

MOSI-OA-TUNYA/VICTORIA FALLS WORLD
HERITAGE PROPERTY



THE STATE OF CONSERVATION REPORT

ZAMBIA AND ZIMBABWE



2016

MOSI-OA-TUNYA/VICTORIA FALLS WORLD HERITAGE PROPERTY

The State of Conservation Report

Zambia and Zimbabwe

2016

1.0 PROPERTY DETAILS

- a) **States Parties:** *Zambia and Zimbabwe*
- b) **Name of World Heritage Property:** *Mosi-Oa-Tunya/ Victoria Falls*
- c) **Property Identification Number:** N509
- d) **Geographical coordinates to the nearest second:** *17°56" S and 25°55" E*
- e) **Date of inscription on the World Heritage List:** *15th December 1989.*
- f) **Organisation or entity responsible for the preparation of the Report:**
National Heritage Conservation Commission (Zambia) and Parks and Wildlife Management Authority (Zimbabwe) and National Museums and Monuments (Zimbabwe).
- g) **Reporting period:** *2014, 2015, 2016*
- h) **Date of the Report -** *November 2016*

Signature on behalf of the States Parties

Hon. Charles R. Banda (MP)
(MP)
Minister
Ministry of Tourism and /Arts

Hon. Oppah.C. Z. Muchinguri-Kashiri

Minister
Ministry of Environment, Water and
Climate

ZAMBIA

ZIMBABWE

Date _____

Date _____

1. EXECUTIVE SUMMARY

In line with the Operational Guidelines for the implementation of the World Heritage Convention of 1972, States Parties are required to prepare a State of Conservation report to ensure the protection of Properties. This joint report by the States Parties of Zambia and Zimbabwe outlines the conservation status of the Mosi-Oa-Tunya/Victoria Falls World Heritage Property as well as the activities that have been undertaken or are ongoing within the property as routine assignments. These are undertaken to protect the Outstanding Universal Value of the Property.

The report also provides specific responses to the decisions made by the World Heritage Committee at its 38th Session and in particular **Decision 38.COM.7B:96**. The decisions by the Committee involved among others, issues relating to water abstraction, inappropriate proposed tourism development activities, production of a sustainable financing/business plan, review of the Joint Integrated Management Plan (JIMP) and Strategic Environmental Assessment (SEA).

The report further discusses conservation and management issues such as the control of Invasive Alien Species and habitat management. Resource protection activities namely site patrols, wildfire management, waste management and also tourism development and regulation have also been highlighted.

Trans-boundary management coordination such as joint meetings and workshops have continued to be a means of sharing information and experiences and addressing various issues relating to the management of the property. The report also highlights research and monitoring activities such as bird counts, wildlife management, and water level monitoring.

The report further acknowledges the fact that managing the site can be a challenge and as such recognises joint integrated management and planning as a viable framework for managing the site sustainably.

The attached 2014-2018 monitoring plan attests to the fact that to a larger extent, the Outstanding Universal Value of the property continues to be maintained.

2. RESPONSE TO THE WORLD HERITAGE COMMITTEE'S DECISION; 38. COM 7B. 96

The World Heritage Committee,

Paragraph 1: Having examined Document WHC-14/38.COM/7B,

Paragraph 2: Recalling Decision 36 COM 7B.7, adopted at its 36th session (Saint-Petersburg, 2012),

Paragraph 3: Welcomes the completion of the monitoring plan, and requests the States Parties to report on the monitoring results as soon as these are available;

The two States Parties have been monitoring environmental and tourism development aspects. Compliance to these has been in the positive. Find attached the results of the monitoring in the plan in appendix i.

Paragraph 4: Also, welcomes the voluntary measures taken by the State Party of Zambia to limit the dry-season diversion of water from the falls for hydro-electric power generation, thereby restoring part of the Outstanding Universal Value (OUV) of the property, and encourages the State Party of Zambia to consider further reductions in water abstraction;

The State Party of Zambia has reviewed its annual power plant maintenance program. The maintenance period has now been deliberately extended from two months to four months (September to December). This has ensured shutting down part of the power plant to allow enough water to flow over the Falls during this dry period. Also, the water level monitoring is automatically controlled to ensure the abstraction does not cause the level to fall below 881.6 meters above sea level.

The State Party has enhanced alternative power generation sources with the injection of 300MW into the power grid from the Maamba Power Coal Plant which commenced power generation in mid-2016. This has helped to reduce the power shortfall in the southern grid of Zambia and has also helped to reduce water abstraction from the Property.

Find attached the graphs showing the average inflows and power generation reduction in the dry season (September to December) in Appendix ii.

Paragraph 5: Notes with concern the notified intention of the State Party of Botswana to abstract 495 million cubic meters of water per annum from the Zambezi River for irrigation, which represents 5-10 % of dry season water flow at the falls, and strongly urges the States Parties of Zambia and Zimbabwe, in consultation with the State Party of Botswana and the Zambezi Watercourse Commission (ZAMCOM), to include a full evaluation of this project and its impacts

on the OUV of the property in the Strategic Environmental Assessment (SEA) that is currently in preparation;

The States Parties have not been officially communicated to of this intention by Botswana. The States Parties would appreciate being privy to this communiqué from the WHC. However, they take note of the WHC Article 6 Part 3 which encourages States Parties not to undertake any deliberate measures which might damage directly or indirectly the cultural and natural heritage situated on the territory of other States Parties to the Convention. The States Parties request that the WHC communicates directly with Botswana over this issue and provide sufficient information on this proposed project to the two States Parties.

Paragraph 6: Recognises the measures taken by the States Parties of Zambia and Zimbabwe to protect the OUV of the property by denying authorisation of inappropriate tourism development activities, and urges them to not permit any further proposals for a tethered balloon, cableway or other tall structure in the vicinity of the property, if they would have a negative visual impact on the property;

The States Parties have considered the advice from the WHC and will not proceed to permit any further proposals for a tethered balloon, cableway or other tall structure in the vicinity of the property if they would have a negative visual impact on the property. The States Parties are committed to adhering to regulations guiding developments in order to protect the OUV of the WHP.

Paragraph 7: Further urges the States Parties of Zambia and Zimbabwe to expedite the completion of the sustainable financing/business plan, and to consider mechanisms for financing management operations largely from park entry fees and other site-based revenue;

About 50% of the work has been done towards the development of the business plan. This plan will articulate the financing models.

Paragraph 8: Further requests the States Parties of Zambia and Zimbabwe to provide, to the World Heritage Centre, an electronic and three printed copies of the draft revised joint management plan as well as the SEA for review by the World Heritage Centre and IUCN;

Find attached the draft revised Joint Integrated Management Plan (JIMP).

The two States Parties do not have adequate resources with which to carry out the Strategic Environmental Assessment (SEA). However, the Joint Integrated Management Plan has been reviewed comprehensively so as to address all past and emerging issues and impacts that may affect the World Heritage Property.

Paragraph 9: Requests furthermore the States Parties of Zambia and Zimbabwe to submit to the World Heritage Centre, by **1 December 2016**, an updated report, including a 1 page executive summary, on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 41st session in 2017.

The States Parties have compiled updated information on the State of Conservation of the Property as evidenced by the contents of this report.

The remainder of the report elaborates in detail, management activities carried out during the period to address the above WHC decisions and also continue to protect the Outstanding Universal Value of the Site.

3. CONSERVATION AND MANAGEMENT ISSUES

A number of management interventions were carried out to protect the Outstanding Universal Value of the Property. This section will therefore highlight the major activities during the period.

3.1. Control and management of Invasive Alien Species (IAS)

Mapping of *lantana camara* infested areas was done. The States Parties have continued to use both the chemical and mechanical methods to control the spread of *lantana camara*. Daily employees and volunteers from different NGO's participated in control efforts at different times during the period. *Lantana camara* control has been ongoing with about 70%, out of the 5.24km² trans-boundary invaded area cleared to date.

3.2. Habitat Management

During the period, the Site lost a large area of vegetation due to elephant induced modification. The elephants entered the fenced area of the site on several occasions in search of food. This led to them uprooting and destroying indigenous trees in the site. The vegetation destruction has been the most severe in the past ten years at almost 45%. About 90% of the 150 plants that were planted in the site in 2015 were uprooted.



Elephant activity in the fenced area and the resulting impacts on vegetation

In spite of the above setback, habitat restoration and rehabilitation using indigenous plants continued after securing the site from elephant entry by using a barrier. A total of 610 indigenous plants were planted in the site during the period being reviewed, with most emphasis on previously cleared areas. Of these, some were donated to the Site

whilst other saplings were rescued from the gorges where baboons cause vegetation destruction by sliding on the walls of the gorges. A tree nursery has since been established and this provides the Site with about 60% of the trees re-planted. Ecological habitat restoration and rehabilitation using indigenous plants is still on-going.



From left: members of staff taking part in tree re-planting exercises; the tree nursery in the site.

Tree species in the fenced area of the WHS were tagged. This has aided in the monitoring of the diversity status of the resource being managed, especially that the site values are hinged on the aesthetics which depend on the sustainability of the ecosystem therein. This has also improved the identification, education and appreciation of the site by our visitors, who come from diverse backgrounds.

4. RESOURCE PROTECTION

This section outlines activities that were carried out during the period in efforts to conserve the WHP and protect the OUV.

4.1. Site patrols

As a way of enhancing management and monitoring of the state of conservation of the World Heritage Site, bi-monthly intense patrols were carried out with relevant stakeholders during the period under review. Anti-poaching patrols are however carried out on a daily basis in the site. Anti-poaching patrols help to curb illegal harvesting of wildlife (flora and fauna). Poaching of elephants reduced from 12 to 8 incidents between 2014 and 2016 representing a 33% reduction.



Officers conducting a field verification exercise (l) and collecting data on Taita Falcon sightings in the World Heritage Property (r)

4.2. Fire Management

To counter the negative effects of wild fires, the States Parties developed and implemented comprehensive fire control plans, which, among other things, included the formation and maintenance of fire breaks during the dry season. No veld fires were experienced after fire management measures were implemented. This was as a result of

increased stakeholder participation. These stakeholders included operators, business community, conservation groups, government and the community.

4.3. Waste Management

Littering in the Site is as a result of human activity and baboons. As such, the old bins have been replaced with new 'baboon proof' bins. This has reduced site littering. Clean up operations have been conducted with the support of stakeholders. Other initiatives include awareness campaigns and law enforcement.



The baboon proof bins in the site

4.4. Retrospective Geographic Identification Project and Revised Joint Integrated Management Plan

In response to the request by the World Heritage Committee for the two States Parties to submit an official boundary map for the property in line with the 1989 Bureau recommendation, the technical teams from both Zambia and Zimbabwe conducted a series of meetings and ground verification exercises to produce an official boundary map (See attached map in the appendix) that also informed the revised management plan which is now ready.

5. TOURISM DEVELOPMENT AND REGULATION

5.1. Tourist statistics and management

The Property recorded an increase in tourist numbers between 2014 and 2015. A total of 353,025 and 544,104 tourists visited the site in 2014 and 2015 respectively, representing a 54 % increase. The visitor carrying capacity of the site is however being monitored so as not to exceed the recommended carrying capacity of the property. Monitoring is done through the entry control points where tickets are issued.

In addition, following discussions held during the UNWTO General Assembly hosted between Zambia and Zimbabwe in 2013, the two States parties agreed to implement the UNI-VISA which allows tourists visiting the two countries to pay a single visa for visiting the two countries from either side using the Victoria Falls Bridge. This pilot project was launched in November 2014. This attractive package has encouraged and could have contributed to the increased tourist visitations to the site. Signage and barriers have been erected within the property to enhance visitor management.

In an effort to improve service delivery and presentation within the property, some of the existing buildings were refurbished and upgraded. These structures include the offices, toilets, lodges, staff accommodation, refreshment centre and the information centre.

6. TRANS-BOUNDARY MANAGEMENT CO-ORDINATION

The trans-boundary management and coordination is done through Joint Ministerial Committee, Joint Technical Committee and Joint Site Management Committee meetings, among others.

6.1. Meetings

During the period, the Joint Technical Committee (JTC) on the management of the VFWHS held its 12th two-day meeting in Victoria Falls town, Zimbabwe in March 2015. The JTC later held its 13th two-day meeting in Livingstone, Zambia in February 2016 and the latest one to finalise this report in November 2016. Here, the revised Joint Integrated Management Plan (2017-2022) was produced. The work plan for the same period was also updated. The JSMC held a total of 5 (five) meetings during the period under review.



Participants of the 12th and the 14th JTC meetings between Zambia and Zimbabwe

6.2. Workshops and Symposiums

a) The UNESCO Sustainable Tourism Programme Workshop

The two States Parties participated in the World Heritage and Sustainable Tourism Programme that was developed by the UNESCO World Heritage Centre. The purpose of the programme was to catalyze positive change to protect and conserve sites while enriching the lives of local communities and also enhancing the experience of travelers. During the period, a total of three workshops were held. These focused on developing a detailed strategy for sustainable tourism management; developing a governance structure in order to implement the strategy; and to identify practical initiatives and longer term planning on core issues in the Victoria Falls World Heritage destination.

A total of twenty participants attended the workshops, ten from Zimbabwe and ten from Zambia. The coordination and resource team consisted of: Programme Specialists from the World Heritage Centre in Paris, the African World Heritage Fund, and a UNESCO sustainable tourism expert.



Participants to the first, second and third UNESCO sustainable tourism workshops in Livingstone

b) The Kavango - Zambezi Trans-Frontier Conservation Area (KAZA -TFCA) symposium

The two States Parties through the JTC participated in the recently held KAZA -TFCA Symposium from 31st October to 2nd November 2016 at Victoria Falls Safari Lodge in Zimbabwe. The three-day state of the KAZA-TFCA symposium discussed a number of issues affecting heritage, wildlife other natural resource conservation and the growth of tourism within the 5-member countries. The platform gave the Mosi-Oa-Tunya /Victoria Falls World trans-boundary Property an opportunity to showcase its successes, challenges and opportunities as well as marketing the site from a multi- disciplinary approach.

7. RESEARCH AND MONITORING

The WHP provides a platform for diverse research programs. Routine monitoring activities were conducted through an array of methods including aerial surveys, road strip counts and camera trap surveys. Scientific recommendations have sought to improve sightings of key species such as, Eland, Blue wildebeest and Zebra.

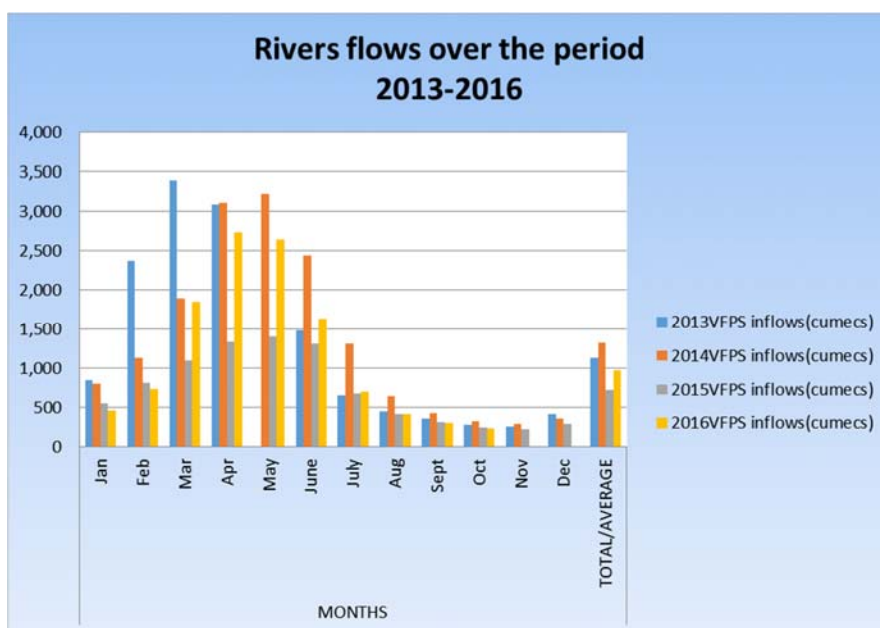
Bi-annual bird counts were also carried out in the fenced area of the VFWHS with different stakeholders and private bird enthusiasts. These revealed an increase in sightings over time.

However, not much research has been done on geological, geomorphological, hydrological research and monitoring of environmental trends in the World Heritage Property due to inadequate funding.

7.1. Water abstraction

River flows

The States Parties continued to monitor the flows of the Zambezi River upstream of the falls. The river flows for the period under consideration are depicted below. The average flows for the year 2013, 2014, 2015 and 2016 are 1,132; 1,327.6; 720.8 and 974.4 cumecs respectively.



The trend over the first two-year period reveals a general increase in the amount of water flows in the Property while the last two years reveal a general decline in the amount of flows. The decline is possibly due to the decline in the rain fall received in the basin. There is therefore need to collate river flow data with rainfall data and any relevant upstream activities to introspect the root cause of this downward trend as this is an important attribute that contributes to the OUV of this Property.

8. OTHER TRANSBOUNDARY INITIATIVES

8.1. Entrepreneurial workshop and farming project for the local community

The MTVFWHP is surrounded by local communities whose main livelihood is selling wood products and curios to visiting tourists. With financial assistance from the African World Heritage Fund (AWHF) and the Centre for Heritage Development in Africa (CHDA), a mixed farming pilot project was initiated for these local communities. This project is currently running and benefiting the community. This initiative has helped to lessen pressure and illegal resource harvest in the property, thereby safeguarding its ecological integrity whilst ensuring livelihoods for the local community through the sale of farm products, some of which are as shown below.



Currently being grown and sold from the farm are green pepper, beans, chili, tomato and butternuts

8.2. Human-wildlife co-existence

Part of the Mosi-Oa-Tunya National Park was fenced to reduce human-wildlife conflicts whilst elephant deterrent lines were also used to keep away elephants from properties in the Site periphery. The staff camp in the Site has been fenced off to mitigate potential conflict situations.

8.3. Staff training

A total of twelve members of staff from both States Parties were trained in Geographic Information Systems (GIS) whilst others had a refresher seminar in heritage conservation. This has enhanced management planning for the site.

9. PROPOSED DEVELOPMENTS

In conformity with paragraph 172 of the Operational guidelines for the implementation of the World Heritage Convention, the State Party of Zambia discloses that it proposes to construct a wheel [mimicking the London eye] within the high ecological sensitive zones of the Eastern cataract. The State Party also proposes to construct a hotel in the development zone of the World Heritage Property. The developments are still at proposal stage.

10. CONCLUSION AND RECOMMENDATIONS

The property is generally intact and the outstanding universal value has been preserved. There have not been any major developments in the property except the ones mentioned above which relate to the administration and management of the Property. While the management framework adopted for the property is effective, there is need for it to be strengthened through funding to ensure more regular consultations between the structures.

Funding remains the major challenge to effectively conduct major conservation initiatives such as eradication of invasive alien plant species and research. Despite these challenges, the two States Parties have reviewed the Joint Integrated Management Plan.

PUBLIC ACCESS TO THE STATE OF CONSERVATION REPORT

The two States Parties DO give permission for the whole SOC report to be accessed.

Signatures of the authority

NHCC, Zambia:

ZIMPARKS, Zimbabwe:

Appendix i

**VICTORIA FALLS WORLD HERITAGE SITE
MONITORING PLAN 2014–2018**

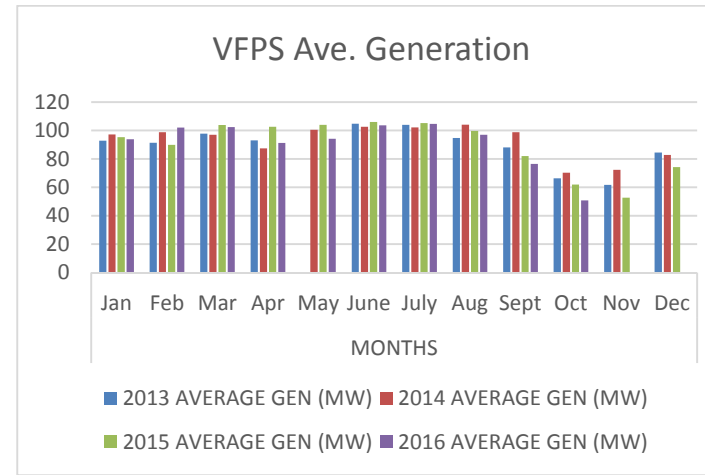
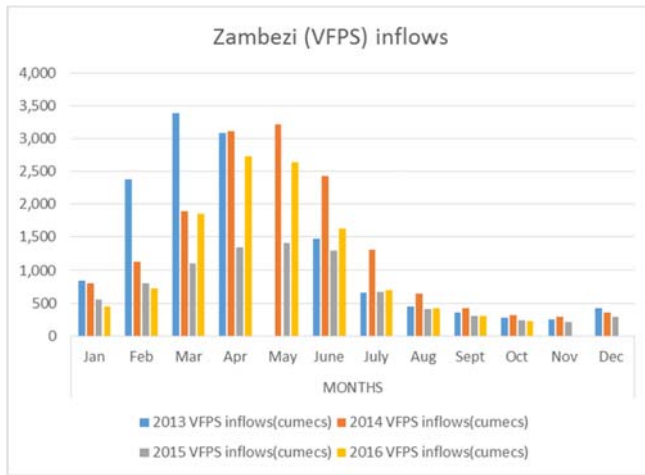
Aspect	Objective	Activity	Time frame	Performance Indicator	Target	Resources Required	Cost	Responsibilities	Result
Environmental Aspects									
Water Monitoring									
<i>Quality</i>	To establish trends in water quality	Collection of water samples up and downstream.	March and December	Records of water quality produced	Ecosystem integrity	Portable laboratory equipment		ZEMA, EMA	Monthly water samples are collected. Results show trends in the environmentally friendly band of blue except during rainy season when they get to green due to higher tepidity.
<i>Flow</i>	To maintain minimum environmental flows	Monitor Water flows	Daily	Record of water flow Volume estimates	Daily flows Discharge maintained between 53m ³ /s (dry) and 117m ³ (rainy).	Hydrological equipment		ZESCO, ZINWA	Water abstraction from the Zambezi River is restricted to minimum levels, allowing enough water to flow over the lip of the Falls.
Vegetation Monitoring									
<i>Invasive alien species</i>	To monitor and control the spread of invasive alien species in the WHP	Removal of invasive alien species	Ongoing	% of Area cleared of invasive alien species.	- 70% of accessible areas - Natural vegetation regeneration	-Manpower, Chemicals, mattocks, machetes, Protective clothing		NHCC, ZPWMA, ZAWA, ZEMA, EMA,	70% of the 5.24Km ² invaded area cleared of the invasive weed.
Land degradation									
<i>Erosion</i>	To maintain Island and riverbank integrity	Monitor the effects of erosion on key areas of the WHP	Seasonally	Extent of erosion on key areas of the WHP	Minimize human induced erosion	-Manpower and equipment		NHCC, ZPWMA, ZAWA, VFM, LCC, ZEMA, EMA,	-Walking trails in the core area rehabilitated. -Barriers erected at some viewing points to prevent access to the river bank and gorges - construction & maintenance of storm water drains and gully reclamation
<i>Sand Mining and stone extraction</i>	To curb land degradation	Enforce compliance	Daily	Extent of sand mining and stone extraction	Minimum sand mining and stone extraction	-Manpower, transport, financial		NHCC, ZPWMA, EMA, ZEMA, ZAWA, VFM, LCC	-Culprits arrested through night raids conducted.
Waste management									

<i>Solid waste</i>	To curb environmental pollution within the WHP	Monitor the management of solid waste within the WHP	Daily	Levels of pollution	Pollution free ecosystem	-Manpower, Statutory Instrument		ZEMA, EMA, LCC, VFM	-Most tourism properties were provided with receptacles -One municipality acquired a new refuse compactor -Distribution of refuse receptacles to some residents -Door to door campaigns - Adherence to scheduled waste collection times. - New landfill being constructed and current one is being fenced to limit accessibility.
	To monitor landfill designs, commissioning, operations, and decommissioning		Bi-annually	Efficiency of landfill sites	-Number of consultative meetings on designs -Number of landfills commissioned or decommissioned -Volume of litter disposed				-Designs for new landfill done, currently at tender stage
<i>Liquid waste</i>	To protect the aquatic environment	Monitor the discharge of industrial and sewerage waste in the open and aquatic environment	Daily	Open and aquatic environment	Pollution kept to minimal levels	Portable laboratory equipment		ZEMA, EMA, VFM, LCC	- A Water Sanitation and Hygiene program is being implemented. -Consultant hired and at final stages of producing designs - Removal of water hyacinth and desludging is on- going), -Monthly ambient monitoring and enforcement done to influence adherence to standards. -New pumps purchased and installed.
Wildlife									
<i>Human wildlife conflicts</i>	To promote co-existence	-Sensitisations and proactive actions -Fencing of wildlife	Ongoing	Number of human-wildlife conflicts	50% reduction in the number of incidences				-Fence erected on the Southern part of the WHP.
<i>Poaching</i>	To maintain species diversity	Increase anti-poaching patrols -Awareness raising -Conduct compliance activities	Daily	The number of anti-poaching patrols -Number of awareness meetings -Number of activities conducted	Species diversity maintained -Number of snares retrieved -Reduction of animal numbers per specie poached	Manpower, transport,		ZAWA, ZPWMA, Security agencies	-Patrols were conducted on a daily basis. -Wire snares recovered have reduced by almost 50% in 3 years.

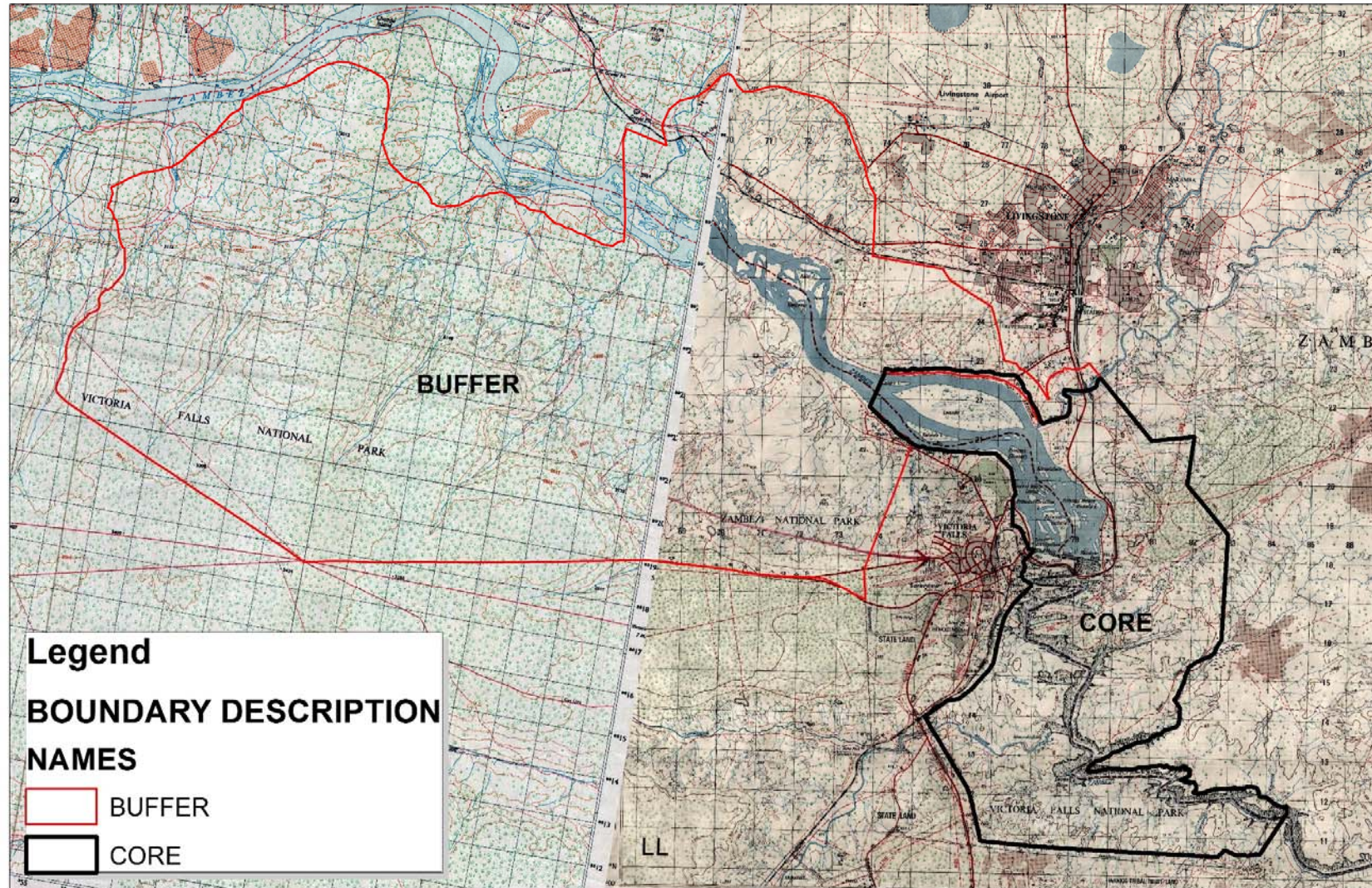
<i>Wild fires</i>	To reduce incidents of uncontrolled fires	Develop and implement fire management strategies	Annually	Extent and distribution of wildfires	Area burnt	Maps, satellite images		ZPWMA, EMA, NHCC, ZAWA	-Fire management plan developed. -Fire prevention programs conducted annually. -Implemented an integrated national fire strategy and enforcement programme - Satellite fire detection (near real time)
Pollution									
<i>Air pollution</i>	To monitor the extent and distribution of Air pollution		Quarterly	List effects and affected areas	Check lists of major points sources Non-point sources (wild fires)	Visual inspection; Air pollution measuring equipment		ZEMA, EMA, NHCC, ZPWMA, LCC, VFM	-Culprits are being apprehended
<i>Noise pollution</i>	To monitor the extent and distribution of noise pollution		Quarterly	List effects and affected areas	-Taita falcon nesting and distribution -Helicopter flying height and direction; -Helicopter activities expansion -Visitor queries	GPS, Visual inspection, Acoustic calibrator		EMA, ZEMA, ZAWA, ZPWMA, NHCC,	
Tourism and Development Aspects									
<i>Visitation/Tourism pressure</i>	To measure the impact of Tourism on World Heritage site		Quarterly	Visitor statistics Environmental degradation	Arrivals Area disturbed	Records Maps/Satellite images		NHCC, ZPWMA, MOTA, ZTA, ZTB, ZDA, ZAWA,	-Impacts of tourism being monitored and mitigated.
<i>Infrastructure Development</i>	To monitor tourism developments within and around the WHS		Annually	Distribution of semi- & permanent infrastructure within and around the WHS	Number of developments	Development approvals Inspections Checklist of developments		LCC, VFM, ZEMA, EMA, ZAWA, ZPWMA	-All development subjected to EIAs - Enforcement of urban development regulations and policies being done on new and old projects respectively
Education and Awareness Aspects									
<i>Awareness creation</i>	To create awareness among pupils, students and scholars on the values of the WHS		Quarterly	Schools mobilized/engaged	-Number of schools -Number scholars visiting	Financial resources, information materials (ICEs)		NHCC, ZEMA, ZPWMA, ZAWA, EMA	-Education awareness campaigns and workshops on the WHP are being held.

Appendix ii

The graphs below show the average inflows and power generation reduction from the Zambezi river in the dry season (September to December) as depicted by Victoria Falls Power Station (VFPS).



MOSI-OA-TUNYA / VICTORIA FALLS WORLD HERITAGE PROPERTY



Source: 1:50000 Topographic Survey Maps 1725D3 and 1725D4. Each grid represents 1 km

MOSI-OA-TUNYA/VICTORIA FALLS WORLD HERITAGE PROPERTY



THE JOINT INTEGRATED MANAGEMENT PLAN

ZAMBIA AND ZIMBABWE



NOVEMBER 2016 – NOVEMBER 2021

FOREWORD

At the expiry of the first Joint Integrated Management Plan (JIMP) for the trans-boundary Mosi-Oa-Tunya/ Victoria Falls World Heritage Property (MoT/VFWHP) (2007–2012) and its successful implementation, it gives the States Parties of Zambia and Zimbabwe great pleasure to present the second JIMP (2016-2021).

Driven by the two States Parties national policies and commitments in line with the Operational Guidelines of the 1972 Convention concerning the protection of Cultural and Natural Heritage, the Management Plan aims to protect and maintain the Outstanding Universal Value (OUV) enabling local communities and visitors to enjoy its naturalness.

The policies in this plan have been informed by an extensive public consultation process. The level of response reflects the desire of individuals and organisations to ensure that the special values of this World Heritage Property are safeguarded. It is the responsibility of the States Parties to work together in the implementation of the Management Plan.

Since 2007, considerable progress has been made on several conservation and management issues. This Management Plan also takes into consideration emerging issues including climate change and risk preparedness as well as changes in national and international policies which will affect the management of the property.

Acknowledgements

The States Parties acknowledge the Joint Technical Committee (JTC), Joint Site Management Committee (JSMC), the two National Commissions for UNESCO (NATCOMs) (Zambia/Zimbabwe), stakeholders, and individuals who have worked hard during the drafting process of this plan. We are confident that this document will prove to be an invaluable management tool for all those involved in the on-going conservation and management of this heritage property in the next five years.

Signatories on behalf of States Parties

Hon. Charles Banda (MP)
Minister
Ministry of Tourism &
and Arts

ZAMBIA

Date_____



Hon. O.C.Z Muchinguri-Kashiri (MP)
Minister
Ministry of Environment, Water
Climate

ZIMBABWE

Date_____



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ACRONYMS AND ABBREVIATIONS

AWF	African Wildlife Foundation
CAAZ	Civil Aviation Authority of Zimbabwe
CAMPFIRE	Communal Areas Management Project for Indigenous Resources
CTA	Curio Traders Association
EA	Environment Africa
EIA	Environmental Impact Assessment
EMA	Environmental Management Agency
FD	Forest Department
HAZ	Hotel Association of Zimbabwe
HRDC	Hwange Rural District Council
IUCN	International Union for Conservation of Nature
IUCN-ROSA	International Union for Conservation of Nature Regional Office for Southern Africa
JIMP	Joint Integrated Management Plan
JSMC	Joint Site Management Committee
JTC	Joint Technical Committee
LCC	Livingstone City Council
LM	Livingstone Museum
LTA	Livingstone Tourism Association
MOTNP	Mosi-Oa-Tunya National Park
MOU	Mémorandum of Understanding
NGO	Non Governmental Organisation
NHCC	National Heritage Conservation Commission
NMMZ	National Museums and Monuments of Zimbabwe
OUV	Outstanding Universal Value
PA	Protected Area
PWMA	Parks and Wildlife Management Authority
RDC	Rural District Council
RDL	Red Data List
SADC	Southern African Development Community
SEA	Strategic Environmental Assessment
SWASCO	Southern Water and Sewerage Company
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VFAPU	Victoria Falls Anti-Poaching Unit
VFM	Victoria Falls Municipality
MVFWHP	Mosi-Oa-Tunya/ Victoria Falls World Heritage Property
VFWHP	Victoria Falls World Heritage Property
WCMC	World Conservation Monitoring Centre
WHC	World Heritage Centre
WHP	World Heritage Property
DNPW	Department of National Parks and Wildlife
ZEMA	Zambia Environmental Management Agency

ZESCO	Zambia Electricity and Supply Corporation
ZIMRA	Zimbabwe Revenue Authority
ZPWMA	Zimbabwe Parks and Wildlife Management Authority
ZARA	Zambezi River Authority
ZRA	Zambia Revenue Authority
ZRP	Zimbabwe Republic Police
ZTA	Zimbabwe Tourism Authority

EXECUTIVE SUMMARY

The conservation and protection of Outstanding Universal Values of the World Heritage Properties presents on one hand opportunities for collaboration and exchange of information and experiences with other States Parties and on the other hand challenges arising from the ever-changing socio-economic environment.

World Heritage Properties have over the last two decades been under constant scrutiny and debate regarding their role in alleviating socio-economic challenges that States Parties face, especially in the developing world wherein conservation in certain instances is perceived as being in conflict with economic development.

Historically, management plans have been the tools for protected area system management. They aid in protecting key resources of the protected area by minimizing threats and allowing for sustainable utilisation of the natural and cultural resources.

The two States Parties have over the period 2014-2016 been involved in the rigorous consultative process of revising the Joint Integrated Management Plan (JIMP) for the Mosi-Oa-Tunya/Victoria Falls World Heritage Property, which was first, formulated in 2007 and expired in 2012.

The implementation of the JIMP, was instrumental in the protection of the Outstanding Universal Value of the Property and coordinating conservation activities over the period of five years. However, the implementation of the same, on the other hand, presented practical challenges on the ground that were not anticipated at the time of formulating the plan.

The challenges encountered and gaps that were exposed during the five-year implementation of the first JIMP greatly helped to inform the content of this revised JIMP. The existence of electricity pylons over sections of the property, for instance, made it impractical to maintain certain zones. This informed the realignment of zones in the revised JIMP.

Aside from the challenges faced on the ground, the revised JIMP was also informed by the need to incorporate emerging issues namely risk management, climate change, Information Communication Technologies Integrated Electronic Information Management Systems (IMS), community participation and beneficiation, and resource mobilization. The emerging issues are aimed at complementing existing or ongoing conservation programmes to conserve and protect the OUVs of the property.

Existing or ongoing conservation programmes from the previous JIMP include Tourism management and Education, Research and development, Resource conservation and operation and maintenance.

Tourism management and education entails coordinating tourism from project development to operation phase and ensuring that tourism activities are compliant to the World Heritage Operational guidelines and do not impinge on the OUVs of the site. Educational activities remain key for the property as a conduit for transmitting the values of the site to visitors and general public.

Research and development involves research activities carried out to directly support management of a specific area or issue and research addressing general conservation goals or knowledge improvement. Research contributes essential cultural knowledge for information and education of visitors.

Resource conservation activities ensure that all the various facets of development around the property should take cognizance of the property's natural resources values and ensure that they are not depleted in the long term.

The two States Parties, despite the challenges faced in the implementation of the previous JIMP, are committed to the conservation and protection of the Outstanding Universal Value of the Property in tandem with the Operational guidelines for the implementation of the World Heritage Convention and will endeavor to bequeath the property to the next generation in a viable condition.

PREAMBLE

VISION: A sustainably managed Mosi-Oa-Tunya/ Victoria Falls World Heritage Property.

MISSION STATEMENT: To protect, conserve and promote the Mosi-Oa-Tunya/ Victoria Falls World Heritage Property through a management framework that ensures its Outstanding Universal Value is maintained for the present and future generations.

PURPOSE: To ensure sustenance of the OUV of the property through co-ordinated joint management, guided development, inter-institutional involvement and community participation by the two States Parties.

The rest of part one looks at the following issues:

- i. Description of the Property highlighting the heritage resources;
- ii. The state of conservation focusing on the values of the MVFWHP;
- iii. Zonation: This section outlines the rationale and criteria used for zoning the WHP and explains the basic management guidelines to be employed in each zone. The WHP is subdivided into three zones namely (i) High ecologically sensitive (ii) Medium ecologically sensitive (iii) Low ecologically sensitive. Modifications may be made only if they enhance the protection of the OUV of the site.

PART ONE:

1.0 BACKGROUND INFORMATION

1.1 Brief History

The Mosi-Oa-Tunya/ Victoria Falls World Heritage Property (MVFWHP) was inscribed a Natural World Heritage Property in accordance with the 1972 UNESCO World Heritage Convention on the 15th of December 1989. This was largely based on its unique geomorphic formations and processes, exceptional natural beauty as well as its aesthetic importance.

The Site was inscribed on the World Heritage List under the then criteria (ii) and (iii), now re-numbered (vii) and (viii) which reflect the World Heritage values.

1.2 Statement on the Outstanding Universal Values

The Mosi-oa-Tunya/Victoria Falls is the largest curtain of naturally falling water in the world at 1.708 m wide and with up to 500 million litres per minute descending at 61 m (Devil's Cataract), 83 m (Main Falls), 99 m (Rainbow Falls), and 98 m (Eastern Cataract). It has eight spectacular gorges of igneous origin (i.e. comprising basalts) and several islands in the core which serve as breeding sites for four endangered and migratory bird species, such as the Taita Falcon and Black Eagle. The riverine 'rainforest' within the waterfall splash zone is a fragile ecosystem of discontinuous forest on sandy alluvium, dependent upon maintenance of abundant water and high humidity resulting from the spray plume of about 500 m (at maximum height) that can be seen from a distance of 50 km and 30 km from Bulawayo and Lusaka roads respectively. A direct frontage viewing of the falls is possible from both Zambia and Zimbabwe.

The Mosi-oa-Tunya/Victoria Falls and associated eight steep sided gorges have been formed through the changing waterfall positions over a geological time scale. The gorges are an outstanding example of river capture and the erosive forces of the water still continue to sculpture the hard basalts. These gorges take a zigzag course of a distance of about 150 km along the Zambezi River below the falls. Seven previous waterfalls occupied the seven gorges below the present falls, and the Devil's Cataract in Zimbabwe is the starting point for cutting back to a new waterfall. In addition, an aerial view of the falls shows possible future waterfall positions. Upstream are a spectacular series of riverine islands formed during the ongoing geological and geomorphological processes. The property is characterized by banded basalt of ancient lava flow, Kalahari sandstones and chalcedony out of which stone artefacts of *Homo habilis* dating three million years, stone tools of the middle Stone Age and weapons, adornments and digging tools of the late Stone Age that indicate occupation by hunter-gatherers.

The property requires continued maintenance and updating of its management plan, supported by adequate staffing and provision of financial resources.

The falls being a major attraction, urban infrastructure developments, tourism facilities and services may impact the property's integrity and therefore need to be carefully managed not to compromise the exceptional beauty and Outstanding Universal Value of the property.

Effective and continued action is also required to tackle the current and potential impacts on the property.

2.0 INTRODUCTION

The States Parties of Zambia and Zimbabwe recognise the need to sustain the integrity of the VFWHP through an appropriate management plan or other management systems. Since 1996 it has been UNESCO and IUCN missions and recommendations that the VFWHP should have an effective JIMP. Thus the agreed institutional framework for the management of the property is at three levels: Joint Ministerial, Joint Technical and Joint Site Management Committees. The property requires continued maintenance and updating of its management plan, supported by adequate resources.

The Falls being a major attraction, urban infrastructure developments and tourism facilities and services may impact the property's integrity and therefore need to be carefully managed not to compromise the exceptional beauty and outstanding universal value of the property. Thus, the management plan is aimed at ensuring the effective conservation, sustainable management and development of the Mosi-Oa-Tunya/ Victoria Falls WHP by the two States Parties of Zambia and Zimbabwe.

3.0 DESCRIPTION OF THE PROPERTY

3.1 LOCATION AND AREA

3.1.1 Location

The property lies at 17°55' South and 25°50' East, on either side of the Zambezi River in southern Zambia and north-western Zimbabwe.

The boundary is formed by the southern section of Victoria Falls National Park in Zimbabwe and the southern part of the Mosi-oa-Tunya National Park up to Maramba River as well as the riverine strip up to the including Canary Island about 2.5km upstream of the Main Falls.

Thus the boundary line for the property generally follows the Zambezi River frontage from a point immediately opposite the western tip of the Canary Island and trends eastwards thence to the confluence of the Zambezi and Maramba River, at point on the southern bank of the Maramba River, thence winding northeastwards to a point on the Mosi-oa-Tunya National Park boundary, thence southwards along this eastern Park boundary to Songwe point at the confluence of the Zambezi and Songwe River on its northern bank, thence connecting to Zimbabwe, thence trending eastwards along the gorges of the Zambezi in the direction of the river flow up to the beginning of the upper part of the Batoka Gorge forming the boundary of the Victoria Falls National Park, thence trending southwards on the eastern line of the Park boundary and following the entire Victoria Falls National Park boundary (thus trending in the generally western, northern and northwestern direction leaving the Victoria Falls town on the left, and following a series of Park boundary beacons along the southern Zambezi River Bank up to Zambezi National Park and a riverine section of the Zambezi River including Canary connecting into Zambia to the starting point.

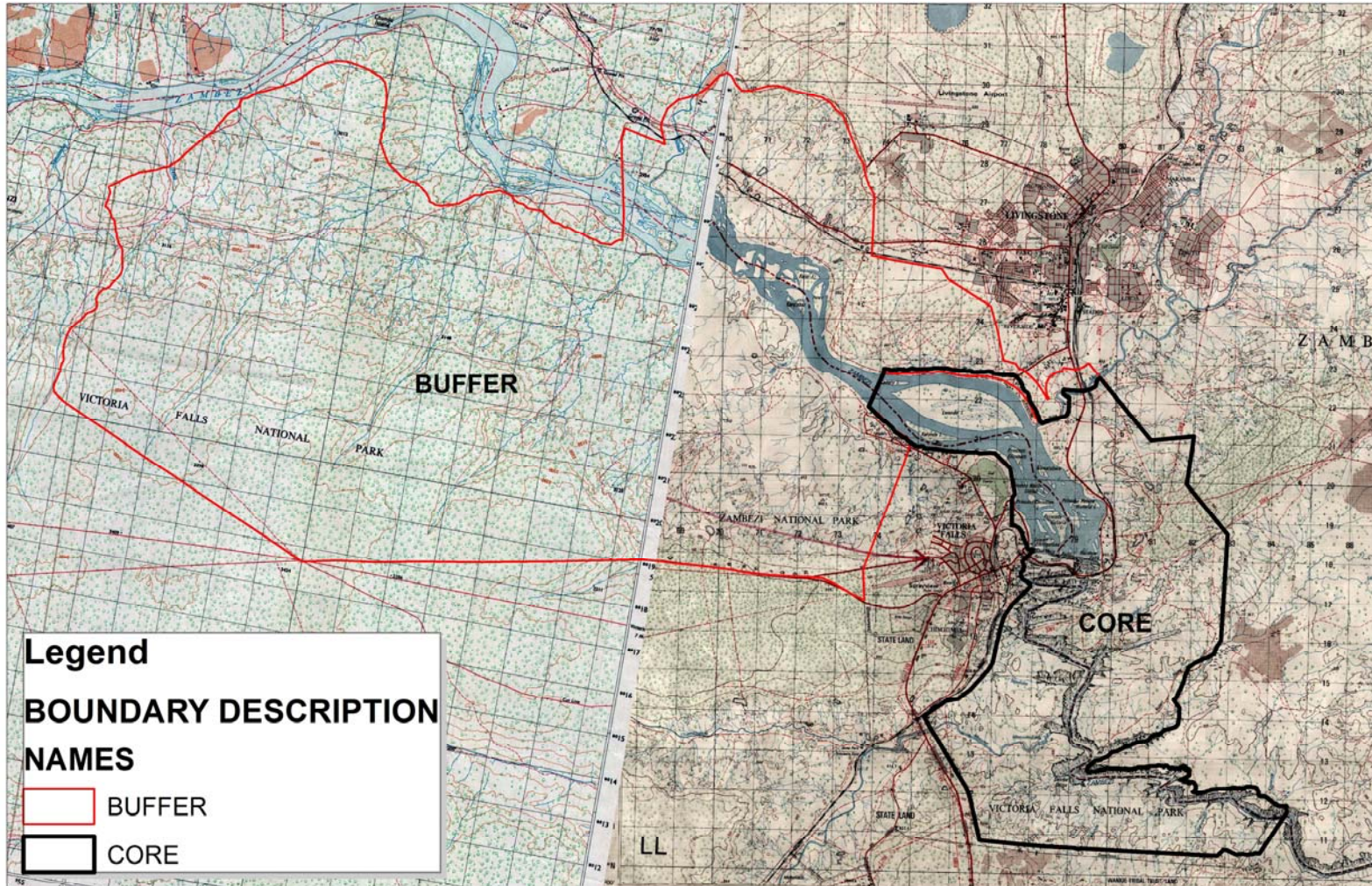
3.1.2 Area of the World Heritage Property

The total area is 27485.5 ha comprising a core of 6562 ha and a buffer of 20925.5 Ha

Table 1: Summary of the World Heritage Property Area

State Party	Core (Ha)	Buffer (Ha)
Zambia	3373	3182
Zimbabwe	3189	17743.5
Total	6562	20925.5

MOSI-OA-TUNYA / VICTORIA FALLS WORLD HERITAGE PROPERTY



Source: 1:50000 Topographic Survey Maps 1725D3 and 1725D4. Each grid represents 1 km

3.1.3 BIOPHYSICAL AND CULTURAL RESOURCES

3.1.3.1 PHYSICAL ENVIRONMENT

(i) Climate

The property falls under a region of a sub-tropical hot and arid climate, with a marked seasonal variation (Meynell *et. al.*, 1996). The property is characterized by three distinct seasons: Wet/Warm season running from November to April; Cool/Dry season which runs from May to August 16 – 27°C and a Hot/Dry season, from September and October 27 - 32°C.

The wet/warm season (November to April) has an annual mean rainfall of ±750mm with the highest rainfall being from January to March. October is the hottest month, whereas June is the coldest with temperatures averaging 33.9°C and 6.4°C respectively. The months of April/May constitute the post rainy season, whereas the cool dry season is from May to August.

(ii) Geology

The geology of this trans-boundary property is a product of volcanic action that characterized much of Southern Africa about 200 million years ago during the Karoo Period (Meynell *et. al.*, 1996, Bond, 1990). The lava flows produced during this period formed the basalt plate underlying the rocks. These basalts are subsequently overlain by a thin layer of arid and/or marine sandstones and the red Kalahari sands. Chalcedony and surface limestones are also found as isolated rocks or constituent minerals. This geology has a major effect on the vegetation of the area (Fanshawe, 1975).

(iii) Soils

The property is characterised by three soil types i.e. shallow gravel soils, underlain with basalt rock close to the Zambezi river channel and along its tributaries; alkaline sandy clay soils on upper valley slopes and Kalahari sands on higher altitudes on north-western section of the park areas.

Together with lithosols, a soil type which lies above weathering rock and gravel and in depth not exceeding 25cm, the Kalahari sands form the rigosols, which are one of the major soil groups in the area. These soils are

extremely infertile and are of little value in terms of agricultural production (Meynell *et al.*, 1996).

(iv) Geomorphology

The Victoria Falls World Heritage Property and the surrounding area is the first order land mass called the African Plateau. The north-western part of the park has two third order forms slightly dissected further away from the river. The south-western portion, close to the Falls area, is an undulating plateau interrupted in various places by hills, ridges and minor escarpment.

The relief of this whole region is dominated by the Zambezi River, the Falls and the downstream gorges. To a large extent these features are the basis for the UNESCO declaration of the area as a World Heritage Property. The Victoria Falls and gorges are the most important natural features of the park and of an exceptional significance internationally, hence the site where they are found was declared a WHP in 1989.

Some of the islands upstream of the Falls are a result of outcropping of the basalt rendering stable islands with thin soil and vegetation cover while others originated from alluvial deposits which result into islands which are often covered with thick vegetation including reeds, grasses and mature trees (Meynell *et al.*, 1996).

The islands vary in size from a few square metres to a several square kilometres and are either sandbanks, sometimes with or without one or more central depressions, or basalt-based. Livingstone Island on the Zambian side and the Cataract Island on the Zimbabwean side are examples of basaltic islands whereas Palm (in the Buffer) and King George VI (in the Core) are sand islands.

(v) Paleontology

The property is characterised by paleontological evidence that the ecology of the falls has evolved through time and space through the fossil faunas which have been excavated from the study area. Fossils of an early form of elephant for instance were unearthed during the construction stage of the ZESCO canal deposited with the Livingstone Natural History Museum. These fossils tell an evolution story of the animal life of the study area. Some of the discoveries in the study area include a giraffe and several antelopes (Clark in

Phillipson 1990). The paleoclimatic indicators as preserved in the property's rocks and sand material show that the climate of the Victoria Falls area has been fluctuating between arid and wet conditions.

(vi) Hydrology

The Zambezi River with its Source at Kalene Hills is Africa's fourth largest river and gives rise to the Victoria Falls after forming another spectacular Sioma-Ngwezi Falls and the Barotse Cultural landscape on the upstream areas (Meynell *et al.*, 1996). The property has two rivers of significance, the Zambezi and Maramba River. The Dambwa Stream disappeared possibly due to both climate change and human related activities.

The Zambezi River records seasonal fluctuations in volumes of water falling on the Victoria Falls area. During November to December the Victoria Falls are at their lowest level with the mean flow of less than 20,000 cubic meters per minute. March-April is the peak season with water levels rising rapidly. At peak flood, water at the Victoria Falls, falls thirty times its dry season volume, averaging 550,000 cubic metres per minute. In 1958 historic flows of 700,000 cubic metres per minute were recorded. At peak season, water is stained golden brown due to the sediment that it carries. These fluctuations have a bearing on the scenic impression of the Falls. The curtain of falling water at the Victoria Falls is 108 metres at its deepest point, 1 708 metres in width.

3.1.3.2 BIOLOGICAL ENVIRONMENT

(i) Flora

The predominant natural habitat in the Victoria Falls/Mosi-oa-Tunya World Heritage Site is woodland (Meynell *et al.*, 1996). Shalwindi (2000) states that according to LANDSAT imagery and the 1:500,000 vegetation map of Zambia, four main vegetation types are observed in the WHS namely; Mopane, Mixed scrubland, Riparian and Swamp vegetation types. A closer analysis of these woodlands reveals six main vegetation types (Meynell *et al.*, 1996) namely Riparian Forest, Kalahari woodland, (iii) Mopane, (iv) Mixed Scrub Vegetation, (v) Mukusi Woodland and (vi) Miombo Woodlands. The vegetation in the WHS is divided into six types based on biological features as described below:

(vii) a. Riparian Forest: The Zambezi River, in common with all rivers in tropical Africa, has a distinct fringing vegetation of gallery or riparian woodland. The Riverine Forest is found along the banks of the

Zambezi, Songwe and Maramba Rivers and on some islands. On the riverbanks it is with a width rarely more than 20-100m wide from the high water mark (Fanshawe, 1975, Meynell et al., 1996). At its best development, riparian forest is a three storeyed forest with a closed evergreen canopy attaining 21m in height. Some common tree species that occur here are *Diospyros mespiliformis*, *Trichilia emetica*, *Syzyguim guineense* ssp *barotsense*, *Syzyguim cordatum*, *Mimusops zeyheri*, *Hyphaene coriacea*, *Hyphaene petersiana* and *Pheonix reclinata*. Also common are *Phragmites mauritianus* and *Cyperus papyrus*.

This habitat houses the highest concentration of animals and is the most sought and threatened by human developments. A small section of the riverine woodland is the 'Rainforest' found opposite the Victoria Falls. Species such as *Rotala cataractea* seem to favour the highly specialized conditions prevailing in the 'Rainforest'. Overall, the rainforest contains a highly specialized forest flora of an island character. Species such as *Sebea pentandra*, *Loberlia kirkii*, and *Gladiolus unguiculatus* are rare herbaceous species with very specialized habitat requirements. Another species of interest is the rare fern *Cheilanthes farinose*.

The central deep sandy ridges of some of the islands produce a non-riparian vegetation, with affinities to Kalahari woodland. *Dichrostachys cinerea*, *Acacia polyacantha* and *Terminalia sericea* are also to be found in these areas.

b. Kalahari Woodland: This woodland type mainly occurs on Kalahari sands (Meynell et al., 1996). The term Kalahari woodland therefore embraces all woodlands on Kalahari sand with the exception of the vegetation derived from the destruction of dry evergreen forest (Fanshawe, 1969). The Kalahari sands are deep and well-drained and are characterized by *Baikiae plurijuga*, *Guibortia coleospermum* and *Schinziophyton rauteneii*. This woodland type is of great economic importance because of its utilization in terms of the curio curving industry, furniture manufacture, firewood supply and ethnomedicology (Meynell et al., 1996). *B. plurijuga* produces a valuable timber commercially exploited in both Zambia and Zimbabwe for railway sleepers, mining timbers and parquet flooring (Fanshawe, 1975, Meynell et al., 1996). This woodland

type is independent of the Zambezi. Other species of interest in this woodland are *Burkea africana*, *Erythrophleum africanum*, and the *Uapaca spp.*

c. Mopane Woodland: This one storeyed open woodland with a deciduous canopy of 6-18m high (Fanshawe, 1969, Chidumayo et al, 2004) is the second largest habitat in the Victoria Falls World Heritage Property on the Zambian side. It is found between the Riverine Forest and Mixed Scrubland. The dominant mopane is pure or almost pure (Fanshawe, 1969), thus frequently forming a near monoculture over considerable areas (Chidumayo et al, 2004). Scattered elements of Munga woodland occur in places mainly represented by *Acacia nigrescens*, *Adansonia digitata*, *Combretum imberbe*, *Kirkia acuminata* and *Lannea stuhlmannii*. Mopane woodland thrives well in alkaline sandy soils. The physiognomy of Mopane woodland on the alluvial flats is largely conditioned by the depth and duration of flooding during the rainy season. The most abundant tree that occurs in this area is *Colophospermum mopane*, a valuable browse species for domestic animals and wildlife.

d. Scrub Woodland: Scrub Vegetation extends over much of the MoNP and Victoria Falls WHS (Chidumayo et al, 2004) and occupies the largest part of this protected area. It is dominated by shrubs, with scattered tall trees on shallow stony basalt soils in the southeast and on shallow sandy soils in the northwest of the park. Notable woody species are *Colophospermum mopane*, *Kirkia acuminata*, *Commiphora Spp*, *Pterocarpus antunesii*, *Pterocarpus angolensis*, *Sclerocarya caffra*, *Acacia nigrescens*, *Sterculia quenquioloba*, *S.africana*, *Cassia abbreviata*, *Securidaca longependulata*, *Dichrostachys cinerea*, *Burkea africana* and *Adansonia digitata*. Mixed scrubland thrives on shallow, strong soils underlain by basalt and its distribution is close to the Zambezi and its tributaries (Meynell et al., 1996). The main value for this vegetation type is browse and grazing for wildlife and cattle in the area. It also provides good supplies of fuelwood and like the Kalahari woodland is exploited for curio making and poles for building (Meynell et al., 1996).

e. Baikiaea Woodland: This habitat occurs on the well-drained Kalahari sands on the plateau overlooking the Zambezi Valley at the Victoria Falls. It is separated from scrubland on the valley floor by a sand scarp. It occupies only 2% of the park and is relatively taller and floristically richer. The *Baikia*

plurijunga, *Guibourtia coleosperma*, *Burkea africana*, and *Schinziophyton rautanenii* are the dominant trees.

f. Miombo Woodland: The Miombo Woodlands occupies the second smallest portion of the WHS and the MOTNP. It is found on the Kalahari sands in the north of the park. This vegetation type is dominated by *Brachystegia boehmii*, *Brachystegia spiciformis* and *Julbernardia globiflora*. Other dominant species are *Erythrophleum africana*, *Schinziophyton rautanenii*, *Pterocarpus angolensis* and *Combretum spp.* Invasive alien species recorded in the WHS include *Lantana camara*. The extent of its distribution and density is a threat to biodiversity of global significance and requires urgent attention. Other invasive alien species of interest in the area are *Eichhornia crassipes* and the *Opuntia species*.

(viii) (ii) Fauna

The WHS is habitat to mammals, fish, amphibians and reptiles. The species diversity is 75% birds, 13% reptiles and 8% mammals. The WHS and surrounding area is home of the White Rhino and rare Taita Falcon. Others include the Elephant, Zebra, Kudu, Hippo, a number of birds, fish, reptile and amphibian species.

a. Mammals: Large mammals represent the most significant fauna. The WHS was initially prime wildlife habitat. Mammals found in the area include among others Elephant, Buffalo, Giraffe, Zebra, Wildebeest, Impala, Kudu, Warthog, Eland, Sable, Baboon, Velvet Monkey, Hippo, Bushbuck, Waterbuck and White Rhino.

b. Avi-fauna: The WHP area has 415 species (Pollard, 1989) of which 36 species are raptors, 13 species breed in the gorges, 16 species are protected and the rest are migratory birds. The islands and gorges are of special interest in relation to birdlife. The islands and swamps are important refuge for the Coppery Tailed Coucal, Lesser Jacana, Night Herons and Pel's Fishing Owl. The gorges are important for raptors. Among the 36-recorded species, 13 species use the area as breeding grounds and 16 are specially protected (Hartley, 1993). The concern is however, over the increasing disturbance of the Taita Falcon and Black Eagle breeding sites in the gorges.

3.1.3.3 CULTURAL ASPECTS

The WHP has a number of various cultural resources that tell the prehistory and cultural history of the Victoria Falls area. The diverse cultural heritage in this area goes back to millions of years as evidenced by the existence of numerous Stone Age and Iron Age deposits and sites associated with living

traditions that are very important to the Leya of Chief Mukuni and Sekute Chiefdoms.

(ix) Archaeological resources

Iron Age Sites that date back to between about the 7th to 12th centuries in the WHP are very important as they have been used to describe the area's cultural-history of the Leya of Chief Mukuni and Sekute. Some of the Iron Age Sites in the WHP include the Baobab Tree, Iron Age Site along Hubert Young Road and the Mubuyu Iron Age Site near the Palm Grove Siding.

(x) Traditional /Anthropological

Besides the Victoria Falls region being occupied by the Bushmen (Kwengo) a hunting and gathering group who occupied the area during the Later Stone Age (10 000 AD to 2000 BP), the Victoria Falls has been occupied by the Leya under Chief Mukuni and Sekute, the Toka under Musokotwane whilst other minor groups included the Subiya under Liswani and Totela from the 15th century. According to the current Senior Chief Mukuni, there are a number of very important traditional/ritual sites in the WHP namely:

- a. Nsamba ndwazi (place for washing diseases)
- b. Katola Buseka/Bunji jumping point (offering site)
- c. Chipozyo (sacred place at Boiling Point)
- d. Chisamu Cilikumbete (source for water used in the various rain and thanks giving ceremonies).
- e. Simukale Site marks the point at which the first Mukuni negotiated his entry into Gundu Village now Mukuni Village
- f. Siloka Island the first Royal Burial ground for Mukuni Siloka I

Similarly, on the Zimbabwean side, according to Chiefs Mvutu, Shana and Hwange, there ritual sites mainly on islands along the Zambezi River, Chamapato Hills and the Big Tree (Victoria Falls town), Kazeruka (now Garden Island) and the Boaruka Island.

(xi) Historical National Monuments and Engineering Structures

There are five historical structures in and close to the WHP namely the boat club monument, the Old drift national monument, Victoria Falls Railway Bridge, David Livingstone statue and the war memorial site in the eastern cataract.

- a. ***The Boat Club Monument:*** This site which marks the 1947 Royal Visit of King George and his entourage is located on the edges of the Zambezi River.
- b. ***Sekute Crossing Point:*** This site marks the Crossing point and a Village Settlement of the Leya. Sekute is located about three kilometers from the Main Mosi-oa-Tunya National Park Main Gate.

- c. ***Old Drift:*** The Old Drift Site is a cemetery of the earliest European settlers who died in the Old Livingstone Town established in 1898 by Mopane Clark.
- d. ***Victoria Falls Railway Bridge:*** This bridge linking Zambia and Zimbabwe was constructed between 1904 and 1905.
- e. ***War Memorial Cenotaph:*** The statue was erected in memory of Northern Rhodesia Europeans killed in the First World War. The protection of these resources is important as they provide information of the history of the site. Further these sites act as additional tourist attraction for the WHP.

4.0 STATE OF CONSERVATION

4.1 Conservation values of the MVFWHP

The property's Core and Buffer lie entirely within protected areas (Zambezi and Victoria Falls National Parks on the Zimbabwean side and the Mosi-Oa-Tunya National Park on the Zambian side). This has helped to ensure double buffering of the property for effective maintenance and conservation of the vegetation, habitats and geomorphic processes in a relatively natural state, especially the Rainforest and islands above the falls. In addition, the Core and Buffer are biologically diverse, and are host to a number of endemic and/or rare plant and bird species. However, natural and human induced processes if not fully managed seem to pose threats to the integrity of the site.

The Victoria Falls/Mosi-Oa-Tunya World Heritage Property is experiencing various conservation challenges related to urban development, tourism pressure; invasive species; poaching; Water pollution and abstraction; and, institutional challenges, as such a State of Conservation Report shall be produced annually.

The two States Parties will continuously strengthen the enforcement of the respective EIA policies and other supporting legal frameworks such as the World Heritage Convention, Parks and Wildlife Acts, Heritage and Museum Conservation Acts and Regional Town and Country Planning Act, Urban and Regional Planning Act and the World Heritage Convention.

The two States Parties through the implementation of the JIMP will thrive to ensure the Outstanding Universal Values of the property are sustained. The integrity of the property and its natural and cultural values are maintained through;

- i. Continuous inventorying of the biodiversity and cultural resources within the property;
- ii. Regular state of conservation reporting;
- iii. Observation of all conservation commemoration days; and
- iv. Upholding Trans-frontier conservation initiatives.

4.2 Core Values

The MVFWHP has a range of values around which objectives have been formulated to ensure adequate protection of the property. These are:

- i. Conservation of biodiversity, ecosystem services, natural and cultural values across boundaries (Geological values, Water catchment values, Geomorphological values, Biological values, Aesthetic values, Cultural and historical values);

- ii. Promoting landscape-level ecosystem management;
- iii. Laying foundations for collaboration (trust and cooperation, community partnerships);
- iv. Increasing the benefits of conservation to communities on both sides of the borders through community partnerships;
- v. Economic development largely through socio-economic activities, education and employment creation through tourism; and
- vi. Trans-boundary initiatives to control problems such as veld fires, pests, poaching, pollution and smuggling.

50 ZONATION

This section outlines the rationale and a criterion used for zoning the WHP and explains the basic management guidelines to be employed in each zone. The WHP is subdivided into three zones namely (i) High ecologically sensitive (ii) Medium ecologically sensitive (iii) Low ecologically sensitive. Modifications to these zones have been made in line with the 1989 World Heritage Bureau recommendations as well as the prevailing inconsistent historic land use. Future modifications can only be made if only they contribute to the enhancement of the OUV.

5.1 Rationale for Zoning

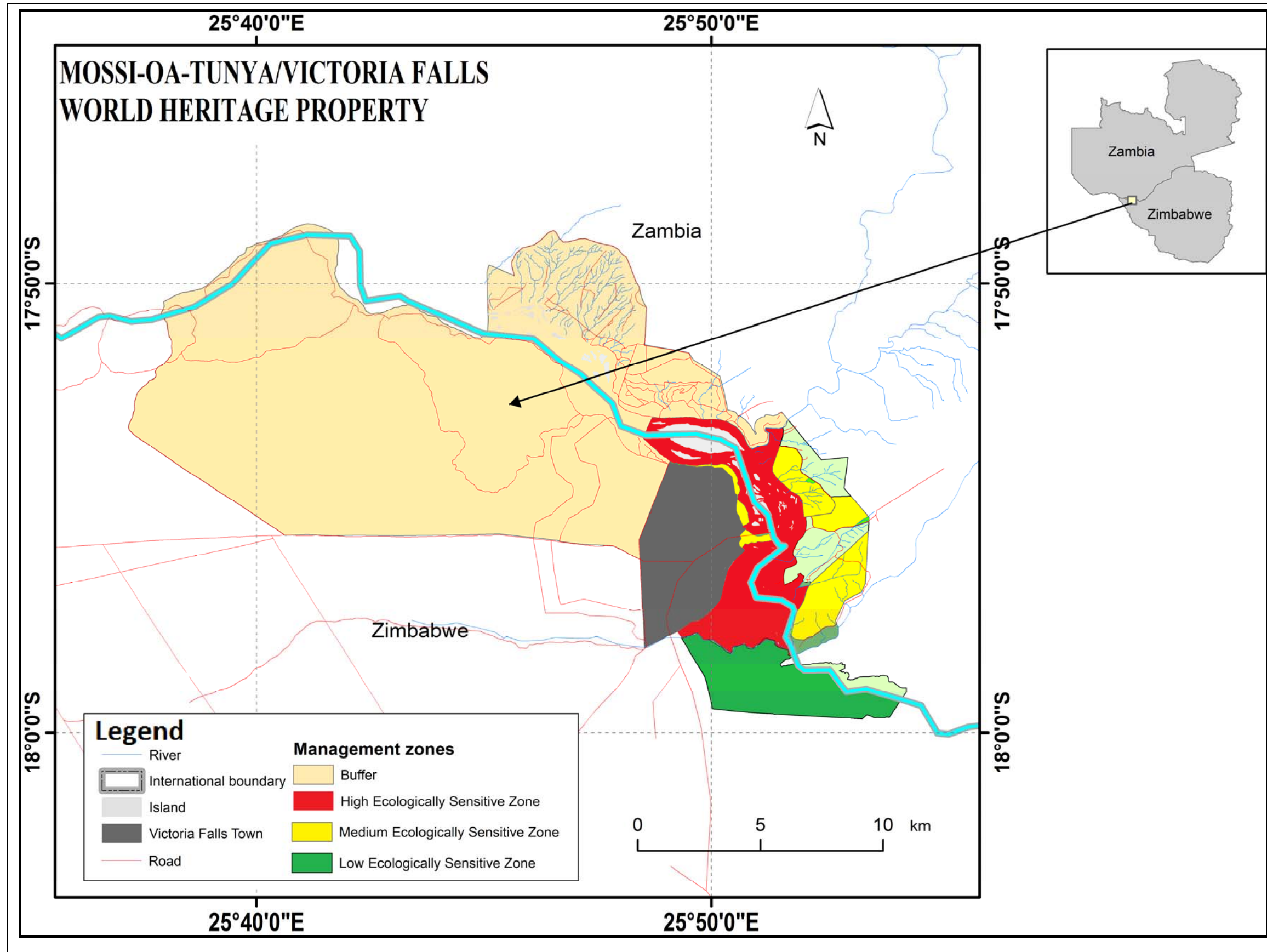
The zoning plan for the WHP is based on the understanding that certain activities and management practices are more ecologically appropriate within specific areas of the WHP than in others. The zoning therefore allocates specified activities, facilities, and management practices to defined areas of the WHP based on the following principles:

- i. Legal protection and land use harmonisation are key to the protection and maintenance of the OUV of the property.
- ii. Some biophysical features/elements and processes are more sensitive than others. Thus, the protection of different conservation values requires the application of different management approaches, if those values are to be maintained or enhanced;
- iii. Certain activities, while acceptable individually, are mutually incompatible. They are therefore best confined to distinctly different areas;
- iv. Even where uses are compatible, designation of a zone helps to establish the management priorities for that particular area; and
- v. It is desirable to concentrate intensive facility development in clearly defined areas, to minimise the area of environmental disturbance and protection of the OUV. All proposed developments should be subjected to an EIA process.

The zones created provide guidelines for dealing with the management issues where they occur. These guidelines will be used in the implementation of the management activities proposed under each management programme.

5.2 Detailed Description of the Zones

Figure 1: Map of Mosi-oa-tunya/Victoria Falls World Heritage Property Zones



5.2.1 Zambia

(i) Highly Ecologically Sensitive Zone (Block 1)

This zone includes an area bordered by a 10 metres riverine strip (river bank) of the Zambezi up to the confluence of Maramba River (i.e. to the bridge) The eastern zone boundary follows the Mosi-oa-tunya road from the Maramba River Bridge to Border post extending to the northern scarp of Gorge 3 and follows the scarpline of the gorges up to Songwe River. On the western side the zone is bordered by an international boundary which forms a common boundary with Zimbabwe. It encompasses islands, waterfalls and gorges and their ongoing formation processes.

(ii) Medium Ecologically Zone (Block 2)

This zone is an area between Hurbert Young Drive on the east and the Mosi-oa-tunya Road and bordered by the Mukuni Road in the south as well as the Park Boundary to the east.

(iii) Medium Ecologically Sensitive Zone (Block 3)

This zone comprises an area south of the ZESCO powerlines which trend in a southwest to northeast direction and meets with the eastern cutline of Mosi-oa-tunya National Park that trends in a southerly direction into Songwe River gorge scarps. On the west, this zone is bordered by the gorge scarp line.

(iv) Low Ecologically Sensitive Zone (Block 4)

This zone is defined by the area below the cutline of the eastern Mosi-oa-tunya National Park and Hurbert Young Drive on the west and the intersection of road to Maramba River On the southern part the zone is bordered by the Mukuni Road and follows Songwe Village Road to the Park Boundary.

(v) Low Ecologically Sensitive Zone (Block 5)

This zone is represented by an area on the southern part of Mukuni Road which is bordered by the high voltage powerline that passes through an area next to Beacon BK1 and truncates Mukuni Village. The zone is bordered by the eastern boundary of the Mosi-oa-tunya National Park; also part of the Mosi-oa-tunya Road and an extension to the gorge scarp where the ZESCO power station and compounds and Palm Groove school are. This zone with the power station and lines form the southern boundary line as stated earlier.

5.2.2 Zimbabwe

(i) Highly Ecologically Sensitive Zone (Block 6)

Starting from a point UTM X 378914 Y 8013226 where the Masuwe River joins the Zambezi River, the boundary follows the Masuwe River towards Victoria Falls / Bulawayo Road to point UTM X375298 Y 8013294, thence northwards along

the Road to Deka- Falls Railway Strip 4, thence northwards along the eastern boundary of that Railway strip to the southern boundary of Railway Reserve Victoria Falls A following the Victoria falls Municipality Town boundary up to a point it joins the Railway Strip 6, thence eastwards to the Victoria Falls Bridge, thence northwestwards following the Victoria Falls Rainforest, thence up the Zambezi River covering the riverine vegetation strip to where it joins the Zambezi National Park boundary.

(ii) Medium Ecologically Sensitive Zone (Block 7)

The zone covers the Victoria Falls border and the Rainforest car park area and continues from the Victoria Falls Rainforest VIP entrance gate, thence along the Zambezi Drive Road to beacon R11, thence westwards following the boundary beacons to where it joints Zambezi National Park boundary.

(iii) Low Ecologically Sensitive Zone (Block 8)

The zone covers the Southern part of Victoria Falls National Park A, area bounded by a line drawn from a point on the Zambezi River at map référencé 35KLL842115 on the 1:50000 map Victoria Falls 1725D4 and on a straight line drawn between beacons M44 and M43 of the Victoria Falls Reserve (as shown on the General Plan CG152 , and generally westwards along the boundaries of that Reserve,through beacons M43,M17 and towards M23 to the Bulawayo-Victoria Falls Road, thence proceeding generally north-westwards along that road to Masuwe Bridge, thence downstream the Masuwe River to the Masuwe/ Zambezi confluence, thence southeast along the international boundary to the starting point.

(iv) Buffer

(xii) a. Zambia

The northern section of the Mosi-oa-tunya National Park forms the Buffer for the WHP in Zambia.

(xiii) b. Zimbabwe

The area starts from the international boundary of Zimbabwe and Zambia on a straight line through beacon BL2 and BL1 proceeding generally southwards along a straight line through beacon W1, thence 800 metres on a straight line southwards towards beacon W3, thence 16km westwards along the Victoria / Falls Kazungula Road, thence 7,6km northwest along the 16km Road following that road northeast wards to its intersection by the Zimbabwe – Zambia international boundary at UTM X35K5039 Y 8027011, thence downstream the Zambezi River to the starting point.

5.3 Prescribed Activities for the Zones

5.3.1 High Ecologically Sensitive Zone

(i) Purpose

To provide for the protection and sustainable utilisation of the core features and processes of the WHP and for the protection of the fragile natural environments such as the Zambezi river gorges and riverine vegetation.

(ii) Permitted activities

The following are activities **permitted** in the High Ecologically Sensitive Zone

Rafting	Boat Cruises	Canoeing	Boating
Angling	Rafting	Kayaking	Bunge Jumping
Gorge Swing	Falls Viewing	Game Viewing and walking safaris	Cultural Ceremonies
Bush meals	Rap jumping	River boarding	Moonlight viewing
Photographic tourism	Traditional rites	Jetting (30-45hp)	Picnics
Abseiling	Research and Monitoring	Tour guiding	Law enforcement and management operations

(iii) Prohibited activities

The following activities and developments are **prohibited** in the High Ecologically Sensitive Zone:-

Resource extraction except for research purposes	Ballooning	Low flight levels – low (SEA)	Night drives
Cable car	Use of Speedboats above 45hp engine	Erecting new permanent infrastructure	Developments or fencing in animal migration areas/ corridor(s)
Boating along river bank and islands	Construction of facilities of height above native tree	Herding of domesticated animals	Littering, mining

	canopies		
Wet bikes; Water skiing	Fencing of infrastructure and other developments in the zone	Painting buildings/ facilities in non-earth colours	Loud Music

(iv) Permitted Facilities / Infrastructure

The following facilities and infrastructure are **permitted** in the High Ecologically Sensitive Zone: -

Existing infrastructure	WHP management facilities (Toilets, garbage bins, signage, walking trails)	Hides
Common Marina	Eco-lifts	Picnic sites

(v) Prohibited Facilities / Infrastructure

No further infrastructural developments except those under permitted facilities/infrastructure.

5.3.1 Medium Ecologically Sensitive Zone

(i) Purpose

To permit habitat recovery, provide for the natural preservation of resources and reduce utilisation pressure on the core features of the WHP.

(ii) Permitted Activities

The following are **permitted** in the Medium Ecologically Sensitive Zone

Game viewing and game drives	Tour guiding	Aerial viewing,	Walking safaris
Photographing	Traditional rites	Hiking	Bird watching,
Camp sites	Lion walks and nature walks	Picnicking	Moonlight viewing
Lodging	Law enforcement and management operations	Research and monitoring	Elephant-back rides
Art painting	Bush dinners	Helicopter flights	Hides

(iii) Permitted Facilities / Infrastructure

The following facilities and infrastructure are **permitted** in the Medium Ecologically Sensitive Zone:-

Existing infrastructure	Signage	semi-permanent facilities	Park Management facilities such as Toilets and garbage bins.
Camping sites	Hides	Picnic sites	walking trails, game viewing loops

(iv) Prohibited activities

The following activities and developments are **prohibited** in the Medium Ecologically Sensitive Zone: -

Resource extraction except for research purposes	Ballooning	Low flight levels – low (SEA)	Night drives
Cable car	Construction of tarred park roads	Erecting new permanent infrastructure	Developments or fencing in animal migration areas/ corridor(s)
Fencing of infrastructure and other developments in the zone	Construction of facilities of height above native tree canopies	Painting buildings/ facilities in non-earth colours	Littering, mining, loud music, Herding of domesticated animals

(v) Prohibited Facilities / Infrastructure

No further permanent structures

5.3.2 Low Ecologically Sensitive Zone

(i) Purpose

This zone is meant to provide for the sustainable management of the natural resources by keeping the environment as natural as possible while enabling medium to large scale development and other activities compatible with conservation principles and objectives of the WHP.

Due to the presence of five pylons of power lines on the Zambian side, the low ecological zones have been shifted slightly inwards to compensate for area initially covered.

The following activities are **permitted** in the Low Ecologically Sensitive Zone

Lodging	Walking safaris	Game viewing	Bird watching
Law enforcement and management operations	Ariel Viewing	Picnicking and camping	Hiking
Photographing	Research and monitoring	Tour guiding	Moonlight viewing
Wildlife conservation water reticulation system	Road construction, maintenance and rehabilitation,	Park management facilities, signage	Game viewing loops

(ii) Permitted Facilities / Infrastructure

The following facilities and infrastructure are **permitted** in the Low Ecologically Sensitive Zone: -

Existing infrastructure	Signage	semi-permanent facilities	Park Management facilities such as Toilets and garbage bins.
Camping sites	Hides	Picnic sites	walking trails, game viewing loops

(iii) Prohibited activities

The following activities and developments are **prohibited** in the Low Ecologically Sensitive Zone: -

Resource extraction except for research purposes	Ballooning	Low flight levels – low (SEA)	Night drives
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Cable car	Construction of tarred park roads	Erecting new permanent infrastructure	Developments or fencing in animal migration areas/ corridor(s)
Fencing of infrastructure and other developments in the zone	Construction of facilities of height above native tree canopies	Painting buildings/ facilities in non-earth colours	Littering, mining, loud music, Herding of domesticated animals

5.3.3 Buffer

(i) Purpose

This zone is meant to provide for the sustainable management of the natural resources by keeping the environment as natural as possible while enabling medium to large scale development and other activities compatible with conservation principles and objectives of the WHP.

(ii) Permitted Activities

Photographic safaris, angling, boating

(ii) Permitted Facilities / Infrastructure

Lodges, Camps, Roads, Signage,

(iii) Prohibited activities

Settlements, farming, mining, harvesting of trees, grazing of domestic animals

(iv) Limits of Acceptable Use

All developments taking place in the zone shall be subject to existing legal requirements

Lodges and other photographic activities shall be undertaken

PART TWO

6.0 STRATEGIC MANAGEMENT PROGRAMMES

Arising from the strengths, weaknesses, problems/challenges, issues, opportunities and threats raised in the various review documents relating to the WHS, a number of key strategic management programmes, objectives and activities have been planned to address or mitigate the issues raised.

The following key strategic management programmes have been identified:

- Legal, Policy and Institutional Framework;
- Tourism Management and Education;
- Research and Development;
- Resource Conservation
- Community Participation and Beneficiation
- Integrated Electronic Information Management Systems
- Operations and Maintenance programs
- Disaster and Risk management
- Financing and Resource Mobilisation
- Planning, Monitoring and Evaluation

6.1 LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK

6.1.1 Legal and Policy framework of the WHP

This Management Plan has been endorsed by both States Parties through the respective Ministries responsible for its implementation as the framework for long-term detailed decision-making on the conservation and improvement of the OUV of the WHP and its attributes, and its aims and policies have been incorporated into relevant planning guidance and policies.

The States Parties shall observe key legislations that promote and sustain OUVs namely:

- ii. National Heritage Conservation Commission Act
- iii. Zambia Wildlife Act
- iv. Town and Country Planning Act
- v. Zambia Environmental Management Act
- vi. Zimbabwe Parks and Wildlife Act (Chapter 20:14)
- vii. Environmental Management Act (Chapter 20:27)
- viii. Atmospheric Pollution Prevention Act (Chapter 20:03)
- ix. Hazardous Substances and Articles Act (Chapter 15:05)

- x.Noxious Weeds Act (Chapter 19:07)
- xi.National Museums and Monuments Act (Chapter 25:11)
- xii.Tourism Act (Chapter 14:20)
- xiii.Forestry Act (Chapter 19:05)
- xiv.Regional Town and Country Planning Act (Chapter 29:12)
- xv.Rural District Councils Act (Chapter 29:13)
- xvi.Zimbabwe National Water Authority Act

6.1.2 Institutional framework and Regional cooperation

6.1.2.1 Institutional frameworks

The two States Parties of Zambia and Zimbabwe have a number of commonalities on the Zambian and Zimbabwean side in terms of existing legislative and administrative/institutional frameworks. However, there are also a few differences, which are fundamental. Thus, it is imperative that guiding regional frameworks are established. However, institutional frameworks at country level are a mandate of each States Party though it is advisable to include all the key stakeholders with a bearing on the ecosystem integrity of the WHS as well as the broader socio-economic dynamics of the area. It is against this background that the Institutional Framework needs to be synchronized at both national and bi-national level.

The institutional frameworks include the principal stakeholders, National Heritage Conservation Commission (NHCC) and Department of National Parks and Wildlife (DNPW) formerly Zambia Wildlife Authority (ZAWA) on the Zambian side, Zimbabwe Parks and Wildlife Management Authority (ZPWMA) and National Museums and Monuments of Zimbabwe (NMMZ) on the Zimbabwean side. On either side, various stakeholders with a bearing on the ecosystem integrity are included in the overall management and planning for the WHP.

Objective 1:

- i. To establish an Institutional Framework to enable the Joint Integrated Management Plan (JIMP) for the Mosi-Oa-Tunya/ Victoria Falls World Heritage Property to be implemented;
- ii. To coordinate planning and management of natural and cultural resources in the Mosi-Oa-Tunya/ Victoria Falls World Heritage Property;

- iii. To implement an effective trans-boundary natural and cultural resources management programme for Mosi-Oa-Tunya/ Victoria Falls World Heritage Property;
- iv. To mobilise resources for the effective implementation of the Joint Integrated Management Plan (JIMP); and
- v. To ensure regional cooperation at all levels to conserve the natural and cultural values of the Mosi-Oa-Tunya/ Victoria Falls World Heritage Property.

6.2.2.2 Issues and Rationale

On the Zambian side of the Falls, NHCC is the government agency tasked with the management of the MVFWHP, while DNPW is directly in charge of the wildlife resources of Mosi-Oa-Tunya National Park (MOTNP). The Victoria Falls is also a declared National Monument. This has presented some challenges in the actual management of the site. A ministerial recommendation was made in 2002 for the two institutions to agree on a common position in management of the site. In 2006, an MoU was signed by NHCC and DNPW to facilitate this collaborative approach. This MOU formed the basis of the establishment of a Joint Technical Committee comprising of staff from NHCC and DNPW referred to as the Joint Management Committee (JMC).

On the Zimbabwean side, the WHP is managed by the ZPWMA. The Zambezi National Park was declared as a protected area in 1952. NMMZ also has a role in the management of the site since the area was declared a National Monument in 1937.

i. Structures of Management Committees

a. Structure of the MWHP-Zambia

The membership for the committee shall be drawn from the following: ZESCO, LTA, FD, ZEMA, SWASCO, Local Chiefs, CTA, LCC, KDC, NHCC, DNPW, Livingstone National Museum, ZTA, Ministry of Tourism, Zambia Police, Immigration, ZRA, AWF, etc). The Chair and the Vice Chair shall be appointed by the Minister responsible for Chiefs and Traditional Affairs.

Officers on the Committee shall be Chair, Vice Chair, Secretary, Vice Secretary and Committee members. NHCC to provide secretariat.

b. Structure of the VFWHP Committee-Zimbabwe

The membership of the committee shall be drawn from the following: ZPWMA (Chairperson, NMMZ (Vice Chairperson), VFMS (Secretary), EMA (Vice Secretary), COMMITTEE MEMBERS (Local Chiefs; HRDC), Forestry Commission, ZTA, ZINWA, ZARA, HAZ-Victoria Falls and Local Community Representative.

ii. The Joint Management Structure

The Joint Management Framework for the WHP, comprising of the Joint Ministerial Committee (JMC), Joint Technical Committee (JTC) and the Joint Site Management Committee (JSMC) which was adopted in 2007 facilitates joint site management and consultation.

The responsible Ministers from both Zambia and Zimbabwe shall serve on the JMC. The relevant ministries responsible for Tourism, Environment, Natural Resources, Local Government, Housing, Education, Energy, Water, Community Development, Home Affairs and any other relevant ministries may be co-opted. Sub-committees to focus on specific issues at JSMC and JTC level may be created and added to the structure.

iii. Structure of Bi-National Management Framework

Comprises the JMC, JTC and the JSMC.

a. Joint Ministerial Committee (JMC)

To meet at least once a year and has the following responsibilities:

- i. Provide policy guidelines and direction to the JTC; and
- ii. To hold consultative meetings at least once a year to review implementation progress and recommendations by the JTC

b. Joint Technical Committee (JTC)

To meet at least twice a year and has the following responsibilities:

- i. Identify discrepancies and propose harmonisation of the existing legal instruments;
- ii. Propose domestication of World Heritage Convention into local laws;
- iii. Preparation of consolidated bi-national state of conservation reports;
- iv. Review implementation progress of the JIMP;

- v. Produce periodic reports to UNESCO; and
- vi. Identify projects for implementation.

Despite the two committees having clearly defined parameters, they have challenges such as Non-domestication of World Heritage Convention into local laws and inadequate financial resources.

c. Joint Site Management Committee (JSMC)

To meet quarterly and has the following responsibilities:

- i. Hold meetings at least quarterly;
- ii. Undertake invasive species control and management in the WHP;
- iii. Develop bi-national guidelines for management of the WHP;
- iv. Produce educational awareness materials;
- v. Undertake Site promotion and publicity campaigns;
- vi. Undertake site monitoring and patrols;
- vii. Collect and compile visitor statistics;
- viii. Collect and compile human-wildlife and incident reports;
- ix. Address any local problems and make recommendations to the JTC

6.2.2.3 Regional Cooperation

i. Guiding Principle

To develop a coordinated approach to the management and conservation of the biophysical and cultural resources of the WHP into the Regional context.

ii. Issues and Rationale

It is recognised that the MVFWHP is an important tourist destination and natural asset to the whole region of Southern Africa. Though Zambia and Zimbabwe should take the leading role in planning and management of the site, the entire Southern region is indirectly involved in this process. The Kavango Zambezi Trans-frontier Conservation Area (KAZA-TFCA) principle plays a significant role in the management of the property.

OBJECTIVE 1:

To use diversity of tourism products and services in SADC/COMESA as a package in order to increase value of the WHP as a tourist destination.

Activities

- i. Integrate WHP into other major tourism programmes/products in the region;
- ii. Stage exhibitions and fairs marketing regional tourism products; and
- iii. Maintain and improve existing tourism and cultural infrastructure such as museums.

OBJECTIVE 2:

To promote ecosystem management and biodiversity conservation at regional level.

Activities

- i. Promote collaboration in trans-frontier conservation areas;
- ii. Develop and implement common guidelines in the management of shared natural resources; and
- iii. Identify, prioritise and address common problems as focal points of regional initiatives (e.g. Climate Change, Desertification, Biodiversity Conservation, Poaching and Pollution)

OBJECTIVE 3:

To promote regional cooperation and exchange of information in natural and cultural resource management.

Activities

- i. Build synergies in human and institutional capacity at regional scale in collaboration with universities and other tertiary institutions;
- ii. Undertake exchange programmes;
- iii. Establish regional database of heritage experts (natural and cultural); and
- iv. Facilitate research projects at regional level.

6.2 TOURISM MANAGEMENT AND EDUCATION

6.2.1 Guiding principle:

To coordinate and support sustainable tourism management in order to make meaningful contribution to poverty alleviation at local and, regional levels.

6.2.2 Issues and Rationale

Victoria Falls being one of the world's greatest wonders and a World Heritage Property is a major tourist attraction in Southern Africa. The high tourist arrivals experienced during tourism peak season have increased the need for more hotel/lodge accommodation and demand for more tourism activities resulting in the following challenges within the WHP and surrounding areas:

- i. Pressure to put up more hotels, lodges and camping facilities;
- ii. Developers tend to prefer sites in the core zone along the Zambezi River leading to insularisation (blockage of the game corridors);
- iii. Increased illegal activities like wood poaching for curio making and firewood;
- iv. Waste management – litter, along roads and paths;
- v. Pollution – this includes water pollution from boats on the rivers, release of sewage into the river system, especially at Masue and Maramba, and noise pollution from the helicopters;
- vi. Threats of loss of wilderness and ecosystems values due to overcrowding;
- vii. Limited space for tourism development within the Site and towns namely Livingstone and Victoria Falls;
- viii. High unemployment levels in Livingstone, Victoria Falls and surrounding areas;
- ix. Restrictions on tourism infrastructural designs and extent;
- x. Conflict of interests amongst operators;
- xi. Failure to fully meet visitor expectations;
- xii. Stiff competition with other attractions in the region;
- xiii. Exclusion of local people from experiencing some of the WHP areas e.g. the Site, the Zambezi River and buffering protected areas
- xiv. Low park patronage of the WHP; and
- xv. Poor customer care services.

OBJECTIVE 1:

To provide adequate safety and security to visitors to the WHP.

Activities

- i. Enter into contract with Rescue Service Providers;
- ii. Promote tourism Insurance policies for Tour operators;

- iii. Procure safety and first aid equipment;
- iv. Train site personnel in first aid; and
- v. Deploy adequate security personnel in the WHP.

OBJECTIVE 2:

To reduce vehicular traffic congestion and overcrowding within the WHP.

Activities

- i. Encourage relevant authorities (Customs and Immigration Departments) on improved and efficient clearance system at the border/entry points.

OBJECTIVE 3:

To improve visitor service and standards within the WHP

Activities

- i. Provide necessary accessories to visitors with special needs;
- ii. Upgrade visitor trails to accommodate those with special needs;
- iii. Construct, maintain and upgrade viewing points;
- iv. Establish and maintain animal proof waste disposal bins;
- v. Design and erect appropriate signage;
- vi. Upgrade and maintain Visitor Information Centres; and
- vii. Regulate tour-guiding through licensing and accreditation.

OBJECTIVE 4:

To market and promote the WHP.

Activities

- i. Conduct regular marketing and promotion of the WHP through various media;
- ii. Establish a Website for the WHP (e-market place of SEED project);
- iii. Produce and distribute information materials;
- iv. Participate in local and international tourism fairs; and
- v. Promote partnerships with strategic institutions as regards packaging of tourism products.

OBJECTIVE 5:

To regulate the number of tourists entering the WHP

Activities:

- i. Carry out a study to review the carrying capacity of the Rainforest and Eastern Cataract which currently is set at 500 visitors for the Rainforest and 250 visitors for the Eastern Cataract per any given time;

- ii. Limit the number of students/pupils to 100 in the Rainforest and the Eastern Cataract at any given time; and
- iii. Compile visitor statistics regularly.

OBJECTIVE 6:

To allow for appropriate tourism administrative development within the WHP

Activities:

- i. Install electronic ticketing systems;
- ii. Install electronic ticketing turn-stiles;
- iii. Provide wheel chairs for physically challenged visitors and all those that may not complete the tour on foot;
- iv. Build an ablution block for visitors and operators at the car park. Complete development of car park. Extend/improve and maintain administration offices and ablution blocks;
- v. Place more warning signs at Horse Shoe, Rainbow and at other danger points;
- vi. Continually upgrade and repair the twenty Zambezi camp lodges and three fishing camps (Kandahar, Mpalajena and Siansimba);
- vii. Improve Interpretation Centres of the WHP; and
- viii. Ensure that brochures relating to the WHP are up to date.

6.3 RESEARCH AND DEVELOPMENT

6.3.1 Guiding principle

Investigative activities that that will be conducted with the intention of making a discovery that can either lead to the development of new products or procedures, or to improvement of existing products or procedures.

6.3.2 Issues and Rationale

The conservation of natural and cultural resources in the WHP, and protection of the environment in general, is primarily a law-enforcement issue. The steps required to improve law-enforcement in the WHP are given in the **Operations and Maintenance Programme** of this Joint Management Plan. The programme outlined here provides for monitoring of the natural and cultural resources and illegal activities, in order to determine the effectiveness of conservation and protection measures. The programme also defines research priorities for the WHP, as indicated by the Joint Technical Committee.

Management decisions taken in Protected Areas (PA) are often not properly researched and are based on managers' understanding and intuition. Research in PAs should primarily be applied research into problems and issues underlying the threatened loss of biodiversity and ecological function.

Identified research priority areas:

- i. Geomorphologic survey and mapping to monitor soil erosion, rock falls and the extraction of soil, gravel and rocks;
- ii. Vegetation mapping and survey;
- iii. Identification and mapping of cultural sites;
- iv. Hydrological studies related to water abstraction and pollution;
- v. Research on the impacts of Human/ Tourism on the natural and cultural resources of the WHP;
- vi. Studies on the aquatic fauna and flora;
- vii. Long-term viability of the rainforest ecosystem;
- viii. Exotic and invasive species; and
- ix. Sustainability indicators.

Other important but non-prioritised areas of research (not in any order):

- i. Sustainability of natural resource use systems;
- ii. Improving land use around the WHP;
- iii. Cultural values and practices that promote conservation;
- iv. Impact of gully formation on the ecosystem in the WHP;
- v. Studies to identify indicator species; and
- vi. Economic valuation of ecosystems.

OBJECTIVE 1

- i. To encourage research that is consistent with the protection and understanding of the WHP's biophysical and cultural values.
- ii. To facilitate the collection of traditional knowledge relevant to the site and the integration of that knowledge into contemporary science-based approaches in management of the WHP.
- iii. To facilitate documentation of information relating to the location, significance, and use of sites of cultural significance within the WHP.

Activities:

- i. Determine key (indicator) species;
- ii. Periodically carry out elephant censuses and movement patterns;
- iii. Identify and implement ways of encouraging researchers to carry out management orientated research;

- iv. Ensure management orientated research is carried out and properly supervised;
- v. Liaise with research institutions to ensure that management oriented research is given priority.
- vi. Prepare guidelines for accessing information and research findings;
- vii. Tap into indigenous knowledge of the local communities in areas of research and forestry resource inventories;
- viii. Implement relevant research recommendations;
- ix. Produce land-use maps in and around the WHP;
- x. Investigate appropriate methodology for the control of invasive alien species;
- xi. Initiate research to determine causes and impacts of habitat modification on sensitive and rare species of fauna and flora;
- xii. Update the existing database of flora, fauna and cultural sites;
- xiii. Carry out a comprehensive archaeological survey of the WHP;
- xiv. Record oral history, myths and legends from local communities;
- xv. Study the effects of pollution on the ecosystem of the river;
- xvi. Carry out a geological baseline study of the WHP;
- xvii. Conduct soil erosion surveys;
- xviii. Record sacred sites and other cultural sites in collaboration with local communities;
- xix. Undertake studies on the population dynamics of the Falcon species in the Batoka gorges as well as other endangered bird species in the WHP;
- xx. Consider listing endangered species on the RDL;
- xxi. Create herbariums;
- xxii. Undertake research on climate change and its impact on the WHP;
- xxiii. Conduct water quality tests;
- xxiv. Conduct hydrological studies to establish a number of water baseline conditions for monitoring; and
- xxv. Employ a consultant to study and recommend carrying capacity of vessels on the river.

6.3 RESOURCE CONSERVATION

6.3.1 Guiding Principle

Develop a sustainable and effective natural and cultural resource based management system that includes all stakeholders in WHP.

6.3.2 Issues and Rationale

The conservation of protected areas and places of exceptional landscape or biological value is strengthened if these areas are given international recognition as World Heritage Properties. It is, however, incumbent on the property owners (Zambia and Zimbabwe) to conserve the natural and cultural resources of the site in as natural a state as possible. The Falls area conforms to the necessary criteria as a 'superlative natural phenomenon' and the 'most important and significant natural habitat' where threatened species of animals and plants of outstanding universal value survive'.

6.3.2.1 Natural resources related impacts/issues

- i. **Lack of capacity in ecosystem management to manage the WHP leading to:**
 - a. Flourishing of alien species (reduction of wilderness values of Rainforest);
 - b. Rock-falls and erosion.
- ii. **Pressure for infrastructural development which may lead to:**
 - a. Loss of riverbank (riparian) vegetation;
 - b. Loss of wilderness value;
 - c. Riverbank erosion;
 - d. Loss of habitats for avian, reptiles and other forms of wildlife and migration routes;
 - e. Reduction in river bank stability; and
 - f. Alteration of river flow rates and disturbance of geomorphological processes.
- iii. **Increasing numbers of Jetties leading to:**
 - a. Loss of riverbank (riparian) vegetation;
 - b. Loss of wilderness value;
 - c. Riverbank erosion;
 - d. Loss of habitats for avian, reptiles and other forms of wildlife and migration routes;
 - e. Reduction in river bank stability; and
 - f. Alteration of river flow rates and disturbance of geomorphological processes.
- iv. **Pressure on the River (High Number of Boats) leading to:**
 - a. Visual impacts and reduced aesthetic value;
 - b. Overcrowding of tourists/boats;
 - c. Poor water quality; and
 - d. Negative impacts on the freshwater ecology (Disturbances of the spawning areas of fish from moving boats and their propellers.)
- v. **Poor land use practices leading to:**
 - a. Deforestation of areas adjoining the WHP; and

- b. Visual impact due to conflicting land uses.
- vi. **Increased and unregulated tourist numbers leading to:**
 - a. Disappearance of vegetation;
 - b. Desertification;
 - c. Loss of aesthetic value of the site;
 - d. Loss of wildlife habitat; and
 - e. Accelerated erosion
- vii. **Water Abstraction leading to:**
 - a. Reduced aesthetics;
 - b. Changes in active land formation processes; and
 - c. Alteration of river bank sedimentation.
- viii. **Pressure on Islands (Islands on the Zambezi River are on demand for various tourism activities) leading to:**
 - a. Loss of islands wilderness values ;
 - b. Disturbance of the island formation or normal geomorphic processes;
 - c. Accelerated soil erosion;
 - d. Disturbance of wildlife habitats such as nesting areas and animal corridors; and
 - e. Loss of cultural values of the islands.
- ix. **Pressure on the Zambezi Gorges leading to:**
 - a. Disturbance to breeding sites of numerous bird species;
 - b. Disturbance of gorge ecology such as loss of vegetation;
 - c. Disturbed geomorphic processes;
 - d. Visual Impacts due to developments on the cliff bottoms, tops and slopes; and
 - e. Removal of rocks (boulders) and other earth material for construction purposes.
- x. **White water rafting is a popular tourism sport in the gorges leading to:**
 - a. Disturbance of the sensitive ecological sites;
 - b. Disturbance of geological features and processes;
 - c. Vegetation removal and associated soil erosion;
 - d. Visual impact; and
 - e. Waste management problems and poor water quality.
- xi. **National Parks and Wildlife Areas: Protected areas are not for development however they are affected by:**
 - a. Disturbance of vegetation/ wildlife ecology (habitat);

- b. Disturbance of animal corridors;
 - c. Disturbance of fish spawning areas;
 - d. Loss of wilderness value;
 - e. High rate of animal road kills;
 - f. Inbreeding of animal species (Poor Gene Pool);
 - g. Littering in the park area;
 - h. Bush fires;
 - i. Soil erosion;
 - j. Poaching;
 - k. Pollution;
 - l. Shortage of food for grazers in parts of the park; and
 - m. Noise pollution.
- xii. **Deforestation and Poor forest husbandry resulting in:**
- a. Disappearance of vegetation;
 - b. Desertification;
 - c. Loss of aesthetic value of the site;
 - d. Loss of wildlife habitat; and
 - e. Accelerated erosion.

6.3.2.1 Cultural resources related impacts/issues

- i. **Poor conservation, interpretation and management of cultural heritage resources resulting in:**
 - Disintegration of excavation pit walls in the field museum;
 - a. Poor/inadequate interpretation and publicity of heritage sites;
 - b. High erosion at cultural heritage sites;
 - c. Vandalism of sites by human beings;
 - d. Destruction of sites by wildlife;
 - e. Lack of financial benefit to the local communities from heritage resources;
 - f. Deforestation of areas adjoining the WHP; and
 - g. Visual impact due to conflicting land uses.

OBJECTIVE 1:

To maintain ecosystem integrity in the WHP.

Activities

- i. Develop woodlots in rural areas to minimise pressure on vegetation;
- ii. Remove existing exotic species and rehabilitate affected habitats with indigenous species;
- iii. Develop guidelines for rafting pressure points in gorges;

- iv. Rehabilitate pathways to prevent erosion in Eastern Cataract and other gorges;
- v. Develop standards, guidelines and procedures for river based operations in the WHP and enforce guidelines for riverbank development;
- vi. Maintain artificial (man-made) water points in south eastern portion of WHP(Zambia) Chamabondo and Kalisosa vleis in the Zambezi National Park (Zimbabwe) as a measure to control elephant densities in the riverine habitats;
- vii. Formulate integrated fire management plans;
- viii. Promote collaboration in trans-frontier conservation areas; and
- ix. Agree on water usage to protect the Rainforest and preserve wilderness values of the site.

OBJECTIVE 2:

To conserve the geology and geomorphology of the gorges, river banks, islands and associated features and processes

Activities

- i. Review NHCC Act (Zambia) to enforce or strengthen adequate punitive measures;
- ii. Design and erect restrictive signage in appropriate areas;
- iii. Undertake media campaign to increase awareness on the natural and cultural resources in the WHP; and
- iv. Investigate alternative sources of fuel (green technology), carving and construction materials.

OBJECTIVE 3:

To control negative impacts in the WHP and surrounding buffer zone which result from incompatible land use in the buffer zone and surrounding areas

Activities

- i. Prohibit the introduction of exotic fish species;
- ii. Develop an integrated land use plan for the buffer zone and surrounding areas.

OBJECTIVE 4:

To control noise from aircrafts and boats, water pollution from boats and waste disposal within the WHP

Activities

- i. Enforce acceptable noise levels and number of flights at any given time over the Falls;
- ii. Carry out regular water quality tests to monitor pollution of the river from water vessels, and ensure stiffer penalties for non-compliant operators
- iii. Collaborate with **ZEMA and EMA** on standards and guidelines.

OBJECTIVE 5:

To control illegal activities that threaten the integrity of the WHP

Activities

- i. Carry out regular law enforcement patrols

OBJECTIVE 6:

To develop capacity through staff appointments, capacity building and facilitation of collaborative programmes to enhance effective conservation in the WHP.

Activities

- i. Carry out collaborative projects with other agencies to facilitate information sharing

OBJECTIVE 7:

To conserve and enhance the WHP's cultural resource values, which are of local, national and universal significance.

Activities

- i. Arrest soil erosion at cultural resources sites
- ii. Erect signage that prohibits littering at cultural sites
- iii. Ensure that the cultural sites that are threatened, receive attention and are given adequate protection
- iv. Erect barriers to protect vulnerable cultural resources
- v. Protect/conservate the cultural resources that are threatened by wildlife

OBJECTIVE 8:

To develop and maintain synergies between the natural and cultural values of the WHP in order to sustain the authenticity and integrity of the resources

Activities

- i. Integrate into the environmental management and biodiversity policies the protection, preservation, conservation and utilisation of the cultural resources
- ii. Utilise database information in liaison with appropriate stakeholders to conserve cultural resources in the WHP

OBJECTIVE 9:

To recognise and preserve the site's diverse tangible and intangible cultural resources.

Activities

- i. Review by appropriate stakeholders any activity that may damage or change the authenticity or integrity of cultural resources in the WHP
- ii. Allow custodians of cultural traditions regulated access to sacred sites in the WHP
- iii. Allow tourism development that ensures sustainability and integrity of cultural resources in the WHP while sustaining its OUV
- iv. Hold regular consultative meetings with local community representatives.
- v. Incorporate the Bene-Mukuni intangible and tangible aspects in the management, presentation and conservation of the Property.

6.4 COMMUNITY PARTICIPATION AND BENEFICIATION

6.4.1 Guiding principle

To balance the needs of residents/community and visitors to ensure that cultural heritage tourism benefits all stakeholders and local communities participate positively in the sustainable management of World Heritage Property.

6.4.2 Issues and Rationale

The Community Participation and beneficiation programme aims at environmental protection and awareness among the local communities. Under this programme the WHP's staff will explain the properties management policies to the bordering communities.

The rapid growth of human populations in areas surrounding the WHP presents great challenges to the managing organisations in promoting better community relations. The demands for use of the area's resources are intensifying. They should be managed in ways that balance the environmental, social, economic and cultural needs of residents; to create a safe, green, friendly, prosperous environment in which people want to live and work, now and in the future.

As more people settle close to the boundary of the WHP, conflicts are escalating between local communities and the WHP due to issues arising including the following:

- i. Loss of value to their traditional attachment/resources within the WHP;
- ii. Lack of community involvement in management, decision-making and benefit from natural resources in the WHP;
- iii. Human/wildlife conflicts caused by elephants, buffaloes, and monkeys straying into communal areas;
- iv. Inaccessibility of natural resources in the restricted area (for firewood, crafts, grazing land) by the community;
- v. Lack of alternative watering points for domestic animals, outside the WHP during the dry season; and
- vi. Lack of alternative route between Mukuni village and Livingstone town, other than through WHP.

OBJECTIVE 1

To develop mutual understanding and respect between the local communities and the WHP management.

Activities

- i. Establish a structure to hold 2 annual consultative meetings between the JSMC of the WHP and the local communities;
- ii. Devise lines of communication that promote smooth flow of information; and
- iii. Encourage dialogue between policy makers and communities.

OBJECTIVE 2

To create opportunities for local communities to benefit from the tourism and conservation activities of the WHP.

Activities

- i. Initiate developmental projects in the WHP that will benefit the local communities;
- ii. Promote and encourage village tours to encourage community empowerment;
- iii. Develop and implement income-generating projects to benefit local communities;
- iv. Develop intellectual property rights for the indigenous knowledge systems;
- v. Encourage the tourism and hospitality industry to contribute towards infrastructural developments in the local communities;
- vi. Encourage the tourism and hospitality industry to develop a sustainable marketing strategy and promotional programmes focussing on the values of the cultural resources; and
- vii. Create a structure to ensure that communities benefit from tourism and conservation activities of the WHP.

OBJECTIVE 3

To promote interest and awareness of the outstanding values of the WHP among the local communities.

Activities

- i. Design and implement heritage educational outreach programmes for schools, tertiary education institutions and the public;
- ii. Facilitate regulated access for educational tours for the local schools;
- iii. Establish voluntary heritage resource management frameworks at local community level;
- iv. Train traditional custodians and local tour guides to inform the public with correct information; and
- v. Raise awareness on intellectual property rights for indigenous knowledge systems of the area.

OBJECTIVE 4

To promote and enhance the conservation of cultural resources of the local communities in the WHP and adjacent areas.

Activities

- i. Develop programmes to raise awareness on the importance of cultural resources and their conservation; and
- ii. Design, communicate and continually review local custodian access to sacred sites.

6.5 INTEGRATED ELECTRONIC INFORMATION MANAGEMENT SYSTEMS

6.5.1 Guiding principles

Use of Information and Communication Technology (ICT) for conservation of, and access to, the WHS; for education (both conventional and lifelong learning); and promoting sustainable tourism.

6.5.2 Issues and rationale

The heritage sector in all countries contributes to the generation of national wealth by providing attractions for tourists, helping to preserve habitats, providing exciting foundations and settings for education, and offering resources to commercial activities including advertising, publishing, radio and television. Thus, the heritage sector has not been spared in embracing use of ICT which is a driver for economic development.

However, ICT also as issues that include the following:

- i. The internet server can go down randomly, so you cannot connect to a webpage;
- ii. Networks can get hacked into;
- iii. Conducting business online leaves customers prone to online credit card theft, such as identity theft;
- iv. Viruses can come through the internet damaging the files in your computer thereby losing data;
- v. Some software can be difficult for some generations and people to learn how to use i.e. low ICT literacy levels;
- vi. People start to rely on computers too much and use them to do everything i.e. become mechanic;
- vii. Repetitive strain injury, strain on tendon in the arms, back problems and painful eyes are caused from prolonged use of computers;
- viii. Work sometimes does not look exactly like what you want it to look like and there is a possibility of ICT deceiving the customer in terms of appearance; and
- ix. low awareness of the benefits and usefulness of ICTs especially in decision-makers (SMEs managers as well as civil servants) leading to low level of utilisation of such tools from the ones who are endowed.

Objective 1

To enhance Knowledgeable (education) and Physical Access to WHP.

Activities:

- i. Study Tourism domain competition dynamics, main market trends, and future scenarios related to the diffusion of ICTs and e-Business at the international and at the local level;
- ii. Analysis, design and develop e-Business applications or services for the WHP e.g. applications for marketing, advertising, online booking (hotels, vehicles, visits);
- iii. Identify the priorities for the use of ICT in the WHP in the provision of infrastructure, training, the development of education strategies, and research into the effective use of different technologies;
- iv. Deploy effective and high -speed ICT infrastructure and software applications for the WHP;
- v. Develop a database for customer/tourist tracking and management for the WHP;
- vi. Identify the roles and ways in which the WHP can use ICT to promote education (in school and in later life) and employment;
- vii. On-site provision of information at the heritage provider, museum, archive, or local record centre; and
- viii. Off-site provision of heritage information at schools, libraries, and eventually at homes.

Objective 2

To leverage ICT in Documentation and Site Recording;

Activities:

- i. Digitisation or retro-conversion of the WHP documentation and recordings for easy access and enhance preservation/conservation;
- ii. Create digital libraries for the WHP. This is true whether the contents of these resources are sites and monuments records, library or museum catalogues, archival finding aids, manuscripts, audio recordings, records of species, digitised photographs, computer-aided designs, or Virtual Reality models of the built heritage or landscapes, natural and environmental records, and maps; and
- iii. Ensure synergy between projects creating digital resources, whether these are generated through the creation of new information assets or the retro-conversion of non-digital resources.

Objective 3

To facilitate Multiple Interpretive Contexts.

Activities:

- i. Identify and encourage the use of optimum technologies, practices, and standards that will produce consistent and interoperable digital resources (e.g., catalogues which support cross-heritage searching);
- ii. Establish criteria for supporting the development of software, documentation, and other local ICT needs of the heritage sector; and
- iii. Research into interoperable catalogues to have a significant impact on the ways we use heritage information to allow cross domain searching- the ability with a single query to search biological, habitat, archaeological, built heritage, and documentary data for information related to a single topic.

Objective 4

To enhance Preservation of Authenticity.

Activities:

- i. Address the problem of managing the expanding digital record for contemporary users and future generations, whether through distributed data services or more novel preservation strategies; and
- ii. Enable the creation of a national heritage network, including libraries, museums, archives, biological recording centres, with links to public networks.

Objective 5

To Balance Visitorship with Conservation.

Activities:

- i. Ensure a synergy between bodies which are supporting content creation as part of heritage conservation and preservation, and those which are supporting infrastructure provision;
- ii. Monitor the trends of visitorship to balance with conservation as well as reduce animal-human conflict; and
- iii. Put facilities in place to monitor visitors, enhance their security as well as conservation plans.

Objective 6

Facilitating Public Participation and beneficiation.

Activities:

- i. Establish clear guidelines on the commercial exploitation and expected return on investment in heritage assets when created in digital form;

- ii. Ensure that all those organisations and sections of society (communities) which can benefit from the creation of heritage information do so; and
- iii. Form the framework for public outreach by making it possible to give general access to information about the holdings and to allow institutions to better identify material of community interest.

Objective 7

To use ICT for efficient management and administration of the WHP

Activities

- i. Automate the management and administration, supply chain and combine into a single source that facilitates a variety of operations - product selection, ordering, fulfillment, tracking, payment and reporting;
- ii. Continuous maintenance of ICT equipment and infrastructure to facilitate business continuity;
- iii. Embrace the use of ICT to undertake a range of tasks that enhance the efficiency of employees in the workplace e.g. emails, use of social media for communication and sharing of information;
- iv. Identify and propose ways of resourcing the ICT training needs of both users and workers in the WHP; and
- v. Encourage organizations/institutions to develop coherent strategies to effectively manage revenue collection in the WHP.

6.6 OPERATIONS AND MAINTENANCE PROGRAMS

6.6.1 Guiding principle

Coordinated operational plans and adherence to regulations through the various law-enforcement agents for enhanced maintenance of the infrastructure of the WHP.

6.6.2 Issues and Rationale

The following issues and challenges were identified under operations and maintenance:

a. Operational and maintenance Issues:

- i. Poor road infrastructure in the WHP
- ii. Inadequate coordination amongst stakeholders within the WHP.
- iii. Inadequate training opportunities and low staffing levels.

b. Disjointed management approaches leading to:

- i. Differences in presentation and interpretation standards;
- ii. Reduced environmental standards; and
- iii. Littering of the Site.

The success of WHP to meet its vision will be greatly enhanced by well-equipped and trained staff in the various management authorities. Recruit, train, develop, and motivate staff that has the knowledge, skills, abilities, and commitment, to achieve the WHP's goals in the areas of heritage protection and presentation, collaborative management, visitor use, tourism, and financial sustainability. This programme is designed to maintain the infrastructure of the WHP and to ensure that the regulations are adhered to through the various law-enforcement agents. In order to protect the important WHP ecosystem as well as the enjoyment of the visitors to the site the following activities require attention:

OBJECTIVE 1:

To improve the operational effectiveness and maintenance of services within the WHP

Activities:

- i. Equip the implementing organisations with sufficient equipment, financial and human resources to effectively manage the site;
- ii. Assess training needs among staff and organise capacity building courses;
- iii. Appoint new qualified staff to fill the gaps within the organisations;
- iv. Demarcate and maintain WHP boundary;
- v. Demarcate the sacred sites within the WHP;
- vi. Carry out collaborative work with other agencies and bureau to facilitate information sharing;
- vii. Regulate activities on the Zambezi River;
- viii. Increase the security units to police the WHP;
- ix. Provide relief services for visitors who may not complete the tour;
- x. Train staff in the use of new equipment (electronic ticketing systems and turn-stiles);
- xi. Replace information signs with improved signs;
- xii. Ensure that trails do not cause erosion;
- xiii. Ensure proper security in danger areas;

- xiv. Establish and maintain fire breaks in the WHP;
- xv. Maintain elephant trench at Big Tree in Zimbabwe;
- xvi. Develop guidelines and establish rafting, boats, canoes launching points. The number of operators on either side needs to be established through a study;
- xvii. Restrict picnics to designated areas;
- xviii. Establish water level monitoring points along the Zambezi River within the WHP;
- xix. Ensure aircrafts (helicopters, micro-lights and fixed winged) fly within regulated space and height;
- xx. Enter into smart partnerships with stakeholders in recycling solid waste;
- xxi. Continuously monitor quality of treated wastewater being discharged into the river;
- xxii. Continuously monitor the effectiveness of the sewer reticulation infrastructure;
- xxiii. Maintain and improve roads, walkways and drainage in the WHP;
- xxiv. Upgrade the existing wastewater treatment to meet the increasing demand in both countries; and
- xxv. Install rain gauges and other metrological instruments within the WHP.

OBJECTIVE 2:

Coordinated operations and maintenance of the WHP

Activities:

- i. Manage the volume of traffic passing through and around the WHP, the negative impacts this has on the site, and the extent to which this impedes the management of other issues;
- ii. Encourage greater use of public transport, improve the service, and allow for more effective management of other forms of transport;
- iii. Establish mechanisms and processes by which integrated transport systems for the WHP can be explored and developed;
- iv. Encourage walking and cycling in order to control and reduce car journeys;
- v. Ensure pedestrians navigate the site easily, safely and enjoyably;
- vi. Address tensions between conservation and the desirability of providing physical access to the site to as many people as possible; and

- vii. Provide clear and efficient transport alternatives, and encourage their use, in order to reduce traffic congestion in and around the WHP.

6.7 DISASTER AND RISK MANAGEMENT

6.7.1 Guiding principle:

Risk and Disaster Management shall be a consistent, cohesive and embracing management strategy, communicated between different stakeholders and organizations to reduce vulnerability to hazards and cope with disasters.

6.7.2 Issues and Rationale

Flooding, fire, disease, drought, reduction in water flow, pollution from traffic, development pressures amongst other risks present a major threat to the WHP as well as visitors and the communities living in and around the property. As such the Risk and Disaster Management Plan (RDMP) is intended to protect the WHP against these and other natural and man-made risks and disasters so as to safeguard the OUV of the property.

The RDMP must be:

1. Comprehensive, Progressive and anticipate future disasters and take preventive and preparatory measures to build disaster-resilience and disaster resilient communities;
2. Risk-driven and use sound risk management principles (hazard identification, risk analysis, and impact analysis) in assigning priorities and resources;
3. Integrated to ensure unity of effort among all levels of government and all elements of a community;
4. Collaborative to create and sustain broad and sincere relationships among individuals and organizations to encourage trust, advocate a team atmosphere, build consensus, and facilitate communication;
5. Coordinated to synchronize the activities of all relevant stakeholders to achieve a common purpose;
6. Flexible and able to use creative and innovative approaches in solving disaster and risk challenges; and
7. Professional and should value a science and knowledge-based approach based on education, training, experience, ethical practice, public stewardship and continuous improvement.

OBJECTIVE 1:

To mitigate and manage Natural and man-made risks and disasters

Activities

- i. Monitor environmental trends (hydrological, ecological, geomorphological and metrological);
- ii. Conduct a stakeholder mapping in environmental risk and disaster management;
- iii. Conduct awareness, sensitisation and Capacity building programmes on natural and man-made disasters;

OBJECTIVE 2:

To develop a Risk and Disaster Management Framework for the WHP

Activities:

- I. Develop Standards and Guidelines for Heritage related risk and disaster management;
- II. develop and implement a comprehensive and coordinated risk and disaster management plan;
- III. create synergies with the main risk and disaster management National Frameworks.

6.8 FINANCING AND RESOURCE MOBILISATION

6.8.1 Guiding Principle

To develop a robust financing and resource mobilisation strategy for the sustainable management of the WHP.

6.8.2 Issues and Rationale

In order for the JIMP to be successfully implemented, there is great need for financing and resource mobilisation. In most cases, plans end up gathering dust in shelves because they are beautifully crafted but lack any strategies and resources to implement them. World Heritage Properties need long-term, continuous support. The greatest challenge to national and local authorities and citizens is to provide both technical and financial assistance for their long-term management, preservation and for emergency interventions. For the success of the JIMP the following are proposed:

6.8.2.1 Financing

- i. All responsible and interested stakeholders of the WHP to subscribe monthly/annually to JIMP

Key Stakeholders include:

- a) Ministries responsible for tourism and environment in both countries
i.e. EMA, ZEMA, ZPWMA, ZTA, DNPW;
 - b) Local Authorities VFM and LCC;
 - c) Private sectors operating in the WHP;
 - d) Any other interested parties;
- ii. Donors, cooperating partners especially international organisations and individuals interested in the conservation and sustainability of the WHP such as UNESCO;
 - iii. Fines polluters using the polluter pays principle and fines directed to WHP conservation.

6.8.2.2 Resource Mobilisation

- i. Recruit adequate skilled staff e.g. security for the instilling of statutory laws governing WHP;
- ii. Volunteer support e.g. skilled and experienced personnel to train staff in specified fields of interest to support the WHP;
- iii. Submitting joint proposals to donor agencies; (eg Research and control of invasive species)
- iv. website creation, which is key to marketing and promoting the WHP.

The other issues include the need to:

- i. Establishing clear guidelines and mechanisms for partnerships development and operation;
- ii. Expanding and ensuring effective implementation of existing partnerships;
- iii. Identifying new partnership potential and financial opportunities;
- iv. Establishing performance indicators for evaluation of the activities;
- v. Consolidate and expand existing levels of technical and administrative expertise and financial assistance to safeguard the proper management of these outstanding cultural and natural heritage sites.
- vi. In sudden calamities and emergencies, including wars, earthquakes or floods, can critically affect the WHP and threaten what the world community cherishes most. Attending to sudden special needs requires quick response and intervention capabilities. Damages at affected WHP can quickly escalate beyond the normal stand-by capacity of local authorities and of the World Heritage Fund. In times of such sudden peak demands there will also be a need for a stronger

technical stand-by assistance, to facilitate fast mobilization of the very best expertise.

6.8.3 Communication and general engagement of the public

Objective

To reach out to the larger audiences to increase public understanding of WHP. Discussion progressed from an overview of the cause, the value of branding, the issues and target audiences involved, and ended with suggestions of specific initiatives.

Activities

- i. Explore and value the WHP “brand”, as they are internationally acclaimed and officially certified. The World Heritage portfolio is of timeless and immense social value, such that some organizations or corporations may like to connect their image with a specific site or a specific thematic category or cause.
- ii. Create a “Champions’ Club” of international figures, using the “ambassadors” model of UNICEF and UNESCO at the national, regional and global levels;
- iii. Launch a Youth Heritage Movement using the “World Federation of UNESCO Clubs and Associations”;
- iv. Partner with the media to reach a larger audience;
- v. Set up an international award for WHP journalism;
- vi. Establish a World Heritage Day;
- vii. Institute special awards every two years to acknowledge successful initiatives at WHP;
- viii. Establish a programme to highlight the WHP and their stories annually;
- ix. Prepare practical regional field guides to WHP to support fund-raising, advocacy, and information sharing at World Heritage Property sites about other sites;
- x. Clarify through communication that WHPs’ are not protected by UNESCO, while they are under the responsibility of the States Parties.

6.8.4 Resources Mobilizing

Objective

To formulate short and long term resource mobilization strategies to meet the resource gaps.

Activities:

- i. Conduct a survey on the current activities and resource gaps at the WHP;
- ii. Explore Public-Private Partnership Programmes, wherever possible, structured with a view to the long term;
- iii. Implement a cohesive and overall strategy to engage all constituencies to provide more and sustainable resources for the WHP;
- iv. Present a clear and compelling case for support. Mapping current activities,

- identifying priority needs, and demonstrating likely impact of additional resources;
- v. Develop a leadership community by cultivating private individuals, top-level corporate and foundation, bi- and multi-lateral leadership willing to advocate, build awareness, and seek support for the WHP;
 - vi. Develop prospects for support from all potential constituencies by customizing prospect identification in order to match site needs with what various constituencies can offer;
 - vii. Design a coherent and comprehensive plan of action and ensure that the plan is realistic, reflects clear goals and priorities, and can be scaled up consistent with capacity;
 - viii. Develop membership programmes targeting various constituencies;
 - ix. Leverage the resources of various constituencies (e.g. private capital triggering multi-lateral funding) to yield more rapid results;
 - x. Build sustained corporate giving programmes (targeting customers and employees);
 - xi. Create an “Adopt-a-Site” and a “Sister-Sites” programme, potentially around endangered sites, to connect resources with needs at different locations;
 - xii. Explore other commercial linkages such as electronic billing add-ons, or marketing for a cause;
 - xiii. Seek to involve the growing number of foundations and non-profit institutions who specialise in bringing investors, philanthropists and applicants together;
 - xiv. Prepare an inventory of potential donors;
 - xv. Prepare a clear portfolio of sites needing support from respective donors while prioritizing projects and seek to secure funding for the entire portfolio.

6.8.5 Private-Public Complementarities

Objective

To facilitate mechanisms in which governments and international public institutions can directly and indirectly support the cause of the WHP through their policies, incentives, and other instruments.

Activities:

- i. Mainstream WHP into development processes, such as the World Bank Comprehensive Development Framework, AFDB and UN Coordination programmes;
- ii. Use World Heritage as a sector of activity and a basis to review other programmes and projects;
- iii. Use programmes aimed at social development, environment, infrastructure, training and income creation as entry points;

- iv. Explore opportunities in the context of the World Bank grant provision under International Development Aid (IDA) to support WHPs, and enlarge site-specific trust funds;
- v. Prepare a protocol to support private-public partnerships. This should include: legislation and policies, tax incentives, revenue retention at sites; Governance instruments (trusts and foundations, advisory boards representative of local, national and, international interests, impact assessment of development proposals on cultural resources, values-based planning, methodology for assuring long-term support and inter-government coordination);
- vi. Invest in strengthening local capacity to enable local communities to coordinate donors and make the WHS a priority demand in development aid;
- vii. Carry out pilot projects to demonstrate Return on Investment for conserving sites (value-adding activity) and report results widely;
- viii. Disseminate widely the inventory of endangered parts/areas of the WHS, and specify budgetary requirements;
- ix. Establish structured Round Tables for the WHP with the Global Environment Fund (GEF) and consider adding a cultural fund to GEF;

It is cardinal and important that the World Heritage Partnerships Initiative must be accountable to its stakeholders. It should present periodic progress reports to the stakeholders, at which time an in-depth performance evaluation and decision on continuation will be made. Such feedback will be essential in keeping partnerships and the good-will of contributors alive. In addition, Transactions – from project selection to implementation, evaluation and accounting – must be governed by correct rules and highly transparent procedures. Beyond ethical conduct, results should be well disseminated, and successes should be celebrated. Where warranted, positive feedback and public recognition needs to be given to those who have generously supported a cause.

6.9 PLANNING, MONITORING AND EVALUATION

6.9.1 Guiding principle

Planning, monitoring and evaluating the available resources in order to identify and prepare responses to potential risks as well as develop the foundations for sustainable financing of activities in the WHP.

6.9.2 Issues and Rationale

Management plans need to be continuously developed in a participatory manner, fully involving all interested parties and in particular those managing, or administering the WHP. The planning should be attuned to the particular characteristics and needs of the site and incorporate sustainable development principles. Over the years, management authorities have carried out various activities within and around the WHP in an attempt to protect and conserve the natural and cultural resources. These efforts have been most pronounced in the eradication of invasive alien species, notably *Lantana camara* on the Zimbabwean side. However, there has not been adequate collaboration and consultation between Zimbabwe and Zambia to evaluate the effectiveness of such activities and programmes. There is need to jointly monitor and evaluate the activities in a holistic manner.

Key areas for planning, monitoring and evaluation:

- i. Water quantity and quality;
- ii. Vegetation cover;
- iii. Key indicator species: flora and fauna;
- iv. Human impacts (illegal activities: levels, frequency, types);
- v. Resource off-takes (wood and fish);
- vi. Problem animals: impacts, effectiveness of management interventions;
- vii. Endangered species: flora and fauna;
- viii. Effectiveness/impacts of conservation programmes
- ix. Tourist volumes, demography and characteristics
- x. Incidence and impacts of fire outbreaks in the WHP;
- xi. Climate and issues of climate change;
- xii. Community participation and Beneficiation;
- xiii. Impacts of tourism;
- xiv. Information dissemination;
- xv. Rain-forest dynamics;
- xvi. Ranger patrol performance;
- xvii. Large mammal population dynamics and movements;
- xviii. Implementation of existing tourism regulations; and
- xix. Tourist opinions

As implementation of this plan continues there will be need to review the list above. Planning, monitoring and evaluation will cover all aspects of the WHP relating to its boundaries, development, tourism, interpretation, education and transport.

Given their importance in helping to sustain and enhance the significance of the WHP, relevant policies in planning need to be taken into account by local planning authorities in developing their strategy for the historic or natural environment (as appropriate) and in determining relevant planning applications.

OBJECTIVE 1:

To implement appropriate planning, monitoring and evaluation mechanisms to ensure effective and efficient management, and interventions of the WHS.

Activities:

- i. Regular monitoring of water quality and quantity;
- ii. Regular monitoring of vegetation cover;
- iii. Regular monitoring of the impacts of humans on the WHP;
- iv. Continue monitoring the *Lantana camara*;
- v. Monitor and Evaluate the effect of different management programmes;
- vi. Plan and Implement recommendations arising from the monitoring and evaluation exercises;
- vii. Prepare implement and review a monitoring and evaluation plan;
- viii. Review the planning, monitoring and evaluation plan;
- ix. Implement and Monitor fire management plans;
- x. Continue animal population monitoring;
- xi. Monitor cultural sites for their protection;
- xii. Monitor long-term effects of the removal of invasive alien species;
- xiii. Monitor Geological processes;
- xiv. Monitor human activities along and on the river; and
- xv. Monitor ZESCO's water abstraction.

Objective 2

Optimize benefits accruing from Planning, monitoring and evaluation system of the WHP.

Activities:

- i. Establish clear and consistent leadership structures for the WHP;
- ii. Secure the long-term provision of appropriately qualified staff to manage the WHP through the planning, monitoring and evaluation system;
- iii. Develop opportunities to transfer learning between WHPs;
- iv. Explore access to alternative funding sources, and re-invest funds generated from WHS into management and conservation, so that

responsibility for funding for the Site does not fall disproportionately upon the Local Authority.

- v. Plan and put mechanisms in place to manage the WHP, and co-ordinate exchange of significant amounts of information held by various stakeholders;
- vi. Monitor the WHP's general condition regularly, and assess the implementation of the Management Plan;
- vii. Raise the local community's awareness of the value and relevance of the WHP, and promote the opportunities and responsibilities so as to enable property owners to make informed decisions;
- viii. Seize the opportunity to realise the potential benefits of greater community involvement, and the opportunities that the properties status brings for regeneration, education, culture, and civic pride;
- ix. Seek greater engagement of the local business community in the management of the property to enhance sustainability;
- x. Put mechanisms in place to manage any tensions between conservation and development;
- xi. Minimise the threat of inappropriate development and ensure that plans and decisions fully consider the impacts of development proposals, and are based on a thorough understanding of the property's Outstanding Universal Values;
- xii. Mitigate the potential damage caused to the fabric, authenticity and character of the property by incremental change;
- xiii. Address the challenges of integrating contemporary design within the Site and encourage high quality development schemes
- xiv. Address sustainability issues, including climate change, and manage the permanent, inherent tensions between the needs for adaptation and conservation; and
- xv. Research into the relationships between sustainability and conservation, and disseminate information through education, training and public awareness programs and materials.

Objective 3

Conserve and preserve the Outstanding Universal Values of the WHP.

Activities

- i. Promote co-ordination and responsibility across the different ownership patterns in the WHP;
- ii. Put mechanisms in place for effective management of all elements of the Site's historic environment, to protect the authenticity and integrity, based on a thorough understanding of the OUV;
- iii. Address the long-term availability of materials and skilled craftsmen to maintain the fabric of the Property;

- iv. Safeguard the property's Site's historic buildings and archaeological structures and ensure they remain in general good condition, and protect them from inappropriate and/or inadequate maintenance;
- v. Ensure that the property's extensive and vulnerable landscape setting is recognised, interpreted, protected and managed to prevent incremental damage as well as treat the parks and open spaces as integral to the property's landscape setting and managed appropriately;
- vi. Promote understanding that the Zambezi River is an integral to the property's landscape setting and a need to ensure it is managed appropriately;
- vii. Identify and safeguard important views, both within and beyond the property and manage them appropriately;
- viii. Base tree and woodland management of the Site upon an understanding of the OUV; and
- ix. Secure the necessary capital investment to realise opportunities to improve the quality and maintenance of the Site's public realm.

Objective 4

Factor in adaptive management and address emerging issues.

Activities:

- i. Ensure that management and administrative arrangements are appropriate for the effective implementation of the Plan, encourage community involvement, enable partnerships and secure the required funding;
- ii. Put in place risk management plans for the protection of the property, including the fabric, relevant archives, and periodically updated. Guarantee that research and information about the Site is produced, collected, archived and analysed, and made available to partners in ways that assist implementation of the Plan;
- iii. Ensure periodic monitoring of the condition of the property;
- iv. Ensure that the property and its setting are taken into account by all relevant planning, regulatory and policy documents (statutory and non-statutory) and by any future changes to the planning system as well as in all relevant decisions taken by the Local Authority and other management partners;
- v. Ensure that architecture, which enhances the values of the site, is encouraged; and
- vi. Ensure that adaptation to address climate change is made and promoted with any harm to the heritage asset balanced against the public benefit.

Review and Amendment of Management Plan

Preparation of a management plan is an essential step in the establishment and use of a sound approach to Protected Area management. However, the management plan should be considered to be an evolving document rather than one that is unchanging.

ANNEXTURES

Annex 1: Structure of MWHP Committee-Zambia

Zambia Mosi-Oa-Tunya World Heritage Property Committee				
Sub-Committees				
Conservation and monitoring	Tourism	Socio-Cultural	Finance and budgeting	Publicity/Education

Structure of the VFWHP Committee-Zimbabwe

<p>CHAIRMAN (ZPWMA)</p> <p>VICE CHAIRMAN (NMMZ)</p> <p>SECRETARY (VFMS)</p> <p>VICE SECRETARY (EMA)</p> <p>COMMITTEE MEMBERS</p> <p>(Local Chief; HRDC, Forestry Commission, HAZ-Victoria Falls, ZTA, Local community Representative, ZINWA, ZARA)</p>

[B] STRUCTURE OF BI-NATIONAL MANAGEMENT FRAMEWORK

<p>JOINT MINISTERIAL COMMITTEE (JMC)</p> <p>JOINT TECHNICAL COMMITTEE (JTC)</p> <p>JOINT SITE MANAGEMENT COMMITTEE (JSMC)</p>
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Annex 2: IMPLEMENTATION LOGFRAME AND REGIONAL COOPERATION PROGRAMME

1.1 OBJECTIVE 1:					
<i>To sustain a JMC consisting of the responsible Ministers in each of the two countries</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
1.1.1	Provide policy guidelines and direction to the JTC	Permanent Secretaries and JTC	Ongoing	H	5 000
1.1.2	Hold two consultative meetings a year to review implementation progress and recommendations by the JTC	Ministers	Ongoing	H	10 000 x 2 per year

1.2 OBJECTIVE 2:					
<i>To sustain a Joint Technical Committee (JTC) comprising of the two National WHP Committees</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
1.2.1	Agree on the composition and membership of the Joint Site Management Committee (JSMC)	Joint Technical Committee (JTC)	ongoing	H	None
1.2.3	Propose harmonisation of joint legal instruments	JTC	2017-2019	H	25 000
1.2.4	Propose domestication of World Heritage Convention into local laws	JTC	2017-2021	M	10 000
1.2.5	Continue the formation of World Heritage Committees at national level	JTC	By 2018	M	None
1.2.6	Preparation of consolidated bi-national conservation status reports	JTC	annually	H	2 500
1.2.7	Review implementation progress of the JMP	JTC	twice a year	H	None

1.2.8	Produce periodic reports to UNESCO	JTC	every 2 years (2019)	H	2 500
1.2.9	Identification of projects for implementation	JTC	At quarterly meetings	H	None

1.3 OBJECTIVE 3:

To sustain a JSMC consisting of the members as recommended by the JTC and for it to manage the WHP at the Site level

No	Activities	Responsibility	Timing	Priority	Budget US\$
1.3.1	Hold meetings quarterly or when the need arises	JSMC	Once every two months	H	10 000
1.3.2	Undertake invasive species control and management in the WHP	JSMC	Ongoing	H	10 000
1.3.3	Develop bi-national guidelines for managing the WHP	JSMC	By 2018	H	20 000
1.3.4	Produce educational awareness materials	JSMC in collaboration with ZTA and ZNTB	Ongoing	M	15 000
1.3.5	Undertake Site promotion and publicity campaigns	JSMC	Ongoing	M	10 000
1.3.6	Address any local problems and make recommendations to the JTC	JSMC	Ongoing	H	None

1.4 OBJECTIVE 4:					
<i>To use diversity of the tourism product and services in SADC/COMESA as a package in order to increase value of the WHP as a tourist destination</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
1.4.1	Integrate WHP into other major tourism products in the region	JSMC	Ongoing	L	10 000
1.4.2	Stage exhibitions and fairs to market regional tourism products	JSMC	Ongoing	M	10 000
1.4.3	Upgrading existing interpretive centres and field museum(s)	JSMC	Ongoing	L	100 000

1.5 OBJECTIVE 5:					
<i>To promote ecosystem management and biodiversity conservation at regional level</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
1.5.1	Promote collaboration in trans-frontier conservation areas	JSMC, JTC	Ongoing	M	15 000
1.5.2	Develop and implement common guidelines in the management of shared natural resources	JSMC	Ongoing	M	10 000
1.5.3	Identify, prioritise and address common problems as focal points of regional initiatives (e.g. Climate Change, Desertification, Biodiversity Conservation, Poaching and Pollution)	JSMC, JTC	Ongoing	L	20 000

1.6 OBJECTIVE 6:

To promote regional cooperation and exchange of information in natural and cultural resource management

No	Activities	Responsibility	Timing	Priority	Budget US\$
1.6.1	Build synergies in human and institutional capacity at regional scale in collaboration with universities and other tertiary institutions	JSMC	Ongoing	L	5 000
1.6.2	Undertake exchange programmes	JSMC	Ongoing	M	1 000
1.6.3	Establish regional database of heritage (natural and cultural) experts	JSMC	Ongoing	L	None
1.6.4	Facilitate research projects at regional level	JSMC	Ongoing	L	10 000

Annex 3: RESOURCE CONSERVATION PROGRAMME

2.1 OBJECTIVE 1:					
<i>To maintain ecosystem integrity in the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
2.1.1	Develop woodlots in rural areas to minimise pressure on vegetation	FC, FD, NHCC,	Ongoing	M	10 000
	Promote green technology		Ongoing		
2.1.2	Remove existing exotic species and rehabilitate affected habitats with indigenous species	ZPWMA, NHCC, DNPW,	Ongoing	H	6 000
2.1.3	Review guidelines for rafting pressure points in gorges	ZPWMA, NHCC	2017-2019	H	5 000
	Develop sustainable livelihoods alternatives together with local communities				
2.1.4	Rehabilitate pathways and their sides to prevent erosion in Eastern Cataract and other gorges	ZPWMA, NHCC, DNPW, NMMZ	Ongoing	H	2 000
2.1.5	Develop standards, guidelines and procedures for river based operations in the WHP and enforce guidelines for riverbank development	ZPWMA, NHCC, DNPW, NMMZ	June 2017	H	5 000
2.1.6	Maintain artificial (man-made) water points in South eastern portion of WHP (Zambia) Chamabondo and Kalisosa vleis in the Zambezi National Park (Zimbabwe) as a measure to control elephant density in the riverine habitat	ZPWMA, NHCC, DNPW	Ongoing	M	10 000
2.1.7	Integrate fire management plans	ZPWMA, NHCC, DNPW, FC, NMMZ	2018	M	2000
2.1.9	Monitor and regulate water abstraction to protect the Rainforest and preserve wilderness values of the Site	ZPWMA, NHCC and DNPW	Ongoing	H	None

2.2 OBJECTIVE 2:					
<i>To conserve the geology of the gorges, river banks, islands and associated features/processes</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
2.2.2	Maintain and erect regulatory signage in appropriate areas	ZPWMA, NHCC, DNPW, NMMZ	Ongoing	M	1500
2.2.3	Undertake media campaigns to increase awareness on the Natural and cultural resources in the WHP	ZPWMA, NHCC, DNPW NMMZ	Ongoing	M	2000
2.2.4	Investigate and promote carving and construction material	ZPWMA, NHCC, DNPW FC, EMA	2018-2019	H	4000

2.3 OBJECTIVE 3:					
<i>To control negative impacts in the World Heritage Property and surrounding buffer zone which result from incompatible land use in the buffer zone and surrounding areas</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
2.3.1	Regulate the introduction of exotic flora and fauna species.	EMA, ZEMA, ZPWMA, DNPW NHCC, NMMZ	Ongoing	H	3000
2.3.2	Develop an integrated land use plan and a buffering mechanism areas around the WHP	ZPWMA, DNPW NHCC, NMMZ, FC	2017-2020	M	10000

2.4 OBJECTIVE 4:					
<i>To control noise from aircraft and boats and water pollution from boats and waste disposal within the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
2.4.1	Determine and implement acceptable noise levels and number of flights at any given time over the falls.	CAAZ, ZA, ZPWMA	2017- 2021	H	10000
2.4.2	Carry out regular water quality tests to monitor pollution of the river from water vessels, and ensuring defaulting operators are prosecuted and stopped from operating	ZPWMA, NHCC, EMA, SWASC, ZEMA, DNPW	2017- 2021	M	10 000
2.4.3	2.4.3 Enforce environmental standards and guidelines	ZPWMA, EMA, NMMZ, NHCC, DNPW	2017- 2020	H	5 000

2.5 OBJECTIVE 5:					
<i>To control illegal activities that threaten the integrity of the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
2.5.1	Carry out regular area law enforcement patrols.	ZPWMA, NHCC, DNPW	2017- 2021	H	60 000

2.6 OBJECTIVE 6:

Develop capacity through staff appointments, capacity building and facilitation of collaborative programmes to enhance effective conservation in the WHP

No	Activities	Responsibility	Timing	Priority	Budget US\$
2.6.1	Carry out collaborative projects with other agencies to facilitate information sharing	ZPWMA, NMMZ, NHCC, DNPW, EMA, SWASC, ZEMA	2017-2021	M	10 000

2.7 OBJECTIVE 7:

To conserve and enhance the WHP's cultural resource values, which are of local, national and international significance.

No	Activities	Responsibility	Timing	Priority	Budget US\$
2.7.1	Arrest soil erosion at cultural resources sites	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	M	5 000
2.7.2	Erect signage that prohibits littering at cultural sites	NHCC, ZPWMA, DNPW, NMMZ	2017-2021	H	1 500
2.7.3	Ensure that the cultural sites that are threatened, receive attention and are given adequate protection	NMMZ, NHCC, ZPWMA, DNPW	2018-2020	M	5 000
2.7.4	Erect barriers at cultural sites that are damaged by traffic	NMMZ, ZPWMA, NHCC, DNPW	2017-2020	H	2 000
2.7.5	Protect/conserv e the cultural resources that are threatened by wildlife	NMMZ, ZPWMA, NHCC,	2017-2021	H	5 000

2.8 OBJECTIVE 8:

To develop and maintain synergy between the natural and cultural values of the site in order to sustain the authenticity and integrity of the resources.

No	Activities	Responsibility	Timing	Priority	Budget US\$
2.8.1	Integrate into the environmental management and biodiversity policies the protection, preservation, and utilisation of cultural resources	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	H	10000
2.8.2	Utilise the information in the database and in liaison with appropriate stakeholders to conserve the cultural resources in the WHP	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	H	5 000

2.9 OBJECTIVE 9:

To recognise and preserve the Site's diverse tangible and intangible cultural resources

No	Activities	Responsibility	Timing	Priority	Budget US\$
2.9.1	Review by appropriate stakeholders any activities that may damage or change the authenticity or integrity of a cultural resource in the site	ZPWMA, NMMZ, NHCC, DNPW Other stakeholders	2017-2021	H	6 000
2.9.2	Allow custodians of cultural traditions regulated access to sacred sites in the WHP	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	H	None
2.9.3	Allow tourism development that ensures the sustainability and integrity of cultural resources in the WHP	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	H	None
2.9.4	Hold regular consultative meetings with local community representatives	ZPWMA, NMMZ, NHCC, DNPW	2017-2021	H	10 000

Annex 4: COMMUNITY COLLABORATION PROGRAMME

3.1 OBJECTIVE 1:					
<i>To develop mutual understanding and respect between the local communities and the WHP management.</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
3.1.1	Hold 2 annual consultative meetings between the JSMC of the WHP and the local community	JSMC	2017-2021	H	5 000

3.2 OBJECTIVE 2:					
<i>To create opportunities for the local communities to benefit from the tourism and conservation activities of the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
3.2.1	Initiate developmental projects in the WHP that will benefit the local communities	JSMC	2017-2021	M	10 000
3.2.2	Promote and encourage village tours	JSMC	2017-2021	H	500
3.2.3	Develop and implement income-generating projects to benefit local communities	JSMC	2017-2021	M	15 000
3.2.4	Develop intellectual property rights for the indigenous knowledge systems	JSMC	2017-2019	H	10 000
3.2.5	Encourage the tourism and hospitality industry to initiate and implement infrastructural development among the local communities	JSMC	2017-2021	H	None
3.2.6	Encourage the tourism and hospitality industry to develop a sustainable marketing strategy and promotional programmes focussing on the values of the cultural resources	JSMC	2017-2021	H	None

3.3 OBJECTIVE 3:					
<i>To promote interest and awareness of the outstanding values of the WHP among the local communities</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
3.3.1	Design and implement heritage educational outreach program for schools, tertiary education institutions and public	NHCC, NMMZ, ZPWMA, DNPW	2017-2021	H	20 000
3.3.2	Facilitation of regular access of educational tours for local schools	NHCC, NMMZ, ZPWMA, DNPW	2017-2021	M	800
3.3.3	Establish voluntary heritage resource officers at local community level	NHCC, NMMZ, ZPWMA, DNPW	2017	M	1 000
3.3.4	Train traditional custodian and local tour guides to inform the public with correct information	JSMC	2017-2021	H	2 000
3.3.5	Raise awareness on intellectual property rights for indigenous knowledge systems of the area	JSMC	2017 - 2021	H	1 000

3.4 OBJECTIVE 4:					
<i>To promote and enhance the presentation and conservation of cultural resources of the local communities in the WHP and adjacent areas.</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
3.4.1	Research and document all the cultural resources in the WHP	NHCC, NMMZ	2017-2019	H	80 000
3.4.2	Develop environmental education programmes to raise awareness on the importance of cultural resources and their conservation	JSMC	2017-2019	H	20 000
3.4.3	continually review local custodian access to sacred sites	JSMC	2017-2021	H	None

Annex 5: TOURISM DEVELOPMENT PROGRAMME

4.1 OBJECTIVE 1:					
<i>To provide adequate safety and security to visitors to the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
4.1.1	Enter into contract with Rescue Service Providers	NHCC, ZPWMA	2017	H	500
4.1.2	Promote tourism Insurance policies with Tour operators	JSMC	2017-2021	H	1 000
4.1.3	Procure safety and first aid equipment	NHCC, ZPWMA	2017	H	1 000
4.1.4	Train site personnel in first aid	NHCC, ZPWMA	2017-2021	H	1 000
4.1.5	Deploy adequate security personnel in the WHP	NHCC, ZPWMA	2017	H	None

4.2 OBJECTIVE 2:					
<i>To reduce vehicular traffic congestion and overcrowding within the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
4.2.1	Encourage relevant authorities (Customs and Immigration Departments) on fast track system of clearance at the border/entry points.	JMC	2017-2021	H	None

4.3 OBJECTIVE 3:					
<i>To improve visitor services and standards within the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
4.3.4	Construct, maintain and upgrade viewing points	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	H	50 000
4.3.5	Establish and maintain animal proof waste disposal bins	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	H	6 000
4.3.6	Design, produce and erect appropriate signage	NHCC, ZPWMA, NMMZ, DNPW	2017	M	500
4.3.7	Upgrade and maintain Visitor Information Centres	NHCC, ZPWMA, NMMZ	2017	M	30 000
4.3.8	Regulating tour-guiding through licensing and accreditation of tour guides	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	H	500

4.4 OBJECTIVE 4:					
<i>To market and promote the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
4.4.1	Conduct regular marketing and promotion of the WHP through various media	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	H	20 000
4.4.2	Establish a Website for the WHP	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	M	10 000
4.4.3	Produce and distribute information materials	NHCC, ZPWMA, NMMZ, DNPW	2017-2021	M	20 000

4.4.4	Participate in local and international fairs	NHCC, ZPWMA, NMMZ, DNPW	2017- 2021	L	20 000
4.4.5	Promotional partnerships with strategic Tourism institutions as regards packaging-tours	NHCC, ZPWMA, NMMZ, DNPW	2017- 2021	L	500

4.5 OBJECTIVE 5:

To regulate the number of tourists entering the WHP

No	Activities	Responsibility	Timing	Priority	Budget US\$
4.5.1	Establish and review the carrying capacity of the Rainforest and Eastern Cataract.	NHCC, ZPWMA	2017- 2021	M	None
4.5.2	Limit students to 100 in the Rainforest and the Eastern Cataract at any given time	NHCC, ZPWMA, NMMZ	2017- 2021	M	None
4.5.3	Compile visitor statistics regularly	NHCC, ZPWMA, NMMZ	2017- 2021	H	None

4.6 OBJECTIVE 6:

To allow for appropriate tourism administrative development within the WHP

No	Activities	Responsibility	Timing	Priority	Budget US\$
4.6.2	Install electronic ticketing turn-stile	NHCC, NMMZ DNPW ZPWMA	2017	H	5 000
4.6.5	Improve signage within the WHP	NHCC, NMMZ DNPW & ZPWMA	2017 - 2021	H	None

Annex 6: OPERATIONS AND MAINTENANCE PROGRAMME

5.1 OBJECTIVE 1:					
<i>To improve operational effectiveness and maintenance of services within the WHP</i>					
No	Activities	Responsibility	Timing	Priority	Budget US\$
5.1.1	Equip the implementing organisations with sufficient equipment, financial and human resources to effectively manage the WHP.	NHCC, NMMZ DNPW ZPWMA	2018-2021	H	200 000
5.1.2	Assess training needs among staff and organise capacity building courses	NHCC, NMMZ DNPW, ZPWMA	Ongoing	H	60 000
5.1.3	Appoint new qualified staff to fill the gaps within the organisations	NHCC, NMMZ DNPW, ZPWMA,	Ongoing	H	40 000
5.1.5	Record sacred sites within the WHP	NHCC, NMMZ DNPW ZPWMA	2018	H	3 000
5.1.10	Train staff in use of new equipment (electronic ticketing systems and turn-stiles)	NHCC, NMMZ DNPW ZPWMA	Ongoing	H	2 000
5.1.16	Maintain elephant trenches within the WHP	NHCC, NMMZ DNPW ZPWMA	Annually	H	2 000
5.1.17	Review guidelines and establish rafting, boats, canoes, launching points.	NHCC, NMMZ DNPW ZPWMA	2017	M	2 000
5.1.19	Treatment of water bodies to remove pollutants with use of harmless chemicals or biological cleaners	NHCC, NMMZ DNPW ZPWMA	20177 - 2021	H	1 000
5.1.21	Ensure aircrafts (helicopters, micro-lights and fixed-winged) fly within regulated space and height	NHCC, NMMZ DNPW ZPWMA	Ongoing	H	None
5.1.23	composting of biodegradable solid waste to minimise accumulation of solid waste	NHCC, NMMZ DNPW ZPWMA and local	Ongoing	H	None

		authorities			
5.1.24	Enter into smart partnerships with stakeholders in recycling solid waste	NHCC, NMMZ DEPARTMENT OF WORLD LIFE, & ZPWMA and stakeholders	Ongoing	L	None
5.1.25	Continuously monitor quality of treated waste water being discharged into the river.	EMA, ZEMA, VFM, LCC	Ongoing	H	None
5.1.26	Continuously monitor the effectiveness of the sewer reticulation infrastructure.	LCC & VFM	Ongoing	H	None
5.1.27	Maintain and improve roads, walkways and drainage in the WHP	NHCC, NMMZ DNPW ZPWMA	2018-2021	H	30 000
5.1.29	Install rain gauges and other meteorological instruments within the WHP	NHCC, NMMZ DNPW ZPWMA	2017-2021	H	1 000

Annex 7: RESEARCH AND MONITORING PROGRAMME

6.1 OBJECTIVE 1:

To encourage the conduct of research that is consistent with the protection and undertaking of the WHP's biophysical and cultural values.

No	Activities	Responsibility	Timing	Priority	Budget US\$
6.1.1	Determine key (indicator) species	ZPWMA and DNPW	Ongoing	H	1 000
6.1.2	Periodically carry out elephant census and movement patterns	ZPWMA and DNPW	Once a year	H	None
6.1.6	Prepare guidelines for accessing information and research findings	ZPWMA, DNPW NHCC and NMMZ	2017 - 2021	H	5 000
6.1.7	Tap into indigenous knowledge of local communities in areas of research and forest resource inventories	ZPWMA, NHCC and NMMZ	Ongoing	M	1 000

6.1.8	Implement relevant research recommendations	Joint Bi-lateral Committee	Ongoing	H	None
6.1.9	Produce land-use maps in and around the WHP	NHCC, NMMZ, DNPW and ZPWMA	Ongoing	H	5 000
6.1.10	Investigating appropriate methodology for the control of invasive alien species	NHCC, NMMZ, DNPW and ZPWMA	Ongoing	H	1 000
6.1.11	Initiate research to determine causes and impacts of habitat modification on sensitive and rare species of fauna and flora	NHCC, NMMZ, DNPW and ZPWMA	2017-2021	H	5 000
6.1.12	Update the existing database of flora, fauna and cultural sites	ZPWMA and NMMZ, DNPW NHCC	Ongoing	M	1 000
6.1.13	Carry out a comprehensive archaeological survey of the WHP	NHCC, NMMZ, DNPW and ZPWMA	2018-2020	H	10 000
6.1.14	Record oral history, myths and legends from local communities	NHCC, NMMZ, DNPW and ZPWMA	Ongoing	H	None
6.1.16	Carry out a geological baseline study of the WHP	JTC	2018 – 2020	H	5 000
6.1.17	Conduct erosion surveys within the site	NHCC, NMMZ, DNPW and ZPWMA	Ongoing	H	1 000
6.1.19	Undertake studies on the species population dynamics	NHCC, NMMZ, DNPW and ZPWMA	Ongoing	H	1 000
6.1.20	Update RDL database to include WHP species	JTC	Ongoing	M	None
6.1.21	Create herbariums	NHCC, NMMZ, DNPW and ZPWMA	2018-2020	M	None
6.1.25	Commissioning study to determine carrying capacity of vessels on the river	ZPWMA, DNPW	2018 – 2021	H	5 000

6.2 OBJECTIVE 2:

To ensure effectiveness of management interventions are monitored and evaluated

No	Activities	Responsibility	Timing	Priority	Budget US\$
6.2.2	Regularly monitor vegetation cover	NMMZ, DNPW and ZPWMA	Ongoing	H	1 000 per year
6.2.3	Regularly monitor the impacts of human on the WHP	NMMZ, DNPW and ZPWMA, NHCC	Ongoing	H	500 per year
6.2.4	Continue monitoring the <i>Lantana camara</i> project and extend it on the Zambian side of the WHP	ZPWMA, DNPW	Ongoing	H	1 000 per year
6.2.7	Prepare and implement a monitoring plan	JSMC	Ongoing	H	5 000
6.2.8	Regularly review monitoring plan	JSMC	Ongoing	H	None
6.2.18	Monitor ZESCO water abstraction	JTC	Ongoing	H	ZESCO

Annex 8: EMERGING ISSUES

For emerging issues such as climate change, Risk management and preparedness, Information Management Systems the JTC shall propose, develop and implement management plans.