Please note: this is an archived Conservation Outlook Assessment for Iguaçu National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Iguaçu National Park

SITE INFORMATION

Country: Brazil
Inscribed in: 1986
Criteria: (vii) (x)
The park shares with Iguazú National Park in Argentina one of the world's largest and most impressive waterfalls, extending over some 2,700 m. It is home to many rare and endangered species of flora and fauna, among them the giant otter and the giant anteater. The clouds of spray produced by the waterfall are conducive to the growth of lush vegetation. © UNESCO

SUMMARY

Conservation Outlook **Significant concern**

Based on current conditions, Iguaçu National Park maintains good ecological integrity, with stable or improving trends in key biodiversity indicators such as large mammal populations, especially jaguars, and forest regeneration along the Colono Road. However, the park remains vulnerable to persistent threats, including altered river flow from upstream dams, illegal hunting, and pressure from tourism growth. While monitoring indicates no current significant ecological impacts from hydropower operations, long-term risks to aquatic systems and the scenic value of the falls cannot be ruled out. The lack of trend data for plant diversity and limited information on staff capacity and research integration also represent gaps that could affect adaptive management.
The park shows potential to conserve its World Heritage values over time, supported by a solid legal and institutional framework, structured planning tools, and effective implementation of conservation measures. Ongoing restoration programs and coordinated cross-border efforts, including monitoring systems and environmental safeguards around the Baixo Iguaçu HPP, contribute to the resilience of the park's ecosystems. Investments in sustainable tourism and infrastructure under a long-term concession are aligned with conservation goals and contribute to management capacity. Continued investment in enforcement, monitoring, and adaptive planning will be critical to address threats and ensure the long-term protection of the site's Outstanding Universal Value.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **One of the largest and most impressive waterfalls in the world** **Criterion:(vii)**

Iguaçu National Park shares with Iguazú National Park in Argentina one of the world's largest and most impressive waterfalls comprised of a system of numerous cascades and rapids within the setting of a lush and diverse sub-tropical broadleaf forest (World Heritage Committee, 2016; IUCN, 1986). The site's main attraction is the waterfalls system of the Iguaçu (or Iguazú) river, renowned for its visual and acoustic beauty, with vertical drops of up to 80 meters. The river, named after the indigenous term for "great water", forms a semi-circle in the heart of the two parks and constitutes the international border between Argentina and Brazil before flowing into the mighty Paraná River, 25 kilometres downstream from the park (World Heritage Committee, 2016). The permanent water cloud from the cataracts forms an impressive scene that surrounds the forested islands and riverbanks resulting in a visually stunning and constantly changing interface between land and water (World Heritage Committee, 2016; IUCN, 1986).

▶ **Exceptional biodiversity and rare charismatic species** **Criterion:(x)**

Iguaçu National Park and the neighbouring Iguazú National Park constitute a significant remnant of the Atlantic Forest, one of the most threatened global conservation priorities. The rich biodiversity includes countless invertebrate species, over 400 species of birds and possibly as many as 80 mammals, including some endangered and vulnerable species such as the puma (Puma concolor), the margay (Leopardus wiedii), the jaguarundi (Puma yagouaroundi), the harpy eagle (Harpia harpyja), the giant otter (Pteronura brasiliensis), the black-fronted piping guan (Aburria jacutinga), the tapir (Tapirus terrestris), the bush dog (Speothos venaticus), the pygmy brocket (Mazama nana), the monjolo or surubim of the Iguaçu (Steindachneridion sp), the piracanjuba (Brycon orbignyanus) and the fasciated tiger heron (Tigrisoma fasciatum) (World Heritage Committee, 2016). Rare charismatic species also include the broad-snouted caiman, giant anteater (Myrmecophaga tridactyla), ocelot (Leopardus tigrinus) and the jaguar (Panthera onca) (World Heritage Committee, 2016; IUCN, 1986).

▶ **Exceptional plant diversity with high level of endemism** **Criterion:(x)**

Iguaçu National Park, together with the contiguous World Heritage property of Iguazú National Park in Argentina and adjacent protected areas, forms the largest single protected remnant of the Paranaense subtropical rainforest, which belongs to the Interior Atlantic Forest. Both parks host over 2000 species of vascular plants, including some rare and iconic species such as the Juçara-palm, the Peroba and the critically endangered Paraná-pine (World Heritage Committee, 2016; IUCN, 1986).

Assessment information

Threats

Current Threats **High Threat**

The increasing number of visitors , reaching 1.8 million by 2024, making it the most visited federal protected area in Brazil, represent a major threat to the property. Efforts to sustainably manage this growth have been carried on by ICMBio through the development of a Public Use Plan (PUP), outlining more than 50 strategic actions to promote tourism while maintaining conservation goals. Additionally, the park faces ongoing challenges related to hydroelectric dams upstream. The dams have altered the flow of water to the falls, reducing their visual appeal and affecting river ecosystems, although ecological impacts remain poorly documented. In particular, the Baixo Iguaçu Hydroelectric Power Plant, which has been operating near the park boundary since 2018, poses a long-term threat to the park's Outstanding Universal Value (OUV). While current water flow regulations and environmental programs are in place, their effectiveness requires continued monitoring and vigilance. Hunting pressure persists, with medium-sized rodents such as agouti and paca still targeted, threatening key ecological functions such as seed dispersal. Although enforcement has improved, cultural and economic factors sustain illegal hunting activities. The absence of specific data on climate change its an important gap in assessing the park’s resilience and adaptive capacity.

▶ **Recreational Activities** — **High Threat**

(Increasing visitation) — Inside site, localised(<5%)

ICMBio seeks to increase visitation to protected areas. The park is the second most visited federal protected area in Brazil, and there is an increasing trend of visitor numbers (from 645,000 in 2002 to 1.9 million in 2018). On national holidays the park received up to 13,000 visitors a day (State Party of Brazil, 2020). During 2024 the park received 1,8 million tourists, becoming this year the most visited after the COVID 19 pandemic (Seven Wonders, 2025). The Iguaçu National Park Public Use Plan (PUP) was developed through a multi-stakeholder consultation to explore gaps and opportunities to unlock the park's potential for sustainable tourism, while ensuring appropriate regulation (ICMBio, 2020). It is a non-binding, non-exhaustive program of action that outlines strategies, guiding principles, and key actions - including over 50 studies, assessments, projects, protocols, and regulations - to be developed and implemented to promote public use, diversify visitation opportunities, enhance the visitor experience, and guide tourism management. The plan is consistent with the park's conservation objectives, zoning and management plan, and ICMBio guidelines for planning and managing public use in protected areas (State Party of Brazil, 2024).

▶ **Dams & Water Management/Use** — **Very High Threat**

(Dams on the Upper Iguaçu River watershed) — Inside site, widespread(15-50%)
Outside site

The Itaipu dam (Brazil and Paraguay) on the Parana River and the four Brazilian dams on the Iguaçu River, including the Baixo Iguaçu Hydroelectric Power Plant, have significantly altered the flow of water that feeds the falls, and the flora and fauna of the river, although the details are not known. Potential environmental impact drivers that may affect these attributes are changes in the river’s water flow and quality patterns, as well as the isolation of aquatic species populations upstream and downstream of the dam.

The Baixo Iguaçu Hydroelectric Power Plant (HPP) became operational in December 2018. The State Party did not submit a specific assessment of its impact to the World Heritage Centre as requested (UNESCO, 2023). It is located a few hundred meters from the eastern boundary of the park (State Party of Brazil, 2020). The National Water Agency (ANA) requires a minimum flow of 350 m^3/s at the Iguaçu Falls to preserve their scenic beauty, and this condition was met as of June 2024 (State Party of Brazil, 2024). Extensive conditions have been imposed by the ICMBio and the Environmental Institute of Paraná (IAP) for licensing the construction and operation of the HPP. In response, the joint venture responsible for the project has established 32 environmental and social programs (State Party of Brazil, 2024). Monitoring programmes’ results shows that: 1) monitored water and sediment parameters have remained within the expected range for a recently constructed reservoir; 2) ichthyological surveys identified 54 fish species within the area of influence of the HPP, including 22 endemic, 19 native, and 8 exotic species, and no significant changes in water parameters that could compromise the ichthyofauna were observed; 3) Monitoring of semi-aquatic fauna did not find impacts by the construction of the HPP on the populations of surveyed key species Williams’ side-necked turtle (Phrynops williamsi) and

Neotropical otter (Lontra longicaudis) (State Party of Brazil, 2024). Additionally, ICMBio carried out the National Action Plan for the Conservation of Aquatic and Semi-Aquatic Fauna of the Lower Iguaçu (PAN Baixo Iguaçu), supporting the conclusion that the damming of the Iguaçu River has not been shown to impact Phrynops williamsi or Lontra longicaudis. Overall, ICMBio believes that the monitoring system in place is adequate (State Party of Brazil, 2024).

However, while ongoing monitoring efforts are welcome, the potential impacts of the HPP and other hydroelectric developments on the Upper Iguaçu River watershed on the OUV of the property require continued attention to inform adaptive management of the HPP.

► Recreational Activities

High Threat
Inside site, localised(<5%)

(Tourism infrastructure and activities)

Reported plans to further develop tourism in the property, specifically the proposal to construct a cable car and further expand other tourism-related infrastructure is of concern (UNESCO, 2023). In 2022, ICMBio awarded a new 30-year concession contract for the provision of visitor services in the Iguaçu National Park. The concession includes the revitalization, modernization, operation and maintenance of the tourism infrastructure, as well as the obligation to cover expenses related to the conservation, protection and management of the park. The investment commitments established in the concession have allowed the launch of a comprehensive infrastructure improvement program, developed in accordance with the strategies outlined in the Public Use Plan (PUP) released in 2020.
The cable car project proposal is listed as a mandatory investment for the concession holder and its preliminary location is at the mouth of the São João River, about 8.5 km downstream from Iguaçu Falls. The project remains subject to a locational study to determine the most suitable site for its execution, considering the environmental and heritage impacts, as well as its technical and financial feasibility (State Party of Brazil, 2024). While ICMBio asserts that the infrastructure development program poses no threat to the property' OUV, the proposed project and all future development projects need to be subject to Environmental Impact Assessments.

► Hunting, Collecting & Controlling Terrestrial Animals, Fishing, Harvesting & Controlling Aquatic Species

High Threat
Inside site, widespread(15-50%)
Outside site

(Hunting or trapping terrestrial wild animals and illegal fishing for subsistence, commercial and recreational purposes.)

Other targeted species names
Jaguar (Panthera onca); Jaguarundi (Puma yagouaroundi); Peccary (Pecari tajacu); Puma (Puma concolor)

The protection given by the Park allowed the increase of wildlife populations attractive to hunters. The Park hosts most of the terrestrial large mammals known to have occurred around 20 years ago, at the time of the first systematic study. The census, conducted every two years since 2010, estimated 93 jaguars in 2022, up from 40 in 2005, highlighting the success of joint conservation efforts (State Party of Brazil, 2024). Recent reports estimate that between 230 and 300 jaguars remain in the Atlantic Forest region, which spans the border region between Argentina, Brazil and Paraguay. A third of them live in the area that includes the Iguaçu National Park and its namesake on the Argentine side. This is largely due to conservation efforts in recent decades (Camargo, 2021). The exception is the white-lipped peccary, which was not recorded in a recent survey. Paca and agouti, medium-sized rodents, are among the most hunted species in the park. Both are important seed dispersers that play a key role in forest regeneration (da Silva et al., 2018; State Party of Brazil, 2020). The park has a program to deter hunters, including joint patrols with neighboring Iguazú National Park, but hunters still venture into the park for cultural, commercial, and subsistence reasons. There is evidence of sport hunting activities in the region (ICMBio, 2018; IUCN, 2015). The monitoring program established between ICMBio and the Baixo Iguaçu HPP has intensified inspection activities and curbed predatory hunting, fishing, and extractivism within the boundaries of the Iguaçu National Park and in the area surrounding the Baixo Iguaçu HPP (State Party of Brazil, 2023).

► Changes in Temperature Regimes, Changes in Precipitation & Hydrological Regime

High Threat
Inside site, widespread(15-50%)
Outside site

(Increased rainfall, extreme temperatures and extraordinary floods and droughts)

The Iguazú National Park (Argentina) Management Plan reports an increase in rainfalls and temperatures especially during spring and winter, as well as extraordinary floods. Affectation of sensitive species like the amphibians and changes in the forest composition and physiognomy are expected (APN, 2017). A study conducted in Iguazú National Park shows that climate change, particularly increased rainfall linked to El Niño events, has a severe negative impact on the local yacaré population, a key aquatic predator in the ecosystem (Herrera, 2014). The Argentinian National Meteorological Service (SMN) confirmed that the severe floods during the September-October-November 2023 period were caused by El Niño, with its impacts intensified by climate change. This threat is therefore to be considered recurring in the Iguaçu National Park (Brasil) as well. Currently, there is a need to develop specific adaptation strategies within the Iguaçu and neighbouring Iguazú National Park and to strengthen monitoring efforts to better understand and address the cumulative effects of climate change and upstream dams, which together pose increasing risks to the park's aquatic ecosystems and biodiversity.

► Water-borne & other effluent Pollution

High Threat
Inside site, extent of threat not known
Outside site

(Water pollution)

The northern boundary of the property is clearly marked by the limit of the forest and the start of intensive farming. The streams that run from the agricultural zone into the property and down to the river Iguaçu carry heavy sediments. What exactly the sediment carries, in terms of agricultural pollutants (pesticides and nitrates) is a concern. The sediment load of those streams carrying the agricultural run-off is greater than that of the tributary whose entire catchment areas lies in the eastern part of the National Park (IUCN, 2015). While there is limited published information on specific pollutants and their potential impacts on the site's ecological values, rivers from neighbouring municipalities in both Argentina and Brazil are polluted with untreated or partially treated domestic and industrial wastewater, including sewage and grey water from tourism facilities, which flow into the Iguazú River basin and impact its water quality (APN, 2017). There have also been recent reports from local residents since 2024 about untreated wastewater being discharged directly into the river (Voz de las Cataratas, 2024). The combination of inadequate effluent treatment and the high density of dams highlights the need to better understand cumulative impacts on water quality and to develop transboundary management plans to mitigate harm to the site's ecological values.

► Logging, Harvesting & Controlling Trees

Low Threat
Inside site, extent of threat not known

(Illegal extraction of palmito)
Other targeted species names
Euterpe edulis (palmito)

Illegal extraction of palmito (Euterpe edulis) has been maintained over the years, mainly due to cultural reasons since the extraction, consumption and commercialization of palmito is passed from generation to generation (ICMBio, 2018). However, no updated information on the level of this activity was found.

► Annual & Perennial Non-Timber Crops, Terrestrial Animal Farming, Ranching & Herding

High Threat
Outside site

(Agriculture, livestock farming, roads and other infrastructure outside the site)

The Park is an island in a sea of ranching and farming right up to the Park's boundaries, limiting connectivity within the Atlantic Forest Biome in Brazil, primary by low forest cover along Iguaçu river. Large cats from the Park that prey on livestock and peccaries that consume crops outside the Park are eliminated. Connectivity to the Atlantic Forests remaining in Argentina is limited by the area known as the "Argentine Peninsula Bottleneck" (IUCN and UNESCO, 2008). A recent study highlight that the spatial distribution of most terrestrial large mammals within the Park have been negatively affected by edge effects from human-modified landscapes (and tourism and to a lesser extent hunting). For large

mammals, that range widely and come into frequent contact with Park limits and beyond, the altered areas overexpose them to human-induced mortality such as road kills, hunting and persecution. In addition, favor biological invasions like the domestic dog across the Park, an example of an edge-induced invasion (da Silva et al., 2018).

Potential Threats

Low Threat

The Colono Road, built illegally through Iguaçu National Park, led to the site's inclusion on the List of World Heritage in Danger in 1999. After construction stopped, the site was removed from the list in 2001. As of 2019, the road remains closed, and the forest along its former route is in an advanced stage of natural regeneration, making the original path difficult to trace. Two bills aimed at reopening the road were introduced in Congress; one has been archived, and the other has lost momentum. According to ICMBio (2024), there is currently little risk of the road being reopened, and forest restoration continues to progress successfully. Although there is no local data available , it is highly likely that invasive species recorder in the Argentinian side of the park are present on the Brazilian side as well.

▶ Roads, Trails & Railroads

Low Threat

(Pressure to re-open the "Estrada do Colono")

Inside site, widespread(15-50%)

In 1999, the Committee inscribed the property onto the List of World Heritage in Danger due to the construction of the unauthorized Estrada do Colono (Colono Road) through the centre of the property. In 2001, due the end of road construction activities, the property was removed from the List of World Heritage in Danger (UNESCO, 2012). As of 2019, the Colono Road was closed and the road area in advanced stages of forest regeneration. However, there were two Bills passing through National Congress that propose the reopening of Colono Road (State Party of Brazil, 2020). Of the two bills introduced to reopen the road, one has been archived and is no longer under consideration, while the other has only advanced to 2021 and appears to have lost momentum and political appeal (State Party of Brazil, 2024). Currently, ICMBio's congressional advisory team sees little likelihood that the remaining bill will resume its progress in Congress and does not consider it a significant threat to the property (State Party of Brazil, 2024). However, it remains of concern the potential consideration of the one Bill left.

▶ Invasive Non-Native/ Alien Species

High Threat

(Invasive species)

Inside site, extent of threat not known
Outside site

Invasive/problematic species
Hovenia dulcis
Morus alba
Leucaena leucocephala
Hedychium coronarium
Panicum maximum
Other invasive species names
Zebrina pendula, Penisetum purpureum, Ligustrum cinesis, Citrus sp, Impatiens sultani, Eriobotria japonica, Cynodon plestostach, Sorgum alepens

The management plan of Argentina's Iguazu National Park reports 123 non-native plants species including 13 invasive plant species (6 woody and 7 herbaceous) as well as 3 exotic fish species identified in the upper Iguazú river (Coptodon rendalli, Geophagus brasiliensis, Oreochromis niloticus) and one in the lower Iguazú (Clarias gariepinus) (APN, 2017). Although there is no equivalent data available for the Brazilian side of the park, it is highly likely that similar invasive species are present there as well.

Overall assessment of threats

High Threat

The park faces ongoing environmental and political threats. Hydroelectric dams upstream have altered the flow of water to the falls, reducing their visual appeal and affecting river ecosystems, although ecological impacts remain poorly documented. In particular, the Baixo Iguaçu Hydroelectric Power

Plant, which has been operating near the park boundary since 2018, poses a long-term threat to the park's Outstanding Universal Value (OUV). While current water flow regulations and environmental programs are in place, their effectiveness requires continued monitoring and vigilance. Hunting pressure persists, with medium-sized rodents such as agouti and paca still targeted, threatening key ecological functions such as seed dispersal. Although enforcement has improved, cultural and economic factors sustain illegal hunting activities. The absence of specific data on climate change its an important gap in assessing the park’s resilience and adaptive capacity. The Colono Road, once illegally opened through the park, was closed and has since undergone significant forest regeneration. While previous legislative efforts sought to reopen it, these have lost momentum and are no longer considered an active threat. The successful restoration of the Colono Road corridor complements the restoration efforts.
Efforts to sustainably manage tourism growth are ongoing by ICMBio through the development of a Public Use Plan (PUP).

Protection and management

Assessing Protection and Management

▶ **Involvement of stakeholders and rightsholders, including indigenous peoples and local communities, in decision-making processes** — **Mostly Effective**

The Park management has carried out several activities in partnership with neighbouring communities which improved relationships with local population. Key local stakeholders participated in the process of developing the management plan, and some are members of the Park Advisory Council (CONPARNI), along with government actors (State Party of Brazil, 2020; ICMBio, 2018). Ranchers occasionally get into conflict with Park authorities due to shooting jaguars and pumas when these predate on their livestock (ICMBio, 2018). The Public Use Plan for the Iguaçu National Park (2020) establishes a strategy for the creation of visitor poles, focusing on the improvement of the visitor experience, the extension of public use areas to other neighbouring municipalities, the expansion of the inclusion policy, the promotion of the integration of local production chains, and the monitoring of the impact of visitation to guide management. Four visitation poles have been created, which are the Cataratas, Silva Jardim, Rio Azul and Iguaçu Islands and Gonçalves Dias Poles. The last three poles have activities designed to attract mainly local and regional visitors. Thus, it is expected that the planned actions will contribute to local development, the recognition of the importance of the conservation of the Park by the surrounding communities, seeking the involvement of allies for conservation (ICMBio, 2020). In addition, the Park has promoted a series of on-site interpretation workshops on topics such as the perspectives and heritage of indigenous peoples and the outstanding universal value of the property. Another important initiative was the establishment of a new base in the community of São Miguel do Iguaçu to support the Community-Based Tourism project, implemented in partnership with the Apepu Quilombola community (State Party of Brazil, 2024).

▶ **Legal framework** — **Mostly Effective**

The Park is subject to national legislation on protected areas, specifically the Federal Law "on Environmental Protection" of 1991, updated in 2002, and the Federal Law "on Special Protected Natural Areas" of 1995 (IUCN and UNESCO, 2008).
ICMBio is in charge of the management, protection, control and monitoring of the Park (Law 11.516/2007), a federal protected area belonging to the National System of Nature Conservation Units - SNUC (Law 9.985/2000). The current legal framework has been effective in preserving the values of the site.
Other related regulatory bodies are: i) Instituto Ambiental do Paraná - IAP, responsible for issuing licenses to hydroelectric companies to operate in the Iguaçu River, a state river (a river that flows only through a state); ii) National Water Agency - ANA, a federal agency responsible for the use and

regulation of water resources and the implementation of the national policy on water resources (Law 9.433/1997), which grants licenses for the use of water resources, including for the hydroelectric plants; iii) National Electricity System Operator, a non-profit private entity responsible for the coordination of generation and transmission within the national interconnected electricity system (ICMBio, 2018).
In 2024, the managers from both Parks agreed, at the technical level, to support the proposal for an international cooperation agreement between the States Parties of Brazil and Argentina, which would serve as a legal framework for developing joint action plans covering various aspects of site management, including biodiversity monitoring, control and surveillance, and sustainable tourism. The draft agreement is currently under review by ICMBio, and official negotiations with the Argentine government are planned (State Party of Brazil, 2024).

► Governance arrangements — Mostly Effective

The governance of the Iguaçu National Park is exercised by the Chico Mendes Institute for Biodiversity Conservation (ICMBio), a Brazilian federal agency responsible for the management of conservation units. The management of the Park also has the participation of civil society, through the Advisory Council of the Iguaçu National Park (CONPARNI), an advisory body that promotes social participation in decision-making about the conservation of the Park. In 2022 the tourist services of the Iguaçu National Park were granted to the private sector. The winning consortium, Novo PNI, which paid 375 million reais to the government will start activities after the conclusion of procedures and evaluation of any disputes provided for by the legislation. Due to its scale, visibility and proposed innovations, this new concession represents a milestone for public-private partnerships in conservation units in Brazil.

► Integration into local, regional and national planning systems (including sea/landscape connectivity) — Mostly Effective

The Park is a federally protected area belonging to the National System of Nature Conservation Units (SNUC) and is located on the border between Argentina and Paraguay, 60 km from Iguazú National Park in Argentina (ICMBio, 2018). Collaboration between the two Parks was formalized in 2016 in a Memorandum of Understanding between the Administración de Parques Nacionales de Argentina (APN), ICMBio, the Iguazú National Park in Argentina, and the Iguaçu National Park in Brazil, which promotes increased collaboration (State Party of Brazil, 2020). Joint actions and cooperation include: constant communication and exchange between the managers and rangers of both Parks, joint patrols and law enforcement actions, research and monitoring programs. The development of the management plans of both Parks included the participation of technicians and stakeholders from both protected areas. It is worth noting that the Argentinean Park administration holds the presidency of the Iguaçu National Park Advisory Council, which holds four regular meetings per year and has councils for technical research, environmental education and public use. In terms of connectivity, the main concern is the biological isolation of the Park, as agricultural land uses are established all around its boundaries. The only connectivity the park has is with the Iguazú National Park and, through it, with other Atlantic Forest areas in Argentina. The Atlantic Forest Green Corridor initiative between Brazil and Argentina aims to increase the park's connectivity with other forest areas, as well as to restore 1,700 ha of vegetation on the margins of the Iguaçu River surrounding the reservoir of the Baixo Iguaçu HPP (State Party of Brazil, 2020; ICMBio, 2018).

► Boundaries — Mostly Effective

The boundaries of the site are clearly defined and respected. The Park does not have a formal buffer zone, since is not contemplated in the regulatory framework (ICMBio, 2018).

► Overlapping international designations — Data Deficient

The Iguaçu National Park is part of the Atlantic Forest Biosphere Reserve. Administration of the Biosphere Reserve is carried out by Conselho Nacional da Reserva da Biosfera da Mata Atlântica and the Forest Institute of São Paulo (Instituto Florestal). There is a lack of information to what extent there is collaboration across the two designations in the area.

► Implementation of World Heritage Committee decisions and recommendations — Mostly Effective

The State Party attempts to implement World Heritage Committee decisions and recommendations, though progress on some measures has been slow. The State of Conservation report sent to the Committee in 2024 (State Party of Brazil, 2024) provides further details on the Baixo Iguaçu Hydroelectric Plant (HPP) and monitoring of potential impacts on the OUV, which was of concern in the last Committee decision. Results of four monitoring programmes have been submitted: the Water and Sediment Monitoring Program; the Aquatic Environment Monitoring Program – Limnology and Water Quality Subprogram; the Aquatic Environment Monitoring Program – Ichthyofauna Subprogram; and the Monitoring Program for Terrestrial and Semi-Aquatic Fauna. According to the State Party, the monitoring results demonstrate that the construction of the HPP has no negative impacts on key attributes. Regarding the flow rate of Iguaçu Falls, the National Water Agency (ANA) has set a requirement among the operational parameters for the HPP to maintain a minimum outflow of 350 m^3/s, in order to mitigate the potential impact of the project on the scenic beauty of the waterfalls. As indicated in the water and sediment monitoring report from June 2024, these conditions are being met. While no impact from the HPP have been documented, the forthcoming Action Plan for the Conservation of Fish Species in the Iguaçu River (PAN Iguaçu), currently at the planning stage, will provide a suitable programmatic framework for implementing recommended ancillary conservation measures.

Another concern in previous Committee decisions was the potential reopening of the Colono Road due to two Bills being under consideration. The State Party has assured that one Bill is archived and no longer under consideration, while the other Bill has not progressed due to public disagreement. Nevertheless, the second Bill still seems to be in existence and could pose a future threat to the property.

Other progress by the State Party in response to Committee decisions includes progress in implementing the Public Use Plan and strengthening coordination with Argentina through joint monitoring programmes and discussing the development of an international cooperation agreement between the States Parties.

► Climate action — Some Concern

The Iguaçu National Park Management Plan mentions their link with the National Biodiversity Monitoring Program - Monitora Program. A long-term institutional program aimed at monitoring the state of biodiversity and associated ecosystem services, as a subsidy to the evaluation of the effectiveness of conservation of the National System of Conservation Units (SNUC), adaptation to climate change and the use and management of biodiversity in the conservation units managed by ICMBio (ICMBio, 2018). The management plan does not however include specific provisions to protect the OUV from the negative impacts of climate change. There is no information on how the Park measures and monitors the effects of climate change on the OUV, neither is there information on management measures to support and/or maximise the global response to climate change. Nevertheless, the actions being implemented under the Biodiversity Corridor Consolidation Program of Baixo Iguaçu are contributing to restoration and ecosystem resilience. Between May 2022 and February 2024 a total of 146,240 seedlings were planted across roughly 198 hectares, encompassing row, enrichment and maintenance planting, using 74 native tree species. Furthermore, 25.65 hectares were restored using the high-density direct seeding (muvuca) of 28 native species (State Party of Brazil, 2024).

► Management plan and overall management system — Mostly Effective

Iguaçu National Park is managed by Chico Mendes Institute for Biodiversity Conservation (ICMBio), a semi-autonomous body of the Environment Ministry. The property Management Plan was published in 2018 and the neighboring Iguazu National Park (Argentina) Management Plan was published in 2017. The participatory development process of both plans feed into each other. The Management Plan guide actions toward the protection of the park’s priority resources and values, addressing environmental education, participation, exotic species prevention and control, research, monitoring and public use (ICMBio, 2018). The property also has a Public Use Plan (2020) and a Research Plan (2022), which seek to implement and operationalize policies and strategies contained in the Management Plan.

► Law enforcement — Mostly Effective

Law enforcement activities including joint patrolling with the neighbouring Iguazú National Park (Argentina) are mostly effective. The Natural Resources Protection Program focuses on preventing illicit extraction of natural resources in the Park’s buffer zone, including hunting and illegal fishing. However, illegal activities remain a threat to the site’s values, especially due to limited human capacities (ICMBio, 2018; State Party of Brazil, 2023). The are endeavours to establish partnerships with other administrative bodies, such as the Environmental Military Police to support law enforcement over the next two years (State Party of Brazil, 2023).

► Sustainable finance — Mostly Effective

In 2022, ICMBio awarded a new 30-year concession contract to provide visitor services in the Park. The contract requires the concessionaire to invest a total of BRL 500 million (approximately USD 90 million). The concession agreement allowed for the launch of a comprehensive infrastructure improvement program, including the revitalization, modernization, operation and maintenance of tourism infrastructure, as well as the obligation to cover the costs related to the conservation, protection and management of the Park (State Party of Brazil, 2024). There is no updated information on park entrance fees and the use of these resources in management. According to the latest periodic report, the available budget could be further improved to fully meet management needs (State Party of Brazil, 2023).

► Staff capacity, training and development — Some Concern

Park staff belongs to the ICMBio, Green Rangers from Paraná State Police Force and outsourced administrative, maintenance and security personnel (IUCN and UNESCO, 2008). There is a lack of updated and comprehensive information on staff capacity to provide a detailed assessment. The latest periodic report (State Party of Brazil, 2023) states that there are deficiencies in human resources. There is a continuous search for new public employees, recruitment and assignment from other agencies, in addition to hiring outsourced collaborators according to demand.

► Education and interpretation programmes — Data Deficient

The Public Use Plan includes the definition of strategies to improve education and interpretation activities, educational visits and exhibitions in some of the proposed visitor centers (ICMBio, 2020). The Park has promoted a series of workshops on site interpretation, covering topics such as the perspectives and heritage of Indigenous peoples and the property’s Outstanding Universal Value (State Party of Brazil, 2024). The effectiveness of these activities is currently unclear.

► Tourism and visitation management — Some Concern

The Park is the second most visited federal protected area in Brazil, with visitor numbers increasing from 645,000 in 2002 to 1.9 million in 2018. On national holidays, the Park received up to 13,000 visitors per day (State Party of Brazil, 2020). The Iguaçu National Park Public Use Plan (PUP) was developed through multi-stakeholder consultation to identify gaps and opportunities to unlock the Park's potential for sustainable tourism, while ensuring appropriate regulation. It is an action program that outlines strategies, guiding principles, and key actions to be developed and implemented to promote public use, diversify visitation opportunities, enhance the visitor experience, and guide tourism management. The plan is consistent with the Park's conservation objectives, zoning and management plan, and ICMBio guidelines for planning and managing public use in protected areas. In accordance with the strategies outlined in the PUP, and consistent with the property's management plan and zoning, ICMBio awarded a new 30-year concession contract in 2022 to provide visitor services in the Park. The concession agreement allowed for the launch of a comprehensive infrastructure improvement program, including the revitalization, modernization, operation and maintenance of the tourism infrastructure, as well as the obligation to cover the costs related to the conservation, protection and management of the Park. Compliance with the property's core planning and management tools, other design and construction guidelines contractually imposed on the concessionaire, and the multi-stage, multi-stakeholder evaluation process for assessing individual projects are safeguards to ensure the protection - and

promote the enhancement - of the property's outstanding universal value (State Party of Brazil, 2024). Nevertheless, the Committee has expressed concerns over the tourism development in the site and the potential for associated negative impacts. However, the State Party assures that individual projects undergo adequate impact assessments and the concession holder is developing a Visitation Guiding Number (NBV) Monitoring Plan, which will determine a carrying capacity and develop a system of indicators and procedures to monitor the impacts of visitation on the areas of the Park designated for public use (State Party of Brazil, 2024).

► Sustainable use — Mostly Effective

The Iguaçu National Park Management Plan (2018) proposes the development of sustainable tourism as one of the main strategies for the conservation of the site. For the operationalization of this activity, the Public Use Plan (2020) was developed. The Visitation Operational Protocol (PROV) provides a set of operational and locational guidelines for visitors, service providers, and other stakeholders involved in the park’s public use, with the goal of organizing visiting areas, tourist attractions, and visitor activities. Additionally, a complementary ordinance regulating the recreational use of the stretch of the Iguaçu River along the park has been developed (State Party of Brazil, 2024).

► Monitoring — Highly Effective

Iguaçu National Park (Brazil) and Iguazú National Park (Argentina) have strengthened their cooperation, notably through a joint jaguar census in the Green Corridor - an area of protected Atlantic Forest shared by both Parks. The census, conducted every two years since 2010, estimated 93 jaguars in 2022, up from 40 in 2005, highlighting the success of joint conservation efforts. Other collaborative efforts include harmonization of biodiversity monitoring systems and mutual participation in advisory meetings. In 2024, park managers agreed to support a formal international cooperation agreement to coordinate site management, which is currently under review by ICMBio. In response to the conditions imposed by the ICMBio and the Environmental Institute of Paraná (IAP) for licensing the construction and operation of the Baixo Iguaçu Hydroelectric Plant (HPP), the joint venture responsible for the project has established 32 environmental and social programs and four monitoring programs. Two important environmental initiatives are also underway: the Baixo Iguaçu Biodiversity Corridor Consolidation Program, which reforests and connects native forest areas to the Iguaçu National Park, and the Natural Resources Protection Program, which combats illegal activities in the Park's buffer zone. Between May 2022 and February 2024, approximately 223 hectares have been restored. While the potential impacts of the HPP on the OUV of the property require continued attention. ICMBio believes that the monitoring system in place is adequate (State Party of Brazil, 2024).

► Research — Mostly Effective

The scientific activities carried out in the conservation unit since the start of SISBIO by ICMBio have involved 1770 researchers from 307 institutions and have generated 371 reports submitted to the system and 13,659 biological data sets. From 2007 to the end of the first half of 2022, 522 authorizations have been issued for 419 scientific activities and 103 teaching activities. Approximately 29% of the authorized activities did not generate reports in the system. Of the reports that were submitted, a significant proportion did not contain results that could feed into the management of the conservation unit. There is a concentration of activities in easily accessible areas around Foz do Iguaçu and along the entire "Northwest Border". It's important to promote a better distribution of research within the property. Another important issue is the need to raise awareness and share knowledge with the community. To address this situation, a Research Plan was participatory developed. The plan aims to guide the management of scientific research, encouraging and supporting strategic programs and projects for the Iguaçu National Park and its surroundings. The plan seeks to cover the different areas of knowledge, with a view to the information needs required by the management of the conservation unit. It is not limited to the field of biological sciences, but requires the production of knowledge in other fields, such as humanities, social sciences, economics, urban planning, etc. (ICMBio, 2022).

► Effectiveness of management system and governance in addressing threats outside the site — Mostly Effective

Iguaçu National Park's management system and governance effectively address external threats through a strong legal framework, community engagement, and transboundary cooperation. Key actions include stakeholder participation, joint monitoring with Argentina's Iguazú National Park, and environmental programs linked to the Baixo Iguaçu HPP that support forest restoration and control of illegal activities. The successful closure and regeneration of the illegally constructed Colono Road illustrates effective threat mitigation. However, challenges remain, including pressures from agriculture, hunting, energy infrastructure, the lack of a formal buffer zone, and limited integration of research and climate considerations into management.

▶ Effectiveness of management system and governance in addressing threats inside the site

Mostly Effective

The management system and governance of Iguaçu National Park have shown effectiveness in addressing internal threats through strong legal frameworks, participatory planning, and targeted conservation initiatives. ICMBio leads the implementation of the Management Plan, Public Use Plan, and Research Plan, all developed with input from local stakeholders. Activities such as joint patrols with Argentina, community-based tourism, and educational outreach help build local support and reduce human-wildlife conflict. Sustainable tourism is promoted through structured visitor infrastructure and a 30-year concession agreement that funds conservation. However, internal pressures such as illegal hunting, resource extraction, and livestock predation persist. While enforcement has improved, these threats remain active, and gaps in scientific data use and climate change planning limit the park’s adaptive capacity.

Overall assessment of protection and management

Mostly Effective

Iguaçu National Park benefits from a solid legal framework under national environmental laws and is managed by ICMBio, with structured planning tools such as the Management Plan (2018), Public Use Plan (2020), Research Plan (2022) and other associated supporting strategies and plans. These documents guide conservation, tourism, education, and scientific activities. The Park has implemented inclusive governance practices, involving local stakeholders in planning and management processes through the Advisory Council and community partnerships. Efforts to promote sustainable tourism include multi-stakeholder consultation and infrastructure investment through a 30-year concession, aligning with conservation objectives. Restoration efforts—including 223 hectares reforested between 2022 and 2024 and significant forest regeneration along the closed Colono Road—support ecological connectivity. A monitoring system is in place around the Baixo Iguaçu HPP, where compliance with minimum water flow requirements and active environmental programs help protect the park’s Outstanding Universal Value. Cross-border collaboration with Argentina’s Iguazú National Park has strengthened wildlife monitoring—such as joint jaguar censuses—and law enforcement, and supports broader landscape connectivity initiatives like the Atlantic Forest Green Corridor.
Despite these strengths, the Park faces management challenges in particular regarding staff capacity. Although enforcement has intensified, evidence of hunting remains. Furthermore, plans to develop tourism present some concerns on the increasing pressure from visitation and tourism infrastructure developments on key attributes.

▶ Good practice examples

A good practice example in Iguaçu National Park and Iguazú National Park in Argentina is the conservation of jaguar populations, which has shown positive results due to coordinated monitoring, habitat protection, and enforcement. Between 2009 and 2016, the number of jaguars within the Park increased from an estimated 11 to 22 individuals, with broader regional estimates indicating a rise from 40 to 100 outside the Park. Recent figures suggest that 230–300 jaguars remain in the Atlantic Forest region, with approximately one-third living in and around the Iguaçu and Iguazú National Parks. This progress is largely attributed to sustained conservation efforts, including transboundary cooperation, habitat restoration, and joint patrols that help reduce threats such as illegal hunting.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **One of the largest and most impressive waterfalls in the world**

High Concern
Trend:Stable

The presence of several dams on the upper Iguaçu River, especially the recently constructed Baixo Iguaçu Hydroelectric Power Plant (HPP), represents a very high threat to the OUV of the falls. The property attributes that may be potentially impacted by the Baixo Iguaçu HPP are the flow rate of Iguaçu Falls and the populations of key aquatic and semi-aquatic species in the Iguaçu River. Potential environmental impact drivers that may affect these attributes are changes in the river's water flow and quality patterns, as well as the isolation of aquatic species populations upstream and downstream of the dam. The National Water Agency (ANA) requires a minimum flow of 350 m^3/s at the Iguaçu Falls to preserve their scenic beauty, and this condition was met as of June 2024. In response to the conditions imposed by the ICMBio and the Environmental Institute of Paraná (IAP) for licensing the construction and operation of the HPP, the joint venture responsible for the project has established 32 environmental and social programs. The latest reports shows that: 1) Monitored water and sediment parameters have not shown any significant changes, remaining within the expected range for a recently constructed reservoir; 2) The ichthyofauna monitoring identified 54 fish species within the area of influence of the HPP, including 22 endemic, 19 native, and 8 exotic species; No significant changes in water parameters that could compromise the ichthyofauna were observed; 3) Monitoring of semi-aquatic fauna found that the construction of the HPP did not impact the populations of surveyed key species Williams' side-necked turtle (Phrynops williamsi) and Neotropical otter (Lontra longicaudis). Coordinated alongside the monitoring programs operated by the HPP, ICMBio has carried out the National Action Plan for the Conservation of Aquatic and Semi-Aquatic Fauna of the Lower Iguaçu (PAN Baixo Iguaçu), supporting the conclusion that the damming of the Iguaçu River has not been shown to impact Phrynops williamsi or Lontra longicaudis. While the potential impacts of the HPP on the OUV of the property require continued attention, ICMBio believes that the monitoring system in place is adequate (State Party of Brazil, 2024).

▶ **Exceptional biodiversity and rare charismatic species**

Low Concern
Trend:Improving

According to da Silva et al. (2018), the Iguaçu National Park still supports most of the terrestrial large mammal species present two decades ago, including several that are rare or extinct in other areas of the Atlantic Forest. Over a five-year period, no significant declines in occupancy were observed for any species, including the endangered jaguar. The only exception was the white-lipped peccary, which was not recorded. The study also noted that the spatial distribution of most large mammals has been negatively impacted by edge effects from surrounding human-modified landscapes, tourism, and, to a lesser extent, hunting.
Results from the joint jaguar census carry out by the Iguaçu National Park (Brazil) and Iguazú National Park (Argentina), conducted every two years since 2010, estimated 93 jaguars in 2022, up from 40 in 2005 (State Party of Brazil, 2024). Other reports estimate that between 230 and 300 jaguars remain in the Atlantic Forest region, which spans the border region between Argentina, Brazil and Paraguay. A third of them live in the area that includes the Iguaçu and Iguazu National Parks. This is largely due to conservation efforts in recent decades (Camargo, 2021).

▶ **Exceptional plant diversity with high level of endemism**

Low Concern
Trend:Data Deficient

A study of the structure, composition and richness of the Park's forests identified a total of 54 families, 135 genera and 218 species of plants. The most abundant species was Euterpe edulis mart. which, together with Aspidosperma polyneuron müll. arg. characterize the seasonal forests in the central and southern regions of the Park. In the northern region, located at 700 masl, Araucaria angustifolia (Bertol.)

Kuntze and Ilex paraguariensis A. St.-Hil. were observed together with some seasonal species, characterizing a transitional environment between seasonal and ombrophill forests. In general, the forests in the pPark were classified in advanced stages of ecological succession (Souza et al., 2019). However, there are not enough data to evaluate the trend of the exceptional plant diversity with a high degree of endemism.

Summary of the Values

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

The current state of the World Heritage values of Iguaçu National Park reflects both strong conservation outcomes and ongoing management challenges. The scenic value of Iguaçu Falls remains in good shape, with the required minimum flow of 350 m³/s maintained as of June 2024 despite the potential threat posed by the Baixo Iguaçu Hydroelectric Power Plant (HPP). Monitoring programs indicate no significant changes in water quality, fish diversity, or populations of key semi-aquatic species such as Phrynops williamsi and Lontra longicaudis. Meanwhile, the Park continues to support most of its historically present large mammal species, including the endangered jaguar, whose population has increased significantly thanks to long-term conservation efforts and transboundary cooperation. However, edge effects from surrounding landscapes, tourism, and hunting have negatively influenced the spatial distribution of animals species. In terms of plant diversity, the Park's forests host a rich assemblage of flora, including high endemism and key forest species across different altitudes. Nevertheless, due to insufficient data, the trend of plant diversity and endemism remains unclear.

Additional information

Benefits

Understanding Benefits

▶ **Sacred natural sites or landscapes**

The waterfalls of Iguaçu National Park are a sacred site for indigenous peoples living in the Park surroundings.

The dams located upstream of the property have considerably altered the rate and periodicity of water flow that feeds the waterfalls. The decreased flow and pollution from agriculture damages the aquatic ecosystem and the aesthetics of the waterfalls. Some tourism infrastructure also spoils natural aesthetic values and the visual integrity of the waterfalls.

▶ **Carbon sequestration,**
Soil stabilisation,
Flood prevention,
Water provision (importance for water quantity and quality),
Pollination

The Park protects significant portions of Atlantic Forest and aquatic ecosystems, providing important ecosystem regulation services, like species habitats conservation, downstream hydrological regulation, maintenance of biological and genetic diversity of species. It also provides cultural services related with education, research, tourist use and aesthetic values, allowing visitors well-being.

Pollutants from agricultural systems, outside the Park, that include nutrients, toxic chemicals, pesticides and nitrates and/or sediments have a negative impact on ecosystem services.

Summary of benefits

The Park protects significant portions of Atlantic Forest and aquatic ecosystems, providing important ecosystem regulation services, like species habitats conservation, downstream hydrological regulation, maintenance of biological and genetic diversity of species. It also provides cultural services related with education, research, tourist use and aesthetic values, allowing visitors well-being.

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