IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 14 August 2014

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

Iguazú National Park

SITE INFORMATION

Country:
Argentina
Inscribed in: 1984
Criteria:
(vii) (x)

Site description:
The semicircular waterfall at the heart of this site is some 80 m high and 2,700 m in diameter and is situated on a basaltic line spanning the border between Argentina and Brazil. Made up of many cascades producing vast sprays of water, it is one of the most spectacular waterfalls in the world. The surrounding subtropical rainforest has over 2,000 species of vascular plants and is home to the typical wildlife of the region: tapirs, giant anteaters, howler monkeys, ocelots, jaguars and caymans. © UNESCO

SUMMARY

2014 Conservation Outlook

Significant concern

The overall outlook for the conservation of the site’s World Heritage values is of significant concern. Threats include degradation of the natural setting of the waterfalls, hunting, biological isolation, the effects of unnatural changes in river levels because of upstream dams, including ongoing dam construction in close proximity to the site's boundaries, and potential ecosystem changes driven by climate change. While more effective management might improve the natural setting of the falls and reduce hunting, relatively little can currently be done to reduce or mitigate threats originating outside the Park, including biological isolation, the effects of existing dams, or climate change

Current state and trend of VALUES

High Concern
Trend: Stable

The natural beauty of the Iguazú waterfalls is being negatively impacted from unnatural changes in river levels, tourism infrastructure, and recreation activities. Studies conducted to date on the site’s biodiversity tend to indicate it is being conserved. Concern remains, however, with regard to possible negative environmental effects of unnatural shifts in water levels of the Uperr Iguazú River, habitat degradation along the eastern Park boundary, and potential habitat shifts caused by climate change.

Overall THREATS

Very High Threat

Current high level threats from tourism infrastructure and activities, habitat degradation on the eastern boundary, and dams on the Upper Iguazú River, in particular the ongoing construction of the Baixo Iguaçu dam in close proximity to the contiguous World Heritage property of Iguaçu National Park in Brazil, remain

a significant concern.

Overall PROTECTION and MANAGEMENT

Mostly Effective

In general, protection and management of the Park is relatively effective within its boundaries, especially considering the high rate of visitation, and the increasing contribution of research and monitoring to management decisions is a good sign for even better management effectiveness in the future. However, the impacts of threats originating outside the site, including biological isolation due to agriculture, livestock grazing, roads and other infrastructure and upstream dams are considerable.

FULL ASSESSMENT

Description of values

Values

World Heritage values

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

Iguazú National Park and its sister World Heritage property Iguaçu National Park in Brazil conserve one of the largest and most spectacular waterfalls in the world comprised of a system of numerous cascades and rapids almost three kilometres wide within the setting of a lush and diverse sub-tropical broadleaf forest. The permanent spray from the cataracts forms impressive clouds that soak the forested islands and river banks resulting in a visually stunning and constantly changing interface between land and water (SoOUV, 2013).

► **Exceptional biodiversity**
Criterion:(x)

Iguazú National Park, together with the contiguous World Heritage property of Iguaçu National Park in Brazil and adjacent protected areas, forms the largest single protected remnant of the Paranaense subtropical rainforest, which belongs to the Interior Atlantic Forest. The rich biodiversity includes over 2000 species of plants, 400 species of birds and possibly as many as 80 mammals, as well as countless invertebrate species (SoOUV, 2013).

Assessment information

Threats

Current Threats

Very High Threat

The high levels of threat from tourism infrastructure and activities, deforestation and agricultural activities on the eastern boundary, are of some concern. Existing dams on the upper Iguazú River, and in particular the ongoing construction of the Baixo Iguaçu dam in close proximity to the boundaries of the contiguous Iguaçu National Park World Heritage Site in Brazil are the most pressing current concern.

► Tourism/ visitors/ recreation

High Threat
Inside site

Tourism infrastructure has led to an impairment of natural aesthetic values. For visitors to the Brazilian side of the waterfalls, the most predominant non-natural component of the view towards the Argentinean side is the Sheraton Iguazú Hotel, the old unused walkways to the Garganta del Diablo viewpoint, and the water tower. For visitors to the Argentinean side, the infrastructure on the Brazilian side that interferes most with the natural landscape include the Porto Canoas Restaurant located on the lip of the Floriano Waterfalls; the Naipi Souvenir Shop, elevator, and walkway to the Santa Maria falls; and the Hotel das Cataratas. Visitor activities that most impact aesthetic values are the adventure boat excursions on the lower Iguazú River, which originate both on the Argentinean and Brazilian sides, and the helicopter flights over the falls originating on the Brazilian side (Mission report, 2008).

► Tourism/ visitors/ recreation

Low Threat

Visitor facilities, including the old airport, light rail system, trails, visitor

reception center, kiosks, research center, and trails have all had an impact on vegetation and wildlife in the waterfall area of the Park, the area of greatest biodiversity and highest number of endemics. However, impacts have been minimized by locating the visitor reception center on the old airport runway and the Research Center in the historic hotel. (Mission report, 2008; 36COM Iguazu.SPreport)

► Subsistence hunting

High Threat
Inside site

The protection afforded the Park has maintained the populations of wildlife that are attractive to hunters. The Park has a very active program to intercept and detain hunters. While this has had a deterrent effect, hunters still venture into the Park, though at great risk. (34COM Iguazu.SPreport; 36COM Iguazu.SPreport)

► Invasive Non-Native/ Alien Species

Data Deficient
Inside site
Outside site

(Aquatic) invasive species have been detected in the Park, but the level of damage is unknown (36COM Iguazu.SPreport)

► Forestry/ Wood production, Livestock Farming / Grazing

High Threat
Outside site

When seen at a regional scale, there is an area on the eastern boundary of the Park called the “Argentine Peninsula Bottleneck” that is a barrier to genetic flows between the Brazilian and Argentinean Parks. In the last few decades this area has been settled by colonists who have continued over the years to deforest the area for agricultural development and the rearing of livestock. Projects that seek to slow the rate of deforestation have only had marginal success (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazu.SPreport)

► Water Pollution

Data Deficient
Inside site

Levels of water pollution in the lower Iguazú River are currently under study (36COM Iguazu.SPreport)

► Dams/ Water Management or Use

Very High Threat
Inside site
Outside site

These dams have considerably altered the rate and periodicity of flow of water that feeds the waterfalls. On weekends, when the demand for electricity is low, the dams are closed causing the waterfall to have less water during the beginning of the week. The decreased flow damages the aesthetics of the waterfalls. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazu.SPreport). A recent hydrographic study on the impacts on river water flow at the falls from the series of hydroelectric dams (SP Report, 2012) concludes that there was a measurable reduction in both the extreme low water and high water events. The nearest and most recent dam (Caixa – built in 1999) is 200 km upstream from the falls. The study indicates that the dam’s distance, and the fact that the river downstream from the dam flows in large part through protected areas (from which other tributaries flow into the river), contributes significantly to the attenuation of any potentially negative impacts from the dam on water quality and flow. The unnatural fluctuation in water levels and rates of flow also affect riverine flora and fauna, though the specifics are unknown (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazu.SPreport). Brazil confirmed in February 2014 that the Baixo Iguaçu hydroelectric project is under construction, while Environmental Impact Assessments are ongoing (Brazil State Party report, 2014). The construction of this dam, which is located in close proximity to the boundary of Iguaçu National Park in Brazil, has commenced without a prior assessment of its impacts on the Outstanding Universal Value of Iguaçu National Park. Once completed, the dam would be likely to exacerbate existing impacts noted above, including on water flow over the falls and on riverine flora and fauna.

Potential Threats

Low Threat

Potential habitat shift caused by increased rainfall remains a potential threat but at a low level for now.

► Habitat Shifting/ Alteration

Data Deficient
Inside site
Outside site

In recent years, rainfall has increased in the region. At some point this could cause habitat shifts (36COM Iguazu.SPreport)

Protection and management

Assessing Protection and Management

► Tourism and interpretation

Some Concern

Tourism management is dominated by a concessionaire that runs all facilities and programmes in the waterfall area. The concessionaire is guided by an independent Committee that carries out research on areas of major concern. Concession activities have received the relevant ISO certifications. Current levels of visitation (1.4 million in 2011) exceed the capacity of current Park infrastructure. Current marketing efforts to increase visitation even further are thus counterproductive. The Park has a sophisticated interpretation program that includes a visitor center; interpretive signs and brochures; and experienced, certified, and university educated guides. A recent study indicates, however, that interpretive panels are seldom read or understood. (Mission report, 2008; 34COM.Iguazu.SPreport; 36COM Iguazú.SPreport).

► Boundaries

Some Concern

Only the eastern boundary is problematic. While projects have been

undertaken to reduce deforestation and agriculture in the “Argentine Peninsula Bottleneck” area that is critical for genetic flows between the Brazilian and Argentinean Parks, success has been limited. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

► Integration into regional and national planning systems

Some Concern

Within the region, positive steps have been taken to set up arrangements for the coordination of management with the adjacent Iguaçu National Park in Brazil. Nevertheless, there remains a need for a formalized transboundary cooperation framework to ensure adequate coordination of management of the two contiguous properties (SOC report, 2012; SOC report, 2014).

► Relationships with local people

Mostly Effective

In general relationships with local people are positive, though minor occasional disagreements surface with the tourism industry and agricultural communities along the eastern boundary of the Park. (Mission Report, 2008)

► Legal framework and enforcement

Mostly Effective

Relatively complete and effective. Poaching is the greatest enforcement problem. (Mission report, 2008).

► Management system

Mostly Effective

The World Heritage site consists of a national park of 492 km² and a nature reserve of 63 km². Both the park and reserve are included in the property, and both are vested in the national government and managed by the Administración de Parques Nacionales.The management system in general is highly effective, though the development of an up-to-date general management plan and a more detailed public use plan, coordinated with Iguaçu National Park in Brazil, continues to lag (Mission report, 2008; 34COM Iguazu..SPreport; 36COM Iguazú.SPreport).

► Management effectiveness

Mostly Effective

In 2006 a study of management effectiveness was conducted. The 2008 SOC report provides a relatively positive assessment of management. It also recommends that periodic evaluation of management effectiveness be carried out using the “Enhancing our Heritage” methodology. However, no information is available on whether a more recent evaluation of management effectiveness has taken place. (Mission report, 2008; 34COM Iguazu..SPreport.; 36COM Iguazú.SPreport).

► Implementation of Committee decisions and recommendations

Highly Effective

Most Committee decisions have been or are in the process of being addressed (Mission report, 2008; 34COM Iguazu..SPreport.; 36COM Iguazú.SPreport).

► Sustainable finance

Data Deficient

The Park receives close to one million visitors/year, and revenues from tourism finance management activities at Iguazú as well as at other less-visited parks. (Mission report, 2008). However, recent information on the finance of management activities is not available.

► Staff training and development

Highly Effective

Argentina’s regular 8 month Ranger training courses and additional specialized training events assures that Ranger staff are formally trained. Management level staff consist of Rangers who have had wide field experience and advanced specialized courses. Recent sharing of experience between Brazilian and Argentinean Park Staff has also benefited staff development. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

► Sustainable use

Some Concern

Current uses of the Park, including conservation, research, and education appear to be sustainable. However, studies that would help to document this preliminary conclusion are still on-going. There is some concern about the impacts of tourism infrastructure (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

► Education and interpretation programs

Mostly Effective

Environmental education efforts has focused mostly on the colonized area along the eastern boundary (34COM Iguazu.SPreport; 36COM Iguazú.SPreport)..

► Monitoring

Highly Effective

The Park’s research station carries out regular monitoring activities that are actively used as inputs to management decisions. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

► Research

Highly Effective

Research in the Park has for many years been encouraged by the hiring of resident Park researchers, and the provision of research facilities for guest researchers, both national and foreign. This has resulted in an ever expanding body of research literature relevant to the Park and its resources. (Mission report, 2008; 34COM Iguazu..SPreport; 36COM Iguazú.SPreport).

Overall assessment of protection and management

Mostly Effective

In general, protection and management of the Park is relatively effective within its boundaries, especially considering the high rate of visitation, and the increasing contribution of research and monitoring to management decisions is

a good sign for even better management effectiveness in the future. However, the impacts of threats originating outside the site, including biological isolation due to agriculture, livestock grazing, roads and other infrastructure and upstream dams are considerable.

▶ **Assessment of the effectiveness of protection and management in addressing threats outside the site**
Serious Concern

The dams on the Upper Iguazú River are the greatest threat outside the site. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport). Habitat conversion by colonists along the eastern boundary is the second largest outside threat. Projects designed to slow the rate of conversion have had only marginal success. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

▶ **Best practice examples**

Best practice examples include 1) world class development and operation of major visitor facilities in the waterfall area by a private concessionaire, 2) research and monitoring through the Park Research Center; and 3) emergency preparedness plans for visitor safety in the waterfall area concession.

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 major threats to the exceptional natural beauty of Igauzú Falls include (1) low water volumes during the beginning of the week because of the weekend closure of the Salto Caixias dam on the upper Iguazú River; 2) tourism infrastructure that directly impacts the natural setting; and 3)

adventure sport water craft on the lower Iguazú River that impact the natural setting. There is increasing recognition that poorly located tourism infrastructure has impaired the visual integrity of the natural setting, and the development of an updated management plan for the Park is being used as an opportunity to address this critical issue. New concessionaire contracts with providers of adventure sport watercraft will lower the frequency and limit the routes of these watercraft. All of these are positive trends that, if carried to a successful conclusion, should improve the visual integrity of the setting, thereby maintaining the exceptional natural beauty of Iguazú Falls. (Mission report, 2008; 34COM Iguazu..SPreport.; 36COM Iguazú.SPreport).

► Exceptional biodiversity

Low Concern
Trend:Stable

Recent and ongoing research tends to indicate that the biological diversity of the site is being maintained.
The Iguazú Falls' Canyon is the most biodiverse and environmentally sensitive area of the Park. It is also the area of the Park that receives near 1 million visitors each year. While there is little research to provide specifics, it appears that infrastructure developed to guide visitors to the best viewpoints and surrounding Atlantic Forest environments have been relatively effective in minimizing damage.
There is serious concern that 1) the riverine biota of the Upper Iguazú River may be suffering negative impacts due to the alteration of river levels caused by the Salto Caxias Dam; 2) deforestation and agricultural development along the eastern boundary of the Park may reduce genetic flows between Argentinean and Brazilian protected areas in this region; and 3) climate change in the Iguazú region is causing increased rainfall that could potentially cause habitat shifts within the Park. However, in each of these cases there is not enough research to corroborate these hypotheses. (Mission report, 2008; 34COM Iguazu.SPreport; 36COM Iguazú.SPreport).

Summary of the Values

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

High Concern

Trend: Stable

The natural beauty of the Iguazú waterfalls is being negatively impacted from unnatural changes in river levels, tourism infrastructure, and recreation activities. Studies conducted to date on the site's biodiversity tend to indicate it is being conserved. Concern remains, however, with regard to possible negative environmental effects of unnatural shifts in water levels of the Uperr Iguazú River, habitat degradation along the eastern Park boundary, and potential habitat shifts caused by climate change.

Additional information

Key conservation issues

▶ Habitat modification

Regional

Modification of riverine habitats from unnatural variation in river levels caused by upstream dams.

▶ Deterioration of scenic values

Local

Deterioration of the natural scenery by low waterfall volumes, and the negative impacts of poorly planned tourism infrastructure and inappropriate adventure recreational activities.

▶ Fragmentation of habitat

Regional

Habitat destruction on the boundary of the Park that will impede genetic flows between protected areas in the region

▶ **Subsistence hunting**

Regional

Hunting of large mammals in the Park even though there is widespread awareness that it is illegal.

Benefits

Understanding Benefits

▶ **Is the protected area valued for its nature conservation?, Does management of the site provide jobs (e.g. for managers or rangers)?**

Iguazú National Park of Argentina together with the transboundary Do Iguaçu National Park in Brazil constitute the largest single protected area of the Atlantic Forest biome, which is one of the most threatened biomes of South America.

▶ **Outdoor recreation and tourism**

The waterfalls of Iguazú National Park are one of the major tourist attractions in South America and attract nearly 1 million national and international visitors each year, which results in a major tourist industry with its many multiplier effects throughout the economy.

▶ **History and tradition, Wilderness and iconic features, Sacred natural sites or landscapes**

The Iguazú Falls are a sacred site for the Guaraní Indigenous Community that is native to the region. Community members are allowed to practice traditional rituals on San Martin Island, but no human settlements are allowed within the Park.

Summary of benefits

The conservation and tourism values of Iguazú National Park are enormous and

are well known throughout the world. It is truly a natural icon on a global scale. The cultural and spiritual values of the Park are significant to the Guaraní Indigenous Community, but are relatively unknown outside of it.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Subtropical Ecological Research Center (CIES)		A series of ongoing ecological research and monitoring projects in Iguazú National Park undertaken by national and foreign researchers.
2	Araucaria XXI Atlantic Forest Regional Project		A regional project to encourage sustainable development in communities in the Iguazú National Park.buffer zone.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Research institutions	Development of a research fund to address research needs to inform critical management decisions for Iguazú National Park.	
2	N.A.	Provision of technical assistance at critical points in the development of revised and harmonized general management plans and more detailed public use plans for the transboundaqry Iguazú and Do Iguaçu World Heritage Sites.	
3	N.A.	Development of an evaluation of management effectiveness of the Iguazú World Heritage Site using the methods developed through the “Enhancing our Heritage” project.	

REFERENCES

№	References
1	34COM.Iguazu.SPreport
2	36COM.Iguazu.SPreport
3	Declaración del Valor Excepcional Universal Retrospectiva del Parque Nacional Iguazú (Argentina). 34.COM.Iguazu.SPreport
4	Pedersen, A. and A. Putney, 2008. Report on a Mission to Iguazú national Park, Argentina, and Iguaçu National Park, Brazil. WHC08/32.COM/7B.31.
5	Retrospective Statement of Outstanding Universal Value, 2013.
6	SOC report, 2012.