

World Heritage Sites

Protected Areas and World Heritage



MANA POOLS NATIONAL PARK, SAPI AND CHEWORE SAFARI AREAS ZIMBABWE

In this Park on the banks of the Zambezi, great cliffs overhang the river, sandbanks and wide floodplains in a valley little modified by man. The area is home to a remarkable concentration of wild animals including elephants, hippopotamus, leopards, cheetahs and buffaloes. An important concentration of Nile crocodiles is also found in the area.

COUNTRY

Zimbabwe

NAME

Mana Pools National Park, Sapi and Chewore Safari Areas

NATURAL WORLD HERITAGE SERIAL SITE

1984: Inscribed on the World Heritage List under Natural Criteria vii, ix and x.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE

The UNESCO World Heritage Committee issued the following Statement of Outstanding Universal Value at the time of inscription

Brief Synthesis

The Mana Pools National Park, Sapi and Chewore Safari Areas World Heritage Site is an area of dramatic landscape and ecological processes. Physically protected by the Zambezi River to the north and the steep escarpment (which rises to over 1,000 m from the valley floor) to the south, this substantial property of 676,600 ha provides shelter for immense congregations of Africa's large mammal populations which concentrate in its flood plains. The Mana Pools are former channels of the Zambezi River, and ongoing geological processes present a good example of erosion and deposition by a large seasonal river including a clear pattern of plant succession on its alluvial deposits. While black rhino has disappeared since the property's inscription, huge herds of elephant and buffalo, followed by zebra, waterbuck and many other antelope species and their associated predators including lion and hyena migrate to the area each year during the dry winter months. The river is also famous for its sizeable numbers of hippopotamus and Nile crocodile. Resident and migratory birdlife, with over 450 species recorded, is also abundant. Controlled hunting on quota is permitted in the safari areas.

Criterion (vii): The annual congregation of animals in riparian parkland alongside the broad Zambezi constitutes one Africa's outstanding wildlife spectacles.

Criterion (ix): The 'sand-bank' environment constitutes a good example of erosion and deposition by a large seasonal river (despite changes in river flow due to the Kariba Dam). There is a clear pattern of vegetation succession on the alluvial deposits. Seasonal movements of large mammals within the valley are of great ecological interest both because of interspecies and intraspecies differences.

Criterion (x): At time of inscription the justification for this criterion was that the area is one of the most important refuges for black rhino in Africa as well as a number of other species considered threatened at that time. Today, the black rhino has now disappeared from the reserve although the property still contains important populations of threatened species including elephant and hippopotamus, as well as other threatened species such as lion, cheetah and wild dog. Leopard and brown hyena, classified as near threatened, and a large population of Nile crocodile, are also protected within the property. The area is also considered an important refuge for a number of plants and birds.

Integrity

The property is composed of three contiguous protected areas comprising the Mana Pools National Park (219,600 ha), Sapi Safari Area (118,000 ha) and Chewore Safari Area (339,000 ha) covering an entire area of 676,600 ha. Three other contiguous conservation areas, although not included in the property, include the Urungwe Safari Area (287,000 ha), Dande Safari Area (52,300 ha) and the Doma Safari Area (76,400 ha). In addition the Lower Zambezi National Park in Zambia (409,200 ha) is contiguous on the opposite bank of the river. It is considered that the property is relatively intact and adequately sized to maintain natural and functional ecological processes as well as to capture its natural and aesthetic values. Natural barriers created by the Zambezi River to the north and the steep escarpment to the south protect the property from environmental damage and alternative land uses. There is no permanent human habitation within the property.

The greatest threat to the integrity of the property is that the ecology of the river is dominated by the regulating effect of the Kariba Dam. There is also continued threat of the construction of another dam along the Zambezi River in the Mapata Gorge, which would effectively negate the major value of the area. The possibility of oil prospection within the reserve has also been raised. When the property was inscribed in 1984 it contained about 500 black rhino, although due to poaching by the end of 1994 only ten animals remained. These were removed for safekeeping elsewhere, but poaching remains a problem for rhino re-introduction as well as for other species such as elephant.

Protection and Management Requirements

The property is legally managed by the Lower Zambezi Valley Parks and Wildlife Area Policy and the Zimbabwe Parks and Wildlife Act Cap. 20: 14 of 2008 (revised). This principal legislation provides for legal protection of the resources within the property. The property has a well-defined and buffered boundary which requires physical demarcation. Each of the three areas has functional Park Integrated Management Plans which require adequate staffing and resources for their implementation. A system of regular monitoring of the natural values of the property and on-going programmes to maintain habitats and landforms in their natural state, avoid disturbance and other impacts on wildlife, and to preserve the aesthetic values are in place.

The property requires a World Heritage Property Integrated Management Plan to ensure long term priority for the protection of the natural values and to guard against encroachments and impacts from sport hunting (Sapi Safari Area), poaching, boating along the Zambezi, fishing, campsites/chalets for tourists and other inappropriate development. Management of visitor use to both prevent negative impacts and provide opportunities to experience the value of the property in a sustainable manner is a long-term requirement for the property. Plans are underway to declare the Mana Pools (Zimbabwe) and the Lower Zambezi National Park (Zambia) as a Transfrontier Park which will strengthen the management of the entire area.

IUCN MANAGEMENT CATEGORY

Mana Pools National Park: II National Park
Sapi Safari Area: II National Park
Chewore Safari Area: II National Park

BIOGEOGRAPHICAL PROVINCE

Miombo Woodland / Savanna (3.07.04)

GEOGRAPHICAL LOCATION

Situated in northernmost Zimbabwe on the south bank of the Zambezi river, 110 km downstream from Kariba Dam, between 15° 37' to 16° 25' S & 29° 08' to 30° 20' E.

DATES AND HISTORY OF ESTABLISHMENT

1952: Much of the area protected as a non-hunting area;

1963: Mana Pools Game Reserve established;

1964: Chewore, Sapi and Urungwe Safari Areas designated; 1968: Dande Safari Area designated;

1975: The National Park established and made public under the Parks and Wildlife Act.

LAND TENURE

State, in Urungwe district, north Mashonaland. Managed by the Zimbabwean Department of National Parks and Wildlife Management (DNPWM) except for ~5,000 ha around Chirundu.

AREAS

676,600 ha. Components; Contiguous conservation areas in Zimbabwe;

Mana Pools National Park:	219,600 ha	Urungwe Safari Area:	287,000 ha
Chewore Safari Area:	339,000 ha	Dande Safari Area:	52,300 ha

Sapi Safari Area: 118,000 ha Doma Safari Area: 76,400 ha
Lower Zambezi National Park in Zambia (409,200 ha) is contiguous on the opposite bank of the river.

ALTITUDE

Under 360m to 1,244m.

PHYSICAL FEATURES

The Mana Pools lie in the wide floodplain of the Zambezi river under high escarpment cliffs. They are former channels of the Zambezi which lie in a broad sandy valley 110 km downstream from the Kariba Dam little modified by man. There are four main pools: Main, Chine, Long and Chisambuk. The Safari Areas lie along the lower Zambezi nearer the Mozambique border (except for Dande and Doma which are inland). Their hinterlands include large areas of the rugged Zambezi escarpment, which rises 1,000m from the valley floor. The geology of the region ranges from the ancient gneiss and para-gneiss overlain by the lithosols of the basement complex of the escarpment to the Karoo sandstones and recent river alluvium of the valley. Much of Chewore is heavily dissected, with the 30 km long Mupata Gorge along its northern boundary. The soils are sandy except for the river bottom alluvium.

CLIMATE

The mean annual rainfall is 700mm, falling mainly in summer. The mean annual temperature is 25°C.

VEGETATION

Some 463 species have been recorded, including 106 grasses (DNPWM, 2000). Well-grassed *Brachystegia* communities dominate the mountainous escarpment and higher Chewore areas. The valley floor is dominated by mopane *Colophospermum mopane* woodlands or dry deciduous thickets known as *jesse* bush of a mixed species layered dry forest. Seasonal tributaries crossing the valley floor support extensive riparian communities differing in character from the floodplain vegetation. On the younger sandier alluvial deposits along the Zambezi are well-developed though dwindling tracts of winterthorn *Faidherbia albida*, a useful source of fodder with more diverse woodlands containing sausage tree *Kigelia africana* and Natal mahogany *Trichilia emetica* on the higher levee deposits or old islands.

FAUNA

The rich and varied mammal populations concentrate on the floodplains during the dry season when water elsewhere is scarce, except in the escarpment, and when the numerous winterthorn trees shed their protein-rich pods. Chewore used to include the greatest concentration in Africa of south-central black rhinoceros *Diceros bicornis bicornis* (VU), a population of some 500, but these are being poached out of existence. Southern white rhinoceros *Ceratotherium simum simum* has been reintroduced. The fauna includes elephant *Loxodonta africana* (VU), hippopotamus *Hippopotamus amphibius* (VU), and Nile crocodile *Crocodylus niloticus* all numbered in thousands. Also lion *Panthera leo* (VU), leopard *P. pardus*, cheetah *Acinonyx jubatus* (VU), African wild dog *Lycaon pictus* (EN), spotted hyena *Crocuta crocuta*, Cape pangolin *Smutsia temmincki*, honey badger *Mellivora capensis*, warhog *Phacochoerus aethiopicus*, bushpig *Potamochoerus porcus*, plains zebra *Equus burchelli*, and many antelopes including mixed herds of greater kudu *Tragelaphus strepsiceros*, bushbuck *T. scriptus*, nyala *T. angasi*, eland *Taurotragus oryx*, waterbuck *Kobus ellipsiprymnus*, sable antelope *Hippotragus niger*, Lichtenstein's hartebeest *Alcephalus b. lichtensteinii*, grysbok *Raphicerus melanotis*, and steenbok *R. campestris*.

Birdlife on the river and in the bush is prolific: over 450 species have been recorded, a number which reflects a 50-year tradition of bird-watching. Slaty egret *Egretta vinaceigula* (VU), wattled crane *Grus carunculatus* (VU) and lesser kestrel *Falco naumanni* (VU) are occasionally seen. More common are banded snake-eagle *Circaetus cinerascens*, southern pochard *Netta erythrophthalma*, Kittlitz's plover *Charadrius pecuarius*, rock pratincole *Glareola nuchalis*, Lilian's lovebird *Agapornis lilianae*, yellow-spotted nicator *Nicator chloris*, Livingstone's flycatcher *Erythrocerus livingstonei* and at times, thousands of waterbirds. There are also twelve species restricted to *miombo* woodland. Common fish include tiger fish *Hydrocyanus vittatus*, cornish jack *Mormyrops anguilloides*, *Tilapia* species, lungfish *Protopterus annectens*, vundu catfish *Heterobranchus longifilis*, *nkupi* *Distichodus mossambicus*, *chessa* *D. schenga* and several species of bream.

CONSERVATION VALUE

Escarpment cliffs overhanging an almost pristine riverine flood-plain and sandbanks harbour a remarkable density of wild animals including elephants, hippotamus, leopards, cheetahs, buffaloes and large numbers of Nile crocodiles and birds. The Parks lie within a WWF Global 200 Eco-region.

CULTURAL HERITAGE

Iron Age sites have been investigated in the area and J. White (1971) has written on the history and customs of the Urungwe district. 'Mana' means four pools.

LOCAL HUMAN POPULATION

There is virtually no permanent human habitation because of the presence of an array of tropical diseases including sleeping sickness, bilharzia, and malaria, but the main road between Harare and Lusaka with its associated settlements passes near the area.

VISITORS AND VISITOR FACILITIES

Between 1995 and 2000 tourist numbers averaged 10,000 a year (DNPWM, 2000), but current conditions in the country have reduced tourism. Visitor movements are strictly confined and they are allowed to walk only in the Park's riparian woodlands. During the wet season the area is virtually closed and the only effective way to see it is by canoe, and several canoe safaris are available. During the dry season visitors here experience some of the highest concentrations of game in Africa and the greatest of all seasonal aggregations of wild mammals along the Zambezi river. There is high quality recreational hunting, game fishing and exceptional wildlife viewing which are all managed so as not to impair these resources or the wilderness. Mana Pools is only partially developed as a tourist centre, but is so popular that the available facilities can become overcrowded. The number of cars allowed into the National Park at one time is limited. There are tourist lodges at Rukumeche in the west and at Chikwenya at the confluence of the Sapi and Zambezi Rivers and tourist and hunting camps, but no tarred roads. The nearest airport is at Kariba, 150 km southwest.

SCIENTIFIC RESEARCH AND FACILITIES

The broad little-modified valley provides a benchmark site for the study of a riverine sandbank environment, its associated succession and adaptive changes. Research and education is also conducted on ecological stability and human impact on the environment: long term studies have been made of the ecological effects of land-use systems applied in neighbouring areas and the effects on riparian communities of the formation of Lake Kariba upstream. In 2000 onsite research covered herbivore pressure on vegetation and the relationship between lions and prey (DNPWM, 2000). Regular aerial game counts are carried out. A research laboratory is located at Mana Pools where part of the Ornithological Research Unit of the Parks & Wild Life Conservation Fund (PWLCF) has been based since 1973. Two ecologists and workers were stationed in the area after a break of several years but foreign researchers are not granted visas to work there at present.

MANAGEMENT

Fully protected, but strictly controlled recreational hunting is permitted in the safari areas by the draft management plan. Chewore and Sapi are eventually to become National Parks. The five areas are zoned into: one Special Conservation Area with no development and entry only for scientific purposes; two Wilderness Areas of sufficient size to contain the complete biota of the locality and with few signs of human occupation; four Wild Areas serviced by roads and tracks, but where the fauna and flora are paramount; and Development Areas for visitor, management and administrative facilities. Hunting rights in Sapi, Chewore and part of Urungwe Safari Areas are divided into lots which are sold by auction on an annual basis. In the rest of Urungwe they are sold to a local hunting association, and in Dande they are leased to a safari company. The Zambezi water level, fisheries, animal populations, birdlife, dwindling winterthorn forest and tourist numbers are monitored annually by the research staff of the DNPWM.

MANAGEMENT CONSTRAINTS

Natural seasonal flooding of low-lying areas was seriously curtailed by the completion of Kariba Dam in 1958. In 1989, oil exploration was proposed in the reserves using trace line roads which would result in erosion, industrial littering and improved access for poachers. International publicity temporarily averted this threat. The ecological heart of the area, the rich floodplain, has been further threatened by a hydroelectric scheme proposed for Mapata Gorge which would create an 85,000 hectare lake, obliterating much of the Zambezi valley and halving the carrying capacity of Mana

Pools. An environmental assessment has been completed. When the property was listed in 1984, it contained about 500 black rhinoceros, the largest endemic population of these animals in Africa. But this was almost destroyed by well organised foreign poachers, chiefly from across the river in Zambia who killed many rangers. To help control the problem it was suggested in 1987 that the site be listed in danger and that Lower Zambezi National Park in Zambia be added to the World Heritage site. But at the end of 1994 the last ten rhino were captured and translocated to an intensive protection zone in another part of Zimbabwe. Habitat destruction by elephants, poaching of elephants and fish are also problems, and conditions in the country have led to much destruction of wildlife during the past two years (David Shepherd Wildlife Foundation, 2003).

The main road (gated) between Harare and Lusaka with associated settlements passes through the area and there is a private estate on the Zambezi near Chirundu. The land is sandy, of limited agricultural potential and has never been used extensively for livestock owing to tsetse fly infestation; Mana Pools have until recently been remote enough to be relatively unaffected except for the increasing numbers of tourists which create the need for more facilities, especially for litter control. However, a group of farmers, businessmen and companies recently publicised the Chirundu Project, a 100,000 ha agricultural development approximately 100 km long x 10 km wide, proposed for the World Heritage area in 2005. The area under immediate consideration totalled 67,660 sq.km, including the construction of 600 low-cost houses. According to the Zimbabwe Conservation Development Foundation, this would result in serious degradation and the loss of potential tourism revenue; and farming subject to malaria, sleeping sickness and bilharzia would prove unprofitable (ZCDF, 2005). A temporary stop was placed on the proposal in mid 2005 (Zimbabwe Watch, 2005).

In 2008 prospecting for copper, gold and uranium on land in Zambia adjoining tributaries to the Zambezi became known, including a reported 'world class' open-pit copper mine. Eight national and international mining companies, among them Rio Tinto, are interested in developing the prospects. The resulting pollution by uranium and other mineral wastes could potentially contaminate the almost pristine valley, threatening its value as a World Heritage site. A proposal for hotel development on the same bank was made at the time but withdrawn (UNESCO, 2010).

STAFF

The complex is administered by a Chief Warden at Marangora and Head Wardens for two safari areas, with four rangers, 2 ecologists with 2 assistants, one tourist officer and three support staff, plus 93 guards, 12 trackers, 10 labourers and 40 unskilled men (DNPWM, 2000).

BUDGET

No information is available.

LOCAL ADDRESSES

The Director, Department of National Parks and Wildlife Management, CY 140, Causeway, Harare. Zimbabwe.

The Chief Warden, Mana Pools National Park, Marangora, Urungwe District, Zimbabwe.

REFERENCES

The principal source for the above information was the original nomination for World Heritage status. Numerous National Parks and Wildlife Management departmental reports are augmented by published papers on the biology of the area and include a population census as a basis for setting hunting quotas.

Barkham, J. (1981). *Report on the Environmental Impact Assessment of Proposed Hydro-electric Schemes on the Zambezi River*. IUCN, Gland. 30 pp.

David Shepherd Wildlife Foundation (2003). Africa's drought kills wildlife too. *Wildlife Matters*. 1p. www.davidsshepherd.org/core_pages/!_index.

Department of National Parks and Wildlife Management (DNPWM) (2000). *National Periodic Report on the State of Conservation of the Mana Pools National Park, Sapi and Chewore Safari Areas*. Submitted by DNPWM to IUCN & UNESCO World Heritage Committee.

du Toit, R. (1982). *A Preliminary Assessment of the Environmental Implications of the Proposed Mupata and Batoka Hydro-electric Schemes (Zambezi River, Zimbabwe)*. Natural Resources Board, Harare. 209 pp.

Fishpool, L. & Evans, M. (eds) (2001). *Important Bird Areas in Africa and Associated Islands*. Pisces Publications/ Birdlife International, Newbury & Cambridge, U.K. BLI Conservation Series No.11.

Guy, P. (1977). Notes on the vegetation types of the Zambezi Valley, Rhodesia between Kariba and Mupata Gorges. *Kirkia* 10: 543-557.

Jarman, P. (1972). Seasonal distribution of large mammal populations in the unflooded middle Zambezi Valley. *Journal of Applied Ecology* 9: 283-299.

Raath, J. (1989). Mobil threatens Zimbabwe's wildlife. *China Daily*. 26 May.

UNESCO World Heritage Committee (2010). *Report on the 34th Session of the Committee*. Paris.

White, J. (1974). Some notes on the history and customs of the Urungwe District. *Native Affairs Dept. Ann., Rhodesia* 10(3): 33-72.

Zimbabwe Watch (2005). 'Disastrous' Chirundu project end. *The Zimbabwean*, 22 July.

Zimbabwe Conservation Development Foundation (ZCDF) (2005). Chirundu Project threatens World Heritage site. *Sokwanele Report*, 1 Aug.

DATE

April 1985. Updated 9-1989, 4-2003, 10-2005, 8- 2010, May 2011.