



Utilization of the Zambezi River Basin for Tourism: Opportunities and Challenges

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Research Article

Abstract

Purpose: Zambezi River Basin (ZRB) is one of the top ranking tourist destinations in Southern Africa. It is one of the five longest river basins in Africa blessed with diversified wildlife. The popular stopovers along the river basin are Caprivi, Victoria Falls and Livingstone, Kariba, Kafue, Cahora Bassa and Zambezi Delta. It offers variety of tourist attractions including boating, cruising, kayaking, diving, walking along the river bank, bungee jumping, white water rafting, fishing, hunting and flying over the Basin. However, it seems that the development of facilities around the Basin like hotels, cottages, campsites, trails, tourism complexes and walkways does not match with the opportunities the ZRB offers. Keeping this in mind, the present study explores the challenges and the possibility of tourism development along the Zambezi River Basin (ZRB).

Methods: The study is solely based on the Literature synthesis generated from secondary sources based on reports and articles published in academic journals.

Results: Diverse wildlife and scenic beauty are the main opportunities for the region to develop tourism. However poor road and air communication and other infrastructural weaknesses are the major obstacles for the region to develop tourism.

Implications: Governments and the private entrepreneurs should work together in developing infrastructure as well as tourist attractions in the region, including road, water and air transportation, electricity supply, gaming options, spa, and other such facilities.

Limitations: The paper is based only on literature synthesis to arrive at the conclusion and recommendation. The literature is relatively scant and most of the available literature is from reports. Survey methods can be used to have a broader comprehension of the challenges and the opportunities of the region.

Keywords: Tourism, River basin, Zambezi, Opportunities, Challenges, Zimbabwe

1. Introduction

The tourism industry is significantly contributing to global economy; it contributed 5% of gross domestic product (GDP), 30% of service exports and 235 million jobs. In Africa tourism receipts are projected to around \$261.77 billion, service exports have grown six times faster than goods exports in Africa from 1998 to 2015 (AfDB 2015). Given these trends, tourism industry in Southern Africa can enjoy its share if the natural resources like river basins are well utilised especially the Zambezi River Basin.

The Zambezi River Basin (ZRB) is one of the most diverse and valuable natural resources in Africa. It is the fourth largest in Africa after the Congo, the Nile and the Niger (Tumbare 2004). Its waters are critical to sustainable economic growth and poverty reduction in the region. In addition to meeting the basic needs of some around 40 million people and sustaining a rich and diverse natural environment, the river plays a central role in the economies of the eight riparian countries; Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe (SADC 2018). It provides important environmental goods and services to the region and is essential to regional food security and hydropower production. Zambezi River Basin is characterised by extreme climatic variability, the River and its tributaries are subject to a cycle of floods and droughts that have devastating effects on the people and economies of the region, especially the poorest members of the population (The World Bank 2010). Major economic activities of the Basin, with a human population of about 38 million (SADC 2018), include mining, tourism, hydropower production, fisheries, agriculture and manufacturing (Tumbare 2004).

2. Literature Review

Despite the regional importance of the ZRB, few improvements have been made in the management of its water resources over the past 30 years. Differences in post-independence development strategies and in the political economy of the riparian countries, as well as the diverse physical characteristics of the Basin, have led to approaches to water resources development that have remained primarily unilateral. Better management and cooperative development of the Basin's water resources could significantly increase agricultural yields, hydropower outputs, tourism and economic opportunities (The World Bank 2010). In view of this, the researcher aims to assess the utilisation of the ZRB for tourism, identify areas that can be improved and give recommendations.

2.1. Basic Characteristics of the Zambezi River Basin

The Zambezi River lies within the fourth-largest basin in Africa after the Congo, Nile, and Niger River basins. Covering 1.37 million km², the Zambezi River has its source in Zambia, 1,450 meters above sea level (the map is shown in Figure 1). The main stem then flows southwest into Angola, turns south, enters Zambia again, and passes through the Eastern Caprivi Strip in Namibia and northern Botswana; this part is known as the Upper Zambezi River basin. The Middle Zambezi River basin then flows through Mosi-oa-Tunya (Victoria Falls), shared by Zambia and Zimbabwe, before entering Lake Kariba, which masses behind Kariba Dam, built in

1958. A short distance downstream from Kariba Dam, the Zambezi River is joined by the Kafue River, a major tributary, which rises in northern Zambia. The Kafue River flows through the Copper belt of Zambia into the reservoir behind the Itesha Tezhi Dam (ITT), built in 1976. From there, the Lower Zambezi River basin starts when the Kafue River enters the Kafue Flats and then flows through a series of steep gorges, the site of the Kafue Gorge Upper (KGU) hydroelectric scheme, commissioned in 1979. Below the Kafue River confluence, the Zambezi River pools behind Cahora Bassa Dam in Mozambique, built in 1974. Some distance downstream, the Zambezi River is joined by the Shire River, which flows out of Lake Malawi to the north. Lake Malawi, which covers an area of 28,000 km², is the third-largest freshwater lake in Africa. From the confluence, the Zambezi River travels some 150 km, part of which is the Zambezi Delta, before entering the Indian Ocean. The basin of the Zambezi River is generally described in terms of 13 sub basins representing major tributaries and segments (The World Bank, 2010; Taber, 2012; Tumbare, 2004 and ZAMCOM, 2016)

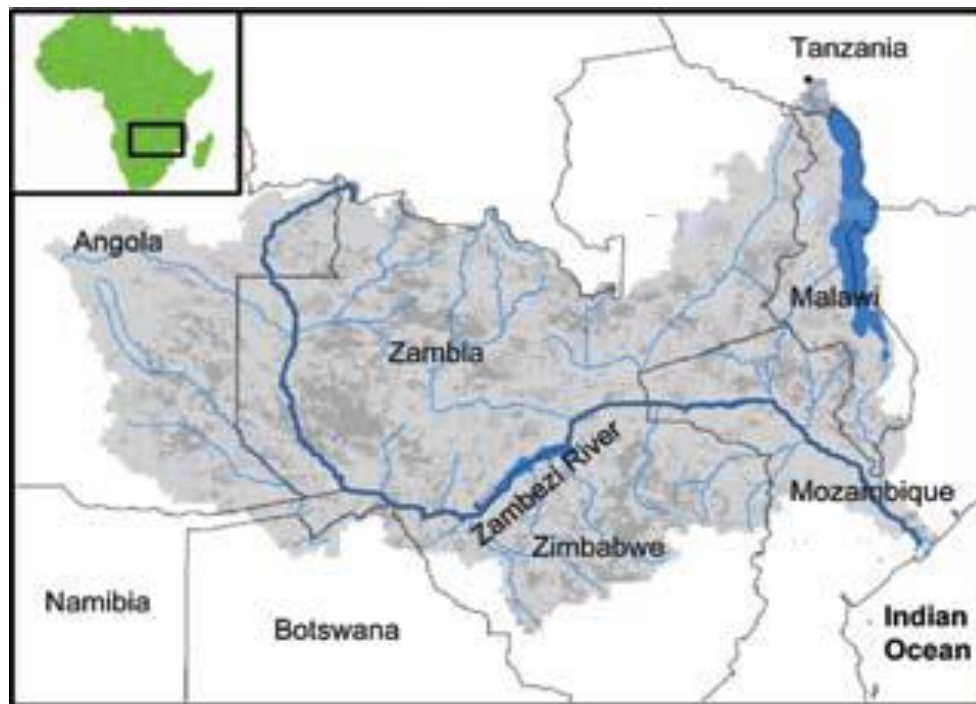


Fig.1: Zambezi River Basin, Southern Africa

Source: Sanchez, 2018

From a continental perspective, the ZRB contains four important areas of biodiversity:

- Lake Malawi, a region of importance to global conservation because of the evolutionary radiation of fish groups and other aquatic species.
- The swamps, floodplains, and woodlands of the Paleo-Upper Zambezi in Zambia and northern Botswana, including the areas of Barotseland, Busanga and Kafue, which along with the Bangweulu are thought to be areas of evolutionary radiation for groups as disparate as Reduncine antelope, suffrutices, and bulbous plants.

- The Middle Zambezi Valley in northern Zimbabwe and the Luangwa Valley in eastern Zambia, two of the last remaining protected areas extensive enough to support large populations of large mammals.
- The Gorongosa/Cheringoma/Zambezi Delta area of central Mozambique, which covers an area of enormous habitat diversity not found in such close proximity elsewhere on the continent.

2.2. Population and Economy

The population of the ZRB is approximately 40 million more than 85 per cent of whom live in Malawi, Zimbabwe, and Zambia within four sub basins: Kafue, Kariba, Tete, and the Shire River and Lake Malawi. Of the total population, approximately 7.6 million (25 per cent) live in 21 main urban centres (with 50,000 or more inhabitants). The rest live in rural areas. The proportion of rural population varies from country to country, from over 50 per cent in Zambia to around 85 per cent in Malawi. The ZRB is rich in natural resources. The main economic activities are fisheries, mining, agriculture, tourism, and manufacturing. Industries depend on the electricity produced in the hydropower plants (HPPs) of the Basin, as well as on other sources of energy (primarily coal and oil) (Domptail & Mundy 2014). The eight riparian countries of the Basin represent a wide range of economic conditions. Annual gross domestic product per capita ranges from \$122 in Zimbabwe to more than \$7,000 in Botswana. Angola, Botswana, and Namibia have healthy current account surpluses, chiefly due to their oil and diamond resources (AfDB, 2015; The World Bank, 2010).

2.3. Utilisation of ZRB for Tourism

The Caprivi, Chobe, Kasane and Victoria Falls area in the Upper Basin is the most significant tourism destination in the entire Zambezi River Basin. The area around Livingstone and Victoria Falls accounts for 56 per cent of the tourism accommodation capacity (1,704 beds), 46 per cent of the total bed-nights in nature-based tourism establishments and the second highest turnover rate of visitors in Zambia. In 2005, it generated \$38 million annually and employed 435 permanent staff (Pope 2005).

The Kavango-Zambezi Trans Frontier Conservation Area (KAZA, TFCA) tourism project is a cooperative effort among five countries; Angola, Botswana, Namibia, Zambia, and Zimbabwe. The KAZA TFCA in southern central Africa covers an area of 400,000 km². The Victoria Falls is a central point in the TFCA near the meeting point of four of the five participating countries. Two major river basins, the Zambezi and the Okavango, contribute major wetlands, including the Okavango Swamps, to the gently undulating KAZA TFCA landscapes (Vandome & Vines, 2018; Suich, 2005; Cumming 2008). The mission of the participating countries is: “to establish a world-class trans frontier conservation area and tourism destination in the Okavango and Zambezi river basin regions of Angola, Botswana, Namibia, Zambia and Zimbabwe within the context of sustainable development” (Domptail & Mundy, 2014; MoU, December 2006).

The primary objectives of the KAZA TFCA are to: foster transnational collaboration and cooperation in implementing ecosystems and cultural resource management; promote alliances

in the management of biological and cultural resources and encourage social, economic and other partnerships among their governments and stakeholders; enhance ecosystem integrity and natural ecological processes by harmonizing natural resources management approaches and tourism development across international boundaries; develop mechanisms and strategies for local communities to participate meaningfully in, and tangibly benefit from, the TFCA; and, promote cross-border tourism as a means of fostering regional socioeconomic development. This trans-frontier conservation effort will directly rely on the availability, quality and sustainability of its water resources. This is particularly true for the wetland areas where biodiversity and ecosystems are highly sensitive and interlinked with its waters.

The financial implications of tourism in the KAZA TFCA are considerable (Suich, 2005). In 2004, accommodation establishments in the conservation region had a combined capacity of 8,312 guests per night. The total revenue generated by accommodation establishments and tour operations exceeded \$100 million. In the same year, the tourism industry employed a total of 5,204 local workers, 689 of them in part-time jobs (The World Bank 2010). Promoting integrated catchment management, for sustaining necessary water resources, to the relevant authorities will be vital part of KAZA TFCA's work.

It should also be noted that information on tourism is more readily available for Victoria Falls and in the outer Zambezi Delta compared to in other parts of the Basin. The relationships between water management, the environment, and tourism have large scale, multifaceted and complex dimensions. There is therefore an urgent need for more investment in information gathering, monitoring, and capacity.

2.4. Lower Victoria Falls

The area between Victoria Falls and Lake Kariba is an internationally recognised white-water rafting area. The proposed Batoka reservoir 65 kilometres downstream of Victoria Falls is expected to have a major effect on the white-water potential of the Gorge as it may dam water back up the river towards the falls. According to Denconsult (1998), the minimum flow for successful white water rafting is 500 m per second. The dam operators claim that they need a flow for the first 30 kilometres downstream from Victoria Falls and they operate for 365 days of the year. According to Pope (2005) more than 34,402 visitors go white-water rafting on this stretch each year at the Zambian side. Each visitor spends an average of \$135 per excursion (excluding accommodation) which means total annual revenue from the excursions is more than \$4.5 million. If two night's accommodation in the area is included, with an average cost of \$200 per night, white water rafting tourists in this area on the Zambezi side generates well over \$10 million per year. Therefore, if the Batoka reservoir dams the water more than 35 kilometres upstream, the entire white water rafting operation will be closed down, with an estimated loss of \$10 million to the economy each year (AfDB, 2015; Signé & Johnson 2018).

The Kafue Flats, which also includes the renowned Kafue National Park, already has a dam at Itezhi Tezhi. Although some improvements to the dam; such as new turbines are planned, the changes are not expected to alter flows and should have no further effect on the natural environment and tourism in the area. An additional reservoir below the existing Kafue Gorge

Upper reservoir, the Kafue Gorge Lower, is planned. This area is not a tourism area, and no impact on tourism is expected.

Luangwa National Park, Lake Kariba, and Mana Pools: Luangwa North and South National Parks, Lake Kariba, and Mana Pools are some of the most important tourism attractions in the middle Basin. No new water extraction or damming projects are planned for this area.

Lake Malawi. The primary tourism attraction in the Lower Basin is Lake Malawi. The Malawi Ministry of Tourism, Wildlife and Culture reports that future tourism projects are planned, including conference resorts, lodge additions and upgrades on the lakeshore and in Blantyre (Republic of Malawi 2008). The areas upstream of Lake Malawi are not significant for tourism.

Shire River. Liwonde National Park, south of Lake Malawi/Niassa/Nyasa on the Shire River, offers bird watching, boating safaris, and game drives. In the extreme south, Lengwe National Park is popular for hiking and bird watching (Republic of Malawi 2008). The Shire River is also a popular sport fishing area. There are other reservoirs under consideration for the Shire River though the sites appear to fall outside protected areas and are not expected to have a significant influence on tourism.

Zambezi Delta. The areas around the Cahora Bassa Dam and its reservoir have very limited tourism infrastructure. Plans for further expansions at Cahora Bassa North and South, as well as for the planned Mphanda Nkuwa Dam upstream of Tete, also have no immediate consequence for tourism. The two dams' flow release regimes are expected to have a strong effect on the environment, however, and therefore on the future tourism potential of the Marromeu Complex (Beilfuss and Brown 2006). The Marromeu Complex has possibly some of the best future tourism potential in the lower sub-basin and in the Zambezi Delta (which is already a recognised wetland of international significance). The considerable tourism potential in these wetlands is linked to its spectacular game and bird populations. These populations have however declined in recent years for various reasons, including the reduction of natural flooding caused by the construction of Cahora Bassa Dam (Beilfuss, and Brown 2006). No final plans for operation and maintenance are yet in place to regulate flow to the benefit of the downstream ecosystems and biodiversity. It is therefore impossible at this time to assess the economic potential and the possible impact of the operation of Cahora Bassa, its planned extensions and the planned Mphanda Nkuwa Dam and reservoir.

3. Tourism in Zambezi River Basin: Strengths and Challenges

3.1. Strengths

The Zambezi River Basin is endowed with relatively unspoiled wildlife, scenic, cultural, and adventure attractions, most notably along the river and particularly at Victoria Falls, Lake Malawi, Lake Kariba, Kafue Flats, Luangwa Valley, and the Zambezi Delta. The natural game populations are one of the major tourism attractions and competitive advantages of the Zambezi River Basin (Mbaiwa, 2009; Signé & Johnson, 2018). Formally protected areas, such as national parks, game reserves, conservancies, and game management areas play an important role in conserving those populations. The trans-frontier conservation areas are also playing a constructive role in the further development and joint management of protected areas in the

region. That area contains a number of well-developed and world-renowned tourism destinations, such as the Victoria Falls complex, the Chobe-Kasane complex, and Lake Malawi as elaborated earlier. The tourism infrastructure is well established in these areas, strengthening the viability of the incomes generated as well as multiplier effect on associated businesses. Local employment in the conservation and tourism sectors is relatively high. A large informal sector has developed around the major tourism destinations, which results in substantial local benefits for host communities. The tourism sector in the SADC region and in the Zambezi River Basin is performing well, with constant growth in tourism numbers for most areas over a number of years. With increased efforts in marketing the tourism attractions, nationally and internationally, actual arrival figures have continued to rise (World Travel and Tourism Council, 2018).

3.2. Challenges

Some of the more prominent tourist destinations are isolated. The cost of transport to those destinations is therefore high, with limited potential for tourism packages. The potential for growth in tourism is also limited by the lack of other attractions nearby which can accelerate development of tourism sites and offer a diversity of experiences (ANBO ; AMCOW 2007). Due to the length of the Basin and issues of isolation, gateways to tourism and access to markets to support tourism are both expensive and limited. The generally poor condition of road and air infrastructure also hinders accessibility. Many areas lack bulk infrastructure support (water, electricity, and telecommunications), and will require major investment from the private sector. Lack of planning and infrastructure investment in road access to and within protected areas has also constrained private sector investment that otherwise could contributed to tourism growth (AfDB 2015).

According to tourism operators, investment in the tourism industry is limited by a number of factors. These include, the lack of favourable government policies, lengthy and complicated bureaucratic procedures for investments, lack of decentralised administrative procedures, lengthy and complex licensing processes, as well as need for developing professional capacities at multiple levels of the tourism industry. Growth has been limited to individual and ad hoc initiatives on the part of private sector investors and non-government agencies. In general, cooperation between the private sector operators and government departments is not always well organised or efficient. This limits the potential for achieving synergies and accomplishing mutually beneficial goals. The lack of cooperation also prevents the effective marketing and packaging of tourism products. Tourism information and travel distribution systems are therefore poor. Locals worry about the large percentage of tourism products owned by foreigners and the limited local benefits of tourism. Operators, on the other hand, are concerned about the lack of skilled human resources and the inability of government to facilitate a better distribution of benefits. Governments in the Basin also need to implement results driven planning, develop relevant infrastructure, and establish incentives targeted to develop the untapped potential of priority attraction sites (The World Bank, 2010).

Investment for tourism projects is mostly sourced internationally rather than domestically. As a result of underdeveloped accessibility, infrastructure, and business and investment environments, investment operational costs are high. Local entrepreneurs wanting to enter the industry or its supply chains are also hindered by the lack of financial and political support. This results in a comparatively short supply chain and a reduced multiplier effect. Throughout the Zambezi River Basin, wildlife agencies are insufficiently funded and severely lack management capacity and other resources. As a result, infrastructure in protected areas has not been maintained and very little new infrastructure investment occurred in recent years. Most wildlife populations are not adequately surveyed and monitored and their numbers have either declined or remain low (Vandome & Vines 2018). As a result, conservation objectives and standards have not been achieved or cannot be measured. Conflicts between humans and animals are also reported in many areas. The tourism potential of the region, along with its benefits to local economies and communities, remains largely unexploited (The World Bank, 2010).

Water pollution is threatening the survival of fish in the river basin as towns that are found along the ZRB are discharging waste into the river. Boats are discharging sewerage waste and oil leak into the water which is leading to growth of evasive species making some parts of the basin inaccessible reducing the river freeways (ZAMCOM 2018). Maintaining clean environment in the basin is affected by lack of infrastructure in the basin and flooding which destroys minimum infrastructure being put in place for sustainable development of tourism.

4. Tourism: Opportunities and Constraints

The growth in global and Sub-Saharan African tourism figures offers potential for expanding tourism products at well-established tourism destinations. The region is extremely well endowed with natural beauty and cultural diversity, which is a growing niche market for the international travellers. Products should be packaged to offer variety and longer visits (including cross-border excursions) to justify the high cost of tourists travelling to a distant destination. Some areas with high tourism potential, such as Victoria Falls, already have good access infrastructure, such as airports and road linkages. These areas therefore offer an attractive opportunity to potential investors and could be expanded to be a regional and international tourism gateway. Such a transformation would require that the governments provide investors with appropriate infrastructure support and incentives. The Zambezi riparian governments recognize the economic benefit of tourism and have therefore made it a priority. Giving priority to tourism can attract international donor funding and technical support for proactive planning and development of the region's tourist potential (World Bank, 2010).

ZRB has potential to eradicate poverty among the communities that live along the basin. The communities can participate in agro-tourism, offer accommodation to trackers and sailors, get employed in the tourism industry and even take part in fishing industry (Beilfuss & Brown 2006). The basin can benefit even population that is far away from the basin through water Trans-boundary projects which can draw water to big cities and along the way supplying water to irrigation schemes. In Zimbabwe there is Zambezi, Bulawayo Water Projects which is

underway, (Government of Zimbabwe; 2010). Public private partnerships with nature-based concessionaires and operators within protected areas also remain an untapped source of revenue for wildlife conservation agencies and communities. Threats to tourism development include factors such as political instability (real or perceived) in the eyes of tourists, and difficulties with accessing visas and crossing borders. Furthermore, insufficient wildlife management capacity and insufficient funding of protected areas has led to declining wildlife populations and reduced standards of infrastructure maintenance. This situation threatens the future the most important regional attraction for tourists. Local communities believe that they bear a disproportionately high fraction of the cost of wildlife tourism compared to the benefits that they receive. This situation can create increased competition for land and increased wildlife-human conflict. The change in flood regimes caused by new reservoirs could affect the scenic beauty of some river systems as well as the habitats of wildlife and birdlife, thus directly affecting primary tourist attractions. Unsustainable hunting methods can potentially also reduce wildlife populations. Uncontrolled overdevelopment could also reduce the natural attraction of prime tourist sites through landscape damage (World Bank, 2010).

5. Economic Role of Tourism in the Zambezi River Basin States

Table 1: Economic Role of Tourism

	Angola	Botswana	Malawi	Namibia	Tanzania	Zambia	Zimbabwe
2018 GDP Contribution (\$ million)	1.630.0	687.5	221.5	369.3	1.975.9	777.6	5.123
2028 GDP Contribution forecast (\$1 million)	2.308.0	1.131.8	362.0	756.7	4.315.6	1.334.7	678.5
GDP % Contribution (2018)	5.7	3.8	3.5	2.9	3.8	3.2	3.0
GDP % Contribution forecast (2028)	3.0	4.5	3.3	3.7	4.8	4.9	3.3
Employment (2018)	110.500	26.000	233.000	23.000	446.000	313.500	69.000
Employment forecast (2028)	147.000	42.000	315.000	35.000	795.000	324.500	81.000
Employment % (2018)	1.1	2.6	3	3.2	3.3	5.3	4.4
Employment % forecast (2028)	2.3	3.4	2.8	3.6	4.0	5.3	4.0
Expected real GDP growth in 2018	3.8	11.5	7.7	13.8	9.0	7.3	7.1
Expected real GDP average over next 10 years	2.3	11.2	7.2	15.6	10.19	7.1	7.6

Source: WTTC 2018

Note: Information on Mozambique was not listed in the WTTC Report

6. Conclusion and recommendations

The potential for growth in tourism along the ZRB is limited by the lack of other attractions nearby which can accelerate development of tourism sites and offer a diversity of experiences (World Bank, 2010). Other attractions that can be developed along the basin include the following:

- Development of amusement parks. Activities that can be offered in the theme parks may include the following: water slides, parachute drop rides, jungle cruise rides, roller coasters, flying jumbo elephants, fantasy land, robotic animals as well as hair raiser rides. Amusement parks usually provide entertainment for all age groups.
- Beach sport activities along the lake shores, for example beach volley ball, beach basketball, sand soccer, beach rugby
- State of the art tourism and hospitality school along the basin. This will help attract both local and international students as well as business people.
- Develop state of the art airport at all major tourism complexes along the ZRB. This will improve access to the basin as well as adding on to the attractions along the basin.
- Development of agro ecological tourism by local farmers along the basin. This will help to conserve biodiversity as well as attracting the green tourist. (World Bank, 2010) noted that locals worry about the large percentage of tourism products owned by foreigners and the limited local benefits of tourism. Operators, on the other hand, are concerned about the lack of skilled human resources and the inability of government to facilitate a better distribution of benefits. The development of agro ecological tourism by local farmers along the basin will help to increase local benefits from tourism.
- Inter-basin water transfer schemes (waterway transportation) can be created using state of the art technology and become tourists' attractions.
- Transformation of local business centres along the basin into Tourists' town (Residential Tourism).
- Excursion flights over the ZRB basin can boost tourism business
- The provision of various SADC protocols, programmes and projects (TFCA, road connections) (Fachrudin & Mohammad, 2016; Agita, 2005; Nlom 2011)
- Introduction of wellness tourism (Spas) along the basin
- Tourism cluster development projects and special economic zones
- Educational tourism, researching on wildlife, aquaculture, mining and others along the ZRB.

Some of the more prominent tourist destinations along the ZRB are isolated. The cost of transport to those destinations is therefore high, with limited potential for tourism circuits and packages. Using rivers as transportation routes will improve accessibility of these isolated destinations. Ferries, water buses or water taxis can be used to transport people along the basin.

7. Limitations

The paper is based on literature synthesis only to arrive at the conclusion and recommendation. The literature is relatively scant and most of the available literature is from reports. Survey

methods can be used to have a broader comprehension of the challenges and the opportunities of the region.

Authors Contribution: Rudorwashe Baipai conceived the idea and structure the paper. She is the lead in the paper. Vitalis Basera did literature search and synthesized the data. Dr. Chikuta edited the paper.

Conflicts of Interest: The authors declare no conflict of interest.

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