

Mission Report
Reactive Monitoring Mission
Mana Pools, Sapi and Chewore Safari
Areas (Zimbabwe)
9-15 January 2011



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Acronyms

ECZ	Environmental Council of Zambia
EMA	Environment Management Authority (Zimbabwe)
GMA	Game Management Area
IUCN	International Union for Conservation of Nature
LZ	Lower Zambezi
LZNP	Lower Zambezi National Park
MMMD	Ministry of Mines and Mineral Development (Zambia)
MPNP	Mana Pools National Park
MPSC	Mana Pools National Park, Sapi and Chewore Safari Areas
MTENR	Ministry of Tourism, Environment and Natural Resources (Zambia)
MZBR	Middle Zambezi Biosphere Reserve
NHCC	National Heritage Conservation Commission (Zambia)
OUV	Outstanding Universal Value
SEA	Strategic Environmental Assessment
SoC	State of Conservation
TFCA	Trans Frontier Conservation Area
UNESCO	United Nations Educational, Scientific and Cultural Organisation
ZAMCOM	Zambezi Watercourse Commission
ZAWA	Zambia Wildlife Authority
ZPWMA	Zimbabwe Parks and Wildlife Management Authority

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Special thanks to the staff of ECZ; NHCC and ZAWA who accompanied the team in Zambia and Zimbabwe; and ZPWMA and EMA for participating in the Zimbabwe field visit and meetings. Our gratitude goes to ECZ of Zambia and ZPWMA of Zimbabwe for providing road and water transport; and to the same organisations, IUCN, WWF and Zambezi Society for provision of documents.

Finally we would like to thank the UNESCO National Commissions of Zambia and Zimbabwe and the UNESCO cluster office in Harare for their logistic support in organising the reactive monitoring mission.

Executive Summary

From 9 to 15 January 2011, a joint UNESCO World Heritage Centre/IUCN reactive monitoring mission visited the area in and around Mana Pools National Park and Sapi and Chewore Safari Areas (MPSC); World Heritage property in Zimbabwe; in accordance with **Decision 34 COM 7B.7**, adopted by the World Heritage Committee at its 34th session (Brasilia, 2010).

The mission looked into the potential impact of reported mining and tourism infrastructure developments in and around the property. The main conclusions and recommendations are summarized below.

On the basis of the information gathered, the mission concludes that the Outstanding Universal Value (OUV) of the property is currently being maintained but could be compromised in the future, in particular regarding criterion vii, in the event of uncontrolled or uncoordinated socio-economic developments, in particular open cast mining and tourism activities. The OUV integrity also relies on the condition that the waters of the Zambezi River in its eastern stretches in Zambia and Zimbabwe are kept free from downstream impacts of mining.

During meetings in Zimbabwe and Zambia, the mission received confirmation of past exploration and the potential for future mining in the Zambian protected areas adjacent to the Property; and of the planned Hotel development in the Chiawa GMA in Zambia and two planned lodge developments in Mana Pools NP.

The mission recommends that in view of possible future mining in the Zambian protected areas, the environmental policies should be strictly followed and monitored; and that special regulations are required to protect the Zambezi River from overburden and drainage from mine activities, with strategic monitoring to detect pollutants related to mining operations and the mining operations charged with removing impacts and sources; that for mining outside protected areas but in the catchment of the Lower Zambezi, precautionary measures should be taken to ensure no mining pollution occurs; and that regular monitoring for pollutants originating from mining operations in the same section of the Zambezi River is required to identify their origin.

In view of the development of tourism, the mission recommends that controls on levels of tourism and other uses of facilities (particularly the lodges, and especially for conferencing) should be strictly maintained to limit traffic and disturbance in the Zambian protected areas and reduce impacts on local people, biodiversity and on the World Heritage site across the Zambezi River; in adherence to ZAWA, ECZ and other regulations and should be regularly monitored.

Furthermore, cross-border coordination and rationalization of socio-economic activities such as fishing, low-impact tourism, and boat traffic in the Zambezi River valley should be discussed and standardized according to the policies and regulations of both countries and both countries' wildlife area management plans.

It is also recommended to facilitate regular cross-border meetings of the protected area managers to solve immediate problems and on-going issues to do with the biodiversity and environment of the Zambezi Valley in the area of concern.

The mission also notes that the recommendations of Decision 34 7B.7 remain relevant, in particular the request to submit documents regarding planned mining and other socio-economic developments in the Property or areas adjacent to the Property, in Zambia and Zimbabwe; and the request to increase collaboration, where the mission recommends to undertake a joint process of strategic environmental assessment (SEA) to inform an eventual joint management plan of the Middle Zambezi valley. The mission reiterates the recommendation of the World Heritage Committee (1984) that Zambia consider nominating the Lower Zambezi National Park.

1. Background

Mana Pools National Park; Sapi and Chewore Safari Areas (MPSC) was inscribed on the World Heritage List in 1984 under criteria (vii), (ix) and (x). Mana Pools had been a National Park since 1963; and Sapi and Chewore were designated Safari Areas in 1964.

The Property is situated along the Zambezi River, which forms the northern border of Zimbabwe, and has a total area of 6766 km². It is one of two core areas of the Middle Zambezi Biosphere Reserve (MZBR) and is separated by the Zambezi River from Lower Zambezi National Park (LZNP) and Chiawa Game Management Area (Chiawa GMA) in Zambia (cf. map in Annex D). It forms the last remaining natural section of the Middle Zambezi. The large concentration of biodiversity in the valley of the fourth longest river in Africa provides an exceptional natural landscape. The main landmark within the property is the four (“mana” = 4) pools, left by the gradual shift of the Zambezi. The erosion and deposition of alluvia of the Zambezi result in unique geological and geomorphologic features and active land formation processes. The property has a rich and varied fauna with significant populations of large mammals and is the only location in Zimbabwe for a number of plant species and birds.

At its 1984 session, the World Heritage Committee recommended that the Zambian authorities consider nominating the adjacent Lower Zambezi National Park in order to eventually constitute a joint inscription on the World Heritage List.

During its 34th session (Brasilia 2010), the World Heritage Committee expressed concern regarding the reported threats from mining on the property and adjoining areas; requested the State Party of Zambia to (1) ensure that the Outstanding Universal Value (OUV) of MPSC is considered fully in relation to possible mining exploration and production plans that could affect the Zambezi River and its catchments; and (2) to provide copies of any baseline or feasibility studies already completed by the mining companies, and to ensure that any mining or other developments that could affect the property are notified to the World Heritage Centre prior to granting any permission for mining exploration or production or any other development ; and requested the States Parties of Zambia and Zimbabwe to (1) increase their cooperation in the protection of the property, including in relation to mining threats and planning for tourism and visitation in the area; and (2) to jointly invite a joint World Heritage Centre / IUCN reactive monitoring mission to review the state of conservation of the property, and to examine mining activities in the Lower Zambezi in relation to the possible impacts on the OUV of the property.

The joint World Heritage Centre / IUCN mission visited the property from 9 to 15 January 2011. The main objective of the mission was to assess the current or potential impact of existing or planned mining and infrastructure developments in the Lower Zambezi valley on the State of Conservation (SoC) of the Property. The Mission Team comprised Guy Broucke of the UNESCO Harare office, representing the World Heritage Centre, and Geoffrey Howard of IUCN. The detailed mission schedule together can be found in Annex B, with the list of people met in Annex C. The mission held stakeholder meetings in Zimbabwe and Zambia at the start of the mission, a joint meeting with Zimbabwean and Zambian officials during the field visit to MPSC; and debriefing meetings in Zambia and Zimbabwe. These meetings included discussions with the Permanent Secretaries of the Ministries of Tourism, Environment and Natural Resources (MTENR) and of Mines and Mineral Development (MMMD) in Zambia; and the Permanent Secretary of the Ministry of Environment and Natural Resources Management (MENRM) in Zimbabwe.

2. National Policy for the Preservation and Management of the World Heritage Property

2.1 National Policy in Zimbabwe

The Property is administered and managed under the Parks and Wildlife Act of 2008. No Management Plan has been elaborated for the property; however a proposed Management Plan for Mana Pools National Park has been in draft form since 2008. The draft MP was provided to the team by the Zambezi Society.

2.2 Agreements with Zambia

There are currently no specific bilateral agreements regarding the Property and adjacent protected areas in Zambia. A Joint World Heritage Site Management Committee has been established for the Victoria Falls / Mosi-Oa-Tunya World Heritage Property.

The SADC Zambezi Watercourse Commission (ZAMCOM) agreement has been signed in 2004 by 7 of the 8 riparian states, but not yet by Zambia. Its mandate includes [to] “advise Member States on the planning, management, utilisation, development, protection and conservation of the Zambezi Watercourse as well as on the role and position of the public with regard to such activities and the possible impact on social and cultural heritage matters”.

A number of initiatives have sought to develop joint management agreements. The World Heritage Committee (08.COM, 1984) requested the Zambian authorities to consider nominating the adjacent Lower Zambezi National Park to eventually constitute a joint inscription. With support from the Peace Parks Foundation, negotiations are ongoing regarding the establishment of a Lower Zambezi-Mana Pools Trans Frontier Conservation Area (TFCA).

3. Identification and assessment of threats to the state of conservation of the property

In view of the Decisions of the World Heritage Committee, the field visits and consultations have focused on the current and potential impact of mining on the Property and the current and potential impacts of tourism infrastructure. Recommendations were formulated for these; and for Management of the Property, particularly in relation to these potential threats. Other issues of general relevance to the SoC are briefly addressed.

3.1 Mining and mining prospecting in Zambian areas adjacent to the Property

In a letter (dated 20th July, 2010 to be available at the 34th Session of the World Heritage Committee) to the Director, World Heritage Centre, UNESCO, Paris; the Permanent Secretary, Ministry of Tourism, Environment and Natural Resources, outlined Zambia’s position on mining exploration and actual mining in protected areas and elsewhere.

On behalf of the PS of MTENR, this letter was incorporated in a note provided to the Mission entitled “Brief Background Over the Concerns Surrounding the State of Conservation of the Mana Pools World Heritage Property”.

The important part of these communications was the statement that mining exploration has taken place in the Lower Zambezi NP in the past within the provisions of Zambia’s legal framework such as the Zambia Wildlife Act, the Mines and Minerals Act, the Environmental Protection and Pollution Act and the National Heritage Conservation Commission Act.

During consultations with the Permanent Secretaries of the Ministries in charge of Mines (MMMD) and of Environment (MTENR), the mission was informed that the process of mining in Zambia must always be preceded by an exploration/prospecting phase which requires a permit from the Ministry of Mines and which is also subject to the regulations of the Environmental Council of Zambia (ECZ) and, in a protected area, the regulations of the area manager – in this case the Zambia Wildlife Authority (ZAWA).

In the case of exploration in the Lower Zambezi National Park (LZNP) and the Chiawa Game Management Area (GMA), the information given was that these conditions have been complied with; but at present there is no active mining or exploration in those areas that might impinge upon Mana Pools. The mission was informed that exploration permits and their conditions are in the Public Domain and so are available upon request. A copy of a permit (2007) issued to Zambezi Resources to prospect in Chakwenga; Kangaluwi, Moya, Chiwuyu, Kalulu and Chisawa was availed to the Mission by ECZ. The mission noted that in a copy (unsigned) of the “environmental brief” for Cheowa/Kangaluwi prepared for Zambezi Resources mention is made of a World Heritage Property although potential impacts on the Property are not discussed.

The PS/MMMD emphasized that any mining or exploration was very aware of the possibility of affecting both surface and sub-surface water systems; especially in a valley such as the Zambezi River with both conservation areas in Zambia and a World Heritage site on the other bank in Zimbabwe; and assured the mission that, together with ECZ conditions for exploration and mining, his agency would always insist on careful disposal of water and avoidance of negative influences to any downstream systems.

During the field visit to Chief Chiawa GMA, on the Zambian side of the Zambezi, undertaken in vehicles provided by the UNESCO Office in Harare and by the Environmental Council of Zambia, the mission was accompanied by the Principal Inspector from ECZ; the Senior Conservation Officer – Natural Heritage (NHCC); the local Regional Inspector from ECZ and the Area Warden from the Zambia Wildlife Authority.

Initial discussions revealed that while there was no mining or exploration current in Chiawa GMA or Lower Zambezi NP that could impinge upon the Mana Pools WH site, there are permits for Uranium mining developments in areas situated 100 to 200 km upstream from Mana Pools, by Dennison Mines near Siavonga (upstream of Chirundu in the Zambezi Valley on the edge of Lake Kariba) and by the African Energy Corporation at Gwembe (further west) and Siavonga areas as well as near Chirundu (Gwabe and Njame).

The Chiawa Game Management Area (GMA) has its southern boundary at the Kafue River (one of the three main tributaries of the Zambezi) and extends westwards towards its boundary along the Chisuko River and eastwards to the Chongwe River (a smaller but significant tributary which is the western boundary of the Lower Zambezi National Park).

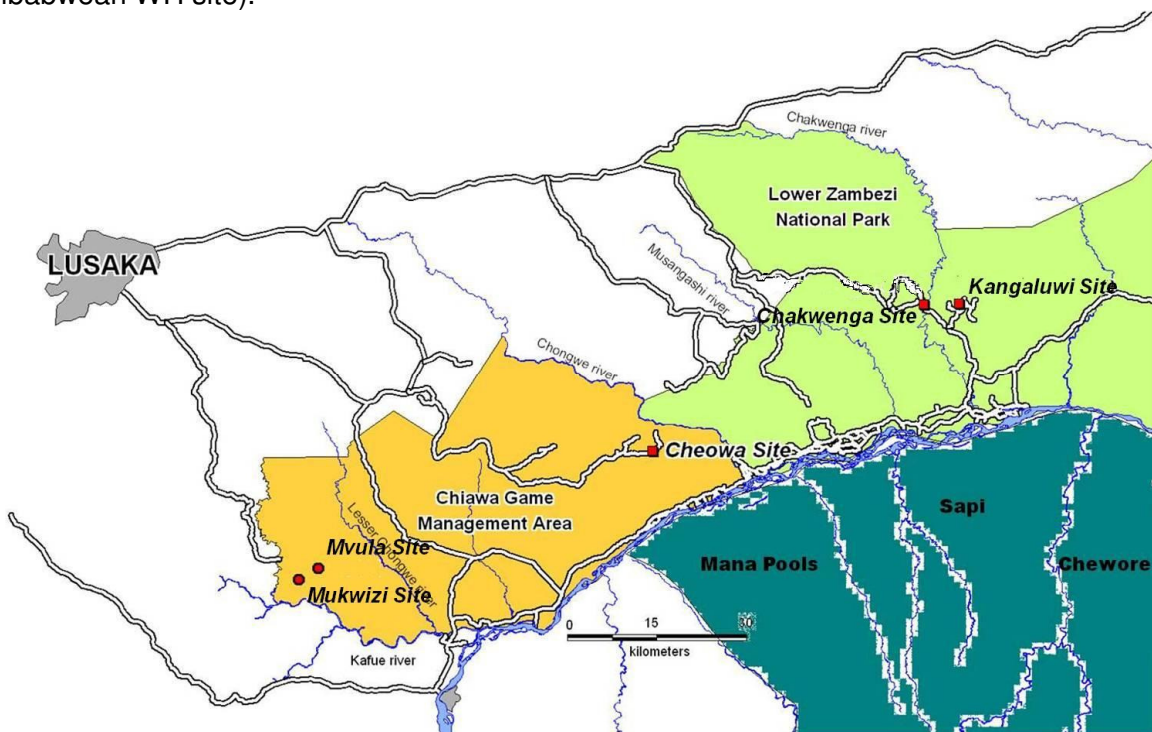
The extent and nature of the Chiawa GMA are described in the recent General Management Plan (GMP) 2009-2019 of ZAWA. Any mineral exploration or mining in the GMA or NP must be described to, and approved by ZAWA and ECZ as well as the Department of Mines. The Chiawa GMA GMP has regulations concerning mitigation measures relating to any mining activities (section 8.3.8, pp. 114, 5) such as: -there may be no more than three mining operations in the GMA at any one time and each mine must cover less than 3 ha, actual mining sites must be at least 50m away from the highest floodline of any river and there must be no disturbance of native trees, sacred sites or traditional cultural, historical or archaeological areas.

Lower Zambezi NP lies to the east of Chiawa GMA. The Draft General Management Plan for Lower Zambezi NP – Part 1: the Management Plan, May 2008, ZAWA, includes several references to mining activities of the past and the proposed management and regulations for the

National Park. There is a relevant paragraph on page 61 of the GMP, under Section 6.5.1., Introduction to the Park Utilisation Programme, which reads: “During the period of this plan review, prospecting and the possibility of mining for gold and copper has become a factor that must be considered seriously in the management plan. Prospecting activities began about two years ago (= 2006) and these have led to the discoveries of several exploitable gold and copper deposits, both in the National Park and the Chiawa Game Management Area. ZAWA is bound to permit these activities if they are considered to be in the national interest”. There are further references to the exploration and likely mining activities in the LZNP and Chiawa GMA (pages 63, 77, 80 and a standard set of Mitigation Measures for Artisanal and Small Scale Mining Activities on page 110) and recognition that the workable areas are “mostly in the upland and escarpment areas”. This means that their impacts on the WH site in Zimbabwe may not be excessive.

It is further recognized in the GMP that there will be need for an EIA for future prospecting and mining activities in the National Park and GMA and that ZAWA should participate in the development of such assessments “at all stages” of preparation (page 80, Item 3: Other use of the National Park is adequately controlled).

Confirmation of the exploration and testing of sites in LZNP and Chiawa GMA came from the website of Zambezi Resources (www.zambeziresources.com) and their various ASX Announcements. The 20 May, 2008 ASX Announcement provided the map (below) of localities being investigated for copper and gold ores at Mukwizi and Mvula (in the far south-western section of Chiawa GMA), and at Cheowa, N-E part of Chiawa GMA across the Chongwe River from LZNP; and Kangaluwi deposits in the central part of LZNP, some 20km north of the Zambezi River, up on the escarpment and East of the old Chakwenga Mine. A more detailed map of the sites of mineral sampling around Kangaluwi (across an area 28km long and approximately 8 km wide) is presented in the ASX Announcement of 4th August, 2008. This is information readily available that indicates the interest in copper and gold deposits in the two protected areas in Zambia (although all quite distant from the Zambezi River frontage of the Zimbabwean WH site).



Informal consultations with local private sector (tourism) operators during the field visit confirmed the indications that since the prospecting activities no mining is currently ongoing within Chiawa GMA and Lower Zambezi NP.

The Chiawa GMA General Management Plan, 2009-2019 has no reference to these sites, but they are located in the Conservation Limited Use Zone as specified by the GMP – that is on or above the escarpment and not on the lower (Development Zone) plain of the GMA or in the Special Use Zone. The GMP has as one of its Natural Resource Management Objectives the harmonizing of mining activities with conservation to conform with EIA processes (5.2.1., f), page 54). Mining is considered to be a Management Problem in the GMA (section 7.2.5, page 68) and the strategy to address that problem is to enforce an EIA with assistance from ECZ. Mitigation measures for small scale mining were mentioned above.

Informal discussions and confidential documents implied that there were several other mining companies with active exploration and mining activities in the Lower Zambezi Valley catchment, but official documents promised about these have not been provided as yet. It should be noted that more than 70% of the land area of Zambia (including most of the Copperbelt) is within the catchment of the Zambezi River. Further analysis is outside the mandate of this mission, but the mission reminds the States parties that any developments that could affect a World Heritage Site should consider the impact on this Site in EIAs and environmental management plans.

The mission recalls the World Heritage Committee's clear position that mineral exploration and mining in World Heritage Sites is incompatible with World Heritage Status. Mineral exploration and mining in adjacent areas may also be incompatible with World Heritage Status if they indirectly affect a World Heritage Site. The mission notes that the International Council for Mines and Metals (ICMM) has undertaken not to explore or mine in World Heritage Sites. Its members have also committed themselves to take all possible steps to ensure that existing and future operations adjacent to World Heritage Sites are not incompatible with the OUV for which these sites were listed and do not put the integrity of these properties at risk.

The mission recommends that regulations related to mining in ZAWA managed areas (GMA and NP) should be complied with and the compliance monitored by ZAWA and special regulations and requirements developed to ensure that overburden and drainage from the mine activities can, in no way, enter the drainage systems that lead to the Zambezi River. Further the Zambezi River waters should be monitored at strategic points to ensure that any appearances of pollutants related to the mining operations are detected and the mining operations charged with removing same and the sources thereof.

Furthermore, mining outside of ZAWA areas but in the catchment of the Lower Zambezi must be required to be extra sensitive to water issues, runoff and sub-surface water disposal, and precautionary measures taken to ensure no mining pollution of the Lower Zambezi Rivers waters. There should be regular monitoring for pollutants originating from mining operations in the Zambezi upstream of its confluence with the Kafue River and of the Kafue River waters near the Zambezi confluence but upstream to identify their origin. The mission recommends that the significance of exploration and mining in the Lower Zambezi catchment to the World Heritage site in Zimbabwe should be the subject of an analysis in terms of drainage, river flows and possibilities for pollution.

3.2 Tourism infrastructure in Zambian areas adjacent to the Property

The proposed building of a large tourist facility in the eastern (least developed) area of the Chiawa GMA by Protea Hotels was discussed during the consultative meeting with the Permanent Secretaries of MMMD and MTENR.

The initial proposal for a set of buildings to accommodate 144 beds has led to a number of concerns expressed to ECZ and UNESCO. The mission was provided with copies of letters objecting to the development (from a grouping of Zimbabwean tourism operators; from Zambezi Society; and from a Zambian tour operator) in response to an ECZ call for comments on the Environmental Impact Statement. The mission was informed that this initial proposal had not been granted a permit to go ahead and design the complex in the initial position requested at the edge of the Zambezi River. A revised and scaled down set of requirements has been given to the Protea Hotels developers for a facility that is smaller and less visible from the river.

The mission was advised to visit the proposed location and to discuss the new conditions with the local officials and to see the location and aspect of the site in relation to the World Heritage site across the river. The Environment Project Brief was made available by ECZ; a copy of the Environmental Impact Statement was received from the Zambezi Society.

During the field visit to Chiawa GMA, the mission travelled from Chirundu through Zambezia Farm / Conservation Area and the Malilonsolo Game Guard Station to the proposed site of the Protea Hotel where the area was examined and details of the revised conditions for such a venture were discussed with ECZ.

The site is in sight of the riverbank in a beautiful glade of tall, old tamarind trees (*Tamarindus indica*) and one of the conditions was that none of these could be removed or affected in any way. The site is between two small streams which are boundaries to adjoining properties – to the West is Baines River Camp and to the East is Munyemeshi Self Catering Camp.

The proposed building sites are quite far back from the river's edge on the middle terrace and amongst other tall vegetation that would ensure that they are not visible from across the river in the World Heritage site or from the river itself. The ECZ approval includes various other conditions concerning the size and shape of the buildings ("safari lodge and not a structure with modern urban appeal ... in colours that blend in with the environment"), their drainage and soak-aways ("no sewage discharged directly in the Zambezi River ... soakaways at least 60m away from the Zambezi River"), reduction of noise impacts ("during construction and operation ... by minimising the number of vehicles and equipment and ensuring that noisy activities are restricted to normal operational hours"). It appears that during the negotiations the capacity of the proposed development has also been reduced, since the initial EIS refers to 72 rooms (resulting in the figure of 144 beds that has been quoted), while the ECZ letter to Protea refers to "4 accomodation blocks [each with] 11 self-contained rooms.

The mission notes that the initial application (EIS) includes the Heritage Convention among the international agreements for which "It is a requirement that all projects implemented in Zambia subscribe to and support government in fulfilling its obligations to the Agreements"; but although mention is made of Mana Pools NP as situated in the vicinity of the planned development, and mention is made of Victoria Falls as a WH site, the WH listing of Mana Pools, Sapi and Chewore, situated right across the proposed development, is surprisingly omitted.

The intention to use the hotel as a conference centre using at least the 72 rooms in the Protea accommodation and possibly others in nearby lodges in the GMA was also discussed. Worries were expressed about the movement of large numbers of people to and from such a conference facility and the disturbance that would be caused through Chiawa after congestion at the ferry crossing of the Kafue River, by river traffic if conference participants came by boat and general

disturbance if they came by air to the few small airstrips in the GMA (which would also involve road transport). This would have to be considered if/when issuing a conference facility license.

The mission believes, however, that since the issuance of these conditions, the Protea Hotel Group may be reconsidering the project (see <http://www.awf.org/content/headline/detail/4378> of April, 2010) and may not go ahead with it.

The mission also visited Baines River Camp where it was noted that although this is a recent development of ± 10 rooms, similar measures to those advocated to limit visible impact of the Protea proposal were not in evidence.

The Mission recommends that controls on levels of tourism and other uses of facilities (particularly the lodges, and especially for conferencing) should be strictly maintained to reduce traffic and disturbance in the GMA and impacts on local people, biodiversity and the World Heritage site across the Zambezi River - in adherence to ZAWA, ECZ and other regulations and this should be regularly monitored.

3.3 Tourism infrastructure within the Property

A field visit by boat with 10 officials from the Ministry of Environment and Natural Resource Management, Zimbabwe Parks and Wildlife Management Authority and the Zimbabwe National Commission for UNESCO; together with the Zambian team (ZAWA, ECZ, NHCC) allowed a 70 km journey from the Chirundu border post down the Zambezi River to Mana Pools National Park headquarters at Nyamepi Camp.

This included a short stopover at Ruchomechi Safari Camp. The mission had been informed that this site is considered as one of the planned 24-bed tourist lodges on the Zimbabwe side of the river. However, it appears that there are no plans for a tourist lodge at this location and that the confusion causing this belief was due to the location of the aforementioned camp near the Ruchomechi River - but far away from the Zambezi River in the upper reaches of the river on the escarpment at the southern end of the MPNP.

The field visit passed the Protea Hotel site in Chiawa GMA, the confluence of the Chongwe River with the Zambezi (the Chongwe being the western boundary of the Lower Zambezi N.P.) and the many islands and low sandbanks associated with the Mana Pools.

The mission was met at MP HQ (Nyamepi Camp) by very hospitable Zimbabwe Parks staff who hosted a meeting, two presentations and some significant discussions. The meeting was managed by the Regional Manager of MPNP and the first presentation made by the Principal Ecologist who described the World Heritage site and its Nyamatusi No-Development Zone and the Zambezi Zone where some development was allowed. He described the three new developments planned – two 12-bed, temporary (seasonal) tented camps near the Zambezi River (at Vine and BBC sites) and the one 12-bed, temporary tented camp at Chitake close to the upper Ruchomechi River on the southern boundary of the WH property. The mission was addressed by the Head of the Development Department who described the wildlife populations, vegetation and attributes of the site. He described the environmental management of the site as primarily fire management and wildlife management relating to stocking rates and a small meat ration allocation of 18 wild animals per year. Sport fishing within the waters of Mana Pools only is allowed with a limit on the daily catch of five fish. Lively discussion followed about all these issues and some debate between the two wildlife authorities concerning cross-border animal movements and coordinated management of the protected areas. The visiting team was reassured that the tourist developments described were the only new ones allowable within the

draft management plan for the NP and for the proposed management plan for the World Heritage Site.

The principles of low density but high quality tourism and least disturbed biodiversity conservation (sometimes thought of together as undeveloped wilderness) should continue as a leading policy issue of the nature reserves (National Parks, WH sites, GMAs, other wildlife areas) of the Zambezi Valley in eastern Zambia and Zimbabwe where they are valued as a unique riverine system in tropical Africa

3.4 Management

At present there is a draft management plan for Mana Pools NP but it does not cover the entire WH property as some aspects referring to Chewore and Sapi need to be added. The NH Commission in Zimbabwe has been asked to assist with this process.

During consultations at MENRM in Harare, ZPWMA officials confirmed that the draft MPNP Management Plan has not yet been ratified, and that this is related to pending decisions regarding planned tourism infrastructure developments. Civil Society members (Zambezi Society; Man and Biosphere Committee) expressed disappointment regarding the potential unilateral changes in the Management Plan that has gone through an extensive participative process which is now perceived to be ignored.

In terms of management capacity, the draft MP refers to unsatisfactory housing and communication systems at Nyamepi camp. The mission did not verify these, but noted that there was no electricity supply although efforts towards solar systems were reported. Based on the available monitoring reports from ZPWMA and WWF, it appears that regular wildlife monitoring was undertaken until 2005 but has not been maintained; although specific surveys on Nile Crocodiles (2007) and Lions (2009) have been reported. It should be considered possible that poaching figures may be lowered due to the reported low monitoring capacity.

The mission recommends that the draft management plan be submitted to the World Heritage Centre for review.

3.5 Transboundary cooperation

Both States Parties have indicated that strengthening transboundary cooperation would benefit management of shared natural resources. The mission was given examples of successful case-specific collaboration although no formal agreement exists.

The World Heritage Committee has recommended the nomination of the Lower Zambezi NP towards a transboundary WH site. Zimbabwe stakeholders mentioned that they would still like to pursue this idea to unite the wildlife properties for posterity and to enable the development of joint management plans. Zambian officials indicated that Lower Zambezi NP is not on the indicative list.

Other initiatives exist to strengthen transboundary cooperation. The SADC Zambezi Watercourse Commission agreement was signed by 7 of 8 riparian states in 2004, and the mission has been informed by the SADC secretariat that Zambia has yet to sign it.

Mana Pools – Lower Zambezi is also listed as one of the SADC Transfrontier Conservation Areas (TFCA), developed with support from the Peace Parks Foundation. The mission was informed that a draft MoU has been developed, but that approval of the respective Management Plans for Mana Pools NP and Lower Zambezi NP is a necessity to make progress.

In 2009, UNESCO organised a joint workshop to develop a transboundary Biosphere Reserve that would include Mana Pools NP and Lower Zambezi NP as core areas; but eventually this was not agreed and Zimbabwe successfully submitted the Middle Zambezi Biosphere Reserve.

In view of ensuring protection of the exceptional value of this transboundary area, the mission wishes to reiterate the recommendation of the 1984 WH Committee meeting regarding a transboundary Property. This will improve management and also allow improved access to donor support for TFCA sites.

The mission recommends that the Zambian authorities consider nominating the adjacent Lower Zambezi National Park in order to eventually constitute a joint (trans-boundary) inscription on the World Heritage List (which would be second between the two countries and the third in Africa).

3.6 Other issues

3.6.1 Biodiversity

As noted in decision - 18COM IX, the Property has lost the black rhino (*Diceros bicornis*) as one of its "flagship" species. The Committee had urged the Centre that in order to protect populations of similar species in other World Heritage sites, it should expand its cooperation with IUCN's Species survival Commission and the Secretariat of the Convention on International Trade on Endangered species (CITES).

However, the 2009 IUCN/SSC report "African and Asian Rhinoceroses – Status, Conservation and Trade" indicates that while black and white rhino numbers were stable between 2000 and 2007, a marked decline had been observed since 2007 due to poaching; with 235 illegally killed rhinos between 2006 and 2009.

For other key species, estimates for elephant and buffalo populations from the 2003 AWF aerial survey of large herbivores in the Zambezi heartland are 10654:buffalo and 10586:elephant; which are similar to the figures provided at the time of nomination in 1983; and in reports obtained from ZPWMA for 1995. A survey for the Nile crocodile in 2007 obtained an estimate of 627 adults between Ruchomechi and Kanyemba. Surveys of the hippo population indicate a population growth between 1.5 and 4.5% since 1968, with current estimates around 3000 for the Mana Pools shoreline.

No indications were obtained regarding the impact of the socio-economic crisis since 2007.

The draft Management Plan for Mana Pools indicates lack of data for rare and endangered species such as wild dog (*Lycaon pictus*) and nyala (*Tragelaphus angasi*); and the need to analyse "grey" literature.

Poaching was stated not to be a major problem; a joint anti-poaching operation was mentioned during the field visit.

The draft Management Plan and the Park Manager confirmed that a low level offtake (18 animals per year) continues within the Park for training and ration hunting and this is mainly confined to buffalo.

The Mission notes that ration hunting should be adequately monitored, in view of the risk of opening a backdoor for illegal hunting.

3.6.2 Invasive species

The mission did not study changes in fauna and flora but also found no indications of major threats. However, a mild threat of an often invasive species; water hyacinth (the alien invasive floating water plant, *Eichhornia crassipes*) was evident from both banks of the Zambezi as well as frequent single or multiple plants floating down the mainstream of the River. This plant has been in the Zambezi for at least 40 years and does little damage to the biodiversity and ecology of the WH site – unless there are a series of exceptionally dry years when it may not be flushed

out during the wet seasons. However, it is currently showing signs of infestation by the beetle biocontrol agents (weevils of the genus *Neochetina*) which will keep it partially in check. If it becomes a serious impediment to water flow or river transport or fishing, the level of biocontrol can be increased (upstream) to affect the relevant part of the river system – by introducing more weevils at a strategic location in the Zimbabwean and/or Zambian parts of the Zambezi Valley.

The mission recommends that both countries jointly address the issue of possible invasive species.

3.6.2 Fishing and other ecosystem services

During the consultations, it was pointed out to the mission team that fishing regulations differ between Zambia and Zimbabwe. Zambia has a 3-month fishing ban in the river between December and March; which is not observed in Zimbabwe. The Draft Mana Pools Management Plan states that only fishing with rod and line is permitted but “netting for fish occurs in the Zambezi River and is closely linked to legally permitted fishing activities in the Chiawa GMA in Zambia”; while the Chiawa GMA MP does prohibit net fishing in the eastern part (Special Use Zone).

It is likely that similar disparities and monitoring challenges exist regarding other services provided by the river, such as in transport and tourism regulations. Mana Pools does not authorise motor boat traffic but the draft Mana Pools Management Plan mentions there is a suggestion for a trial period of wet-season motor boat access and use downstream from Nyamepi. Zambia currently has no restrictions although the Chiawa GMA MP and the Lower Zambezi Draft MP both mention the issue as in need of regulation.

The mission recommends increased transboundary collaboration to strengthen Biodiversity monitoring and anti-poaching measures.

Cross-border coordination and rationalization of fishing regulations in the Zambezi River should be discussed and standardized according to the policies and regulations of both countries and both country wildlife area management plans.

Boat traffic on the Zambezi River can be quite disruptive to the environment, biodiversity and tourism and should be managed in the same way on each side of the river by mutual agreement and coordination of existing regulations, traffic quotas and maximum speeds - for the benefit of all.

Pending a joint management agreement, more informal cross-border meetings of the protected area managers should take place to solve immediate problems and on-going issues to do with the biodiversity and environment of the Zambezi Valley in the area of concern. These would be additional to the present occasional formal meetings and the existing Cross-Border Commissions between the two countries.

3.7 Follow-up on other Decisions of the World Heritage Committee

In addition to the recommendation to invite a reactive monitoring mission, a number of other recommendations were made during in Decision 34COM 7B.7.

Regarding the request to the State Party of Zambia to “ensure that the Outstanding Universal Value of [the Property] is considered fully in relation to possible mining exploration and production plans that could affect the Zambezi River and its catchments, or the property and protected areas adjacent to it”; at this moment no specific initiative has been received or reported to specifically emphasize the Property.

Regarding the request to the State Party of Zambia to “provide to the World Heritage Centre copies of any baseline or feasibility studies already completed by the mining companies, and to

ensure that any mining or other developments that could impact the property are notified to the World Heritage Centre, in line with Paragraph 172 the *Operational Guidelines*, prior to granting any permission for mining exploration or production or other development”; the mission team is informed that such documents have not yet been sent to the WHC; although the team was able to obtain the response from ECZ regarding the permit for prospecting to Zambezi Resources.

Regarding the request to the States Parties of Zambia and Zimbabwe to increase their cooperation in the protection of the Property, including in relation to mining threats and of planning for tourism and visitation in the area, in the context of the conservation of the Lower Zambezi area and the protected areas in this region; no particular initiative has been reported; although the TFCA and ZAMCOM initiatives above could provide platforms for such increased cooperation if ratified.

The mission reiterates recommendations 4, 5 and 6 of Decision 34COM 7B.7, which should be fully addressed, including; i) consideration by the State Party of Zambia of the Mana Pools World Heritage Site in relation to mining proposals that could affect the Zambezi River and its catchments, ii) notification to the UNESCO World Heritage Centre by the State Party of Zambia, in line with Paragraph 172 of the Operational Guidelines, of any mining or other developments that could affect the property, and iii) encouraging both the State Parties of Zambia and Zimbabwe to increase their cooperation in the protection of the property.

4. Assessment of the State of Conservation of the Property

The mission was provided with the Statement of Outstanding Universal Value that has been prepared in consultation with the WHC by the Zimbabwe authorities (Annex E).

The mission has concluded that the Outstanding Universal Value of the Property is being maintained.

Values for which the Property is inscribed: the statement of OUV lists the unique geological and geomorphologic features and active land formation processes (criterion viii); the rich and varied fauna, in particular large mammal populations and the plant biodiversity (criterion x); and the overall outstanding beauty of the site attributed to the pristine environment of the river valley, islands and sand bank (criterion vii).

The Integrity of the Property: is currently maintained. The geological and geomorphologic features and active land formation processes remain of exceptional value. The outstanding beauty remains exceptional; however it can be threatened by open cast mining and uncoordinated tourism developments along the river. Adequate measures to limit the impact of these developments can also be negatively affected by lack of accurate information regarding the policies of the neighbouring State Party.

To maintain the integrity of the Property, the mission confirms the need for information sharing, consultation and cooperation listed in Decision 34COM 7B.7. The mission recommends that efforts be increased to develop a joint management plan for the Lower Zambezi valley, informed by a process of Strategic Environmental Assessment, assessing environmental and socio-economic parameters.

This can be undertaken within the framework of the SADC/ZAMCOM agreement or any other transboundary initiative such as a TFCA or transboundary Biosphere Reserve. Terms of Reference for such an SEA are attached in Annex F.

5. Conclusions and Recommendations

On the basis of the evidence seen by the mission, the mission concludes that the natural values, as stated in the Declaration of OUV would appear to be being maintained.

The mission has the following conclusions and recommendations, based on the issues identified in the preceding sections:

- R1.** The mission reminds States Parties that mineral exploration and mining may be incompatible with World Heritage Status if it affects a World Heritage Site and reminds the members of the International Council for Mines and Metals (ICMM) of their commitment to take all possible steps to ensure that existing and future operations adjacent to World Heritage Sites are not incompatible with the OUV for which these sites were listed and do not put the integrity of these properties at risk.
- R2.** The mission recommends that regulations related to mining in protected areas in Zambia should be complied with and special regulations and requirements developed to ensure that overburden and drainage from the mine activities can, in no way, affect the Zambezi River. Effective monitoring should detect any pollutants related to mining operations and these mining operations charged with removal of pollutants and sources.
- R3.** Furthermore, mining outside protected areas but in the catchment of the Lower Zambezi River must be required to be extra sensitive of water issues, runoff and sub-surface water disposal, and precautionary measures taken, including regular monitoring for pollutants originating from mining operations in the Zambezi upstream of the Property.
- R4.** The Mission recommends that principles of low density but high quality tourism and least disturbed biodiversity conservation should continue as a leading policy issue for these protected areas; and that controls on levels of tourism and other uses of facilities (particularly lodges, and especially for conferencing) should be strictly maintained in adherence to national regulations, to reduce traffic and disturbance in the Zambian protected areas; and impacts on local people, biodiversity and the World Heritage Site across the Zambezi River; and should be regularly monitored.
- R5.** The mission recommends that the draft management plan of Mana Pools NP be submitted to the World Heritage Centre for review.
- R6.** The mission recommends increased information sharing and transboundary collaboration in daily management of the Zambian and Zimbabwean protected areas adjacent to the Property, to strengthen Biodiversity monitoring and anti-poaching measures; and coordination and rationalisation of policies related to fishing, tourism, river traffic, hunting and wildlife management.
- R7.** The mission recommends that efforts be increased to develop a joint management plan for the Lower Zambezi valley, informed by a process of Strategic Environmental Assessment, assessing environmental and socio-economic parameters. Within this assessment, the mission recommends that the significance of exploration and mining in the Lower Zambezi catchment to the Property should be the subject of an analysis in terms of drainage, river flows and possibilities for pollution.
- R8.** The mission recommends that efforts towards a formal transboundary protected area should be accelerated, and that Zambian State Party consider nominating Lower Zambezi National Park as a World Heritage site in order to eventually constitute a joint inscription on the World Heritage List.
- R9.** The mission reiterates recommendations 4, 5 and 6 of Decision 34COM 7B.7, including; i) consideration by the State Party of Zambia of the Mana Pools World Heritage Site in relation

to mining proposals that could affect the Zambezi River and its catchments, ii) notification to the UNESCO World Heritage Centre by the State Party of Zambia, in line with Paragraph 172 of the Operational Guidelines, of any mining or other developments that could affect the property, and iii) encouraging both the State Parties of Zambia and Zimbabwe to increase their cooperation in the protection of the property.

6. List of Annexes

Annex A – Decision of the World Heritage Committee

Annex B – Itinerary for the Mission

Annex C – List of individuals / organisations met during the mission

Annex D – Map of the Area

Annex E – Statement of OUV

Annex F – Proposed ToR for a Middle Zambezi SEA

Annex G – Photographs

Annex A Decision of the WH Committee

Mana Pools National Park, Sapi and Chewore Safari Areas (Zimbabwe) (N 302)

Decision: 34 COM 7B.7

The World Heritage Committee,

1. Having examined Document WHC-10/34.COM/7B.Add,
2. Recalling Article 6 of the Convention which states that each State Party undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage referred to in Articles 1 and 2 situated on the territory of other States Parties to this Convention;
3. Notes with concern the reported threats from mining on the property and adjoining related protected areas in Zambia;
4. Requests the State Party of Zambia to ensure that the Outstanding Universal Value of Mana Pools National Park, Sapi and Chewore Safari Areas World Heritage property of Zimbabwe, is considered fully in relation to possible mining exploration and production plans that could affect the Zambezi River and its catchments, or the property and protected areas adjacent to it;
5. Also requests the State Party of Zambia to provide to the World Heritage Centre copies of any baseline or feasibility studies already completed by the mining companies, and to ensure that any mining or other developments that could impact the property are notified to the World Heritage Centre, in line with Paragraph 172 the Operational Guidelines, prior to granting any permission for mining exploration or production or other development;
6. Encourages the States Parties of Zambia and Zimbabwe to increase their cooperation in the protection of the property, including in relation to mining threats and of planning for tourism and visitation in the area, in the context of the conservation of the Lower Zimbabwe area and the protected areas in this region;
7. Further requests the States Parties of Zimbabwe and Zambia to jointly invite a joint World Heritage Centre/IUCN reactive monitoring mission to review the state of conservation of the property, and to examine mining activities in the Lower Zambezi in relation to the possible impacts on the Outstanding Universal Value of the property;
8. Requests furthermore the States Parties of Zimbabwe and Zambia to submit to the World Heritage Centre, by **1 February 2011**, a joint report on the state of conservation of the property, including the potential impacts on the property from mining activities in Zambia, for examination by the World Heritage Committee at its 35th session in 2011.

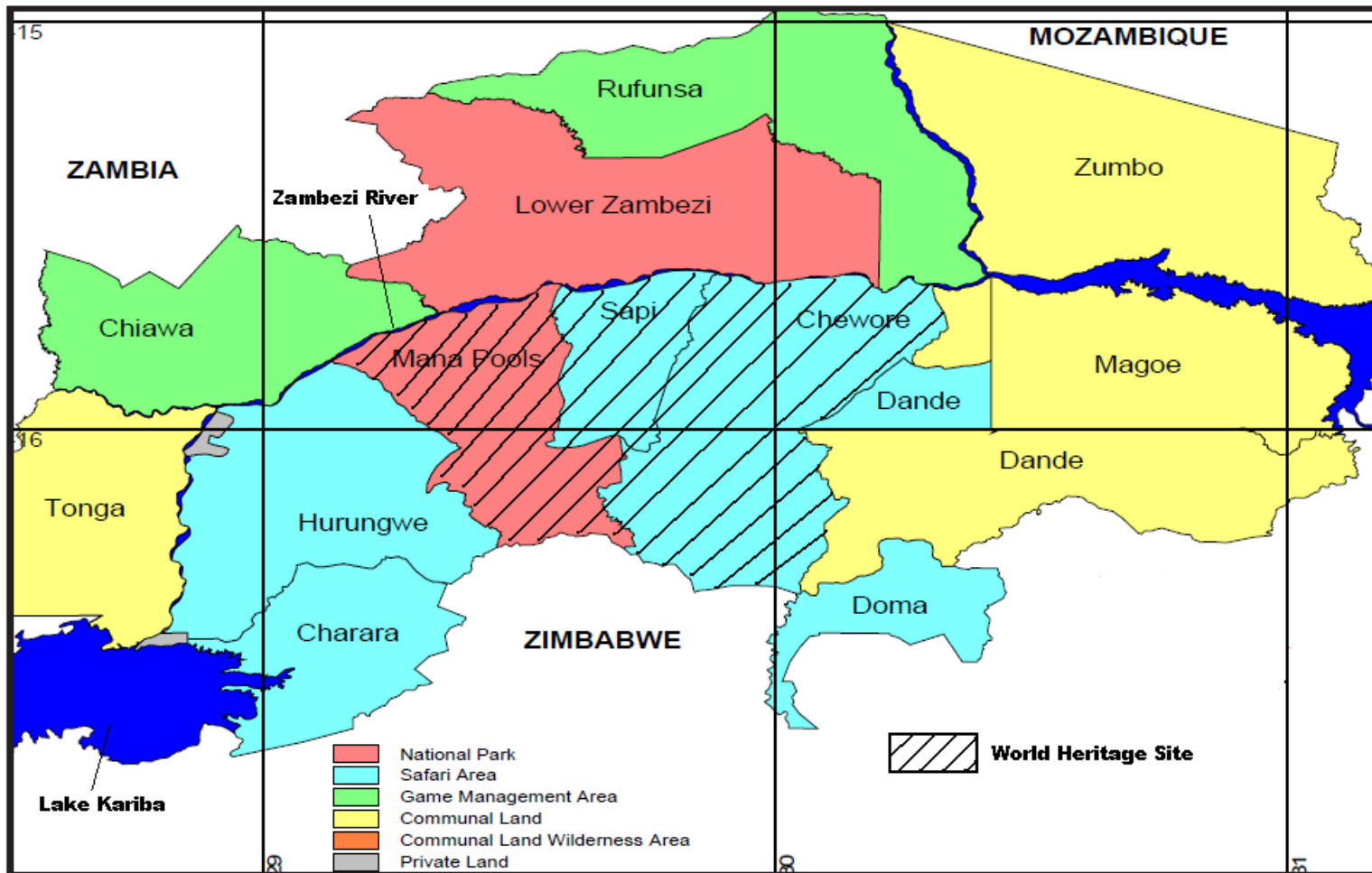
Annex B Itinerary for the mission

06/1/2011	Meeting with Zimbabwean stakeholders (GB), MENRM, Harare
08/1/2011	Travel GB from Harare to Lusaka
09/1/2011	Travel GH from Nairobi to Lusaka
	Meeting of the IUCN/UNESCO team
	Meeting with the UNESCO National Commission
10/1/2011	Meeting with Zambian stakeholders at MTENR, Lusaka
	Travel to Chirundu, Zambia
11/1/2011	Field visit to Chiawa GMA (road)
12/1/2011	Travel to Chirundu, Zimbabwe
	Field visit to Mana Pools (boat)
	Meeting with Zambian and Zimbabwean officials
	Travel to Lusaka
13/1/2011	Debriefing at MTENR Lusaka
	Travel to Chirundu
14/1/2011	Travel to Harare
	Debriefing at MENRM, Harare
15/1/2011	Wrap up meeting GH/GB
16/1/2011	Departure GH

Annex C List of Individuals/Organisations met during the mission

Name	Title, Organisation
Mrs Lillian Kapulu	Permanent Secretary, Ministry of Tourism, Environment and Natural Resources (MTENR) Zambia
Mr Godwin Beene	Permanent Secretary, Ministry of Mines and Mineral Development (MMMD) Zambia
Ms Justina Wake	Director of Tourism, MTENR, Zambia
Mr Billy Chewe	Acting Director of Mines, Zambia
Mr John Chiluwe	Chief Tourism Development Officer, MTENR, Zambia
Mr Joseph Thole	Regional Standards Inspector, MTENR, Zambia
Mr Kagosi Mwamulowe	Acting Director, East and Central, National Heritage Conservation Commission, Zambia
Mr Ndiyoi Muyumbwa	Senior Conservation Officer, NHCC, Zambia
Mr Frederick Muyano	Principal Inspector, Environmental Council of Zambia
Mr Zook Muleya	Head of Planning, Zambia Wildlife Authority
Mr Paul Zyambo	Manager – Operations, Zambia Wildlife Authority
Mr Bemby Sialambwa	Senior Economist, Ministry of Foreign Affairs, Zambia
Mr Ronald Kaulule	Secretary General, Zambia National Commission for UNESCO
Ms Hilda Sinywibulula	Senior Programme Officer, Zimbabwe NC-UNESCO
Mr Edwin Matokwani	Director, Conservation and Management, ZAWA
Mr Ngoma	ZAWA Lower Zambezi Area Manager
Mr Crispin	Chirundu Local Manager ECZ
Ms Florence Nhekairo	Permanent Secretary, Ministry of Environment and Natural Resources Management, Zimbabwe
Mr Irvin Kunene	Director, Environment, MENRM, Zimbabwe
Mr T. Mundoga	MENRM, Zimbabwe
Ms Yvonne Chingarande	MENRM
Mr Ntando Nondo	Environment Management Authority, Zimbabwe
Mr Arnold Moyo	Focal point for UNESCO, ZPWMA
Dr Hillary Madzikanda	ZPWMA
Mr E Samuriwo	MENRM
Mr K Manyanga	Ministry of Tourism and Hospitality Industry, Zimbabwe
Dr Geoffrey Matipano	ZPWMA
Ms C. Washaja-Moyo	ZPWMA
Mr Edison Chidziya	ZPWMA
Mr J. J. Mhlanga	Secretary-General, Zimbabwe National Commission for UNESCO
Mr M.S. Machawira	Zimbabwe National Commission for UNESCO
Ms D. Mukaronda	Zimbabwe National Commission for UNESCO
Ms Sally Wyn	Zambezi Society, Zimbabwe
Prof C. Magadza	Chair, Zimbabwe MAB Committee (University of Zimbabwe)
Ms D Chimhanda	Dept of Physical Planning MENRM
Ms C Mutambanengwe	Dept of Physical Planning MENRM
Mr H Magaya	Dept of Physical Planning MENRM
Mr Ian Games	Consultant

Annex D Map of the area



Adapted from the map in the "Aerial Survey of Elephants and Other Large Herbivores in the Zambezi Heartland (Zimbabwe, Mozambique and Zambia)", Report for African Wildlife Foundation, Kevin M. Dunham

Annex E Statement of OUV

MANAPOOOLS NATIONAL PARK, SAPI AND CHEWORE SAFARI AREA WORLD HERITAGE PROPERTY DRAFT STATEMENT OF OUTSTANDING UNIVERSAL VALUE

Brief Summary/Synthesis: The property lies within Longitude 15° 36' South and 16° 24' South and Latitude of 29° 8' East and 30° 20' East and is located in Zimbabwe and consists of Mana Pools National Park (2 196 km²), Sapi Safari Area (1 180 km²) and Chewore Safari Area (3 390 km²). The property extends to about 6766km² and stands at an altitude ranging from about 500 to 1062m above mean sea level (a.m.s.l.). The Zambezi escarpment which rises to some 1 200m above mean sea level forms the southern boundary. The woodlands on the river-terraces extend for some 70km along the river frontage. This property also contains flat valley floor, 60km² area of alluvial, sand river environment, and the Mupata Gorge (30 km long along the northern boundary) cutting through the Chewore Mountains by the Zambezi over geological time. The undulating valley floors vary in altitude from 350m to 640m above mean sea level. The Southern escarpment rises up to an altitude of about 1200m mean sea level. The property has a mean annual rainfall of 700mm and mean annual temperature of 25°C.

Values: The Mana Pools National Park, Sapi and Chewore Safari Areas World Heritage Property is significant worldwide for its unique (exceptional) geological and geomorphologic features and active land formation processes which are of outstanding universal values. The property has a rich and varied fauna with large mammal populations concentrating on the flood plains. Well grassed *Brachystegia* communities dominate mountainous escarpment and Mopane woodland and Jesse bush on the valley floor. Seasonal tributaries dissecting the valley floor supports extensive riparian communities. *Acacia albida*, *Kigelia africana* and *Trichelia emetica* on both younger sandier and old islands and levees. The active land formation process portrays an ongoing geological process. In addition, the site has outstanding beauty attributed to the valley floor and sand banks. Mana Pools constitutes a low-cost wilderness recreational amenity for tourists. A maximum of 50 cars are permitted at any given time in the park. Canoe trips are undertaken during the rainy season. Tourists are permitted to have unguided walks in the riparian woodlands. Sport hunting in the Chewore and Sapi areas is strictly controlled (using sustainable hunting quotas) and is only carried out from May to October, yearly. The property is also serviced by the Zambezi River, the third longest river in the world. Several wildlife research projects are undertaken by local and foreign researchers. The property has a large braided area of the Zambezi River. Some Dinosaurs remains/fossils have been found within the site.

Criteria vii: The property is refuge to a number of wildlife species including elephant, buffalo, lion, sable, eland waterbuck and zebra. Basing on the 2010 wildlife survey the wildlife population statistics are as follows; elephant 12 502, buffalo 8352, sable 195, zebra 951 and waterbuck 1871. The property is characterized by a congregation of wildlife in the riparian parkland along the Zambezi River, thus providing a benchmark site for study of the riverine “sand bank” environment and associated succession and adaptive change. Birdlife along the Zambezi River is prolific (380 bird species) to include Nyasa love bird, Yellow spotted nicator, White collard practincole, Banded snake eagle and Livingstone’s fly-catcher. With its diversity of vegetation types and lack of human pressure, the property is richly endowed with bird species and serves as an important staging post for migratory water birds. The sand and pebble banks provide breeding sites for birds (African skimmer, White-fronted sand-plover, Stilt and Red-winged practincole) and are free from land predators. Common fish species include Tiger, Bream, Vundu, Nkupe, Chessa, Cornish jack and Lung fish. There is a clear pattern of vegetation succession on the alluvial deposits from ongoing geological processes. Seasonal movement of large mammals within the valley are of great ecological interest on both inter-species and intra-species differences. Local water birds such as guesee, long-tailed starling, purple-banded sunbird and lilian’s loverbird utilize the riparian plant community during the dry season. There is no longer rhino species within the property and full wildlife surveys are undertaken once every three to five years.

Criteria IX: The property is supported by scenery ranging from escarpments 60km south of the Zambezi River, to the extensive *Acacia albida* and mahogany woodlands and the Mighty Zambezi River that flows

through numerous channels, sand banks and islands and the impressive 30km Mupata gorges. The escarpment provides a natural barrier to wildlife movement within the site.

Criteria x: This property is a down-faulted trough, with old paragneiss and gneiss of basement complex exposed along the escarpments, and younger *Triassic* sedimentary formations comprising the valley floor. Rivers draining into the Zambezi (Rukomechi, Chiruwe, Sapi, Chewore and Mwanja) forms dry sand beds most of the time. The undulating valley floor varies in altitude from 350m to 640m above mean sea level. A 60km² area of alluvium within Mana Pools and at the river mouth of Chewore and Sapi rivers characterize the property. Zambezi river narrows to about 150m within Mupata Gorge for 30km long in hard gneiss rock and is broad (3.5km) between Kariba and Mupata Gorges, flowing between numerous sand-banks and islands. Soils developed on the Triassic formation of the Karoo sedimentary system cover the flat valley floor forming complex ridges characterized by mopane woodland. Mopane woodland is dissected by dendritic watercourses and pans permitting large trees growth (*Diospyros mespiliformis*). Dry deciduous vegetation (*Jesse bush*) rich in trees and shrub is found in redish, acidic sands from Aeolian sandstone and is characterized by *Combretum* species and *Commiphora* species.

Integrity: The property extends over 6766km² (Mana Pools National Park - 2 196 km², Sapi Safari Area - 1 180 km² and Chewore Safari Area -3 390 km²) which is considered relatively intact and adequately sized to maintain the diverse natural processes, functions and interactions including the riverine ecosystem, breeding ground, and habitat or landing base for migratory endangered bird species making it an IBA. The three areas (Mana Pools, Chewore and Sapi) form a sufficiently conservation unit for naturally functional ecological processes. This property is well protected by natural barriers the Zambezi River on the North and steep escarpment on the South from environmental and alternative land uses. The property is characterized by reduction in flooding by the construction of the Kariba Dam. The area has an effective carrying capacity for wildlife. The boundaries are of sufficient size to capture the natural and aesthetic values of the property.

Protection and management: The property is administered and managed by the Parks and Wildlife Act (Chapter 20:14) of 2008. The Act provides for legal protection of the resources within the property. The property has a well defined and buffered boundary but not physically marked. Of the three protected areas, only Mana Pools National Parks has a functional management plan (2010-2015). 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, to avoid disturbances and other impacts on wildlife, and to preserve the aesthetic values are in place. The property needs 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 and Chewore Safari Areas), poaching, boating along Zambezi, fishing, campsites/chalets for tourists and other inappropriate developments. Management of visitor use to both prevent negative impacts and provide opportunities to experience the values of the property in a sustainable manner is a long term requirement for the property. Plans are underway to have the Mana Pools (Zimbabwe) and Lower Zambezi National Park (Zambia) Trnsfrontier Park which will strengthen the management of the entire area.

Annex F Proposed ToR for a Middle Zambezi Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) can be defined as a “systematic process for evaluating the environmental consequences of proposed policy, plan or programme (PPP) initiatives in order to ensure they are fully included and appropriately addressed at the earliest stage of decision making on a par with economic and social considerations”.

A broad range of socio-economic PPPs affect the Zambezi valley between Zimbabwe and Zambia. While both countries have Environmental Impact Assessment policies for *projects*, these consider the impact at the late stage of project development rather than at the stage of policy formulation; and do not consider potential cumulative impacts or medium/long-term socio-economic impacts of natural resource utilisation. Current EIA policy also does not cover transboundary impacts; including impacts on the two World Heritage sites in the valley, Victoria Falls and Mana Pools, Sapi and Chewore.

It is therefore proposed to undertake an SEA to look at socio-economic development options in the Zambezi valley between Zambia and Zimbabwe; in function of their sustainability and impact on natural and cultural heritage.

The following steps are recommended.

1. Screening existing and planned developments (PPPs) for relevance (potential impact). It is expected that the relevant sectors will include mining; tourism; wildlife management; etc
2. Determining the scope of the SEA. It is expected that this will include:
 - a. brief description of the institutional and legislative framework of the different sectors
 - b. brief presentation of relevant environmental policy and national development objectives in the two countries
 - c. determination of baseline conditions and trends
 - d. identification of the key stakeholders and their concerns
 - e. determination of impact identification and evaluation methodologies to be used in the SEA Study; including key environmental and socio-economic variables to be used to assess alternative scenarios for a number of PPPs
 - f. indication of time-frames, costs and resources needed to carry out the SEA Study.
3. Undertaking the SEA study in a participatory manner, including
 - a. identification and assessment of potential impacts of different PPP scenarios and recommended mitigating measures for each scenario
 - b. identification of conflicts between PPP scenarios and socio-economic and environmental policy
 - c. recommendations towards implementation of the preferred scenario and indicators
 - d. recommendations towards planning and implementation of a joint management plan for the Zambezi valley, including organisational aspects such as opportunities for transboundary protected areas

Annex G Photographs



Pontoon to cross the Kafue River to enter Chiawa GMA



Mana Pools NP from Protea proposed hotel site in Chiawa GMA



Field visit to the planned Protea Hotel site, Chiawa GMA



Visual Impact of a recent development in Chief Chiawa GMA seen from the Zambezi River



Access to the WH property via the Zambezi River



Typical view of Zambezi floodplain, Mana Pools NP



Nile crocodiles on an elephant carcass on one of the Zambezi islands near Mana Pools HQ



Poster outlining draft management plan at Mana Pools HQ



Invasive water hyacinth, Zambezi River near Mana Pools HQ



Debriefing meeting with the PS, MENRM in Harare