

Paisagens Cariocas entre a Montanha e o Mar



Rio de Janeiro

SITE MANAGEMENT PLAN

RIO DE JANEIRO: CARIOCA LANDSCAPES BETWEEN THE MOUNTAIN AND THE SEA

FEBRUARY 2014

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CONTENTS

PRESENTATION

1. CONCEPTS AND GOALS

2. DESCRIPTION OF THE SITE

2.1. RIO WORLD HERITAGE SITE

2.2. THE BUFFER ZONE – THE URBAN LANDSCAPE BETWEEN THE MOUNTAIN AND THE SEA

2.3. THE SITE'S CURRENT STATE OF CONSERVATION

3. PRESSURES ON THE SITE AND THE OBSERVED IMPACTS

3.1. URBAN EXPANSION-RELATED FACTORS

3.2. ENVIRONMENTAL FACTORS

3.3. NATURAL DISASTERS AND RISK PREVENTION

3.4. TOURISTIC ACTIVITIES AND SOCIAL PRESSURES

3.5. NUMBER OF INHABITANTS WITHIN THE PROPERTY AND BUFFER ZONE

4. THE SITE'S CURRENT MANAGEMENT

4.1. LAND OWNERSHIP AND LEGAL SITUATION

4.2. EXISTING PROTECTION

4.3. EXISTING MANAGEMENT PLANS

4.4. PUBLIC VISITING CONDITIONS IN THE SITE

4.5. RESOURCES INVOLVED

5. SITE MANAGEMENT PLAN

5.1. ATTRIBUTES THAT ENSURE THE SITE'S UNIVERSAL VALUE

5.2. CURRENT MANAGEMENT SYSTEM

5.3. PROPOSED MANAGEMENT SYSTEM

5.4. MANAGEMENT COMMITTEE

5.5. GUIDELINES FOR SITE MANAGEMENT

5.6. SITE INTERVENTION PROGRAMS

6. SITE MONITORING PLAN

6.1. MONITORING SYSTEM

6.2. MONITORING INDICATORS

6.3. AGENTS INVOLVED IN MONITORING

6.4. EXPECTED RESULTS

BIBLIOGRAPHY

ANNEXES

I. DIRECTIVE CREATING THE MANAGEMENT COMMITTEE

- II. MANAGEMENT COMMITTEE INTERNAL REGIMENT
- III. COMPONENT DELIMITATION
- IV. TIJUCA NATIONAL PARK MANAGEMENT COMMITTEE
- V. SUGAR LOAF AND URCA HILLS NATURAL MONUMENT COUNCIL
- VI. TERM OF REFERENCE FOR THE FLAMENGO PARK MASTER PLAN

VOLUME I

MANAGEMENT PLAN FOR THE TIJUCA NATIONAL PARK

VOLUME II

MANAGEMENT PLAN FOR THE NATURAL MONUMENT OF SUGAR LOAF AND URCA HILLS

VOLUME III

MASTER PLAN FOR THE RIO DE JANEIRO BOTANICAL GARDENS

PRESENTATION

The National Historic and Artistic Heritage Institute (IPHAN), being legally responsible for identifying and preserving the Brazilian cultural heritage presents in this document the ***Global Management Plan*** for the areas included in the Site *Rio World Heritage: Carioca Landscapes between the mountain and the sea* in the city of Rio de Janeiro, Brazil. The site was recognized and inscribed as a Cultural Landscape during the 36th session of the World Heritage Council on July 1, 2012, in Saint Petersburg, Russia.

The work now presented has been developed in a long process of discussion and agreement among technicians and managers of the elements integrating the site listed as World Heritage within the *Management Committee for the Landscape of Rio de Janeiro*, created by IPHAN's Directive 464, dated December 29, 2011, including representatives from all three administrative authorities involved – city, state and federal –, in the fields of culture, environment, urban planning and landscape architecture, as well as managers in specific areas of the site, such as the Botanical Gardens, the Tijuca National Park and the fortresses located within military areas. The work comes in response to the requirement presented at the moment of nomination for structuring an integrated management plan of the listed area to be evaluated by the World Heritage Committee in 2014. Because of the site's unique characteristic as a cultural landscape within a complex urban area, such as the city of Rio de Janeiro with more than 11 million inhabitants in its metropolitan area, incorporating several elements associated to very distinct management models in the hands of also very distinct institutions belonging to all three spheres of the Brazilian executive branch (municipal, state and national), the organization of this Management Plan had to seek an original management pact and model.

As cultural landscapes in urban areas cannot be conceived as detached monuments, its management must be integrated to the city as a whole, bringing benefits to the collectivity. Likewise, the management of its integrity and exceptionality as expressed in the values identified in the site cannot follow the traditional standards for the management of architectural monuments, or even of cultural landscapes associated to traditional populations, rural areas or parks and planned areas. The management of a cultural landscape in an urban area requires the creation of a pact and the establishment of a forum, such as the Landscape Management Committee, capable of giving voice to the different agents and finding agreed solutions for action within the site. It also requires the incorporation of a discussion on the landscape's values and how to maintain them as an instrument for sustainable development and for the exercise of citizenship in its relation with the dynamics of a living megalopolis in permanent construction.

This plan herein presented by the National Historic and Artistic Heritage Institute has been jointly developed with different civil society agents in Rio de Janeiro and Brazil. Furthermore it is intended to be a step towards the construction of more democratic spaces for the practice of World Heritage-based sustainable development, contributing to a transformation in the notion of heritage, more suitable to the challenges faced in these first decades of the 21st century.

1. CONCEPT AND GOALS

The Management Plan for the World Heritage Site of Rio de Janeiro: Carioca Landscapes between the Mountain and the Sea will guide the actions performed within the area established as a world heritage site and recognized by UNESCO, comprising all of its elements and its buffer zone. The Plan is based upon strategies for cultural and environmental sustainability of the site's global landscape, promoting:

- a heightened awareness, among society, of the importance of valuing, conserving and preserving this heritage as a reference of the culture and memory derived from the *Carioca*, the *Fluminense* and Brazilian identity;
- an improvement of instruments of management and planning for the elements in the Site;
- the application of the aforesaid instruments towards an integrated management of the Site, involving the three spheres of government (municipal, state and federal), private partners and civil society;
- an integrated perspective of heritage, incorporating its different dimensions, natural and cultural, tangible and intangible, promoting global heritage management through its cultural landscape.

Measures for shared management are structured around four dimensions: institutional, normative, technical-operational and economical-financial. After defining the territorial unit that includes all the elements of the Site, the shared management structure is composed by a Management Commission, an Executive Secretariat and an Advisory Board. In the normative and technical-operational dimensions, shared management will establish new norms for the Site's protection and governance, making them compatible with the existing legislation. In the economic-financial dimension, a Fund for the Conservation of the Rio World Heritage Site will be created.

Coordination will be achieved through the Federal agencies of cultural and environmental heritage, namely the National Historic and Artistic Heritage Institute (IPHAN), with the collaboration of the Ministry of Environment through Chico Mendes Institute for the Conservation of Biodiversity (ICMBio).

The overall goals of the Management Plan are:

- Defining and detailing the shared management structure for the World Heritage Site, establishing the attributions of each management agent;
- Ensuring the compatibility of the management instruments established by law for each component or sector of the Site, so as to build a management system based upon existing legislation and the regulation of urban space;
- Integrating the proposed plans and projects for the Site within a process of sustainable preservation;
- Ensuring mechanisms that promote social discussion and participation of decision making in the pursuit of a democratic management for the area.

Its specific goals contemplate:

- Integrating proposed actions and projects within the process of the Site's sustainable preservation, offering suggestions to promote ecologically balanced and culturally diversified territorial and social-economical development;
- Establishing guidelines and measures for planning and promoting actions aiming at the Site's conservation and valuation, considering strategic, normative and operational aspects necessary for their achievement;
- Promoting shared responsibilities between the different public agents involved, as well as their common application;
- Promoting political and social practices that may contribute to the sustainable preservation of the Site in its integrity and in a homogeneous manner, respecting the peculiar features of each of its elements, through instruments and actions aiming at its protection, recovery, conservation, public fruition, promotion and publicity of natural and cultural assets;
- Promoting, in the buffer zone, the monitoring of the use and occupation of urban areas as well as the valuation and conservation of natural and cultural areas.

2. DESCRIPTION OF THE SITE

In the resolution issued by the World Heritage Committee when inscribing Rio de Janeiro in the World Heritage List, the Site of Rio de Janeiro was described as “an asset consisting of an exceptional urban setting encompassing the key natural elements that have shaped and inspired the development of the city: from the highest points of the Tijuca National Park’s mountains down to the sea. They also include the Botanical Gardens, established in 1808, Corcovado Mountain with its celebrated statue of Christ, and the hills around Guanabara Bay, including the extensive designed landscapes along Copacabana Bay which have contributed to the outdoor living culture of this spectacular city. Rio de Janeiro is also recognized for the artistic inspiration it has provided to musicians, landscapers and urbanists.”¹

The dossier presented to UNESCO informed that the site corresponds to the areas marking the relation between the city and the mountain, the forest and the sea along with the impact of human labor over it. The Tijuca Massif, with the Tijuca National Park and the Botanical Gardens, the entrance to the Guanabara Bay and the seafronts redesigned by human work correspond to the site’s main axes. The values to be preserved are found in the creative fusion between culture and nature in a macro scale, that is, in matching the great views of the city landscape towards the Guanabara Bay and the sea, as well as the impact of human labor over these areas.

This World Heritage Site is divided in four components (according to the following table), three of which correspond to the sectors of the Tijuca National Park and the Botanical Gardens; the fourth component corresponds to the Flamengo Park, the Botafogo cove, the entrance to the Guanabara Bay including the historical fortresses in both banks, and the Copacabana seafront. The four components are linked by the buffer zone which, in addition to its traditional role of ensuring the site’s preservation, integrates the different areas, turning the whole area into a single asset that must be seen and managed in a global, integrated manner. Starting with the different views offered by Rio de Janeiro, these areas must not be considered separately, considering they integrate a cultural landscape that corresponds to the part of the city that relates to the sea, allowing this landscape, strewn with hills and mountains, to be seen from a number of viewing points.

The following table names the neighborhoods in which these components are found, the coordinates of their central point, their respective areas, as well as the Site’s total area and its buffer zone.

¹ <http://whc.unesco.org/en/list/1100>, visited in January 2014.

WORLD HERITAGE SITE COMPONENTS

Nº	COMPONENT NAME	NEIGHBORHOOD	COORDINATES OF CENTRAL POINT	SITE AREA (ha)	BUFFER ZONE (ha)
1	PNT – Tijuca Forest, Pretos Forros and Covanca	Alto da Boa Vista	43°28'W 22°94'S	1.982,58	
2	PNT – Pedra Bonita and Pedra da Gávea	São Conrado	43°28'W 22°99'S	257,89	
3	Tijuca National Park and Botanical Gardens	Alto da Boa Vista, Jardim Botânico, Sumaré	43°23'W 22°95'S	1.823,97	
4	Entrance to the Guanabara Bay and designed seafronts – Flamengo P., Historical Forts of Rio de Janeiro and Niterói, Sugar Loaf Natural Monument, Copacabana Seafront	Jurujuba, Urca, Centro, Flamengo, Botafogo, Copacabana	43°21'W 22°95'S	3.184,34	
TOTAL AREA (ha)				7.248,78	8.621,38

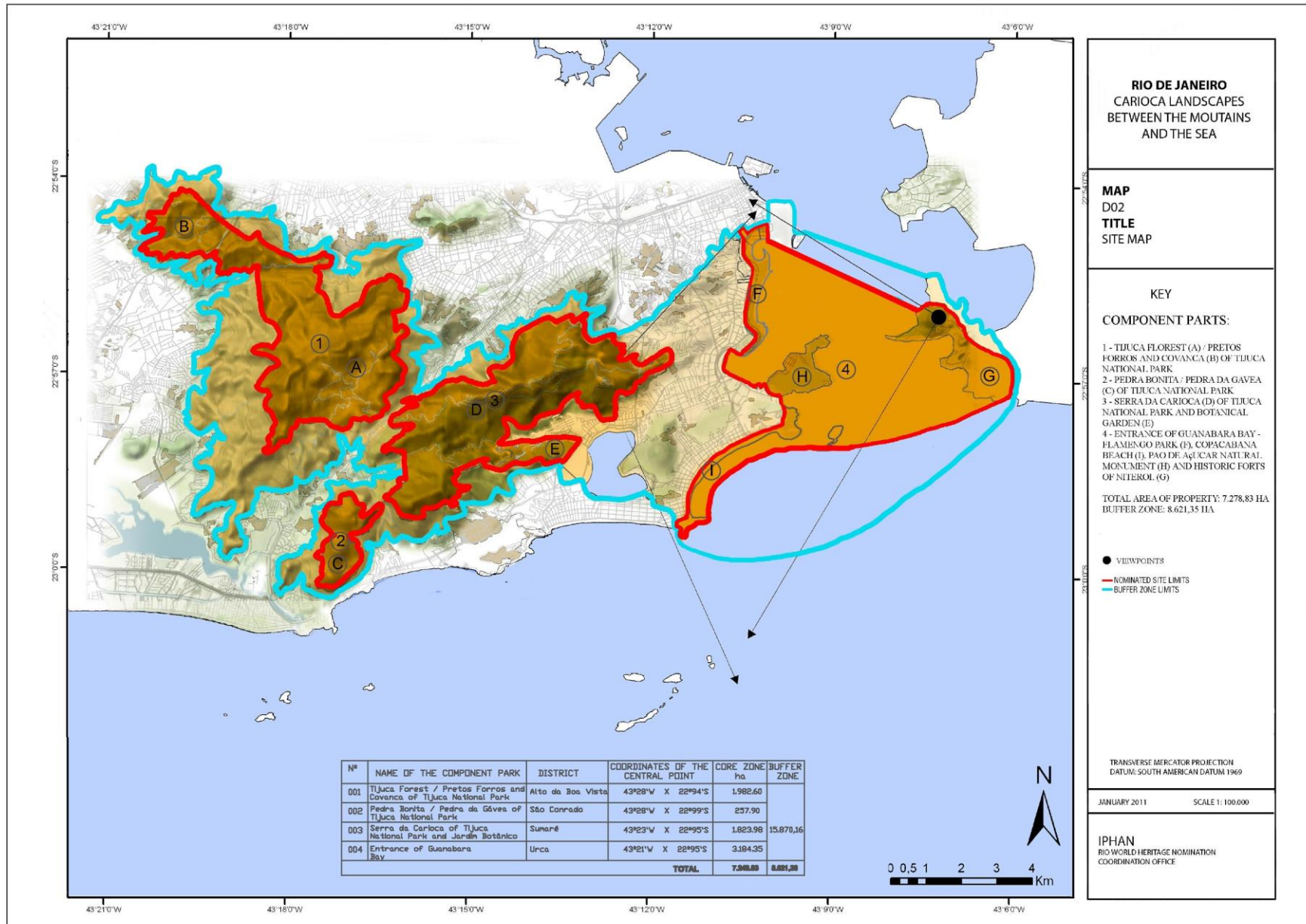
2.1. RIO WORLD HERITAGE SITE

The Site contains the main landmarks for viewing the city, corresponding to the top of its great hills, from where its panoramic views make it easier to understand and interpret this urban cultural landscape. In some of them, easy access and the installation of equipment, as in the Corcovado, Sugar Loaf, Morro do Leme and Outeiro da Glória, favor the enjoyment of these views.

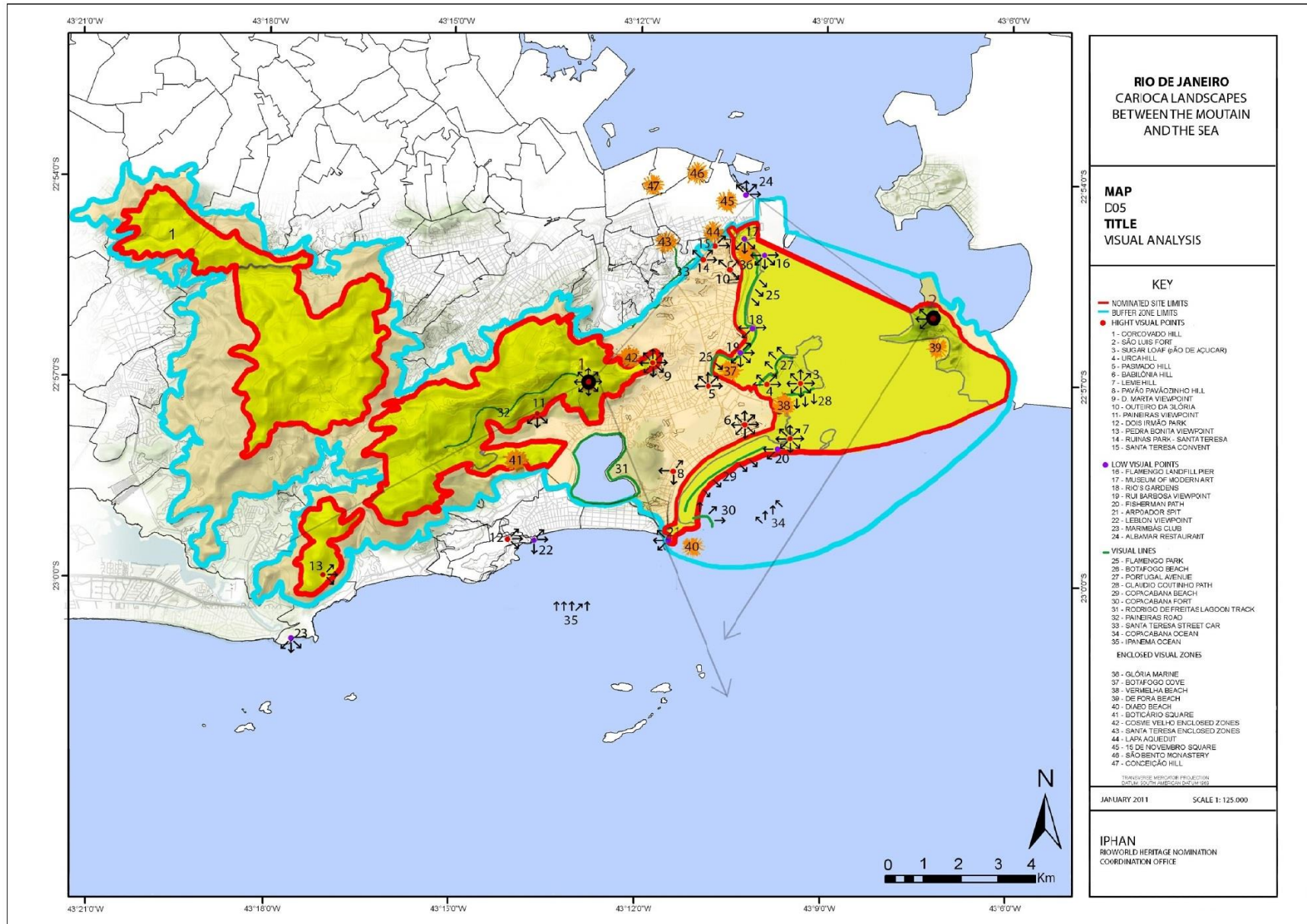


The Site is delimited by two imaginary lines starting at the main viewing points, Corcovado and Morro do Pico, whose angles form a quadrilateral. The following map shows the area that contains the site's most important elements, indicating different aspects of its landscape – the sea, the mountain, the city and its forests – and demonstrates their connection. The viewing zones there identified present their own features, some of them corresponding to open spaces of beaches and parks, others representing urban areas such as the Claudio Coutinho Road and Portugal Avenue, highlighting the landscape and playing an important role in the urban fabric. The boundaries of these components were defined according to the heritage polygons established by the Federal, State or Municipal law that protect them. These components correspond to areas in the city of Rio de Janeiro, in which a strong interface between mountain and sea is predominant, preserving the main examples of the geomorphological and ecological diversity that are its main features with which humans have established a special relationship from its foundation to this day.

SITE MAP



VISUAL ANALYSIS



The geomorphology and the climate associated with the city of Rio de Janeiro are some of the factors contributing to its relevant biodiversity. The main ecosystems found by the Portuguese who arrived in the Captaincy of Rio de Janeiro in the 16th century were the mangroves swamps along the edges of the bays and lagoons; the *restinga* sandspit vegetation, near the sea; and the tropical rainforest called Atlantic Forest, occupying most of the territory where the city would eventually be established. After more than four centuries of intense human activity, this vegetation was greatly altered, but the city has developed a special way of dealing with nature through human craft. Whether by replanting its massifs, whether through landscape redesign and treatment of the seafront and by using the beach, the environment has retained its special place in the urban configuration. In this sense, the relationship between people and nature in Rio de Janeiro is unique and constitutes the soul of the city.

I. Justification for its Outstanding Universal Value

According to the Operational Guidelines for the Implementation of the World Heritage Convention, Outstanding Universal Value defines the cultural or natural significance of an asset, considered so special as to transcend the limits of a nation, becoming important for all future and present generations of the world.

The site listed in the City of Rio de Janeiro is a unique example where the relationship between people, city and nature remains balanced and acknowledged as a monument to quality of life and to the joy of living in a metropolis. This tropical landscape, built deliberately and determinedly within an exuberant nature, was constituted through singular historic and cultural processes of shared human values, from the Portuguese colonization to the present day, resulting in an exceptional ensemble of public areas, historical gardens, parks and natural monuments, whose scientific significance, formal qualities as much as symbolic cultural associations grant the city's outstanding universal value, worthy of being shared by all humanity.

The transformations inflicted by people upon the mountain range and the seashore, as well as the manner in which the alteration were designed and occupied, made the city a world reference. This happened, first, through the experience of applying in the tropics the ideas of 18th and 19th century European landscaping, and later, through the development of a modern school of landscaping, surrounding the figure of Roberto Burle Marx, spread throughout the world.

The listed site comprehends the structural natural elements that guided and inspired the city's development. It encompasses the whole Tijuca National Park with its mountains and its highest peaks, such as the Corcovado with the statue of Christ the Redeemer and the secondary forest that was replanted after the mid-19th century. It also includes the Botanical Gardens

created in 1808, the Sugar Loaf and other hills at the banks of the Guanabara Bay, as well as the landscaping along the coast, such as the Flamengo Park and Copacabana Beach. The boundaries of the site also include the best viewing points and lookouts to appreciate the landscape and the marked relationship between society and nature.

Rio de Janeiro: Carioca Landscapes between the mountain and the sea site is characterized by one of the most complex cultural landscapes, produced from the exchange between different cultures in a natural site marked by its originality. The intentional use of nature, at first due to the economic interest of Portuguese colonizers, shaped the Carioca landscape through the years. Later, the impositions of a tropical nature and a rugged terrain, associated with the cultural traits of the humans who settled in Rio de Janeiro, made human-wrought natural elements sovereign in the city's landscape, ensuring for the most part the preservation of local biodiversity. In the second half of the 19th century, environmental disasters related to coffee plantations and to the expansion of the city brought a concern to preserving the environment. The direct consequence was that massive areas previously used by agriculture were reforested, thus creating the Tijuca National Park. The Park has set a groundbreaking model for Latin America on the grounds that it fulfilled an environmental demand that was not yet clear in the mind of the population at the time, and because it offered attractions for visitors. These concepts were soon widespread throughout other cities of Brazil and of the American Continent.

Since its foundation, Rio de Janeiro has been affirmed as one of the most beautiful sceneries in Brazil and the world. For five centuries, the stunning natural landscape in which the city was set inspired the creation of a vast iconographic legacy, matched by very few in the planet, legacy that has been and continues to be produced by professional and amateur artists from Brazil and abroad. By observing and experiencing the city, other works of exceptional quality and importance appeared, such as travelers' journals, music, literature, movies and photography, offering a multiplicity of perspectives on Rio de Janeiro. From the standpoint of the living traditions associated with the listed site as world heritage, a series of manifestations that began in the city were eventually spread throughout the world: samba; bossa nova; soccer; street carnival and traditional religious festivals, projecting the unique features of this city worldwide.

The site was listed under criteria (v) and (vi) of the Operational Guidelines. Criterion (v) incorporates exactly the fact that the city's development was shaped by a creative fusion between nature and culture. This exchange is not the result of a persisting traditional process, but rather the reflex of a relationship based upon scientific and environmental criteria and upon ideas of planning and design that allowed large-scale creative innovations in the heart of the city. Criterion (vi) highlights the fact that the landscape of Rio de Janeiro was the inspiration for many art forms, such as literature, poetry, painting and music. Images of Rio de Janeiro showing its bay, the Sugar Loaf and the statue of Christ the Redeemer are recognized all over the world.

II. Components 1, 2 and 3 –Tijuca National Park and Botanical Gardens

- **Tijuca National Park**

The Tijuca National Park is the only national park in Brazil that is located completely within an urban area, and is considered one of the largest urban parks in the world. It contains some of the most strikingly characteristic elements of an urban forest: its geomorphology, its geological substratum, the soil, the fauna, the climatic conditions and the relationship between nature and culture.

In the 19th century, the massifs surrounding the Guanabara were densely occupied with coffee plantations, and a direct consequence of such occupation was deforestation of the hillsides. The Tijuca Forest was one of the most severely damaged vegetations in the area, causing immediate impact on the courses of water that supplied the city. In December 1861, the Plan for the Preservation of Water Springs led to a government resolution and entrusted to Major Gomes Archer authorized a program for the reforestation and conservation of the Tijuca and Paineiras forests. As a consequence to the strenuous work of slave labor, in less than 15 years 100 thousand seedlings brought from neighboring forests or produced locally of native species had been planted.

Continued by Baron d'Escragolle and with the collaboration of landscape architect Auguste François Marie Glaziou, part of the forest also received a Romantic landscaping with the creation of paths, recreation areas, belvederes and highlighted courses of water. In the 1940s, a patron of the arts in Rio de Janeiro, Raymundo Castro Maya, took on the responsibility for restoring the Tijuca Forest, enlisting the support of landscape architect Roberto Burle Marx, who shaped the Park's current appearance. Castro Maya also restored buildings such as the Mayrink Chapel, installing paintings created specially by Cândido Portinari.

The reforesting of the Tijuca massif is considered the world's most successful instance of regeneration of a native forest. For this reason, the Tijuca National Park was created through Federal Decree n. 50,923, dated July 06, 1961, under the name of Rio de Janeiro National Park. Its current denomination was granted on 08 February 1967, by Federal Decree 60,183. It was listed as a heritage site by IPHAN on 27 April 1967, in its Book of Archaeology, Ethnography and Landscape. On 04 June 2004, a non numbered Decree redefined the Park's boundaries to include the Lage Park and the Pretos Forros/Covanca Ensemble. It is currently managed by Chico Mendes Institute for the Conservation of Biodiversity (ICMBio), institute under the Ministry of

Environment. In 1991 it was included in the Brazilian territory declared as a Biosphere Reserve, in acknowledgement of the importance of its natural assets for the balance of the world's ecosystem.

The landscaping model established in the Tijuca National Park was groundbreaking in Latin America, inasmuch as it fulfilled an environmental demand that was not deeply entrenched in the conscience of the population at the time, and because it offered visiting attractions in the mold of European parks. Its ideas were soon widespread throughout Brazilian and other American cities. At the present time, the Tijuca National Park presents a significant biodiversity, with 1.619 plant species, 433 of which are endangered, and 328 animal species, including amphibians, birds and mammals, 16 of them critically endangered. Also noteworthy is the park's historical representativeness with buildings dating back to the 18th and 19th centuries, as well as 120 archaeological sites located within the park's boundaries.

With all of these amenities, the Tijuca Park offers countless opportunities for leisure, ecological and cultural tourism. One of its main attractions is the Corcovado hill, made accessible in 1885 with the inauguration of the Corcovado Railway, a massive feat of engineering for the time, still operating in perfect safety and comfort, charming everyone with the Corcovado's stunning route. In 1931, the monumental sculpture of Christ the Redeemer, an art-deco design by architect Heitor da Costa e Silva with the collaboration of French artist Paul Landowsky, was installed at the hill's summit (704 meters), integrating perfectly with the landscape of Rio de Janeiro and becoming one of its greatest icons.

- **Rio de Janeiro Botanical Gardens**

Rio de Janeiro's Botanical Gardens, located between the base of the Massif and the banks of Rodrigo de Freitas Lagoon, corresponds to the lands of a former sugarcane farm expropriated by Prince Regent D. João soon after his arrival in 1808 for the construction of a gunpowder factory, to which the Prince Regent annexed a garden of exotic plants and Eastern spices, initially named *Real Horto*, or Royal Garden. It is crossed by two rivers, from which the springs are located within the Tijuca National Park: Macacos River and Igrezias Creek. From the Gardens' current area of 137 ha, only 53 ha are open to the public, constituting its arboretum. The continuation of the Botanical Gardens is integrated to the Tijuca National Park and is devoted to preservation and scientific research.

The urbanistic outlines of the arboretum features a Neoclassical scale, with geometrical alleys distributed along balanced axes, where majestic imperial palm trees (*Roystonea oleracea*) confer a spatial sense to the place, constituting a trademark throughout the two centuries of the Botanical Gardens' existence. Installed at the end of the main alley is the portico that remained

from the former National Academy of Fine Arts – a project of Grandjean de Montigny, brought to the Botanical Gardens by IPHAN after the Academy’s demolition in 1940.

The mission of the Rio de Janeiro Botanical Gardens Research Institute, created in 2001, is to “promote, undertake and publicize the educational activities and the technical-scientific research on Brazil’s plant resources, aiming at the knowledge and conservation of biodiversity, as well as maintaining the scientific collections under its responsibility”.

III. Component 4 – The Entrance to the Guanabara Bay, the Historical Fort System and the Designed Seafronts

In this component, highlighting the relationship between the city and the sea, a major role is played by the entrance to the Guanabara Bay, defined by the hills surrounding it, particularly, to the east (Niterói) the massif of Pico Hill and, to the west (Rio de Janeiro) the ensemble of Sugar Loaf, Cara de Cão, Urca and Babilônia Hills. Because the Guanabara Bay has been, from the early days of occupation, greatly disputed as a token of possession and usage of the territory, these rocky formations were major points of reference for the Bay’s defense through the first centuries of the city, allowing the construction of forts and giving Rio de Janeiro the characteristic of a Fortified City. As the defensive value of these points, dwindled because of technological innovations that modified military practices, the surviving forts and fortresses in this system have become iconic landmarks in the urban landscape.

In the part of the city facing the bay and the ocean, along the seafronts modified by human craft, successive reclaimings of land gave rise to the Flamengo Park and the Copacabana Seafront, both following a landscape design by Roberto Burle Marx.

Component 4 includes urban parks, conservation units and other areas protected by public authorities, such as: Passeio Público, Paris Square and Flamengo Park, from Santos Dumont Airport, in Downtown, to the Viúva Hilltop; the Botafogo Cove waters (except for the highway and the landscaping); the Sugar Loaf Natural Monument (except for the neighborhood of Urca, included as buffer zone); the Copacabana Seafront and its landscaping, up until the buildings surrounding it; the edges of Leme and Copacabana hills, as defined by State heritage regulations.

- **The Sugar Loaf and Urca Hills Natural Monument**

The Sugar Loaf Hill was acknowledged as one of the most relevant geological sites in the world during the *31st International Geological Congress*, in July 2000, when a commemorative plaque was placed at the site. Its highest point is located at 306m, at the cable car's second station.

Recent studies have been able to determine the age of cristalization of the rocks comprising the Sugar Loaf at 560 million years. With these advances, the importance of the site was expanded as a landmark in the Brasiliano Orogeny and in the final collision and amalgamation of the South-American and African continents, giving rise to the supercontinent Western Gondwana. Surrounded by a vegetation typical of the tropical climate, with some remainders of the Atlantic Forest, it contains native species that have been extinct elsewhere in the Brazilian coast, as well as rare plant species such as the orchid "*laelia lobata*", blooming only in two places in the planet: the Sugar Loaf hill and the Gávea Stone, both in Rio de Janeiro. The Sugar Loaf, the Brazilian mountain with the greatest number of pathways for climbing (until 1997 they were 38), receives daily hundreds of rock climbers, mountaineers and ecologists from Brazil and abroad.

Its physical and biotic features and the need to control its current use have led the Rio de Janeiro City Hall to declare it, in 2006, the Sugar Loaf Natural Monument, including the Urca Hill.

The cable car system was designed in 1908 by Brazilian engineer Augusto Ferreira Ramos, and was inaugurated in 1912, completing 100 years in October 2012. This system was the first installed in Brazil and the third in the world; it is currently one of the most important icons for the Carioca tourism, and became one of the trademarks of the city of Rio de Janeiro.

- The designed seafronts

Throughout its development, the city had to reclaim lands from mangrove swamps, lagoons, the sea and even the hills. In the 20th century, successively reclaiming land became a constant practice. The growing value attributed to the seafront and the expansion of the city towards the ocean resulted in a series of measures targeting the development of the coast, building spaces that allowed for a greater interaction between the city and its natural environment. The construction of open spaces has been a characteristic of this relationship between society and the landscape of Rio de Janeiro.

The Passeio Público and the Flamengo Park are instances of urban parks built in distinct historical moments (the former in the late 18th century and the latter in the 20th century), both with the same goal in mind: to enhance the quality of the urban space and to promote the appreciation of the beauties of the Guanabara Bay.

The Passeio Público, the first garden built in Brazil, in 1783, was designed by Master Valentim. Located at the banks of the Guanabara Bay and containing acclimated native plants, the garden was a popular place to appreciate the natural allurements of the Bay, and became a favorite meeting place for the Carioca population from the late 18th to the early 20th century. At the time, it was used for afternoon strolls, meetings and soirées with music and poetry. In 1862, it went through a reform conducted by landscape architect Auguste Glaziou, who conferred an English Romantic style to the Passeio. A café-concert was opened and people would use the park for “contemplating nature, jolly children running about, the footing, the flirt, the cult of Eros in the shaded alleys and of Bacchus in the cafés and bars installed within it”. With the urban reform undertaken by Francisco Pereira Passos (1902-1906), then mayor of the city of Rio de Janeiro, a great reclaiming of land removed its direct contact with the sea.

In the 1930s, the Paris Square, created on this reclaimed land, was greatly appreciated by the Carioca elites, particularly for the neoclassical design featuring water fountains, statuettes, and dense vegetation.

- The Flamengo Park

In a city whose landscape is cut through with hills, the forest and the sea, the Flamengo Park constitutes an important zone of connection between Downtown and the South Zone, creating a striking transition between the city itself and the Guanabara Bay.

In 1961, when the reclaimed land connecting the Downtown and the South Zone was completed, the Governor of the State of Guanabara created a Work Group for the implantation of the Flamengo Park. Presided by Maria Carlota de Macedo Soares, its greatest encourager, it was formed by some renowned professionals of the time in the field of urban planning and landscaping: Affonso Eduardo Reidy; Jorge Machado Moreira; Sérgio Bernardes; Hélio Mamede; Maria Hanna Siedlikowski; Juan Derlis Scarpellini Ortega and Carlos Werneck de Carvalho (architects); Berta Leitchic (engineer); Luiz Emygdio de Mello Filho (botanist); Magú Costa Ribeiro and Flávio de Britto Pereira (botanist assistants); Ethel Bauzer Medeiros (recreation specialist); Alexandre Wollner (visual programming); Roberto Burle Marx and Associated Architects (landscape architects).

As for the design of the Park, intended to take up 1.2 million square meters, the project has not only adapted to the preliminary outlines of the reclaimed land and thoroughfares, but should also integrate some important urban equipment that had

been built separately, such as the Santos Dumont Airport (1944), the Museum of Modern Art (1956) and the National Monument for the Deceased in World War II (1957).

Also implicit in the idea of the park was the project of forming a “living park”, with specific spaces designed, in their different activities, for children, teenagers, adults and the elderly. The clear functional scheme was distributed in three main strips: the first located between the city’s built boundaries and the highways, where the parking lots, the sports courts and the playgrounds were located. The parking lots were placed in this strip, among other reasons, to stimulate users to walk. The second strip is comprised of the highways and the central gardens, designed in a deep perspective in order to be seen from the cars at high speed. The third strip, along the border of the bay, holds the leisure equipment, the beach and associated activities. The strips are connected through footbridges and subterranean passages. Inside the park, different circulation systems are structured to interconnect the areas of the park and the city, with no conflict among them. These pathways are useful to both cycling and walking.

As for the use of vegetation, more than the simple execution of a project, the works for Flamengo Park show the achievements of a great experiment, in which plants were cultivated in adverse climatic (winds, sea mist) and edaphic conditions (a soil comprised of landfill, waste, highly salty mud). The Park is also a major contribution to the expansion vocabulary concerning plants used in urban arborization.

The Park was informally inaugurated, still under construction, on 12 October 1965, in a great popular celebration. By then, it had already been listed as a heritage site by IPHAN in order to protect it from real estate speculation, and because of its rich landscape collection. It soon became a major reference for leisure to the urban population.

- **The Copacabana Seafront**

In the late 19th century, the Copacabana Beach occupation began with the opening of Mayor Alaor Prata Tunnel (Old Tunnel), marking the transformation of the city into a beach resort. The current seafront lies on land reclaimed in the 1970s when the strip of sand was widened the avenue duplicated and the promenade expanded.

The Copacabana seafront, with 4.15 km – delimited in its extremities on one side by the rock, where the Copacabana fortress is located, and on the other, by Leme hill – is completely inserted in the Rio World Heritage Site. One of its most prominent features is the landscaping by Roberto Burle Marx, with world-renowned geometric outlines. Continuing his work on Flamengo Park, Burle Marx created an exceptional design for the promenade of Copacabana Beach using a mosaic of Portuguese

stone in a master work that, complemented by a composition of vegetation and urban furniture, added great value to the region's public spaces.

- **The historical forts**

The first occupations of the coast at the entrance to the Guanabara Bay were military: with the Fort of Santa Cruz (at the foot of Pico Hill, in Niterói) and Fort of São João (at the foot of Sugar Loaf, in Rio de Janeiro), built in the mid-16th century to defend the entrance of the Bay. The Fortress of São João, built in the same spot where the city had been founded in 1565, is a military complex including, in addition to three small forts, the São José Fort, the third oldest in Brazil, founded in 1578.

- **The eastern border of Guanabara Bay**

The eastern border of the entrance to the Guanabara Bay, also a rugged terrain with peaks and rock walls elevating from the sea to an altitude of 230 m, was the other end of the defense system that made the city possible. It represents one of the first appropriations and transformations of natural elements by the Portuguese who arrived in later known Rio de Janeiro. The boundaries incorporated to the Site listed as World Heritage correspond to the delimitation of an area under military administration, in which constructions are protected as National heritage.

In this complex of fortresses, that of Santa Cruz is prominent. Built over a rock at sea level, it was the main support for the city's defense, facing the Fortress of São João, at the other side of the bay. With more than 450 years of history, the Fortress of Santa Cruz is an exemplary work of Portuguese-Brazilian Colonial military architecture, recognized in 1938 by IPHAN as a heritage site. It features an irregular polygonal floor plan in a constructed area of 7,153 m².

As part of the same defense ensemble, at a height of about 180 m, the Fort São Luiz was built on Pico Hill in the second half of the 18th century. This is a point of exceptional visibility of the whole entrance to the bay and the land surrounding it, corresponding to an important point for watchguards at the time.

Also relevant is the Imbuhy Fort, built in the late 19th century, facing the ocean. The whole ensemble represents the way in which Portuguese colonists, and later on Brazilians, appropriated themselves of different conditions provided by the terrain to build a complex for the protection of the city, now representing as an exceptional point for the observation of the cultural landscape of Rio de Janeiro.

- **The city and the landscape: the living fabric of social relations in time and space**

In the City of Rio de Janeiro, the uses and practices of its space and cultural manifestations have shaped the landscape in a unique way. Carioca urban culture has not only reflected, but has actively formed and singled out the relationship between natural environment and cultural expressions, shaping the city over time. In this city of exuberant nature, the use of open spaces is the norm: social encounters take place while walking, strolling, in chance meetings on the street. The “street culture” emphasizes green spaces, the contours of the forest and the seaside. The habit of experiencing this landscape intensely in everyday life and in festive moments is strongly cultivated. Note the soccer games in the parks and on the beach, the walks and bicycle rides on the promenades of Copacabana and Ipanema, on the Reclaimed Land and the Pond. The samba gatherings in squares, the street markets and the *botequim* pubs are privileged spaces for leisure.

Cultural territories form the living fabric of social relations in this environment. They show the superposition of different times in the life of the city, expressing distinct ways of living, holding a diversity of religious, sportive or festive manifestations. These are aspects of a historical character, marking the urban memory associated to certain periods in the city’s urban evolution. Part of the city is taken up by wide spaces dedicated to leisure, such as the Passeio Público, the gardens of the Museum of Modern Art (MAM), and the Flamengo Park.

Although strolls and walks take place in green areas, the contemplation of the sea, the sun and the strip of sand are also important aspects of Carioca culture. The beach is, thus, a cultural space in which the Cariocas are frequent attendants.

The city began to effectively turn itself to the sea in 1892, when the Barroso Tunnel was opened, connecting Botafogo to the coastal area of Copacabana, with the first streetcar service towards the seafront running parallel to the beach, towards Leme and Ipanema, allowing all three neighborhoods to be occupied, turning them into pleasant seaside resorts.

Throughout the 20th century, beaches were increasingly associated with youth, leading to a change in habits and in musical discourse, in which Copacabana had a crucial role. It became a cosmopolitan space, gathering crowds, resulting in the establishment of New Year’s Eve celebrations at the beach, accompanied by all sorts of events, extending from Copacabana to other beaches, bringing in hundreds of thousands of people every year, at first on the promenade but now on the beach itself, to watch the fireworks and the concerts performed by national and international artists alike.

It must also be remember the territorial role of the samba and other popular festivities, seeing that both activities correspond to the culmination of cultural processes that often extend throughout the year. From the most traditional to the most modern, both lay deep roots in the lives of the groups that promote them. Prominent among them is the Carnival, with its great

concentration of samba schools, whose appearance and dissemination followed the growth and increasing complexity of the city, taking hold of its territories.

2.2. THE BUFFER ZONE – THE URBAN LANDSCAPE BETWEEN THE MOUNTAIN AND THE SEA

The buffer zone corresponds essentially to the densely occupied urban area connecting the sea and the mountain, between components 1, 2, 3 and 4. It is defined by the Site's main visual angles and by the areas contributing to the sustainability, protection and promotion of the universal value of its elements.

The buffer zone adopted for components 1, 2 and 3 has been the area specified in the management plan for the Tijuca National Park and the outskirts of the Botanical Gardens, forming an ecological corridor designed to protect the biodiversity of plants and the mobility of animals. The buffer zone of component 4, to the west, is comprised of the urban landscape separating it from component 3. To the south, it is delimited by the Copacabana Seafront and extends all the way to the fortresses of Niterói. The boundary follows the contours of the hills in this region, reaching the seafront of Jurujuba Beach. From this point, it crosses the Guanabara Bay in a straight line towards Santos Dumont Airport, where it bends towards the northern extremity of Flamengo Park. It encompasses the Passeio Público, the historical aqueduct in the neighborhood of Lapa and follows the ridge of Santa Teresa Hill, reaching the boundaries of the buffer zone at Tijuca National Park.

The buffer zone includes a great number of Conservation Units, areas protected by environmental legislation, located on the hills of Babilônia, São João, Saudade, Cabritos, Catacumba, delimiting the neighborhoods of Copacabana, Botafogo and Lagoa, on Viúva Hill in Flamengo, on the valley of Cosme Velho and Laranjeiras and on the southern hillside of Santa Teresa Hill. Much of its urban area includes APACs – Areas for the Protection of Cultural Settings, an instrument for landscape and cultural preservation used by the Rio de Janeiro City Hall. The following units are worthy of notice: Outskirts of Rodrigo de Freitas Lagoon; Jardim Botânico; Humaitá; Botafogo; Peixoto Neighborhood; Lido; Cosme Velho; Laranjeiras; Santa Teresa; Glória.

The buffer zone also includes the Rodrigo de Freitas Lagoon and Jardim Botânico neighborhood, as protection for the hillsides of the Tijuca National Park and for the Rio de Janeiro Botanical Gardens, as well as the green areas adjacent to Flamengo Park (Marechal Deodoro Square and Russel Square, and the gardens in the Catete Palace) reinforcing its protection. The neighborhood of Urca was included as buffer zone for the Sugar Loaf.

2.3. THE SITE'S CURRENT STATE OF CONSERVATION

The municipality of Rio de Janeiro holds a great biodiversity, a great part of which is found in areas included in the World Heritage Site, such as the Tijuca National Park and its adjacent area in the Botanical Gardens, in the rocky formations of Sugar Loaf, Urca Hill and Corcovado, as well as in the marine habitats of the Guanabara Bay and the beaches of the city's South Zone. It may be considered a relevant example of sustainable use, mostly because of successive conservation measures for the preservation of this biodiversity throughout history. From the early 19th century, with the creation of the Botanical Gardens, followed by the replanting of the Tijuca Forest in the middle of that century, and the construction of the Flamengo Park in the mid-20th century, Rio de Janeiro has been intensely and successfully experiencing the revitalization of its soil, aiming at the preservation of its natural resources, ecosystems and biodiversity.

Intent on maintaining actions for nature conservation, the Rio de Janeiro City Hall, aiming at urban sustainability, seeks to ensure constant work on environmental preservation in its Conservation Units, many of them present in the Site. In addition to this heritage, the buffer zone includes a privileged ensemble of urban parks, valuable not only for their beauty and open spaces offering to the population, but also for the parks' utility as scientific collections and biodiversity corridors.

Consequently, the current state of conservation of the many parts comprising the landscape of the World Heritage Site may be considered good. In a macro scale, these parts need to be rigorously conserved to avoid the deterioration of its cultural and environmental values, and so they can be appreciated not only from the many viewing points offered by the city, but especially by those who walk about and stop to enjoy the parks.

- **Tijuca National Park**

The mass of existing forest in the Tijuca National Park plays an important role in reducing pollution and alleviating the city's climate, as well as it is crucial for containing the hillsides on the Tijuca Massif. A constant activity for the Park's administration is maintaining the quality of its phytosanitary state, with the characteristics of its 19th century replanting.

All of the Park's internal paths are paved and in a good state of conservation, with signposts pointing to the main equipment and points of interest, as the fountains, lakes and belvederes.

The definition of norms for the uses and activities practiced in the Park take into account its cultural and environmental character, according to the area, as follows:

- **Tijuca Forest:**

Because it counted with the participation of landscape architects Glaxiou and Burle Marx, this space includes areas intended for picnics, children's recreation, and leisure, with all the necessary equipment. Walks take place in the existing trails, most of them dating from the 19th century, when they were used by the dwellers of the old farms and by members of the Imperial elite.

The peaks most frequently sought by mountaineers are those of Papagaio (989 m), Tijuca (1,021 m) and Conde (821 m), from which wide panoramic views of the city can be seen. The area contains a number of attractions, including grottos, waterfalls, lakes and belvederes, as well as leisure areas and restaurants. It is the space most often sought by visitors, therefore requiring greater investments in conservation. Some of these points are now in a certain degree of deterioration, and need to be restored and requalified, such as the area of Açude da Solidão and the Taunay Waterfall.

- **Carioca Mountain Range:**

Well maintained, the roads in the Carioca Mountain Range are used for bicycle rides and walks. The Paineiras Road is most commonly used for these activities, particularly on Sundays and holidays, when it is closed to the vehicle traffic, and the presence of the police is reinforced. Along the road there are a number of waterfalls, frequently used by the population. The area is cut through by many trails, giving access to many recesses of the park and linking them to different points in the city. This is the ensemble with the greatest number of belvederes, including, in addition to the Corcovado, the Paineiras, the Dona Marta and the Vista Chinesa, that is marked by the presence of a pavillion in Eastern style, as a tribute to the Chinese who used to grow tea at that location. The latter has a heliport from which touristic flights depart. The Corcovado concentrates the most important service equipment: train station, shops, restaurant and snack bar. On the Paineiras, a beautiful building from the late 19th century, restored in the 1930s, was once used as a luxury hotel. Its revitalization is currently being planned, integrated to the reurbanization of the parking area and the point of departure for the transportation system towards the Corcovado. One of the most serious problems in this sector is the telecommunication antennas present in the area. Although a more rational use of such equipment is being studied, the antennas' visual impact is still significant.

- **Pedra Bonita- Pedra da Gávea:**

Used mostly for hang gliding, the area has been supplied with facilities for the sport's practitioners. Specialized guides accompany visitors in walks and rock climbing to the top of the Bonita and Gávea Stones.

• **Rio de Janeiro Botanical Gardens**

The Botanical Gardens, in order to provide good service to the public that visits the arboretum, concentrates its efforts on maintaining and conserving this important heritage, whose living collections contain up to 8,000 species from several parts of the world. The arboretum also includes a few areas with specific vegetation, such as bromeliads, orchids, medicinal plants, insectivorous plants and cactuses, as well as a sensorial garden open for visitation.

To ensure the arboretum's high level of conservation, the administration of the Research Institute responsible for the Gardens counts with the efficient work of both the Conservation of Green Areas and of the Living Collections coordinations. On account of the institution's dynamics, known for the permanent and innovative activities that attract a wide audience, one of the permanent concerns has been to control the maximum occupancy capacity during large events, due to the fact that the excess of public in certain areas of the arboretum can bring a negative impact to the historical gardens.

The arboretum counts with an adequate and dynamic infrastructure to receive visitors and researchers, hosting environmental education activities to the garden's employees, as well as visitors, in a permanent process of awareness-building, fostering knowledge, values, skills and experiences for the solution of environmental problems.

One other service offered by the Botanical Gardens is the production of seedlings in the Horto Florestal, particularly native and endangered species, emphasizing on those from the Atlantic Forest. Rio de Janeiro's Botanical Gardens sets its main goals as to disseminate and represent plant species, as well as to ensure their conservation *in situ* and *ex-situ*, as much as the diffusion of new technology.

The Horto Florestal, adjacent to the arboretum, is, according to the national norms, in charge of promoting and fulfilling:

- the demand of the public who wishes to purchase seedlings and obtain technical guidance for planting the seeds, urban arborization and recovery of degraded areas, always considering that the selected species must belong to the ecosystem being recovered;

- the introduction and replacement of species in the arboretum;
- scientific exchange with similar institutions;
- donations;
- Institutional Agreements.

- **Flamengo Park**

The Flamengo Park, with the Passeio Público and the seafront of Copacabana Beach, integrates the ensemble of public spaces under the administration of the Rio de Janeiro City Hall. The park consists of the most extensive and complete leisure oriented area in the city. It extends all the way from Santos Dumont Airport to the Viúva Hill, and is adjacent to the beach created at the same time as the reclaimed land from which the park resulted. Land modules, featuring groves of different species, sizes and textures, all blossoming throughout the year, compose the adequate spaces for the activities that take place there.

Seen as a harmonious transition between the city and the seaside, the Flamengo Park offers a view of the exuberant natural landscape represented by the hills and the Guanabara Bay, as well as the rich architectural ensemble of Flamengo, with buildings from different periods and styles, as the Church of Nossa Senhora da Glória do Outeiro. The footbridges created over the express highways, with their high quality design, complement this perception.

Although built on reclaimed land brought from hills that came down to allow the city's horizontal expansion, after almost 50 years of existence it now presents a great biodiversity, due to the role played by its vegetation and to the presence of a significant population of wild birds attracted by the park's permanent flowering, further enriched by the seasonal visit of other bird species from nearby green areas. Most plant species were successfully adapted, in spite of the adversity resulting from the conditions of the reclaimed soil and the strong saline ocean winds. Adaptations and additions to the Flamengo Park were brought about from alterations in its original program, as in the case of Marina da Glória, opened by the City Hall for nautical activities and sports competitions, as well as international-level exhibitions.

The Museum of Modern Art was built before the creation of the park, and its landscaping received special treatment, highlighting the award-winning architecture of Affonso Eduardo Reidy, ensuring the perfect integration of the building to the fine green area in its surroundings.

In spite of the satisfactory state of conservation, the Park does not possess a management plan, which hinders the integration of actions and its own conservation. Certain isolated points warrant greater care. For instance, an integrated plan would

allow the oversight of the original rhythm and plan established by Roberto Burle Marx. The Carioca River flows from the end of the Flamengo Beach, near Viúva Hill, and reaches the park in a channel with extremely high levels of pollution, virtually transformed into a sewage draining channel, though a treatment plant has been established. Pollution levels at the beach, bathed by the waters of the Guanabara Bay, are also considered very high, and it remains unfit for bathing throughout most of the year.

- **Landscape Protection Area for the Forts at the Entrance to the Guanabara Bay**

The Sugar Loaf and Urca Hills are considered along with Corcovado the most relevant icons in Carioca landscape. Their main attractions are both the elevated cable car system connecting the top of the hills, with their lookouts, and the Cláudio Coutinho Road (1,250 m), offering a beautiful and accessible path around the base of the Sugar Loaf and several trails for rock climbing and mountaineering.

Two cable car routes have been in operation since 1912, Praia Vermelha/Urca and Urca/Sugar Loaf. In the 1960s, the system was modernized and the top of the hills was reurbanized, receiving new recreation and leisure equipment, including bars, restaurants, and souvenir shops. On the Sugar Loaf, a privileged lookout offers a 360° view of the city, emphasizing the entrance to the Guanabara Bay. This complex is run by the Caminho Aéreo Pão de Açúcar Co., authorized by SPU.

In the 1980s, the State of Rio de Janeiro initiated an extensive program of reforestation on both hills, counting with the participation of community groups involved with the creation and consolidation of a Conservation Unit, intended to maintain the rich biodiversity of the area. The Sugar Loaf's steep rocky hillsides favor the growth of rare bromeliads and orchids, all threatened species.

Installed at the base of the hills, marking the entrance to the Bay on its eastern and western sides, the three main forts responsible for the city's defense system in the past, São José, Santa Cruz, and Lage, now play a major role in the landscape of the city of Rio de Janeiro. They are all run by the Brazilian Armed Forces, and are mostly open to guided public visitation. Because they are located in maritime areas, subject to all kinds of inclement weather, these forts need permanent conservation and restoration. The Lage Fort is half-abandoned and in a poor state of conservation, requiring urgent restoration. A project is being developed for its restoration and revitalization for touristic and cultural uses.

- **Leme and Copacabana Beaches, rocky promontories**

The Leme Hill is part of the seaside edges of the Tijuca Massif. From the hill's top, at the old Duque de Caxias Fort, formerly known as *Forte da Vigia*, one has a commanding view of the neighboring hills, including the Sugar Loaf, from an unusual angle, as well as a panoramic view of the beaches of Leme and Copacabana. Leme Hill, with Cotunduba Island, forms the Environmental Protection Area of Leme Hill. In a stage of regeneration, the last remainder of Atlantic Forest, and a significant habitat for local fauna, is surrounded by the secondary vegetation predominant in the area.

At the foot of Leme Hill is the Army Center of Personnel Studies (CEP), responsible for the Duque de Caxias Fort and Leme Fort, is in charge of ensuring the Forts' state of conservation, as well as organizing sporting and cultural programs for the community, such as hiking trips, particularly those leading to the top of the hill. At the hill's base, just above sea level, the fisherman's path offers a beautiful view of the beach, and is frequently used by recreational fishers.

Leme Beach is integrated to that of Copacabana by the treatment of its seafront. This land reclaimed from the sea was landscaped following the design of Burle Marx, in what is considered a masterwork of international landscaping. In this space envisioned as a continuous panel, pedestrians are offered the opportunity to enjoy a rich variety of shapes and compositions. The flooring in Portuguese stone mosaic incorporates elements from formal abstractionism that can be identified in Burle Marx's later works. The space is completed with spots of trees adequate to local conditions. Near the beach, it maintains the waves from the original design of the Atlântica Avenue sidewalk, designed in the early 20th century.

Throughout the years, urbanistic modifications were introduced to the project, creating parking lots, a continuous bicycle lane, lifeguard towers, kiosks and gas stations. Other significant interference in the project has been the expansion of seaside restaurants towards the public space, partly interrupting the design of the promenade. All of these issues have been tackled by the City Hall by the Seafront Committee and the State Institute for Cultural Heritage (Inepac), the agencies responsible for the area's management and safeguard.

The Copacabana Fort appeared in 1914 to house the garrison defending the Carioca coast, after the demolition of the small chapel that used to house the image of Our Lady of Copacabana, a great attraction for pilgrims. In the 1980s, with the extinction of the Coast Artillery Battery, the Army Historical Museum was inaugurated.

At the Arpoador promontory, until the 18th century, whales coming from the cold southern seas were hunted with harpoons. The Diabo Beach, located between the promontories of Copacabana and Arpoador, is now used for surfing. The Arpoador Rock is a prominent feature of Carioca landscape, because of the quality of its rocky formations and of its view towards

the west. After both promontories have been declared Environmental Protection Areas, the City Hall has been investing in preservation actions.

- **Urban Landscape in the Buffer Zone**

Urban landscape in the buffer zone is delimited by the visual angles starting at the two main peaks contained within the elements of the Site: the Corcovado, in the Tijuca National Park, and Pico Hill, in Niterói. It plays a major role in interconnecting and protecting the outstanding value of the Site's components. It ensures the protection of the outstanding universal value and the integrity of its elements.

It includes several Nature Conservation Units, such as the Environmental Protection Areas (APAs) of Cosme Velho and Laranjeiras, São José, Babilônia and São João Hills, Cabritos and Saudade Hills. Certain urban municipal parks are also included: Pasmado Park, Garota de Ipanema Park, Tom Jobim Park and Catacumba Park. The Chacrinha State Park is also worthy of mention. APACs include Jardim Botânico, Humaitá, Botafogo, Bairro Peixoto, Lido, Cosme Velho, Laranjeiras, Santa Teresa and Glória. The Rodrigo de Freitas Lagoon holds a crucial position in spatial and environmental terms, marking the relationship between these neighborhoods.

The northern side of Flamengo Park is connected to a series of green areas contained in the Buffer Zone, whose legal protection complements that of the park. These public spaces, i.e. Passeio Público, Outeiro da Glória and the gardens in Catete Palace, used to be at the seaside until the late 19th century, but after successive reclaimings of land, they face the highways that connect Downtown to the South Zone. In spatial terms, they are connected to the Flamengo Park by the great mass of trees along the highways, broken only by the intense traffic of vehicles.

The Passeio Público, restored by the City Hall in 2004 to enhance Glaziou's original landscaping, retains its old belvedere, isolated by the railings that surround the green area. Russel Square is the spatial connection between Outeiro da Glória and Flamengo Park. Also ensuring the same relation, the gardens of the Republic Museum, corresponding to those of the 19th century palace that used to belong to the Baron of Nova Friburgo's the family, remain open to visitation throughout the year.

Thus, it may be consider that the urban landscape in the buffer zone is dominated not only by the waters of Rodrigo de Freitas Lagoon, but also by wide green areas protected by environmental or cultural legislation, constantly subject to preservation actions. The current urbanistic legislation favors controlling the use and occupation of land in these neighborhoods, as they are considered integrated to key elements in the city's natural landscape and inserted into the macro-zone of controlled

occupation. Rio de Janeiro's City Hall programs in different administrations, such as Rio Cidade, have invested in the requalification of street furniture, conferring a visual identity to the different areas to which they were applied.

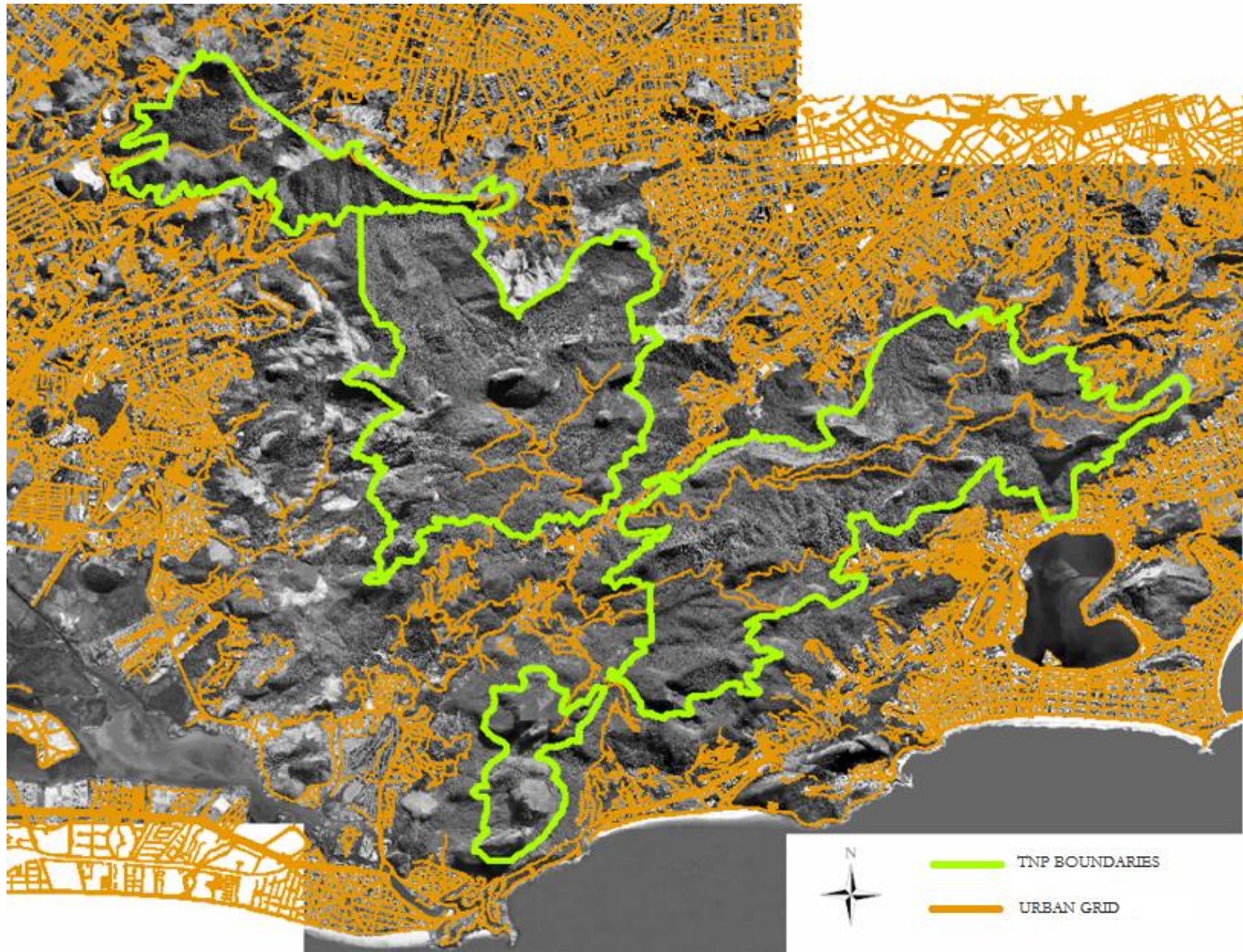
3. PRESSURES ON THE SITE AND THE OBSERVED IMPACTS

3.1. URBAN EXPANSION-RELATED FACTORS

Since the late 19th century, the hills of Rio have been occupied by low-income populations. Throughout the 20th century, as the discussion on housing became more present, disorderly occupation preceded by the deforesting of the hills became widespread, which not only transformed the urban landscape, but also brought serious environmental consequences to the courses of water, contributing to the erosion of hillsides.

The Tijuca Massif and other hills within the Site's buffer zone, particularly those delimiting Copacabana, separating it from Botafogo and Lagoa, were densely occupied in this period, when a great number of *favelas*, or slums, were formed. Since the early 1990s, Rio de Janeiro City Hall has been promoting the Favela Bairro Program, focusing at integrating these communities to the urban fabric, offering new spaces for conviviality, infrastructure networks and community engagement.

The following map, included in the Tijuca National Park Management Plan, indicates the occupied hillsides on the Tijuca Massif, some of them extending up to the boundaries of the TNP. One of the main activities of the park's administration is to curb illegal occupation, by means of a strict surveillance of the park's periphery, as well as supporting the City Hall in monitoring urban expansion in these critical zones. As a safety measure, the administration of the Tijuca National Park maintains intensive and permanent surveillance of its buffer zone.



The side effect suffered by the park is due not only to irregular occupation, but also from its excessive fragmentation caused by the park's great dimensions, its insertion in an urban area, and the busy highways cutting through the different fragments of the park. An efficient surveillance of the periphery has been crucial to avoid invasions or other undesirable activities in the the Park.

Very few occupations remain within the Conservation Unit, mostly situations that have been dragging on for years, in which occupants have acquired legal rights because of the long time of usage of the area. The current administration intends to settle all these issues, but the proceedings are slow, even more so because of the social and economic conditions of the occupants, who frequently do not have the required documentation, hindering the achievement of a solution. The administration has been trying to establish agreements for the removal of the residents in partnership with the municipality.

Another situation in the Tijuca National Park is the presence of a great number of antennas, detrimental not only because of their interference in the landscape but also because they destroy the vegetation. In addition actions in the Management Plan, some of the procedures taken by the current administration are:

- re-registration of all companies responsible for the antennas;
- discussions with broadcasting companies for the creation of a Term of Cooperation establishing criteria and methodologies to authorize activities, including compensations and mitigations;
- a cooperation agreement with radio and TV stations with public service licences for maintaining their antennas in Sumaré, and removing the equipment of those that do not offer public services;
- establishing security posts and systematic surveillance;
- imposing an environmental compensation fee, considering the area/height occupied by the antenna, directly encouraging smaller structures and the consolidation of many companies in a single antenna.

3.2. ENVIRONMENTAL FACTORS

The coast of the city suffers with water pollution. The problem is most severe in the Guanabara Bay, as it has received *in natura* sewage from a large part of the metropolitan area for decades. The Program for the Pollution Clean Up of Guanabara Bay (PDBG) contains strategies for cleaning up the Bay in the mid and long term. Today, *in natura* sewage dumping has been greatly

reduced, and a network of collecting channels and treatment plants is being built. In ocean beaches, the presence of submarine outfalls taking sewage into high seas ensures electronically monitored proper bathing conditions throughout most of the year. Yet, illegal sewage dumping in rainwater galleries causes storm waste overflow on the sand after rainfall. A monitoring structure including cameras is being developed in order to detect illegal connections.

3.3. NATURAL DISASTERS AND RISK PREVENTION

Because of its climate, the municipality of Rio de Janeiro is subject to strong rainfall, particularly in the summer, causing floods in several points, as well as landslides. The City Hall has a “Heavy Rain and Hillside Landslides Warning System”, using real time information from 32 automatic pluviometric stations, images from meteorological radars, lightning detectors, weather data from two meteorological stations, satellite images and information available on the Web. In some favelas located at risk areas, deforesting and accumulated garbage may cause landslides. When this happens and the problem is detected, a system is activated to monitor the situation and remove the population.

There have been no landslides in the rocky outcrops of the city, since those that would be in a situation of risk have been protected by different systems of hillside retention. During the rainy summer of 2010, however, there have been landslides in different points of the Tijuca National Park, but they have not involved any of the dwellings in the area. Resources from the federal and municipal governments have enabled the execution of retention and restoration works on the affected areas.

The northern section of Tijuca Forest, drier and with areas that have been taken over by *colonião* grass, is prone to wildfires. A system for monitoring the Tijuca National Park is being prepared in order to rally teams of volunteer brigades. Another problem faced by the Park is the hunting of wild animals, now controlled with surveillance actions and environmental education activities. The abandonment of domestic animals, particularly cats, also puts pressure on the forest, as does plant extractivism.

3.4. TOURISTIC ACTIVITIES AND SOCIAL PRESSURES

The impacts identified in this approach are related to the social problems faced in the relationship between the users of the site and its administration, often suffering with the lack of coordination between the different entities involved.

Because of their size, the Tijuca National Park and the Flamengo Park must be constantly inspected to ensure that the parks' premises are being used for the proper function. Restrictions on the use of the Tijuca Park are particularly strict. Some minor violations that represent a certain security risk have been identified, such as the practice of religious offerings using lit candles and food left in the open. This problem has been addressed by an ongoing environmental education program and via the creation of an appropriate location for the practice of different religious groups.

In Flamengo Park, the use of barbecue grills and the presence of street vendors announcing their merchandise are constant conservation challenges. In the Park's Master Plan, new regulations should be developed to prevent activities of this sort. Also, as the Park is completely open 24 hours a day throughout the year, the presence of homeless persons at times of difficult inspection poses a serious problem to the security of the users. The administration of the Park is aware of these issues and has been discussing with the municipality on how to handle them.

In March 2009, the Seafront Management Committee was created within the Environment Secretariat in order to ensure the quality of the city's coastal setting and its urban area, defining indicators of environmental quality, supervising and monitoring the activities conducted there: economic, sports, tourism and leisure. Precisely along the Copacabana seafront, several problems still arise, such as vehicles being parked on the promenade; the illegal use of public space by street vendors, selling any merchandise that might attract tourists; the irregular expansion of kiosks, all of them damaging the basalt (portuguese stone) flooring and blocking the flow of pedestrians. The Municipal administration by the Management Committee, has been identifying these problems and intensifying its monitoring.

3.5. NUMBER OF INHABITANTS WITHIN THE PROPERTY AND BUFFER ZONE

- **Components 1, 2 and 3**

Occupation for residential use in the Tijuca National Park is minimal: there are 68 (sixty-eight) dwellings occupied by 340 (three hundred and forty) persons, most of them former and current employees, former residents and their relatives, dating from much earlier than the present administrations. According to the Park manager, a program is underway to remove and resettle these families in areas near the Park. Certain areas are also occupied by former municipal employees or retired employees from the extinct Forest Service. The current administration plans to use these places to establish the Cultural Complex of the Tijuca National

Park as soon as their dwellers can be relocated. Part of the existing buildings belongs to its historical heritage. The others are used by the administration of the Park for various uses, such as a Visitor's Center, Researcher's House and Research Laboratories.

A considerable part of the Botanical Gardens is occupied by families originally employees and/or their descendants, now representing a small portion of the total of irregular dwellings. The issue that has been tackled in different ways for years. Currently, the Federal Government advocates that these dwellers should be removed from the perimeter of the institution, through different solutions according to a number of typologies (financial situation, environmental vulnerability, etc.). Among other proceedings, land will be purchased for the construction of houses, assistance will be offered for dwellings purchasing and families will be enlisted in the "Minha Casa, Minha Vida" Federal program. So far, these dwellers have been registered, as well as an instance has been established for information and negotiation, and the current administration of the garden intends to enforce the determinations of the relevant Federal institutions.

- **Parts of component 4**

There are no invasions or similar problems in the complex comprehending the Sugar Loaf, Urca and Cara de Cão hills. The Protected Area of the Historical Forts of Niterói is occupied by a military base, as are the areas of Forts in the Urca neighborhood and at the base of the Sugar Loaf and the beaches of Copacabana and Leme.

There are no dwellers in the protected area of Flamengo Park and its surroundings, such as the Passeio Público, Praça Paris, or in the Copacabana beach seafront.

- **Buffer zone**

The following table indicates the population residing in the buffer zone, by neighborhood, communities included, according to the 2010 Census by IBGE (Brazilian Institute of Geography and Statistics).

Neighborhood	Dwellers
Santa Tereza	40,926
Botafogo	82,890
Flamengo	50,043
Catete	24,057
Cosme Velho	7,178
Glória	9,661
Humaitá	13,285
Laranjeiras	45,554
Urca	7,061
Copacabana	146,392
Leme	14,799
Jardim Botânico	18,009
Lagoa	21,198
Alto da Boa Vista	9,343
TOTAL	490,396

Source: Brazilian Institute of Geography and Statistics (IBGE, Census 2010 / Pereira Passos Institute.)

4. THE SITE'S CURRENT MANAGEMENT

4.1. LAND OWNERSHIP AND LEGAL SITUATION

- **Ownership of the Site's elements**

The whole area included in the Rio World Heritage Site belongs to the Federate Republic of Brazil:

- The Tijuca National Park, including Lage Park, by a regime of expropriated lands;
- The Rio de Janeiro Botanical Gardens Research Institute, since it was acquired by the Imperial government in 1808 for the establishment of a gunpowder factory and an acclimation garden;
- The areas at the seafront, because they are *Terreno de Marinha* or *Acrescido de Terreno de Marinha*². This area includes the Flamengo Park with Marina da Glória, Botafogo Cove all the way to the Cara de Cão, Sugar Loaf and Urca hill ensemble, to the west of the entrance to the Guanabara Bay, and, surrounding them, to Vermelha Beach, Leme Hill and Copacabana Beach, with their promontories all the way to the Arpoador Stone. To the east of the entrance to the Guanabara Bay, parts of the Pico, Ourives and Morcego Hills.

- **Legal statute or situation**

The useful domain of the components of Rio World Heritage Site is under the responsibility of bodies in the direct or indirect administration of the Federal civil service, as well as under a concession scheme.

The Tijuca National Park, created by Federal Decree n. 50.923, dated July 6, 1961, under the name of Rio de Janeiro National Park, received its current name on February 8, 1967, through Federal Decree 60.183. It is run by the Chico Mendes Institute for the Conservation of Biodiversity (ICMBio), in the Ministry of Environment.

² *Terreno de Marinha* is a strip of land, throughout the Brazilian coast, measuring 33 (thirty-three) meters towards the land from the point (of high tide the average high tide), as per tidal records of 1831, when the concept of *terreno de marinha* was created. *Acrescido de Marinha* is the land formed, naturally or artificially, towards the sea or rivers and ponds, next to the *terrenos de marinha*.

Following the guidelines of the National System of Conservation Units Act, the Tijuca National Park Management Plan has a collegiate management structure, by its Consulting Council, with two Technical Boards, one for Tourism and one for Protection. The Joint Consulting Council includes twenty six representations (half from the government, and half from the civil society) and is presided by the Head of the Tijuca National Park, representing ICMBio in the Council.

A Term of Agreement and Commitment has been signed to ensure the shared management of the TNP by the three spheres of government, with the creation of a Management Council. The Corcovado Railway is operated through a direct concession by the Union Estate Service.

In Lage Park, the main equipment is the former Lage family mansion, now occupied by the School of Visual Arts (EAV). On June 23, 2009 (document D.O. Rio n. 64, dated June 23, 2009) a Usage Assignment Term was signed, in which ICMBio transferred the place's administration to the state government, ending a legal battle that had been procrastinated for years. The measure established a partnership between culture and the environment, aiming at its sustainability.

The Rio de Janeiro Botanical Gardens Research Institute was created as a federal agency linked to the Ministry of Environment through Act n. 10.316, dated June 12, 2001 (document D.O.U n. 233, dated July 12, 2001), defining its legal nature, goals, competences and administrative constitution.

The seafront areas are mostly run by the Municipal City Hall. With the creation of IRPH in 2012, this agency was entrusted with the management of Flamengo Park, as well as the Copacabana seafront. Currently, there is a proposal of creating a Work Group to gather essentially the agencies in activity on Urca Beach to ensure greater efficiency in their actions of conservation and restoration.

As for the management of the Sugar Loaf NM, Resolution SMAC 518/2012 has created the Consulting Council of the Sugar Loaf and Urca Hills Natural Monument, including representatives from all three spheres of Government and ample participation of organized civil society. The Sugar Loaf Cable Cars are operated by a concession granted by the City Hall, as well as Marina da Glória, the Restaurante Rio's in Flamengo Park and the kiosks along the parks and beaches. The Museum of Modern Art and the Carmen Miranda Museum have usage concessions.

The fortresses at the entrance to the bay are run by the Brazilian Armed Forces. To the west, the Fortress of São João, built in the same place where the city was founded in 1565, includes the São José Fort; to the east, the Fortress of Santa Cruz and the Forts of Pico, Imbuí and São Luiz are interconnected, and had a major role in the defense of the entrance to the Guanabara Bay.

4.2. EXISTING PROTECTION

Measures for the protection of the cultural landscape of Rio de Janeiro have been adopted since the 19th century, when the government started to expropriate lands containing the water courses used to supply the city and its springs (Act n. 1.114, dated September 27, 1860), and the creation of the Tijuca and Paineiras Forests (Decision n. 577, Resolution dated December 11, 1861) by the State Secretariat for Affairs of Agriculture, Commerce and Public Works. To continue these protective activities, in 1866 sites located within the Tijuca and Paineiras Forests were expropriated.

Currently, the national policy for the protection and preservation of heritage assets in Brazil is ensured by the Brazilian Constitution in two fronts: in the chapter of Culture and in the chapter of Environment. That of Culture states that “Brazilian cultural heritage consists of assets, tangible or intangible in nature, taken individually or as ensembles, that make reference to the identity, the action, the memory of the different groups who formed Brazilian society”. That of the Environment addresses the conservation of nature under a biological perspective, taking legal and administrative responsibility for the preservation and restoration of essential ecological processes, for biodiversity and for the integrity of genetic heritage, as well as the conservation units.

Thus, preserving Brazilian cultural pluralism and its biological diversity are complementary tasks, particularly in a city such as Rio de Janeiro, where the appropriation by man of a rich and diversified natural environment, with its typical geological and geomorphological formations, has resulted in an outstanding cultural landscape.

The city of Rio de Janeiro stands out in the national arena for having one of the greatest numbers of protected areas in the country, in cultural and environmental terms, such is the importance and significance of our cultural landscape. The Rio World Heritage Site certainly concentrates its most representative elements, particularly those protected by heritage or environmental agencies.

Note that, aware of its role and responsibility in the preservation of landscape heritage, IPHAN has organized, in tandem with the Mariano Procópio Foundation, and the Casa de Rui Barbosa Foundation, the 1st National Meeting of Managers of Historical Gardens, in 2010. It resulted in the Brazilian Historical Gardens Charter, establishing the criteria, definitions and guidelines for the defense and safeguard of historical gardens. As the Charter puts it, “historical gardens are a rich testimonial of the relationship between culture and nature, a testimonial that is preserved in the character of the interventions undertaken and in the

safeguard of the spirit of the place. Preserving them is not just about taking care of a legacy from the past, but rather about creating conditions for the new assets that will enrich our future legacy”.

- **Cultural Protection Listings, Directives and Resolutions**

It was the movement in favor of national culture, supported by Minister Gustavo Capanema in the Ministry of Education and Health, throughout the 1930s that resulted in January 1937 in the creation of SPHAN – the National Historic and Artistic Heritage Service. In the same year, Decree-Law 25 established the act of listing as a measure for the protection of national historic and artistic heritage.

Based upon international preservationist concepts at the time, and written by an intellectual avant-garde, Decree-Law 25 has been maintained for more than 75 years as an integral, consistent and up-to-date document, complete in terms of the different aspects of Brazilian cultural heritage. It is still the primordial document supporting the work of the federal agency responsible for the safeguard of cultural heritage (now called IPHAN), and has been used as model for other cultural institutions. In its second paragraph, it equates tangible assets and natural monuments, as well as the sites and landscapes worthy of conservation and protection because of their notable appearance granted by nature or human industry. Later on, the National Historic and Artistic Heritage Institute established the concept of Brazilian Cultural Landscape by Directive n. 127, dated April 30, 2009, defining the Brazilian Cultural Landscape as “a peculiar portion of the national territory, representative of the process of interaction between man and the natural environment, on which human life and science have imprinted their marks or to which they have attributed value”.

In Rio de Janeiro, the state agency created in 1965 as the Division of Historic and Artistic Heritage of the State of Guanabara, DPHA; now INEPAC – State Institute of Cultural Heritage, an agency of the State Secretariat of Culture, as well as the municipal agency for cultural protection, created in 1984, had a major role in the nomination of Rio de Janeiro for World Heritage. In the municipality, on July 5, 2012, by Decree n. 35,879, the Rio de Janeiro City Hall created the IRPH – Rio World Heritage Institute, as the city of Rio de Janeiro was listed as World Heritage in the Cultural Landscape category and the relevance of heritage for the city’s development was increasingly acknowledged. This new body brought to the former Subsecretariat of Cultural Heritage, Urban Intervention, Architecture and Design the attributions associated to the management of the site recognized by UNESCO, as well as new actions for the expansion, promotion and consolidation of heritage in different areas of the city.

The listed sites corresponding to elements in the Rio World Heritage Site are:

- **Tijuca National Park**

Process 76-T-65, listed in the Book of Archaeology, Ethnography and Landscape on April 27, 1967;

- **Corcovado Cliff**

Process 869-T-73, listed in the Book of Archaeology, Ethnography and Landscape on August 08, 1973;

- **Rio de Janeiro Botanical Gardens**

Process 101-T-38, listed in the Book of Archaeology, Ethnography and Landscape on June 30, 1938;

- **Lage Park Landscape Ensemble**

Process 537-T-57, listed in the Book of History on June 14, 1957;

- **Flamengo Park**

Process 748-T-64, listed in the Book of Archaeology, Ethnography and Landscape on July 28, 1965;

- **Cara de Cão, Babilônia, Urca, Sugar Loaf, Dois Irmãos Hills and Pedra da Gávea**

Process 869-T-73, listed in the Book of Archaeology, Ethnography and Landscape on August 08, 1973;

- **São João Fortress**

Processes 101-T-38 and 155-T-38, listed in the Books of History and of Fine Arts on May 24, 1938;

- **Santa Cruz Fortress**

Process 207-T-39, listed in the Books of History and of Fine Arts on October 04, 1939.

The Buffer Zone includes a great number of listed properties. The only listed were those with a significant size, coherent with the scale in study:

- **Laranjeiras Palace and its garden**

Process 1,075-T-82, listed in the Book of Fine Arts on May 24, 1983;

- **Guinle Park**

Process 1,110-T-84, listed in the Book of Fine Arts on April 16, 1986;

- **Catete Palace and its garden**

Processes 101-T-38 and 153-T-38, listed in the Books of History and of Fine Arts on April 06, 1938;

- **Guanabara Palace and its garden**

Process 101-T-38, listed in the Books of History and of Fine Arts on April 06, 1938;

- **Passeio Público**

Process 099-T-38, listed in the Books of History and of Fine Arts on June 30, 1938.

Considering the importance of ensuring the visibility of heritage and following the guidelines established in Article 18 of Decree-Law 25, IPHAN has been defining some of the areas surrounding listed properties by specific resolutions, in an effort to ensure their protection. Some of these Federal resolutions include elements of the Site and its surroundings:

- **Jardim Botânico, Gávea and Lagoa:**

Resolution n. 104/2000 – establishes criteria to curb new constructions from interfering with the framework surrounding cultural assets, in the areas submitted to special protection by the Federal Public Power;

- **Botafogo:**

Resolution n. 29 of August 15, 1980 – establishes conditions for constructions in Sorocaba and Palmeiras Streets, at the outskirts of listed monuments, so they do not interfere with their visibility and setting;

- **Glória, Catete and Downtown:**

Resolution n. 08 of January 29, 1980 – establishes parameters for new constructions aiming at protecting the visibility and setting of listed monuments. Glória Skyline;

- **Sugar Loaf, Urca, Babilônia and Cara de Cão Hills:**

Resolution n. 420, of December 22, 2010 – Defines the procedures for granting authorization to undertake interventions in built properties listed as heritage and their respective surroundings;

- **Joatingá, Itanhangá, São Conrado and Alto da Boa Vista**

Resolution n. 420, of December 22, 2010 - Defines the procedures for granting authorization to undertake interventions in built properties listed as heritage and their respective surroundings.

The areas listed by the State of Rio de Janeiro contained within the Rio World Heritage Site are listed below:

- **Copacabana Fort and Copacabana and Arpoador promontories**

Resolution SEC 47, dated September 02, 1991, published in the Diário Oficial of September 04, 1991;

- **Landscaped urban ensemble on the beaches of Leme, Copacabana, Ipanema and Leblon**

Edict published in the Diário Oficial of January 01, 1991;

- **Henrique Lage Park**

Decree “E” n. 788, dated July 15, 1965;

The Buffer Zone also contains a great number of listed state properties. As in the previous survey, we will mention only those of significant size:

- **Dois Irmãos Hill**

Edict published in the Diário Oficial of September 22, 1994;

- **Chacrinha State Park**

Edict published in the Diário Oficial dated December 30, 2002;

- **Gávea Park**

Decree “E” n. 927 of 11.29.1965;

- **Copacabana Palace Hotel**

Resolution SEC n. 16 of 03.19.1986, published in the Diário Oficial RJ of 03.24.1986;

- **Gardens by Roberto Burle Marx at Senador Salgado Filho Square**

Edict published in the Diário Oficial RJ of December 20, 1990;

- **Santos Dumont Airport Passenger Station**

Edict published in the Diário Oficial RJ of December 09, 1998;

- **Architectural Ensemble of Largo and Beco do Boticário**

Resolution n. 026, dated August 31, 1990, published in the Diário Oficial RJ of September 12, 1990.

The most significant areas listed by the Municipality of Rio de Janeiro contained in the Rio World Heritage Site are:

- **Flamengo Park**

According to Act n. 2,287, dated January 04, 1995;

- **Copacabana Promenade and Flamengo Park, along with other landscape works by Burle Marx**

Decree n. 30.936, dated August 04, 2009, provisionally listing 84 landscaping works by Burle Marx;

- **Duque de Caxias Fort (Leme)**

Decree 6,933, dated September 08, 1987;

- **Arpoador Stone**

Act 1,433, dated September 03, 1989;

- **Botafogo Cove body of water**

Decree 7,444, dated March 01, 1988;

- **Almond tree ensemble and gardens in Paris Square and Marechal Deodoro da Fonseca Square**

Decree 13,898, dated May 16, 1995;

- **Sugar Loaf, Urca, Cara de Cão and Babilônia Hills, including the initial station of the Bondinho Sugar Loaf Company**

Decree 26,578, dated June 01, 2006;

- **Christ the Redeemer**

Decree 9,156, dated January 30, 1990;

The Buffer Zone contains a great number of listed municipal properties, including:

- **Rodrigo de Freitas Lagoon shore line and outskirts**

Decree 9,396, dated June 13, 1990;

- **Cinelândia Architectural Ensemble**

Act 1,467, dated November 30, 1989;

- **City Palace**

Decree 9,904, dated December 12, 1990;

- **São Joaquim Palace**

Decree 25,693, dated August 23, 2005;

- **UFRJ Music School**

Act on September 18, 2007;

- **Gávea Racetrack Built Ensemble and other premises of the Brazilian Jockey Club**

Decree 14,898, dated July 20, 1996.

Areas for the Protection of Cultural Settings – APACs and Areas Surrounding Listed Properties located in the Buffer Zone of the sites listed as a Cultural Landscape or their outskirts include:

- **Urca**

Decree n 7,451, dated March 03, 1988 – Establishes the Definitive Listing as Heritage of the mentioned cultural assets and delimits its Surrounding Area (Urca Casino).

Decree n. 16,783, dated June 29, 1998 – Alters annex II of Dec. n 7,451/1988.

- **Lido**

Decree n. 11,448, dated October 07, 1992 – Establishes special conditions for the Environmental and Land Occupation Protection of the area known as Lido and adjacent areas, in Copacabana, V RA, and other provisions.

Decree n. 14,676, dated March 29, 1996 – Revokes the only paragraph of Art. 2 of Decree 11,448/1992

- **Peixoto Neighborhood**

Act n. 1,390, dated May 12, 1989 – Creates the Environmental Protection Area of Peixoto Neighborhood, in Copacabana, V RA, and other provisions.

Decree n. 9,226, dated March 13, 1990 – Regulates Act 1,390/1989, and other provisions.

- **Jardim Botânico**

Decree n. 20,939 of 12/24/2001 – creates the Area for the Protection of Cultural Setting (APAC) of the neighborhood of Jardim Botânico – VI RA, determines the Listing as Heritage of the properties mentioned and other provisions. Reprinted in D.O RIO of March 27, 2003, for incorrecion

- **Area Surrounding the Gávea Racetrack**

Decree n. 14,898, dated June 20, 1996 – Determines the Permanent Listing of the cultural properties mentioned, creates their Surrounding Area and establishes criteria for their protection (Built ensemble of the Gávea Racetrack).

- **Rodrigo de Freitas Lagoon**

Decree n. 9,396, dated June 13, 1990 – Determines the Permanent Listing of the cultural property mentioned, Creates a Protection Area for the Outskirts of the Rodrigo de Freitas Lagoon, and other provisions.

Decree n. 21,191, dated March 26, 2002 –D.O RIO of October 09, 2002 - Alters Art. 3 and Annex II of Decree 9,396/1990.

- **Santa Teresa**

Act n. 495, dated January 09, 1984 – Transforms the neighborhood of Santa Teresa into an Environmental Protection Area and other provisions.

Decree n. 5,050, dated April 23, 1985 – Regulates Act n. 495, dated January 09, 1984, alters the Zoning Regulations approved in Decree 322, dated March 03, 1976, and other provisions.

- **Cosme Velho and part of Laranjeiras**

Act n. 1,784, dated October 29, 1991 – Declares the Neighborhood of Cosme Velho and part of the Neighborhood of Laranjeiras - VI RA as Areas for Environmental Protection and other provisions.

Resolution SMC n. 27, dated November 04, 1997 – Establishes conservation criteria for works of reform, modification, recharacterization or any physical intervention on the sidewalks, gardens and buildings of the parts of the streets General Glicério, General Cristóvão Barcelos and Professor Ortiz Monteiro included in Act n. 1,784/1991.

- **Laranjeiras**

Decree n. 17,028, dated September 25, 1998 – Creates an Area for the Protection of Cultural Setting (APAC) in the neighborhood of Laranjeiras and other provisions (Laranjeiras Street and Ribeiro de Almeida Street).

Decree n. 20,611, dated October 10, 2001 – Creates the Area for the Protection of Cultural Setting (APAC) of the neighborhood of Laranjeiras – IV RA and establishes criteria for its protection.

Decree n. 13,051, dated June 29, 1994 – Determines the listing of the architectural property mentioned in it and Creates its Surrounding Area (Casas Casadas).

- **Catete**

Decree n. 24,121, dated April 15, 2004 – Regulates subparagraph III of art. 3 of Act 1,679/1991 – APA São José.

Decree n. 25,693, dated August 23, 2005 – Creates the Area for the Protection of Cultural Setting of the neighborhood of Catete and part of Glória

- **Botafogo**

Decree n. 22,221, dated November 04, 2002 – Creates the APAC of the neighborhood of Botafogo, Determines the provisional listing of the properties mentioned in it and other provisions.

Decree n. 22,643, dated February 10, 2003 – Adds annexes III and IV, rewrites articles 4 and 5 and corrects annexes I and II of Decree n. 22,221/2002

- **Humaitá**

Decree n. 26,268, dated March 20, 2006 – D.O. Rio of March 21, 2006 – Creates an Area for the Protection of Cultural Setting (APAC) in the neighborhood of Humaitá – IV RA and other provisions.

Decree n. 4,665, dated August 27, 1984 – Establishes special conditions of environmental protection for the section of Alfredo Chaves Street between Icatu and its ending, located at IV RA.

Act n. 730, dated September 04, 1985 – Creates a Zone of Cultural and Landscape Preservation at Alfredo Chaves Street.

- **Alto da Boa Vista - APARU**

Decree n. 11,301, dated August 21, 1992 - D.O. RIO of August 24, 1992 – Creates the Area for Environmental Protection and Urban Recovery (APARU) of Alto da Boa Vista, comprehending the neighborhood of Alto da Boa Vista, part of the Tijuca National Park and including a forest reserve zone, consisting of the areas located above 100 m (one hundred meters).

Decree n. 11,461, dated October 08, 1992 - D.O. RIO of October 09, 1992 – Adds a single paragraph and Annexes I and II to Decree n. 11.301, dated August 21, 1992.

Decree n. 12,242, dated August 30, 1993 - D.O. RIO of August 31, 1993 – Modifies articles 4 and 5 of Decree n. 11,301 , dated August 21, 1992.

Decree n. 18,685, dated June 15, 2000 – D.O RIO of June 16, 2000 – Extends the deadline established in Art. 4 of Decree 11,301/1992.

- **Cultural Corridor**

Act n. 506, dated January 17, 1984 – Creates the Cultural Corridor Special Zone, for the landscape and environmental preservation of Downtown, addresses the Listing of real estate in the Surrounding Area, and other provisions.

Act n. 1,139, dated December 1987 – Addresses the preservation of real estate in the Cultural Corridor Special Zone and its Surrounding Area, and other provisions.

- **Arcos da Lapa**

Act n. 3,188, dated March 19, 2001 – Establishes the Area for the Protection of Cultural Setting (APAC) of Arcos da Lapa.

- **Ipanema**

Decree n. 23,161, dated July 21, 2003 – Recognizes the Cultural Site of Ipanema, creates the Area for the Protection of Cultural Setting of Ipanema, lists as heritage the properties mentioned in it and other provisions.

• **Nature Conservation Units**

The National System of Nature Conservation Units (SNUC) was created by Act 9,985/2000 based upon the guidelines of the National Environment Policy (Act n. 6,938/1981). It established criteria and norms for the creation, implementation and management of Conservation Units in Brazil, which main goals are maintaining the biological diversity and genetic resources of the national territory.

A Conservation Unit is understood as “the territorial space and its environmental resources, including jurisdictional waters, with relevant natural characteristics, legally instituted by the Public Power, aiming at their conservation, with defined boundaries, under a special regime of administration, to which adequate guarantees for protection are applied”. The law establishes different categories of protection, distinguishing integral protection units from sustainable use units.

One of the most relevant Federal Conservation Units is the Tijuca National Park, with its respective buffer zone, created by Federal Decree n. 50,923, dated July 06, 1961, revised by Decree n. 60,183, dated February 08, 1967, in its denomination and boundaries.

The Municipal Conservation Units completely or partly included in the Site are:

- **Sugar Loaf and Urca Hills Natural Monument**, created by Municipal Decree n. 26,578, with 91.50 ha;
- **Carioca Landscape Natural City Park**, created by Decree n. 37,231, dated June 05, 2013, with 159.83 ha;
- **APA of the Seafront**, created by Act 1,272, dated June 06, 1988, with 215.49 ha;
- **APA of the Copacabana e Arpoador Promontories**, created by Act 2,087, dated January 04, 1994, with 24.79 ha.

The Buffer Zone includes a number of Nature Conservation Units established by Municipal instances, as well as urban parks run by the City Hall:

- **APARU of Alto da Boa Vista**, created on August 21, 1992, with 3,210.88 ha;

- **City Natural Park**, created on July 03, 2008, with 46.78 ha;
- **Fonte da Saudade Natural City Park**, created on November 14, 2000, with 2.22 ha;
- **Catacumba Natural City Park**, created on January 19, 1979, with 29.74 ha;
- **José Guilherme Merquior Natural City Park**, created on November 14, 2000, with 6.39 ha;
- **Penhasco Dois Irmãos Natural City Park**, created on December 12.31.1992, with 30.54 ha;
- **Paisagem Carioca Natural City Park**, created on June 05, 2013, with 159.83 ha;
- **APA Paisagem Carioca**, created on August 05, 2013, with 204 ha;
- **APA of São José**, created on October 01, 1991, with 108.99 ha;
- **APA of Morro da Saudade**, created on September 28, 1992, with 59.46 ha;
- **APA of Babilônia and São João Hills**, created on June 05, 1996, with 122.66 ha;
- **APA of Viúva Hill**, created on December 12, 1997, with 16.53 ha;
- **APA of Cabritos Hill**, created on September 28, 1992, with 135.46 ha;
- **APA of Sacopã**, created on October 26, 1986, with 94.75 ha.

Some protected natural areas within the Site and the Buffer Zone overlap, so that about 85% of their area is under a legal protection instrument.

- **Landscape protection through Urban Legislation**

In addition to protection based upon heritage and environmental legislation, the urban legislation of Rio de Janeiro was crucial for the conservation of the sites declared Cultural Landscape, and of a significant part of the Buffer Zone.

Throughout the 20th century, when urban buildings became increasingly vertical, one of the main urbanistic instruments used to control this process was the maximum height of 12 floors, established according to the characteristics of each neighborhood or sub-neighborhood. The maximum height in the city was abolished only in 1967, enabling the construction of single buildings of greater height, respecting the built volume of an edifice located in the same plot.

The process of verticalization of urban buildings has gradually intensified throughout the 20th century in many areas of the city, particularly after 1967, when the construction of buildings of greater height became viable. This change in urban legislation led to great changes that may be perceived in the landscape of certain neighborhoods: Copacabana, with its “wall” formed by 12-

story buildings (more than 30m of height) by the sea, and other buildings of great height at the Beaches of Flamengo and Botafogo, Copacabana, Ipanema and Leblon.

- **Forest protection**

The first urbanistic instruments concerned with the control of hillside occupation appeared in the 1970s, focusing on protecting the forests. Decree E 3,800, dated 1970 defined the Special Zones, later ratified by Decree 322/ 1976, where SZ1 corresponded to a forest reserve zone and SZ10 to the areas occupied by slums. For the first time in the city's urbanistic legislation, a limit has been set for the occupation of hillsides, establishing a maximum elevation of 60 meters above sea level for Sugar Loaf, Urca and Telégrafo, and 100 meters for the other hills in the city. Three years later, Decree E 6,168, dated May 15, 1973 banned the opening of streets by private initiative above 60 m from the sea. It only allowed developments of land properties facing an acknowledged public street into plots with the dimensions allowed by current legislation.

The urban landscape as we perceive it today confirms the importance of this restriction, crucial for the maintenance of the plant covering of our hills, ranges and boulders.

- **Implementation of protection**

The two most relevant documents of urban policy in the Municipality of Rio de Janeiro are the Municipality's Organic Law, dated April 05, 1990, and the Master Plan for the Sustainable Urban Development of the Municipality of Rio de Janeiro (Complementary Law n. 111 of February 01, 2011). Both documents incorporate all the Federal laws and guidelines related to both cultural and environmental protection and preservation in the municipality, as well as all the listed properties and Conservation Units defined until the date of its publication.

The Master Plan, following an international model of sustainable development, adopts the themes of culture, environment and landscape, intrinsically correlated to urban planning. It is based upon principles in which the value of the landscape plays a crucial role, defining that the municipality's urban policy will be formulated and implemented based upon the principles of appreciation, protection and sustainable use of the environment, the landscape and of natural, cultural, historical and archaeological heritage in the City's process of development. By affirming its state-of-the-art position in the appreciation of our landscape, it also defines that the goal of the municipality's urban policy is to promote the full development of social functions in

the City and in urban properties by a number of guidelines, particularly “...conditioning urban occupation to the protection of the massifs and hills, the forests, the seaside and the bodies of water, the city’s landmarks, the landscape, the rural areas and the cultural identity of the neighborhoods”.

- **Principles of the Master Plan**

Among its principles, in terms of landscape preservation, Art. 2 states:

- “Urban occupation is conditioned to the preservation of the massifs and hills, of forests and other areas with plant covering, of the seaside and its sand banks vegetation, of the bodies of water, lagoon complexes and its banks, marshes, the landmarks of the city and its landscape”;
- “Landscape is meant to be the interaction between natural environment and culture, expressed in the space configuration resulting from the relation between natural, social and cultural elements, and in the marks of human actions, manifestations and forms of expression”;
- “The landscape of the city of Rio de Janeiro is its most valuable asset, responsible for its renown as a world icon and for its insertion in the country’s touristic economy, generating employment and income”;
- “The city’s landscape heritage includes both landscapes with special attributes and landscapes deriving from popular manifestations and expressions”.

In Art. 14, of Land Occupation, it is established that “the use and occupation of the land in occupied areas or areas committed to be occupied will be regulated through the limitation of densities, construction intensity and economic activities, in function of the capacity of its infrastructure, of the transit network and the accessibility of protection to the natural environment, urban memory, the right to enjoy the city’s natural landscape and the quality of the urban setting”.

This principle will be crucially important for the occupation control in the Buffer Zone.

- **Instruments of urban policy**

Among the many instruments of urban policy, three are directly related to the protection of landscape:

- Areas for the Protection of Cultural Setting (APACs), comprehending public or private territories presenting a built ensemble of relevant cultural interest, whose occupation and renovation must be compatible with the protection and conservation of its setting and its social and spatial characteristics identified as relevant for the memory of the city and for maintaining the diversity of urban occupation shaped by time;
- Sites of Relevant Landscape and Environmental Interest, encompassing the “public or private areas that, for their natural, landscape, historical and cultural attributes, are reference points in the city’s landscape, subject to a specific protection regime and to environmental recovery interventions, for effects of the protection and maintenance of their characteristics”;
- Cultural Landscapes, corresponding to “a portion of the territory where human culture has imprinted significant marks over the natural environment, producing combined works of culture and nature, conferring the landscape singular identity and values”. They may be found inside or overlaped with Nature Conservation Units or other institutionalized areas of preservation. These two categories encompass all the elements in the Site listed as World Heritage.

- **City landscape policy**

An innovative landscape policy, in comparison with the previous plans, is defined in Articles 166 to 170, in its concept, objectives and structuring actions.

“It is in the joint responsibility of the agencies associated with the planning and management system, in reference to the protection of the landscape:

- I. To identify the relevant elements constituting the landscape;
- II. To ensure each citizen the right to enjoy the landscape;
- III. To ensure a harmonious relation between the different elements comprising it;
- IV. To create measures for the preservation of the landscape in territorial planning and in sector policies that may avoid direct or indirect impacts;
- V. To ensure the improvement of the environmental quality of public spaces;
- VI. To foment the preservation of urban cultural and environmental heritage.”

“Structuring actions related to landscape protection include:

- I. Planning and executing actions of conservation, monitoring and maintenance in the significant or characteristic features of the landscape;
- II. Developing specific legislation addressing the urban landscape, including norms and programs for the different areas of the city, considering the diversity of its landscape;
- III. Curbing the intrusion, in the urban space, of constructive forms that may obliterate significant elements in the natural and built landscape;
- IV. Establishing processes of negotiation to mediate the different interests and values of the social groups that live and interact in the configuration of the landscape;
- V. Establishing procedures for the participation of society and of representatives of the entities, institutions and public bodies in the different governmental instances, interested in defining and implementing landscape protection policies;
- VI. Disciplining the use of public space by the public and private sectors, exceptionally, according to legal parameters expressly stated in the Law of Land Use and Occupation;
- VII. Establishing, in the laws of land division, use and occupation and in regional and urban structuring plans, or in specific legislation, more adequate parameters and standards for institutional, informative or indicative communication, considering the physical, landscape and environmental characteristics of the city, outdoor publicity and urban furniture;
- VIII. Creating effective mechanisms for the surveillance of the different interventions in the urban landscape;
- IX. Undertaking permanent actions of environmental education, by promoting public awareness campaigns for the protection and appreciation of urban landscape.”

“Landscape is understood as the visual configuration of the city and its components, resulting from the interaction among natural, historical and cultural elements. The landscape of Rio de Janeiro is the city’s most valuable asset, responsible for its renown as a world icon and for its insertion in the country’s touristic economy, generating employment and income.”

“The goals of the municipal landscape policy will be:

- I. to ensure citizens the right to enjoy the landscape;
- II. to promote the environmental quality of public spaces;
- III. to allow citizens to identify, interpret and understand the landscape, the public and private elements that constitute it;
- IV. to ensure visual balance between the different elements comprising the landscape;
- V. to coordinate and qualify public spaces; and
- VI. to strengthen an urban identity, promoting the preservation of urban cultural and environmental heritage.”

“The general guidelines of landscape policy are:

- I. to implement the technical, institutional and legal instruments of landscape management;
- II. to promote the classification of public and private components in the landscape, ensuring visual balance between the different elements constituting it;
- III. to favor the preservation of urban, cultural and environmental landscape;
- IV. to promote community participation in the identification, appreciation, preservation and conservation of significant elements in the landscape;
- V. protecting natural, cultural and landscape elements, allowing a view of the panorama and the maintenance of the landscape in which the elements are inserted;
- VI. raising awareness, among the population, about the appreciation of the landscape as a factor in improving quality of life, through environmental and cultural education programs.”

Another important feature of the Master Plan is Subsection VII, related to the Green areas and Open Spaces, establishing as structuring actions the development of an environmental urban diagnosis of the different regions in the municipality,

aiming at creating, implementing and improving squares and urban parks to alleviate the effects of the densification of the urban grid and the development and implementation of a Reforesting Master Plan, aiming at an adequate planning and management of the urban arboretum, among other actions.

- **Cultural heritage policy**

The Sustainable Urban Development Master Plan defines a more precise cultural heritage policy in its objectives, guidelines and structuring actions. Thus, the landscape as integral part of this heritage also plays a more relevant role.

One of its main goals is: “To identify, protect and conserve the setting of urban ensembles, the natural and built landscape and inherent social and economic relations, of relevant cultural interest”.

- **Enforcement of Master Plan principles in the APACs**

As an application of the Master Plan guidelines in reference to the landscape, Decree n. 34,982 (dated December 16, 2011) addresses the licencing of activities in the APAC of Leblon. Although the neighborhood in question lies outside the site’s buffer zone, the aforementioned Decree is relevant because it establishes a new model that should be adequate for the management of other APACs. It establishes the requirement of a previous analysis by the municipal body for the safeguard of cultural heritage – IRPH, of projects relating to licencing, change of use and change of profile of economic activities, including the concession of permits of any nature for all activities taking place in real estate units facing a public street. The impact of the economic activity profile over the quality of the cultural setting also must be observed. This decree is primarily intended to include the notion of cultural setting in the protection of landscape, beyond merely visual or morphological aspects. Thus, the setting of the neighborhood and the economic and cultural practices also are the object of tutelage by the State.

The same decree creates a Work Group for the development of a Management Plan for the APACs, defining its guidelines.

In 2012, the following instruments were instituted to foment the recovery of built ensembles in protected areas:

- Decree 35,646, dated May 16, 2012, created the Edict for the Creative Occupation of municipal buildings (Downtown) within the boundaries of APACs (listed, preserved and under tutelage), and is planned to be extended to all other APACs.

- Decree 35,648, dated May 16, 2012, instituted the reappropriation of abandoned buildings in areas protected by their cultural attributes with a 10-year use assignment (listed, preserved and under tutelage).

4.3. EXISTING MANAGEMENT PLANS

Management plans for the components of the Rio World Heritage Site, crucially important for its management, are mostly completed and in operation, or in a stage of preparation.

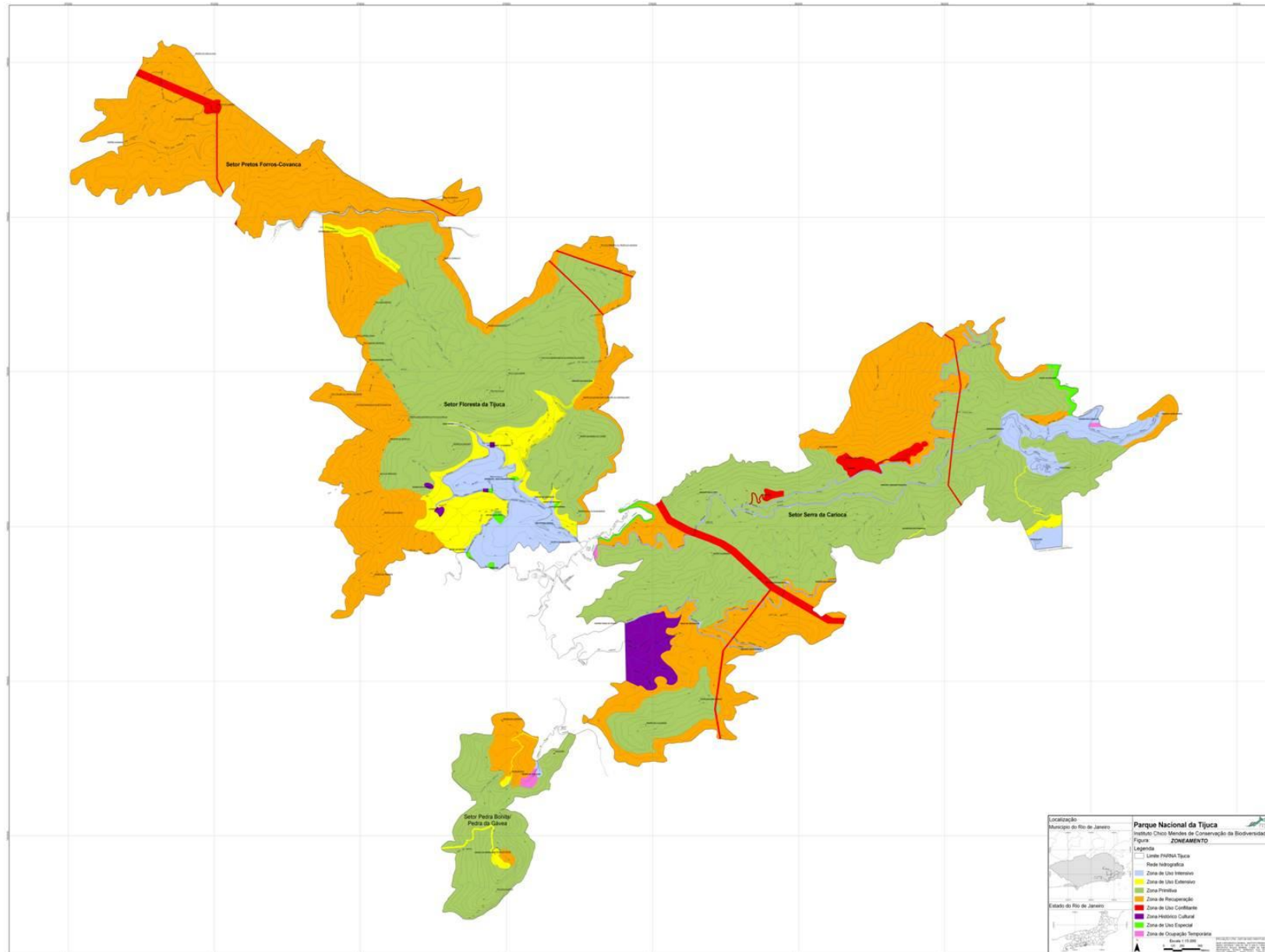
4.3.1. MANAGEMENT PLAN FOR THE TIJUCA NATIONAL PARK

The Management Plan for the Tijuca National Park was updated in 2008 by the Chico Mendes Institute for the Conservation of Biodiversity – ICMBio and approved by Resolution ICMBio n. 40, dated June 25, 2008. This document is a management instrument formulated after a diagnosis that consists in promoting zoning and planning in the Conservation Unit. The Management Plan has been developed using the methodology of planning by thematic programs (protection, research, public use, external integration, operationalization programs) and by strategic areas. It establishes guidelines, actions and norms that must be followed. The protection, time and management actions should provide an increase of the Primitive Zone, consisting of the areas considered in recovery that become areas of dense vegetation with trees of significant size.

The Management Plan establishes the zoning of the Park according to its diagnosis. Its cartographic base was the map defined by the perimeter delimited in the Presidency of the Republic’s Decree, dated June 03, 2004. All activities and actions are proposed according to the established zoning recorded in it:

- **Primitive Zone** – where slight or minimal human intervention occurred, containing plant, animal species or natural phenomena of great scientific value. For the characteristics of the Tijuca National Park, this is the zone encompassing the most well-preserved areas, it is, therefore, the zone of most restrictive use “to ensure the harmonious coexistence of the different elements comprising the landscape”;

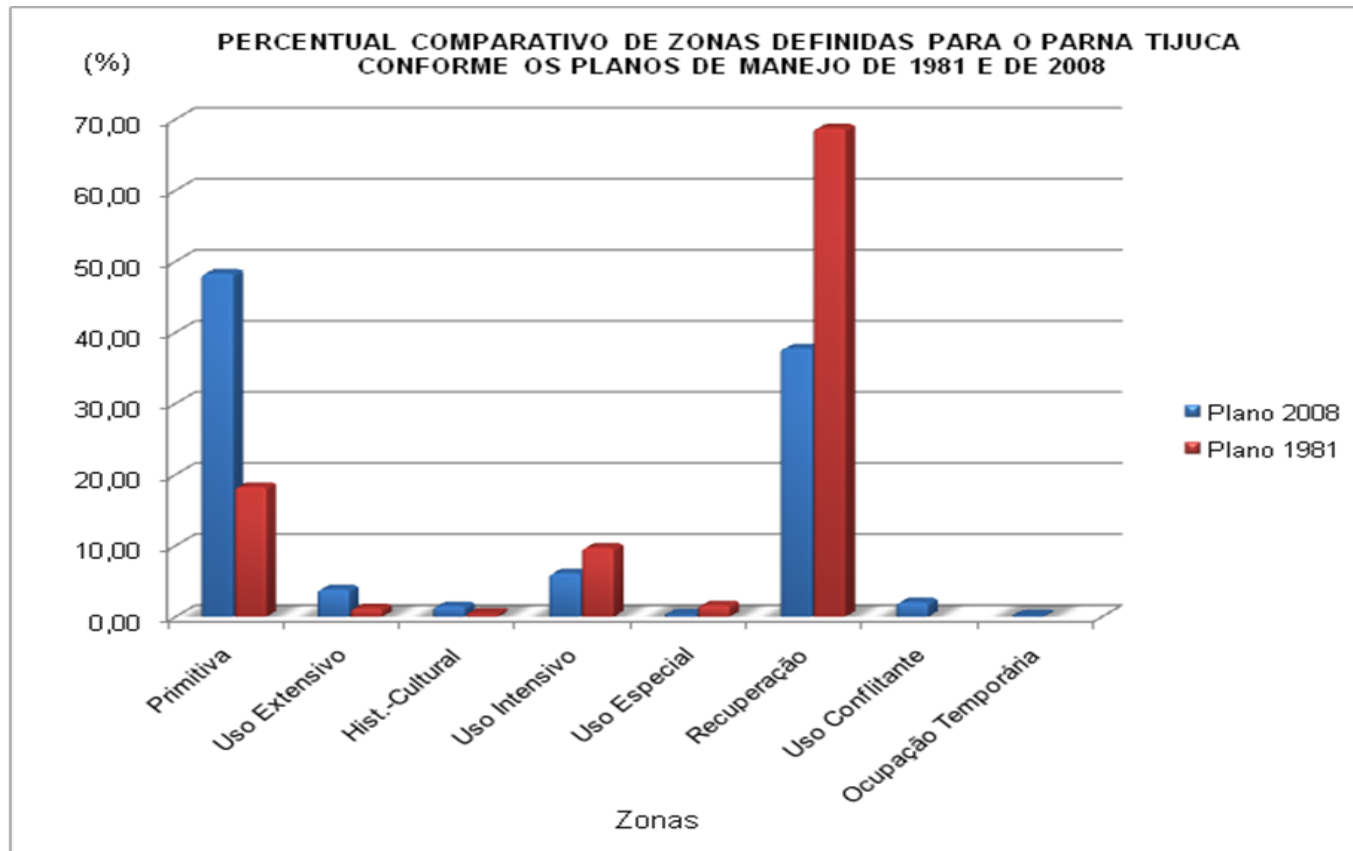
- **Extensive Use Zone** – consisting mostly of natural areas, it may present some human alterations. Characterized as a transition between the primitive zone and the intensive use zone;
- **Intensive Use Zone** – consisting of natural or anthropized areas. The setting is maintained as close as possible to its natural state, and it may contain, among other buildings, a visitor’s center, snack bars, restaurants, restrooms and other amenities and services for public use;
- **Historical-Cultural Zone** – encompasses sites of historic relevance open to public visitation “to promote environmental quality in public spaces”;
- **Recovery Zone** – contains areas with considerable human impact. It is a provisional zone, as, once restored, it will be incorporated to one of the permanent zones in the Conservation Unit.
- **Special Use Zone** – contains the areas necessary to the administration, maintenance and services for the Conservation Unit, including dwellings, headquarters, workshops, operating center and others. They must be chosen and controlled so as not to conflict with the natural character of the Conservation Unit, and should, whenever possible, be located in its periphery;
- **Conflicting Use Zone** – consisting of spaces located within the Conservation Unit whose uses and aims, established before the creation of the Unit, conflict with the conservation goals of the protected area. These are areas occupied with public utility enterprises, such as transmission lines, antennas, water collection, dams;
- **Temporary Occupation Zone** – areas within the Conservation Unit with concentration of human residences and their respective areas of use. These are provisional zones: once the population has been relocated they will be incorporated to one of the permanent zones.



Source: Management Plan for the Tijuca National Park

The graphic comparing the zones established by the management plans of 1981 and 2008 reveal the effort of the Park administration towards the protection and conservation of its different zones, leading to their requalification and promoting a significant improvement in the quality of the forest and its densification.

COMPARATIVE PERCENTAGE OF ZONES DEFINED FOR THE TIJUCA NATIONAL PARK
ACCORDING TO THE MANAGEMENT PLANS OF 1981 AND 2008



Zones: Primitive; Extensive Use; Historical-Cultural; Intensive Use; Special Use; Recovery; Conflicting Use; Temporary Occupation

Source: Management Plan

The Buffer Zone of the Tijuca National Park was strictly defined according to the criteria of non-existence of irregular occupations and the presence of significant vegetation.

The guidelines for management in the buffer zone are:

- stimulating the creation of RPPNs (Private Reserves of Natural Heritage);
- not authorizing any activity or intervention implicating the suppression of native vegetation, from a secondary initial stage of successional development;
- maintaining the classification of primary or secondary vegetation, in any stage of regeneration, even in case of fire, deforesting or any other kind of unauthorized or unlicensed intervention;
- not authorizing the implantation of enterprises implicating the suppression of trees, even when not native, except for the case of single-family homes, according to technical analysis;
- prohibiting the urbanization of areas in the buffer zone.

The Tijuca National Park is awaiting the acknowledgement of its buffer zone by the municipal City administration and the declaration of its legal protection.

4.3.2. MANAGEMENT PLAN FOR THE SUGAR LOAF AND URCA HILLS NATURAL MONUMENT

The Management Plan for the Sugar Loaf and Urca Hills Natural Monument (NAMO) has been developed with resources from the Environmental Compensation Council of the State of Rio de Janeiro, and it was approved by Resolution SMAC n. 543/2013. The respective Plan was developed according to the methodology established by the Methodological Norms for the Development of Management Plans published by INEA in 2010. Note that there was no previous Management Plan for the NAMO, and this is phase 01, corresponding to its basic implementation.

After a diagnosis of the conservation unit, based upon the available information about the area, particularly the results of researches undertaken, in addition to field surveys, the specific objectives for its management and zoning were established, defining the norms and different degrees of use restriction for each zone.

The map below presents the zoning established for the NAMO.



Zoning of Sugar Loaf and Urca Hills NAMO

KEY: Visiting area; Recovery Zone; Conservation Zone; Cable car

CONSERVATION ZONE – The zone assigned for the conservation of ecosystems, with a potential for future recovery or regeneration, admitting its indirect use. The general objective of its management is to preserve the natural environment while favoring activities of scientific research, promoting environmental awareness and recreation.

Specific Objectives:

- Favoring scientific research in more protected environments;
- Preserving samples of the different plant typologies in the Natural Monument;
- Protecting a significant portion of the species in the massif, including rupicolous species endemic in the region;
- Allowing visitation in a primitive manner, seeking to conciliate public use and preservation.

VISITING AREA – Consisting of natural or anthropized areas. The setting is kept as close as possible to its natural state, and may contain infrastructure to support visitation, with equipment compatible with the implementation of the CU. The general objective of its management is to facilitate recreation and environmental education in harmony with the environment.

Specific objectives:

- Propitiate low impact public use activities (environmental awareness, interpretation and recreation), offering infrastructure and other amenities;
- Provide visitors in general with options for leisure and learning, offering a support structure for visitation, ensuring access to the attractions located on Sugar Loaf and Urca Hills;
- Stimulate the development of leisure activities of an educational character, exploring the composition of the landscape along the Monument;
- Allowing visitation on Urca Hill, with the necessary infrastructure for support and control;
- Allowing a diversity of public use activities in more altered areas, with the presence of bars, restaurants and cable car stations;
- Promoting scientific research activities and environmental monitoring;
- Offering visitors opportunities for being in touch with nature, by activities such as hiking and contemplation.

RECOVERY AREA – The area in a process of recovery. Once recovered, it will be reincorporated to one of the CU zones. Exotic species introduced must be progressively removed and its recovery may be natural or induced. The general objective for the management of these areas is to curb environmental degradation and ensure natural evolution.

Specific Objectives:

- Ensuring the recovery of degraded areas or those colonized by invading plant species;
- Avoiding greater damage to the biota, originating in the Visiting Areas, serving as a transitional area between these and the Conservation Zone;
- Ensuring the recovery of areas eroded by human activity.

The Conservation Zone represents 83.8% of the CU (76.7 ha). The Visiting Area, more intensively used, counts only 5.9% (5.4ha) and the Recovery Area counts 10.3% of the total area (9.4 ha), as summed up in the following table.

Table 1. Zoning with the respective areas and their proportion in relation to the CU's total area.

Zone	Area (ha)	Proportion of CU
Conservation Zone	76.7	83.8 %
Recovery Zone	9.4	10.3 %
Visiting Area	5.4	5.9 %
TOTAL	91.5	100.0 %

Source: NAMO Management Plan (Developed by Detzel Consulting, 2012)

Based upon the provisions of the SNUC Act and Decree n. 4,340/2002, the Buffer Zone (BZ) of the NAMO is subject to the following general norms:

- Visitation to the attractions in the BZ must observe the principles of minimal impact;
- No activities of ground levelling, dredging or digging that may cause damage or degradation to the environment and/or pose danger for people or the biota will be allowed without the authorization of the competent bodies and the consent of SMAC, who must analyze the pertinence of undertaking the necessary studies;

- The disposal of residues and/or effluents of any nature must abide by the legal norms, established for specific cases, and the norms of the management plan;
- The disposal of chemical and nuclear refuse within the BZ is forbidden. In the case of those generated within the BZ, there must be an adequate project for their adequate disposal and for the fulfillment of the legislation in vigor;
- Every touristic enterprise implanted or to be implanted in the BZ must be licensed by the competent bodies and follow sanitary norms and those relating to the protection of natural resources, as well as those in this management plan;
- Buildings raised in the BZ cannot interfere with the landscape quality of the NAMO;
- The modification or implantation of installations, equipment or urban furniture, as well as any landscape or urbanistic interference planned for the General Tibúrcio Square and Vermelha Beach must be authorized by the NAMO administration;
- Public events programmed for the NAMO region, or that may impact the CU (such as in the Botafogo Cove) must receive the consent of the CU administration;
- Touristic activities cannot compromise the integrity of the natural, landscape, historical-cultural and urbanistic resources in the region of the NAMO;
- Surveillance of the activities of support to visitation, tourism and leisure (parking, taxis, vans and chartered tourist buses, street commerce etc.) in the BZ must be intensified in the weekends, long holidays and high season;
- Surveillance of recreative fishing and submarine hunting must be intensified in the weekends, long holidays and high season;
- Surveillance of controlled species fishing (true sardine and shrimp) in the surrounding waters must be intensified in the closure period, as well as those with a regulated minimum size of capture, in a joint action with IBAMA, INEA and other institutions.

4.3.3. Botanical Gardens Master Plan

The Master Plan for the Rio de Janeiro Botanical Gardens Research Institute, developed soon after its creation in 2001, has been guiding all the actions developed. It has been recently readjusted to include new technical proposals. The Botanical Gardens have been seeking to implement a strategic management model, developed in partnership with the consulting company Intelligere and the Brazilian Institute of Municipal Administration – IBAM.

The total area of the Botanical Gardens is considered to be 138.34 ha, calculated by the cartographic base annexed below, recording its insertion in the neighborhood of Jardim Botânico, the occupations existing in it and those in its surroundings.

The Master Plan, updated in 2009, is divided into three main groups of information. The first presents the principles adopted and the general guidelines, aiming at integrating the urban systems of mobility and accessibility; the preservation of its historical, cultural and environmental aspects; cultural integration and the improvement of public visitation.

The second group presents the main strategies emphasizing the place and the urban integration between the Botanical Gardens and the city, as well as the initiatives that strengthen its character as a social and cultural reference. The territory of the Botanical Gardens is viewed in its singularity, taking into account the buildings used by the research and maintenance units, as well as the agencies and entities maintained by special funding, housing facilities and other urban uses. According to this perspective, this piece of heritage, so strongly protected, may be understood from a multidimensional point of view, so as to conciliate different interests in the preservation of the vitality of the Botanical Gardens in its social and urban context.

The third group concludes the document with some general propositions, indicating a summary of implemented actions (2002-2009), ongoing and planned projects, a description of special projects and additional plans, including effective energy and environmental sanitation management and an integrated solid residue management, to ensure its sustainability.

Rio de Janeiro Botanical Gardens



4.3.4. FLAMENGO PARK MASTER PLAN

Flamengo Park was designed in the 1960s by a staff associated to what was then the Government of the State of Guanabara, coordinated by architect Affonso Eduardo Reidy and by Maria Carlota de Macedo Soares, counting with the essential participation of landscape architect Roberto Burle Marx. Its proposal was to compatibilize the new axes of the city's road system, connecting Downtown to the South Zone, formed on the reclaimed land along the Guanabara Bay, with the creation of a wide leisure area for the city's population.

The Park has been integrally protected by IPHAN since 1965, and by the municipality since 1995. Thus, it is under the tutelage of both governmental instances. With the creation of IRPH in 2012, this City Hall agency took up the management of the Flamengo Park, maintaining an interface with the city departments and other agents active in its legal tutelage area, aiming at ensuring the necessary actions for its planning, conservation, preservation and monitoring. But the Flamengo Park still lacks a more rigorous institucionalization, particularly in its delimitation and constitution as an urban park.

The Park's initial program envisaged a number of equipment in addition to the existing ones, but since many of them were not executed at the time, the project remained incomplete and inadequate to current demands. Many conflicts of use and occupation still persist between the user population, the city administration and the tutelage bodies.

Currently, the IRPH intends to contract a Master Plan for the Flamengo Park, including, among its objectives:

- Identifying its uses, its landscape and spatial characteristics, critical problems and potentialities, by a survey and diagnosis of the Park's physical and environmental conditions and of its social and cultural marks;
- Establishing guidelines for regulating the use of the Park's space and equipment, to be later submitted to the City Executive and Legislative powers;
- Establishing priority actions for maintenance, restoration and conservation.

The Master Plan will collaborate with the public bodies directly involved with the management and preservation of Flamengo Park (IPHAN, SECONSERVA, SUBPREFEITURA, SEOP), in order to establish a management model, with the force of a legal statute, that will materialize a more efficient, economical and sustainable administration through time. In addition to the development of the Guidelines for Public Bids, actions undertaken so far include a comparative analysis of management models for other urban parks in Brazil and the world.

One controversial issue in the Flamengo Park is the occupation of Marina da Glória, completely included in its area and in the heritage polygon. In 2013, the Marina da Glória Special Commission was created (Decree 37,354, dated July 02, 2013), involving City Hall bodies (IRPH and SUBPPP) as well as IPHAN, aiming at:

- establishing construction and landscape parameters for Marina da Glória, abiding the limitations established by cultural heritage protection bodies and by the legislation in vigor;
- defining parameters for the use and occupation of Marina da Glória, improving the enterprise's viability and favoring its nautical functions.

4.3.5. COPACABANA SEAFRONT ORDAINMENT AND REVITALIZATION PLAN

Aiming at the recovery and revitalization of the Copacabana Seafront, IRPH is responsible for developing coordination and management actions according to the following guidelines:

- Recovery of all elements in Burle Marx's original plan, particularly the Portuguese stone mosaics, using conservation techniques that are compatible with international quality;
- Rearranging the use of public space so as not to block and deface the elements listed as heritage;
- Removing elements that deface its original project, such as urban equipment, canopies, iron railings, etc.;
- Revitalizing the use of public spaces with incentives to social and cultural practices that are adequate to its heritage space.

Agents that have established a partnership with IRPH include, in addition to the tutelage bodies IPHAN and INEPAC, the following bodies in the Rio de Janeiro City Hall: SECONSERVA, SUBPREFEITURA, SMU, SEOP, SMAC, and FPJ.

Priority actions developed over the last few months were:

- Ordainment of the urban equipment (kiosks, parasols, beach tents etc) in the Copacabana seafront;
- Ordainment and requalification of the lifeguard towers;
- Organization of Copacabana's night street market so as to ordain its physical space, its facilities and mobility;
- Reorganization of the equipment installed in public light posts.

4.3.6. PLAN FOR THE REVITALIZATION AND TOURISTIC-CULTURAL USE OF THE HISTORICAL FORTRESSES AT THE ENTRANCE TO THE GUANABARA BAY

The Plan for revitalizing and promoting tourism and cultural use in the historical fortresses at the entrance to the Guanabara Bay was prepared by the Brazilian Armed Forces– Board of Army Historical and Cultural Heritage, under the supervision of IPHAN. It includes the creation of four programs:

- **Heritage Preservation Program**

Stipulates the restoration of the fortresses, including not only the buildings but also, whenever possible, the armoury, works of art, documental and cartographic archives and other elements comprising their historical collection.

- **Historical and Cultural Program**

Intended to develop research in the fields of knowledge that may allow gathering information on the fortresses, as spaces both of culture and memory, focussing on: their origins; their employment in the Guanabara Bay defense system; historical facts in which the fortresses played a relevant role; historical reasons for their construction; the alterations suffered (in shape and organization) throughout history; the origins of their weapons, their calibre, the period in which they were used and the reasons for the deactivation of these weapons and of the fortresses themselves as “bastions for the defense of the Guanabara Bay”. This implicates research actions in the fields of History, Museology, Archaeology, Architecture and Heritage Education.

- **Touristic and Social Use Program**

Intended to provide the infrastructure necessary for including the main fortifications in the Guanabara Bay in the touristic itineraries of the cities of Rio de Janeiro and Niterói, connecting road and sea travel, it will include actions for the development of touristic infrastructure in the fortresses, in partnership with companies in the transport sector (nautical and terrestrial, including cable cars), food services (restaurants), artistic events, among others.

- **Environmental Education Program**

Intended to create attractions for the establishment of new partnerships with common interests, it will develop and implement a system for environmental education and preservation, enhancing actions aiming at the environmental awareness and conservation and at improving the quality of life in the areas surrounding the fortifications. It will include actions of infrastructure development for leisure and scientific activities, aiming at environmental preservation and education.

4.3.7. MONITORING PROGRAM FOR THE QUALITY OF WATER IN THE RODRIGO DE FREITAS LAGOON

The Rodrigo de Freitas Lagoon plays a major role in the landscape of the Buffer Zone, and for this reason the monitoring undertaken by the Secretariat of Environment (SMAC) is highly important for the Site's management.

Reinitiated in 2011, the monitoring is done continuously through a multiparameter probe installed at the central point. Twice a week, with collections in six points distributed along the 3 sections established in Municipal Decree 18,415/2000 for use in sporting and leisure activities. In addition to the water in the Lagoon, the waters or rivers and canals belonging to its sub-basin are assessed through weekly collections in one point of each course of water and canal.

Assessment parameters are associated to the protection of aquatic communities (Dissolved Oxygen, Temperature, Salinity, Turbidity, pH, *Chlorophylla* and permitted recreation and amateur fishing (Total Coliform Count and *Escherichia coli*). The *phytoplankton* is also identified and quantified. The Lagoon is monitored through a meteorological station, reporting local information every 30 minutes. Results are broadcast through informative bulletins, available at: Rio Operation Center and in the City Hall³. Flags indicating the quality of the RFL water are also raised on masts affixed near publicity panels in the parks of Patins and Cantagalo, at the banks of the Lagoon.

³ <http://www.rio.rj.gov.br/dlstatic/10112/2972533/DLFE245314.pdf/6RIOAGUASPlanodeContingencia2012.pdf>, visited in January 2014.

4.3.8. PROGRAM FOR POLLUTION CLEAN-UP OF THE GUANABARA BAY

Although only the mouth of the Guanabara Bay is included in the Rio World Heritage Site, the Bay's physical and environmental conditions must be considered as an object of study by the Site's management staff because of the consequences they bring to the area. Because it is a complex ecosystem in its entirety, involving many municipalities in its banks, pollution clean-up actions are being developed over a few decades, with no success. The Program for the Pollution Clean-up of the Guanabara Bay – PDBG – consisted in basic sanitation works undertaken for about 20 years in the State of Rio de Janeiro, in an attempt to reduce pollution levels in the Bay. The program included also improvements in the water supply system, garbage collection, flood control, the region's digital mapping and several environmental programs.

Recently, to compensate this decades-old liability, the Clean Guanabara Plan was created, gathering 12 initiatives by the State Government for the environmental recovery of the Guanabara Bay – with the Sanitation Program for the Municipalities Surrounding the Guanabara Bay (PSAM) as a flagship program⁴. The goal of cleaning up 80% of the Guanabara Bay until 2016 is one of the Olympic commitments agreed between the State Government and the International Olympic Committee (IOC) for the Rio Olympics. Some of the Projects included in the Plan are:

- **Program for Pollution Clean-up of the Guanabara Bay**

Continuing the former program, since 2007 the State Government has invested about R\$ 100 million of its own funds in works – entrusted to Cedae – for the completion of the sanitary sewage systems that had been left unfinished. Also, in 2011, the current administration applied for another loan from the Inter-American Development Bank (IADB). In March 2012, a contract was signed to finance a new sanitation program – the Sanitation Program for the Municipalities Surrounding the Guanabara Bay (PSAM).

⁴ <http://www.rj.gov.br/web/sea/exibeconteudo?article-id=1055505>, visited in January 2014.

- **Sanitation Program for the Municipalities Surrounding the Guanabara Bay (PSAM)**

Coordinated by the State Secretariat of Environment (SEA), the Sanitation Program for the Municipalities Surrounding the Guanabara Bay (PSAM) envisions the investment, until 2016, of R\$ 1.3 billion in sanitary sewage works and sanitation programs in the 15 municipalities surrounding the Bay. PSAM is the flagship sanitation initiative of the Clean Guanabara Plan, and is supported and funded by the Inter-American Development Bank (IADB), that loaned the State Government US\$ 452 million. The State Government, in its turn, invested R\$ 330 million from its State Fund for Environmental Conservation and Urban Development (Fecam).

About 80% of these resources are destined to projects and works for the installation of sewage collection and treatment systems, contributing to reduce the amount of domestic organic refuse thrown into the Bay. In addition to executing these works, PSAM actions include investments in State Government institutions to improve the quality of services and to support city halls in the promotion of public sanitation policies in 15 municipalities surrounding the Guanabara Bay: Belford Roxo, Cachoeiras de Macacu, Duque de Caxias, Guapimirim, Itaboraí, Magé, Mesquita, Nilópolis, Niterói, Nova Iguaçu, Rio Bonito, Rio de Janeiro, São João de Meriti, São Gonçalo and Tanguá.

- **Expansion of Sewage Treatment Services**

In addition to the sewage treatment actions envisioned in the PSAM, the Project for the Expansion of Alegria System entrusted to Cedae and the State Secretariat of Construction Works (Seobras) is the State Government's greatest investment in the expansion of treatment systems for the sewage thrown into the Bay.

The Project for the Expansion of Alegria System includes the construction of new sewage collection channels and the expansion of the Sewage Treatment Station (STS) of Alegria, in the neighborhood of Caju, in Rio de Janeiro's Port Zone.

Three other major works that will contribute to improve the waters of Guanabara Bay, also entrusted to Cedae, are the reconstruction of the STSs of Pavuna and Sarapuí, the modernization of the sewage treatment system of Paqueta Island and the expansion and operational improvement of the Sewage Treatment Station (STS) of São Gonçalo. With the completion of works, planned for July 2014, the STS of São Gonçalo will be able to treat 675 liters of sewage per second, benefitting 280 thousand inhabitants. In addition to the recovery of the STS of São Gonçalo, this municipality will have its sanitary sewage system expanded by the SEA, with the construction of the Sewage Treatment Station of Alcântara, with the capacity of treating 800 liters of sewage per second. About 220 thousand people will be benefitted.

- **Zero Garbage Program**

The State Government intends to eradicate, until 2014, all the trash dumps in the state's municipalities. The solid residues will be discarded in sanitary landfills or in residue treatment centers (RTCs), some of them including projects for energy production, that is, transforming the methane gas produced by the decomposition of garbage into energy. The 15 municipalities surrounding the Guanabara Bay have reached this goal in 2012.

- **Program for the Revitalization of Fundão Canal**

In 2012, SEA completed one of its works for the environmental recovery of the State of Rio de Janeiro: revitalizing the Fundão Canal, located between Fundão Island and the continent, along the Red Line. In the Fundão Canal dredging process, areas contaminated with heavy metal underwent a process of sand separation. The remaining sediments were placed in geotextile capsules. The canal's dredging and the replanting of its banks boosted naval industry in the region, creating new jobs, and birds returned to the region.

- **Conduct Adjustment Term for the Duque de Caxias Refinery**

At the banks of the Guanabara Bay is Petrobras' largest oil refinery, Reduc, in the municipality of Duque de Caxias. In 2011 the company signed a Conduct Adjustment Term (CAT), committing itself to invest R\$ 1 billion in environmental actions for the improvement of the refinery's operational area. Actions included in Reduc's CAT will not only improve air quality in the region, particularly in the municipality of Duque de Caxias, but also contribute to improve sanitation and water quality in the Guanabara Bay. As part of Reduc's CAT, the SEA is completing the Residue Treatment Unit – RTU – of Irajá River, that will treat 12% of the water pollution load reaching the waters of the bay.

- **River Treatment Units**

To complement the investments in basic sanitation included in the Clean Guanabara Plan, the State Government has been undertaking the Program for the Implementation of River Treatment Units (RTUs), foreseeing the construction of five units at the estuary of four rivers and one canal, all that are the greatest contributors to the discharge of sewage pollutants in the waters of the Guanabara Bay.

- **Iguaçu Project and Imboáçu Project**

Coordinated by INEA and included in the Federal Government's Plan for the Acceleration of Growth (PAC), Iguaçu Project's main goal is to promote flood control and environmental recovery in the basins of rivers Iguaçu, Botas and Sarapuí, flowing into the Guanabara Bay. Ongoing actions have resulted in great improvement in the inhabitability and urban infrastructure conditions in the areas hit by floods in this region of the Baixada Fluminense and in the western part of the Guanabara Bay, benefitting about 2.5 million inhabitants.

In 2012, a project was launched for the environmental recovery of the Imboáçu River Basin, in São Gonçalo. Interventions in the most important rivers in the municipality, Imboáçu and Alcântara, follow the standard adopted in the Iguaçu Project, comprehending not only flood prevention, with dredging and urbanization of the riverbanks, but also the relocation of inhabitants living in areas with risk of floods.

- **Clean Sena Program**

Launched in 2012, the Rio de Janeiro State Government's Clean Sena Program, in partnership with the City Hall, will clean up six of Rio's main beaches until 2014. Environmental recovery works are underway, in different stages, on the beaches of São Conrado, Leblon, Ipanema, Leme and Urca, in the South Zone, and Bica, in Governador Island. Two of these beaches, Urca and Bica, are in the Guanabara Bay. Entrusted to Cedae, interventions on Urca Beach include the reform of the sewage lifting station, the exchange of the discharge line, and the reform of the collection network. Interventions in Urca encompass also the Vermelha Beach, facing high sea, but adjacent to the Guanabara Bay, thus contributing to improve the quality of waters in the Bay. With actions such as the implementation of two new sanitary sewage collectors and the modernization of the Lifting Stations in Urca and São João Fort, the Vermelha Beach is suitable for bathing during 95% of the year.

- **Reforestation of the Guanabara Bay surroundings**

As part of the concern with maintaining the Bay's ecosystem, a series of actions have been taken for reforestation of the Bay's banks, such as replanting the mangroves, a crucial element for the reproduction of life in the region. In the Program for the Revitalization and Environmental Recovery of the Fundão Canal, more than 500 thousand seedlings have been planted, with the

revitalization of 40 hectares of degraded areas (the equivalent of 40 official soccer fields), including the recovery of more than 32 hectares of mangroves. Seven million seedlings of Atlantic Forest species have also been planted in the area and in the surroundings of the Petrochemical Complex of Rio de Janeiro (Comperj).

- **Floating Trash Removal**

The Ecobarriers Project, entrusted to INEA, includes structures made from recycled materials, such as PET bottles, installed near the estuary of rivers and canals to retain solid residues, the so-called floating trash. Of the 14 ecobarriers installed so far, 11 are located in rivers and canals flowing into the Guanabara Bay, thus integrating the Clean Guanabara Plan. It thus retains part of the floating trash that would otherwise end up in the waters of the Bay.

To reinforce its collection, ten vessels will be contracted to collect floating trash from the waters of the Bay, adequately disposing of them in ecopoints. The material that cannot be recycled will be taken to the nearest sanitary landfill. Seven ecopoints are to be installed to receive the residues collected by these vessels.

- **Recovery of the São Lourenço Canal**

SEA and the Ministry of Fishing and Aquiculture have initiated, in November 2012, the removal of 52 hulls of vessels that have been abandoned or submerged in the São Lourenço Canal, in the Guanabara Bay. After removal, 100 thousand m³ of silted material will be dredged. With the removal of these hulls and the dredging, the canal will be navigable again, allowing the Integrated Center for Artisanal Fishing, in Niterói, to be reopened.

4.4. PUBLIC VISITING CONDITIONS TO THE SITE

In the Rio World Heritage Site, both infrastructure and tourism help to ensure a more respectful use of parks, the seafront, the beaches, and the appreciation of the landscape as key factors for environmental and social education, as well as leisure.

The Tijuca Forest, with its magnificent vegetation that may be seen from the paved roads or the trails, complemented by cascades and fountains, the result of a Romantic-inspired landscaping, contains strong attractions for the Carioca population and tourists alike. According to data from ICMBio/MMA, out of all parks in the country, the Tijuca National Park receives the greatest number of visitors: about 2 million a year.

At the entrance to the Guanabara Bay, the fortresses, in addition to their spectacular architecture, offer excellent vantage points to appreciate the city. These forts reflect the different periods in the history of the city, which may be understood in guided visits. All of these spaces control the number of visitors and sold tickets. In 2010, the forts and the Monument to the Deceased in World War II (in Flamengo Park) received a total of 769,284 visitors:

- Copacabana Fort: 671,672;
- Leme Fort: 40,000;
- Monument to the Deceased: 18,000;
- São João Fortress: 5,000;
- Niterói Forts: 34,612.

The city's two main landmarks, Sugar Loaf and Corcovado, are emblematic of the city's stunning landscape. In the first year of implementation of the new system of access and charging, the Corcovado received a total of 1,204,728 visitors, between April 2008 and April 2009. In the same period, the Tijuca National Park counted 1,415,916 visitors. These numbers have been increasing considerably, and in 2011 the sum of 828,608 people visited the Corcovado by train, which, including the access by road, adds to a total of 1,900,000 people/year. As for the Sugar Loaf, the Caminho Aéreo Pão de Açúcar Company, in charge of the cable cars leading to the top of the hill, recorded an average of 123,075 visits per month in the year of 2013, peaking on holidays and in vacation periods, corresponding to an annual visitation of 1,476,898 people.

The arboretum of the Rio de Janeiro Botanical Gardens is also one of the most sought-after leisure areas in the city. It has received an average of 600,000 people a year, and is expected to reach 1 million visitors in 2014. Visitors may observe the Gardens' plant collections, some of which form specific groups, such as the Bromeliad House, the Orchid Nursery, the Medicinal Plants Patch, the Sensorial Garden, the Insectivores Greenhouse, and the Cactus House. To enhance public knowledge on biodiversity and the importance of its conservation, the Botanical Gardens offers a number of environmental education activities and courses, as well as extension courses in botanical illustration, at the same time fulfilling Botanical Gardens' mission and abiding by the recommendations of the conventions of which Brazil is signatory, such as the Biological Diversity Convention, the Aichi

Targets and others. The Botanical Gardens are recognized, in Brazil and abroad, as an important center for the research of tropical botanics, possessing six modern laboratories, many collections and a staff of 50 research PhDs, with an increasing and relevant scientific production.

Flamengo Park is an urban park that receives a great number of visitors, attended by those who use it for walks and for enjoying the Park's magnificent view of the Guanabara Bay, as well as by those who use its space for picnics, sports or leisure in the beach formed therein. According to information from RIOTUR, the Flamengo Park has received about 300 thousand visitors in 2012. Annex to the Park, the Museum of Modern Art is also a sought-after attraction.

Copacabana beach is one of the most sought-after by bathers throughout the year, including not only the resident population but also a great number of tourists, as a result of the many hotels surrounding it. Many events take place during the year in the neighborhood's public spaces, such as concerts and sporting championships. Some of the sporting events in the 2016 Olympics will take place in the temporary arena set up on the sand of the beach, replicating previous successful experiences. A high point in the beach's cultural agenda is the New Year's Eve, considered to be the greatest open-air celebration of its kind in the planet, with a fantastic firework display complemented by concerts of local and international bands. According to information from RIOTUR, in 2012 the Copacabana Seafront received about 2.3 million visitors.

4.5. RESOURCES INVOLVED

The two elements in the site that are subordinate to the Ministry of the Environment, Tijuca National Park and the Rio de Janeiro Botanical Gardens Research Institute, formulate their budgets based upon the resources they receive from the Federal Government, from national and international research funding institutions, and from private sponsorships. Resources for the management of the Tijuca National Park come from the Budget assigned by the Union to the Ministry of the Environment. Only one third of the sum total obtained through ticket sales returns to the Park.

Financial resources from the Municipal Government, as well as lease contracts, are used to maintain the areas under municipal management: the Copacabana Seafront, the Flamengo Park, the Sugar Loaf and its cable car system.

The historical forts located at the entrance to the Guanabara Bay, including the Duque de Caxias and Copacabana forts, are maintained by the Brazilian Armed Forces and by other private funds of ticket sales or rental for events.

5. SITE MANAGEMENT PLAN

The goal of the Management Plan is to lay out the global management of the Site and its Buffer Zone to ensure the conservation and protection of the values identified, to undertake scientific studies, to ensure their pedagogical transmission, their national and international visibility, their connection with the other assets and values, their sustainable development, as well as the development of heritage and environmental education, and of sustainable tourism through capacity-building, communication and marketing.

The sustainability of the cultural landscape of the Site *Rio, Carioca Landscapes Between the Mountain and the Sea* is sought by the integration of its managers in the various levels of National, State and City Government, corresponding to the representatives of the institutions responsible for the administration of each of its elements, for the planning and execution of its actions and for abiding by the legislation. The cultural and environmental sustainability of the Site will derive from an integrated management that will allow the feasibility of projects and action taking. By fomenting the participation and integration of different agents in activity within the Site, as well as discussions with the population and different sectors of society, the management plan intends to be an instrument for the exercise of citizenship and democracy through cultural heritage, the landscape and its preservation.

The main target of the Management Plan is to integrate the plans, projects, actions and agents in a process of sustainable preservation, ensuring an ecologically balanced and culturally diversified territorial and social-economic development. It defines actions for planning and fomenting conservation actions in a joint management, considering normative and operational strategic aspects necessary for their accomplishment, as well as promoting responsibility sharing between the different public agents involved and their common application.

At the same time, the engagement of society with the public or private initiatives must be promoted within the Site, particularly in the fields of heritage, education and tourism.

5.1. ATTRIBUTES THAT ENSURE THE SITE'S UNIVERSAL VALUE

The information and analysis contained in the different chapters constituting the Management Plan have allowed us to identify the attributes that ensure the Site's Universal Value, specifying their characteristics. The recognition of these attributes by the nomination appraisers confirmed the title of World Heritage attributed to the city of Rio de Janeiro. Their maintenance, therefore, is crucial. They are the foundation for the specific guidelines of the intervention programs, as well as for management monitoring.

ELEMENT	ATTRIBUTE	CHARACTERISTIC
Landscape and Natural Resources	City – mountain – sea relation	The city has been developed between the sea, the mountain and the forest, forming an original and unique landscape.
	Balance between natural and built elements	Striking presence of natural elements in the urban area. In addition to constituting a site of extreme scenic beauty, it ensures a unique social and environmental quality, particularly for its diversity of recreation and leisure options.
	Symbolic values and associated images	Carioca landscapes are disseminated to the world by the landscape's unique features represented by the existent natural landmarks.
	Urban expansion under control	The current urban and environmental legislation of the city of Rio de Janeiro adopts principles that acknowledge the value of the landscape.

Tijuca National Park	Environmental preservation/ environmental quality	The only National Park in Brazil completely situated in an urban area, derived from a 19 th -century conservationist action of reforesting and regeneration of the forest that had been decimated by coffee plantations. Consequently, it ensures the presence of nature in the heart of the city, creating an interface among nature, city and people, ensuring better environmental conditions for the city and quality of life for the population.
	Biodiversity	The mass of forest existing in the TNP, and adjacent areas, plays an important role in reducing urban pollution and alleviating the climate of the city, as well as it is crucial for containing the hillsides in the Tijuca massif. The TNP presents a rich biodiversity, with 1619 plant species (433 of them threatened with extinction) and 328 animal species, including amphibians, birds and mammals (16 of them threatened with extinction).
	Public and social use	In addition to the leisure areas offered by the Park to the Cariocas, as well as to the great number of tourists attending it, the Corcovado Hill is home to one of the greatest tourist attractions in Brazil, i.e. the statue of Christ the Redeemer.
	Vulnerability to external urban pressures	Located at the centre of a metropolis, it has more than 48 communities on its surroundings, exerting permanent pressure for the occupation of protected areas. Intensive public use of the TNP areas also contributes to its vulnerability.
	Cultural protection	In addition to its environmental and landscape value, the TNP is also characterized by a great historical and cultural representativeness, with buildings dating from the 18 th and 19 th centuries, as well as 120 archaeological sites located within its boundaries.

Tijuca National Park		Cultural protection was established on April 27, 1967, when the Tijuca National Park and protected forests above 80 and 100 m above the sea level were listed as heritage by IPHAN.
	Environmental education	The TNP promotes actions for environmental education that consist of external integration, capacity building, school visits, educational events, and cultural promotion.
	Environmental protection	A fully protected Conservation Unit, created at the Federal level on July 06, 1961; under the management of ICMBio/MMA, its Management Committee has been in activity since August 07, 2002; it currently has 3,973.19ha.
Rio de Janeiro Botanical Gardens	Preservation of Brazilian flora	The RJBG plant collections, distributed in patches, thematic gardens and greenhouses, with specific conditions to provide for adequate environment for the plants, presents historical, cultural, scientific, landscape and conservationist significance. Botanical Gardens have been recognized, for many years, by governmental and non-governmental entities, from Brazil and abroad, as particularly outstanding institutions for the preservation of native species, through the <i>ex situ</i> mode of conservation. Such collections should be fully maintained, conserving their integrity.
	Spatial configuration of the arboretum	The main alleys of the arboretum keep their original shape, with geometric features, a Neoclassical scale and a typically French landscaping style, with predominance of plant species displayed in homogeneous rows, among which the centuries-old palm trees highlight the place's spatial quality, remaining as a landmark in the RJBG and in the city; in the spaces between the main alleys, with time, alterations were made, and sinuous paths were opened, interspersed with irregular patches of plants displayed in heterogeneous arrangements.

Rio de Janeiro Botanical Gardens	Scientific research	In its 205 years of existence, the RJBG has been characterized as an important national pole for the production and diffusion of scientific research and botanical and environmental information, emphasizing, among others, the acclimation and improvement of useful plants, the planting of groves for the study of native and non-native forest essences, flower and taxonomic studies, development of replanting techniques (i.e. participating in the actions for the replanting of the Tijuca Forest), ecological studies, DNA sequencing, among others.
	Green pocket and ecological corridor	The arboretum where the cultivated plants are found (living scientific collection) is flanked by an important remainder of the Atlantic Forest. This ensemble is directly connected to the Tijuca Forest, forming, with this and other CUs in the municipality of Rio de Janeiro, an important green corridor. Located at one of the edges of this green pocket, within the influence area of the Macacos River Basin, the RJBG arboretum is greatly important for the preservation of the state's biodiversity, consisting of a privileged area for the observation of fauna and flora.
	Historical importance	Installed in 1808 by D. João VI, the whole RJBG represents an important landmark in the city of Rio de Janeiro, including elements of great historical, cultural, archaeological, botanical, scientific, landscape and environmental value.
	Public and social use	An important point of visitation and leisure for the Cariocas and tourists alike (the third most enjoyed by the Cariocas), it consists of a significant green area in the city, offering its inhabitants both contact with nature and Botanical knowledge. It also includes some relevant cultural elements, such as the Environment Museum, Theaters, exhibit halls and library.

Rio de Janeiro Botanical Gardens	Cultural protection	The whole RJBG area, including its historical buildings, water fountains, monuments, and landscape are protected from defacement by several listings (the last one, by IPHAN, in 1973), considering its historical, cultural, archaeological, landscape and environmental importance.
	National School of 'Tropical Botanics' Graduate Program in Botanics	Intended to form personnel for public and private organizations, devoted to teaching, research and public policies, aiming at the knowledge and conservation of plant diversity.
Flamengo Park	Landscape designed on purpose	The Park integrates Modernist landscaping, architecture, and urban planning, conciliating open spaces and built elements; an organic design reflecting the curves and recesses of our coast, forming the transition between the urban area and the outdoors landscape of the Guanabara Bay, in perfect harmony with Carioca scenery.
	Landscape Concepts adopted in the project	The Park's landscaping consisted basically of forming harmonically distributed homogeneous groups of vegetation, in which Burle Marx was able to conciliate his artistic talent and his high-level knowledge of the plant species used; its result confirmed the landscape architect's international renown.
	Vulnerability to undesired interferences on the landscaping	Works on Flamengo Park are a testimonial to the achievements of a great experiment in growing plants in adverse climatic (winds, sea mist) and edaphic conditions (soil comprised of landfill, waste, highly salty mud).

Flamengo Park	Concept of lighting adopted	The lighting adopted in the Park is characterized by its diffuse and homogeneous distribution, allowing to conciliate the attributions of the Park with the high speed traffic lanes, its sporting equipment and its recreation and leisure spaces.
	Urban equipment/furniture	The Park's equipment and furniture have been preserved due to the quality of their original design and because they are included in the Heritage Listing
	Infrastructure/urbanization	Its infrastructure and urbanization have been modernized, maintaining the principles guiding the implementation of the Park
	Public and social use	Since its inauguration, Flamengo Park has become one of the most sought-after leisure spaces for the city's population; in addition to its beach, the recreation spaces and the sporting areas are intensely used
	Cultural protection	Even before its inauguration, the Park's cultural protection was ensured by Iphan, with its listing as heritage on July 28, 1965, to ensure its preservation. The protection by the Municipality of Rio de Janeiro dates from January 04,1995, extending the heritage area to the end of the gardens of Botafogo Beach, also designed by Burle Marx.
Sugar Loaf Natural Monument	Preservation of natural elements	A fully protected Conservation Unit of Integral Protection, the ensemble of Sugar Loaf and Urca Hills was declared a Natural Monument by the municipality on 06.01.2006, with 91.5ha. Its creation was motivated by its natural, geomorphological and ecological characteristics and attributes, with countless endemic, rare and endangered species.

Sugar Loaf Natural Monument	Public use	<p>The Natural Monument is one of the city's main tourist attractions, because of the access provided by the cable car to the Hills of Urca and Sugar Loaf.</p> <p>Some other areas of intensive visitation are the Cláudio Coutinho Road and the trail on Urca Hill.</p>
	Scientific research	<p>The IP is the object of scientific research allowing the expansion of knowledge about the NAMO and the incorporation of the obtained results in actions for the management of this protected area.</p>
	Historical and cultural significance	<p>The image of the Sugar Loaf has been associated to depictions of the city of Rio de Janeiro since the early days of colonization.</p> <p>Sugar Loaf and Urca Hills have been listed as heritage sites by IPHAN in 1973, including the initial station of the cable car run by the Caminho Aéreo Pão de Açúcar Company.</p>
	Social participation	<p>The action of volunteers in the NAMO is significant, including mostly planting actions.</p> <p>NGO's have also been historically active in the protection of its natural heritage, as in the case of the Rio de Janeiro Mountaineering Federation – FEMERJ and the Ecological Action Group – GAE</p>
Copacabana Seafront	Intentionally designed landscape	<p>The project for the Copacabana Beach, by Roberto Burle Marx, consists of the design of Portuguese stone panels of great artistic and symbolic value, of international renown; it is considered the greatest instance of an applied work of art in the world</p>
	Preservation of landscaping elements	<p>The plant elements and the furniture included in the project are complementary in their unicity, maintaining its Outstanding Universal Value, justifying their preservation</p>

Copacabana Seafront	Historical and cultural significance	The pattern in the Portuguese stone mosaic is an internationally recognized trademark of the city of Rio de Janeiro, as a model of a seaside resort city in the tropics, ensuring its significance
	Cultural protection	The Copacabana Seafront and its surroundings are under the following protections in cultural legislation: listing as heritage by Inepac on 01.25.1991 of the Urban-Landscape Ensemble of the beaches of Leme, Copacabana, Ipanema and Leblon; listing as heritage by Inepac on 09.06.1990 of the Copacabana Fort and the Promontories of Copacabana and Arpoador for their relevant historical, cultural and landscape value; listing as heritage by the municipality of the Arpoador Stone on 09.13.1989, for its landscape, environmental and ecological interest
	Environmental protection	The Copacabana Seafront and its surroundings count with the following protections in environmental legislation: included in the municipal APA of the Maritime Seafront of the Beaches of Copacabana, Ipanema, Leblon, São Conrado and Barra da Tijuca, declared on 06.06.1988; adjacent to the APA of the Copacabana and Arpoador Promontories and their surroundings, created on 01.04.1994 to protect and conserve environmental quality and the natural systems there existing; adjacent to the APA consisting of the natural ensemble of Leme Hill, Urubu Hill, Anel Stone and Cotunduba Island, created on 11.12.1990 to preserve the landscape, the Atlantic Forest, the fauna and flora on it.
Historical Forts	Shape and conception	The projects of military engineers for the historical forts preserve the military architecture of the time, responding splendidly as elements in their defense strategy
	Insertion in the landscape	All the forts in the Guanabara Bay, for the quality of their architecture and for their dimensions, are perfectly integrated to the local landscape

Historical Forts	Public and social use	The Brazilian Army proposed to include the main fortresses and cultural spaces associated to them into the city's touristic itineraries, within the current parameters of sustainability and preservation of social and cultural memory
	Historical importance	The forts are witnesses to the way in which the site was used for the city's defense, and in which the rocky promontories were appropriated for this function. They also represent testimonials of important events in the history of Brazil and the evolution of military techniques and technologies, and the way in which they were adapted to the city's site.
	Cultural protection	Together with São José Fort (the third oldest fort in the country), the fortress of São João was listed by Iphan on 10.04.1939; the protection of both was justified for their historical and architectural value

5.2. CURRENT MANAGEMENT SYSTEM

The serial area comprising the Rio World Heritage Site consists of four components; the current management of these areas is in charge of the institutions described in the following table.

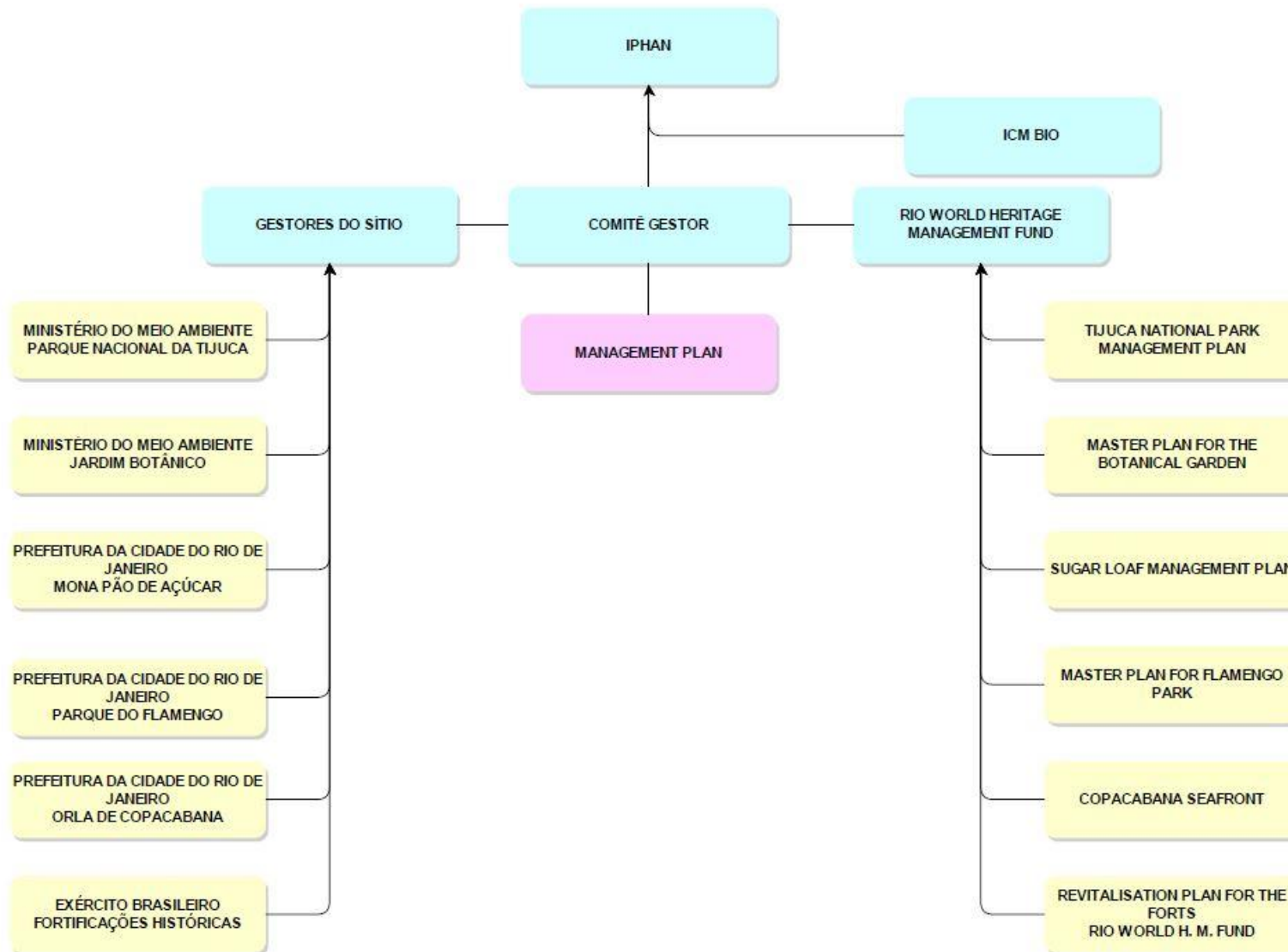
COMPONENT N.	TITLE OF COMPONENT AND SUBCOMPONENT	DESCRIPTION	ENTITY RESPONSIBLE FOR MANAGEMENT
1	Tijuca Forest, Pretos Forros and Covanca	Encompasses the Tijuca Forest, Pretos Forros and Covanca sectors of the Tijuca National Park	Ministry of the Environment - Chico Mendes Institute for the Conservation of Biodiversity – Administration of Tijuca National Park
2	Pedra Bonita and Pedra da Gávea	Encompasses the Pedra Bonita and Pedra da Gávea sectors of the Tijuca National Park	Ministry of the Environment - Chico Mendes Institute for the Conservation of Biodiversity – Administration of Tijuca National Park
3	Carioca Mountain Range	Encompasses the Carioca Mountain Range sector of the Tijuca National Park	Ministry of the Environment - Chico Mendes Institute for the Conservation of Biodiversity – Administration of Tijuca National Park
	Rio de Janeiro Botanical Gardens	Encompasses the area within the boundaries of the Rio de Janeiro Botanical Gardens	Ministry of Science and Technology – Rio de Janeiro Botanical Gardens Research Institute

4	Entrance to the Guanabara Bay and its designed seafront		
	Flamengo Park and adjacencies	Encompasses the area within the boundaries of the Federal protection of Flamengo Park, Outeiro da Glória and Passeio Público and its surrounding areas	Rio de Janeiro City Hall – IRPH, Parks and Gardens Foundation and Regional Administration
	Sugar Loaf and Urca Hills Natural Monument	Encompasses the area within the boundaries of the Federal and Municipal protection of the Sugar Loaf and Urca NAMO and its surrounding area	Rio de Janeiro City Hall – Municipal Secretariat of Environment
	Copacabana Beach and its promontories of Leme and Arpoador	Encompasses the area within the boundaries of the Municipal protection of Copacabana Beach and the Federal protection of the promontories of Leme and Arpoador	Rio de Janeiro City Hall
	Historical Forts at the entrance to the Guanabara Bay	Encompasses the area within the boundaries of the Federal protection of the historical forts and their surrounding area	Ministry of Defese / Brazilian Army / Army Department of Historical and Cultural Heritage

5.3. PROPOSED MANAGEMENT SYSTEM

The shared management structure proposed for the Rio World Heritage Site is demonstrated in the following chart. Its coordinating body is the National Historic and Artistic Heritage Institute (IPHAN), associated with the Brazilian Ministry of Culture, entrusted with the mission of protecting, surveying and monitoring the management of Brazilian historic and cultural sites protected by Federal law. Whereas much of the Site's area is under the legal protection of IPHAN, its attribution of coordinating the management of the Site is justified.

Next, we present the proposal for the management structure of the Rio World Heritage Site.



5.4. MANAGEMENT COMMITTEE

Responding to the commitment established in the nomination document, an IPHAN resolution published in the *Diário Oficial da União*, Section 1, page 16, on December 30, 2011, created the Management Committee of the Site delimited as World Heritage: Rio de Janeiro – Carioca Landscapes between the Mountain and the Sea (see annex 1).

The Committee's inaugural meeting took place on January 10, 2012, by initiative of the Superintendency of IPHAN in the State of Rio de Janeiro, in charge of its coordination. The meeting began with the reading of the objectives to be attained, according to the terms of the resolution instituting it: compatibilizing the delimitation of protection areas defined in the different levels of government with the area defined in the World Heritage nomination; detailing the shared management structure of the area proposed in the nomination, defining the attributions of each management body; detailing the shared management plan for the area proposed in the nomination, after compatibilizing the management instruments defined by law for each component and subcomponent comprising the site, as described in the Logical Framework Approach agreed during the nomination. It was also explained that the Committee's target is to finalize a detailed Management Plan for the Site. A biweekly regularity was established for the Committee meetings.

The Management Committee follows a thematic schedule, discussing for each sector of the Site and for the Buffer Zone basic issues such as the preservation of universal value attributes, risk factors, management, the maintenance of the integrity/authenticity of its elements, their state of conservation, among others.

The Management Plan hereby presented was discussed, developed and agreed upon within this Management Committee. The schedule of its activities is described in the following table.

SCHEDULE OF ACTIVITIES FOR THE MANAGEMENT COMMITTEE– 2011-2014

ATIVIDADE	ENTIDADE RESPONSÁVEL	DAT	dez/11	jan/12	fev/12	mar/12	abr/12	mai/12	jun/12	jul/12	ago/12	set/12	out/12	nov/12	dez/12	jan/13	fev/13	mar/13	abr/13	mai/13	jun/13	jul/13	ago/13	set/13	out/13	nov/13	dez/13	jan/14	fev/14
Publicação da Portaria instituindo o Comitê Gestor	IPHAN	30/12/2011	█																										
Reunião Inaugural do Comitê Gestor		10/01/2012		█																									
APRESENTAÇÕES TEMATICAS / PLANOS SETORIAIS																													
Monumento Natural do Pão de Açúcar	SMAC/PCRJ	07/02/2012			█																								
Parque do Flamengo	SECONSERVA/PCRJ e SUBPC/SPC/PCRJ	28/02/2012			█	█																							
Fortes Históricos (Limites e documentação)	DPHCEX	20/03/2012					█																						
Jardim Botânico	IPJB/RJ	03/04/2012						█																					
VISITA AO	JB e IPHAN	17/04/2012							█																				
Parque Nacional da Tijuca	PNT/ICMBio/MMA e SECONSERVA/PCRJ	02/05/2012								█																			
Ora: Copacabana, Leme, Urca Niterói	INEPAC SECONSERVA/PCRJ e SUBPC/SPC/PCRJ	15/05/2012									█																		
Lagoa Rodrigo de Freitas	SECONSERVA/PCRJ e SUBPC/SPC/PCRJ	29/05/2012										█																	
Mesa redonda - Rio patrimônio Mundial na Rio +20	IPHAN/RJ, no Palácio Gustavo Capanema	12/06/2012											█																
Entrega Versão Preliminar do Plano de Gestão do Sítio	GRUPO DE TRABALHO	15/06/2012												█															
Gestão das águas	SMAC/PCRJ	26/06/2012													█														
Vales da Área de Entorno	SUBPC/SPC/PCRJ e SMU/PCRJ	10/07/2012														█													
Mosaico de áreas protegidas (Meio ambiente + Corredores Culturais)	SMAC/PCRJ e SUBPC/SPC/PCRJ	24/07/2012															█												
Parque do Flamengo	SECONSERVA/PCRJ e SUBPC/SPC/PCRJ	07/08/2012																█											
Jardins Históricos	SMAC/PCRJ e SUBPC/SPC/PCRJ	21/08/2012																	█										
Patrimônio Imaterial	SUBPC/SPC/PCRJ	04/09/2012																		█									
Validação do Plano de Gestão Preliminar pelo Comitê Gestor	COMITÊ GESTOR E COMITÊ INSTITUCIONAL	18/10/2012																											
DESENVOLVIMENTO DO PLANO DE GESTÃO	GRUPO DE TRABALHO + GRUPO DE TRABALHO +	DE OUT/12 A OUT/13																											
DETALHAMENTO DO SISTEMA DE GESTÃO DA PAISAGEM	COMITÊ GESTOR	DE ABRIL/13 A OUT/13																											
Validação final do Plano de Gestão e assinatura do documento de pactuação entre as instituições envolvidas	C COMITÊ GESTOR E INSTITUCIONAL	out/13																											
APRESENTAÇÃO DO PLANO DE GESTÃO AO CENTRO DO PATRIMÔNIO MUNDIAL		fev/14																											

5.5. GUIDELINES FOR SITE MANAGEMENT

From the general guidelines for the preservation and appreciation of the Site, established in the nomination dossier, with the intensive participation of the managers of the area comprising the Technical Committee, specific guidelines were defined for each component of the Site, in meetings of the Management Committee summoned for that end throughout 2012 and 2013. These guidelines, along with the attributes of the Site's components, form the basis of the intervention programs presented in this chapter.

Some of the general guidelines are:

- Safeguarding and preserving the attributes of universal value identified in the Site's components and sectors;
- Ensuring the Site *Rio de Janeiro: Carioca Landscapes between the Mountain and the Sea's* landscape integrity;
- Ensuring the maintenance of the Site's biodiversity;
- Supporting the implementation of the plans already developed for its components - Management Plan for the Tijuca National Park, Master Plan for the Rio de Janeiro Botanical Gardens, Management Plan for the Sugar Loaf and Urca Hills Natural Monument and Plan for the Revitalization and Touristic-Cultural Use of the Historical Fortresses at the Entrance to the Guanabara Bay;
- Encouraging the development of Master Plans for the elements of the Site under Municipal administration, namely: Flamengo Park and Copacabana Seafront;
- Regulating the urbanized areas in the Buffer Zone, following the parameters of new landscape concepts in the Master Plan, with a specific character for these areas, considering the importance of ensuring the integrity and identity of the Site's elements and the sustainability of its management.

Specific guidelines include:

A. Related to the preservation of the city's natural resources:

- Preserving and maintaining natural resources and physical elements: relief, hydrography, vegetation (natural and implanted);

- Preserving the landscape: points of view, scenic elements, scenic backgrounds, historical and natural landmarks, areas of visual emergency;
- Preserving and expanding the urban system of open spaces: conservation units, urban parks, squares, urban arborization, green corridors interconnecting the urban vegetation grid;
- Preserving natural elements with a striking landscape value: ornamental trees, iconic relief (Sugar Loaf, Corcovado), etc;
- Improving the criteria for the protection and surveillance of legally protected areas;
- Applying new methods of urban and environmental control for green spaces and open spaces in the city.

B. Related to the Tijuca National Park

- Promoting forest recovery in the areas of TNP altered by human or natural interventions;
- Controlling the erosive processes that may compromise the integrity of the environment of TNP;
- Monitoring the evolution of the recovery of its plant covering, based upon the mapping of TNP and its surroundings;
- Encouraging and supporting research institutions and universities in undertaking studies of great priority for the TNP;
- Identifying priority and special interest species for the conservation of TNP plants;
- Inventorying animal species of conservational interest in the TNP, particularly rare, endemic and endangered species (internationally, nationally, regionally or locally);
- Updating the inventory of the Park's bird species, attempting to record their song manifestations and to photograph the species;
- Identifying specific management actions to eliminate exotic and unwanted species in the TNP;
- Monitoring the populations of plant and animal species of high conservation priority in the TNP;
- Continuing and updating the photographic records of cultural assets, attempting to record in images the processes of intervention/restoration and their state of conservation, completing their diagnosis;
- Undertaking actions, with the public power and private initiative, in the attempt of obtaining financial resources for the restoration of cultural assets;
- Undertaking the reform of the buildings responsible for the TNP infrastructure and the qualification of others to be used in visitation support services;
- Ensuring the periodic maintenance of buildings, road paving, draining systems and signposts;
- Promoting training and capacity building for visitor conductors, tourist guides and ecotourism agents in the TNP;

- Implementing visitation support services through concessions, aiming at improving the management and ordering of public use activities;
- Consolidating and maintaining the Volunteer Program to stimulate the participation of society in the different management actions of the TNP;
- Building capacity for the specific groups that act in the TNP, such as environmental agents, municipal guards, volunteers, interns, environmental monitors, visitor conductors and tourist guides, for an educational approach to the performance of their functions;
- Attending educational institutions, communities and other social segments in the surrounding area, through guided visits and other educational activities;
- Developing and implementing the TNP communication program, contemplating the different media for promotion and information;
- Developing and producing specific flyers describing the natural and tourist attractions of the TNP, to be distributed in strategic points of the city, such as hotels and other tourist attractions, and also in institutions fomenting publicity;
- Reviewing and implementing the signalling project for the TNP, including all modes such as, indicative, interpretative, informative and educational;
- Planning for accessibility in the areas inside the TNP, respecting the capacity defined for each of its sectors;
- Rectifying the land ownership situation of the TNP;
- Studying the possibility of extending the boundaries of the TNP, aiming at protecting its surroundings;
- Zeal for the integrity of the landmarks, fences and walls in place through periodic inspections and maintenance, whenever necessary;
- Monitoring the occupation of the borderline areas of the TNP, expanding/reinforcing the fences of those in which there is a risk of invasion or where communities are already installed;
- Maintaining the firefighting brigade and developing a capacity-building course for volunteers in fire prevention and fighting;
- Promoting the qualification of teachers in elementary, middle and high schools and colleges, raising their awareness for the introduction of TNP-related environmental themes in the curricular contents of the schools in the surrounding area;
- Maintaining a control and monitoring system with microcameras in strategic areas of the TNP and implementing the center of monitoring operations;
- Maintaining the movable surveillance patrol and distributing the employees hired for unarmed surveillance services to act in monitoring and supporting surveillance in the areas of public use;

- Installing and operating the vigilance/surveillance guardposts in the boundaries of each sector of the TNP.

C. Related to the Rio de Janeiro Botanical Gardens

- Incrementing the programs of rescue and conservation of plant specimens, emphasizing rare or endangered species from the Atlantic Forest;
- Investing in modern techniques and structures to receive, multiply and allocate plant species;
- Investing in improving the headcount of patrimonial guards in the RJBG;
- Implementing the program of environmental monitors, who should be distributed around the arboretum helping to ensure its protection as well as that of the other listed properties, whether by transmitting environmental education and nature preservation concepts, or by helping to enhance knowledge about our species and improving the quality of the experience of visiting the arboretum;
- Producing a new instrument to ensure the preservation of the many forms of heritage found there – historical, cultural, archaeological, botanical, scientific, landscape and environmental.

D. Related to Flamengo Park

- Establishing the management of Flamengo Park with autonomy to run and manage its financial resources;
- Establishing the Flamengo Park as a Municipal urban park, defining its boundaries;
- Supporting the integrated surveillance by Federal and Municipal protection agencies, regarding the occupation and use of public space;
- Creating a Master Plan for the Flamengo Park, regulating the use and occupation of space and of the equipment in the Park, establishing guidelines for its priority maintenance, restoration and conservation and for its shared management involving the Municipal, State and Federal bodies responsible for its conservation and protection;
- Reviewing the use assignment terms of Marina da Glória, aiming at its total integration to the Park, according to the guidelines of its Master Plan;
- Reviewing all the use assignment terms of equipment in the Park, regulating their counterparts and the forms of payment in benefit of its management;

- Promoting the replacement and/or insertion of trees or palm trees that have been lost through time, or present a poor phytosanitary state, after a careful survey of the state of conservation of the vegetation, making it compatible with the Park's original landscape design;
- Promoting and maintaining, in a routine basis, all the sanitary tracts necessary for the vegetation existing in the Park, particularly the phytosanitary treatment of plant species whose assessment indicates such necessity;
- Evaluate the need to restore the furniture and the equipment installed in the Park, distinguishing the original ones and those executed through time;
- Evaluate suggestions for the inclusion of new equipment, considering the guidelines of the Master Plan and their setting in the Park;
- Evaluate the conditions of use of the existing restrooms and proposing their reform, abiding by the principles of the Master Plan;
- Assessing the conditions of accessibility provided by the Park – sidewalks, ramps, subterranean passages, footbridges, parking lots, adequating them to the current requirements of Brazilian legislation;
- Assessing their state of conservation, reviewing them according to the principles and guidelines to be defined in the Park's Master Plan;
- Developing a full signalling project for the Park, including educational signposts, according to the guidelines to be defined in the Master Plan;
- Reviewing the position of antennas located on high posts;
- Evaluate the location and characteristics of the low posts implemented to fulfill specific needs;
- Maintaining the operation of the Carioca River Treatment Station in all its stages;
- Recovering its landing deck;
- Modernizing the Riolut substation;
- Evaluate the Park's draining system, reviewing it wherever necessary;
- Reinforcing Park security, including the network for the installation of a camera system.

E. Related to the Sugar Loaf and Urca Hills Natural Monument

- Conserving, protecting and recovering the existing Atlantic Forest ecosystem, promoting environmental awareness and primitive forms of recreation;

- Fostering activities of scientific research and environmental monitoring;
- Promoting the recovery of areas colonized by invading plant species;
- Promoting the recovery of areas eroded by natural action or human activities;
- Implementing a visitor reception point for the NAMO at Urca Hill;
- Subdue the impact of tourist operations related to visitation on the Sugar Loaf and Urca Hills;
- Promoting the recovery and restructuring of the trail on Urca Hill;
- Developing and implementing an Environmental Education program for specific groups of users, particularly the fishers and attendants of the trail on Urca Hill;
- Upkeeping and expanding the signalling about historical and natural heritage along the areas of public use;
- Creating a permanent Technical-Scientific Research Chamber near the Consultive Council, to implement and monitor the NAMO research program;
- Publicizing the main research demands to universities and interested institutions;
- Encouraging long term research, aiming at monitoring the environmental parameters of the NAMO;
- Encouraging the establishment of a partnership between rock climbers and researchers, to enable research on rupicolous vegetation and monitoring the fauna in remote areas;
- Transferring the results of research in the NAMO to SMAC's Center for Environmental Education, so as to develop publicity strategies to be used in the activities of environmental education and interpretation in the CU;
- Publicizing the historical and cultural importance of Urca Hill in the visitors reception center, through environmental education activities;
- Fomenting volunteer activities in the NAMO for the preservation of natural resources through educational actions and the maintenance of public use areas.

F. Related to the historical fortresses of Guanabara Bay

- Developing actions aimed at integrating the fortifications to the historical context of the formation of the city as an urban space;
- Encouraging the development of academic research focusing on the fortifications;
- Identifying and cataloguing the biotic environment of historical fortifications to serve as basis for research and for conservation and restoration interventions;

- Supporting the implementation of maritime infrastructure for the consolidation of a sea-land circuit of historical fortifications;
- Encouraging private initiative in the exploitation of regular touristic maritime transport lines in Guanabara Bay;
- Promoting dialogue with Third Sector institutions promoting projects and activities related to the historical fortifications.

5.6. SITE INTERVENTION PROGRAMS

Master Plans or Management Plans for the elements of the Rio World Heritage Site generally include a great number of projects and actions that consist of programs inherent to each management agency, often initially conceived without an integrated proposal for the interpretation of the Site as a cultural landscape. This Management Plan includes only select plans, projects and actions intrinsically related to the preservation of the cultural landscape, aiming at a non-compartmented management of the area listed as a cultural landscape. Such projects and actions, conceived from the beginning in integration between managers of the different elements of the Site, are believed to foster concepts and proposals that will result in joint and orchestrated public policies.

We have also opted to encourage actions to always observe the different scales of landscape:

- the macro scale of the city (p.e.: the great visual lines; impacts on the city etc.);
- the meso scale of the neighborhood and urban segment (p.e.: urban interventions in neighborhoods; projects in parks and wide areas etc.);
- the local micro scale (p.e.: the interference of color on the surroundings, the characteristics of urban furniture, impacts on the sound and olfactory landscape etc.).

Also, the universal value attributes presented on the table of item 5.1, along with the management guidelines listed on item 5.5 served as a basic criteria for the selection of the integrated programs and projects included in the Intervention Programs, classified according to the themes related to the conservation and preservation of the cultural landscape, including all sectors in the Site and its Buffer Zone. These are:

- Heritage Conservation Program (Natural and Cultural);

- Program for the Safeguard of Intangible Heritage;
- Infrastructure Program;
- Heritage Education Program;
- Capacity-building Program;
- Program for the Promotion of Sustainable Tourism;
- Institutional Program of Foment and Funding.

5.6.1. HERITAGE CONSERVATION PROGRAM

The Heritage Conservation Program intends to promote integrated activities for heritage conservation, without the traditional and obsolete division between natural and cultural heritage. In a cultural landscape approach, assets formerly treated separately need to be managed in integration. Thus, the program's main guidelines include:

- adopting an integrated approach to actions on assets that used to be treated separately as natural heritage or cultural heritage;
- promoting actions for the monitoring and conservation of the cultural landscape;
- encourage all established actions to be conceived from a cultural landscape focus, in its three scales.

Next, we present the main proposed actions and projects, per Site component:

A. In the Tijuca National Park

- **Recovery of operational infrastructure and the historical monuments in the TNP – Estimated Value: R\$ 850,000.00** (mid term)

Reform works on the Park's administrative headquarters, known as "barracão", maintaining its current characteristics and adapting its interior to house the IP operation nucleus (surveillance, monitoring, volunteer work, transport, fire brigade). Adapting the annex buildings to hold housing facilities, warehouses, dressing rooms, maintenance workshop, refectory and parking garage.

- **Recovery of spouts, fountains, chapel and other historical monuments** existing in the TNP, according to the IPHAN directives. **Estimated Costs: R\$ 400,000.00** (long term)

- **Replanting of recovery zones in the TNP and the degraded surrounding areas – Estimated Costs: R\$ 100,000.00**

The project aims at the recovery of natural ecosystems. The specific objective of this project is to recompose the forest's original physiognomy, by replanting native species and controlling exotic species. The dissemination of native species is done mostly through the dispersion of seeds, afforded by the reintroduction of agoutis and the development of its population in the natural environment. The control of exotic species, particularly jackfruit trees, is done by mapping the areas of greater concentration of this species, where they predominate in the environment and cause the retraction of the development of native species. Next, the gradual removal of individuals will be undertaken through a girdling methodology.

- **Systematic Fire Prevention Actions - Estimated Costs: R\$ 100,000.00**

Actions promoted during six months of the year, from the beginning of the dry season, by a brigade comprised of 12 men hired to fight fires caused by fallen balloons or intentional fires; it is a well established program in the institution

- **Control of TNP trails**, by satellite monitoring, through a cooperation agreement between the TNP and the PUC Rio University, as a measure for the protection of the IP's natural resources;

- **Strategies for the Control and Protection of TNP Natural Resources – Estimated Costs: works R\$ 10,000,000.00 + labor R\$ 2,500,000.00** (contracted)

Actions for the retention of hillsides, recomposition of drains and recovery of areas that suffered with landslides are currently underway, contemplated by the TNP Recovery Program, now being undertaken by GEORIO. The construction of five guardposts at the boundaries of the Park is also included in the plan. The installation of these guardposts, with 24-hour surveillance, will afford better control of the areas, and consequently promote greater protection to the forest.

- **Permanent surveillance actions against invasions at the Park's boundaries**

- **Rectifying the land ownership situation of the TNP – Estimated Costs: R\$ 5,000,000.00**

Strategies for protecting the CU include promoting the rectification of its land ownership situation, consisting in removing dwellers from inside the park and proceeding with the forest recomposition of expropriated areas. There are currently about 31 residences inside the CU, and the current administration's project intends to create a social and economic registration of these dwellers, eventually removing them by enlisting them in the municipality's housing programs. (long term)

B. In the Rio de Janeiro Botanical Gardens

- **Recovery of the Master Valentim Greenhouse**, a historical building in the Rio de Janeiro Botanical Gardens, including the restoration of its works of art, aiming at conserving the landscape setting of the arboretum;
- **Expanding the area of public visitation**, by integrating the cactus house to the Atlantic Forest trail, aiming at maintaining the integrity and connectivity between the areas and the different sectors of the Botanical Gardens;
- **Replanting of the Atlantic Forest area**, aiming at safeguarding the regenerating forests at hillsides and hilltops and restoring the permanent preservation areas.

C. In the Historical Fortresses

- **Preservation of the Cultural Heritage of historical fortifications**, with the restoration of its buildings, armoury, works of art, documental and cartographic archives and other elements comprising the historical collection of the following fortifications:
 - Duque de Caxias Fort;
 - Copacabana Fort;
 - Santa Cruz Fortress;
 - National Monument to the Deceased in World War II;
 - Laje Fort;
 - São Luiz Fort.
- **Historical-Cultural Program**
 Research actions in the fields of knowledge that may allow gathering information on the fortresses, as spaces both of

culture and memory, focusing on: their origins; their employment in the Guanabara Bay defense system; historical facts in which they played a relevant role; historical reasons for their construction; the architectural styles adopted in these constructions; the alterations suffered (in shape and organization) through history; the origins of their weapons, their calibre, the period in which they were used and the reasons for the deactivation of these weapons and of the fortresses themselves, as “bastions for the defense of the Guanabara Bay”. This implicates research actions in the following fields:

- **History and archaeology:** retrieving the reasons for the existence of the fortifications; their strategic importance; the historical marks of their evolution; their armoury and the historical facts that marked them; how their buildings and the spaces defined in it were originally used; how their occupants lived, what were their uniforms like, their hygiene, their food supply; who were the men who built them; the participation of Indians and black slaves in their construction; who was their staff; and how did their staff relate to the population living in its surroundings;
- **Museology:** classifying, conserving and displaying the collection of historical, artistic, cultural and scientific value existing in the fortifications, aiming at transmitting knowledge and developing cultural actions through these collections in shows and exhibits;
- **Architecture:** Assessing and planning actions allowing to maintain the historical value of the fortifications. Analysing the physical conditions of the build heritage and developing actions for the restoration and conservation of this heritage, considering the technologies to be employed, as well as identifying architectural styles in collaboration with the employment of armoury.

D. In the Sugar Loaf and Urca Hills Natural Monument

- **Recovery and structuring of the Urca Hill trail – Estimated Costs: R\$ 150,000.00**
The trail on Urca Hill is intensely visited, requiring actions to avoid and correct the degradation of the visited environment, such as eroding processes and damages to the vegetation. Equally important is the implementation of signalling for users throughout the trail.
- **Management of exotic species, with control of invading species – Estimated Costs: R\$ 800,000.00**
The recovery of native vegetation in the NAMO should be effected by planting autochthonous species associated to

the gradual removal of invading exotic species that hinder its natural or induced regeneration for the increment of local biodiversity.

- **Improvement of equipment and signalling in the Cláudio Coutinho Road – Estimated Costs: R\$ 850,000.00**

The revitalization of the Cláudio Coutinho Road and its surrounding area should be done through physical interventions to offer greater security and comfort to users and tourists, as well as improving the management of the Natural Monument. This is intended to enhance the value of the space through the intervention of the public power in consonance with the NAMO Management Plan.

The specific objectives of this project are:

- Recovering the physical structures for public visitation in the Pista Cláudio Coutinho Road;
- Increasing security for its users and tourists by recovering and implementing a support infrastructure;
- Recovering service access between Vermelha Beach and the Cláudio Coutinho Road;
- Undertaking geotechnical works for hillside retention.

- **Disciplining fishing activities - Estimated Costs: R\$ 300,000.00 per year**

Attendants of the Natural Monument, particularly those interested in the practice of fishing, must be informed of the rules for the use of the conservation unit and of restrictions on fishing activities. For that end, a broad educational, control and monitoring program must be implemented to prevent and curb harmful activities.

- **Management and monitoring of visitation impacts– Estimated Costs: R\$ 150,000.00 per year**

Ensuring qualified public use in the conservation unit presupposes the permanent monitoring of visitation and correction or management actions aiming at the safeguard of natural resources and at providing visitors with a positive experience. These actions must be implemented by a multidisciplinary staff experienced in the management of protected natural spaces.

- **Implementation of buildings and other structures of support to visitation and administration in the CUIP– Estimated Costs: R\$ 250,000.00**

Activities necessary for the control, monitoring and management of the NAMO require the constant presence of a team from the Municipal Secretariat for the Environment – SMAC on the premises, but the lack of a minimal physical structure makes it impossible to maintain a staff in this conservation unit, and complicates decisionmaking in emergency actions, as in the case of fires.

Small structures of low landscape impact should therefore be implemented, in order to house the NAMO management staff, particularly the technical manager and the Municipal Guard of the Environmental Defense Group – GDA. These structures should be located at strategic points for controlling access.

- **Ordainment of parking areas, informal commerce, taxi and tourist bus stops at a strategic external area at General Tibúrcio Square - Estimated Costs: resources provided by each City Hall agency involved with the ordainment.**

The Sugar Loaf cable car is a major tourist attraction not only in the Natural Monument, but in the city itself. Organizing access to this tourist attraction is crucial to further qualify tourism in the city, also avoiding the disorderly use of public spaces such as General Tibúrcio Square and its surroundings.

To achieve the proposed ordainment, there must be a convergence between the actions of different City Hall agencies, particularly the Municipal Secretariat of Transport, through CET-RIO, the Municipal Secretariat of Public Order – SEOP, the Municipal Guard, the Rio de Janeiro Municipality Tourism Company – RIOTUR, the Municipal Secretariat of Conservation – SECONSERVA, SMAC itself, among others.

E. In Flamengo Park

Restoration of the architectural and landscape elements of Flamengo Park, including:

- Phytosanitary treatment of the vegetation;
- Planting new seedlings following Burle Marx’s original landscape design;
- Pavement maintenance;
- Equipment maintenance;
- Restoration and modernization of lighting;

- Restoration of monuments and water fountains.

F. In the Copacabana Seafront

Ordainment of urban equipment existing in the Copacabana Seafront:

- Implementation of new kiosks. Situation in January 2014: 46 implemented kiosks, 8 in construction and 10 to be implanted.
- Reform of Lifeguard Towers. Situation in January 2014: 3 reformed, 2 to be reformed.
- Ordainment of the Copacabana Night Street Market. Goals: to enhance the market's organization to improve its traffic, installations and aesthetics; to adequate the number of units according to the available space. Current status: in progress.
- Ordainment and requalification of the covering of restaurants at Atlântica Avenue. Current status: in progress.
- Mapping the street lights with interventions aiming at optimizing the use of light posts and improving their appearance.

5.6.2. PROGRAM FOR THE SAFEGUARD OF INTANGIBLE HERITAGE

The city of Rio de Janeiro is home to countless cultural manifestations denoting, on one hand, the cultural plurality of the formation of Brazil and, on the other, the city's *sine qua non* condition as an unquestionable receptacle for this wealth in its most varied strands: colonial, classical, popular or contemporary art. This diversity of practices integrates the city's cultural landscape and is intrinsically related to it. Cultural practices associated with the landscape confer vitality to the city and confirm the exceptional character of Rio de Janeiro's cultural landscape.

Among the city's Intangible Cultural Heritage Assets – ICHs listed by the Federal Government in Brazil are the “Capoeira” (“Trade of the Capoeira Masters” and “Capoeira Rounds”), “Modes of Samba in Rio de Janeiro – samba de terreiro, samba de partido alto and samba enredo”, the “Jongo/Caxambu in the Southeast” and the “Trade of the Baianas of Acarajé”. Actions to support traditional groups in maintaining these cultural assets are developed with the effective participation of stakeholders, defining priorities, ensuring the visibility and appreciation of their traditional knowledge, known as Safeguarding Actions.

Additionally, cultural manifestations abound that are still reclaiming their official recognition, pointing to the vivacity of the city's wide cultural scenery, such as Folia de Reis, the Northeastern Market at the São Cristóvão Pavilion, the Society of Friends of the Adjacencies of Alfândega Street – SAARA, the Religions of African Descent – Candomblé and Umbanda, Choro: a Brazilian musical expression, the Traditional Street Blocks, some already catalogued and safeguarded, such as the Festival of Our Lady of Conception on Conceição Hill, as well as *quilombola* issues, or those relating to communities descending from runaway slaves, such as the Quilombola Community of Pedra do Sal, in Rio de Janeiro's port zone.

Rio de Janeiro has also benefitted from countless programs of support to traditional groups, whether through the Intangible Heritage National Program – PNPI, an edict published yearly by IPHAN's Department of Intangible Heritage, ensuring support to traditional groups and their actions, such as the Cartola Cultural Center – Reference Center for the Modes of Carioca Samba and the Capoeira Cidadã Group, both in this municipality, or through specific actions by the Superintendency of IPHAN in Rio de Janeiro. The recognition of African presence in the city, mentioned above, is translated in the creative force of the traditional communities of African descent spreading throughout the city, enveloping it in an enchanting web of colors and sounds. Thus, advances in the area of Intangible Heritage point to the recognition that the city is plural, transcultural, but marked by manifestations that express particular aspects of Brazilian social and cultural diversity. These practices, although intangible, are anchored in their own territories, and define part of the characteristics of Carioca cultural landscape. In this sense, protection to these practices needs to be conceived in relation to the protection of the cultural landscape as a complex and dynamic whole.

In addition to these actions for the recognition and appreciation of Carioca intangible heritage, another relevant acknowledgement was the award granted by the Scientific Committee of the Slave Route – UNESCO, placing a plaque at Valongo Wharf, in what is known as “African Diaspora”, marking that place as one of the main points of arrival of enslaved Africans in the world.

IPHAN's Department of Intangible Heritage acts in the State of Rio de Janeiro with the following objectives:

- identifying, recording and safeguarding the cultural heritage of an intangible nature, contributing with the process of appreciation of Carioca cultural diversity and the appreciation of this heritage;
- ensuring the inclusion of possessors of traditional knowledge in the development and execution of safeguarding actions defined in the debate for the creation of public policies for the appreciation of cultural assets in the State of Rio

Their integration to the Management Plan of the Rio World Heritage Site through the Program for the Safeguard of Intangible Heritage has, as its main guidelines:

- promoting the democratic identification of the intangible heritage of the city of Rio de Janeiro;
- identifying the relationships between intangible heritage and the Carioca cultural landscape;
- encouraging an approximation between the public power and those practicing and responsible for the intangible heritage of the city of Rio de Janeiro.

Actions arising from this initiative aim at the construction of an integrated notion of heritage that is not stagnant and, particularly, that is constructed in partnership with those practicing it, in a democratic way that can serve as an instrument for the practice of citizenship.

5.6.3. INFRASTRUCTURE PROGRAM

The targets of the Infrastructure program are:

- encouraging actions to ensure the infrastructure for the access and enjoyment of Carioca cultural landscape;
- allowing the modernization of the sanitation network, water and energy supply in the Rio World Heritage Site and its surroundings;
- promoting the compatibility between the implementation of the infrastructure necessary for the city and the requirements for the conservation and protection of Carioca cultural landscape.

Its proposed projects and actions include:

A. In the Tijuca National Park

- Rectifying the land ownership situation of the TNP with its registered dwellers, in a process of negotiation for relocation;
- Improvement of road and sanitation infrastructures of the TNP, making them adequate them to the needs and objectives of the IP.

B. In the Rio de Janeiro Botanical Gardens

- Modernization of the RJBG electrical infrastructure networks, transforming the air network into subterranean ones;
- Modernization of the RJBG sanitation networks, with the renovation of sanitary connections in the existing buildings with the water supply and sanitary sewage networks;
- Permanent actions for the removal of the invading population from the RJBG territory, to rectify its situation within the strategy defined with the other management bodies, in a temporal perspective, in the short, medium and long term.

5.6.4. Heritage Education Program

A great number of heritage educational activities are planned or underway, promoted by the different agents responsible for the elements comprising the Carioca cultural landscape in the World Heritage List. We have listed some of the projects and actions developed in the area of heritage education by managers of the Rio World Heritage Site:

- **Educational Programs in the Tijuca National Park**

They include:

- Education and Integration Program (Environmental Educators), consisting in working with environmental educators in order to expand the reach of the park in local community through guided visits and child recreation;
- Project for Education and Integration in the Park (part of the Christ the Redeemer Project), intended to raise awareness among the population of the surrounding areas for the importance of preserving the cultural, historical and environmental heritage of the TNP; includes one coordinator and five teachers working in the 11 local schools surrounding the Park, in partnership with the Environmental Education Nucleus, offering workshops with fun activities and guided visits.

- **Environmental Education Service in the Rio de Janeiro Botanical Gardens**

Environmental Education is a permanent process, through which people expand their awareness on their environment and acquire knowledge, values, skills, experiences and determination enabling them to act – individually and collectively – towards solving environmental problems. The Environmental Education Service of the Rio de Janeiro Botanical Gardens Research Institute, created in July 1992, is located in the Pacheco Leão House and counts with a multidisciplinary team, with the mission of promoting reflections on environmental themes and stimulating changes in attitude, aiming at conserving biodiversity; to achieve its goals, the EES trains teachers and receives diverse groups to apply itineraries specially developed inside the arboretum. Its actions are organized along the following lines: Scientific Dissemination, Training in Environmental Education, Education for Environmental Management, Extension and Research in Environmental Management.

- **Heritage Education Program in the Historical Fortifications**

The heritage education program in the fortifications is intended to establish dialogue between social agents, with the fortifications as an intersecting element in the construction of a joint knowledge gathering history and memory, heritage and environmental preservation and dissemination of knowledge and skills, through the following actions:

- Dissemination of scientific historical and cultural information on the fortifications, aiming at creating a reference for the construction of national identity through the interpretation of its history; architecture; exhibits of its collection, to broadcast the values that have consecrated them as cultural heritage; and guided visits, not only for tourists, but also for the local population, particularly children and teenagers in school age;
- Practicing environmental preservation activities in the forest areas surrounding the fortifications in order to reduce any environmental impact of touristic activities on them;
- Qualifying personnel for guided visits and ecological activities, of a scientific nature or not, planned so as to consolidate cultural and environmental preservation values;

- Promoting dialogue with Third Sector institutions aiming at developing projects and activities related to the preservation of the built heritage and its surrounding areas.

- **Education Committee for the Nomination of Rio de Janeiro as a World Heritage Site**

During the process of nomination of Rio de Janeiro as a World Heritage Site, the Education Committee was created, with the participation of the following bodies and institutions:

- IPHAN, Superintendency of the State of Rio de Janeiro;
- Rio de Janeiro State Government, through its Secretariats of Culture and Education;
- Rio de Janeiro City Hall, also through its Secretariats of Culture and Education;
- Unesco, Rio de Janeiro and
- Roberto Marinho Foundation.

The general objective of the work initiated was to promote educational actions on the themes of Cultural and World Heritage to be developed in the Basic Education Network of Rio de Janeiro. In these actions, students become familiar with the social process behind the knowledge and recognition of heritage in collective assets, whether local, regional, national or worldwide.

Its specific objectives included:

- enhancing cultural references as the molds for our identity;
- understanding the interrelation between nature and culture founding the concept of a Cultural Landscape;
- promoting multidisciplinary approaches to educational activities;
- considering experiences of other cities that are part of the World Heritage network.

- **Extension Project Rio Heritage: Meanings of Carioca Landscape**

The Project intends to build strategies for heritage education incorporating a discussion of the Carioca landscape as heritage, in addition to offering a mini-course for teachers in basic education schools. Working with photographs taken by the students themselves and using an Internet platform accessible to all, one of the goals of this project is to build a network of images

on Carioca landscape and to provide instruments for the discussion of citizenship, by asking students to identify aspects of the landscape that require protection and intervention. The project is envisioned as an instrument to be constructed and used in schools by teachers and students, exploring the interface between landscape, heritage and citizenship, starting with a debate on Carioca landscape.

The goal of this action, then, is to build, with a group of teachers in basic education schools, an instrument for dialogue, through the use of images captured by the students themselves, and turned into didactic tools in permanent transformation, fed by students and teachers from different geographical contexts in the city of Rio de Janeiro. Thus, a mini-course is offered to interested teachers, understood as an initial point for the construction of dialogue and for training the actions that may be undertaken by them in the classroom, according to the segment in which they teach and its respective curriculum.

This action proposal was developed by Geopol – Group of Studies and Research in Policy and Territory – of the UFRJ Geography Department, through the Extension Project: *Rio Heritage: meanings of Carioca Landscape*, approved in the PROEXT bid of the Ministry of Culture, with the partnership of IPHAN - National Historic and Artistic Heritage Institute, within its Superintendency in Rio de Janeiro, and the Cultural Landscape Management Committee.

- **The Heritage Education Program envisioned in the Management Plan**

The Program is expected to:

- promote integration between these different actions;
- allow all scales of the landscape to be contemplated in heritage education actions;
- identify the areas and themes that present greater need of educational actions;
- build channels that may give visibility to the different values and meanings attributed by the population to the Carioca landscape, while allowing these values and meanings to be recognized and incorporated by the other programs in the construction of their actions;
- promote the integration of different communities with the Carioca landscape and the management institutions.

5.6.5. CAPACITY-BUILDING PROGRAM

A number of capacity-building projects and actions are currently undertaken by some of the managers of the Rio World Heritage Site. They include:

- **Heritage Training and Management Center**

An agreement was established between IPHAN and UNESCO in 2010 for the creation of a Category II Center of the World Heritage Center for training and management in the field of Heritage. The Lucio Costa Center – LCC – was then created, in the Gustavo Capanema Palace, in Rio de Janeiro, acting primarily with South American countries, countries integrating the PALOP (African Countries with Portuguese as Official Language) and East Timor. The LCC aims at expanding heritage management capacity and expanding regional cooperation between participant countries. In 2013, a work proposal involving PALOP countries and the African World Heritage Fund was developed, now in the process of approval.

- **Capacity-building Programs in the Tijuca National Park**

The TNP has been developing capacity-building courses for management support personnel:

- a capacity-building course for guides and monitors, instructing them on the norms of the Park and international and local conduct standards to be followed;
- the Hosts of Cosme Velho Project, corresponding to capacity-building for the practice of self-sustainable professional activities for young people in the surrounding communities, promotes environmental awareness and informs them on the norms of the Park, zoning and environmental content, as a mechanism for integrating the IP with established communities and institutions.

- **Botanical Gardens Professional Training and Environmental Education Program**

The Rio de Janeiro Botanical Gardens Research Institute counts with qualified employees, and has been investing in their researchers through Masters and Doctoral scholarships in Brazil and abroad, in different fields of knowledge. In 2002, when its last civil service examination took place, the number of qualified researchers employed was increased, as well as the number of areas of research, in addition to several fellows.

The Institute's environmental education program is designed for its employees, including those less qualified, offering them the necessary knowledge to adequately fulfill their tasks in the arboretum, in the other areas of visitation and for customer service.

Another important capacity-building is offered by the Botanical Gardens Social and Environmental Responsibility Center, contemplating young people from nearby communities and preparing them for gardening activities, administrative support, English and computer use.

- **National School of Tropical Botany - Post Graduate Program**

Acknowledged by MEC/CAPES (with a 5 rating), the National School of Tropical Botany Post Graduate Program intends to train personnel for public and private institutions, devoted to teaching, research and public policies, aiming at the knowledge and conservation of plant diversity. Achieving this goal requires action in different fields of knowledge, adopting integrated and innovative approaches, as well as the capacity to propose methodologies and implementing effective processes for the conservation of Brazilian biodiversity.

Its faculty is comprised of doctors devoted to research, graduate teaching and the orientation of young scientists. It currently includes 22 professors, mostly researchers in the Rio de Janeiro Botanical Gardens Research Institute. The Program focuses on the knowledge of Plant Diversity and Neotropical Ecosystems Ecology.

- **The Management Plan's Capacity-Building Program**

The main attributions of the Capacity-Building Program include:

- promoting the integration between different projects and actions, making them attainable by all components of the Site;
- generating a mechanism that may enable technicians and managers to, simultaneously, act according to the specific needs of the unit to which they are related and to the general needs of the Site;
- promoting capacity-building actions on the notion of cultural landscape and the challenges for its management;
- promoting the exchange of information and activities among professionals working in the different units comprising Carioca cultural landscape.

5.6.6. PROGRAM FOR THE PROMOTION OF SUSTAINABLE TOURISM

The aims of tourism promotion projects are, in addition to the qualification of public use activities, the economic sustainability of the asset involved.

The basic guidelines of this program are:

- developing integrated visiting activities in the Carioca landscape, allowing the tourist to understand the recognized and protected values;
- promoting the local population's empowerment in relation to the resources generated by sustainable tourism.

Proposed or ongoing actions include:

A. In the Tijuca National Park:

- modernizing the Forest's Visitors Center, making it compatible with the international standards for tourism and the guidelines in the TNP Management Plan;
- revitalizing access to the Corcovado in the TNP, reforming the elevator access areas, road and rail departure and arrival areas, cafes and shops. Modernizing the trains to increase their capacity for transporting visitors.

B. In the Historical Fortifications:

- implementing the touristic infrastructure necessary to include the main fortifications and cultural spaces in the Guanabara Bay to the touristic itineraries of Rio de Janeiro;
- Fort Itinerary Project, corresponding to the creation of a set of alternative visiting circuits including the forts and fortresses in the Guanabara Bay, within the current parameters of sustainability and preservation of social and cultural memory

C. Promoting the Rio World Heritage Brand, through:

- a poster contest with the theme “areas of the Unesco World Heritage Site”, by the Rio de Janeiro City Hall.
- development of a smartphone application to assist tourists visiting the city and inform society about elements comprising the Sites through texts, images, sounds and maps.

5.6.7. INSTITUTIONAL PROGRAM OF FOMENT AND FUNDING

The goals of the Institutional Program of Foment and Funding include:

- building strategies that may enable the discussion and consensus between the different institutions involved in the management of the Site;
- promoting debates and meetings between the different agents involved in the Management Plan;
- increasing the circulation of information on planned and implemented actions between the management actors in different institutions;
- developing reports and spreadsheets on the actions undertaken, their costs and impacts on the Site;
- creating a Fund to manage the revenues devoted to conservation investments in the World Heritage area and its Buffer Zone;
- promoting public discussions on the use and application of resources obtained by the Fund;
- promoting public discussions on fundraising mechanisms and bids to be applied on the Site and Buffer Zone.

The Program’s ongoing actions include the creation of a draft and the opening of a process to regulate the Cultural Heritage Conservation Fund.

Decree n. 35.879 of 07.05.2012, creating the Rio World Heritage Institute, defined that the Cultural Heritage Conservation Municipal Fund envisioned in the Rio de Janeiro Master Plan will be ruled by IRPH with the goal of providing resources for the planning and execution of programs and projects related to the City’s Cultural Heritage. It states that this Fund

will be formed, among other sources of revenue, by specific budgetary resources, envisioning counterparts in the form of events promoted in the area of the Site recognized by UNESCO.

6. SITE MONITORING PLAN

Each management body currently has its own management system regarding the asset(s) for which they are responsible, responding independently for their state of conservation and monitoring.

For instance, the historical forts in the Guanabara Bay and their respective cultural spaces, included in the Rio World Heritage Site, are managed by the Brazilian Army. According to testimonials, its Historical and Cultural Heritage Department has been working for incrementing touristic visitation, democratizing access, expanding educational actions, creating conditions for their self-sustainability, contributing to raise environmental awareness and ensuring the social role of this heritage, integrating them to the everyday dynamics of the city of Rio de Janeiro. This work is being supported by IPHAN, by similar bodies in the State and Municipal spheres, research institutions and Third Sector organizations, and is being acknowledged by society and the population of Rio de Janeiro. With the inclusion of the Rio Cultural Landscape Site in the World Heritage List, these joint efforts will result in an increment of investments for the execution of projects in the Plan for the Revitalization and Touristic-Cultural Use of the Historical Fortresses at the Guanabara Bay, in expanding touristic and cultural interest in these spaces and the consequent enhancement of the social and cultural benefits provided by these assets.

In the Tijuca National Park, planning and monitoring actions for the Park and its surroundings were grouped in thematic programs, according to the national guidelines of ICMBio. Actions and/or projects are addressed within thematic programs of protection and management, research and monitoring, environmental education, visiting and operations. Planning is defined for a period of five years; in the case of the TNP, the established schedule is being followed; after four years of its existence, about 49% of the actions have been completely or partly executed.

6.1. MONITORING SYSTEM

The implementation and execution of the programs, projects and actions included in the Site Management Plan, aiming at shared management between its elements and respective agents, will be monitored by a geo-referenced system encompassing all data pertaining to the elements in the Site and its Buffer Zone.

The Pereira Passos Municipal Urban Planning Institute (IPP), a City Hall agency, is in charge of producing maps and statistics for Rio de Janeiro as well as maintaining a reference center for data and knowledge on Rio de Janeiro, used to formulate and monitor public policies, municipal or otherwise. The Institute, through its website, offers the *Data Warehouse*, created in 2001. In all, the Warehouse offers users 17 free access applications, 157 maps, 1074 tables and 285 studies and analyses. The information is gathered and updated in different sources, such as the State and Municipal secretariats, the Brazilian Institute of Geography and Statistics (IBGE), Getúlio Vargas Foundation, the UN – United Nations Organization, as well as publishing papers by school and college students and researchers. The information is available at the website: <http://www.armazemdedados.rio.rj.gov.br/>

The Institute also offers the *Portal Geo* (<http://portalgeo.rio.rj.gov.br/>) providing information on its map collection and the bases for the city's Geoprocessing. The following applications are available:

- Morei: a simple application gathering information from the IBGE's 2000 Census;
- Bairros Cariocas (Carioca neighborhoods): presents a panorama of data on the city, its 160 neighborhoods and the 33 administrative regions. Offers an overview of the following themes: Territory and Environment; Population, Housing, Health, Education; Real Estate, Occupation and Income and Tributes;
- CadLog: a sig-web application that identifies addresses and some urban equipment in the city;
- Orthophoto Mosaic;
- Environmental Protection Areas (SMAC)

Thematic maps on a 1:275.000 scale (JPG, A4), a map of Rio de Janeiro by region on a 1:50.000 scale (JPG, A4), city maps in a Planning Areas format (JPG), blueprints in a 1:10.000 scale (WMF, A1), blueprints in a 1:10.000 scale in an Administrative Regions and Planning Areas format (WMF), a land use map in a 1:200.000 scale (JPG) are already available.

Since 1991, the IPP has been gathering and treating information on territory, environment, population, economy, education, health, culture, sports, leisure, tourism, infrastructure, land use, transport and housing, comprehending the city as a whole, its Administrative Regions and neighborhoods.

All this information may provide an overview of the city, as well as a specific view of the characteristics of the elements comprising the World Heritage Site, its Buffer Zone and its evolution through time. They must be joined to the Monitoring indicators listed below to provide a complete and contextualized monitoring of the city.

Also, a system of specific cameras and a geo-referenced database is currently being implemented to monitor the area of the World Heritage Site, according to Art. 4 of Decree n. 35.879 of July 5, 2012. Actions implemented by the IRPH in this field include:

- suggesting places for the installation of cameras;
- defining the role of the cameras;
- placing the cameras;
- identifying a professional (body) to monitor the cameras;
- defining the methodology for the transmission of information to IRPH and from it to the competent bodies;
- developing periodic reports;
- developing a term of reference for the development and implementation of the SIUNE data system (a monitoring system for the UNESCO Site to which each body will have an access as well as the responsibility of inserting data regarding the Site and updating their general information).

6.2. MONITORING INDICATORS

The indicators that based the structure for the Site's Logical Framework during nomination will be used for monitoring, as well as the data provided by the Site's management agents.

6.2.1. GENERAL INDICATORS

Some of these indicators are general, and may be employed for any element comprising the Site. They include:

- Well preserved and/or recovered cultural landscapes, used for environmental, cultural, social and commercial activities, identified with signs indicating their historical-cultural-environmental significance to ensure the full awareness of the population and visitors;
- Customer services in all visiting areas integrating the Rio Cultural Landscape Site, compatible with international standards of tourism;
- Presence of infrastructure in the sectors integrating the Site, adequate to the demand and objectives of each area;
- Strengthened administration for each area, with priority lines of action, enabling to improve the performance of its functions;
- A well-structured system for organizing visitation and controlling revenue of all sectors integrating the Site;
- The heritage properties integrating the Site acknowledged and promoted in their natural, historical and cultural values, in a local, regional, national and international level;
- Heritage conservation interventions undertaken in all protected areas of the Site;
- Established strategies for controlling and protecting the natural resources of these assets;
- Systematic actions for fire control and prevention, promoted in all Conservation Units;
- Redimensioned public use areas, considering the technical and operational viability of each protected area and its loadbearing capacity;
- Ensured mechanisms for integrating the Conservation Units in the Site with the surrounding community and established institutions;
- In Conservation Units: adequate environmental management, conservation, maintenance, recovery, direction and environmental control, for their effective operation and the population's enjoyment.

6.2.2. SPECIFIC INDICATORS

Specific indicators established for each element of the Site include environmental, institutional and social-economical indicators:

- **Environmental Indicators:**

- In the Tijuca National Park, managerial actions in the fields of protection and management, research and monitoring, visitation and environmental education, implemented according to the Park's Management Plan.
- **In the Rio de Janeiro Botanical Gardens:**
 - a conserved arboretum, including monuments and works of art, allowing its visitation by a greater number of people, within its loadbearing capacity;
 - enhancing the value of public visitation and environmental education activities;
 - teaching and research units integrated to the other activities developed therein;
 - the land ownership issue associated to irregular dwellings within the area, underway with a prospect of resolution in the mid term.
- **In the fortifications and cultural spaces of the Army at the Guanabara Bay:**
 - restoration of their historical and cultural heritage, accomplished;
 - better conditions offered for public visitation;
 - ensured public use and consistent sustainability, allowing the staging of cultural activities and their organic maintenance;
 - historical-cultural researches accomplished;
 - inclusion in the touristic circuits of Rio de Janeiro, ensured;
 - environmental education activities, with the dissemination of scientific information and the provision of community services, accomplished.
- **In the Copacabana Seafront:**
 - elements included in Burle Marx's original plan recovered with conservation techniques compatible with the international quality of their design;
 - public spaces and urban equipment reordered so as not to block and deface the listed elements;
 - Modernized lifeguard towers and kiosks.
- **In the Sugar Loaf Natural Monument:**

- Atlantic Forest ecosystem and its landscape heritage conserved, protected and recovered;
- Ensured and open green spaces to promote sustainable leisure, ensuring the protection of the CUIP's natural assets.

- **Institutional Indicators**

- Management Committee in activity after January 2012, with the participation of all three levels of government, and of the current managers of the areas included in the Site and of private initiative, producing a Management Plan;
- Management Plan completed in 2014;
- Institutional competences and attributions established in the shared management's processes of technical cooperation;
- Master Plan for the Flamengo Park developed with the participation of management bodies;
- Management Plan for the Sugar Loaf Natural Monument completed and implemented;
- Plan for the Recovery and Revitalization of the Copacabana Beach Seafront developed;
- Plan for the Revitalization and Touristic-Cultural Use of the Historical Forts at Guanabara Bay detailed;
- Projects for the restoration of architectural and landscape elements of Flamengo Park developed;
- Land ownership situation in the Tijuca National Park and the Rio de Janeiro Botanical Gardens in process of rectification;
- A World Heritage Management Fund in surplus after five years of its creation, with transmission of effective resources (donations, public funds, revenue from financial investments etc.).

- **Social-economical indicators**

- The population's degree of knowledge and positive attitude towards World Heritage;
- Increment of the flow of visitors in the Site's elements, taking as reference the date of the Site's inclusion in the World Heritage List;
- Involvement of the surrounding communities with the protected assets, through partnerships established between the community, public managers and companies;
- Economic self-sustainability and qualification of activities in the Conservation Units included in the Site.

6.2.3. VERIFICATION FACTORS

Monitoring will be based upon the following documents:

- Yearly Progress Report on conservation and educational and promotional actions, developed by the Management Committee and envisioned in the Management Plan, based upon sequential photographic records;
- Lists of visitation in visitors' centers or museums located in the heritage area;
- Signed instruments for private partnerships;
- Balances and trial balances of the World Heritage Management Fund delivered.

6.3. AGENTS INVOLVED IN MONITORING

The names and contacts of the agencies responsible for monitoring are:

6.3.1. COMPONENTS PART 1, 2 AND 3

- **TIJUCA NATIONAL PARK**

The TNP has a special office responsible for its management, located in the park. It is associated to the Ministry of Environment/Chico Mendes Institute for the Conservation of Biodiversity, in the following addresses:

- **CHICO MENDES INSTITUTE FOR THE CONSERVATION OF BIODIVERSITY**

EQSW 103/104, Complexo Administrativo, Bloco C, 1o Subsolo, Setor Sudoeste, CEP 70.670-350, Brasília-DF, Brazil

Phone.: 55 (61) 3341-9280 and 3341-9294

website: www.icmbio.gov.br

President: Roberto Ricardo Vizentin

- **ADMINISTRATION OF TIJUCA NATIONAL PARK**

Estrada da Cascatinha 850, Alto da Boa Vista Rio de Janeiro/RJ - Brazil - ZIP 20531-590

Phones (55-21)2492-2252, 2492-2253 and 2401-1700

website: www.sapnt.org.br

Director: Ernesto Vieiros de Castro

The Park, as the Botanical Gardens, are under the legal protection of IPHAN, and the office responsible for monitoring it is the Superintendency of IPHAN in Rio de Janeiro, at the address:

- **SUPERINTENDENCY OF IPHAN IN RIO DE JANEIRO**

Avenida Rio Branco n° 46, Centro Rio de Janeiro/RJ - Brazil – ZIP 20090-002 Phones: (55 -21) 22030-3113 Fax (55-21) 2516-1075

website: www.iphan.gov.br

Regional Superintendent: Ivo de Matos Barreto Junior

The monitoring of some aspects is shared with the Rio de Janeiro City Hall – Secretariat of Environment; it is undertaken by the environmental patrol, including control of wildfires, air pollution, illegal traffic of plants and animals, hunting of wild animals, water pollution, land pollution, plant removal, mineral removal, irregular landfills, irregular invasions of conservation zones and buffer margins; among others. The addresses of the City Hall and the Secretariat of Environment are:

- **RIO DE JANEIRO CITY HALL**

Rua Afonso Cavalcanti 455/13º andar, Cidade Nova Rio de Janeiro/RJ - Brazil – ZIP 20211-110 Phones (55-21) 2273-3897/25032812 Fax: (55-21) 2273-9977

website: www.rio.rj.gov.br

Mayor: Eduardo Paes

- **MUNICIPAL SECRETARIAT OF ENVIRONMENT**

Rua Afonso Cavalcanti 455/12º andar, Cidade Nova Rio de Janeiro/RJ - Brazil - ZIP 20211-110 Phones (55-21) 2976-3183 website: www.rio.rj.gov.br/smac

Secretary: Carlos Alberto Muniz

- **RIO DE JANEIRO BOTANICAL GARDENS**

The administrative structure of the Rio de Janeiro Botanical Gardens Research Institute is subordinate to the Ministry of Environment. It is in charge of managing the activities of the Botanical Gardens, counting with the supervision of the Superintendency of IPHAN in Rio de Janeiro:

- **SUPERINTENDENCY OF IPHAN IN RIO DE JANEIRO**

Avenida Rio Branco nº 46, Centro

Rio de Janeiro/RJ - Brazil – ZIP 20090-002

Phones: (55 -21)22030-3113 Fax (55-21) 2516-1075

Site www.iphan.gov.br

Regional superintendent: Ivo de Matos Barreto Junior

- **RIO DE JANEIRO BOTANICAL GARDENS RESEARCH INSTITUTE**

Rua Jardim Botânico 1008, Jardim Botânico

Rio de Janeiro/RJ - Brazil – ZIP 22460-030

Phones (55-21) 38741200 Fax (55-021-21) 38741201

Site www.jbrj.gov.br

President: Samyra Crespo

6.3.2. COMPONENT PART 4

- **FLAMENGO PARK**

Flamengo Park is under the management/monitoring of the City Hall Rio World Heritage Institute/Municipal Secretariat of Environment/Parks and Gardens Foundation.

- **RIO WORLD HERITAGE INSTITUTE**

Rua Gago Coutinho, 52/3º andar, Laranjeiras.

Rio de Janeiro/RJ - Brazil – ZIP: 22221-070

Phones Tel.: (55 21) 29766611 / 29766626

Site www.rio.rj.gov.br/web/irph

President: Washington Fajardo

- **MUNICIPAL SECRETARIAT OF ENVIRONMENT - SMAC**

Rua Afonso Cavalcanti 455/12º andar, Cidade Nova

Rio de Janeiro/RJ - Brazil – ZIP 20211-110

Phones (55-21) 2976-3183 Site www.rio.rj.gov.br/smac

Secretary: Carlos Alberto Muniz

- **PARKS AND GARDENS FOUNDATION**

Rua República do Líbano, no 54, Campo de Santana, Centro

Rio de Janeiro, RJ – Brazil – ZIP: 20211-110

Tel: (55-21) 2223-3228

website: www.rio.rj.gov.br/fpj/

Director: Mauro Alonso Duarte

Flamengo Park, the Sugar Loaf and the Historical Fortresses are under the protection of IPHAN: the office responsible for their monitoring is the Superintendency of IPHAN in Rio de Janeiro, at the address:

- **SUPERINTENDENCY OF IPHAN IN RIO DE JANEIRO**

Avenida Rio Branco nº 46, Centro

Rio de Janeiro/RJ - Brazil – ZIP 20090-002

Phones: (55 -21)22030-3113 Fax (55-21) 2516-1075

Site www.iphan.gov.br

Regional superintendent: Ivo de Matos Barreto Junior

- **COPACABANA SEAFRONT**

The Copacabana Seafront is under the management of the Rio World Heritage Institute and the monitoring of the City Hall – Secretariat of Environment – SMAC. The promenade designed by Burle Marx is under Municipal and State protection, monitored by IRPH and the State Institute for Cultural and Artistic Heritage – INEPAC:

- **RIO WORLD HERITAGE INSTITUTE**

Rua Gago Coutinho, 52/3º andar, Laranjeiras.

Rio de Janeiro/RJ - Brazil – ZIP: 22221-070

Phones Tel.: (55 21) 29766611 / 29766626

Site www.rio.rj.gov.br/web/irph

President: Washington Fajardo

- **STATE INSTITUTE FOR CULTURAL AND ARTISTIC HERITAGE – INEPAC**

Rua da Ajuda nº 05, 13º andar, Centro,

Rio de Janeiro, RJ, Brazil, ZIP: 20.031-145

Phone: (55-21) 23331389

Director: Paulo Eduardo Vidal Leite Ribeiro

- **MUNICIPAL SECRETARIAT OF ENVIRONMENT - SMAC**

Rua Afonso Cavalcanti 455/12º andar, Cidade Nova
Rio de Janeiro/RJ - Brazil – ZIP 20211-110
Phones (55-21) 2976-3183 Site www.rio.rj.gov.br/smac
Secretary: Carlos Alberto Muniz

- **SUGAR LOAF AND URCA HILLS NATURAL MONUMENT**

The Sugar Loaf and Urca Hills Natural Monument is under the management of the Rio de Janeiro City Hall – Municipal Secretariat of Environment and the Superintendency of IPHAN in Rio de Janeiro, at the addresses:

- **MUNICIPAL SECRETARIAT OF ENVIRONMENT - SMAC**

Rua Afonso Cavalcanti 455/12º andar, Cidade Nova
Rio de Janeiro/RJ - Brazil – ZIP 20211-110
Phones (55-21) 2976-3183 Site www.rio.rj.gov.br/smac
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- **HISTORICAL FORTRESSES OF NITERÓI AND RIO DE JANEIRO**

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6.4. EXPECTED RESULTS

The Global Management Plan for the Site *Rio de Janeiro, Carioca Landscapes between the Mountain and the Sea* intends, first and foremost, to coordinate the many actions undertaken by different agents in activity in the area. Since the inclusion of sections of the city of Rio de Janeiro in the World Heritage Site was made through a renewed and inclusive interpretation of its heritage, its management plan cannot be otherwise, representing a challenge for the country in charge, as well as for the Convention. In this sense, from the point of view of its structure and activities, the Management Plan faces the challenge of orchestrating different agents inserted in a complex structure such as Brazilian Federalism, in which three Federate entities coexist, the Union, the states and the municipalities, with relatively autonomous and, sometimes, overlapping powers. In a megalopolis such as Rio de Janeiro, this convergence of powers may sometimes pose problems for integrated actions and for the global planning that effect a multivariate population with very distinct interests.

The establishment of a Management Committee as a forum for debates and meetings between these different managers appears as an adequate institutional solution and political space, in which issues, projects, possible disagreements, will have a venue of expression, where they can be debated, so consensus may prevail over dissent. From the point of view of popular participation, we expect that, after the initiatives here described, the population will be able to take part in decisions, not only regarding the attribution of value, but also the management of these values represented in the landscape. Thus, the appreciation and protection of the city landscape, understood as a complex and multivocal whole, should work as an instrument for the empowerment of the population and the practice of citizenship, valuing their identities.

Integrated management should also allow coordination between actions for the preservation of culture and nature, often still understood separately in governmental structures. Nature and Culture must be discussed in an integrated manner. Interpreting heritage in an urban conglomerate of an emerging country with a very strong repressed demand for growth and production of wealth, with a population mass ascending to new levels of consumption and desire, while suffering strong speculative pressures, requires orchestrated actions, conceived jointly with these actors, so that heritage preservation may be not a burden, but an important element in the construction of sustainable development. Culture and Nature in the landscape must become elements in the management of the city, conceived in an integral manner, rather than obstacles to its development. On the contrary, if they are correctly appropriated and managed, they must serve as an important engine for the practice of citizenship and for sustainable development.

LIST OF ABBREVIATIONS USED IN THE DOCUMENT

APA	Environmental Protection Area
APAC	Area for the Protection of Cultural Setting
APARU	Area for Environmental Protection and Urban Recovery
CAPES	Coordination for the Training of Higher Level Personnel
CLC	Lucio Costa Center, Ministry of Culture
DEPAM	Tangible Heritage and Monitoring Department, National Historic and Artistic Heritage Institute
DEPROM	Promotion Department, National Historic and Artistic Heritage Institute
DPHCE _x	Army Historical and Cultural Heritage Department
DPHDM	Navy Historical Heritage and Documentation Department
DPI	Intangible Heritage Department
IAB	Brazil Institute of Architects
IBAMA	Brazilian Institute of Environment and Natural Resources
IBGE	Brazilian Institute of Geography and Statistics
ICMBio	Chico Mendes Institute for the Conservation of Biodiversity, Ministry of Environment
ICOMOS	International Council on Monuments and Sites
INEPAC	Artistic and Cultural Heritage State Institute, Rio de Janeiro State Government
IPHAN	National Historic and Artistic Heritage Institute, Ministry of Culture
IPP	Pereira Passos Institute, Rio de Janeiro City Hall
IRPH	Rio World Heritage Institute, Rio de Janeiro City Hall
IUCN	<i>International Union for Conservation of Nature</i>
RJBG	Rio de Janeiro Botanical Gardens Research Institute, Ministry of Environment
MAM	Rio de Janeiro Museum of Modern Art
MEC	Ministry of Education
MinC	Ministry of Culture
MMA	Ministry of Environment
NAMO	Natural Monument
TNP	Tijuca National Park

RA	Administrative Region
RIOTUR	Rio de Janeiro Municipality Tourism Company
SECONSERVA	Municipal Secretariat of Conservation, Rio de Janeiro City Hall
SEOP	Municipal Secretariat of Public Order, Rio de Janeiro City Hall
SMAC	Municipal Secretariat of Environment, Rio de Janeiro City Hall
SMC	Municipal Secretariat of Culture, Rio de Janeiro City Hall
SMU	Municipal Secretariat of Urban Planning, Rio de Janeiro City Hall
SNUC	National System of Nature Conservation Units
CUIP	Nature Conservation Unit for Integral Protection
UFRJ	Federal University of Rio de Janeiro
UNESCO	United Nations Educational, Scientific and Cultural Organization

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ANNEX I – DIRECTIVE CREATING THE MANAGEMENT COMMITTEE

DIRECTIVE 464, DATED DECEMBER 29, 2011.

On the establishment of the Management Committee for the Site delimited as World Heritage: Rio de Janeiro: Carioca Landscapes Between the Mountain and the Sea.

THE PRESIDENT OF THE NATIONAL HISTORIC AND ARTISTIC HERITAGE INSTITUTE – IPHAN, using the attributions conferred to him in art. 21, subparagraph V, Annex I, Decree n. 6.844, May 07, 2009, considering:

proceedings to approve the nomination of Rio de Janeiro as a World Heritage Site by Unesco in the category of Cultural Landscape;

the necessity of establishing a management system for the proposed site, based upon the legislation in vigor and the regulation of urban territory;

the construction of the National Cultural Heritage System, aiming at establishing dialogue and articulation between the three spheres of government for the management of Cultural Heritage;

the extension of the proposed site, the complexity of its attributes and the challenges for its shared management;

the meetings taking place between Iphan and consultants from Unesco/Icomos;

RESOLVES:

Art. 1 - To establish the Management Committee for the site delimited as “World Heritage: Rio de Janeiro - Carioca Landscapes Between the Mountain and the Sea”, with the following objectives:

- I – Ensure the compatibility between protection areas defined in the different levels of government and the area defined in the World Heritage nomination;

- II – Detailing the shared management structure of the area proposed in the nomination, defining the attribution of each management body;
- III – Detailing the shared management plan for the area proposed in the nomination, after ensuring the compatibility between the management instruments already defined by law for each component and subcomponent comprising the proposed site, as described in the agreed logical framework;
- IV – Participating, in a consultive and collaborative manner, of the revision of IPHAN directives for the municipality of Rio de Janeiro.

Art. 2 - The Management Committee for the proposed site will be comprised of the following full and alternate members:

I – the Department of Tangible Heritage and Monitoring – DEPAM

- a) General Office of Real Estate
- b) General Office of Historical Towns
- c) General Office of Natural Heritage

II – the Superintendency of IPHAN in Rio de Janeiro

- a) Superintendent
- b) Head of Technical Division

III – guest institutions

- a) Ministry of Science and Technology: Rio de Janeiro Botanical Gardens Research Institute
- b) Ministry of Environment: Chico Mendes Institute for the Conservation of Biodiversity – Tijuca National Park
- c) Ministry of Defense: Army Historical and Cultural Heritage Department

- d) Ministry of Defense: Navy Historical Heritage and Documentation Department
- e) Rio de Janeiro State Government: Cultural Heritage State Institute
- f) Rio de Janeiro City Hall: Municipal Secretariat of Culture – Subsecretariat of Cultural Heritage, Urban Intervention, Architecture and Design
- g) Rio de Janeiro City Hall: Municipal Secretariat of Conservation
- h) Rio de Janeiro City Hall: Municipal Secretariat of Urban Planning
- i) Rio de Janeiro City Hall: Municipal Secretariat of Environment
- j) Niterói City Hall

Sole paragraph. The Management Committee will, in 30 days, define its work schedule, aiming at completing the detailed management plan for the proposed site, until October 2013.

Art. 3 - The Superintendent of IPHAN in Rio de Janeiro will coordinate the activities of the Management Committee.

Art. 4 - The Management Committee is allowed to invite external specialists to discuss specific issues, at no cost for the Institute, as well as summoning technicians from IPHAN whenever necessary.

Art. 5 - This Directive is effective from the date of its publication.

Luiz Fernando de Almeida
President

ANNEX II – MANAGEMENT COMMITTEE INTERNAL REGIMENT

INTERNAL REGIMENT

*OF THE MANAGEMENT COMMITTEE FOR THE WORLD HERITAGE SITE: RIO DE JANEIRO – Carioca Landscapes
Between the Mountain and the Sea*

CHAPTER I – OF ITS PURPOSE

Article 1. – The Internal Regiment of the Management Committee for the Rio de Janeiro World Heritage Site is intended to establish its organization, modes of operation and the competence of its members.

CHAPTER II – OF THE COMPETENCE

Article 3. – It is in the competence of the Management Committee for the Rio de Janeiro World Heritage Site:

- I. To monitor the effectiveness of governmental actions necessary for the safeguard of the World Heritage Site;
- II. To propose guidelines for the execution of the actions proposed in the Management Plan;
- III. To support the implementation, within the listed site, of priority actions for immediate revitalization and those that will be the object of projects to be implemented within five years.
 - a) These projects should be revised and assessed annually, and also every five years, aiming at bringing them up to date and reorienting them, when necessary, always considering international, national and local norms in vigor, the recommendations of UNESCO and also the results obtained by work groups that for many years have been studying and proposing interventions for improvements in several points of the site.

- IV. To create, within the Management Committee, subcommittees for the different approaches to the site, so that there may be a more objective involvement of each member, and an Executive Body to support the Committee's administrative activities.
- V. To implement the proposal of training multiplying agents for increasing visibility and understanding of the Site in the World Heritage List.
- VI. To promote articulation and compatibility between Municipal, State and Federal policies aiming at the revitalization and/or recovery of areas.
- VII. To suggest policies and action guidelines that may contribute to the site's integrated and sustainable development.
- VIII. To contribute to updating the current legislation effecting the proposed site, aiming at clarifying and, consequently, facilitating its application.
- IX. To coordinate the monitoring system and develop the respective reports every 6 (six) years, according to the World Heritage Committee guidelines.

CHAPTER III – OF INTERNAL DISPOSITIONS

Article 4. – The Management Committee for the Rio de Janeiro World Heritage Site is thus organized:

- I. Executive Body: comprised of the Committee Coordinator and one General Secretary.
 - a) The Committee is in charge of creating subcommittees, according to the themes and others that may be deemed necessary, such as;
 - b) The following subcommittees are immediately created;
- II. Subcommittee of Conservation of Built Heritage: comprised by the members involved with related activities.
- III. Subcommittee of Conservation of Environmental Heritage: comprised by the members involved with related activities.

- IV. Subcommittee of Intangible Heritage: comprised by the members involved with related activities.
- V. Subcommittee of Touristic Development: comprised by the members involved with related activities.
- VI. Subcommittee of Communication and Promotion: comprised by the members involved with related activities.
- VII. Subcommittee of Institutional Affairs, Foment and Funding: comprised by the members involved with related activities.
- VIII. Subcommittee of Education: comprised by the members involved with related activities.

Paragraph 01. – It is in the competence of the Executive Board, in addition to the activities established for the Committee:

- a) To provide, with IPHAN/RJ, the premises for the activities of the Permanent Commission.
- b) To follow the projects of each Subcommittee.
- c) To organize and maintain a Center for the Data and Information obtained during the development of Projects by the subcommittees.
- d) To organize and maintain all the documents arising from the Committee's operations.

Paragraph 02. – All Subcommittees are in charge of following projects aiming at the safeguard of the World Heritage Site.

- a) Subcommittees should coordinate and harmonize the actions of the agencies pertinent to the projects proposed.

Article 5. – The Superintendent of IPHAN in Rio de Janeiro will coordinate the activities of the Management Committee. It is in the competence of the Coordinator:

- a) To conduct Committee meetings, whether ordinary or extraordinary.
- b) To represent the Committee, personally or through an expressly authorized proxy holder.
- c) To invite the Entities comprising the Committee and name other representatives in case of vacancy, impediment or the absence of effective members.
- d) To sign all mail from the Committee or delegate this competence to the Secretary.
- e) To coordinate the works of meetings and conduct debates.
- f) To present to the Committee a quarterly report on its activities.

Article 6. – The Secretary will be elected during the opening of the Committee’s works to fill the post for a period of two years, renewable in a new vote.

- I. It is in the competence of the Secretary:
 - a) To develop a yearly calendar for the Committee’s ordinary meetings, forwarding it to all components.
 - b) To forward invitations to components for the meetings.
 - c) To notify the Entities comprising the Committee when its representative has been absent for three consecutive meetings, requesting his or her replacement.
 - d) To develop the minutes for the Committee meetings.

CHAPTER IV - OF MEETINGS

Article 7. – The Committee will meet in a quarterly basis, at least, with the possibility of extraordinary meetings, regardless of regularity, to present the results of works underway at dates that will be established, after confirmation, by the members and the Secretary.

First Paragraph: The Coordinator or the Secretary must be present in those meetings.

Second Paragraph: Meetings will take place with the minimal confirmation of 10 (ten) participants, plus the Coordinator or Secretary.

Third Paragraph – Citizens and organized entities are allowed to request, in writing and with justification, the inclusion of a topic of their interest in the meeting agenda, and, at the discretion of the President, they may expound their clarifications.

Fourth Paragraph – Upon invitation, professionals of attested competence to analyze the projects developed in the subcommissions may be heard.

CHAPTER V – OF GENERAL DISPOSITIONS

Article 8. – Cases not contemplated in this Regiment will be settled by a vote with the members of the Committee.

Article 9. – When one of the members leaves the Committee, his or her replacement will be appointed by the governmental or non-governmental body responsible for the previous appointment.

Article 10. – The Committee may, at any time, invite other institutions to collaborate as extraordinary members, according to the thematic demands in course.

Article 11. – The Subcommittees may create specific work fronts to better perform their attributions.

DIRECTIVE , DATED

On the establishment of the Management Committee for the World Heritage Site: Rio de Janeiro – Carioca Landscapes Between the Mountain and the Sea.

THE PRESIDENT OF THE NATIONAL HISTORIC AND ARTISTIC HERITAGE INSTITUTE – IPHAN, using the attributions conferred to him in art. 21, subparagraph V, Annex I, Decree n. 6.844, of May 07, 2009, considering:

the inclusion of the Site Rio de Janeiro – Carioca Landscapes Between the Mountain and the Sea in the Unesco World Heritage List in the Cultural Landscape category;

the necessity of establishing a management system for the proposed site, based upon the legislation in vigor and the regulation of urban territory;

the construction of the National Cultural Heritage System, aiming at establishing dialogue and articulation between the three spheres of government and organized civil society for the management of Cultural Heritage;

the extension of the proposed site, the complexity of its attributes and the challenges for its shared management;

RESOLVES:

Art. 1 To establish the Management Committee for the site delimited as “World Heritage: Rio de Janeiro - Carioca Landscapes Between the Mountain and the Sea”, with the following objectives:

- I – Ensuring the compatibility between protection areas defined in the different levels of government and the area defined in the World Heritage nomination;
- II – Detailing the shared management structure of the area proposed in the nomination, defining the attribution of each management body;
- III – Proceeding with the management plan, ensuring the compatibility between management instruments assigned by law for each component and subcomponent comprising the listed site and those that will be proposed, as described in the framework;

Article 2. – The Management Committee for the Rio de Janeiro World Heritage Site is comprised of 22 (twenty two) full members and 22 (twenty two) alternates, with the following composition:

I – Governmental Representatives:

a) Representatives from the National Historic and Artistic Heritage Institute

I – Department of Tangible Heritage and Monitoring - DEPAM

II – 2 representatives from the Superintendency of IPHAN in Rio de Janeiro

III - Lucio Costa Center

b) Representatives from the Rio de Janeiro City Hall

I – Rio World Heritage Institute

II - Municipal Secretariat of Urban Planning

III – Municipal Secretariat of Tourism

IV – Municipal Secretariat of Conservation

V – 2 representatives from the Municipal Secretariat of Environment

c) Representatives from the Rio de Janeiro State Government

I – Secretariat of Culture – Cultural Heritage State Institute

II – Secretariat of Environment – INEA

III – State Secretariat of Education

d) Representative from the Ministry of Environment

I – Chico Mendes Institute for the Conservation of Biodiversity – Tijuca National Park

II – Rio de Janeiro Botanical Gardens Research Institute

e) Ministry of Defense

I – Army Historical and Cultural Heritage Department

II- Navy Historical Heritage and Documentation Department

II – Non-governmental Representatives, upon invitation:

a) Representative from ICOMOS Brasil

b) Representative from Roberto Marinho Foundation

c) Representative from UNESCO/Brasil – Rio de Janeiro

- d) Representative from ABAP – Brazilian Association of Landscape Architects, Rio de Janeiro Nucleus
- e) Representative from the Green Infrastructure and Urban Ecology Research Institute – INVERDE.

III – The term of each member will be of 2(two) years, and the number of participants may be increased or reduced.

Art. 3 - The Superintendent of IPHAN in Rio de Janeiro will coordinate the activities of the Management Committee.

Art. 4 - The Management Committee is allowed to invite external specialists to discuss specific topics, at no cost to the Institute, as well as summon technicians from IPHAN, whenever necessary.

Art. 5 - This Directive is effective from the date of its publication.

Jurema Machado

President

ORGANIZATION CHART

RIO WORLD HERITAGE COMMITTEE	IPHAN	DEPARTMENT OF TANGIBLE HERITAGE AND MONITORING - DEPAM
		LUCIO COSTA CENTER
		SUPERINTENDENT OF IPHAN-RJ
		TECHNICAL COORDINATION OF IPHAN-RJ
	RIO DE JANEIRO STATE GOVERNMENT	STATE ENVIRONMENT INSTITUTE – INEA
		CULTURAL HERITAGE STATE INSTITUTE - INEPAC
		STATE SECRETARIAT OF EDUCATION
	RIO DE JANEIRO CITY HALL	RIO WORLD HERITAGE INSTITUTE
		MUNICIPAL SECRETARIAT OF ENVIRONMENT
		MUNICIPAL SECRETARIAT OF URBAN PLANNING
		MUNICIPAL SECRETARIAT OF TOURISM
		MUNICIPAL SECRETARIAT OF CONSERVATION
		SECRETARIAT OF PUBLIC ORDER
	NITERÓI CITY HALL	DEPARTAMENT OF HERITAGE
	MINISTRY OF ENVIRONMENT	TIJUCA NATIONAL PARK - ICMBIO
		RJ BOTANICAL GARDENS RESEARCH INSTITUTE
	MINISTRY OF DEFENSE	ARMY HISTORICAL AND CULTURAL HERITAGE DEPARTMENT
		NAVY HISTORICAL HERITAGE AND DOCUMENTATION DEPARTMENT
	ORGANIZED CIVIL SOCIETY	ICOMOS BRASIL
		UNESCO BRASIL
ROBERTO MARINHO FOUNDATION		
BRAZILIAN ASSOCIATION OF LANDSCAPE ARCHITECTS/ABAP		
INFRASTRUCTURE RESEARCH INSTITUTE - INVERDE		

ANNEX III – DELIMITATION OF AREAS

Component 4 (G)

FORTRESS OF SANTA CRUZ – NITERÓI/RJ

Decree n. 77,890, of June 22, 1976

Authorizes the record, in the name of the Federal Union, of the real estate mentioned in it, located in the State of Rio de Janeiro.

THE PRESIDENT OF THE REPUBLIC, using the attributions conferred to him in Article 81, item III, of the Constitution, and considering dispositions in Article 2, item I, of Act n. 5,972, of December 11, 1973, altered by Act n. 6,282, of December 9, 1975,

DECREES:

Art. 1. - Authorizes the record, in the name of the Federal Union, of the real estate consisting of the land and constructions occupied by the installations of the 1st Battery of the 1st Motorized Coast Artillery Group and the Army Jailhouse, at the place called Imbuí Fort, Rio Branco Fort and Fortress of Santa Cruz, located in Jurujuba, in the City of Niterói, State of Rio de Janeiro, occupied over the last twenty years, with no interruption or opposition, by the Ministry of the Army, thus described and confronted: point 1 was located in front of Abrigo da Guarda, to the left of the road leading from the Fortress of Santa Cruz to Niterói, by the stone at the southern boundary of the small beach located near Macaco Hill. From point 1, with magnetic heading 89°02'NE, measuring 22.00m, is point 2, located to the right side of the same road; from point 2, with magnetic heading 89°02'NE, measuring 295.60m, is point 3; from point 3, with magnetic heading 61°47'SE, measuring 156.10m, is point 4, from point 4, with magnetic heading 01:49'SE, measuring 27,40m, is point 5; from point 5, with magnetic heading 42°05'SE, measuring 639.20m, is point 6; from point 6, with magnetic heading 50°22'SW, measuring 36.60m, is point 7; points 6 and 7 are located on the left side of the road leading from Rio Branco Fort to Jurujuba and Niterói; from point 7, with magnetic heading 33°57'SE, measuring 108.60m, is 8; from point 8, with magnetic heading 47°24'SE, measuring 52.80m, is point 9; from point 9, with magnetic heading 36°49'SE, measuring 180.00m, is point 10; from point 10, with magnetic heading 35°28'SE, measuring 245.40m, is point 11; with magnetic heading 60°24'SE, measuring 871.10m, is point 12, coinciding with the trigonometrical mark named "Viração"; from point 12, with magnetic heading 81°00'SE, measuring 120,80m, is point 13, materialized on the terrain by the mark of the point: from point 13, with magnetic heading 27°02'SE, measuring 202.20m, is point 14; from point 14, with magnetic heading 47°41'SE, measuring 64.60m, is point 15; from point 15, with magnetic heading 28°27'SE, measuring 180.60m, is point 16; from point 16, with magnetic

heading 22°24'SE, measuring 115.40m, is point 17; from point 17, with magnetic heading 09°36'SE, measuring 196,30m, is point 18; from point 18, with magnetic heading 15°45'SE, measuring 15,40m, is point 19, located at the Lagoa Guard House, on the left side of the road leading from Imbuí Fort to Piratiniga; from point 19, with magnetic heading 03°00 SE, measuring 153.90m, is point 20, materialized on the terrain by a mark; the alignments between points 1 and 20 confront with other Union lands, outside the occupation of the Ministry of the Army; from point 20, with magnetic heading 06°46'SW, measuring 151.30m is point 21; from point 21, with magnetic heading 05°28'SW, measuring 51.30m, is point 22; from point 22, with magnetic heading 27°11'SE, measuring 10.80m, is point 23; from point 23, with magnetic heading 01:50'SW, measuring 15.70m, is point 24, materialized on the terrain by a mark, located at the banks of the Atlantic Ocean; the alignments between points 20 and 24 confront with land belonging to Antonio Plínio Alvim, or his successors; from point 24, along the waters of the Atlantic Ocean, at first in the general W direction, the boundaries of the National Land reaches and surrounds the earth promontory containing Imbuí Fort, follows in the general N direction along the Beach of Imbuí reaching the Tabahiba Promontory, surrounding it, continuing N along the Praia de Fora, inflects W reaching and surrounding the promontory of the Fortress of Santa Cruz; entering the Guanabara Bay, continues in the general NE direction, surrounds the foot of Macaco Hill, all along the water line, reaching point 1, the beginning of this description and demarcation, closing an irregular perimeter, containing a surface of 3,146,862.00m², according to the blueprint and documents annexed to the Explanatory Memorandum n. 70, of April 27, 1976, from the Ministry of the Army.

Art. 2. - The real estate mentioned in Article 1 belongs to the legal circumscription of the 2nd Office of the General Real Estate Registry in the City of Niterói, RJ.

Art. 3. - This Decree will be effective from the date of its publication, and contrary dispositions are revoked.

Brasília, June 22, 1976; 155th of the Independence and 8th of the Republic.

ERNESTO GEISEL

Sylvio Frota

Mário Henrique Simonsen

This text does not replace the original published in Diário Oficial da União – Section 1 of 06/23/1976

Published in: * Diário Oficial da União - Section 1 – 06/23/1976 , Page 8729 (Original Publication); * Collection of Brazilian Laws - 1976, Page 505 Vol. 4 (Original Publication).

FORTRESS OF SÃO JOÃO – URCA

Decree n. 77,180, of February 17, 1976

Authorizes the record, in the name of the Federal Union, of the real estate mentioned in it, located in the City and State of Rio de Janeiro.

THE PRESIDENT OF THE REPUBLIC, using the attributions conferred to him in Article 81, item III, of the Constitution, and considering dispositions in Article 2, item I, of Act n. 5,972, of December 11, 1973, altered by Act n. 6,282, of December 9, 1975,

DECREES:

Art. 1. Authorizes the record, in the name of the Federal Union, of the real estate consisting of the real estate (land and constructions) named Fortress of São João, located in the neighborhood of Urca, in the City and State of Rio de Janeiro, occupied over the last twenty years, with no interruption or opposition, by the Ministry of the Army, with its land measuring 411,297.96 m² (four hundred and eleven thousand, two hundred and ninety seven square meters and ninety six square decimeters) and the following confrontations: to the North, the Cara de Cão Hill and the Guanabara Bay, to the West the foot of Urca Hill, to the East the Atlantic Ocean and to the South the Pão de Açúcar Hill, according to the elements listed in the process protocolled in the Ministry of Finance under n. 0768-24.346, of 1975.

Art. 2º. The real estate mentioned in Article 1 belongs to the legal circumscription of the Real Estate Registry of the 3rd Office of the Municipality and County of Rio de Janeiro.

Art. 3. This Decree will be effective from the date of its publication, and contrary dispositions are revoked.

Brasília, February 17, 1976; 155th of the Independence and 8th of the Republic.

ERNESTO GEISEL

Sylvio Frota

Mário Henrique Simonsen

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Component 4 (H)

DECREE N. 26578 OF JUNE 1, 2006

Declares the Pão de Açúcar and Urca Hills ensemble a Natural Monument and other provisions.

Delimitation of the Pão de Açúcar and Urca Hills Natural Monument

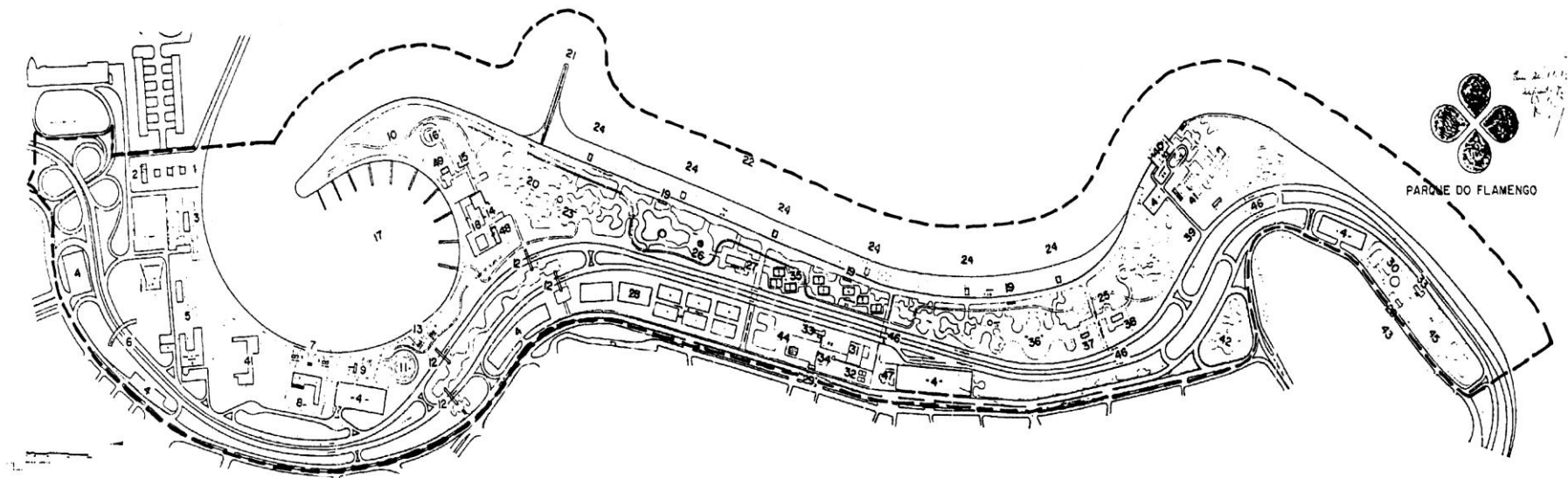
Beginning at Vermelha Beach, at point 1, with coordinates 688,329 / 7,460,427. Follows North to point 2, with coordinates 688,329 / 7,460,466, at a contour line of 20 meters. This contour line surrounds Urca Hill until Urca Beach, at point 3, with coordinates 688,352 / 7,461,008. From here, heading South, one finds point 4, with coordinates 688,352 / 7,460,962, at the contour line of 50 meters. This contour line surrounds the North face of the Pão de Açúcar until point 5, with coordinates 689,248 / 7,461,107. From there, heading North, one finds point 6, with coordinates 689,248 / 7,461,169, on the rocky hillside. It surrounds the East and South faces of the Pão de Açúcar and Urca Hills, meeting the initial point.

Component 4 (F)

FLAMENGO PARK

HERITAGE LISTING PERIMETER - IPHAN

REPRESENTATION OF THE PERIMETER LISTED AS HERITAGE OVER THE GENERAL BLUEPRINT (1965), SIGNALLING THE 100 METERS STRIP IN THE WHOLE SEASIDE EXTENSION OF FLAMENGO PARK, BORDERED BY ARTIFICIAL BEACHES OF SAND AND STONE.



Component 1

TIJUCA NATIONAL PARK

DECREE OF JUNE 3, 2004

Redefines the boundaries of the Tijuca National Park, in the Municipality of Rio de Janeiro, State of Rio de Janeiro, and other provisions.

THE PRESIDENT OF THE REPUBLIC, using the attributions conferred to him in Article 84, subparagraph IV, and according to the dispositions in Article 225, § 1, Subparagraph III, of the Constitution, and provisions in Art. 22, §§ 2 and 6 of Act n. 9,985, of July 18, 2000,

D E C R E E S:

Art. 1 – The boundaries of the Tijuca National Park are redefined, according to the areas delimited in art. 2, described from the map of the Municipality of Rio de Janeiro, on a scale of 1:10.000, of the year 1999, developed by the Geographic Information Department – DIG, of the Pereira Passos Institute – IPP, of the Secretariat of Urban Planning in the Rio de Janeiro City Hall, State of Rio de Janeiro.

Art. 2 – The Tijuca National Park hereby consists of the areas located in higher altitudes than its boundaries namely: Tijuca Forest (Sector A), on the West slope: begins at the Gate of the Tijuca Forest at Alfonso Viseu Square (Point 1) and rises in the direction of the summit of Visconde Hill (517.4m), crossing altitudes 375m (Point 2), altitude 425m (Point 3), altitude 460m (Point 4). From there, it follows from this altitude 460m towards the West meeting the imaginary geographic line of the North-South direction (Point 5), connecting the summit of Almeida Hill (537.1 m) to the Açude Road, crossing the contour lines of altitude 440m (Point 6), and altitude 410m (Point 7). It meets Açude Road (Point 8) and by its right margins (for one coming from Alto da Boa Vista) it follows its margins, passing Açude da Solidão and following until it crosses the waters of Cova da Onça River, at 150m from the Açude Gate (Point 9). From there, it rises by the left banks of the aforementioned river until it meets the contour line of altitude 660m (Point 10) and follows along it, towards the South, surrounding the Pedras Hill, crossing Sertãozinho Valley, in demand to Taquara Hill, until it meets its rocky foot (former quarry) (Point 11), following towards the Southeast until it meets the contour line of altitude 600m (Point 12). It continues in the altitude of 600m, surrounding Cocanha do Itanhangá Hills (São Miguel Hill) and Cipó Hill, passes by rocks, surrounding the Taquara Castles and the West slope of Taquara Hill, always following by the contour lines of altitude 600m meeting the Ernesto River (Point 13). It follows the river, by its right banks towards the Northeast to the summit of Magalhães Castro Peak (559.5m), crossing the contour lines of altitude 575m (Point 14), altitude 550 (Point 15), altitude 525m (Point 16). From there, it follows in a straight line towards altitude 559m (Point 17). Following the watershed

towards the Northwest, passing by contour lines of altitude 550m (Point 18), altitude 525m (Point 19), altitude 505m (Point 20). From there, it goes towards the North until it reaches the summit of Nazaro Esteves Peak (510m) (Point 21). It follows towards the Northeast passing through the contour lines of altitude 500m (Point 22), altitude 485m (Point 23). It rises towards the Northwest, passing through the contour lines of altitude 485m (Point 24), altitude 500m (Point 25), reaching the summit of Jorge Lossio Peak, at an altitude of 501m (Point 26). It follows towards the West, passing by the contour lines of altitude 475m (Point 27) and altitude 450m (Point 28). It goes towards the northwest, passing by the contour lines of altitude 425m (Point 29), altitude 400m (Point 30), altitude 405m (Point 31), the summits of altitudes 406.7m (Point 32), 412.8m (Point 33) and the main summit of Thedim Hill (417.8 m) (Point 34). From there, it heads North, passing the contour lines of altitude 400m (Point 35), altitude 375m (Point 36), altitude 350m (Point 37), altitude 328m (Point 38), altitude 300m (Point 39), altitude 275m (Point 40), altitude 250m (Point 41), altitude 225m (Point 42), altitude 200m (Point 43), altitude 175m (Point 44), altitude 150m (Point 45), altitude 125m (Point 46), crossing the Sangrador River (Point 47) and reaching the crossing between Menezes Cortes Ave. with the contour line of altitude 165m (Point 48). From this point, it follows along the right margin of Menezes Cortes Ave. towards the East, reaching a contour line of altitude 313m, at the place known as Matheus Gorge (Point 49). On its East slope: From the aforementioned point (Matheus Gorge) it rises to the southeast by the same watershed, passing by the contour lines altitude 325m (Point 50), altitude 350m (Point 51), 375m (Point 52), altitude 400m (Point 53), altitude 425m (Point 54), altitude 450m (Point 55), altitude 475m (Point 56), reaching the summit of Ramalho Hill (484.3m) (Point 57). It follows by the watershed towards the Southeast by the Matheus Range, passing by the contour lines of altitude 475m (Point 58), altitude 450m (Point 59) e altitude 420m (Point 60). From there, it rises once again by the watershed, passing by the contour lines of altitude 425m (Point 61), altitude 450m (Point 62), altitude 475m (Point 63), altitude 500m (Point 64), altitude 525m (Point 65), altitude 550m (Point 66), altitude 575m (Point 67), altitude 600m (Point 68), altitude 625m (Point 69), altitude 650m (Point 70), passing by the contour line of altitude 673.2m (Point 71) and continues to rise to the altitudes 675m (Point 72), 700m (Point 73), 714m (Point 74), at Elefante Hill. It follows towards the Northeast by the watershed (summit of Elefante Hill), passing by the contour lines of altitude 700m (Point 75), altitude 675m (Point 76), altitude 678.4m (Point 77), altitude 656.5m (Point 78), altitude 663.7m (Point 79), altitude 650m (Point 80), altitude 625m (Point 81), altitude 600m (Point 82), altitude 575m (Point 83), altitude 550m (Point 84), altitude 525m (Point 85), altitude 500m (Point 86), altitude 475m (Point 87), altitude 450m (Point 88), altitude 425m (Point 89), altitude 400m (Point 90). It heads East, falling to the contour line of altitude 375m (Point 91) e altitude 350m (Point 92). From there, it surrounds the rocky wall of Perdido Peak towards the East (Points 93 to 101), until it reaches the contour line of altitude 175m (Point 102). It follows along the rocky wall until it crosses the contour line of altitude 200m (Point 103). It heads towards the Southeast following the edges of the forest (Point 104), proceeds downwards in the same direction (Point 105), surrounds Marianópolis Street (Point 106 and Point

107), continues towards the Southeast in a straight line until it reaches the contour line of altitude 145m (Point 108). It follows by it until it meets Jacó River (Point 109). From there, it heads towards the Northwest following the course of Jacó River until it meets Excelsior River (Point 110). It follows the course of Excelsior River rising by its left bank, without crossing it, until it meets the contour line of altitude 460m (Point 111). It follows in this altitude, surrounding Felizardo Hill, Anhanguera Hill or Excelsior Hill and crosses São João River (Point 112). It surrounds the Pedra da Caixa Hill, at the same altitude of 460m, crosses Maracanã River (Point 113). Surrounds Alto do Bandeira Hill and heads towards a straight imaginary line, from the summit of Alto do Bandeira Hill to the gate of the Tijuca Forest, at Cascatinha Road (Point 114). Following in a straight line to Point 1.

In the Corcovado Sumaré Gávea Pequena ensemble (Carioca Mountain Range) (Sector B), on its South slope: beginning at the Eastern slope of Dona Marta Hill (Point 1), at an altitude of two hundred meters following by the same altitude on the South slope of Dona Marta Hill and Corcovado Hill, passing by Chácara da Bica, in Chácara da Lage, including the whole area of Lage Park until Jardim Botânico Street (Point 2 to Point 10). Following at an altitude of 200 meters, where it crosses the Cabeça River (Point 11); continuing at the same altitude, crosses Algodão River (Point 12), crosses an unnamed Creek, upstream from Macacos Dam (Point 13). Continuing at an altitude of 200m, crossing the Dona Castorina Road by the right margin of one descending towards the Botanical Gardens (Point 14) and passing to an altitude of 100 meters at the crossing with Macacos River (Point 15). At the same altitude of 100m, surrounding Horto Hill (Point 16). It follows in a straight line reaching the summit at an altitude of 160m (Point 17); from there, it rises to the summit of Vista Chinesa, passing by the altitudes of 170m, 185m, 200m, 305m, 310m, 315m, 120m, 345m, 350m, 380m (respectively Points 18 to 27), reaching an altitude of 400m at Vista Chinesa (Point 28). It follows to the altitude 400m, by the left slope of Rainha River, crossing it (Point 29), continuing at the same altitude, by the right slope to the boundaries of Parque da Cidade always at the same altitude, surrounding the elevations of Ponta das Andorinhas and Labouriaux Hill. From there, it heads North of the Canoas Overpass, surrounding Cochrane Hill at the same altitude of 400m until it reached the North-South direction (Point 30). At the crossing of the North-South line with the Vista Chinesa Road, at km 2.5 (Point 31), and following that line to the North, reaching the rocky wall with the bed of the Vista Chinesa Road (Point 32). It surrounds the rocky wall (Points 33 to 40). From there it descends to an altitude of five hundred and sixty meters, following by the North slope of Freira and Boa Vista Hills (Point 41), crossing the waters of Taylor Creek (Point 42). It descends by the right bank of Taylor Creek (Points 43 to 49) reaching an altitude of 400m, following it until it crosses Redentor Road (Point 50), at the place called Sapucaia.

On its North slopes: from the entrance of Redentor towards the North until it reaches Edison Passos Ave. (Point 51). It follows the right margin of this Avenue (of one who heads to Usina/Tijuca), until it reaches an altitude of Caixa Velha da Tijuca

(Point 52). It follows in a straight line to the East to an altitude of 240m (Point 53). It surrounds the rocky wall at the front of Muçu Street and continues at the foot, at the contact between the forest and the rocks (Points 53 to 114). It reaches an altitude of 460m crossing the Pico da Carioca Creek (Point 115). It follows at an altitude of 460m to the Pedrão (Point 116). It follows to the summit (Points 116 to 119) until it reaches an altitude of 200m (Point 120). It follows in a straight line bordering the transmission line, reaching an altitude of 250m (Point 121). It borders the transition line of Sumaré Hill (Points 122 to 128) until it reaches an altitude of 420m (Point 129). It follows at an altitude of 420m, crossing Sumaré Road (Point 130) and following by the left margin of this road until the summit (Points 131 to 133), reaching an altitude of 320m (Point 134). It follows at this altitude of 320m surrounding the slope of Formiga Range, crossing the Comprido River (Point 135) reaching the Creek flowing into the Lagoinha Country Club pool (Point 136). It descends by the right margin of the aforementioned Course of water and the water drain of the aforementioned pool until it reaches Almirante Alexandrino Street (Point 137). From there, it heads towards the Silvestre by the right margin (of one ascending) of the road, crossing the beginning of Paineiras Road (Point 138), continuing at the right margin of Almirante Alexandrino Street until it crosses the train line of the Corcovado Railway, crossing it and descending by the horizontal projection to the right of the Silvestre Overpass until it reaches Ascurra Slope at an altitude of 200m (Point 139). It follows at this altitude of 200m until it reaches Point 1.

In the Pedra Bonita Pedra da Gávea ensemble (on its East slope) (Sector C): beginning at Canoas Road, at the place where it is crossed by the altitude of 360m (Point 1) heading South at the same altitude, crossing Emydio River, at Bandeira Hill (Point 2), descending following the rocky wall of Bandeira Hill, passing to an altitude of 300m (Point 3), following at this altitude surrounding Pico dos Quatro and continuing by the slopes of Pedra da Gávea facing the Barra da Tijuca, Lagoa da Tijuca and Itanhangá, crossing the Barra River (Point 4), then crossing Jacaré River (Point 5) and continuing at this altitude of 300m until it crosses it as Pedra Bonita Creek (Point 6), following by the Creek until it reaches an altitude of 280m (Point 7). Heading North at the aforementioned altitude and continuing until it reaches an altitude of 280m with the rocky wall facing Furnas, called Agassiz Stone (Point 8), surrounding the rocky wall, crossing the contour lines of altitude 350m (Point 9), altitude 400m (Point 10), altitude 450m (Point 11), reaching an altitude of 500m (Point 12). At the 500m altitude it surrounds the North face of the Pedra Bonita massif at the elevation known as Chapecó Hill, crosses the valley between Gávea Pequena and Pedra Bonita Hills (Point 13), following at an altitude of 500m, surrounding Dois Picos Hill and Pedra Aguda. It heads Northeast (Point 14) passing by the altitudes 450m (Point 15), altitude 425m (Point 16), altitude 400m (Point 17), altitude 375m (Point 18) reaching an altitude of 369m (Point 19), meeting Canoas Road and Point 1.

Pretos Forros and Covanca Range (Sector D):beginning at the summit of Inácio Dias Hill (449.4m) (Point 1), heading Northwest crossing the contour line of altitude 400m (Point 2), continuing in this direction until it crosses the contour line of altitude 375m (Point 3), following at this altitude towards the West reaching the North-South imaginary line (Point 4), heading South in this line, reaching a summit of elevation 411.9m (Point 5). It follows in a straight line towards the Southwest, passing by the summits of altitude 325.5m (Point 6) and 326.5 m (Point 7). From there it heads West in a straight line crossing the contour lines of altitude 300m (Point 8), altitude 275m (Point 9), altitude 250 m (Point 10), altitude 225m (Point 11), altitude 200m (Point 12) reaching the contour line of altitude 175m (Point 13). Following by this altitude until Point 14 and from this in a straight line towards the South until it reaches the altitude of 125m (Point 15). It follows by this contour line of altitude 125m until Point 16. It follows in a straight line towards the East, reaching the contour line of altitude 160m (Point 17). It follows at this altitude until Point 18, located above the Engenheiro Raimundo de Paula Soares Tunnel. It ascends towards the Northeast, crossing the contour lines of altitude 175m (Point 19), altitude 200m (Point 20), altitude 225m (Point 21), altitude 250m (Point 22), altitude 275m (Point 23), altitude 300m(Point 24), reaching the contour line of altitude 325m (Point 25). It follows in a straight line towards the Southeast reaching the contour line of altitude 250m (Point 26) near Guimaranea Street. It follows at this altitude until Point 27 and from this towards the Southwest until the elevation of altitude 236.3m (Point 28). It heads Southeast meeting the contour line of altitude 125m (Point 29). It follows at this altitude until Point 30, at Menezes Cortes Ave. It follows this avenue, at the left margin in the direction of the Grajaú neighborhood, until Point 31, at the beginning of the place called Matheus Gorge. It heads East in a straight line reaching the contour line of altitude 325m (Point 32). It heads Northeast reaching the elevation of altitude 358.9m (Point 33). It heads East in a straight line, reaching the contour line of altitude 275m (Point 34) and following at this altitude until Point 35. It follows in a straight line towards the Southwest until the summit of altitude 364.6m (Point 36), continuing in this Southwest direction passing by the contour line of altitude 375m (Point 37) until the summit of Matheus Peak (403.1m) (Point 38). It heads West passing by the contour lines of altitude 375m(Point 39), and 350m (Point 40). From there, it follows to the summit of altitude 359.9m (Point 41). It follows in the same direction, by the summit of Pretos Forros Range, passing by the contour lines of altitude 325m (Point 42), 350m (Point 43), 375m (Point 44) until the summit of altitude 413.8 m (Point 45). Still in the Northwest direction, it reaches the contour line of altitude 425m (Point 46). It follows at this altitude towards the North, surrounding Água Santa Hill, until Point 47. It follows in a straight line towards the Northwest until it crosses the Faria River at the contour line of altitude 225m (Point 48). It follows in a straight line towards the Northwest until it reaches the summit of Inácio Dias Hill, corresponding to Point 1, in this sector.

Art. 3 - The coordinates for the vertexes defining the boundaries of the Tijuca National Park are described in the Annex to this Decree.

Art. 4 - The land contained in the boundaries of the Tijuca National Park, described in this Decree, belonging to the Union, will be ceded to the Brazilian Institute of Environment and Renewable Natural Resources – IBAMA through the Union Patrimony Secretary in the Ministry of Planning, Budget and Management, in the form of law.

Art. 5 – This Decree is effective from the date of its publication.

Brasília, June 3rd, 2004; 183th of the Independence and 116th of the Republic.

LUIZ INÁCIO LULA DA SILVA
Marina Silva

DELIMITATION OF THE BOTANICAL GARDENS

c. DESCRIPTION OF THE BOUNDARIES OF THE BOTANICAL GARDENS/JANUARY 2003

Frontal boundary

- even side of Jardim Botânico Street, with an extension of 671.60 meters.

Left side

- odd side of Pacheco Leão Street, until the entrance of Solar da Imperatriz at n. 2,040, intersection of Macacos River, measuring 2,195.55 meters continuing at the its right margin until an altitude of one hundred meters, boundary of the Tijuca National Park, measuring 372.50 meters, in a total of 2,568.05 meters.

Right side

- from Jardim Botânico Street, following at the even side of Major Rubens Vaz Street, at first at an angle of 12.05 meters, then at a wall dividing it with the Electora; Justice Section, with 48.85 meters until the entrance of the Vila n. 64 with 7.90 meters; following along the even side of Major Rubens Vaz Street through an extension of 93.62 meters, at the frontal boundaries of real estate units of numbers 66, 102 and 122 (RJBG administration); following by the Vila 122 of that Street, measuring 40.50 meters, surrounding on the inside the House I of this Vila in two straight and rectangular segments measuring 20.0 meters and 12.40 meters; follows at the back of real estate unit n. 170, the Police Station, measuring 20.00 meters and 12.40 meters and of real estate unit n. 194 of the Fire Department, measuring 12.40 meters and 32.00 meters along the walls delimiting these corporations. From this point it follows by the back of real estate units number 214, 226, 236 and 246, measuring 54.00 meters until the numberless plot at the same Street, belonging to the Botanical Gardens, measuring 10.00 meters, front and back boundaries, and 35.10 meters, at the sides; it continues at the back of real estate units number 278, 298, 308, 318, 330, 338, 350 (the LIGHT substation), 392, 414, 426, 436, 446 and 456, irregular segments at an extension of 313.94 meters. From this point, it follows transversally the hillside of Major Rubens Vaz Street, touching Jequitibá Street at the boundary with real estate unit n. 57 in this Street, reaching the slope line, measuring 230.00 meters. It bends left and follows by the watershed of the slope existing there, reaching the boundaries of Parque da Cidade. It confronts Parque da Cidade in 479.10 meters through a line along the watershed, reaching the boundaries of another area of Canto e Mello.

Back

- from the POINT 10 Divider of Tijuca National Park (altitude one hundred meters towards Macacos River, it follows to the POINT 11 Divider (the watershed between Macacos and Rainha Rivers at an altitude of one hundred and sixty meters), bending to the right reaching the Divider of Canto e Mello with an extension of 653.26 meters. It bends twice to the left at 125 meters, 10.00 meters, 103.10 meters, in a total of 228.20 meters, confronting the land of the Canto e Mello successors, reaching the aforementioned boundaries of Parque da Cidade.

ANNEX IV – MANAGEMENT COMMITTEE FOR THE TIJUCA NATIONAL PARK



36

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Nº 141, segunda-feira, 23 de julho de 2012
Diário Oficial da União – Seção 2

RAQUÊL MONTE SABAINI, Analista Ambiental do Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, para participar da 62ª Reunião do Comitê Permanente da CITES, em Genebra, Suíça, no período de 21 a 29 de julho de 2012, inclusive trânsito, com ônus.

FRANCISCO GAETANI

INSTITUTO BRASILEIRO DO MEIO AMBIENTE E DOS RECURSOS NATURAIS RENOVÁVEIS
COORDENAÇÃO GERAL DE RECURSOS HUMANOS

PORTARIA Nº 1273, DE 20 DE JULHO DE 2012

O COORDENADOR GERAL DE RECURSOS HUMANOS DO INSTITUTO BRASILEIRO DO MEIO AMBIENTE E DOS RECURSOS NATURAIS RENOVÁVEIS - IBAMA, usando da competência que lhe foi atribuída pelo Decreto nº 6.099, de 26 de abril de 2007, que aprovou a Estrutura Regimental do IBAMA, publicada no Diário Oficial da União de 27 de abril de 2007, e pelo art. 49 do Regimento Interno do IBAMA, aprovado pela Portaria nº 341-MMA, de 31 de agosto de 2011, publicada no Diário Oficial da União de 01 de setembro de 2011 e pela Portaria nº 620-IBAMA, publicada no Boletim de Serviço nº 07 de 05 de julho de 2010, resolve:

Conceder, por força da Decisão Judicial de que trata o Processo nº 03029674620114.05.8103, da 1ª Vara de São Paulo/Certr., pensão judicial em favor de FILOMENA MARIA DUARTE, na qualidade de companheira de ex-servidor VICENTE AGUIAR ELPRA-SIO DE OLIVEIRA, Matrícula SIAPE nº 0679218, aprovado no cargo de Artífice de Eletricidade e Comunicações, classe S, Padrão III, do Plano Especial de Cargos do IBAMA, a partir de 01 de junho de 2012, com fundamento no artigo 40, § 7º, inciso I e § 18 da Constituição Federal, com a redação dada pela Emenda Constitucional nº 41, de 19 de dezembro de 2003, combinado com os artigos 2º, inciso I e 5º da Lei nº 10.887, de 18 de junho de 2004, e artigos, 216 § 1º, 217, inciso I, alínea “c”, e 218 da Lei nº 8.112, de 11 de dezembro de 1990. (Processo 02007.001088/2012-94),

SÉRGIO ALCAZOTO COELHO DINIZ
NOCHEIRA

SUPERINTENDÊNCIA NO RIO GRANDE DO NORTE

PORTARIA Nº 35, DE 20 DE JULHO DE 2012

O SUPERINTENDENTE DO INSTITUTO BRASILEIRO DO MEIO AMBIENTE E DOS RECURSOS NATURAIS RENOVÁVEIS NO ESTADO DO RIO GRANDE DO NORTE, nomeado pela Portaria nº 178 publicada no DOU de 05/07/2005, no uso das atribuições que lhe são conferidas pelo Regimento Interno do IBAMA, aprovado pela Portaria nº 341-MMA, de 31/08/2011, publicada no DOU de 01/09/2011 e competências delegadas pela Portaria nº 262, de 11/04/2008, publicada no DOU de 14/04/2008, e Decreto nº 3.578, de 18/08/2006, publicado no DOU de 21/08/2006, resolve:

Art. 1º - Designar as atribuições de coordenador e vice-coordenador do colegiado de autoridades julgadoras de autos de infração da SUPPESRN, no período de agosto de 2012 a agosto de 2014, aos servidores abaixo relacionados:

1 - Fabíola Patrícia da Silva Rufino, Analista Ambiental, Matrícula nº 1714820 - Coordenadora;

II - Luiz Eduardo Carneiro Bonilha, Analista Ambiental, Matrícula nº1335258 - Vice Coordenador;

Art. 2º - Esta Portaria entra em vigor, na data de sua publicação

ALVAMAR COSTA DE QUEIROZ

INSTITUTO CHICO MENDES DE CONSERVAÇÃO DA BIODIVERSIDADE

PORTARIA Nº 271, DE 20 DE JULHO DE 2012

O PRESIDENTE DO INSTITUTO CHICO MENDES DE CONSERVAÇÃO DA BIODIVERSIDADE - INSTITUTO CHICO MENDES, nomeado pela Portaria nº 304, publicada no Diário Oficial da União de 29 de maio de 2012, no uso das atribuições que lhe são conferidas pelo art. 21, inciso I do Anexo I do Decreto nº 7.515, de 08 de julho de 2011, publicado no Diário Oficial da União do dia subsequente:

Considerando a Câmara Segunda do Acordo de Cooperação nº 03/2011, celebrado entre o ICMBio, o Estado do Rio de Janeiro, a Secretaria do Meio Ambiente, o Município do Rio de Janeiro, a Secretaria Municipal de Meio Ambiente - SMA/C, a Mitra Arqueológica, a Secretaria do Patrimônio da União, Ministério do Planejamento, Orçamento e Gestão - SPU, com a intervenção do Ministério do Meio Ambiente objetivando a gestão compartilhada do Parque Nacional da Tijuca. Processo nº 02670.000568/2008-22, resolve:

Art. 1º - Instaurar o Comitê Permanente de Acompanhamento e Gestão do Acordo de Cooperação para a Gestão Compartilhada do Parque Nacional da Tijuca nº 05/2011.

Art. 2º - Compõe no Comitê Permanente planejar, acompanhar e monitorar as atividades e programas pactuados no Acordo de Cooperação nº 05/2011, emitir relatórios periódicos ao Conselho Municipal de Meio Ambiente e ao Conselho Consultivo do Parque Nacional da Tijuca.

Art. 3º - O Comitê Permanente será composto por representantes dos seguintes órgãos:

56 I - Do Instituto Chico Mendes de Conservação:
Emerson Bassos Viveiros de Castro - CPF Nº 075.971.807-

Pedro da Cunha e Menezes - CPF Nº 849.360.027-04
II - Do Governo do Rio de Janeiro:
André Silva Ilha - CPF Nº 543.840.527-15
Patrícia Figueiredo de Castro - CPF Nº 596.419.837-68
III - Prefeitura Municipal do Estado do Rio de Janeiro:
Anelise Gramacho COMLURB - CPF Nº 973.298.787-15
Carlos Alberto MunizSMAC - CPF Nº 666.126.917-80
Marta Inês Galvão PinheiroRIOTUR - CPF Nº 620.222.707-97
Maurio José Baptista/ GEO-RIO - CPF Nº 023.347.807-82
Rafael Gonçalves/ SECONSERVA - CPF Nº 086.909.387-

88 Zecarias Rodrigues da Silva Barbosa/ Guarda Municipal - CPF Nº 495.159.347-53
IV - Mitra Arquiepiscopal do Rio de Janeiro
Pe. Omar Raposo de Souza - CPF Nº 0871.44.747-94
V - Secretaria do Patrimônio da União
Marina Angela Miranda Esteves da Silva - CPF Nº 636.457.007-06
VI - Ministério do Meio Ambiente
Larissa Cástia Ribeiro da Cruz Goody - CPF Nº 005.274.689-59

Art. 4º - O Comitê Permanente deverá escolher um coordenador entre seus membros.
Parágrafo único. Cabe ao município do Rio de Janeiro exercer a Secretaria Executiva do Comitê, cuja atribuição será zelar pela implantação das definições provenientes do Comitê, respeitadas as competências de cada convenente.

Art. 5º - A participação no Comitê Permanente criada por esta portaria não engendra qualquer tipo de remuneração.
Art. 6º - Esta Portaria entra em vigor na data de sua publicação.

ROBERTO RICARDO VIZENTIN

DIRETORIA DE PLANEJAMENTO, ADMINISTRAÇÃO E LOGÍSTICA

PORTARIA Nº 309, DE 19 DE JULHO DE 2012

A DIRETORA DE PLANEJAMENTO, ADMINISTRAÇÃO E LOGÍSTICA DO INSTITUTO CHICO MENDES DE CONSERVAÇÃO DA BIODIVERSIDADE, usando da competência atribuída pela Portaria nº 69, de 12 de novembro de 2007, publicada no Diário Oficial da União de 13 de novembro de 2007, e Portaria nº 18, de 06 de fevereiro de 2008, publicada no Diário Oficial da União de 08 de fevereiro de 2008, e considerando o constante do Processo nº 02070.0017172012-12, resolve:

I - Conceder aposentadoria voluntária com proventos integrais, ao servidor FRANCISCO LUIZ CAMARÁ TAVARES, matrícula nº 06835967, ocupante do cargo de Analista Ambiental, Classe “S”, Padrão III, lotado na Diretoria de Pesquisa, Avaliação e Monitoramento da Biodiversidade - DIBIO, pensão em Quantidade Pessoal deste Instituto, com fundamento no art. 3º, incisos I, II e III, parágrafo único da Emenda Constitucional nº 47/2003.

II - Declarar vacância da vaga nº 430994, do referido cargo.

SILVANA CANUTO MEDEIROS

Ministério do Planejamento, Orçamento e Gestão

SECRETARIA EXECUTIVA

PORTARIA Nº 817, DE 28 DE JULHO DE 2012

O SECRETÁRIO-EXECUTIVO ADJUNTO DO MINISTÉRIO DO PLANEJAMENTO, ORÇAMENTO E GESTÃO, no uso da competência que lhe foi subdelegada pela Portaria nº 134/SEMOP, de 4 de março de 2004, publicada no Diário Oficial da União de 5 de março de 2004, e considerando o disposto no art. 93 da Lei nº 8.112, de 11 de dezembro de 1990, regulamentado pelo Decreto nº 4.059, de 12 de dezembro de 2001, e em face do disposto no art. 12 da Lei nº 11.906, de 20 de janeiro de 2009, e no art. 23-A, da Lei nº 9.637, de 1998 resolve eleviar a requisição do seguinte servidor: pensão em Quantidade de Pessoal deste Ministério, na forma abaixo indicada:

Servidor: RICARDO CORTES PORTUGAL
Matrícula SIAPE nº: 09383532
Cargo: Técnico em Comunicação Social
Parq: Instituto Brasileiro de Museus - IBRAM
Cargo a ser ocupado: não informado
Amparo Legal: inciso II do art. 93 da Lei nº 8.112, de 1990, e/c o art. 12 da Lei nº 11.906, de 2009, e com o art. 23-A da Lei nº 9.637, de 1998.
Responsabilidade de ônus: Órgão cedente
Processo nº: 03001.0033383/2012-16

VALTER CORRÊIA DA SILVA

Este documento pode ser verificado no endereço eletrônico <http://www.in.gov.br/auditoria/index.html>, nella referência 04807201120172168734

Documento assinado

ANNEX V

COUNCIL FOR THE PÃO DE AÇÚCAR AND URCA HILLS NATURAL MONUMENT

RESOLUTION SMAC N. 518 OF AUGUST 13, 2012

THE MUNICIPAL SECRETARY OF ENVIRONMENT using the attributions conferred to him by the legislation in vigor and;

CONSIDERING that Decree n. 26.578 of 06/01/2006 declares the Pão de Açúcar and Urca Hills ensemble a Natural Monument. CONSIDERING the dispositions of subparagraph III of Art. 5 of the Federal Law 9,985 of 07/18/2000, instituting the National System of Nature Conservation Units (SNUC), where it is established that SNUC will follow guidelines that ensure the effective participation of local populations in the creation, implementation and management of Conservation Units;

CONSIDERING the dispositions of Municipal Decree n. 30,031 of 11/10/2008 on the creation of the Councils for Conservation Units in the Municipality of Rio de Janeiro;

RESOLVES:

Art. 1 – The Council for the Pão De Açúcar and Urca Hills Natural Monument is established with the equal representation of members of the Public Power and of civil society.

Art. 2 – The Council, with a two-year term, enabling reelection, will be comprised of 20 (twenty) full members, with a right to vote, all appointed by the Council President, with the following composition:

I. 10 (ten) members from the bodies of Public Power indicated below:

- a. 1 (one) Representative from the Municipal Secretariat of Environment – SMAC;
- b. 1 (one) Representative from RIOTUR;
- c. 1 (one) Representative from the Municipal Guard of Rio de Janeiro – GM-Rio;
- d. 1(one) Representative from the Chico Mendes Institute for Biodiversity – ICMBIO;
- e. 1 (one) Representative from the National Historic and Artistic Heritage Institute – IPHAN;
- f. 1 (one) Representative from the Federal University of the State of Rio de Janeiro – UNIRIO;
- g. 1(one) Representative from the Army School of Command and General Staff – ECEME;
- h. 1 (one) Representative from the South Zone Military Hall – PMSZ;
- i. 1 (one) Representative from the Mineral Resources Research Company – CPRM.
- j. 1 (one) Representative from the State Institute for the Environment – INEA.

II. 10 (ten) members from civil society, active in fields related to the Pão de Açúcar and Urca Hills Natural Monument, as listed below:

- a. 1 (one) Representative from the Association of Urca Inhabitants – AMOUR;
- b. 1 (one) Representative from the Caminho Aéreo do Pão de Açúcar Company – CCAPA;
- c. 1 (one) Representative from the Mountaineering Federation of the State of Rio de Janeiro – FEMERJ;
- d. 1 (one) Representative from the Carioca Association of Adventure Tourism Companies – ACTA ;
- e. 1 (one) Representative from the Association of Professional Rock Climbing Guides and Instructors of the State of Rio de Janeiro – AGUIPERJ;

- f. 1 (one) Representative from the Rio de Janeiro Yatch Club – ICRJ;
- g. 1 (one) Representative from the Boy Scouts Union in Brazil – UEB;
- h. 1 (one) Representative from the Association of Botafogo Inhabitants – AMAB;
- i. 1 (one) Representative from the Association of Inhabitants of Lauro Muller Street and Adjacent Areas – ALMA;
- j. 1 (one) Representative from the Ecological Action Group – GAE.

Sole Paragraph – Each full member will have an alternate to replace him or her in absences and impediments.

Art. 3 – The Council will be presided by the manager of the Pão De Açúcar and Urca Hills Natural Monument, to be replaced, in his or her absences and impediments, by the Council’s Executive Secretary.

Art. 4 – The Council addressed in this Resolution will be consultive in nature, and guided by the pertinent dispositions, included in Municipal Decree n. 30,031 of 11/10/2008.

Art. 5 – This Resolution is effective from the date of its publication.

Rio de Janeiro, August 13th, 2012

ALTAMIRANDO FERNANDES MORAES

MUNICIPAL SECRETARY OF ENVIRONMENT IN OFFICE

ANNEX VI

TERM OF REFERENCE FOR FLAMENGO PARK

TERM OF REFERENCE FOR THE DEVELOPMENT OF THE MASTER PLAN FOR BRIGADEIRO EDUARDO GOMES PARK –FLAMENGO PARK

1. INTRODUCTION

The present Term of Reference establishes the necessary set of descriptive, conceptual and technical information, aiming at guiding the legal and technical procedures for contracting the Master Plan for Brigadeiro Eduardo Gomes Park – Flamengo Park.

The Brigadeiro Eduardo Gomes Park, hereinafter called Flamengo Park, is located near the Seafront of Guanabara Bay, on reclaimed lands, measuring 1,325,590 square meters. It was built following the project developed by the Work Group for the Urbanization of the Reclaimed Land⁵, encompassing several neighborhoods, from Santos Dumont Airport to the beginning of Botafogo Beach, and is part of the Carioca Urban Parks system, under the tutelage of FPJ – Parks and Gardens Foundation and SMAC – Municipal Secretariat for the Environment. The Park is currently under the administration of the VI Administrative Region, linked to the Staff Secretariat.

Flamengo Park is listed as heritage in the Federal sphere by IPHAN and in the Municipal sphere, by SUBPC – Subsecretariat of Cultural Heritage, Architecture, Urban Intervention and Design (Dec. n. 30,936/09).

⁵ Work Group presided by Maria Carlota (Lota) de Macedo Soares, comprised by Affonso Eduardo Reidy, urban planning; Roberto Burle Marx, landscape design; Luiz Emygdio de Mello Filho, botany; Jorge Machado Moreira and Helio Mamede, architecture; Berta Leitchic, engineering.

2. OBJECT OF THE CONTRACT

Contracting specialized services for the development of the Master Plan for the Brigadeiro Eduardo Gomes Park – Flamengo Park, whose geographical situation and delimitation, for effects of identifying the scope of the work, are defined in the blueprint included in Annex II of this Term of Reference.

3. JUSTIFICATION

Flamengo Park is one of the main urban components in the nomination of the City of Rio de Janeiro to UNESCO's World Heritage List, in the category of Cultural Landscape.

The importance of the Park in the context of the city is also considered, as a host city for the World Cup in 2014 and the Olympics in 2016. Its premises will host nautical competitions, and it is also an important equipment for the flow of tourists generated by the aforementioned events.

In the year of 2009 we celebrate the centennial of two great figures in world architecture and landscaping, both authors of Flamengo Park – architect and urban planner Affonso Eduardo Reidy and landscape architect Roberto Burle Marx. The relevance of the landscaping works of Roberto Burle Marx for the City of Rio de Janeiro was officially acknowledged through the decree that established the provisional listing of 84 of his works in the city, including the Flamengo Park itself, one of its most significant interventions, with the landscaping in the Museum of Modern Art, also located in the Park, and the Portuguese stone mosaic in the Copacabana seafront.

According to art. 6 of the Florence Charter, the expression "historical garden" may be applied equally to small gardens or great parks, whether formal or "landscapes", which includes the Flamengo Park. Because it is an urban park of great dimensions and widely used by the population, Flamengo Park is subject to constant interferences and degradations, and an intensive intervention of conservation and recovery is now necessary, as well as establishing criteria for its occupation, uses and concessions, aiming at protecting and preserving its botanical, landscape and architectural heritage, allowing to make the most of the ensemble's touristic, cultural, sporting and social potential.

4. MASTER PLAN OBJECTIVES

- Identifying, through a survey and diagnosis of the physical and environmental conditions and of the social-cultural marks of the Park, its uses, landscape and spatial characteristics, critical problems and potentialities;
- Defining guidelines for regulating the use of the space and equipment in the Park, to be later submitted to the Municipal Executive and Legislative Powers;
- Establishing priority maintenance, restoration and conservation actions;
- Contributing with the public bodies directly involved with the administration and preservation of Flamengo Park, to establish a management model, with the force of a legal statute, materializing a more efficient, economic and sustainable administration through time. This management model will take into account the application of the Master Plan and the surveillance of its guidelines.

5. CONCEPTUAL AND METHODOLOGICAL GUIDELINES

The Flamengo Park Master Plan will use as reference, for all the proposed interventions, maintenance, conservation, restoration and others, the principles established in the following documents:

- I. Original project for the Urbanization of the Reclaimed Lands of Flamengo Beach, developed by the Work Group, presided by Maria Carlota (Lota) de Macedo Soares and composed by Affonso Eduardo Reidy, urban planning; Roberto Burle Marx, landscape design; Luiz Emygdio de Mello Filho, botany; Jorge Machado Moreira, architecture; Berta Leitchic, engineering and Helio Mamede, architecture.
- II. Florence Charter – Historical Gardens, document adopted by ICOMOS – International Council on Monuments and Sites in December 1982;

- III. Other documents related to the protection of Brazilian Cultural Heritage, particularly the guidelines of bodies in charge of the listed asset.
- IV. The criteria necessary for the nomination of the city of Rio de Janeiro to UNESCO's World Heritage List –Cultural Landscape category.

The contractor will develop a set of studies, orientations and norms, allowing the implementation of the following guidelines:

- Recovery, protection and preservation of the botanical, landscape, architectural, historical and cultural heritage;
- Enhancing cultural and touristic activities, by valuing and promoting the use of the existing equipment and the now idle areas destined for public visitation;
- Improvement of the levels of comfort and security, so as to:
 - a) be acknowledged by users, in all domains of the Park, including its accesses;
 - b) favoring the extension of positive impacts to the Park's immediate surroundings;
 - c) substantially neutralizing or minimizing predatory initiatives and uses incompatible with the destination of Park spaces;
- Regulating the general conditions for the use and exploitation of material supports (landscape, architectural and urban heritage) in the different territories of the Park, considering their respective profiles of use and interest, by establishing normative criteria aiming at protecting cultural and environmental heritage and making spaces and equipment adequate to the new demands and new uses identified, including accessibility;
- Establishing a management model – and a respective administrative structure, whether through the creation of an independent management body or one inserted in the structure of municipal administration. The contractor will be in charge of collaborating with public agents, who will hear other segments in activity in the Park domains. It will be in the competence of public agents to assess and approve the composition of the management organization proposed by the contractor. The main target of the future management organization of Flamengo Park will be the permanent operation of maintenance of its plant and mineral covering, managing the maintenance of public education, culture, sports and leisure equipment, furniture, draining and lighting

infrastructure, public sanitation and security. The management organization of Flamengo Park will also be in charge of promoting actions to foster culture, sports, tourism and leisure, observing the conditions established in the Master Plan;

As methodology for the development of the Plan, its organization should take place in two main fronts, facilitating its composition and interface with the different professionals of the required multidisciplinary staff:

- I. Landscape heritage of its plant and mineral covering, mineral covering understood as all kinds of non-plant flooring, of a characteristically landscape nature, found in the domains of the Park;
- II. Architectural and urban heritage, understood as the set of convivial spaces, particularly squares or places devoted to permanence compatible with passive leisure. The set of equipment for sporting, leisure and cultural use, such as courts, tracks, furnished areas for child recreation, built elements of support for the most diverse activities, such as the arena, aircraft flying track, naval modeling tank, the buildings and the ensemble of infrastructural elements, such as the footbridges, other areas of access to the Park and circulation.

6. SCOPE OF THE MASTER PLAN

7. Initial considerations

Description of the justification and considerations on the influence and meaning of the Park in the internal and external context; brief history of Flamengo Park – its origins and the main projects and interventions.

Part 1 – Objectives

Description of the Plan's objectives, as established in item 4.

Part 2 – Current situation of Flamengo Park

Comprehends diagnosis through:

- (i) Analysis of the current conditions of Flamengo Park, focusing on its conservation, use and management, based upon physical surveys;
- (ii) Comparative studies between the current configuration and the original project, based upon documental research.

Prospectings and analyses will focus on its landscape heritage and its architectural and urban heritage:

a) Landscape heritage

Comprehends the set of elements comprising the existing collection of a predominantly ornamental character in Flamengo Park, whether of plants (herbaceous, shrubby or arboreal compositions) or of other kinds, such as stone or shale floorings.

The contents of the survey of its landscape heritage must be expressed:

- By a classification or grouping of landscape spaces by similar standards (survey aiming at the general regulation of the use of the Park);
- By sequences of boards, where the original and the current situation will be represented, that is, the discrimination of existing plant species and those planted initially, including a survey of their phytosanitary state;
- By a registry board of species;
- By a comprehensive and representative photographic registry of plant coverings and mineral coverings, presented with references of their placement in the Park, through graphic schemes.

b) Architectural and urban heritage

Comprehends the conviviality spaces, the circulation paths and areas of user permanence, as well as their built equipment, the furniture and the building ensemble.

Note that the set of elements comprising the architectural and urban heritage is inserted in the context of its different uses. In this sense, the aspect herein presented also considers, as an object of investigation, the most frequent uses.

The content of the analysis of architectural and urban heritage must be expressed:

- By a survey of the buildings, built elements, equipment, furniture and their respective conditions of conservation and use;
- By a survey of the infrastructure: draining network, lighting, irrigation and its conditions of operation and conservation;
- By a survey of the uses verified in the different spaces (both those clearly destined for intensive use, circulation and permanence, and those of a predominantly ornamental landscape function) in different days of the week and hours. The uses must be clarified and the impacts, positive or negative, to which the different open spaces are subject, must be assessed. The possible causes and consequences of these impacts on the integrity of the Park and its attractiveness to visitors and users must also be indicated. This assessment should consider also:
 - - The opinions of users and visitors;
 - - The opinions of the most representative agents installed in the Park domains;
 - - The technical opinions of representatives of public bodies directly involved with the tutelage and preservation of Flamengo Park.

The survey must be supported by documental research, field research and interviews.

Part 3 – Guidelines, Propositions and Plans

They comprehend at least:

- Regulating the general use conditions for the different spaces and equipment in Flamengo Park;
- Guidelines for the establishment of a Database to subsidize future interventions, containing the surveys and the georeferenced maps produced, the maps and iconography existing in archives;

- Plan for the recovery, protection and preservation of the botanic, landscape, architectural, historical and cultural heritage of the Park, based upon the diagnosis obtained and any duly justified proposals of interventions.
- Proposals to enhance cultural and tourist activities, by valuing and encouraging the use of existing equipment and of now idle areas destined for public attendance;
- Proposals to enhance the levels of comfort and security of users and tourists

Part 4 – Management System for Flamengo Park

Consists in the study of a management system for Flamengo Park, involving all the precepts of administrative transparency, shared decision-making and sustainability. This study should be submitted to the decision bodies of public administration, directly involved in the preservation and maintenance of Flamengo Park, notably, the Rio de Janeiro City Hall and the Federal Government. The former through its relevant municipal councils, CMPC – Municipal Council for the Protection of the Cultural Landscape of the City of Rio de Janeiro and CONSEMAC – Municipal Council for the Environment of the City of Rio de Janeiro and the second represented by the Federal Council of Culture and the Superintendency of IPHAN in Rio de Janeiro.

The contractor will be in charge of:

- Proposing and submitting, in a preliminary stage, to the representatives of the public powers involved in the development of the Master Plan:
 - (i) option(s) for the configuration of the Management System;
 - (ii) economical-financial and sustainability strategy(ies) through which the Park's future manager will achieve the implementation of the guidelines defined in the Master Plan;
- Facilitating and operating the forum for discussion and deliberation on the Management System for Flamengo Park.

Part 5 – Conclusions and final considerations

Analysis and assessment of the work;

Bibliography and documents consulted.

8. TECHNICAL REQUIREMENTS

From the point of view of the spatiality conceived for Flamengo Park, landscaping is a whole. The elements comprising the ornamental landscape, whether gardens, lawns, sculptures or floorings, are somehow interrelated with the spatiality of the areas clearly destined for permanence and intensive use.

The requirement of a multidisciplinary staff is justified because it will deal with objects of different natures, consisting of different fields of knowledge, which, in their turn, demand the intervenience of different professionals.

Prospectings, diagnosis and proposals referring to landscape and botanical themes in the Master Plan, suggest the profile of a professional multidisciplinary staff.

The study of the dynamics of use and of the different modes of appropriation of spaces by users, by professionals of social areas, in the different territories of the Park, must be conciliated with the investigation of spaces and the analysis of the physical integrity of the built elements, by architects, engineers, botanists and landscape designers.

Minimum staff required:

- 01(one) Coordinator – architect with more than 10 years of proven experience in the development of master plans or similar tasks;
- 01 auxiliary architect, with more than 05 years of proven experience in diagnosis and projects of recovery, maintenance and conservation of cultural heritage;

- 01 landscape architect – with more than 05 years of proven experience in recovery, maintenance and conservation projects
- 01 Forestry Engineer – with more than 05 years of proven experience in phytotherapeutic diagnosis and treatments
- 01 Botanist – with more than 05 years of proven experience in flora recovery recovery, maintenance and conservation projects
- 01 Civil Engineer – with more than 05 years of proven experience in structure diagnosis and projects
- 01 Historian – with proven experience in archival research;
- 01 Sociologist of Anthropologist – with proven experience in the development of social diagnosis and research
- 01 lawyer or economist – with experience in the development of management models for public areas.

8. COMPENSATION FOR SERVICES

The total cost for the execution of the services specified is of R\$ 252,000.00 (two hundred and fifty two thousand reais)

9. TIME FRAME FOR ITS EXECUTION

The time frame for the development of the Master Plan for Flamengo Park will be of 10 (ten) months, counting from the issue of the Service Order.

10. ANNEXES

10.1. Detailing of costs

Annex I – Detailing of costs

MASTER PLAN FOR FLAMENGO PARK				
Staff	• Months	Fees	Working hours	Total
Coordinating architect	10	10,000.00	60%	60,000.00
Auxiliary architect	10	6,000.00	100%	60,000.00
Landscape architect	10	6,000.00	50%	30,000.00
Forestry Engineer	10	6,000.00	30%	18,000.00
Botanist	10	6,000.00	30%	18,000.00
Civil Engineer	10	6,000.00	20%	12,000.00
Historian	10	6,000.00	20%	12,000.00
Sociologist/Anthropologist	10	6,000.00	20%	12,000.00
Lawyer/Economist	10	6,000.00	20%	12,000.00
Indirect Costs	10	1800.00/month	-	18,000.00
TOTAL				252,000.00