

NOMINATION TO THE WORLD HERITAGE LIST

Convention concerning the Protection of the World Cultural and Natural Heritage

Name: IGUACU NATIONAL PARK

Identification No: 355

Date received by WH Secretariat: 27.12.84

Contracting State Party having submitted the nomination of the property in accordance with the Convention: BRAZIL

Summary prepared by IUCN (May 1985) based on the original nomination submitted by Brazil. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the Committee.

1. LOCATION: In Parana State along the Argentine border and close to that of Paraguay. Brazilian Rainforest Biogeographical Province.

2. JURIDICAL DATA:

Established as a national park in 1939 by Federal Decree, amended in 1944 and 1981 to expand the area to 170,086 ha. The park is administered by the Department of National Parks and Equivalent Reserves of the Instituto Brasileiro de Desenvolvimento Florestal (IBDF). Some private land within the park including 113.6 ha of islands in the Iguacu River.

3. IDENTIFICATION:

Located just above the confluence of the Iguacu and Parana Rivers, in a generally flat area with red semi-lateritic soils which are nutrient poor. Basalt-volcanic rocks predominate, the area consisting of mesozoic sediments and volcanic basalt. The Iguacu River lies along the whole of the southern border. The main feature is the Iguacu falls in the far south-west of the park, where the Rio Iguacu falls off the steep edge of the southern Brazilian plateau. The river, which is 1200m wide at this point and contains a number of islands, drops 80m cutting a giant staircase down a triassic basalt flow. The Iguacu Falls form a semicircular front of 2700m of which 800m are on the Brazil side and 1900m on the Argentine side. Humid subtropical climate, with over 2000mm rainfall per annum, and a relative humidity of 80-90%.

The lower park is subtropical rainforest rich in tree ferns, lianas and epiphytes. The upper part is humid subtropical deciduous forest with stands of the Brazilian pine (here at its western limit) with two palms, the Assai palm and wild coconut palm, and the imbuaya.

Fauna recorded within the park include giant otter, La Plata otter, ocelot, jaguar, puma, margay, brocket deer, American tapir, collared peccary, white-lipped peccary, great dusky swift, solitary tinamou, ornate hawk-eagle, red-breasted toucan and harpy eagle. Giant anteater has also been recorded as well as pampas deer, black-fronted piping guan, glaucus macaw, and the vinaceous-breasted and red-spectacled parrots. IUCN (1977) also record black howler monkey, capybara, puma, black hawk-eagle, chimango caracara, crested caracar, white-tailed trogon, rufous ovenbird, broad-snouted cayman, dwarf cayman and the urutu viper. The presence of the black howler monkey is not, however, noted in the management plan, which confirms the presence of all other mammal species. No comprehensive bird list is given in the plan, but it does confirm the presence of the two endangered species, the glaucus macaw and the black-fronted piping guan.

4. STATE OF PRESERVATION/CONSERVATION:

Except for a park staff of 43 the park has no permanent human population and is not exploited except in the heavily visited area around the Falls. The management plan classifies over 80% of the park as a strict undeveloped natural zone.

The waterfalls themselves make Iguacu one of the principal tourist attractions of Brazil. One million visitors a year are concentrated around the falls where there is a hotel, heliport, museum, staff housing, recreational facilities and scientific laboratory. The development of highway BR373 has had a significant impact on the interior of the park. Enforcement of boundaries from surrounding settlement is a major management problem and an unknown extent of illegal forest exploitation within the park occurs.

Nearby hydroelectric development and the deforestation of the upstream catchment area has resulted in a chain of events which have impacted on the park including heavy siltation, rapid runoff and higher diurnal temperature variations.

5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST:

The Iguacu National Park, as presented by the Government of Brazil, provides the following justification for designation as a World Heritage property:

a) Cultural property -- not applicable

b) Natural property

(iii) Exceptional natural beauty. The park shares with Iguazu National Park in Argentina one of the world's largest and most impressive waterfalls which extend over 2700m with falls split into a number of drops and rapids. Clouds of spray soak the surrounding area and islands in the river are consequently covered by luxuriant vegetation.

(iv) Habitat of rare and endangered species. The Iguacu park contains nine species which are listed as threatened on a world scale by IUCN. These include two species of otter, giant anteater and harpy eagle.

WORLD HERITAGE NOMINATION -- IUCN TECHNICAL EVALUATION355 IGUACU NATIONAL PARK (BRAZIL)1. DOCUMENTATION

- i) Nomination form and map
- ii) Literature Consulted: IUCN Project Files, IUCN Directory of Neotropical Protected Areas, 1982

2. COMPARISON WITH OTHER AREAS

Within the Brazilian Rainforest Biogeographical Province there are 11 other protected areas including the adjacent 49,200 ha Iguazu National Park in Argentina. The Argentinian park was added to the World Heritage List in 1984, with the comment by the Committee that it "was ... glad to be informed by the representative of Brazil that the contiguous Iguacu National Park on the Brazilian side of the river would be nominated by the end of 1984 so that both parks could constitute next year a transfrontier World Heritage Site." The Brazil park covers 170,086 ha, over three times the size of the Argentinian park. Together the two Iguazu parks comprise almost two-thirds of the protected territory found in this Province as all other areas are smaller and most have a lesser degree of protection. No other location has the spectacular feature of the waterfalls which is one of the world's most outstanding scenic locations. Along with the Falls, the vegetation and wildlife resources of the park make it one of the most unique in all the Neotropical Realm.

3. INTEGRITY

The site has a long history of protection dating back to 1916. The national park was declared in 1939, with additional areas included in 1944 and 1981 to bring it to its current size. A management plan was prepared in 1981 and is being implemented.

The main impacts on the site are in the form of intensive tourist developments in the area of the Falls (including helicopter viewing), agricultural development in surrounding areas, and a federal highway that cuts through the park. The staff of the park is rather small -- 26 management and 17 general staff -- for such a large area in the midst of agricultural land.

Major concerns on the integrity of the Iguacu property are the effects of deforestation of the upper watershed and major upstream hydroelectric development which have affected hydrological conditions. Another dam proposal would flood 1700 ha in the southeast corner of the park.

Coordinated regional management between the Brazilian and the Argentinian authorities is seen as an important factor in proper administration of the total complex. From a natural point of view the two parks are a single unit and are considered as one site.

4. ADDITIONAL COMMENTS

Inclusion of Iguacu National Park on the World Heritage List would provide another example of a transfrontier World Heritage Site, thus contributing to international understanding and cooperation in conserving the world's areas of outstanding universal value.

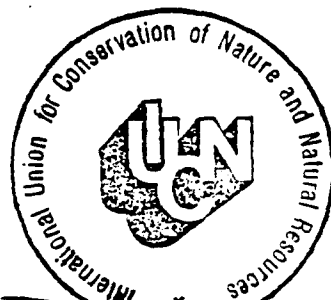
5. EVALUATION

Iguaçu National Park has several qualities that allow it to qualify for World Heritage status. The park contains one of the world's largest and most impressive waterfalls which extend over 2700 m with falls split into a number of drops and cataracts. As an extraordinary natural feature, the site meets criteria iii of the Convention.

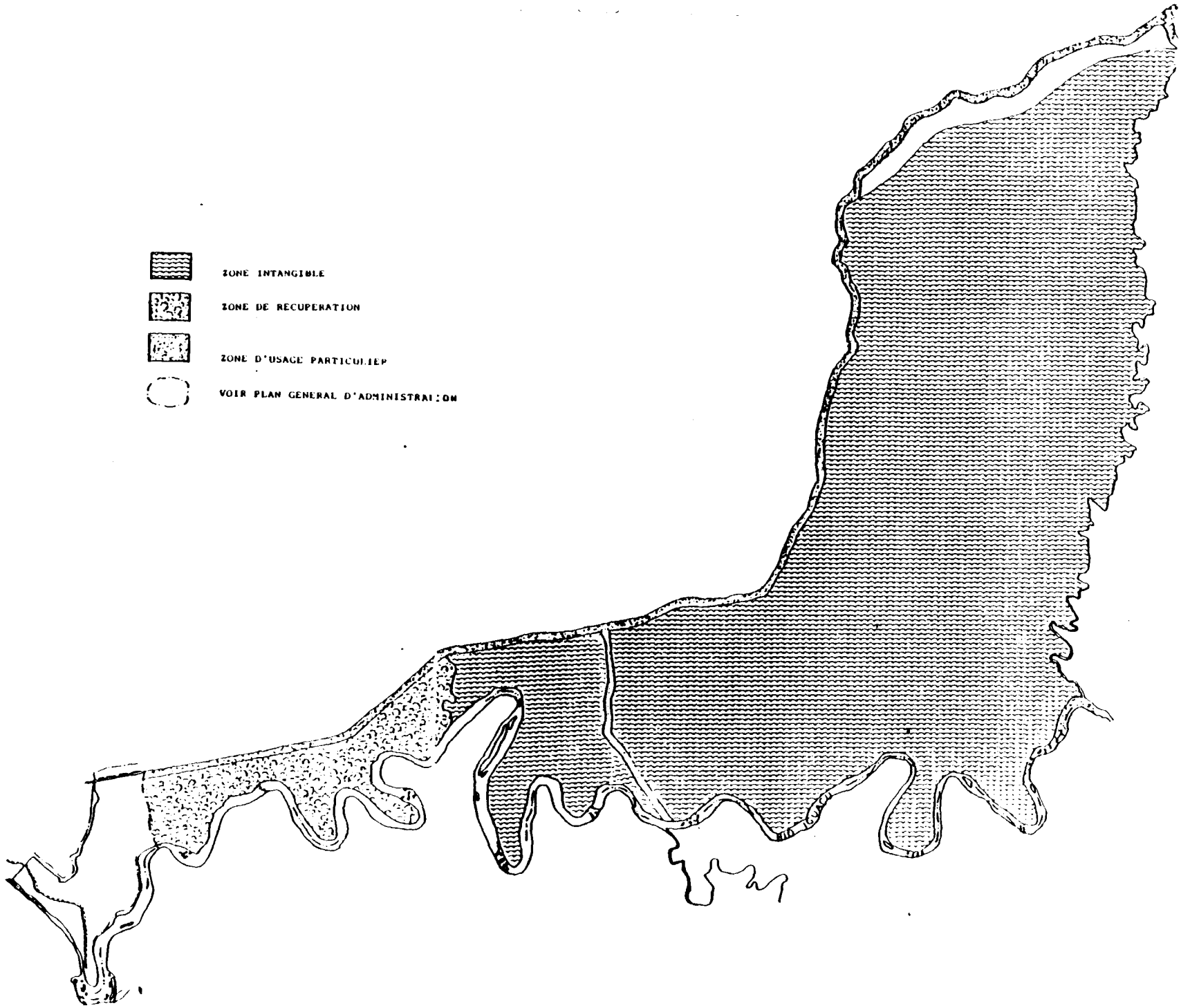
The site also qualifies under criteria iv as it contains habitat that supports 9 species listed as threatened on a world scale by IUCN. These include the endangered broad-nosed caiman of which small populations are found in Iguaçu and two species of otter.

6. RECOMMENDATIONS

The Iguaçu National Park should be inscribed on the World Heritage List, and should be incorporated as one property with the existing Iguazu National Park of Argentina. The name of the property would become "Iguazu, Iguaçu National Park of Argentina and Brazil". The Committee should encourage the Brazilian and Argentine authorities to ensure cooperation and coordination in management of the two adjacent parks.



J. Thorpe



BRAZIL

NAME Iguau National Park

MANAGEMENT CATEGORY II (National Park)
X (World Heritage Site)

BIOGEOGRAPHICAL PROVINCE 8.08.02 (Brazilian Rain Forest)

GEOGRAPHICAL LOCATION Parana State, lying along part of the Argentinian border, and close to that with Paraguay.
25½00'-25½45'S, 53½43'-54½30'W

DATE AND HISTORY OF ESTABLISHMENT 10 January 1939 by Federal Decree No. 1035 based on Forestry Code Law No. 4771 of 15 September 1965, controlling national park creation and national park regulation Decree no. 84017 of 1 September 1979. The 1939 Decree was amended by Decree No. 6587 of 14 June 1944 and Decree 86676 of 1 December 1981 to extend the area covered. Protection measures for Iguau Falls have existed since 1916. Designated as a World Heritage Site in 1986.

AREA According to the management plan, (IBDF, 1981) the area is 170,086ha, although the World Heritage nomination dated 27 December 1984 gives 170,000ha. Contiguous with Iguazu National Park and Reserve in Argentina (49,200ha and 6,300ha, respectively).

LAND TENURE According to the management plan 168,113ha were fully controlled by the Instituto Brasileiro de Desenvolvimento Florestal (IBDF, 1981). The World Heritage nomination dated 27 December 1984 notes that the Federal Government owns the whole area, and that there is no private ownership within the park boundaries.

ALTITUDE 150-740m

PHYSICAL FEATURES Located just above the confluence of the Iguau and Parana rivers, in a generally flat area with red semi-lateritic soils which are nutrient poor. The rocks are mainly basalt lavas from the Mesozoic period which here form the southern Brazilian plateau, interbedded with sandstones. Iguau River lies along the whole of the southern border of the park. The main feature is Iguau falls located in the far south-west of the park, where the River Iguau falls off the steep edge of the southern Brazilian plateau. The river, which is about 1,200m wide at this point and contains a number of islands, drops 72m over a semi-circular front of 2,700m, cutting a giant staircase down a triassic basalt flow. Of this 2,700m, some 800m is on the Brazilian side of the border. Below the falls the river flows in a canyon about 80m wide, which follows a fault line.

CLIMATE The climate is humid subtropical, with over 1700mm of annual rainfall with no dry season, and a relative humidity of

80-90%. Annual mean temperature of 21½C (15½C in winter, 25½C in summer), decreases to 19½C above about 500m.

VEGETATION The lower park is subtropical rain forest rich in tree ferns (Cyatheaceae), lianas and epiphytes, with species of Ilex, Podocarpus, Aspidosperma, Cedrela and Philodendron. The upper part is mainly humid subtropical deciduous forest, but also has stands of the Brazilian pine Araucaria angustifolia (here at its western limit), with two palms, the Assai palm Euterpe edulis and wild coconut palm Cocos romanzoffiana, and the imbaya Phoebe porosa. These stands are limited to a small section in the north-east of the park. Subtropical rain forest occupies in total about 90% of the park.

FAUNA Fauna recorded within the park include giant otter Pteronura brasiliensis (V), La Plata otter Lutra platensis (V), ocelot Felis pardalis (V), jaguar Panthera onca (V) puma Felis concolor, margay Felis wiedii (V), brocket deer Mazama rufina and American tapir Tapirus terrestris. Jorge Padua *et al.* (1974) also recorded bush dog Speothos venaticus (V) and giant anteater Myrmecophaga tridactyla (V). There have been reports of black howler monkey Alouatta caraya, capybara Hydrochoerus hydrochaeris and usutu viper Bothrops alternata. Noteworthy birds recorded include solitary tinamou Tinamus solitarius, harpy eagle Harpia harpyia, black-fronted piping guan Aburria jacutinga (E), glaucous macaw Anodorhynchus glaucus (E), vinaceous-breasted parrot Amazona vinacea, red-spectacled parrot Amazona petrei (V), and white-tailed trogon Trogon viridis. Broad-nosed cayman Caiman latirostris (E) and dwarf cayman Paleosuchus palpebrosus were also recorded. The presence of black howler monkey is not, however, noted in the management plan, which confirms the presence of all other mammal species. No comprehensive bird list is given in the plan, but it does confirm the presence of the two endangered species, the glaucous macaw and the black-fronted piping guan.

LOCAL HUMAN POPULATION No information

VISITORS AND VISITOR FACILITIES The area receives over one million visitors each year, all year round. It is well served by roads, and is close to an airport. There is a large hotel within the park, a heliport, a museum, access roads, trails, and sightseeing spots. Interpretive trails and a visitor centre are under development.

SCIENTIFIC RESEARCH AND FACILITIES Research is under way in connection with assessing what is in the park, and with the aim of assisting management. Accommodation is available for scientists; and there is a museum which includes laboratory facilities.

CONSERVATION MANAGEMENT The area is managed by the Instituto Brasileiro de Desenvolvimento Florestal. Management plans and public use plans have been developed, and are reportedly being

implemented. The park is zoned as follows: Intangible (80%, most of the central and eastern part of the park), Primitive (4%), Extensive use (3%), Intensive use, Recuperation, Special use, Cultural-Historic zones.

MANAGEMENT PROBLEMS There are two federal highways and a large hotel within the park, which is in an area of intense agricultural development and close to several towns. Enforcement of boundaries is a major difficulty, and poaching and fires are particular problems associated with this. Heavy siltation, rapid runoff and high diurnal temperature variations are thought to be the result of a nearby hydroelectric development (including the creation of a 130,000ha lake as part of the Itaipu hydroelectric complex), and the associated deforestation of the catchment. There is also some degree of illegal forest exploitation within the park (though the actual level is uncertain); this is not helped by the relatively small number of park employees compared to the size of the park and the visitor pressures. It has been proposed that the highway which crosses the park should be metalled and fenced; however this proposal is causing some concern since the effect would be to split the park into two.

STAFF There were 1 director, 10 administrative staff, 15 park guards, 17 general workers on the staff in 1981.

BUDGET Cr\$ 10,000,000 (about \$US600,000) in 1981, with increased expenditure planned for 1982 through 1984, dropping to about Cr\$ 5.5 million (US\$327,000) per annum subsequently.

LOCAL ADMINISTRATION Administrator, Iguau National Park, 85.890 Foz do Iguau, Parana

REFERENCES Various reference material is available, including aerial photographs and maps of the park, and lists of flora and fauna.

Jorge Padua, M.T., Magnanini, A. and Mittermeier, R.A. (1974). Brazil's

National Parks. Oryx X11(4): 452-464.

IBDF (1981). Plano de Manejo Parque Nacional do Iguau. Instituto Brasileiro

de Desenvolvimento Florestal, Brasilia.

World Heritage nomination (1984).

DATE October 1985

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DESIGNATION POUR LA LISTE DU PATRIMOINE MONDIAL

Convention concernant la protection du patrimoine mondial, naturel et culturel

Nom: PARC NATIONAL DE L'IGUACU

No d'identification: 355 Date de réception par le secrétariat: 27.12.84

Etat Partie contractante ayant présenté la désignation du bien, conformément à la Convention: BRESIL

Résumé préparé par l'UICN (mai 1985) d'après la désignation d'origine soumise par le pays. L'original et tous les documents présentés à l'appui de cette désignation seront disponibles pour consultation aux réunions du bureau et du comité.

1. SITUATION: Etat du Paraná, le long de la frontière de l'Argentine et près de celle du Paraguay. Province biogéographique de la forêt humide brésilienne.

2. DONNEES JURIDIQUES:

Etabli en tant que parc national en 1939, par décret fédéral amendé en 1944 et 1981 en vue d'élargir l'aire à 170 086 ha. Le parc est administré par le Département des parcs nationaux et des réserves analogues de l'Instituto Brasileiro de Desenvolvimento Florestal (IBDF). A l'intérieur du parc se trouvent des domaines privés dont 113,6 ha constitués par des îles du fleuve Iguacu.

3. IDENTIFICATION:

Situé juste au-dessus de la confluence des fleuves Iguacu et Paraná, dans une région relativement plate aux sols semi-latéritiques rouges, pauvres en nutriments. Dans une région de sédiments mésozoïques et de basalte volcanique, c'est ce dernier qui prédomine. Le fleuve Iguacu s'étire le long de la frontière sud. L'élément le plus spectaculaire est constitué par les chutes de l'Iguacu au sud-ouest du parc où l'Iguacu tombe du versant abrupte du plateau brésilien méridional. Le fleuve, large de 1200m à cet endroit, et comptant un certain nombre d'îles tombe de 80m découpant un escalier géant dans un sol de basalte triasique. Les chutes de l'Iguacu forment un front en demi-cercle de 2700m, 800m se trouvant du côté brésilien et 1900m du côté argentin. Climat subtropical humide avec plus de 2000mm de pluies par an et une humidité relative de 80 à 90%.

La partie basse du parc est une forêt humide subtropicale riche en fougères arborescentes, lianes et épiphytes. La partie haute est une forêt humide décidue subtropicale avec des stations de pins brésiliens (dont c'est la limite occidentale), deux palmiers -- Euterpe edulis et le cocotier sauvage -- et l'imbuya.

Parmi la faune observée dans le parc, on note la loutre géante, la loutre de la Plata, l'ocelot, le jaguar, le puma, le margay, le cerf Mazama rufina, le tapir américain, le pécarî à collier, le pécarî à lèvres blanches, le martinet Cypseloises senex, le tinamou solitaire, le spizaète orné, le toucan Ramphastos dicolorus, et la harpyie. Le grand fourmilier a également été observé, de même que le cerf des Pampas, la pénélope à front noir, l'ara glauque, l'amazone vineuse et l'amazone à face rouge. En 1977, l'UICN a

également fait état de l'alouate noir, du capybara, du puma, du chimango, du caracara huppé, du trogon Trogon viridis, du fourmier roux, du caïman à museau large, du caïman nain et de la vipère urutu. La présence de l'alouate noir n'est cependant pas signalée dans le plan de gestion qui confirme la présence de tous les autres mammifères. Le plan ne donne aucune liste complète des oiseaux mais confirme la présence de deux espèces menacées, l'ara glauque et la pénélope à front noir.

4. ETAT DE PRESERVATION/CONSERVATION:

Outre le personnel du parc, composé de 43 personnes, il n'y a pas de population humaine permanente et le parc n'est pas exploité, excepté dans la région des chutes où le tourisme est très actif. Le plan de gestion classe plus de 80% du parc en tant que zone naturelle intégrale, non développée.

Les chutes font de l'Iguaçu une des principales attractions touristiques du Brésil. Un million de visiteurs par an se concentrent autour des chutes où il y a un hôtel, un hélicoptère, un musée, des logements pour le personnel, des installations de loisir et des laboratoires scientifiques. L'ouverture de la route BR373 a eu des répercussions importantes sur l'intérieur du parc. Un des grands problèmes de gestion consiste à faire respecter les limites du parc, par les établissements humains voisins et les forêts du parc sont soumises à une exploitation dont l'échelle n'est pas connue.

Des installations hydro-électriques voisines et le déboisement du bassin versant, en amont ont eu des répercussions en chaîne sur le parc, notamment une sédimentation grave, une érosion rapide et des variations élevées dans les températures diurnes.

5. RAISONS JUSTIFIANT LA DESIGNATION POUR LA LISTE DU PATRIMOINE MONDIAL:

Pour justifier la désignation du Parc national de l'Iguaçu en tant que bien du patrimoine mondial, le gouvernement du Brésil a donné les raisons suivantes:

a) Bien culturel -- non applicable

b) Bien naturel

(iii) Beauté naturelle exceptionnelle. Le parc partage avec le Parc national de l'Iguazu, en Argentine, les chutes d'eau les plus grandes et les plus impressionnantes du monde s'étendant sur 2700m et se rompant en nombre de chutes et rapides. Des nuages de vapeur enveloppent la région et les îles voisines, situées dans le fleuve, sont donc couvertes d'une végétation luxuriante.

(iv) Habitats d'espèces rares ou menacées. Le parc de l'Iguaçu compte neuf espèces que l'UICN considère comme menacées à l'échelle mondiale. Parmi elles se trouvent deux espèces de loutres, le grand fourmilier et la harpyie.

DESIGNATION POUR LE PATRIMOINE MONDIAL -- EVALUATION TECHNIQUE DE L'UICN355 PARC NATIONAL D'IGUACU (BRESIL)1. DOCUMENTATION:

- a) Formulaire de désignation, photographie aérienne
- b) Littérature consultée; dossiers de projets de l'UICN; Répertoire UICN des aires protégées néotropicales, 1982

2. COMPARAISON AVEC D'AUTRES AIRES:

Dans la province biogéographique de la forêt tropicale humide brésilienne, il y a 11 autres aires protégées, y compris le Parc national adjacent de l'Iguaçu, en Argentine, ayant une superficie de 49 200 ha. Le parc argentin a été inscrit à la Liste du patrimoine mondial en 1984 et le comité avait ajouté que "le représentant du Brésil l'avait informé de la désignation, vers la fin de 1984, du Parc national de l'Iguaçu, se trouvant du côté brésilien, de sorte que les deux parcs pourraient constituer, dès l'année suivante, un bien transfrontière du patrimoine mondial". Le parc brésilien couvre une superficie de 170 086 ha, soit trois fois plus que le parc argentin. Ensemble, les deux parcs comprennent près des deux tiers des territoires protégés de la province biogéographique. Toutes les autres aires sont plus petites et moins bien protégées. Aucun autre site ne possède d'élément naturel aussi spectaculaire que les chutes de l'Iguaçu qui comptent parmi les plus exceptionnelles du monde. Les chutes, la végétation et la faune font de ce parc un des sites les plus extraordinaires de tout le domaine néotropical.

3. INTEGRITE

La protection accordée au parc date de 1916. Le statut de parc national a été attribué à l'Iguaçu en 1939 et l'aire a été agrandie en 1944 et 1981 pour atteindre ses dimensions actuelles. Un plan de gestion, préparé en 1981 est en train d'être mis en oeuvre.

Les impacts principaux affectant le site sont dus à un développement intensif pour le tourisme dans la région des chutes (y compris des tours en hélicoptère), à la mise en valeur agricole dans les régions entourant le parc et à une route qui traverse le parc. Le personnel du parc est plutôt réduit -- 26 personnes pour l'administration et 17 autres membres du personnel général -- pour une aire aussi importante, se trouvant au milieu de terres agricoles.

Les effets du déboisement dans le bassin versant supérieur et les grands projets de production hydro-électrique en amont qui affectent l'hydrologie causent les plus grandes inquiétudes pour l'intégrité de l'Iguaçu. Un autre projet de barrage risque d'inonder 1700 ha dans la partie sud-est du parc.

Une gestion coordonnée au niveau régional entre Brésiliens et Argentins serait un facteur important permettant une administration efficace des deux parcs. Du point de vue naturel, les deux parcs forment une unité et sont considérés comme un site unique.

4. COMMENTAIRES ADDITIONNELS

L'inscription du parc national de l'Iguaçu sur la Liste du patrimoine mondial fournirait un autre exemple de bien transfrontière du patrimoine mondial et contribuerait à la compréhension et à la coopération internationale en matière de conservation des régions de valeur universelle exceptionnelle.

5. EVALUATION

Le Parc national de l'Iguaçu a plusieurs qualités qui justifient le statut de patrimoine mondial. Le parc possède une des chutes d'eau les plus grandes et les plus impressionnantes du monde, s'étendant sur 2700m. Les chutes se divisent en de nombreuses cataractes. En tant qu'élément naturel, le site satisfait au critère (iii) de la Convention.

Le site satisfait également au critère (iv) car il contient des biotopes où vivent neuf espèces que l'UICN considère comme menacées à l'échelle mondiale. De petits peuplements de caïmans à museau large, en danger, vivent dans l'Iguaçu de même que deux espèces de loutres.

6. RECOMMANDATIONS

Le Parc national de l'Iguaçu devrait être inscrit sur la Liste du patrimoine mondial et être inclus dans le même bien du patrimoine mondial que le Parc national de l'Iguazu, en Argentine. Le nom du bien deviendrait "Parc national Iguazu-Iguaçu, Argentine et Brésil". Le comité devrait encourager les autorités argentines et brésiliennes à coopérer et à coordonner leur gestion des deux parcs adjacents.

