Feasibility Study

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IMPLEMENTATION AND DEVELOPMENT OF ECO-TOURISM INFRASTRUCTURE IN ONE ZAMBIAN NATIONAL PARK AIMING AT IMPROVEMENT OF LOCAL ECONOMIC PROSPERITY, REDUCTION OF COUNTRYSIDE'S POVERTY AND IMPROVEMENT IN THE CONSERVATION OF NATURAL ENVIRONMENT.

FEASIBILITY STUDY

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GLOSSARY OF TERMS AND ABBREVIATIONS

Community	Community refers to a heterogeneous group of people who share residence in the same geographic area and access a set of local natural resources. The degree of social cohesion and differentiation, strength of common beliefs and institutions, cultural diversity and other factors vary widely within and among communities (Schmink, 1999).
Ecotourism Management Plan	An ecotourism management plan (EMP) is a tool to guide the development of tourism in a protected area in a way that seeks to synthesize and represent the vision of all the stakeholders whilst fulfilling the conservation objectives for the site. Typically, an EMP will be a detailed continuation of general guidelines established in a general management plan or SCP.
Ecotourism Site	A location, large or small, where ecotourism activity or activities occur. In this

	document, may be used interchangeably with "protected area" or "site". However site usually refers to a location where the activity is focused and is small in extent.
General Management Plan	A planning document which evaluates all the information available for a given protected area or ecotourism site, and defines overall management objectives, goals and strategies. Ecotourism may be identified as a management strategy for appropriate management. If so, then an Ecotourism Management Plan may be recommended.
Preliminary Site Evaluation	A process, consisting of a few basic questions, by which planners can determine whether a particular site is appropriate for ecotourism development. A first filter for determining the viability of ecotourism.
Protected Area	A large or small , legally protected expanse of territory, usually administered by a government entity with specific conservation objectives, but whose day to day management may be delegated to the nongovernmental or private sector or a coalition of government and private interests.
Sustainable Development:	Defined by the United Nations Brundt land Report "Our Common Future" as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".
ZAWA	Zambian Wildlife Authority
ZTMP	Zambian Tourism Management Plan

1 EXECUTIVE SUMMARY

In the past decades, sustainable tourism has become a significant factor in decisions affecting the natural environment, the economy and social issues. Within the tourism industry, there is an emerging need to match the expectations of a new and consistent niche of tourists, who increasingly demand tourism accommodation facilities with ecological features. This study analyses technical, economic and social feasibility of establishing an ecotourism facility at a National Park in Zambia which aims to adopt sustainability practices in its establishment and operation.

Preserving African protected areas implies the involvement of local communities. One of the key tools is the development of sustainable ecotourism. Well-developed ecotourism is an opportunity for the economic prosperity of regions and local people, as well as a significantly better and sustainable quality of care for national parks. Parks without ecotourism very often represent paper parks, i.e., they are national parks only on the map. In many cases, this means plundered protected areas with damaged or destroyed natural vegetation (felling of forests and savannahs), and sometimes also presence of illegal settlements. In these cases no real positive change in the prosperity of local communities is present. The damage or destruction of natural ecosystems and their ecological-production functions in the longer term contributes to further deepening the poverty of local people with all negative social impacts. This project aims to establish the feasibility of implementing an eco-tourism facility in one the pre-selected National parks in Zambia. In the longer term, the goal is to build a pilot ecotourism facility (lodge or bush camp) at a suitable location, train and employ and educate the local available labour force in construction, operation (marketing, guide services, support guard services). This includes the creation of an appropriate institutional entity (Zambian NGO, international corporate partnership, or other), - with secured financial support and investor supervision. All revenue from the operation of the ecotourism facility will be used to benefit the local community. Unlike ecotourism facilities owned by foreign investors, all raised funds will remain in Zambia.

There will be a strong capacity building and educational component of the ensuing pilot project provided by expertise shared with the local community in the form of workshops, exchange visits, research projects and training provided by the and the Czech University of Life Sciences and the Czech Agency for Nature and Landscape Protection with access to a wide range of experts of biodiversity, tropical forestry and agriculture and sustainable land management. The pilot project will also serve as a case capacity building in other communities from locations near National Parks. The purpose is to initiate the creation of a wider system of ecotourism facilities with a similar governance model and modern operation practice, with the focus on increased prosperity, and well-being of communities, and protection of natural ecosystems. Sustainable use of local natural and agricultural products will be in scope of the project as well. In the case of positive evaluation of implementation and operation of this pilot ecotourism facility, it is possible to consider further financial support from or other sources in the future.

This study present the first stage of this pilot project, - selecting an optimal site for placement of the ecotourism facility and feasibility of its construction, and operation. All assessed sites in the 3 National Parks have potential for the development eco-tourism activities. Considering the levels of presumed investments and securing their availability, the site in Kafue National Park has been selected as optimally suited for the pilot project.

Results show Kafue National Park as the preferred location on the basis of a comparative SWOT analysis of 6 pre-determined locations completed independently by 5 experts who visited all identified locations in the field. In case of realization of the pilot project, we recommend the involvement of adjacent communities in the construction and operation of the eco-camp facility and in providing local food and fishing products. Capacity in sustainable natural environment of these communities would also be built via study exchanges, workshops and training by the project team.

General market analysis and economic considerations are presented as well as an approximate cost estimate of construction and operation of the facility.

2 INTRODUCTION

2.1 ZAMBIA, COUNTRY CONTEXT

Zambia (formerly Northern Rhodesia) is one of the larger inland countries of 752,612 km2 (about 10 times the area of the Czech Republic and the 30th largest country in the world) with a relatively small but dynamically growing population. In 2010, a population census was carried out with a result of 13, 1 million. The estimate for 2018 is 17 million and the country's average population density is around 24 inhabitants per km^2 (about 160th country in the world). The country is one of the sparsely populated states of Sub-Saharan Africa and the distribution of settlements is considerably uneven. The most populated areas are in the central part of the country, the Copperbelt and the south-eastern tip of the state. Put it simply, 2/3 are sparsely populated (1-25 inhabitants per km2) and a third is moderately to heavily populated (more than 50 inhabitants per km2). The areas of interest for the feasibility study were then linked to low population density provinces such as Western, North Western and Central. The average annual population increase in recent years has been around 3%. The expected life expectancy is around 54 years. The rapidly increasing population is one of the key factors influencing the destruction of natural habitats. Estimated 2-3 million inhabitants live in the capital of Lusaka and an urbanized area "Copperbelt" with cities of around half a million inhabitants (Kitwe, Chipata, Ndole). Cities with hundreds of thousands or more still include Kabwe, Chingola, Livingstone, Luanshya, Mufulira and Kasama. Zambia is a presidential republic and is considered a stable and secure country.

The vast majority of the rural population is without standard work as interpreted in Europe. Job opportunities are lacking. Only in some regions can local populations be involved in the work of plantations of banana, corn, cotton and other crops, or are employed in the extraction of minerals (particularly in the Copperbelt) by multinational corporations from different developed countries and with an increasing share of China.

Zambia hosts the world's second most powerful Victoria Falls, shared with Zimbabwe, and the second deepest lake in the world, Tanganyika. The large wetlands of Bangweulu Swamps (approx. 12,800 km2), Kafue Flats (6500km2), Barotse Floodplains-Liuwa Plain (11,000km2), Lukanga Swamps (3300km2), and Zambezi, Kafue and Luangwa are ecologically significant. Zambia is regionally and globally significant in its biological diversity. An estimated 3,774 and 3,637 species of flora and fauna respectively (excluding micro-organisms) have been noted within the broad ecozones in Zambia. Of these species, 316 are endemic, 174 are rare, and 31 are endangered or vulnerable.

The Wildlife and Environmental Conservation Society of Zambia (WECSZ) has compiled the following statistics:

1. **5,500** species of plants,
2. Over **1,400** species of vertebrates,
3. **741** species of birds with over **400** recorded at Lochinvar Bird Sanctuary alone,
4. **more than 200** species of mammals (minimum of. 158 species were recorded in NP Kafue alone) .
5. And of the total Zambia's land **6 percent** is wetlands and water bodies with the **Bangweulu Swamps** ranking **10th** largest in Africa.

Since 2017, Zambia has become a priority country for Czech development cooperation. Besides Ethiopia, it is the only sub-Saharan state and this project has been identified as a form of meaningful development using technical assistance contributing to rural prosperity.

Zambia is one of the poorest countries with a GDP per capita of about 1700 USD and in recent years with a total growth of 3-4%. Zambia is a presidential republic and is considered a relatively stable and secure country. The vast majority of the rural population is without standard work as interpreted in Europe. The villagers are extremely poor, so portions of their population move to large cities where their perspective is also limited. Since 2017, Zambia has again become a priority country for Czech development cooperation. Besides Ethiopia, it is the only sub-Saharan state. It is therefore logical to look for forms of meaningful development cooperation. Projects that contribute to the prosperity locally

In 2018, tourism was one of Zambia's fastest growing economic sectors, providing jobs to some 319,000 people, with a share of 6.3% of GDP, and foreign tourism revenue reaching 8.3% of total Zambian exports. However, should be noted,

that in 2016 the share of foreign visitors was primarily from African countries (78%) and only 9.2% of foreign tourists with a strong link to ecotourism from Europe. Only 5% of foreign tourists came from America (mainly the USA and Canada).

2.2 ECOTOURISM, - INTRODUCTION

Ecotourism has become an important economic activity in natural areas around the world. It provides opportunities for visitors to experience nature and culture and learn about the importance of biodiversity conservation and local cultures. At the same time, ecotourism generates income for conservation and economic benefits for communities living in rural and remote areas. The attributes of ecotourism make it a valuable tool for conservation. Its implementation can:

1. give economic value to ecosystem services that protected areas provide;
2. generate direct income for the conservation of protected areas;
3. generate direct and indirect income for local stakeholders, creating incentives for conservation in local communities;
4. build constituencies for conservation, locally, nationally and internationally;
5. promote sustainable use of natural resources; and
6. Reduce threats to biodiversity.

Some areas have greater potential for realizing the benefits of ecotourism, in other areas with low visitation, the potential is not clear. Ecotourism planning process is critical to achieving ecotourism's potential as a powerful conservation strategy. Because of their ecological value, protected areas found in the tropics and in less-developed countries, contain many of the world's greatest ecotourism attractions. These attractions may consist of one or a combination of rare or endemic species of flora or fauna, abundant wildlife, high indices of species diversity, unusual or spectacular geomorphologic formations, or unique historic or contemporary cultural manifestations in a natural context. Protected area managers, then, are faced with the challenge of controlling and limiting the impacts of unfettered nature tourism while at the same time deciding where and how to plan adequately for the development of ecotourism as a compatible economic development option. By integrating ecotourism development into a systematic approach to conservation we can ensure that ecotourism is only initiated when it is the most effective strategy to achieve tangible, lasting results at scale. These distinct but intimately interrelated aspects of ecotourism — conservation management and business development — must be fully understood by ecotourism planners and protected area managers before moving ahead with plans to implement ecotourism activities. Conservationists have typically approached ecotourism with a limited understanding of business issues and an incomplete understanding of the management mechanisms that are available and necessary to ensure the sustainability of tourism in protected areas.

This study describes both economic and technical feasibility of establishing an eco-tourist facility using experience gained in the Czech Republic and world-wide while applying the latest knowledge in sustainable development principles applied to Zambian conditions.

2.2.1 What is Ecotourism?

The Ecotourism Society, based in the US, and defines ecotourism as responsible travel to natural areas that conserves the environment and improves the welfare of local people. Ecotourism seeks to benefit both the local habitat and local community by promoting the sustainable use of readily present biodiversity in natural destinations. The purpose of ecotourism is to:

1. educate the traveller,
2. provide funds for conservation,
3. directly benefit the economic development and political empowerment of local communities, and
4. Foster respect for different cultures and for human rights. As a result, successful ecotourism depends on ecologically and socially conscious individuals seeking destinations where flora, fauna, and cultural heritage are primary attractions.

Ecotourists may differ in several aspects, including:

distance travelled;
length of stay;
desired level of physical effort and comfort;
importance of nature in trip motivation;
level of learning desired;
amount of spending;
desired activities; and
personal demographics.

Various authors, e.g., Lindberg (1991), provides a typologies of nature/ecotourism types, such as:

*Hard-core: S*cientific researchers or members of tours specifically designed for education, environmental restoration, or similar purposes.
Dedicated: people who take trips specifically to see protected areas and who want to understand local natural and cultural history.
Mainstream: people who visit the Amazon, the Rwandan gorilla park, or other such destinations primarily to take an unusual trip.
*Casual:*people who partake of nature incidentally, such as through a day trip during a broader vacation.

It is assumed, that the largest percentage of the proposed eco-camp visitors and clients will be Mainstream and Casual visitors with a minor percentage of Dedicated bird watchers.

2.2.2 Ecotourism Participants

Stakeholders with varying interests and goals participate in ecotourism. A key to the success of ecotourism is the formation of strong partnerships so that the multiple goals of conservation and equitable development can be met (see Figure below). Partnerships may be difficult because of the number of players involved and their different needs, but forging relationships is essential. The key players can be classified as: protected area personnel, community organizations and individuals, private sector tourism industry members and a variety of government officials and nongovernmental organizations. Their effective interaction creates effective ecotourism.

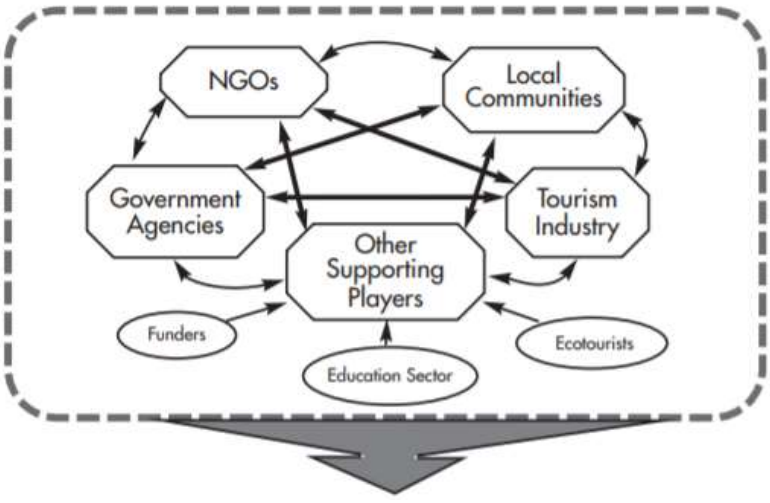

Figure 1. Ecotourism participants, overview

2.2.3 Ecotourism and Protected areas

Tourism and ecotourism are usually a part of the management strategy for a protected area. The degree to which tourism activities are pursued depends upon the priority assigned to them by the area managers, who in turn should be guided by a planning document prepared for that purpose. The planning document (or management plan) should be the result of a comprehensive evaluation of the area's natural and cultural resource base. It determines the stresses, their sources and

the real threats to the area's natural and cultural integrity, as well as the strategies to reduce these threats. The plan should define the area's long-term management objectives and a zoning scheme that identifies where certain activities may take place. When implemented appropriately, eco-tourism constitutes an ideal sustainable activity. It is designed to:

- have minimum impact upon the ecosystem;
- contribute economically to local communities;
- be respectful of local cultures;
- be developed using participatory processes which involve all stakeholders; and
- be monitored in order to detect negative and positive impacts.

2.2.4 Economic aspects of ecotourism

Possible economic benefits and costs for local communities need will be addressed in the project planning stage. Market analysis will aid promoting the development of wildlife-based tourism. The project will ensure that local communities obtain adequate economic benefits from the development of wildlife-based tourism. Economic aspects include:

Economic Benefits
1. Increased local employment and income
2. More regular employment and income throughout year
3. Greater diversification of economic activities, thereby reducing economic risks
4. Opportunities

2.1 ECOTOURISM IN ZAMBIA

Zambia is one of Africa's least crowded and most wildlife-rich destinations. One can easily see the "Big 5" (Lion, Leopard, Elephant, Rhino and Cape Buffalo) without being surrounded by groups of tourists. Traditional jeep safari can be combined with walking and canoeing safaris. It's home to the second largest wilde beest migration in Africa. The Government of Zambia (GRZ) sees tourism as a sector that offers economic diversification beyond agriculture and mining. Historically tourism in Zambia has focused on the Victoria Falls and wildlife. Marketing of cultural heritage and community attractions has been limited. Tourism is growing and can contribute to poverty reduction. Most community involvement in tourism has been passive, in the form of revenue sharing rather than entrepreneurial activity. Community Based Tourism in Zambia is in its infancy but growing, and there are a few established enterprises such as village walks, campsites, traditional style chalets, homestead stays, entertainment and curio markets. Mainstream commercial operators are increasingly seeing cultural and community products as highly marketable and complementary add-ons to their existing attractions. In 2018, tourism was one of Zambia's fastest growing economic sectors, providing jobs to some 319,000 people, with a share of 6.3% of GDP, and foreign tourism revenue reaching 8.3% of total Zambian exports (WTTC). However, the relative stability and security of the country, despite the ongoing destruction of the natural environment, a large range of wilderness landscapes still remains making a solid precondition for the development of ecotourism. The main attractive natural-tourist phenomena in Zambia are Victoria Falls (1), Tanganyika Lake (2) and South Luangwa National Park (3). There are, however, a number of other potentially significant natural-landscape attractants useful for the development of ecotourism. In summary, Zambia's national parks are less busy than national parks in Tanzania, Kenya, Uganda, South Africa, but also in neighbouring Namibia, Zimbabwe or Botswana. One of the reasons for this is the lower concentration of attractive representatives of African fauna or the supposedly higher real cost of tourist services such as accommodation. Although the price of accommodation is increasing, it is still approaching the price of comparable facilities in the countries mentioned, and in Zambia there are still some camps with medium or lower accommodation costs, including the possibility of using tents. Zambia still holds large portions of close-to-nature landscapes, certainly larger than in South Africa, Uganda or Kenya, which can attract a significant part of the ecotourism clientele. The total number of visitors to all national parks in Zambia has been estimated to have been only slightly over 100,000 in recent years. According to the 2016 Ministry of Tourism and Arts (Tourism Statistical Digest 2015), South Luangwa (43, 7 thousand), Mosi oa Tunya (23 thousand), Lower Zambezi (9 thousand) and Kafue are the most visited national parks. (13). Victoria Falls itself, however, is visited by over 140 thousand. people, registered separately from Mosi-oa- Tunya NP.

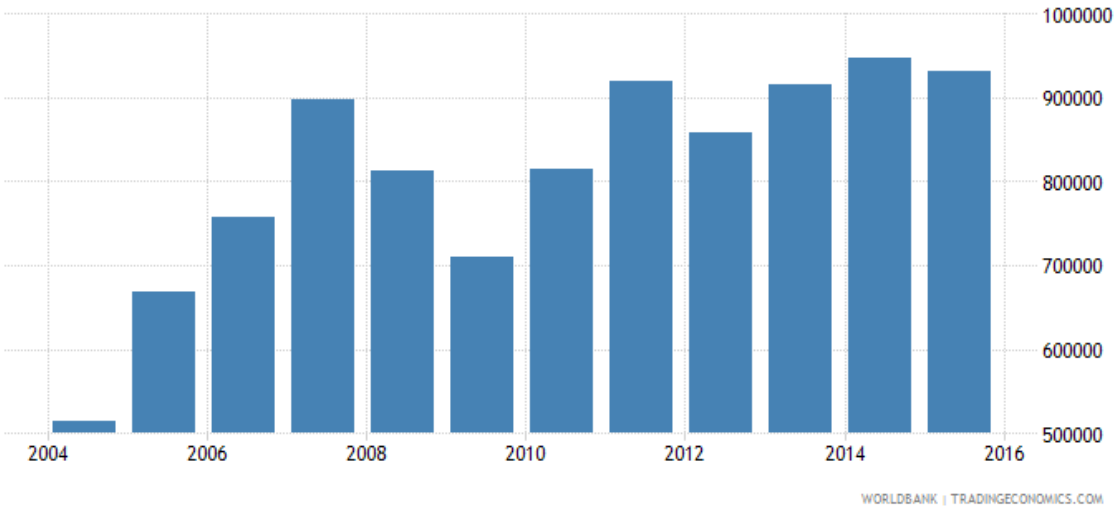

Figure 2. Number of visitors of Zambian National Parks

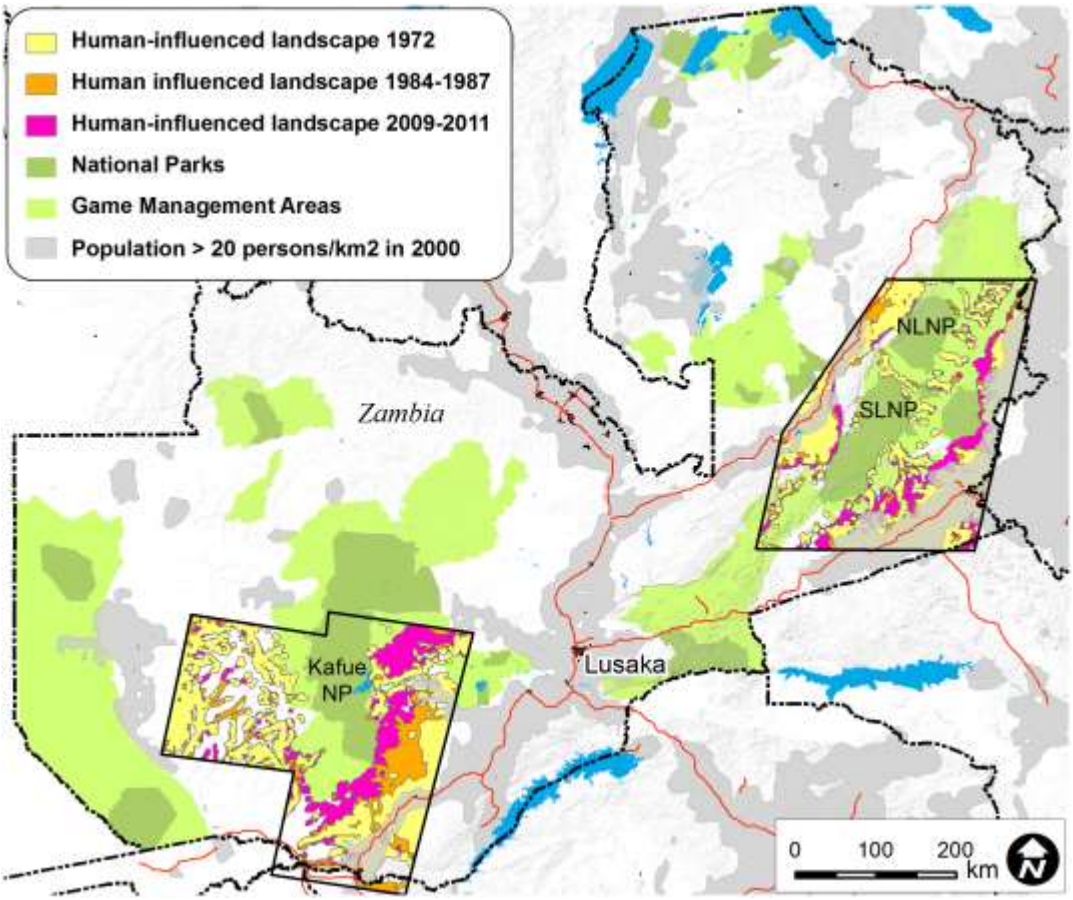

Figure 3. Map of parks (dark green) and hunting grounds (GMA, light green) and human impact on the landscape (Lyndsley et al. 2014). Part of the landscape near the western border of Kafue NP, despite the existence of GMA, is under increasing pressure from human influence.

2.2 NATURE PROTECTION IN ZAMBIA

Zambia has allocated a significant portion of its land surface to wildlife conservation. The protected area is comprised of 20 national parks (covering ~65,000 km2) and 36 game management areas (GMAs) (167,000 km2) and a variety of other protected area categories. Together these areas comprise ~40% of the nation's land area. Human settlement is generally not permitted in national parks and wildlife-use is limited to non-consumptive photo-tourism. In the GMAs, by contrast,

human settlement is permitted and wildlife use is focused primarily on trophy hunting (mainly by foreign nationals) and hunting for meat by local and national residents. Despite their size and potential, the wildlife resources in many GMAs are in a state of steep decline and are not sufficiently productive in ecological, economic or social terms. The reasons for the poor performance in GMAs are related to lacking participation of local communities, the Zambia Wildlife Authority (ZAWA) and hunting operators respectively. Local people do not receive adequate benefit flows from wildlife in GMAs, because community ownership of land and wildlife resources is not recognized. ZAWA-related issues are primarily related to underfunding leading to ZAWA making sustainable wildlife management decisions that confer short-term survival at the expense of long-term sustainability. ZAWA do not have sufficient resources to protect wildlife or monitor resources adequately. Clearly, new models for the structure and functioning of GMAs are needed to include ownership of blocks of land and the wildlife by local communities. These measures would enable communities to develop and benefit directly from wildlife-based land uses and retain important ecological connectivity within and between GMA's and national park complexes. Long term private investment in GMAs should be encouraged. Such arrangements should allocate leases to investors following a simple, fair and transparent tender or auction process, and should provide scope for both consumptive and/or non-consumptive wildlife-based revenue-generating options. Such investment would provide for 1) much greater anti-poaching law enforcement, which in turn would pay substantial dividends in wildlife recovery and income generation. 2) Increase governmental funding of the ZAWA to increase their capacity and reduce the need to generate revenue at the expense of sustainable wildlife management. ZAWA should play a key role in facilitating development of wildlife economies on community lands in GMAs and regulating them to ensure they operate within acceptable parameters. 3) Revise the legal framework for GMA's to facilitate recommendations 1-2.

2.2.1 Levels of National Park Management

Zambian National Parks can be classified according to the level and quality of their management into:

I. Acceptably or very well managed with vital tourist use, (NP South Luangwa, NP Mosi and Tunya, NP Kasanka)
II. Managed on average to low level, with partially preserved fauna and well preserved natural landscape visited by a small numbers of tourists (NP Lochinvar, NP Blue Lagoon, NP Liuwa Plain, NP Lavushi Manda, NP Luambe, NP Nsumbu)
III. Parks practically unmanaged, not used by tourists or used only marginally, with fauna practically destroyed, natural ecosystems under pressure in part of human-induced transformation (poaching, felling, settlement formation)
(NP Isangano, NP Lukususi, NP Lusenga Plain, NP West Lunga, NP Mweru Wa Ntipa, NP Nyika)

Transitional category:
I.-II. North Luangwa NP, Kafue NP, Lower Zambezi NP
II.-III. National Park Sioma Ngwezi

Zambia is not one of the most visited countries in Africa, but it is a beautiful country where, despite the increasing destruction of the natural environment, there is still a wide range of wilderness landscapes. A system of 20 national parks covering 8% of the land base zones with controlled game hunting cover 22% of the land. However, closer examination is not positive. GMAs, with three exceptions, are virtually devoid of viable populations and the overall conservation regime in them is close to zero. The situation in national parks is more complicated due to various funding sources, quality of management, expertise in environmental protection and sustainability and other factors. There is a clear correlation between the existence and development of ecotourism and the quality of nature protection in individual national parks Protected areas without tourist infrastructures and with a minimum of visitors are first populated, to a varying extent grubbed and used for agricultural purposes and subsequently new settlements are created there. Tourism in Zambia accounts for about 7% of GDP and about 4/5 of the country's visitors want to visit one or more protected areas. Visitor numbers of even "premier" national parks such as South Luangwa is low as it reaches about 20 thousand annually. In comparison, our nearly 30 times smaller Krkonoše National Park has an annual visitor rate of 1.5 to 3 million.

2.2.2 Zambian Protected Areas and National Parks

Comparison of parks shows the logic of selecting the 3 parks for placement of candidate sites for placement of the eco-camp.

Name	Area (km^2)	Natural environment	Tourist infrastructure and notes
NP Kafue	22 400	savannah, wetlands, rivers, elephant, lion, leopard, cheetah, lion, puku, hippopotamus, wildebeest, wild dog , sable antelope, roan antelope , sitatunga, lechwe	Stable and developing unevenly, given its large area unsaturated by tourists, KAZA, 13 thousand visitors. (2015)
NPLuiwa Plains	3 600	flooded savanna, river, migration of wildebeest, buffalo, zebras, reintroduction of lion, buffalo, cheetah, lecci	Seasonal with expensive campsites, NGO Africa Parks, settlements near park boundaries
NP Sioma Ngwezi	5 200	dry savanna river at border, fauna incl. elephant, lion, giraffe, antelope, buffalo, zebras - inlow numbers (poached out)	No permanent infrastructure, some by the Zambezi River about 40 km east, KAZA, discontinued support from African Parks , newly German KfB
NP West Lunga	1 680	woodland savannah, wetlands, heavily poached, sparse antelopes, hippo, elephant, buffalo	difficult access, virtually no infrastructure, (edge), NGO AP
NP Mosi and Tunya	100	waterfalls, river and canyon Zambezi, elephants, buffalo, etc.	Sufficient infrastructure at Livingstone, 23 thousand. visitors (2015)
NP Lochinvar	410	flooded plains, wetland endemic lechwe (thousands), hippopotamus, buffalo, zebra, kudu	now virtually no infrastructure, domesticated cattle
NP Blue Lagoon	450	flooded plains, wetland endemic lechwe (thousands) hippo, buffalo, zebra, kudu	renovated abandoned farm
NP Lower Zambezi	4 090	savanna, wetlands, elephant ridge, zebra, buffalo, lion, leopard, wild dog, antelopes	Threat of base metal exploration and mining, (4 -9 licences), TFCA proposal, 9 thousand. visitors (2015)
NP South Luangwa	9 000	savanna, rivers, hills, seasonal wetlands, elephant, hippo, lion, hyena, leopard, wildebeest, zebras, buffalo, giraffe	By the river well developed infrastructure (more than 15 facilities), 43 thousand. visitors (2015)
NP North Luangwa	4 600	savanna, miomb and mopan forests, rivers, elephant, lion, buffalo, wilddog, wildebeest, zebra, leopard, hippo and black rhino	weakly (3 or 5) developed, support FZ Gesselschaft TFCA
NP Luambe	254	savannah and seasonal wetlands by the river, elephant, hippo, leopard lion, wild dog, antelope buffalo, wildebeest	owned by a German couple
NP Kasanka	390	savannah, miombo woodland , lake wetland, elephant, swamp antelope, rarely lion, buffalo leopard, hippo and millions of fruit bats	Sound 2 facilities (Kasanka Trust) , 1400 visitors (2012)
NP Lusenga Plain	880	miombo woodlands and grassy plains, waterfalls, rare (poached) antelopes, zebras, hippos, scenic landscape	virtually no point of interest, except for waterfalls, unresolved reintroduction of elephant fromSouth Africa
NP Mweru Wa Ntipa	3 100	Miombo woods, grassy plains and papyrus wetlands, apparently poached	no point of interest,few immobile guard stations
NP Lukusuzi	2 700	miombo and grass savannas, poached low numbers of elephant, zebra, buffalo, antelopes	no point of interest no paths roads, included in TFCA
NP Nsumbu	2 000	miomb and grassy savanna wetlands by Lake Tanganyika, elephant, buffalo, hippo, zebra, antelopes, rarely lion, leopard (partially poached out)	1 functional and 1 abandoned campsite inside, 1 on the border functional, poorly used, seasonal fishing village
NP Isangano	840	flooded grass plains, miomb savannah, rarely elephant, buffalo, zebra, hippopotamus, antelopes (heavily poached out)	no point of interest , poor accesibility, illegal settlements, mostly destroyed
NP Lavushi Manda	1 500	miombo woods, grassy plains, and mountain ridge, scenic waterfalls, a wide range of extremely low occurrence of fauna due to poaching (elephant, lion, antelopes, hippopotamus, buffalo, hyenas ...)	very primitive camp, - rehabilitation attempt, new camp from 4 permanent tents (2017), Kasanka Trust (finished in 2018)
NP Nyika	80	mountain plains, elephant, antelope, leopard	no point of interest, cross border park (3100 km ^{2} *in Malawi*
NP Ngonye	17	scenic rapids around the river	basic campsite, KAZA

Falls			
NP Lusaka	67	hilly terrain, rhinoceros, giraffe, zebra, sable antelope, pangolin,	Reservations available within 30 min. from Lusaka

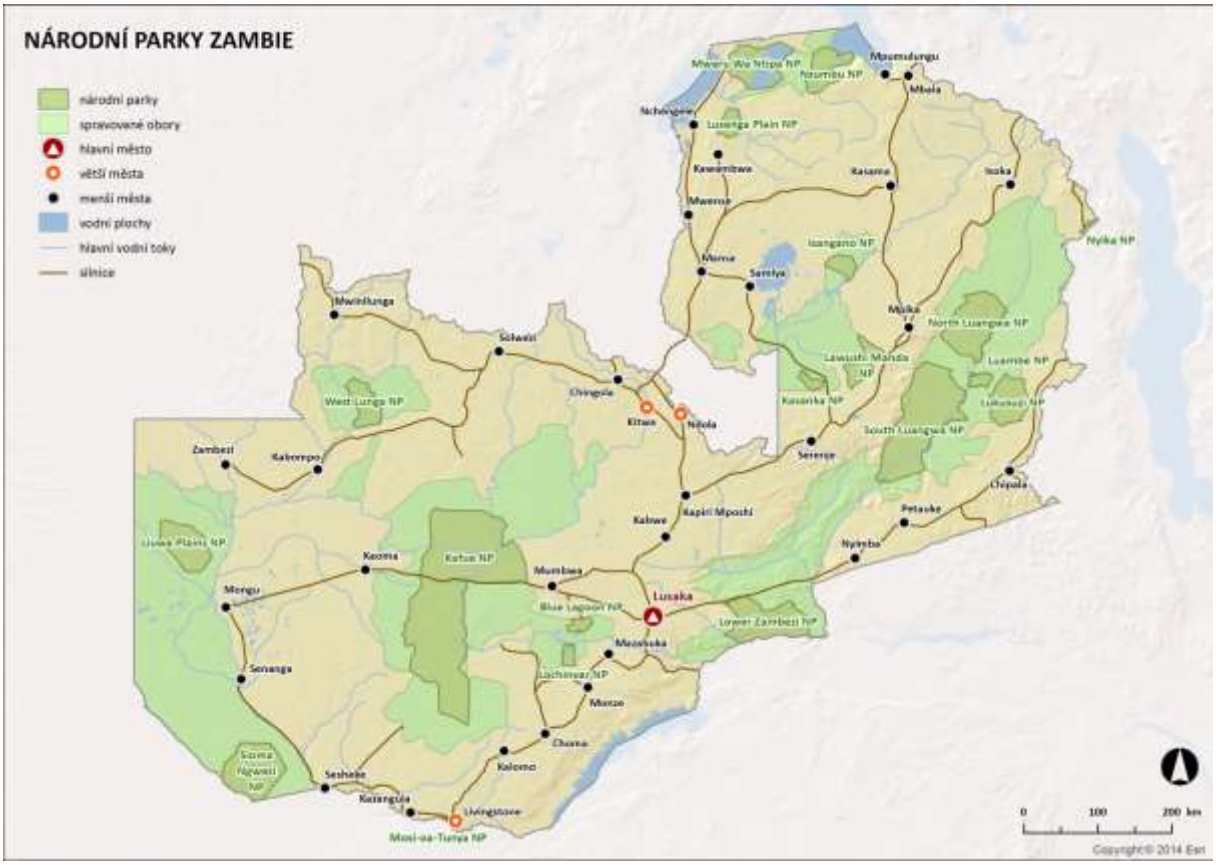

Figure 4. Location of national parks (green) and hunting grounds (lighter green) in Zambia.

Figure 5. Fig.3 Zambia still has more than half of its area covered by well-watered landscape made up of natural and near-natural habitats. The Luangwa River connects three national parks and several controlled hunting areas (GMAs).

Figure 6. The wild dog is one of the rarest and most endangered animals. It has already disappeared from 23 African countries and its population is estimated at 6 thousand, in Zambia then 400 to500 individuals. The most stable populations are in Kafue NP, North Luangwa NP, South Luangwa NP and perhaps also in Lower Zambezi NP. In recent years, the dramatic decline has perhaps slowed. NP North Luangwa 2015, Photo F.Pelc

Figure 7.Zambia hosts one third (!) of the African population of 130 thousand hippos. Unlike most countries, the local population is stable. In neighbouring Congo, 95% of the original number has been poached in twenty years. Herds, if so called, with a few hundred individuals in some rivers are not rare. NP Luangwa. It is also common in Kafue NP and Lower Zambezi NP. It can be found in Sioma Ngwezi NP on the Kavango border river and similarly on the Zambezi River in the adjacent area east of the NP. Photo by F. Pelc

In summary, Zambia's national parks are less busy than national parks in Tanzania, Kenya, Uganda, South Africa, but also in neighbouring Namibia, Zimbabwe or Botswana. Causes are identified differently. One of the reasons for this is the lower concentration of attractive representatives of African fauna or the supposedly higher real cost of tourist services such as accommodation (Analysis of Tourism Value Chain in Zambia, CBI Netherlands, 2018). Although the price of accommodation is increasing, it is still approaching the price of comparable facilities in the countries mentioned, and in Zambia there are still some camps with medium or lower accommodation costs, including the possibility of using tents (the concentration of game in some areas is also very high and, for example, in Bangweul wetlands, endemic herds of black (Kobus smithi) of up to tens of thousands can be observed. However, it is possible to assess the overall landscape geomorphology as more uniform with the absence of high mountains than in most of the countries compared, with a large number of watercourses and lakes including the beautiful giant Lake Tanganyika and the famous Victoria Falls. This might have some effect. On the contrary, it is a fact that in Zambia there are still large portions of close-to-nature landscapes, certainly larger than in South Africa, Uganda or Kenya, which can attract a significant part of the ecotourism clientele.

The total number of visitors to all national parks in Zambia has been estimated to have been only slightly over 100,000 in recent years. According to the 2016 Ministry of Tourism and Arts (Tourism Statistical Digest 2015), South Luangwa (43, 7 thousand), Mosi oa Tunya (23 thousand), Lower Zambezi (9 thousand) and Kafue are the most visited national parks. (13). this means that all other national parks are attended by approx. visitors. Victoria Falls itself, however, is visited by over 140 thousand visitors who registered separately from Mosi-oa- Tunya NP.

3 PROJECT RATIONALE

With the Zambian copper industry in decline and up to 80 percent of the people living below the poverty line, the Zambian government has been looking to tourism to revitalize the economy. Central to its plan to make tourism an important driver of the Zambian economy, the Mukuni Environmental and Economic Development Trust has been established to explore ways in which local residents can benefit from tourism development.

The trust aims to educate tourists about the people's precolonial history and way of life in order to tackle some of the concerns about the cultural impacts of further tourism development. Several other initiatives are underway to promote eco-tourism as a viable and sustainable economic udertaking.

This study aims to:

- Select one of three pre-assessed National Parks (Kafue, Sioma Ngwezi, Lower Zambezi) as an optimal eco-tourism site. The pre-selected sites have been designed by Zambian authorities
- Propose basis eco-tourist infrastructure framework
- Determine basic investment needed
- Identify possible investment sources
- Desribe risks of sustainable operation of the eco-tourist facility

3.1 BRIEF EVALUATION OF THE PLANNED PROJECT

Six sites in three national parks have been determined based on negotiations with representatives of the Ministry of Tourism and Arts and the requirement of this institution reflected in the study application (2018). The main criterion for the selection was easy access from Lusaka and Livingstone International Airports (within half a day by car). Since 2017, Zambia has again become a priority country for Czech development cooperation. This project is the first step in establishing an ecotourism campsite using international standards which will contribute to the prosperity of local communities and eradication of extreme poverty in while improving the quality of protection of the natural environment and biodiversity. Both are an essential prerequisite for reducing massive migration of the rural population. Selection of the optimal site and the feasibility of establishing the ecotourism facility are the focus of this study. Comparative SWOT analysis and a preliminary cost estimate for construction of the facility are presented.

3.2 DESCRIPTION OF THE PROJECT'S PRINCIPLES AND PROPOSAL OF STAGES OF ITS IMPLEMENTATION

3.2.1 Project's Principles

Ecotourism is a responsible travel to natural areas that covers the environment and sustains the well being of local people. The main principles of this project will include:

1. Avoiding negative impacts that can damage or destroy the character of the natural or cultural environments of the eco-facility.
2. Education of visitors of eco-facility on the importance of conservation.
3. Direction of revenues to the conservation of natural areas and the management of protected areas.
4. Economic benefits to local communities.
5. Planning and sustainable growth of the eco-tourism industry and ensuring that tourism development does not exceed the social and environmental "capacity."
6. Retaining a high percentage of revenues in the host country by stressing the use of locally-owned facilities and services.

The term ecotourism covers aspects of tourism that draws upon natural, human-made and cultural environments. It is often used to describe any type of travel which focuses on natural environments or settings. Additionally, ecotourism adds social responsibilities to make

3.2.2 Proposed stages of implementation

1. Considering sustainability

Sustainability of the product should be assessed and embedded in the project plan. The product should be in coordination with the sustainable development of the area. Ecologically sustainable development (ESD) aims to achieve the best environmental, economic and social outcomes. ESD recognizes that the existing environment creates opportunities and sets constraints. Goals of economic growth, environmental protection and a healthy society can be irreconcilable and choices will have to be made. In such situations, there will usually have to be trade-offs to obtain the best economic, environmental and social outcomes. Tourism will be ecologically sustainable if it:

- does not use non-renewable resources faster than renewable substitutes can be found to substitute them
- does not use renewable resources faster than they can be replenished
- minimizes operational energy consumption
- does not release pollutants faster than the biosphere can process them to a harmless state
- has no impact on biodiversity and ecological systems and processes
- maintains a full range of recreational, educational and cultural opportunities for the present and future generations
- benefits local communities and the region socially and economically
- does not affect the capacity of other sectors of the economy to achieve ecological sustainability.

2. Feasibility study

The purpose of this initial stage of the development process is to clearly define the project and determined whether it will be possible to realize it. The possibilities for the development are determined by the available opportunities and the unavoidable limits of resources; the market; the environment, ecology, the needs and requirements of the local community and political realities. It necessary to produce a profile of the tourist product, the intended market for it and clientele; the facilities and services the eco-touristic product will include; SWOT analysis on the type of site that will be suitable the most for development of the eco-touristic product. Suitable site for eco-tourism site has to be selected.

3.2.3 Proposed Implementation Stages

The stages described below integrate the needs of tourism and the environment when developing an eco-tourist destination, - as defined and used in similar international projects. You proposed eco-tourist product should be environmentally safe and consider the principals of sustainable development. The following steps should be considered:

1. considering sustainability
2. feasibility study
3. planning
4. assessment and approval
5. construction
6. operation and management

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This report concludes step 2. Steps 3.-6. are subject of approval of the project implementation going ahead.

3.3 MARKET ANALYSIS, ECO-TOURISM SERVICES DEMAND, MARKETING STRATEGY

3.3.1 Current situation

Zambia's appeal to the leisure visitor is based on its natural resources, including its unspoiled and varied landscape. In addition to the iconic Victoria Falls, Zambia has a wealth of rivers, lakes and waterfalls, as well as a rich and unique flora and fauna. These elements, combined with the country's interesting cultural traditions, make Zambia a strong adventure and safari destination. Zambia is considered to be a safe and stable country with hospitable people. Zambia has the potential to appeal to the growing adventure, safari and eco-tourism participants from , including the community-based tourism, birding, hiking and wilderness niches, and the main outdoor activity markets from Europe, North America, Australia, China and other countries. The Zambia Tourism Master Plan 2018-2038 (ZTMP), which provides the Ministry of Tourism and Arts (MoTA) with the blueprint for national tourism growth has been approved in 2019. Currently the fastest-growing economic sector in the country – contributing US$1,8bn last year – travel and tourism is a national priority for growth and the vision is for Zambia to rank among the most-visited holiday destinations in Africa. Massive investment in airport facilities and the launch of several charter flights to connect passengers to the Lower Zambezi National Park, Luangwa and Livingstone makes reaching Zambia's key safari destinations much easier.Zambia is primarily marketed as an 'add-on' to a southern Africa tour, consequently the average length of a leisure trip is only four nights. Leisure tourism relies heavily on Victoria Falls. Zambia's holiday tourism sector, including tour operators and accommodation, is focused around Livingstone and the Southern Province. The ZTMP vision is to spread leisure tourism to other areas through phased development. The key obstacles that restrict Zambian small and medium-sized enterprises from expanding sales to the European market are: 1. Marketing issues a. Limited diversity of products that meet European consumer expectations, due to inadequate market intelligence amongst tour operators and suppliers b. Limited variety of accommodation, in particular a lack of 3 and 4-star establishments c. Poorly marketed cultural activities, especially community-owned and community-led tourism experiences d. Only a limited range of destinations across Zambia that are connected and packaged e. Lack of offer during the 'green' or wet season f. Livingstone, with Victoria Falls, is losing its competitive position to Zimbabwe g. Lusaka depends on business and meetings, incentives, conferences, and exhibitions (MICE), having a very limited leisure offer h. Customer service of poor and inconsistent quality, shortage of skilled workers and poor training i. Low competitiveness on price due to high taxes, few direct flights from source markets and expensive internal flights. The short safari season forces players to generate profit within its six months' duration, and pushes staff into unemployment for the remainder of the year j. Weak brand positioning and destination marketing: low awareness of Zambia in outbound markets k. Marketing activity in Europe is led by high-end safari lodges that have long-standing relationships with European tour operators, leading to a perception of Zambia as an expensive destination.

3.3.2 Current Local Eco-tours Offered

Current tours labelled as eco tours are offered to South Luangwa, Kafue and Mana Pools National Parks. **The South Luangwa Valley** is a wilderness area and wildlife sanctuary in Africa with elephants, lions, cape buffalo, zebra and more. **Kafue National Park**is one of the largest National Parks in Africa with open flood plains with a diversity of mammal species --including cheetah where eco-tours are offered. **Mana Pools National Park** tourse offer boat tours on the Zambezi River.

3.3.3 Foreign tour packages

Zambian inclusive packages are on average offered by EU operators as most expensive at €365/day, followed by Ethiopia packages at €194/day and €132/day for Senegal packages. A key reason for the high package cost is the number of flights in Zambian packages, as Zambia is mostly combined with two destinations or more, including South Africa, Botswana, Namibia, Tanzania and Zimbabwe. Zambia is perceived as a rather expensive safari destination due to a lack of self-drive possibilities, with expensive accommodation facilities. In addition to the high cost of internal flights, this perception also reflects the lack of mid-range accommodation facilities used by international tour operators in key destinations like Livingstone, South Luangwa and Lower Zambezi, combined with higher VAT and service tax than apply in Botswana or Zimbabwe. The country is primarily positioned as an eco-tourism and safari destination, having Victoria Falls as one of the must-do's, while cultural as well as community experiences, although available, are not frequently promoted.

3.3.4 Market constraints

Several tourism market constraints are reported by Zambian tour operators, tourists and the ZTMP. These include:

1. Access to European marketplace: only a few inbound tour operators are active in this market

2. Sustainability problems

a. Limited sustainability practices with few accredited businesses and lack of community-owned and community-led activities

b. Local communities, which are critical to wildlife conservation, currently receive limited direct benefit from non-consumptive tourism

3. Enabling Environment

a. Lack of collaborative working

b. Weak public and private sector institutions

c. Low level of skills in the Ministry of Tourism and Arts (MoTA) to implement and monitor the ZTMP

d. Decentralisation of tourism development to weak regional administrations lacking tourism expertise

e. Poor system for tourism data collection and distribution

f. Poor regulations and enforcement

g. Limited ability to deliver management plans for national parks and game management areas

3.3.5 Current Weaknesses of the Tourism Sector

Tanzania, Zimbabwe and South Africa offer a greater variety and quality of historical sites and general scenery. Zambia is at a disadvantage regarding proximity to major markets, cost of travel and ease of access. The ZTMP identifies factors that contribute to the high cost structure in the industry. These include:

• Bureaucratic business procedures and red tape such as cumbersome business licensing, which place a major burden on an industry that primarily comprises medium-sized and smaller businesses.

• High costs of borrowing from the banking sector

• Heavy tourism taxation, including: o VAT at 16% compared to Botswana (12%), South Africa (15%) and Zimbabwe (15%), applied to all accommodation and activities related to expenditures, while in Zimbabwe, tourist activities are not subject to VAT at all

• Lack of suitable investment incentives for the sector to stimulate development in underdeveloped areas. High airfares, especially on domestic routes

• International leisure tourism is underdeveloped and occurs mainly at a few tourism nodes, namely Livingstone, South Luangwa and to a lesser extent at Lower Zambezi and Kafue National Parks. In these destinations well-established, mostly high-end lodge operators own the majority of accommodation establishments that market to European tourists.
• Insufficient and inconsistent marketing funding.
• Lacking skilled marketing staff and international representation
• Lacking strong public-private marketing partnership and joint marketing

3.3.6 Interest in Future Ecotourism Operations

Due to the many undiscovered and undeveloped destinations, Zambia has a strong growth potential in both the more independent travel and eco-tourism segments, including birding, community-based tourism, waterfalls, hiking etc. There is potential for Zambia to appeal to the growing adventure, safari, and eco-tourism segments from Europe, including community-based tourism attractive to visitors coming from the main European outdoor activity markets in Germany, the UK, the Netherlands, France and Scandinavia.

Zambia's inherent resources and market position is described by the Zambia Tourism Master Plan which identifies the comparative advantages and disadvantages: • South Africa (nine world heritage sites), Tanzania (seven world heritage sites) and Zimbabwe (five world heritage sites) are better positioned in terms of unique 'bucket-list' sites to visit. • Botswana, Tanzania and South Africa offer the Big 5 and more varied wildlife and safari experiences. • Most destinations are on par with Zambia for cultural uniqueness.

However: Zambia has **more** major African **lakes** (Kariba, Tanganyika, Mweru, Bangweulu), **major rivers** (Zambezi, Luangwa, Kafue, Luapula, Chambeshi) and **large water bodies** (Victoria Falls and other waterfalls, Bangweulu Wetlands, Kafue Flats, Liuwa Plains, etc.) than any other country in the region. It also has water bodies with unique biospheres that sustain Africa's prolific fauna and flora and inspire unique cultural traditions, such as the famous Kuomboka ceremony of the Lozi people. As a result, Zambia offers a greater variety of unspoiled natural and cultural experiences than most destinations in the region. These include the many superb waterfalls in the north, the range of undeveloped national parks; cultural ceremonies and dancing that are not yet on the tourist map. Plus, it has a reputation for very good safari guiding. In addition, the country has a stable image, is safe for travellers and the people are exceptionally receptive and hospitable.

3.4 KAFUE NATIONAL PARK, OVERVIEW

One of the largest national parks in Africa and in the world with an area of 2,400 km2 is located in the west of central part of Zambia and forms part of the border with the Western province. The M9 asphalt road leading from Lusaka to Mongu divides it into two segments of approximately the same size. The park is connected to fourteen areas of controlled hunting with a total area of which equals the size of the park itself and one private reserve Mushingasi (500km^2). Of the fourteen hunting areas, only four are in good shape (GMA Mulobezi, Nkala Billi, Mumbwa West and Kasonso Busanga), six are severely damaged, and four are practically fully poached out. As well as being one of the largest parks, Kafue is also one of Zambia's oldes. Although it wasn't awarded national park status until 1950, Kafue was established as a protected area under British colonial rule as early as in 1924.

The landscape is dominated by a slightly undulating large plain (altitude 1000-1479m) covered largely by open-faced miombi woodlands (Zambian miombo-dambo mosaic vegetation formation) cut by several rivers (the largest Kafue, Lufupa) with river forests and river bank vegetation and local permanent and temporary wetlands. In the north, the extensive flooded open grassland of Busanga extends roughly 1000 km^2 with numerous termite mounds for part of the year. The southern part of the park is influenced by the Kalaharian sands and is much more dry and overgrown with thinner miomb woods and a mopan in the south. Large solitary baobabs can be found in the North tens of meters in diameter. Miomb forest in the north is subject of higher rainfall with dominating woody species Julbernardia paniculata and Brachystegia sp. Ficus sycamorus is also common here. There are also teak forests in the southern sector, especially the impressive 25km^2 Ngoma forest consisting of tall Baikiaea plurijuga trees and smaller Pterocarpus antunesii. In the eastern part, there is a dam of three to four hundred square kilometres which stabilizes water for the Gorge Kafue hydroelectric power plant several hundred kilometers away. The territory of the National Park lies at the intersection of two continental plates (Congo craton and Kalahari craton), which are often associated with deposits of diamonds and gold. Among these slabs is a strip of younger rocks of the so-called Katanga group, which contains copper ores mined on

the NE from the national park in the area of Copperbelt. It cannot be ruled out that part of these deposits also occur in the national park.

A wide range of African fauna (510 bird species and 158 mammal species) lives in the park but in low numbers. The largest population of antelopes has the puku , there is a healthy population of African elephant (about 6 thousand), wildebeest, buffalo, hippopotamus, steppe zebra, , Lichtenstein hartebeest,, waterbuck, and impala, roan antelope, sable antelope and sitatunga (approx. a thousand), oribi antelope, , steenbook . The lion is sparsely but widely distributed, mostly in the plains of Busanga. Busanga plains is occupied by a large herds of lechwe antelope.Leopard and Spotted Hyena are quite common, although observations are not so common. Cheetah is rare, but regularly spotted mainly in the northern plains. Thewilddog (painted dog) has the strongest population in the whole of Zambia and forms several packs with a population of 10 to 30 animals widely migrating through the park. Nile crocodile is common in rivers. Saddle stork is common and abundant in the north (about 50 pairs) s where also the rare warty crane nests. Some Zambian or regional endemic species are also present such as the Black –Cheeked Lovebird (Agapornis nigrigenis) and more widespread Racket-Tailed Roller(Coracias spatulatus).

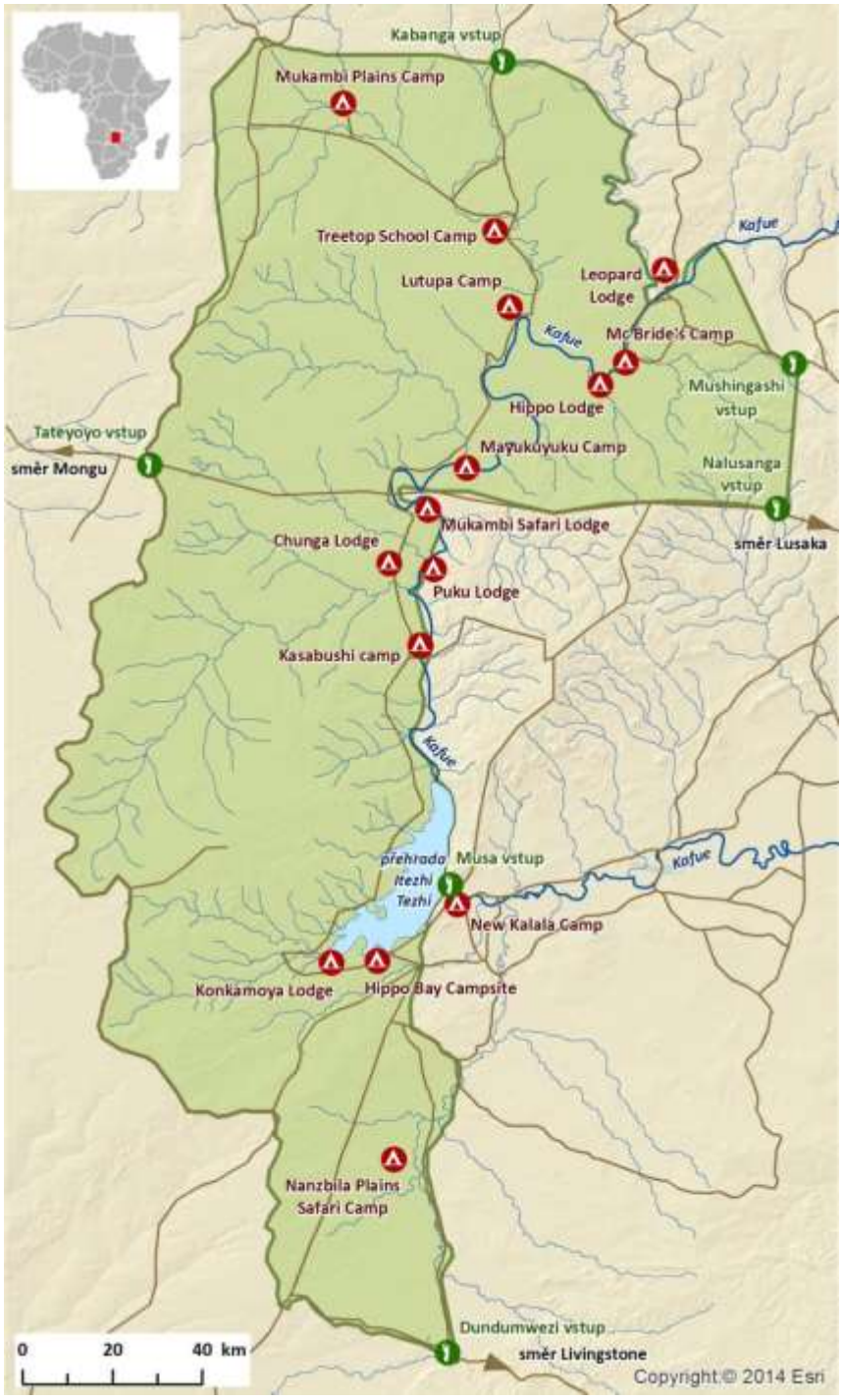


Figure 8. Map of the **Kafue National Park**. **With some exceptions, tourism facilities are attached to the Kafue River**

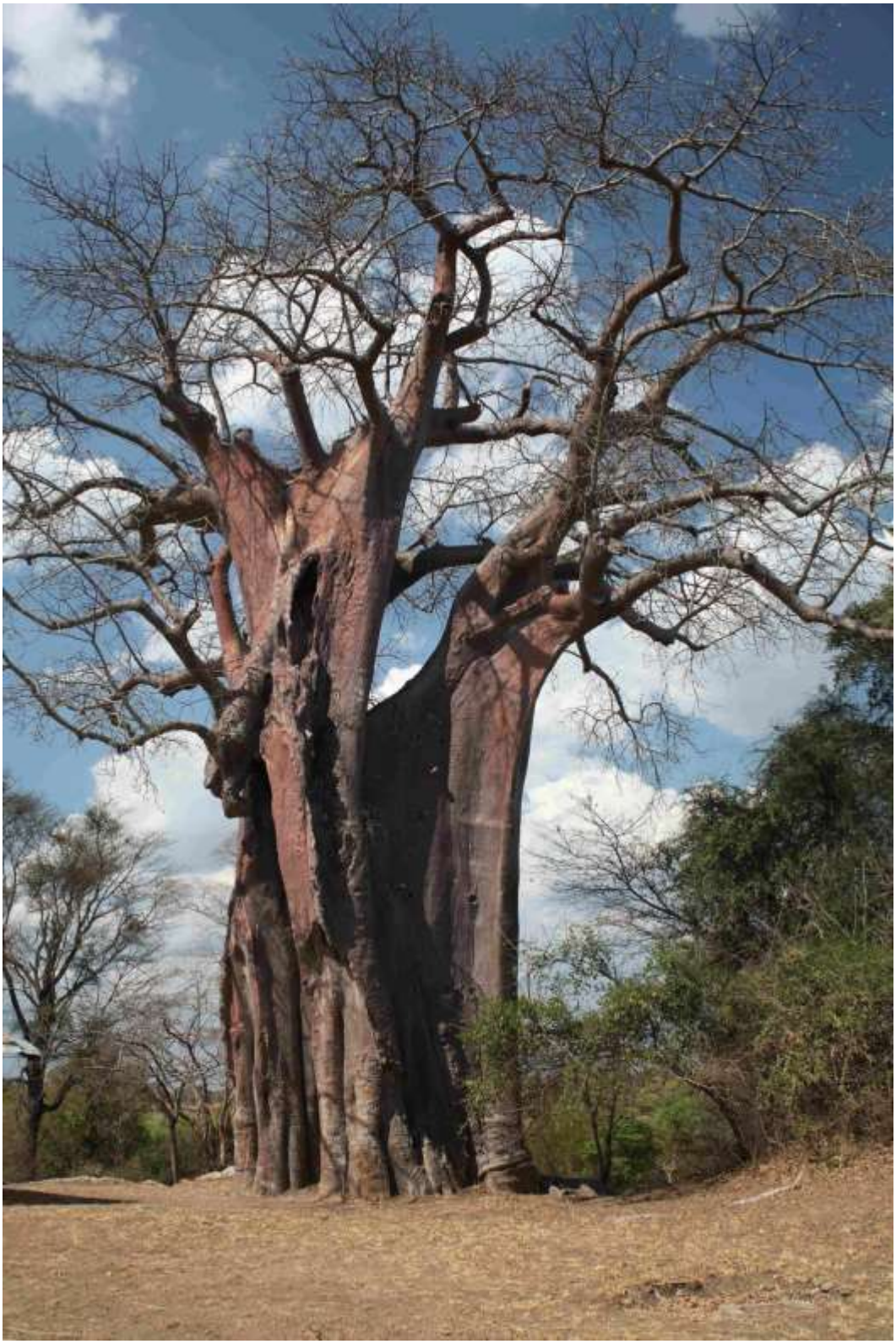


Figure 9. An important landmark of the local landscape is the ring-tailed baobabs (Adansonia digitata), which have a trunk circumference of over 30m. Treetops school, NP Kafue

Figure 10. Kafue Flats wetland is of international significance in the same bird area that begins two hours' drive from Lusaka and covers an area of 6500 km2. It is a significant Bird Sanctuary outside of the boundary of NP Kafue. Similar but smaller swamps are possible to find inside the NP Kafue.

Figure 11. North of Kafue National Park is formed by Busanga's extensive grassy plain, covering an area of over 700 square kilometers, where thousands of herds of wildebeest, leches (in pictures) and other species of antelope are concentrated.

Figure 12. 35. The Kafue River, in places almost a kilometre wide, forms an ecological axis of the Kafue NP.

3.1 DETAILED SITE ANALYSIS

3.1.1 Kafue National Park Site

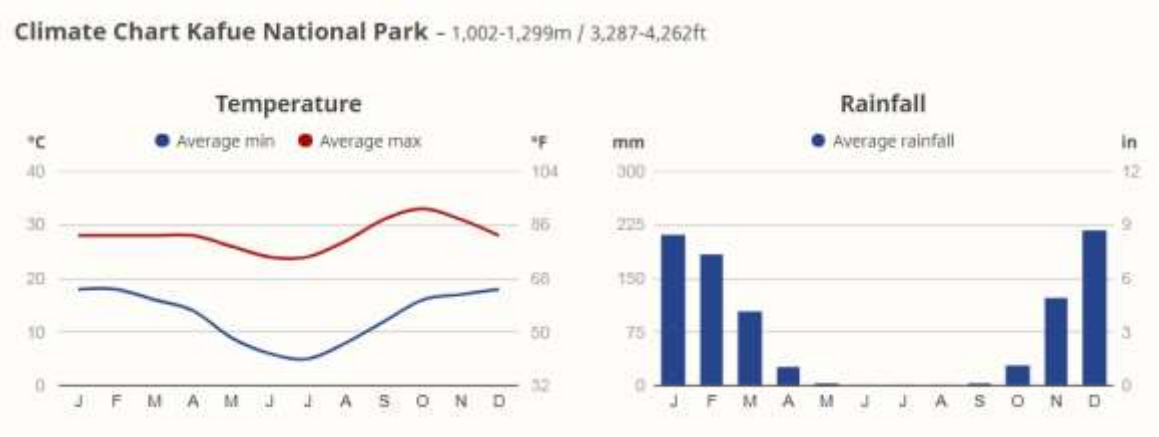
The Kafue NP site at the confluence of the Kafue and Shishambe rivers was found most suitable for the placement of an eco-camp site.

3.1.2 Biodiversity

Kafue National Park takes its name from the 1,900 kilometre long, emerald-green Kafue River, which is fringed by riverine vegetation. During the dry season from May to November, the river attracts all manner of wildlife and provides water for many different species. Large crocodiles are abundant, and birdlife is prolific, including the Pel's fishing owl and African finfoot. Defassa waterbuck, sable, hartebeest, blue wildebeest, Cape buffalo, and plains zebra. The prominent ilala palm is abundant in the area and attracts elephants. The northern section of the park is dominated by the vast, rolling Busanga Plain fed by the Lufupa River system, which recedes in the dry season, stranding large herds of hippos in shallow pools. This is one of the Kafue's richest wildlife areas, attracting a diverse range of antelope that includes many thousands of red lechwe and – deep in the swamps – the elusive sitatunga. This profusion of the game attracts numerous lion, leopard and cheetah, wild dog, and serval cat while there have been about 495 bird species recorded, which makes Kafue probably the richest birdlife park in Zambia.

3.1.3 Climate

Kafue has a hot climate, with a Wet season and Dry season. The average temperature is quite uniform throughout the year, as the park is in the tropics. However, there is an increase in temperature in October, before the rains begin. The nights tend to be cooler in the Dry season, from May to October. There is very little rain in the Dry season, which is the best time for wildlife viewing, and it gets better as the season progresses. It is warm during the day, but cold at night and in the early morning. Temperature and rainfall averages are shown below:



The best times to visit Kafue National Park for ideal weather are April 16th to September 16^{th,} based on average temperature and humidity from NOAA (the National Oceanic and Atmospheric Administration).

The phasing out of the Kafue Programme that aimed to secure critical habitats and species in the Kafue National Park and adjacent Game Management Areas has had an impact on wildlife protection effectiveness and tourism. While populations of 'key' wildlife species continued to grow, and numbers of tourists and the associated revenue had increased, four years after the programme, the illegal activity also increased to the level of the pre-programme period. It is essential for the Department of National Parks and Wildlife to take measures to curb the poaching of all species affected.

3.1.4 Attractiveness and potential for eco-tourism development

Representative extensive landscape-vegetation types include typical savanna, wetlands, grassy plain, forest, and visually attractive vegetation (eg., baobabs, large trees of other species). Particularly attractive types include the grassy plain of Busenga in the north (approx. 700 km^2) or the Nanzihla plain in the south where large baobabs (probably the largest in Zambia) are present as well as a fragment of a teak forest Ngoma (25 km^2). The landscape is relatively flat with large floodplains, meanders of rivers, and exceptional rock gardens. Water is present in lakes, permanent and temporary rivers, and permanent or temporary wetlands. The stable or slightly increasing number of African elephants, is, according to the air census is 4800 pieces with a probable estimate of 2265 individuals not counted (UICN 2016). The total population can be assumed at 6000, - the highest of all national parks in Zambia.

Presence of flag species: elephant, lion, buffalo, hippo, leopard, cheetah, giraffe, rhinoceros, crocodile, zebras, hyena dog, spotted hyena, large antelopes such as horse, elk, crow, wildebeest, buffalo, lion, etc. warrants establishment of different game drives focused on different species, landscapes, and vegetation cover. In addition to safari game drives, there is potential to establish boat cruises, - accompanied by guards and canoe rides. Bird watching has enormous potential due to the presence of a wide range of species and little disturbance from tourist activities. The rhino was exterminated by poaching decades ago while the southern giraffe either did not occur at all in historical times or that its habitat dates back 100 years ago or closer to the present.

Figure 13. Map of the Kafue National Park with the location of the selected eco-camp site.

Figure 14. Location of the selected site in 2D and 3D.

Figure 15. Panoramic view of the confluence of the Kafue and Shishambe Rivers. The location above is suitable for the eco-camp site on the upper terrace, - out of the reach of regular floods. Hippos are present permanently, elephants, and lions occasionally.

Figure 16. The selected proposed site for the establishment of an ecotourism facility - the upper part, approximately 1 hectare in size

Figure 17. 41. The central part of the selected site suitable for setting up an eco-camp.

The selected site location has been recommended by park director Mirriam Namushi at the confluence of the Shishambe and Kafue rivers and thoroughly examined. There is no campsite in the park or the immediate vicinity of the site. The number of eco-camps in the park is very low (less than one per 1000km2).

The area is very clean and safe, with minimal pollution impacts from sparse surrounding settlements.

3.1.5 Accessibility

The park is easily accessed from both Lusaka and Livingstone with a 2-3 hour drive, although many prefer to fly in with charter flights. Kafue National Park is easily accessible by high-quality M9 asphalt road from Lusaka to Mongu. The distance to the Nalusanga gate it is about 190km (the park is the north of the road, but there are no direct turns to any internal road NP), - the distance to the main gate Chunga is about 290km. This means the park border at the nearest gate is less than 3 hours from Lusaka, and the main gate is less than 4 hours away. Road to the Chung Gate - more than half passes through an area of mostly agricultural, intensively managed, medium-populated countryside. More than a third, especially outside the town of Mumbwa is predominantly natural, is forested, and contains various hills and cliffs. The road from the entrance gate to the park management is a well-maintained unpaved access road (approx. 25km). A similar road leads to the headquarters of the employees (approx. 3-4km) and then runs smoothly (in dry times) to the Kafue and Shishambe 4-5 km long, which would need only partial and cosmetic treatments with an estimated tens of thousands of crowns (removal of shrubs).

3.1.6 Landscape

The shores of the human-made Lake Itezhi-Tezhi in the South offer mahogany and ebony trees, interspersed with gnarled baobabs. Verdant thickets merge with recovering teak forests. Low granite hills disrupt the landscape, which eventually returns to grasslands, at the very southern tip of the park. The varied terrain attracts a diversity of wildlife.

The Busanga floodplains attract a variety of wildlife with most of the park's 21 antelope species present, including rare red lechwes. To get an idea of the scale of this enthralling region, take a hot air balloon ride (at an additional cost) over the Busanga Plains. Float silently over the green, watery landscape below; this airborne perspective offers unrivaled views of Kafue.

3.1.7 Accessibility

Kafue National Park is easily accessible by the high-quality M9 asphalt road from Lusaka to Mongu. To the Nalusanga gate, it is only about 190km (the park is the north of the road, but there are no direct turns to any internal road NP), and

the main gate Chunga is about 290km. This means the park border at the nearest gate is less than 3 hours away, and the main gate is less than 4 hours away. The road to the Chung Gate - passes through an area of mostly agricultural, intensively managed, medium-populated countryside. More than a third, outside the town of Mumbwa, is natural, forested, and contains various hills and cliffs. There is no significant attractive phenomenon on the way to Kafue NP. However, not far from the M9 road (about 30km), a dusty but solid road, passable outside the rainy season, leads to the Blue Lagoon NP in the Kafue wetlands. Wetlands host tens of thousands of endemic water lilies (Kobus kafuensis), hippos and buffalos, and there is a wealth of birds. It is also possible to stay here, and after a morning, observation continues a small detour to the Kafue National Park.

3.1.8 Available human resources

A small community located about 5 km from the park hosts local craft firms or artisans likely available for facility construction and operation. According to the Northern Area Park Director, there are approximately 180 employees and several several volunteers involved in the operation of this park section. This translates to 1 guard per 50 -75 km^2, which is a small number considering sub-standard technical equipment.

Figure 18. A small basic settlement with small, supportive agriculture (,e.g., corn, poultry, goats) is located 5-6 kilometres from the park. This could be a likely source of workforce and agricultural products.

3.1.9 Available water and energy

Water from the river will be analysed and treatment options assessed.

3.1.10 Potential for employment increase

The park lies in the North-Western, Central, and Southern provinces. There is substantial unemployment in North-Western provinces/ Construction operation, and the supply of agricultural products by local communities would reduce unemployment of communities in the vicinity of the proposed eco-camp.

3.1.11 Potential for further development of supporting activities (research, education, healthcare)

There are 21-22 functional ecotourism facilities (permanent and temporary in the national park or close to its borders). The camps are concentrated along the Kafue River, with few exceptions. The presence of a truly ecological site built to

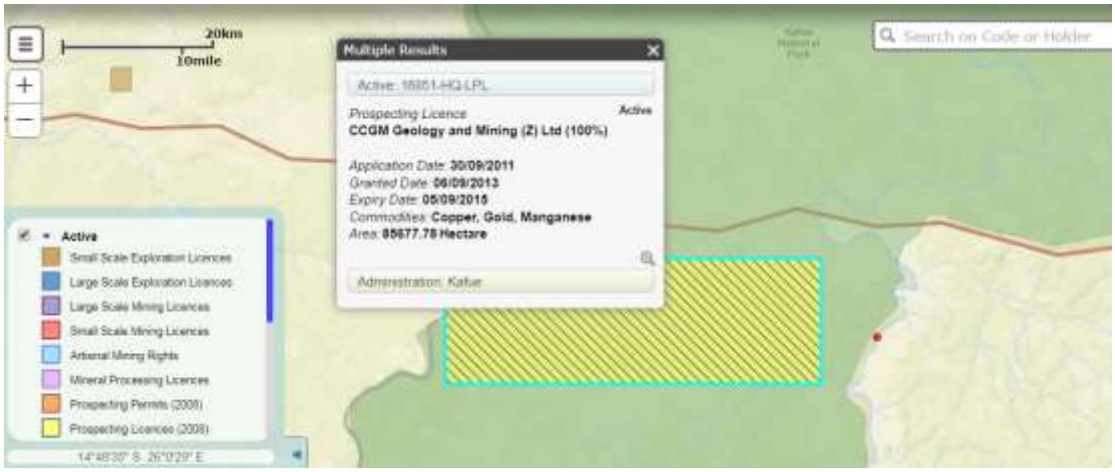
international standards and operating under eco-certification would be a welcome addition. The number of park visitors is about 13 000 per year, which is very low compared to most established parks in Africa.

There will be a strong capacity building and educational component of the ensuing pilot project provided by expertise shared with the local community in the form of workshops, exchange visits, research projects and training provided by the and the Czech University of Life Sciences and the Czech Agency for Nature and Landscape Protection. These agencies have access to a wide range of experts in biodiversity, tropical forestry, and agriculture, and sustainable land management. The pilot project will also serve as a case capacity building in other communities from locations near National Parks. The purpose is to initiate the creation of a wider system of ecotourism facilities with a similar governance model and modern operation practice, with the focus on increased prosperity, and well-being of communities, and protection of natural ecosystems. Sustainable use of local natural and agricultural products will be in the scope of the project as well.

3.1.12 Other factors with a possible impact on tourism development

Poaching intensity is variable over time (Mkanda F. et al. 2018), from a relatively low to a significant level. This is related to the number of active guards paid from different foreign aid programmes. Projects aiming to reduce poaching and increase game populations face reduced funding, which means a reduced number of active guards and an increase in the level of poaching, - including the vicinity of ecotourism facilities.

Mineral rights do not pose a threat due to the presence of a single expired prospecting licence, as shown below.



3.1.13 Tourist attraction summary

Advantages:

- Great wildlife viewing
- Lots of antelope species
- Remote, with so much to explore
- Great night drives, walking safaris, and boat safaris
- Easy to get to if you're driving

Limitations

- Not much accommodation
- The animals, especially elephants, are quite shy
- The view is hazy in the Dry season

3.1.14 Summary of SWOT results by all experts

The results of the SWOT analysis by the 5 experts are shown below. Strengths and opportunities are quite consistent weaknesses and threats show a larger variability between experts. The site has been selected as optimal from the 6 pre-selected and visited locations.

Site K1	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Strengths	103	118	119.5	116.5	127
Weaknesses	-32.5	-12.5	-26	-28	-41
Opportunities	60.5	63	71	62.5	62
Threats	-58.5	-8	-11.5	-62	-61.5
Result	72.5	160.5	153	89	86.5

3.2 LOWER ZAMBEZI NATIONAL PARK, OVERVIEW

The Lower Zambezi National Park lies on the North bank of the Zambezi River in South Eastern Zambia and covers 4200 sq. km. Several smaller rivers flow through the park. There are national parks on both sides of the river – Mana Pools National Park on the Zimbabwean bank, and the Lower Zambezi National Park on the Zambian side. The wide floodplain of the Zambezi River, lying underwater for part of the year, turning into a flat or slightly undulating terrace overgrown with a heterogeneous bush and savannah with the islands of the palm trees of Hyphaene ventricosa and baobabs. Most of the park consists of hilly higher ground on the sides and top of the escarpment – where the bush consists mainly of thick, broad-leafed miombo woodland. With little water in the dry season, the game concentrates on the flat alluvial plain, beside the deep, wide, permanent Zambezi River. From the southwest to the northeast stretches a chain of hills and slopes of the escarpment of the rift valley overgrown with semi-deciduous forest and bushes bounding the lowland part of the park adjacent to the river with a dominant occurrence of local fauna. It covers less than a third of the park area. The river has numerous flat islands and loamy banks with a height of 2–5 m. Along with it and the tributaries, there are coastal stripes of forests such as Acacia albida, Trichilia emetica, and Kigelia africana. There are temporary and permanent wetlands, pools, and blind shoulders, lakes with reed stands around the river (the NP is 120 km long, approximately 0.5-1 km wide), all forming scenic landscapes.

Accommodations within the park vary from Classy lodges or camps to the simplest camps. Elephants and Buffalos are common as well as good populations of kudu, eland, zebra, wildebeest, waterbuck, bushbuck, and the odd duiker or grysbok. Crocodiles and hippos are present; large water monitor lizards can also be spotted. The major predators in the Lower Zambezi are lion, leopard and spotted hyena. Wild dogs can also be seen near the park. 378 bird species have been recorded, such as species of eagle, heron, stork, and bee-eater, kingfishers (pied, giant, woodland, malachite, and brown-hooded kingfishers. The river is patronized by darters, cormorants, egrets, and storks, and fish eagles are often seen perching in trees that overlook the water. The Lower Zambezi is rich in wading birds, both residents, and migrant; uncommon residents include ospreys, spoonbills, and African skimmers. Together with NP Mana Pools (part of UNESCO World Heritage) in Zimbabwe, it creates a large protected area along the country border over 6300 km2, rich in fauna and beautiful natural scenery. Both areas are connected to partially protected areas with controlled hunting, which are integrated into the hierarchically higher proposed cross-border TFCA Lower Zambezi-Mana Pools.

The park is about 4 hours drive from Lusaka on a good asphalt road with local potholes. The last 60 km along the park border, the road is unpaved but well-maintained path with a sandy surface. Precious metal deposits have been discovered in the hilly part of the National Park where exploration licences have been awarded.

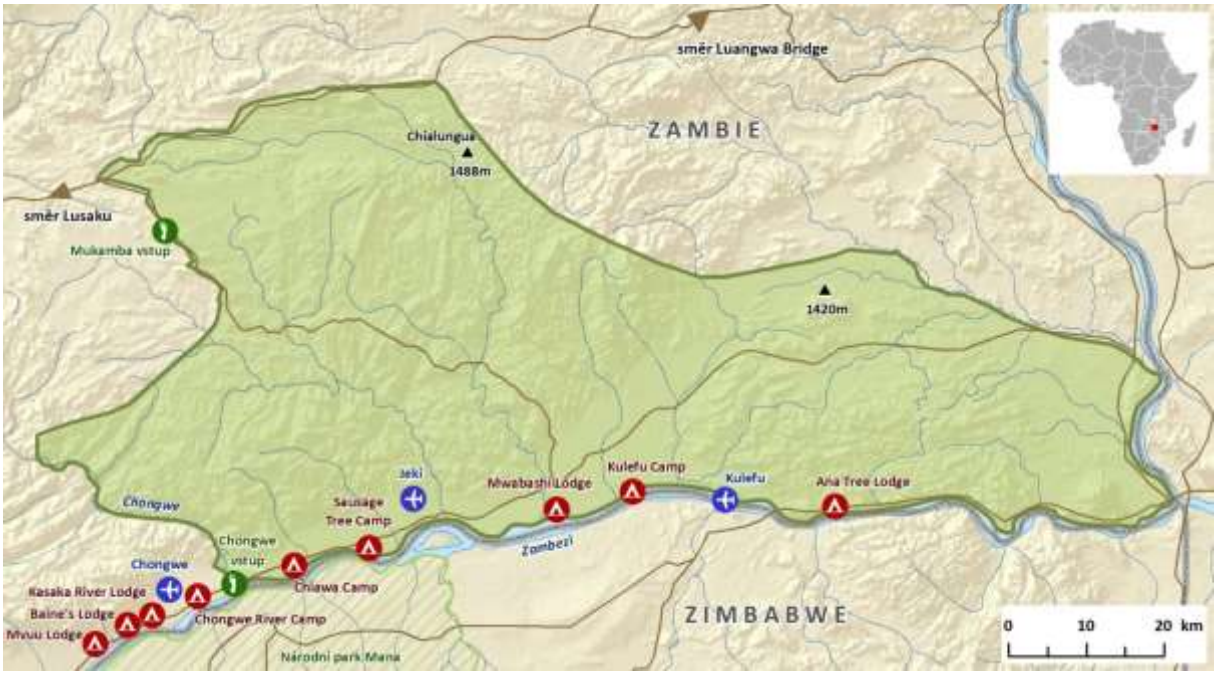


Figure 19. Map of the Lower Zambezi National Park with marked existing campsites and lodges.

Figure 20. Landscape scenery and landscape ecosystems in the Lower Zambezi National Park consisting of a large lake, minor lakes and wetlands, large savannas palm trees, and a mountain chain.

There are six luxury lodges in beautiful surroundings - very expensive for the average visitor. On the way to the park, there are about ten other accommodation options, mostly at affordable prices. About half an hour drive from the entrance to the park, Mvuu camp with various comfortable types of accommodation (from the tent for large, fully equipped tents) or self-service Munyemeshi River Lodge, which can be used as a good starting point to the protected area and the surrounding area by car, boat or canoe. The paths are sandy; unpaved paths are in the park, and at park access. Outside the rainy season, these passable, however, 4x4 all-terrain vehicles are always required.

Visitors to the Lower Zambezi National Park can choose from game drives (early morning game drive and late afternoon game drive) in the open – topped 4WD vehicles or an option of a walking safari with a qualified guide and armed ranger, fishing along the river. Daylong canoeing trips, boat trips to explore the Zambezi while keeping an eye out for hippos, crocodile, and an impressive array of birds are available.

The best time to visit Lower Zambezi National Park is mid-season from June to September, but all lodges and canoeing operators are open from April to November. Royal Zambezi Lodge and Kayila Lodge are open all year. Fishing is at its best in September / October.

3.1 DETAILED EVALUATION OF THE LOWER ZAMBEZI SELECTED SITES

3.1.1 Lower Zambezi National Park Sites

Two Lower Zambezi NP sites have been visited and evaluated for the placement of an eco-camp site. These are shown below:

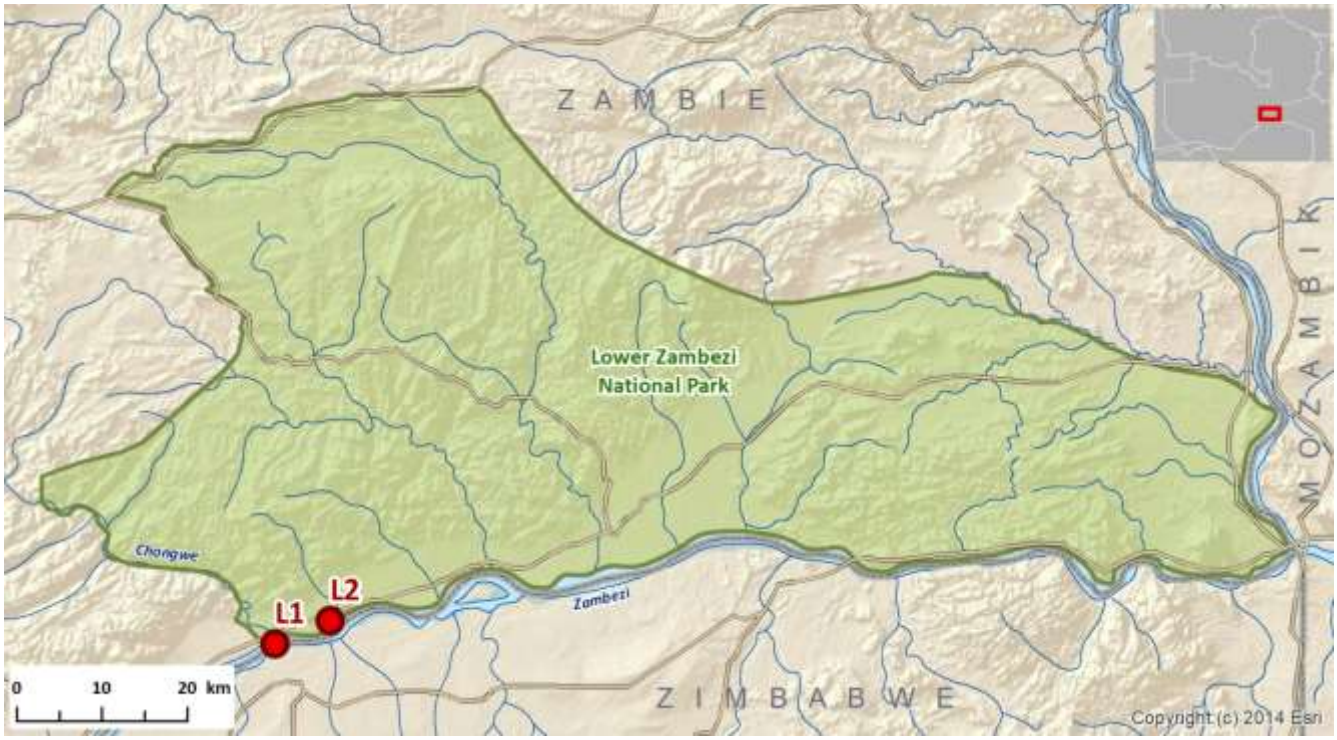


Figure 21. Map of the Lower Zambezi NP with locations of the evaluated sites.

Figure 22. Two sites evaluated in the Lower Zambezi NP.

Figure 23. Evaluated original site L1 at the western shore of the Chongwe River and near the guarded park entrance

Figure 24. The L1 site moved eastward to the shore of the Zambezi river

Figure 25. Geomorphologically suitable area of the evaluated site L2 with a basic access road, several kilometres west of the Chiawa Lodge.

3.1.2 Biodiversity

The diversity of animals is not as wide as the other big parks but offers the opportunity to see wildlife close to the Zambezi channels and islands and in a scenic landscapes. The Lower Zambezi Valley, including the LZNP and surrounding Game Management Areas (GMA's), is rich in biological diversity. The river's edge is overhung with a thick riverine fringe, mostly diasporus, ficus, and other riverine species. Further inland is a floodplain fringed with mopane forest and interspersed with winterthorn trees acacia albida. The forests, wetlands and natural geographical features form unique and complex ecosystems that support abundant wildlife. The hills on the escarpment along the northern end act as a physical barrier to most of the parks animal species.

The vegetation in the area is predominated by acacia albida trees, a thorn species 10 - 30m high with the classical shady umbrella canopy. It can tolerate sandier soils than other woodland species and serves to stabilise infertile sandbanks and reduce erosion. Winterthorn pods are also remarkably nutritious to elephants who digest it, leaving about 40% intact, thereby contributing to its proliferation. Lower Zambezi National Park and the Chiawa Game Management Area support elephant, hippo, buffalo, kudu, zebra, impala, bushbuck, duiker, klipspringer, lion, leopard, African wild dog, serval, aardvark, chac-ma baboon, and vervet monkeys. Occasionally roan, eland, and the Samango monkey are seen. The nocturnal animals are hyaena, porcupine, civet, genet, and honeybadger when approached, crocodiles like to slither stealthily into water.

Birdlife along the riverbanks includes fish eagle, red-winged pratincole, crested guinea fowl, black eagle, and quelea. Other species include the trumpeter hornbill, Meyers parrot, and Lilian's lovebird. The Lower Zambezi National Park attracts an estimated 400-bird species.
The common fish caught are tiger, bream, chessa, and the dolphin-like eastern bottle nose, vudu, or sharp-toothed catfish.

3.1.3 Accessibility

Lower Zambezi National Park is easily accessible by asphalt quality road T2 from Lusaka to Chirund (about 140 km, 2.5 hours). The park's gate is about 77 km (1.5- hours) from Chirundu on an unpaved road. This translates to access time of 4-5 hours to the park from the airport.

The road to the National Park initially leads through an intensely populated landscape. From the city of Kafue, the settlements become sparse, and the road passes through a hilly landscape covered mostly with miombas with occasional smaller settlements. The dirt road of about 77 km then passes through a diverse floodplain landscape with settlements of various sizes and small agricultural activities (goats, poultry, etc.), local plantations with banana trees, and mangoes.

Second half of the trip shows the natural landscape with hills, forests, and the so-called natural monument "petrified forest" about 15 km before Chirund. This monument contains only fragments of fossilized trunks. In Chirund, there is a new shopping center Shoprite, where one can buy everything needed for a hiking trip or autonomous travel. About 35 km in front of the park, the road crosses the border of the area with controlled hunting of Chiawa game, which has a similar landscape character and fauna composition as the park itself.

3.1.4 Landscape

The landscape is generally flat in a vast floodplain with a major river 1-2km wide flow with islands, framed by a chain of hills and mountains along a ditch cliff. Vegetation is composed of typical savanna, wetland, grassy plain, forest, and visually attractive vegetation (,e.g., baobabs, large trees of other species). Occasional and permanent wetlands in the order of hundreds of km^2 are present.

Figure 26. Morphology of the Lower Zambezi park in the vicinity of the evaluated sites in 3D.

3.1.5 Attractiveness

The scenic landscape, a major scenic river, presence of flag species: elephant, lion, buffalo, hippo, leopard, crocodile, zebras, wild dog, spotted hyena, large antelopes such as sable, eland, roan wildebeest, buffalo, lion. Rhino, giraffe, and cheetah are not present, rhinoceros was exterminated by firing decades ago, but the giraffe did not occur at all in the historical era, even in cross-border Zimbabwe. The cheetah has been sparsely present in the past; an attempt to repatriate has failed. There is a high density of elephant, hippo, and crocodile.

In the last decade, the security situation is good.

Sparse surrounding settlements have a minimal impact on pollution.

In addition to the safari in the car, it is possible to realize boat cruises and attractive fishing, as well as hiking with guards. There is a potential for developing canoe trips and bird watching.

At the sole request of the Director (Head of the Guard) - only one site at the confluence of the Chongwe and Zambezi Rivers was examined in detail. The Head of the Rangers explained that there were places in their concept where it was possible and impossible to realize ecotourism infrastructure. All the land inside the park is state-owned.

3.1.6 Available human resources

There are no permanent settlements inside the park, except park staff and their family members. In the mountainous part, there are probably very small settlements in small numbers with a minimal impact on the natural park environment.

3.1.7 Available water and energy

Water is available from the river. Energy

3.1.8 Potential for employment increase

The realization of the new eco-tourism facility will bring approx. 8-15 new employment opportunities and several additional sources of income using supplying agriculture and fishing products, construction and maintenance materials, etc.

3.1.9 Potential for further development of supporting activities (research, education, healthcare)

Sample active biodiversity conservation programmes in Chiawa game include:

- Wild Dog Conservation program focused on monitoring the endangered Wild Dog population.
- Cheetah repopulation program (1994) through Zambia Wildlife Authority and Cheetah Conservation Fund of Namibia and the support of Japan Aid.
- Tagging and monitoring program of tigerfish.

3.1.10 Other factors with a possible impact on tourism development

The potential threat of mining is significant with several active large scale exploration licences near the evaluated sites.

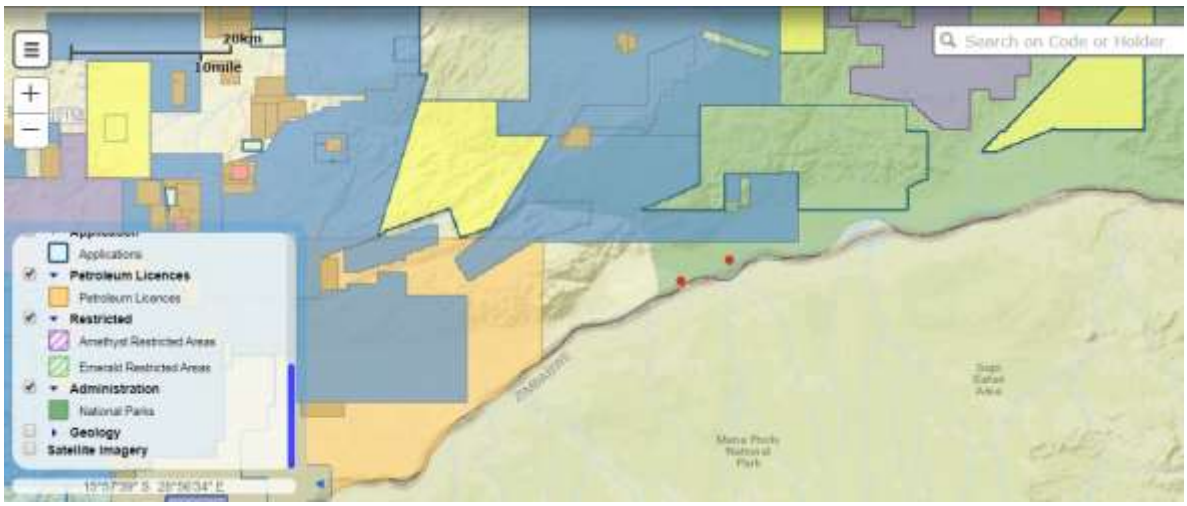


Figure 27. Exploration licences in the vicinity of the L1 and L2 sites. Active base metal large scale licences for cobalt, copper, gold, nickel, and sliver (blue) and petroleum licence (beige).

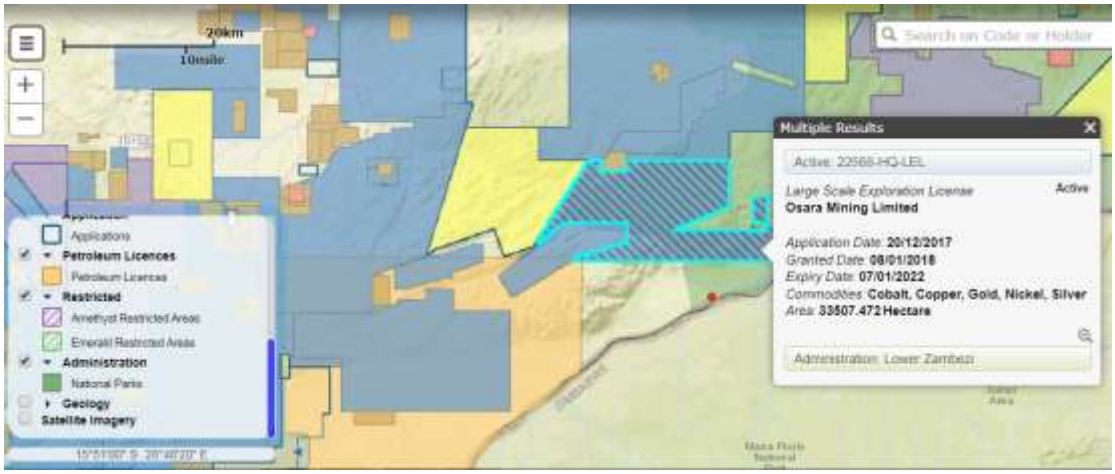


Figure 28. Large scale active (2018-2022) metal exploration licence North of the two evaluated sites.

3.1.11 Economics

The distance of the proposed sites from the asphalt road is approx. 70-80 km on the unpaved access road, the distance from the Chirund and other municipalities with residents potentially employable by the camp is reasonable. The path from the entrance gate to the park management building is a well maintained unpaved road (about 65 km), and a road of similar quality leads through the park and then connects to all considered locations.

3.1.12 Tourist attraction summary

Advantages

- Excellent wildlife viewing with four of the Big Five present (except rhinos, black rhinos occur in Zimbabwean Mana Pools NP in the distance 1-2 km from the boundary of NP Lower Zambezi, a part of a proposal TFPA)
- Exceptional birdwatching and fishing
- Excellent guiding
- Great night drives, walking, and boat safaris
- Short canoe excursions, as well as canoe trips for several days

Limitations

- Only expensive, all-inclusive lodging inside the park
- All budget accommodation is outside the park

3.1.13 Summary of SWOT results by all experts

The results of the SWOT analysis by the 5 experts are shown below. Strengths and opportunities are quite consistent between experts; threats show the largest variability between experts. Four experts prefer site L2 by a narrow positive margin in all categories.

Site L1	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Strengths	99	107.5	88.5	89.5	113.5
Weaknesses	-39	-16.5	-37	-35	-54.5
Opportunities	51.5	51.5	56	56.5	55
Threats	-70.5	-20	-31.5	-74	-73.5
Result	41	122.5	76	37	40.5

Site L2	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Strengths	99	104	98.5	95.5	115.5
Weaknesses	-39	-16.5	-37	-35	-50.5
Opportunities	51.5	51.5	59	56.5	55
Threats	-69	-20	-35.5	-72	-73.5

Result	42.5	119	85	45	46.5

3.2 SIOMA NGWEZI NATIONAL PARK, OVERVIEW

Sioma Ngwezi is the third largest park in the area with an area of over 5270 km^2, located in the Western province in the so-called Barotsoland with a specific public administration. Representatives of the Kingdom. The park is located on the border with Angola and Namibia. The Western Angolan border is formed by the River Kwando (Mashi) with several villages. The eastern border runs in a natural landscape consisting of bush and savannah, about 20 km west of the Zambezi River. The park has several settlements where local people occupy simple buildings, and the total population in the park is close to 2000. A game management area surrounds the park with weakly enforceable regulations. North of the park, about 40km west of the village of Sioma, there are a reserve Ngwezi Pools (about 600km2) of unclear status. Overall, the flat landscape at an altitude of 970-1000 meters is on very sandy terrains, and there are quite a few occasional shallow lakes. Vegetation is dominated by so-called Kalahari tree formations (sparse forests) and some of its degraded stages with the Zambian teak (Baikiaea plurijuga) and Pterocarpus antunesi with more open areas and densely thick shrubs in the lower floor. and Combretum celastroides) that may be the result of fires.

These dry deciduous forests (Baikiaea forest) are usually two-tiered. They are called "mutemwa". Mutemwa is further composed mainly of trees such as Acacia ataxacantha, Acalypha chirindica, Alchornea occidentalis, Citropsis daweana, Combretum elaeagnoides, Dalbergia martini, Grewia avellana, Popowia obovata, Tarenna luteola, Tricalysia alleni, Triumfetta decindtiana. Some communities are practically unaffected by human activity, such as mopane forest areas, large grassland areas (similar to dambo in the east) in places where ecological conditions do not allow the development of tree formations for dry or wet conditions, and savannas with various species of acacia are present. Over 324 bird species have been recorded here (Leonard P. 2005). The population and species spectrum of mammals were very rich 30 years ago. Due to the ineffective protection of the area, the area was in the past extremely populated by local and Angolan poachers. For example, the black rhino was completely exterminated, and the population of other ecotouristically attractive large mammals practically decimated and remained only in fragments or persistent occurrence (lion, hyena, cheetah, leopard, etc.). The number of African elephants has always fluctuated as a result of migration, but the normal population range was around 400 - 4000 individuals at the beginning of the millennium (e.g., Simukonda 2009), in 2015 a maximum of 110 pieces (UICN 2016) were detected by modern air census.

Although the frequency has always varied, an increase of 3% to 85% in the number of dead reared animals (carcass ratio %) is a major concern. In recent years, thanks to improved protection, at least partially, the fauna has been slowly rehabilitating them. Quite often, it is possible to see raven antelopes, rarely wildebeests, and horse antelopes. The occurrence of South Angola giraffe is interesting. In Zambia, the natural occurrence of giraffes is very limited to the South Luangwa NP and its immediate surroundings (where the Masai Zambian Giraffe, also known as Thorncroft's), and to Sioma Ngwezi NP and its surroundings. The Angolan giraffe populations were not abundant but were larger. Some data suggest that the occurrence could reach up to NP Kafue (in the verb.). At present, the local population is estimated to be 100-200 individuals.

3.3 DETAILED EVALUATION OF THE SELECTED SITE

3.3.1 Sioma Ngwezi National Park Sites

Three Sioma Ngwezi NP sites (s1, S2, S3) have been visited and evaluated for the placement of an eco-camp site.

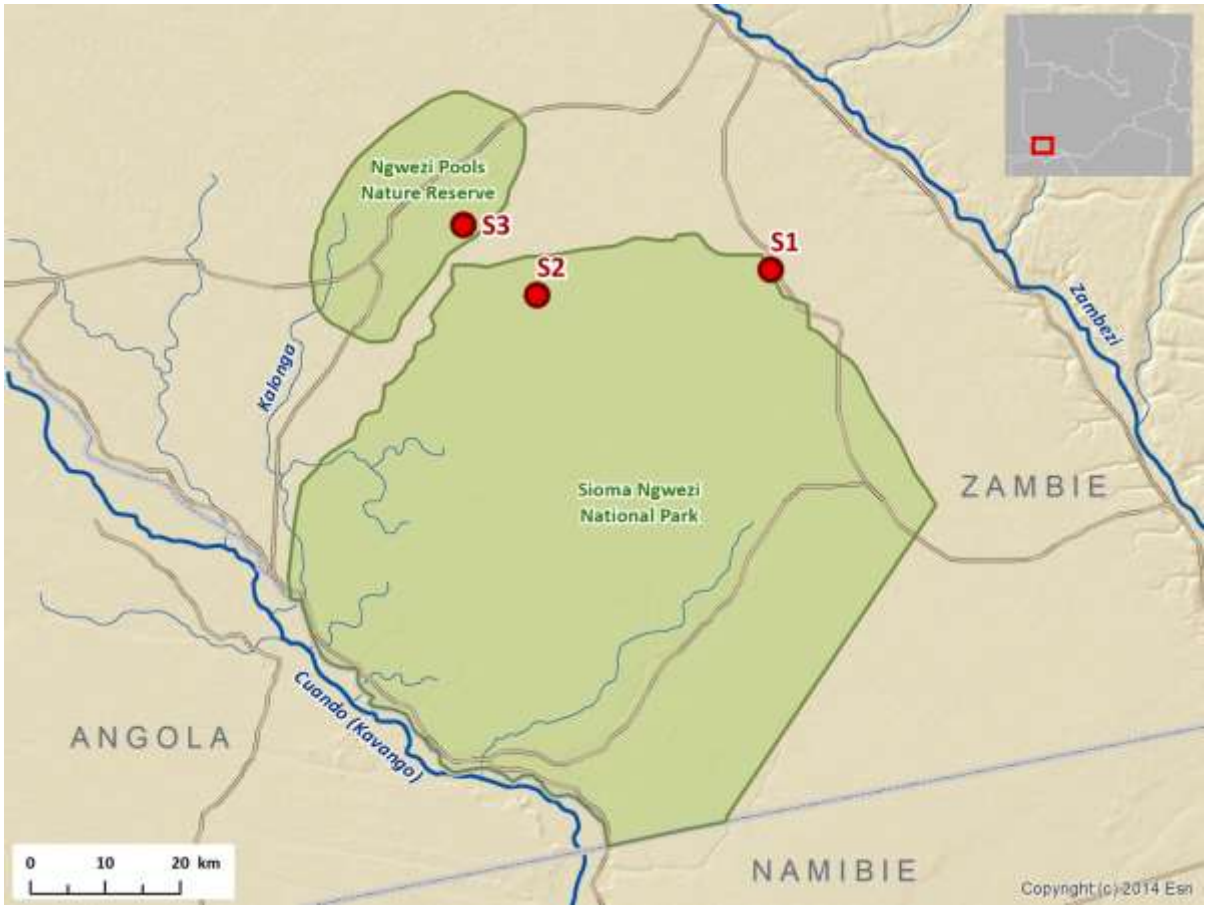


Figure 29. Location of evaluated sites S1, S2 on orthophoto imagery.

Figure 30. Location of evaluated sites S3 on orthophoto imagery.

Figure 31. Illustration of the character of landscape at the evaluated ecotourism infrastructure site S1, Ngwezi Pans). Most of the basins are c waterless or with a muddy bottom (left) during the peak dry period and, exceptionally, have natural water supplies (right).

Figure 32. The environment of the evaluated site S3. At the top, there is a dry pan - at the bottom, there is an abandoned NP administration building (lacking, water). Two other sites, S1, S2, is about 2-3 km apart. Both are outside the NP but part of the reservation.

3.3.2 Biodiversity

Several species from the Zambian list endangered are restricted to the dry south-west of the country. Most occur within the park, including *Pterocles burchelli* and *Lamprotornis australis,* both characteristics of the Kalahari–Highveld biome, as well as *Tockus bradfieldi*, *Tricholaema leucomelas*, *Sylvia subcaerulea*, *Bradornis mariquensis*, *Laniarius atrococcineus*, *Lamprotornis nitens* and *Estrilda erythronotos*. Mammals known to occur include *Loxodonta africana* (EN) and *Giraffa camelopardalis angolensis* (only Zambian population of the species outside the Luangwa Valley).

3.3.3 Accessibility

Sioma Ngwezi National Park is best accessed on the asphalt highway M 10 from Livingstone to Mongu. The village of Sioma is about 320 km reachable in about 4-5 hours from Lusaka. Due to the very poor section along the border with Namibia (totally broken asphalt road about 85km, which takes 2-3 slow hours of driving), the availability is not comfortable. Reaching the virtual gateway resp. the border of the park west of the asphalt road on deeper sandy roads (approx. 20-25 km) requires an additional 1 hour. Not available for regular SUVs. The road to the National Park from Livingstone passes through lowland landscape with floodplains around rivers extensively used for grazing and near-natural of savannah and bush. North of Sesheke it is scenic with the Zambezi River near Sioma and attractive waterfalls with a height of about 10-30m in a small protected area.

The route from Livingstone passes through attractive Mosi o Tunya National Park with Victoria Falls near the city. On the way to Sesheke (about 150 km west of Livingstone), there is the Zambezi River floodplain with a significant bird area (IBA Simungoma 1000 km^2) covered with occasional wetlands, lakes and acacia savannah. Sioma waterfalls (Ngonye) with the adjoining protected areas are located near the village of Sioma.

3.3.4 Available human resources

There are no settlements inside the park. Few small villages can be found near the boundaries of the park. There are small permanent dwellings at the northern edge of the park and along the Mashi River at the western border of the park. According to the park director, their number does not exceed 2000 in total, and their impact on nature is low.

Figure 33. Village in the Ngwezi Pools reservation (outside of the park).

3.3.5 Available water and energy

Water is sparse from pools with the underground sources with unknown quality and stability of supply.

3.3.6 Potential for employment increase

Local companies and artisans will be selected to construct and operate the eco-camp. The management team will include staff from park management. Extensive education in e-marketing will be provided to the designated camp staff. The trained staff will facilitate camp website, e-marketing to tour operators and travel agencies.

Various educational activities will be provided to local staff, including training and workshops in sustainable land management, ecology, and wildlife monitoring. Operational teams from both countries will be established, and continuous analysis of activities and shortcomings to optimize work and improve internal communication carried out.

Educational research missions from CULS and CU are also expected in the future, which will motivate Zambian and Czech students in monitoring environmental phenomena and preparing joint studies, exchange students and educate the local population as potential human resources

All these activities will build capacity in the local communities, which will make its members employable in various fields and activities.

3.3.7 Potential for further development of supporting activities (research, education, healthcare)

There will be a strong capacity building and educational component of the ensuing pilot project provided by expertise shared with the local community in the form of workshops, exchange visits, research projects and training provided by the and the Czech University of Life Sciences and the Czech Agency for Nature and Landscape Protection. These agencies have access to a wide range of experts in biodiversity, tropical forestry, and agriculture, and sustainable land management. The pilot project will also serve as a case capacity building in other communities from locations near National Parks. The purpose is to initiate the creation of a wider system of ecotourism facilities with a similar governance model and modern operation practice, with the focus on increased prosperity, and well-being of communities, and protection of natural ecosystems. Sustainable use of local natural and agricultural products will be in the scope of the project as well.

3.3.8 Other factors with a possible impact on tourism development

Mineral rights pose a moderate threat due to the presence of petroleum expired exploration licence and an active precious metal large scale exploration licence (active until 2012), as shown below.

Figure 34. Location of an expired petroleum exploration licence relative to the evaluated sites (red). Albeit expiration in 2018, two adjacent licences are likely to be renewed.

Figure 35. Location of an active large scale diamond, gold, manganese exploration licence relative to the evaluated sites (red).

3.3.9 Tourist attraction summary

This remote park is rarely visited and lacks facilities. Animals move freely in the area, and elephants migrate between the countries. Poaching is a big problem in the region and wildlife densities are low.

Advantages

- Off-the-commercial track destination
- Close to Victoria Falls and Livingstone
- Nearby attractions include Siomo Falls and the Zambezi River
- Several lodges are on the Zambezi nearby set-up for fishing
- Overnight camping trips offered by the nearby Mutemwa Lodge

Limitations

- Not much wildlife
- No permanent water makes animals move out in the Dry season
- Only one simple bushcamp present in the park

3.3.10 Summary of SWOT results by all experts

The results of the SWOT analysis by the 5 experts are shown below. Strengths and opportunities are quite consistent, weaknesses very inconsistent for Site 2, threats show a larger variability between experts. Site 3 has been selected as optimal from 4 experts and Site 1 by 1 expert.

Site S1	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Strengths	82	63.5	65	68.5	70
Weaknesses	-55	-17	-49	-47	-50
Opportunities	52.5	48.5	59.5	50.5	50
Threats	-54.5	-14	-30	-58	-44
Result	25	81	45.5	14	26

Site S2	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Strengths	82	63.5	47	48.5	61
Weaknesses	-55	-17	-50.5	-47.5	-46
Opportunities	52.5	48.5	59.5	52.5	50
Threats	-54.5	-16	-26	-58	-44
Result	25	79	30	-4.5	21

Site S3	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5

Strengths	82	63.5	75	72.5	73
Weaknesses	-55	-17	-48.5	-50	-47
Opportunities	52.5	48.5	59.5	52.5	54
Threats	-54.5	-16	-31.5	-58	-45
Result	134	79	54.5	17	35

4 SWOT ANALYSIS OF SITES IN SELECTED NATIONAL PARKS

Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis helps to determine if the proposed implementation of an eco-tourism site is feasible. Completed SWOT analysis complements the feasibility study in determining the viability of the proposed project. Strengths and weaknesses are the internal components of the proposed project; opportunities and threats are external factors that may influence the outcome.

Strengths

Strengths are what make the project different and special. Strengths come from positive aspects of five key resources and capabilities - physical resources such as the eco-camp-site, proposed activities and processes, financial resources, past experiences and and qualified human resources.

Weaknesses

Weaknesses are the areas, capabilities, or skills which the project lacks. Weaknesses come from the lack of resources and capabilities - activities and processes, financial resources, past experiences and successes, human resources, and physical resources such as land. This could be, for example, insecure land tenure of the proposed eco-camp site, lack of local human resources for construction and operation of the camp, etc.

Opportunities

Factors outside of the project that could put in a better position to succeed. This could include a lack of competition in the target market, a growing demand for eco-camp services, or new advances in technology such as e-marketing that will make it easier to promote the new services. Opportunities can also emerge from changes in consumer preferences, economic growth, an increase in consumer disposable income, technological innovations, and political developments and policy changes.

Threats

Threats are the inverse of opportunities. Examples could include stiff competition, a bad eco-camp site placement, regulations that make it more costly or difficult to build or operate the camp, or changes in the target consumers that could inhibit the project.

Detailed SWOT analysis of 6 sites in 3 national parks has been developed and carried out independently by each expert. The three national parks listed below were analyzed on the basis of negotiations with representatives of the Ministry of Tourism and Arts and the request of this institution reflected in the study application (2018). The primary criterion for the selection was easy to access from Lusaka and Livingstone International Airports (within half a day by car).

4.1.1 SWOT Parameters

Each SWOT parameter was assigned a weight with possible values of 1, 1.5 and 2 and a score valued from 0-5. Each of the 5 experts assigned independently the weight and score for all defined parameters and sub-parameters. Weighted score (weight * score) was then used to compare all SWOT results using positive values for favourable parameters (Strengths, Opportunities) and negative values for unfavourable parameters.

All defined SWOT parameters are described below:

Internal

Strengths	Weaknesses
Preserved biodiversity	Environmentally sensitive environment
Visually attractive landscape	Absence of strict rules for entry and behaviour in the park
Presence of interesting flora and fauna	Low awareness and involvement of local communities in eco-tourism
Presence of freshwater	Lack of infrastructure and facilities supporting eco-tourism
Possibility of eco-tourism activities 1. fishing 2. boat riding 3. trekking 4. bicycling 5. bird-watching	Lack of awareness of National and foreign institutions of eco-tourism in the area
Presence of hospitable local communities and culture	Lack of experience to develop a sustainable eco-tourism product
Favourable climate	Seasonality of eco-tourism
Food access	Lack of incentives for the involvement of local communities in eco-tourism
Abundant labour force	Inadequate funding for the conservation of natural and cultural resources
Government support of eco-tourism	History of profit-only operated tourist sites
Accessibility	
Presence of park infrastructure	

External

Opportunities	Threats
Development of local ecotourism operation involving local inhabitants in decision making and planning	Lack of funding available for the construction and operation of the facility
Conservation of natural ecosystem and development of measures to mitigate the adverse impact of eco tourism-related activities	Negative environmental impacts of construction and operation of the facility
Generation of sustainable income to local staff involved in the construction and operation of the developed facility	Mineral and mining activity in the near surroundings
Exploration of synergies and partnerships with NGOs, government and local communities	Illegal logging
Increasing environmental awareness among tourists and local communities	Poaching
Developing strategies for waste management for the facility, - also applicable to local communities	Pressure from neighbouring communities
Raising awareness (locally, nationally and internationally) of the richness of local wildlife, vegetation, and geology	Low level of interest/involvement of local inhabitants in the project

Low level of tourist activities guarantee truly a natural aspect of ecotourism experience with no overcrowding by visitors	Low level of interest/involvement of NGOs, the government in the project
Increased environmental conservation and protection measures	Negative cultural and/or environmental impact of construction and operation of the facility
Presence of other eco-tourist and tourist sites in the neighbourhood	Land tenure issues not resolved
	Negative political intervention (local, regional, National level)
	Poor communication/awareness rasing of the benefits of eco-tourism for the area

4.2 SWOT RESULTS

Comparative aggregate results from 5 experts are shown below for each SWOT category. Site ranking for weaknesses and threats assigned negative values and strengths and opportunities positive numbers are shown below:

Strengths	Weighted Score					
National Park	Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2
Preserved biodiversity	9.6	6.4	5.2	6	8	9.2
Visually attractive landscape	8.4	6	4.4	5.2	8.3	9.5
Presence of interesting flora and fauna	9.2	6.8	4.8	6	8.4	9.2
Presence of freshwater	10	4.4	2.8	4.4	10	10
Possibility of eco tourism activities	0	0	0	0	0	0
1. fishing	6	0.8	0.8	0.8	6	6
2. boat riding	5.5	0.9	0.9	0.9	5.5	5.5
3. trekking	3.6	2.1	2.1	2.1	3.7	3.7
4. bicycling	1.6	1.2	0.4	1.2	2	2
5. bird-watching	8.7	6.8	5.6	6.8	8.7	8.7
Presence of hospitable local communities and culture	7.6	5.6	5.6	8	6	5.6
Favourable climate	7.4	4.4	4.4	4.4	6.4	6.1
Food access	6.1	4.8	4.8	6.2	5.7	5.7
Abundant labour force	7.6	6.4	6.4	6.4	4.2	4.2
Government support of eco-tourism	7.4	7.4	7.4	7.4	6.5	6.5
Accessibility	10	2	2	2.6	5.8	5.8
Presence of park infrastructure	7.6	4.2	4.2	5	4.4	4.8
Total	116.3	70.2	61.8	73.4	99.6	102.5

Weaknesses	Weighted Score					
National Park	Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2
Environmentally sensitive environment	2.7	3.8	3.6	3.9	5.1	5.1
Absence of strict rules for entry and behaviour in the park	3.5	5.3	5.3	5.6	3.5	3.5
Low awareness and involvement of local communities in eco-tourism	2.6	3.8	4.1	3.9	3.2	3.2
Lack of infrastructure and facilities supporting eco-tourism	1.7	5.9	5.9	5.7	3.6	2.8
Lack of awareness of National and foreign institutions of eco-tourism in the area	1.6	4.3	4.3	4.3	2.2	2.2
Lack of experience to develop a sustainable eco-tourism product	1	3.8	3.8	4	1.2	1.2
Seasonality of eco-tourism	3	3.6	3.9	3.9	3	3
Lack of incentives for the involvement of local communities in eco-tourism	3.3	5	5	5	4.4	4.4
Inadequate funding for conservation of natural and cultural resources	6	7	7	7	7	7
History of profit-only operated tourist sites	2.6	3.4	3.4	3.4	3.2	3.2
Total	28	45.9	46.3	46.7	36.4	35.6

Opportunities	Weighted Score					
National Park	Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2
Development of local ecotourism operation involving local inhabitants in decision making and planning	7.2	5.2	5.2	5.6	4.8	4.8
Conservation of natural ecosystem and development of measures to mitigate the adverse impact of eco tourism-related activities	5.5	4.3	4.3	4.3	4.4	4.4
Generation of sustainable income to local staff involved in the construction and operation of the developed facility	8	4.8	4.8	5.2	7.6	7.6
Exploration of synergies and partnerships with NGOs, government and local communities	4.2	3.1	3.1	3.1	3.7	3.7
Increasing environmental awareness among tourists and local communities	6	4.6	4.6	4.9	5.4	5.4
Developing strategies for waste management for the facility, - also applicable to local communities	3.8	2.6	2.6	2.8	3.6	3.6
Raising awareness (locally, nationally and internationally) of the richness of local wildlife, vegetation, and geology	7.5	5.7	5.7	5.7	6.8	6.8
Low level of tourist activities guarantee truly a natural aspect of ecotourism experience with no overcrowding by visitors	6.4	8.5	8.5	8.2	3.9	4.5
Increased environmental conservation and protection measures	8.4	7.6	8	7.6	7.6	7.6
Presence of other eco-tourist and tourist sites in the neighbourhood	6.8	4.3	4.3	4.7	6.3	6.3
Total	63.8	50.7	51.1	52.1	54.1	54.7

Threats	Weighted Score					
National Park	Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2
Lack of funding available for the construction and operation of the facility	4.3	5.1	5.1	5.1	5.1	5.1
Negative environmental impacts of construction and operation of the facility	3	3.6	3.2	3.2	4.1	3.8
Mineral and mining activity in the near surroundings	3.6	0.4	0.4	0.4	7.6	7.6
Illegal logging	3.4	4.8	4.8	4.8	4	4
Poaching	5.2	8.4	8.4	8.8	6.4	6.4
Pressure from neighbouring communities	5.5	4.8	5.2	5.5	4.7	4.7
Low level of interest/involvement of local inhabitants in the project	3.4	4.1	4.1	4.1	6	6
Low level of interest/involvement of NGOs, the government in the project	2.7	2.3	2.3	2.3	4.3	4.3
Negative cultural and/or environmental impact of construction and operation of the facility	1.4	3	2.6	3	1.8	2.2
Land tenure issues not resolved	3.6	3.6	3.6	3.6	3.6	3.6
Negative political intervention (local, regional, National level)	1.8	1.8	1.8	1.8	3.6	3.6
Poor communication/awareness-raising of the benefits of eco-tourism for the area	2.4	2.4	2.4	2.4	2.7	2.7
Total	40.3	44.3	43.9	45	53.9	54

Feasibility of an eco-camp establishment in three national parks and 6 possible eco-camp sites have been assessed. Detailed SWOT, risk and site analyses have been carried out using standard indicators established in international practice. Multi-criteria comparative quantitative and empirical analyses have been completed independently by 5 experts. All areas of interest were found to be potentially suitable for the implementation of the project with varying levels of feasibility. The Kafue NP site at the confluence of the Kafue and Shimba rivers was found most suitable. However, in the case of successful implementation concerning other aspects of evaluation, it will be possible to incorporate other assessed areas of interest by sharing and exchanging experience and by exchanging staff.

Ranking	Site	Total feasibility score	Comment
1	Kafue	111.8	The site preferred by all experts
2	Lower Zambezi 2	67.6	Site strengths almost matching Kafue, visually perhaps surpasses it. The density of eco-camp sites and lodges and the imminent threat of exploration and mining makes the site less suitable.
3	Lower Zambezi 1	63,4	Site less attractive than L2 with a high density of eco-camp sites and lodges (e.g., Chongwe River Lodge in adjacent GMA) and imminent threat of exploration and mining.
4	Sioma Nqawezi 3	33.8	Lack of consistent water supply, less attractive landscape, poor infrastructure and low levels of wildlife make the Sioma Nqawezi sites less attractive
5	Sioma Nqawezi 1	30.7	The less attractive site and accessible site. All attributes the same as site S3 contribute to the low ranking of this site. Seasonally, interesting landscape.
6	Sioma Nqawezi 2	22.7	The less attractive and accessible sites and all attributes the same as site S2 contribute to the lowest ranking of this site. Benefits include frequent available giraffe observations.

4.1 PROPOSED ECO-CAMP FACILITY

Examples of a simple but practical camp in Mutidondo Reserve and picturesque but practical facility with common sanitary facilities. Other camps include Mvue camp near NP Lower Zambezi as simple 'luxury' in the wilderness of North Luangwa NP and the Buffalo camp. Permanent tents provide unexpected comfort of separate social facilities and comfortable beds in the Mvue camp. Lodge Mukambi is a higher class and is located on the border of Kafue NP and has two other support camps in the surrounding wilderness. The proceeds support the guard service and the local school, which they have built.

Figure 36. Ecotourism facilities are diverse but usually located in natural landscapes and offer greater comfort than would be expected under these conditions.

Figure 37. Example of a self-contained permanent tent from Hippo lodge, Mulola, Kafue park

4.1.1 Basic parameters of the considered ecotourism facility

Ecotourism facilities in protected areas and other naturally attractive landscapes in sub-Saharan Africa are generally divided into six different categories: Lodge, Tented camp, Bush camp (non-yearly wilderness camp)), Fly camp (mobile camp), Self-catering camp (campsite without restaurant) and Private house. After studying at least 100 of these facilities in various national parks, **campsite with permanent tents, additional free camping area, and basic catering services, and self-catering** options was evaluated as the most suitable. The general description of the eco-camp is shown below with illustrative examples from other campsites. This description will be modified and detailed in the project documentation if implemented.

Option A, campsite with access to river water	
Component	Example
1. Building reception, base approx. 8 x 5m, height 4m - concrete floor, roof construction from tree trunks and boards and local grass cover, basic reception desk, sun shelter. The base area can be increased by about ¼ to be used for roofed dining	 Reception with a restaurant, kitchen, and utilities (Mvuu Lodge – Lower Zambezi NP)

2. Permanent tent (5x), size 7 x 3,5 x 2,5 m, concrete floor, with or without stone with a base area of approx. 9.5m x 4.5m (concrete thickness approx. 30cm). Above the tent base - simple construction made of the stem and protective roof with boards or grass overhanging the base by approx. + 50cm	 Large tent of high quality for 2-3 people with a concrete floor and protective roof from a natural material, (NP Kafue, Magamba Camp)
Private sanitary facilities (toilet, shower, sink) connected loosely to the tent floor plan and covered only by a natural roof (grass, wood) with an open gable	
Interior: 2x standard size bed, table, armchairs outside the tent to the front floor on the terrace, etc.	
3. A free campsite without special landscaping for about 6 private car tents (roof tents)	

	Free campsite with tents on the ground or cars with individual or common sanitary facilities (sink, shower, toilet, (Mvuu Lodge, NP Lower Zambezi)
Each site to include 2x wooden benches connected to 1 table for about 6 people, BBQ	
4.Common social services- 4 x toilets and 2-4 showers, 2 -4 washbasins (separate for women and men) in one axially symmetrical building with natural roofing (wood, grass, tree trunks) on concrete slab approx. 4x5m thick.	
5. Swimming pool 8x 4m or 10mx 4m with water supplied from the river, according to the water quality	
6.Water supply - river water pumping system with pump and tank of approx. 10,000 litres (with pre-treatment)	
7. Energy, - solar panels with batteries and an additional diesel aggregate (lighting, pumping, and heating of water)	
8. Wastewater, - tripod or four-chamber sump or root treatment plant (not WWTP) – at a suitable location	
9. Water heating - solar heating panels (separate for each tent and common sanitary facility)	
10. Kitchen for guests - shelter of 4x3m x 3m analogous to the reception, 2 washbasins, and one work table, large fridge and freezer	
11 The LED lighting in all tents and selected places of the camp	
12. One building for service kitchen: building analogous to reception but about 5 x 4 m, height 4m - concrete floor, roof construction trunks and covering boards with local grass cover, basic table, kitchen equipment (stove, oven,, fridge, washbasins, etc.)	
13. Construction of a service building for washing (1-2 washing machines) 4x3m x 3,5m, concrete floor	
14. Facilities for overnight stay and accommodation of local employees (not yet budgeted) according to the distance of their residence. Construction of 3-4 tents is assumed.	
15. Accommodation for administrators and supervisors (approx. 2 tents, outside expert budget)	
Option B, - no surface water access	
16. Option without surface water access assumes drilling for water. Costs are given in Appendix A.	
17. Additional water treatment systems for the river, or groundwater using aerobic methods can be estimated at 200 000 CZK.	

4.1.2 Construction cost

Equivalent construction costs have been estimated for the Czech Republic. Estimated one-time construction costs for ecotourism facilities with access to river water (option/model A) have been estimated at CZK 135 000 USD (3.1 millionCZK) by a construction expert (ProjektProfess), - in case of the extension of the camp structure to 160 000 USD (CZK 3.7 million as per cost estimate (for details see Appendix A). The camp option with access to river water (A) would cost approximately 135 000 USD (CZK 3.1 million, less VAT). Construction of facilities for local employees and camp administrators, an indicative budget increases to 160 000 USD (CZK 3.7 million). If drilling and pumping of underground water are needed, the investment budget for option B would approximately double, i.e., - 258 000 – 301 000 USD (CZK 6-7 million, less VAT. Given the lower cost of labour in Zambia, it can be assumed that even partial expansion of the eco-camp would require a total investment for the construction of model A still between 129 000 – 172 000 USD (3-4 million CZK, less VAT). Full expert estimate, in CZK, is in Appendix A of this report.

4.1.3 Equipment and accessory costs

Main items needed to operate the eco-camp include:

1-2 off-road vehicles for the actual operation of the camp:	approx. 32300 – 64500 USD (0.75 to 1.5 million CZK)
1 specially adapted vehicle for guide services: approx.:	approx. 64500 USD (1.5 million CZK)
Furniture (tables at least 6, chairs at least 24, beds including bed necessities at least 10, cabinets at least 7, other accessories such as simple chairs 10, etc.):	approx.1500 USD (35 thousand CZK)
Washing machine 2x:	approx. 1000 – 1700 USD (25-40 thousand CZK)
Basic kitchen facilities:	approx. 860 – 1700 USD (20-40 thousand CZK)
Computer technology:	approx. 3-4 PCs: approx.2100 – 4200 USD (50-80 thousand CZK
Contingency funds:	4300 USD (100 000 CZK)
Total initial investment cost:	106500 – 142400 USD (2.1-2.8 million CZK

4.1.4 Annual operating costs

Staff

The total staff is estimated at 10-20 employees according to economic development. The core facility staff is estimated at a minimum of 8-10 employees, including:

- Manager 1
- Assistant Manager (including accounting, reception and other support activities, order)
- Handyman 1
- Cleaner and laundry 1
- Chef and Assistant 2
- Driver and Guide 1-2
- Temporary and support staff 1-2

Wages

Labor costs are assumed at 200-300 USD / month, or approx. 4700 – 7000 CZK, which amounts to approx. 2425-3600 USD/year (CZK 56400 -84000 CZK) per employee. Wages for the entire eco-camp team consisting of employees from local communities amount to 11200 USD (CZK 480,000) to 31000 USD (CZK 720,000) (for 8 employees) and 14000 USD (CZK 600,000) to 38750 USD (CZK 900,000for 10 employees). Especially in the first stages of the camp opening it is necessary to consider providing partial support for salary stability by non-profit organizations and development funds (ČRA etc.).

Other operational costs

Other costs will include fuel (cars, diesel power generator unit), repairs, cleaning, and other services:
Approx.costs is 300-400 thousand CZK.

4.1 MANAGEMENT OF THE PROJECT AND HUMAN RESOURCES

4.1.1 Management of the project

The project will be managed jointly by the Czech-Zambian team established by experts from the Zambian MTA, designated managers from the AOPK, Kafue National Park an NGO in the Czech Republic, possibly abroad. Activities of the project will include:

1. Acquisition of adequate financial resources for investment and operation
2. Elaboration of the project plan and implementation documentation
3. Creating a management team by the investor
4. Elaboration of procedures necessary for the functioning of the ecotourism facility
5. Selecting local companies and artisans from local communities to construct the eco-camp
6. Selection of a team to manage, operate and maintain the eco-camp in cooperation with the supervision team and Kafue park management
7. Development, administration, and update of relevant web pages
8. Promoting the eco-camp service to travel agencies
9. Permanent communication with surrounding communities and their capacity building and education
10. Ensuring stable operation support from the selected NGOs
11 Monitoring of the eco-camp operation

4.1.2 Management of human resources

Human resources of the Czech team will be managed and trained as follows:

1.Preparation of Czech workers for long-term missions within a wide portfolio of activities (from psychology, language, economic and operational aspects to knowledge of local social and environmental conditions) in the framework of independent educational programs

2. Consultation and transfer of practical knowledge of the Czech team from other organizations active in development aid in similar conditions (e.g., People in Need)

3. Special training effective management of a small team by a consulting company (e.g., ACE Consulting)

4. Involvement of team members inadequate motivation training to pursue the project's defined goals

5. Creation of operational teams from both countries and continuous analysis of activities and shortcomings to optimize work and improve internal communication

6. Missions from the Czech side will be long-term (at least half a year), members of the completed missions will share experience from working in Zambia onsite and the Czech Republic in preparation for the ensuing missions in a pre-defined frequency

7. Cultivating work relationships with local community employees

8. Educational research missions from CULS and CU are also expected in the future, which will cultivate Zambian and Czech students in monitoring environmental phenomena and preparing joint studies, exchange students and educate the local population

4.2 BASIC EXPERT/TECHNICAL OUTPUTS FOR SELECTED SITES

The team of 5 Czech experts provided the following outputs.

1. Based on communication with Zambian MTA, prepared technical foundations of the project

2. Organized logistical agreements for the two-week visit of 5 experts September 2019, assembled data and produced draft reviews of background information and summary of discussions

3. Prepared technical and logistical basis of the study trip

4. Prepared the outline of the feasibility study

5. Refined the location of 3 National Park sites to be evaluated for the potential implementation of the eco-camp

6. Completed the study trip, visited all designated sites, met with MTA representatives

7. Drafted the feasibility study in English and Czech for the Zambian MTA and the CRA

5 ECONOMIC FEASIBILITY

Economic feasibility is based on the concept of a local start-up entity where the initial investment of an estimated 3-4 million CZK will be secured by development funds (CRA, European funds, World Bank, non-profit sector) to build and establish the ecotourism facility while another 2.1-2.7 million CZK will be needed for additional investments (cars, interior equipment, etc.). Operating costs are estimated at approx. 500 000-900 000 CZK for staff wages and about 350 000 for miscellaneous operational needs. More detailed cost analysis is given in Appendix A. For the first 1-3 years, operating costs are expected to be partially subsidized by the development funds and the non-profit sector until the economic feasibility of the ecotourism facility is reached. Additional partial support of operating costs will be provided by two Czech NGOs (Nature Conservation Foundation, Ivan Dejmal, and ČSOP ForAfrica). After this initial period, self-financing of the facility should be reached with anticipated annual revenues exceeding CZK 1 million. Financial and economic details will be the subject of project documentation and plan developed if the project is implemented.

6 IMPACT ON THE ENVIRONMENT (TECHNOLOGY FOR ENERGY GENERATION, WATER, AIR AND IMPACT ON THE ENVIRONMENT

Environmental impacts of the actual implementation of the project are assumed to be minimal with the intent of contributing to the improvement of biodiversity and the natural environment of the site and surrounding area. The energy will be primarily obtained from solar panels used for lighting and water heating and only supplemented by a diesel aggregate, - thus negative impacts on the environment will be minimal. The diesel aggregate will serve as a backup energy source so its impact on air and noise level will be minimal. The location of sanitary facilities and technical facilities will be selected to minimize the potential impact on soil and water in nearby rivers. The selected eco-camp site can be accessed using an unpaved, and infrequently used road which requires minor modifications with no negative impact on the environment.

7 PLAN ELABORATING PROPOSALS OF VARIOUS WAYS FOR LONG-TERM MUTUALLY BENEFICIAL INVOLVEMENT OF LCOAL PEOPLE IN THE PROPOSED ACTIVITIES (A PARTICIPATORY APPROACH)

The Community Resource Boards (CRBs) get a share of profits from hunting licenses, and they also share in the meat of animals hunted for trophies. In contrast, other than employment opportunities, they get few direct benefits from photographic tourism. As a result, conflicts between hunting and tourism have escalated, and poaching remains a threat around the parks and conservation areas. To aggravate matters, few of the national parks and even fewer of the GMAs have drafted formal management plans, and those that have plans do not have the resources to implement them. Unregulated residential land allocations by traditional leaders and haphazard residential spread also aggravate human-animal conflicts. These issues are relevant nationally, however, in South Luangwa National Park, which has been declared by the UNWTO as the world's first Sustainable Wildlife Park, the lack of sustainable practices to support the designation are particularly pertinent. The future development of tourism and the preservation of the wildlife and biodiversity on which it is based need to recognise these risks and prioritize the need to find ways in which local communities can gain

direct benefit from non-consumptive and photographic tourism. The rights of indigenous people Zambia's seven main ethnic languages are Bemba, Nyanja, Tonga, Lozi, Luanda, Luvale, and Kaonde; however 73 indigenous African ethnolinguistic groups have been identified, reflecting the numerous groups of indigenous peoples. Although certain minorities in Zambia have occasionally faced stress and outright discrimination, this has never been on a scale and depth of brutality seen in neighbouring countries, and most national policies and programmes have gone some way towards taking legitimate interests of minorities into account. 20 Concerning the development of sustainable tourism, the land rights of indigenous peoples is a key issue. As discussed in the section Preservation of Biodiversity above, these issues are focused around the ownership and management of land in the Game Management Areas. Terms of employment: working hours and contracts, salary and reward The Minimum Wages, and Conditions of Employment Act specifies working conditions such as a maximum 48-hour workweek, minimum wages for different categories including in tourism jobs 20

Conceptually, our plan assumes the involvement of members of the local community at several levels.

1. During construction, - providing manual and qualified labour force
2. During administration and operation of the built facility (see Chapter III.5.3.1. For more details)
3. Provision of operational support by using local goods and services, - including local products from agriculture and fishery
4. Systematic capacity building and participation in educational programs in environmental management and sustainable use of the natural environment in surrounding settlements and villages.

All of these activities will be closely coordinated with local park management. A detailed work plan and schedule will be elaborated on in project documentation of the project, in case it is of realized.

8 ASSURANCE OF INVESTMENTS

If the project realization is approved, necessary investments will be secured from the Czech Development Assistance programme through the Czech Development Agency as the Czech Republic's foreign development assistance policy considers Zambia as a country of priority importance and the development of local countryside is among priority activities. For this purpose, only partial corrections in the specified Ministry of Foreign Affairs indicators are needed, which are generally needed in view of the current dynamics of drawing development funds in this country. This source seems to be the most rational outside the discussion. Other EU funds may be considered as an alternative.

9 ASSURANCE OF OPERATIONAL FUNDING

In the implementation phase (1-3) years, operational funds will be provided, in part, by development assistance agencies to balance the operating budget. If additional funding is required, it will be provided by the non-profit sector (eg., the Ivan Dejmal Nature Conservation Foundation) for a specified period as long as necessary. Self-financing and profit generation is expected during the full operation of the eco-camp facility. Profit will be exclusively used to maintain and improve the eco-camp and promote nature conservation in the national park.

10 FINANCIAL PLAN

Construction of the facility will require an initial investment split into a maximum of two years from the commencement of the construction of the facility. The investment will include the building of the eco-camp facilities, purchase of camp furniture and vehicles, solar panels and batteries, water pump and tank, and PCs. After one to two years, at most, supplemental financing for camp operations is expected in the amount of approx. CZK 300 000-400 000 annually) and employees' salaries (CZK 500 000-900 000/ year) for approximately 3 years. After three years, subsidies from development aid agencies and possibly the non-profit sector are expected to be phased out and the transition to self-financing gradually reached. In exceptional and justified cases due to unforeseen economic fluctuations or other external events, limited support can be provided by the non-profit sector.

11 EVALUATION OF LONG-TERM SUSTAINABILITY AND EFFICIENCY OF THE PROJECT

The project will be evaluated as a measure of success (in terms of efficiency and sustainability) and will be based on these indicators

1. Eco-camp will be built using local workers and using local materials
2. The operation of the ecotourism facility will employ at least 8 local workers within three years, mainly paid from the camp revenues. Seasonal gaps in camp operation will filled-in by workers doing maintenance work, marketing, and facility expansion.
3. The number of eco-camp clients will make it possible to employ more than 10 employees after three years, paid in full, or in the vast majority of service revenues.
4. Marketing supporting points 3. and 4. It will be connected with the creation of web pages in English, German and Czech languages and ensuring their operation and updating by local employees.
5. For efficiency and sustainability, a special contractual relationship will be established with travel agencies in the Czech Republic (and possibly in Austria and Germany) with a priority interest in ecotourism services in Africa.
6. Sustainable support services from wider representatives of local communities will include the purchase of local crops (not cashew nuts) and catch from fisheries
7. A sign of sustainability will be that equipment in a given composition will be able to generate revenue for local management for at least three years and, at least in some years, profitable for the development of eco camping and nature conservation in the surrounding area.

12 RISK ANALYSIS SCENARIOS, LEGAL ASPECTS

Zambia is a relatively politically and legally stable country, and there are no exceptionally exceptional risks for the successful implementation and operation of an ecotourism facility. However, certain risks of moderate-intensity have been identified:
1. Unpredictable development of the influence of Chinese or other foreign investors on the environment
2. Damage to the interests of investors by changing legislation (in the name of nationalization)
3. In case of successful implementation and operation, subsequent insertion of corrupt interests (this will be limited by leaving the equipment in the hands of the investor and solved by a symbolic lease relationship and permanent supervision by representatives of the Czech Republic)
4. Risks resulting from the inefficient operation, etc., will be reduced by continuous supervision by the investor
5. Unpredictable development of world tourism affecting the African continent and Zambia
6. Exclusion of locals from eco-tourist areas with a reduction in income, employment and resource availability to locals
7. Loss of control of eco-tourist business and resources to outsiders
3. Consequent disruption of the social fabric of the local community

Simply imposing sophisticated financial, technological, or business practice regimes from more developed nations may not suit all developing economies. It is worth noting that many economies' indigenous management systems embody sophisticated understandings in regard to long-term knowledgeable management of their natural and cultural resource, and there are calamitous examples of well-meaning development interventions that deserve to be better known.

13 TIMEFRAME

Timetable for the implementation of the feasibility study conclusions is shown below:

Time frame	Activity
2019/2020	Identification of the source of Czech and International funding sources

2020	Completion of an application for implementation of the ecotourism facility from identified funding sources.
2020	Approval of the application
2020/2021	Completion of a detailed project plan and allocation of obtained funding. Establishment of an international corporate entity to manage the project. Establishment of a local presence for this entity. The hiring of local construction and operation staff.
2021/2022	Construction of the facility. The marketing campaign for the new eco-tourism services.
2022/2023	Commencement of partially subsidized operation of the facility, capacity building of local staff
2023-2025	Pilot operation of ecocamp's self-financing, study visits of representatives from other communities. It is expected that students and staff from Czech universities will participate in the study and hands-on operational exchanges with Zambian universities (paid from separate funding sources).
2025	Promotion of pilot project and self-financing. Obtaining of wider support for nature conservation projects in the National Park

14 DESCRIPTION OF PROPOSED INVESTMENTS IN ECO-TOURISM

Potential investment is generally expected to have unexpected multiplier effects with positive economic impacts (employment of local people in services related to conservation and use of nature, downstream agro-production and fisheries), social-educational impacts (meaningful work activities justifying sustainable use of natural resources and their protection) and environmental (improved perception of the importance of protecting the natural environment from local communities). The investment made in this area has obvious advantages of over-investment in agriculture. Improved regional prosperity and purchasing capacity, employment, personal interest and social stabilization of local communities are some of the benefits. Also, improvement of the level of protection of the natural environment and biodiversity will contribute to reducing the negative impacts of climate change.

Specifics and details of the investment into the proposed eco-tourism is described in detail in section 4.1.

15 INVOLVEMENT OF LOCAL COMMUNITY

The primary objective of the project is not the construction and operation of an eco-camp, which is merely a means of achieving the objective. The aim is to increase the economic prosperity and to build the technical capacity of local people to preserve the natural environment as a key prerequisite for improving the quality of biodiversity and nature conservation in the national park. The inclusion of local communities in the implementation of the project is a viable and real condition for the success of the project. The primary local community located near the park will be involved in all aspects of the project, including camp construction, operation, guarding duties, the supply of food and maintenance services as much as possible.

16 ECONOMIC ANALYSIS OF POSSIBLE INVESTMENT

Small and medium enterprises, including microenterprises with five or fewer employees, form the vast majority of businesses and the employment base in many economies. Tourism is a major source of foreign revenue and is seen as a pillar industry in many economies. The sustainable development of the businesses constituting this sector is therefore vital not only to economic development, but also as a vehicle for physical and electronic infrastructure investment and popular uptake, and in providing larger frameworks for managing and maintaining prosperity from the natural resource.

17 EVALUATION

The ZTMP plan recommends developing Kafue NP and Lake Itezhi Tezhi as a larger-scale international safari centre and resort hub, including Kafue NP infrastructure improvement., Itezhi. It further plans to develop and package Kafue Flats tourism offer, including Lochinvar NP improvement, Kafue Flats GMA community development programme and the Kafue Flats ecotourism circuit.

The results of this project conform to this strategy and identify the optimal site for eco-camp placement.

Tourism is becoming formally recognised as a pillar or strategic industry for many economies and is centralised in national or regional development plans, or targeted for increased budget share. Traditional bank attitudes are changing, or are being changed by the increasing provision, by both government and private-sector backers, of microfinance schemes tailored to the needs of smaller businesses. A global trend towards market-oriented economies is shifting the traditional balance between government and the private sector, and negotiating areas of responsibility and partnership arrangements are increasingly evident. The Internet opens new tourism markets, and eco-tourism is widely recognised as a key direction for future development. It is apparent that tourism small business development is being structurally referenced to the global economy and in the context of bilateral and multilateral agreements affecting facilitating specific sets of cross border flows, infrastructure planning in common interests, harmonisation of standards, and in policy frameworks increasingly directed towards market economies. A shifting balance between government and private sectors is evident, in many economies, with public-private partnerships being highly applicable to tourism industry development, due to the dual requirements to macro-manage the economy in the public interest and to encourage a vibrant entrepreneurial sector**. The adoption of business models and practices from highly mature market economies needs to be tailored to the wider development and cultural attitudes of fewer developed economies**, who have a capacity building, and other infrastructure priorities to put in place first. This project aims to develop the most suitable approach suitable for Zambia and the Kafue National Park.

17.1 PROPOSAL OF SUSTAINABLE ECO-TOURISM ACTIVITIES

Zambia's strongest competitive position is environmental sustainability, leading all other countries in Southern Africa in the 2017 Travel and Tourism Competitiveness Report. The Tourism and Hospitality Act 2015 stipulates that the Ministry of Tourism should 'facilitate the increased use of sustainable waste disposal and bio-degradable packaging.' In practice, there is little evidence of this taking place. For Zambia to proclaim its status as a sustainable tourism destination, sustainability practices within the industry need to be fully supported. Tourism operators cannot reliably align their operating practices with sustainable tourism guidelines. While many of the top-end lodges in Zambia have to some extent adopted sustainability practices, the majority of businesses do not follow recognised sustainability practices. None of the globally acknowledged sustainability rating systems have been formally adopted or endorsed by industry or government. There are currently no destination level sustainability schemes. A variety of tourism sustainability schemes are being used by Zimbabwe's several Green Tourism accredited businesses. Fair Trade Travel certification is used in eight other regional countries (Botswana, Kenya, Madagascar, Mozambique, Namibia, Seychelles, Tanzania, South Africa), some of which also have their sustainability accreditation schemes.

Conservation and preservation of natural resources and cultural traditions will be the guiding principles for the implementation of the proposed eco-tourism facility. The key role of local communities in managing and conserving wildlife will be recognised by project management via establishment of joint management of the eco-camp site and related National Park facilities and areas.

Development of the Kafue National Park eco-facility will follow a model of sustainable economic use and biodiversity conservation. Facilitation of Community Based Natural Resource Management (CBNRM) in communal areas surrounding the Kafue National Park and build the capacity of local communities to develop economic opportunities through partnerships with donors, NGOs, and the private sector.

18 CONCLUSIONS

There is a clear correlation between the existence and development of ecotourism and the quality of nature protection in individual national parks. Protected areas without tourist infrastructures and with a minimum of visitors are first populated, to a varying extent grubbed and used for agricultural purposes, and subsequently, new settlements are created there. They become so-called parks only on paper. On the contrary, relatively prosperous national parks tend to have a solid ecotourism infrastructure allowing visitors to nature lovers from all over the world, especially from Europe, North America, and East Asia, or from South Africa. It is estimated that tourism in Zambia accounts for around 7-8% of GDP and more than ¼ of more than 930 thousand foreign visitors (2015) visited one or more national parks. Attendance of even "premier" national parks such as South Luangwa is unexpectedly low in our conditions and has reached around 40,000 in recent years. per year. For comparison, our nearly 30 times smaller Krkonoše National Park has an annual visit rate of 1.5 to 3 million. In the huge Kafue National Park as large as Moravia, the annual number of tourists reaches 10-13 thousand. Of the twenty national parks, according to the Ministry of Tourism and the Arts, only two strongly (South Luangwa, Mosi o, and Tunya) and two slightly (Kafue, Lower Zambezi) currently have a positive balance about the state budget.

About the above facts, the AOPK CR proposes a pilot project for development cooperation based on the support of the construction and operation of an eco-tourism infrastructure in the form of a campsite on the border of one national park, nature trail, observatories including web sites. The project also includes support for some other conservation instruments, such as monitoring of selected natural phenomena, establishing a finding database, formulation, and implementation of care plans. Part of this facility should also serve as a basis for environmental research. At the same time, there could be a focal point for ecologically oriented primary education and first aid. People from the local community will be involved in all work activities, and after the first stage (approx. 5 years), the infrastructure management and development would be gradually transferred to their hands under the supervision of a donor of development aid. About 10-20 representatives of the local community are expected to be employed. Czech students can also be included in the supervision and study stays during their study and research stays. The initial investment would amount to CZK 10-14 million, and the annual operating and personnel costs would be around CZK 4 million. The number of investment costs will be specified in the project documentation, and, due to different economic conditions, it can be expected to be substantially lower. It can also be assumed that some non-profit organizations would contribute to the actual implementation of the project and ensure its sustainability.

The Feasibility Study found eco-tourism potential at all pre-selected sites

(Kafue, Sioma Ngwezi, Lower Zambezi). The valuable support of MTA, park management and local communities made completion of the Feasibility Study possible.

Given the expected limited financial resources from the development aid of the Czech Development Agency, and European funds or World Bank funds, the comparative SWOT analysis recommends the site at Kafue NP at the confluence of the Kafue and Shishambe as the most suitable. Multiplier beneficial effects are assumed in the involvement of local communities in the construction, operation, and management of the camp, and engaging local people in the support services (use of local agricultural products, fishing, etc.). Two non-profit organizations (Ivan Dejmal Nature Conservation Foundation and ČSOP Pro Africa) are ready to contribute in the initial phases of camp operation to operating costs to offset possible income shortfalls.

Implementation of the project would contribute to the fulfillment of the UN Sustainable Development Goals No. 1, 3, 15, and 17 and the obligations arising from the Czech Republic's membership in the EU and OECD. Representatives of Zambia appreciated the intention but were somewhat disappointed by the small scale. Therefore, it would be desirable to coordinate EU development assistance in sub-Saharan Africa and to identify at least 100 sites for the implementation of similar projects. The competent Ministry of Tourism and the Arts addressed to the Ministry of the Environment and the Ministry of Foreign Affairs a positive response to the proposal for such assistance.

A separate report has been produced and delivered with acquired data, partial empirical evaluation of the pre-selected sites, basic descriptions of the National Parks, photo-documentation, expert's notes and estimates of needed investments, and description pf meetings with Zambian partners.

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20 APPENDIX A, FULL SWOT ANAYSIS FOR ALL SITES DONE BY 5 EXPERTS

20.1 SAMPLE SWOT DONE BY ONE EXPERT

The tables below show a sample SWOT analysis done by one of the 5 experts. Results from all experts are delivered separately as an Excel file.

Strengths	Weight 1, 1.5, 2						Score 0-5						Weighted Score					
National Park	Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2	1	1	2	3	1	2	1	1	2	3	1	2
Preserved biodiversity	2	2	2	2	2	2	4	3	3	3	4	4	8	6	6	6	8	8
Visually attractive landscape	1.5	1.5	1.5	1.5	1.5	1.5	4	4	4	4	5	5	6	6	6	6	7.5	7.5
Presence of interesting flora and fauna	2	2	2	2	2	2	3	3	3	3	3	3	6	6	6	6	6	6
Presence of freshwater	2	2	2	2	2	2	5	3	3	3	5	5	10	6	6	6	10	10
Possibility of eco tourism activities																		
1. fishing	1	1	1	1	1	1	5	4	4	4	5	5	5	4	4	4	5	5
2. boat riding	1.5	1.5	1.5	1.5	1.5	1.5	5	3	3	3	5	5	7.5	4.5	4.5	4.5	7.5	7.5
3. trekking	1.5	1.5	1.5	1.5	1.5	1.5	2	1	1	1	3	3	3	1.5	1.5	1.5	4.5	4.5
4. bicycling	1	1	1	1	1	1	0	0	0	0	1	1	0	0	0	0	1	1
5. bird-watching	1.5	1.5	1.5	1.5	1.5	1.5	5	4	4	4	5	5	7.5	6	6	6	7.5	7.5
Presence of hospitable local communities and culture	2	2	2	2	2	2	5	4	4	4	4	4	10	8	8	8	8	8
Favourable climate	1.5	1.5	1.5	1.5	1.5	1.5	4	4	4	4	4	4	6	6	6	6	6	6
Food access	1.5	1.5	1.5	1.5	1.5	1.5	4	4	4	4	5	5	6	6	6	6	7.5	7.5
Abundant labour force	2	2	2	2	2	2	4	4	4	4	3	3	8	8	8	8	6	6
Government support of eco-tourism	1.5	1.5	1.5	1.5	1.5	1.5	4	4	4	4	3	3	6	6	6	6	4.5	4.5
Accessibility	2	2	2	2	2	2	5	2	2	2	4	4	10	4	4	4	8	8
Presence of park infrastructure	1	1	1	1	1	1	3	4	4	4	2	2	3	4	4	4	2	2

Weaknesses	Weight 1, 1.5, 2						Score 0-5					
Park	Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2	1	1	2	3	1	2
Environmentally sensitive environment	1	1	1	1	1	1	3	4	4	4	5	5
Absence of strict rules for entry and behaviour in the park	1.5	1.5	1.5	1.5	1.5	1.5	3	5	5	5	3	3
Low awarenness and involvement of local communities in eco-tourism	1	1	1	1	1	1	3	4	4	4	4	4

Lack of infrastructure and facilities supporting eco-tourism	1.5	1.5	1.5	1.5	1.5	1.5	1	5	5	5	1	1
Lack of awarennes of National and foreign institutions of eco-tourism in the area	1	1	1	1	1	1	1	4	4	4	1	1
Lack of experience to develop a sustainable eco-tourism product	1	1	1	1	1	1	1	4	4	4	1	1
Seasonality of eco-tourism	1	1	1	1	1	1	3	3	3	3	3	3
Lack of incentives for the involvement of local communities in eco-tourism	1.5	1.5	1.5	1.5	1.5	1.5	3	4	4	4	4	4
Inadequate funding for conservation of natural and cultural resources	2	2	2	2	2	2	4	5	5	5	5	5
History of profit-only operated tourist sites	1	1	1	1	1	1	3	5	5	5	3	3

Opportunities	Weight 1, 1.5, 2						Score 0-5						Weighted Score					
Park	Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2	1	1	2	3	1	2	1	1	2	3	1	2
Development of local ecotourism operation involving local inhabitants in decision making and planning	2	2	2	2	2	2	4	4	4	4	3	3	8	8	8	8	6	6
Conservation of natural ecosystem and development of measures to mitigate adverse impact of eco tourism-related activities	2	2	2	2	2	2	3	3	3	3	2	2	6	6	6	6	4	4
Generation of sustainable income to local staff involved in construction and operation of the developed facility	2	2	2	2	2	2	4	2	2	2	4	4	8	4	4	4	8	8
Exploration of synergies and partnerships with NGOs, government and local communities	1.5	1.5	1.5	1.5	1.5	1.5	4	3	3	3	3	3	6	4.5	4.5	4.5	4.5	4.5
Increasing environmental awarennes among tourists and local communities	1.5	1.5	1.5	1.5	1.5	1.5	3	4	4	4	3	3	4.5	6	6	6	4.5	4.5
Developing strategies for waste management for the facility, - also applicable to local communities	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
Raising awarenness (locally, nationally and internationally) of the richness of local wildlife, vegetation and geology	1.5	1.5	1.5	1.5	1.5	1.5	4	3	3	3	4	4	6	4.5	4.5	4.5	6	6

Low level of tourist activities guarantee truly natural aspect of ecotourism experience with no overcrowding by visitors	1.5	1.5	1.5	1.5	1.5	1.5	4	5	5	5	3	3	6	7.5	7.5	7.5	4.5	4.5
Increased environmental conservation and protection measures	2	2	2	2	2	2	5	4	4	4	4	4	10	8	8	8	8	8
Presence of other eco tourist and tourist sites in the neighbourhood	1	1	1	1	1	1	4	2	2	2	4	4	4	2	2	2	4	4

Threats	Weight 1, 1.5, 2						Score 0-5					
Park	Kafue	Sioma Nqawezi			Lower Zambezi		Kafue	Sioma Nqawezi			Lower Zambezi	
Site	1	1	2	3	1	2	1	1	2	3	1	2
Lack of funding available for construction and operation of the facility	1	1	1	1	1	1	5	5	5	5	5	5
Negative environmental impacts of construction and operation of the facility	1.5	1.5	1.5	1.5	1.5	1.5	3	2	2	2	4	3
Mineral and mining activity in the near surroundings	2	2	2	2	2	2	3	0	0	0	5	5
Illegal logging	1.5	1.5	1.5	1.5	1.5	1.5	3	4	4	4	3	3
Poaching	2	2	2	2	2	2	4	5	5	5	4	4
Pressure from neighbouring communities	2	2	2	2	2	2	4	4	4	4	3	3
Low level of interest/involvement of local inhabitants in the project	1.5	1.5	1.5	1.5	1.5	1.5	2	3	3	3	4	4
Low level of interest/involvement of NGOs, government in the project	1.5	1.5	1.5	1.5	1.5	1.5	3	2	2	2	4	4
Negative cultural and/or environmental impact of construction and operation of the facility	1	1	1	1	1	1	2	2	2	2	2	2
Land tenure issues not resolved	2	2	2	2	2	2	3	3	3	3	3	3
Negative political intervention (local, regional, National level)	2	2	2	2	2	2	2	2	2	2	4	4
Poor communication/awarennes rasing of the benefits of eco tourism for the area	1	1	1	1	1	1	3	3	3	3	3	3

21 APPENDIX B, COST OF ECO-CAMP CONSTRUCTION AND ITEMS

RECAP OF PRODUCTS list of works

Part Code - Description	Total price [CZK]
The cost of the inventory work	**3,026,000.00**
PSV - PSV works and supplies	920,000.00
721 - Sanitary - internal sewage	120,000.00
722 - Sanitary - internal water supply	800,000.00
M - Jobs and supplies M	960,000.00
21-M - Elektroworks	960,000.00
Other - Other	1,146,000.00
10001 -	1,146,000.00

PČ	Type	Code	Description	MJ	Amount	Unit price [CZK]	Total price [CZK]
Total inventory costs							**3,026,000.00**
	D	PSV	Labor and delivery PSV				920,000.00
	D	721	Plumbing - drainage systems				120,000.00
1	TO	R-10004-721-01	Waste water - four-chambered sink + drain	kpl	1.000	120,000.00	120,000.00
	PP		Waste water - four-chambered sink + Trativod				
	D	722	Sanitary - internal water supply				800,000.00
2	TO	R-10004-101	Water - pump from the river to the reservoir about 10,000 liters (with pretreatment) + Water Treatment Plant	kpl	1.000	380,000.00	380,000.00
	PP		Water - pumping from the river to the reservoir about 10,000 liters (with pretreatment)				
3	TO	R-10005-102	Solar water heater tank (for tents, common area showers, service kitchen ...)	kpl	1.000	420,000.00	420,000.00
	PP		Solar water heater tank (for tents, common area showers, service kitchen ...)				
	D	M	Labor and delivery M				960,000.00
	D	M-21	Elektromontáže				960,000.00
4	TO	R-24-M-001	Genset power to 26 kW	kpl	1.000	210,000.00	210,000.00
	PP		Genset power to 26 kW				
5	TO	R-24-M-002	Solar panels incl. accumulation of output approximately 15kW	kpl	1.000	750,000.00	750,000.00
	PP		Solar panels incl. accumulation of output approximately 15kW				

	D	Other	Other				1,146,000.00
	D	10001					1,146,000.00
6	TO	R-10001-001	RECEPTION about 8 x 5m, height 4m - concrete floor, roof construction and covering boards tribes with local grass coverage, basic concierge desk, shelter from the sun	kpl	1.000	120,000.00	120,000.00
	PP		RECEPTION about 8 x 5m, height 4m - concrete floor, roof construction and covering boards tribes with local grass coverage, basic concierge desk, shelter from the sun				
7	TO	R-10001-002	Permanent tent 7 x 3.5 x 2.5 m own tent floor concrete with stone or without an area of about 9.5 m x 4.5 m (height about 30 cm concrete) over its own becomes easy construction of stemwood and protective roof overhang boards respectively. grasses	kpl	5.000	115,000.00	575,000.00
	PP		Permanent tent is 7 x 3.5 x 2.5 m own tent floor concrete with stone or without an area of about 9.5 m x 4.5 m (height about 30 cm concrete) over its own becomes easy construction of stemwood and protective roof boards respectively. grasses with dimensions slightly larger than the tent (everything about + 50 cm) and ensuite bathroom (toilet, shower, sink) adjoining tent loosely on the floor plan and roof indoor only natural (grass, wood) with open shield. Interiors: 2x normal size bed, table, chair outside the tent on the terrace precursor				
8	TO	R-10001-003	Camp places small landscaping for about 6 tents with private parking for cars (tents on the roof) Every place: 2 wooden benches connected to one table for about 6 people	kpl	6.000	9,000.00	54,000.00
	PP		Camp places, minor landscaping for about 6 tents with private parking for cars (tents on the roof) Every place: 2 wooden benches connected to one table for about 6 people grill grid construction and social services- Common 4 x toilet and 2-4 showers, washbasins 2 -4 (women and men separately) - one axially symmetric object with natural roof (wood, grass, strains) on a concrete slab about 4x5mm				
9	TO	R 10001-003a	CORPORATE SOCIAL SERVICES, private 6 - 4 x toilets and 2-4 showers, washbasins 2 -4 (women and men separately) - one axially symmetric object with natural roof (wood, grass, strains) on a concrete slab about 4x5mm	kpl	1.000	100,000.00	100,000.00
	PP		CORPORATE SOCIAL SERVICES soukr.stanů for 6 - 4 x toilet and 2-4 showers, washbasins 2 -4 (women and men separately) - one axially symmetric object with natural roof (wood, grass, strains) on a concrete slab about 4x5mm				
10	TO	R-10001-010	Kitchen are: 4x3m shed x 3m analogy reception building and protection of tents, 2 sinks and a preparatory table, fridge	kpl	1.000	54,000.00	54,000.00
	PP		Kitchen are: 4x3m shed x 3m analogy reception building and protection of tents, 2 sinks and a preparatory table, fridge				
11	TO	R-10001-011	SERVICE KITCHEN: building analogous to reception but about 5 x 4 m, height 4m - concrete floor, roof construction and covering boards tribes with local grass coverage, basic table, kitchen equipment (stove, oven, refrigerator, sinks, etc.).		1.000	110,000.00	110,000.00
	PP		SERVICE KITCHEN: building analogy reception but about 5 x 4 m, height 4m - concrete floor, roof construction and covering boards tribes with local grass coverage, basic table, kitchen equipment (stove, oven, refrigerator, sinks, etc.).				

12	TO	R-10001-012	SERVICE BUILDING FOR WASH (1-2 washing machines) and possibly other activities, see the building of a kitchen, but 4x3m x 3.5 m concrete floor	kpl	1.000	53,000.00	53,000.00
	PP		SERVICE BUILDING FOR WASH (1-2 washing machines) and possibly other activities, see the building of a kitchen, but 4x3m x 3.5 m concrete floor				
13	TO	R-10001-100	Outdoor garden pool 8 x 4 m	kpl	1.000	80,000.00	80,000.00
	PP		Outdoor garden pool 8 x 4 m				