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## WORLD HERITAGE NOMINATION - IUCN SUMMARY

### OKAPI FAUNAL RESERVE (ZAIRE)

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Summary prepared by IUCN/WCMC (March 1995) based on the original documentation submitted by the Institut Zairois pour la Conservation de la Nature (IZCN) of the Government of Zaire. All documents presented in support of this nomination will be available for consultation at the meetings of the World Heritage Bureau and the Committee.

#### 1. LOCATION

The site is located in the Northeast of Zaire in the Ituri Forest in the Haut-Zaire Region.

#### 2. JURIDICAL DATA

A captive breeding centre for okapi was first established at Epulu in the Ituri Forest in 1952. The Reserve de Faune à Okapis (RFO) was legally established on 2 May 1992 and is owned by the Republic of Zaire. Since March, 1996 the reserve has been administered by the Gilman Investment Company under agreement with the Institut Zairois pour la Conservation de la Nature (IZCN).

#### 3. IDENTIFICATION

The Ituri Forest totalling 1,372,625ha is situated in the Zaire basin, one of the largest drainage systems in Africa. The park's northern boundary is the Nepoko River. The Ituri River which is a major tributary of the Zaire River, forms the southern boundary. Vegetation consists of four main forest types: swamp forest, mixed forest, Mbau forest dominated by limbali, and secondary growth forest. The park provided habitat for some 5000 of Zaire's population of 30,000 Okapis. Of the 52 mammal species, 15% are endemic and include elephants, water chevrotain, African golden cat, giant forest hog and the highest number of duiker species in Africa. The forest has 13 species of anthropoid primate species, more than any other African forest. There are 329 bird species of which over 70% breed in the reserve. Some 4000 people live inside the reserve, mostly Mbuti pygmies.

#### 4. STATE OF PRESERVATION

The management of the reserve is the responsibility of the IZCN. The park management divides the reserve into four zones: (i) a central protected core area of about 500,000ha; (ii) a zone for traditional hunting largely established for indigenous populations; (iii) a 5km zone to enclose the village of Epulu; and (iv) a 50km peripheral extension zone. A management plan was prepared by IZCN with technical contributions and funding from national and international collaborators. The reserve is threatened by poaching, gold-mining and unsustainable levels of hunting and shifting cultivation. Various international conservation NGO's are supporting IZCN in managing the reserve.

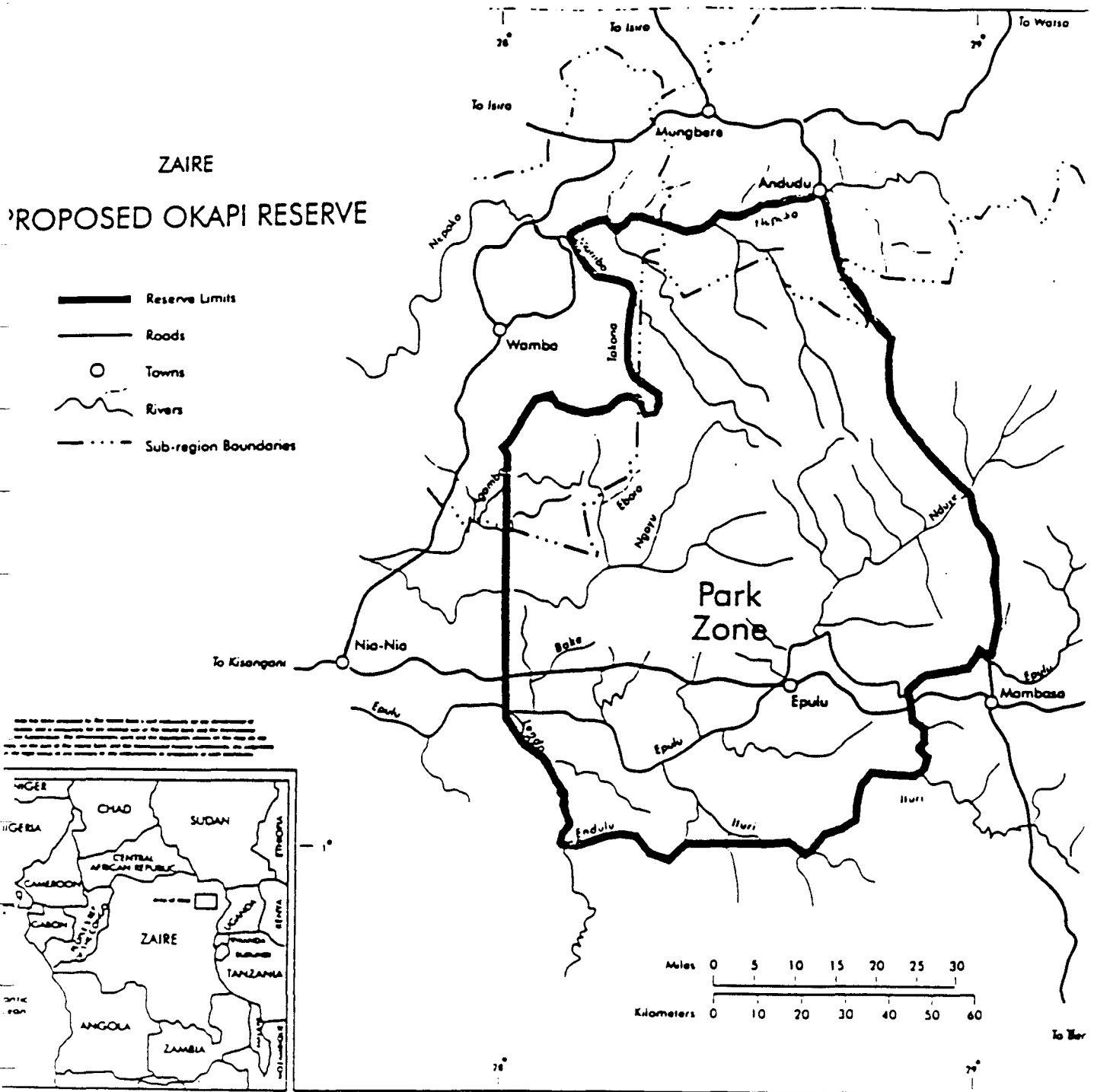
#### 5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST

The Okapi Faunal Reserve nomination, as prepared by the Government of Zaire, provides the following justification for designation as a World Heritage natural property:

- (iv) **Contains the most important areas of high biodiversity and significant natural habitats for threatened species** Due to its Biogeographical location, the forest is a Pleistocene refuge providing exceptional species richness with 15% endemism, one of the highest in the world. Ituri has the highest okapi density in the world, at approximately 2.5 individuals per square kilometre, and is listed as one of the top forest sites in Africa for bird conservation. It has more anthropoid primate species than any other African forest.

Note: A 3 page justification is provided in the original nomination highlighting additional points of significance.

WHC/JWT/amb  
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**FIGURE 2 :**  
**LIMITES APPROXIMATIVES DE LA RESERVE de FAUNE à OKAPIS**  
**et du PARC NATIONAL de l'ITURI en son centre**

(in Rapport Banque Mondiale)

Les limites sont celles qui ont été proposées ;  
 elles sont données à titre indicatif.

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## WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

### OKAPI FAUNAL RESERVE (ZAIRE)

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#### 1. DOCUMENTATION

- (i) Nomination (6p.) and supplement (27p. plus annex); IUCN/WCMC Data Sheet (14 references)
- (ii) Additional Literature Consulted: IUCN. 1994. *Encyclopedia of Endangered Species*; Doumenge Ch. 1990. *La Conservation des Ecosystèmes Forestiers du Zaïre*. IUCN. 242p.; Hart J. & S, Kubwabo C., 1994. *Exploration of the Maiko N.P.* WCS. 88p.; Collar N.J. & Stuart S.N. 1988. *Key Forests for Threatened Birds in Africa*. ICBP. 102p.; IZCN/WWF. 1994. *Management Guidelines for the Okapi Wildlife Reserve*. 69p.; Kingdon J. 1990. *Island Africa*. Collins. 282p.; Hart J.A. and J.S. Hall. 1996. *Status of Eastern Zaire's Forest Parks and Reserves*. *Conservation Biology* 10(2) April; Hart T. et.al. 1996. *Conservation in the Declining Nations State: A View from Eastern Zaire*. *Conservation Biology* 10(2) April.
- (iii) Consultations: Eight external reviewers, local IZCN staff, Representatives of the Wildlife Conservation Society and Gilman Investment Co.
- (iv) Field Visit: February 1995. Jim Thorsell

#### 2. COMPARISON WITH OTHER AREAS

The Okapi Faunal Reserve (OFR) occupies about 20% of the Ituri Forest which, in turn, is a small part of the vast forests of the Zaire basin. It is one of 25 protected areas in the Congo Rainforest Biogeographic Province. Two other natural World Heritage sites exist in this same Province (Salonga in Zaire and Dja in Cameroon). There are a number of similarities in both species make-up and landscape characteristics with these sites. By its location in the upper headwaters of the Zaire basin, however, the Ituri is above the "cuvette" or the lower area and it has higher biodiversity. The Ituri, too, is the main habitat of the "flagship species" of the reserve - the Okapi. Of perhaps 30,000 individuals which remain in the wild, some 5,000 live in the OFR, the site which supports the highest density of these distinctive animals. Okapi are also found 100 km to the south in the Maiko National Park and there is much overlap in other species with this lesser-known park. The OFR, however, is richer in primate and bird species due to the fact that it was thought to be a Pleistocene refuge and thus has been less disturbed over a long period of time.

In an overview of the forest ecosystems of central Africa carried out by IUCN for the European Community (1989), 39 sites were identified in Zaire (see attached map). The OFR was one of the eleven priorities in this inventory.

Recent data published by Hart and Hall provide comparisons of the OFR with Maiko and Kahuzi-Biega. The results are given in the table below and show considerable overlap in species diversity and populations. Human activity encounter rates are lowest in the remote areas of the OFR.

Les sites critiques pour la conservation des forêts au ZAIRE

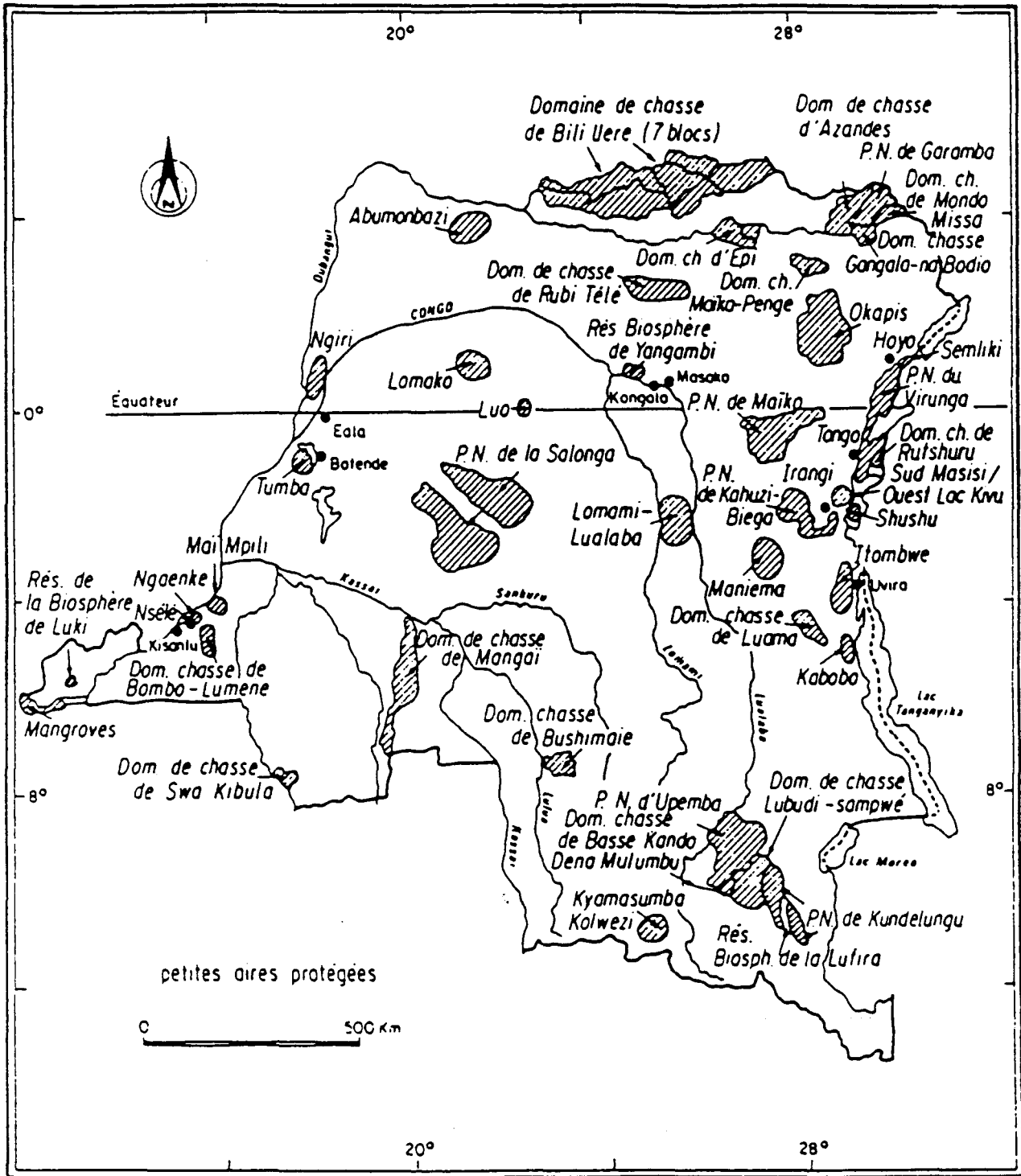


Table 3. Estimated mean densities of selected large mammals in eastern Zaire lowland forests (1989–1995).

Site <sup>a</sup>	Zone	Elephant		Gorilla <sup>b</sup>		Chimpanzee <sup>b</sup>		Okapi	
		Density (km <sup>-2</sup> )	P	Density (km <sup>-2</sup> )	P	Density (km <sup>-2</sup> )	P	Density (km <sup>-2</sup> )	P
Maiko Park	park	0.68		0.25 <sup>c</sup>	—	0.46		0.35	
	hinterland	0.39	<0.05	not surveyed	—	1.27	<0.05	0.41	<0.05
Kahuzi-Biega Park	park	0.40		1.20		0.40		not present	
	hinterland	0.24	no test	0.46	<0.001	0.11	0.001	not present	—
Okapi Wildlife Reserve	remote	0.79		not present	—	0.89		0.48	
	periphery	0.61	<0.05	not present	—	0.55	N.S.	0.44	N.S.

<sup>a</sup>Maiko Park data and statistical tests are found in Hart and Sikubwabo (1994). Kahuzi-Biega Park data and statistical tests are reported in Hall et al. (unpublished). Student's *t* used to test Okapi Reserve results and Maiko Park Okapi results.

<sup>b</sup>Weaned individuals.

<sup>c</sup>Densities apply only to areas where gorillas were recorded.

Table 4. Estimated populations of selected large mammals in lowland forest parks and reserves in eastern Zaire, 1990–1995.<sup>a</sup>

Protected area	Elephant	Gorilla <sup>b</sup>	Chimpanzee <sup>b</sup>	Okapi
Maiko National Park	5500–7500	350–1000	4000–5900	2300–4300
Kahuzi-Biega National Extension Park	1350–3600	4150–10,800	1300–4000	not present
Okapi Wildlife Reserve	4750–10,100	not present	7500–12,000	3900–6350
Total	11,600–21,200	4500–11,800	12,800–21,900	6200–10,650

<sup>a</sup>Estimates are 95% confidence intervals.

<sup>b</sup>Weaned individuals only.

Table 5. Human activities in selected forest areas of eastern Zaire (1990–1995).

Site	Zone	Human sign mean encounter rates (km <sup>-1</sup> )			Activity*					
		Passage	Exploitation	Total	Hunting	Fishing	Elephant poaching	Mining	Agriculture	Food gathering
Maiko National Park	park	0.54	0.17	0.71	+	+	+	+	+	0
	hinterland	no data	no data	no data	+	+	?	+	+	?
Kahuzi-Biega Park	park core	0.97	0.20	1.17	+	+	++	+	0	0
	park boundary	2.47	1.26	3.73	++	+	++	++	+	?
	hinterland	1.62	0.61	2.22	++	+	++	++	++	?
Okapi Wildlife Reserve	remote	0.50	0.07	0.57	+	+	+	+	+	—
	periphery	2.12	0.83	2.95	++	+	0	+	++	++

\*Activity levels: ++, widespread and frequent; +, present but localized or infrequent; 0, not recorded; ?, possibly occurs.

In summary, all the forests of eastern Zaire and the remnant forests along the Albertine Rift are very important for conservation. They all have a rich flora and a diverse fauna of mainly frugivorous species, most support forest elephants and some harbour threatened gorilla and chimpanzee populations (e.g. Kahuzi-Biega, Virunga and Bwindi Impenetrable). The OFR special qualities are:

- it is one of two main strongholds for the Okapi (along with Maiko N.P.);
- it has the highest diversity of primates (13 species) of all the African forests (except the Nouabalé-Dzanga reserves) and is one of the top ten rated sites in Africa for threatened birds;
- it is one area that was likely a Pleistocene refugia;
- it has some interesting physical features such as the falls on the Ituri and Epulu rivers and several inselburgs in the north; and
- it is less disturbed by human activities than many other forests, it is of sufficient size and is the site of long term scientific research.

Finally, although not a factor in the criteria for natural sites, the OFR is of special interest for its cultural values as it is inhabited by traditional nomadic pygmy Mbuti and Efe hunters.

### 3. INTEGRITY

Like all parks in Africa, the OFR is subject to a wide range of threats. Table 1 summarizes what the current and long-term threats are and what is being done to address them. The most serious of these threats is the current level of immigration into the area, which, if it continues, will present a serious obstacle to long-term protection of the OFR. Added to this list are the current political and administrative difficulties in Zaire which are reflected in the lack of government support to pay salaries of OFR staff. These deficiencies have been taken up by the three main NGO's active in project work in the OFR but this support cannot be assured in the long term. The Committee will note that the World Heritage Fund is already assisting to pay staff salaries in three of Zaire's other World Heritage sites as the capacity of IZCN in Kinshasa is very limited due to the economic crisis in the country.

A de facto management plan for the OFR exists but has not yet been formally approved. The plan notes that IZCN will not have the capacity to implement the plan and donor support will be required. This plan was prepared with extensive consultation but several IUCN reviewers felt the zoning system proposed did not adequately define appropriate core zones.

A final concern relates to the legal basis of the reserve which does not provide the highest level of protection by Zaire law. As there is extensive human use of much of the OFR, a national park designation (as indicated in the nomination), however, may not be appropriate. A better defined core area(s) would give greater assurance of long-term integrity.

In summary, then, if the Committee takes a liberal approach to condition of integrity vi, the OFR would comply. If it were to take a stricter view, the OFR could be questioned on the basis of condition vi.

### 4. ADDITIONAL COMMENTS

While the majority of the area of the OFR has not been and is not currently subject to human activity, there are many aspects of human history that add interest. Similarly, the living BaMbuti culture in the reserve is an inseparable part of the Ituri forest. Although it is a culture that is gradually being assimilated, its significance could be better reflected in the nomination.

### 5. EVALUATION

The Zaire River basin has been referred to as an "evolutionary whirlpool" (Kingdon, 1990) as it is the hub around which much evolution has taken place. The Ituri region on the moist eastern margin of this basin is "a dramatic theater for science and natural history" and the OFR will undoubtedly continue to yield new discoveries. The international importance of eastern Zaire and the adjacent protected areas of the Albertine rift is reflected in the existence of five existing natural World Heritage sites: Garamba, Rwenzori, Bwindi Impenetrable, Virunga and Kahuzi-Biega. On the map this appears as a high concentration in this one region but each of the above sites has major distinct features.

The OFR, as noted in section 3 above, also has features that dramatically distinguish it from its five World Heritage "neighbors". The values of the site are well-described in the nomination summary justification for criterion iv. Certainly the OFR meets this criterion but, as noted above, there is some question if it meets the related condition of integrity vi.

The 19th Session of the Bureau agreed with this assessment and referred the nomination back to the authorities in Zaire for further information. A reply was received too late in time for consideration in 1995 but has now been assessed by IUCN. The reply noted that the management plan has been approved, that salaries had been paid and that various management activities were underway to address the issues of immigration, education, tourism and research.

Further to this positive news, further information regarding management of the reserve was received over the past few months:

- The GEF is considering a project to support the Reserve. Approval is still awaited.
- A private conservation group, the Gilman Investment Company (GIC), was given responsibility for management of the Reserve by the Government of Zaire in March, 1996. This includes a commitment by the GIC to pay staff salaries. The GIC intends to commit \$450,000 annually for the next five years towards operation of the reserve in the context of the management plan.
- The concerns over the zoning portion of the management plan as discussed above have not yet received study.

The Bureau felt that this response was sufficient and recommended the site to the Committee for inscription under criterion *iv*. The main concern remaining was the question of the transfer of management responsibility to a private organization. In a previous case of this nature (Manovo-Gounda St. Floris) the Committee (1992) wished to know the implications of privatization on (a) protection of the site, (b) participation of local people, and (c) regional, social and economic impacts. Similar queries should also be made in the case of the OFR.

## 6. RECOMMENDATIONS

The Okapi Faunal Reserve meets criterion *iv* and is recommended for inscription on the World Heritage List. Monitoring of the effectiveness of the new management arrangements should be requested.

WHC/JWT/amb  
October 1996