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DIVERSITY OF THE GEOGRAPHICAL ENVIRONMENT OF NATIONAL PARKS IN RWANDA AS CENTERS OF NATURE BASED TOURISM

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Zróżnicowanie środowiska geograficznego parków narodowych w Rwandzie jako centrów turystyki opartej na walorach przyrodniczych

Abstract: The purpose of the article is to present the geographical diversity of four national parks in Rwanda (Volcanoes National Park, Akagera National Park, Nyungwe National Park, Gishwati-Mukura National Park), as well as a diversified approach to the ways of sharing them as centers of nature-based tourism. The first part attempts to define nature-based tourism and to outline the characteristics of the geographical environment and the state of tourism development in Rwanda. The natural tourist values of national parks and ways of making them available for tourism were discussed on this background. The study used secondary materials (literature, reports, statistical data) as well as primary materials – results of the field inventory and interviews conducted with employees of the national parks during the geographical field seminar in Rwanda entitled *Tourism and the functioning of protected natural areas in overpopulated conditions* (January-February 2020). The knowledge and experience of the author who is a native resident of Rwanda was also important in collecting and interpreting data. The conclusions present a synthetic diversity of the geographical environment of Rwanda with regard to three main zones. In addition, the importance of the economic effects of nature-based tourism for many beneficiaries was emphasized: residents, entrepreneurs, the geographical environment of national parks, as well as the state economy. Recommended further research concerns the need to take up issues also in the field of community-based tourism, environmental awareness and attitude of society, and development opportunities for sustainable and responsible tourism in Rwanda.

Keywords: national parks, nature-based tourism, sustainable tourism, responsible tourism, Rwanda

Zarys treści: Celem artykułu jest przybliżenie zróżnicowania środowiska geograficznego czterech parków narodowych w Rwandzie (Volcanoes National Park, Akagera National Park, Nyungwe National Park, Gishwati-Mukura National Park), a także zróżnicowanego podejścia do sposobów ich udostępniania, jako centów turystyki bazującej na walorach przyrodniczych (*nature-based tourism*). W pierwszej części podjęto próbę zdefiniowania *nature-based tourism*, oraz przedstawienia w zarysie stanu rozwoju turystyki w Rwandzie. Na tym tle zostały scharakteryzowane przyrodnicze walory turystyczne parków narodowych oraz sposoby ich udostępniania dla turystyki. W opracowaniu wykorzystano materiały wtórne (literaturę, raporty, dane statystyczne), jak również pierwotne – wyniki inwentaryzacji terenowej oraz wywiadów przeprowadzonych z pracownikami parków narodowych podczas geograficznego seminarium terenowego w Rwandzie pt. *Turystyka a funkcjonowanie przyrodniczych obszarów chronionych w warunkach przeludnienia* (styczeń-luty 2020). Istotne znaczenie w gromadzeniu i interpretacji danych ma również wiedza i doświadczenie autorki będącej rdzennym mieszkańcem Rwandy. W konkluzjach przedstawiono syntetyczne zróżnicowanie środowiska geograficznego Rwandy z uwzględnieniem trzech stref. Ponadto podkreślone zostały efekty ekonomiczne tej formy turystyki dla wielu beneficjentów: mieszkańców, przedsiębiorców, środowiska geograficznego parków narodowych, a także gospodarki państwa. Rekomendowane, dalsze badania powinny dotyczyć takiej problematyki, jak *community-based tourism*, świadomości i postaw ekologicznych społeczeństwa oraz możliwości rozwoju dla zrównoważonej i odpowiedzialnej turystyki w Rwandzie.

Słowa kluczowe: parki narodowe, turystyka przyrodnicza, turystyka zrównoważona, turystyka odpowiedzialna, Rwanda

Introduction

Proving protection of diverse, most valuable in terms of nature areas in the form of national parks, as well as the development of ecological tourism in this type of areas contributes to their effective protection and protection against threats related to economic use. These types of activities are of particular importance for the protection of the natural environment in developing countries, with high dynamics of demographic development, which entails the needs of land takeover (for development, transport, agriculture or industry). Revenues from tourism in national parks, by providing funds to protect the natural, cultural and community heritage of these areas contribute to maintaining the priority of protecting the geographical environment over forms of economic use.

The diversity of the natural environment in Rwanda has contributed to the establishment of four national parks, which are among the main destinations concentrating foreign inbound tourism in this country. “Rwanda offers one-of-a-kind experiences as

it is home to one third of remaining critically endangered mountain gorilla population, one third of Africa's bird species, several species of primates, volcanoes, the African Big Five to support game safaris, an exhilarating Canopy walkway, volcanic caves and the furthest Source of the Nile amongst just a few" (*Rwanda Tourist Experience Permit Fee & Reservation Guidelines* 2018: 2). In 2017, Rwanda recorded about 1.5 million visitors (*Rwanda Statistical Yearbook* 2019), and tourism has been seen for years as one of the priority sectors for economic development (*Rwanda Tourism Policy* 2009; Alluri 2009; Nielsen, Spenceley 2010; de la Croix Nkurayija 2011).

The purpose of the article is to present the geographical diversity of four national parks in Rwanda (Volcanoes National Park, Akagera National Park, Nyungwe National Park, Gishwati-Mukura National Park) as well as a diversified approach to the ways of sharing them as nature-based centers of tourism. The first part attempts to define nature-based tourism and to outline the characteristics of the geographical environment and the state of tourism development in Rwanda. The natural tourist values of national parks and the ways of making them available for tourism were characterized on this background. The study used secondary materials (literature, reports, statistical data) as well as primary materials – results of the field inventory and interviews conducted with employees of national parks during the geographical field seminar in Rwanda entitled *Tourism and the functioning of protected natural areas in overpopulated conditions* (January–February 2020). The knowledge and experience of one of the authors (Joseph Uamahoro), who is a native resident of Rwanda, was also important in collecting and interpreting data.

Nature-based tourism

A major and growing portion of the global penchant for travel and recreation is nature-based, involving interactions with or appreciation of the natural environment (Balmford et al. 2009; Wood et al. 2013). "Nature-based tourism may be defined as a form of tourism that involves experiencing natural places, often through outdoor activities enjoying different natural attractions. Examples include bird watching, fishing, climbing, beachcombing and hiking. Definition is complicated by the fact that there are a number of equivalent or overlapping concepts, such as *ecotourism*, *green tourism*, *natural tourism* or *rural tourism*, where there are no universal definitions" (Andrades et. al. 2015: 24).

Nature-based tourism, along with community based-tourism, requires management of tourism development in the context of responsible tourism, understood as "tourism that maximizes the benefits to local communities, minimizes negative social or environmental impacts, and helps local people conserve fragile cultures and habitats" (*The Case for Responsible Travel: Trends & Statistics* 2018: 1). This approach

favors the implementation of sustainable tourism, defined as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (UNWTO 2020). Tourism is also identified as one of the tools to “by 2030, increase the economic benefits to Small Island developing States and least developed countries” (*Sustainable Development Goals 2020*).

Geographic environment of Rwanda

Rwanda is located in the great lakes region of central Africa covering 26,338 km², including 24,210 km² of land and other areas under water and swamps (*Rwanda Statistical Yearbook 2019*). Rwanda is bordered by Uganda to the north, Tanzania to the east, Burundi to the south and the Democratic Republic of the Congo to the west. The population of Rwanda was estimated in 2018 as 12,089,721 citizens (*Rwanda Statistical Yearbook 2019*). Rwanda is a land-locked country, also known as the Land of Thousand Hills. “It forms an asymmetrical block of highlands resulting from transformations which were created by the great tectonic rift that extends from the Red Sea up to the southern part of Lake Malawi, crossing Lakes Rwicanzige, Rweru, Kivu and Tanganyika” (Byanafashe, Rutayisire 2016: 23).

Rwanda has five volcanoes, twenty–three lakes and numerous rivers, some of them forming the source of the Nile River. “Lake Kivu was formed in the depression and the straight fold that separates the watersheds of the Nile and Congo Rivers. This fold, the Crest of Congo-Nile, is mountainous range that covers 20 to 40 km, it is located at an altitude of around 2,000 m a.s.l. with a highest peak of 3,000 m a.s.l. It is bordered to the north by volcanic mountains whose peak, Karisimbi is 4507 m a.s.l.” (Byanafashe, Rutayisire 2016: 24). The variety of the landscape is the green country which is dominated to the north by volcanoes and bordered by Lake Kivu to the west.

“Between the Congo-Nile crest and the Akagera-Bugesera depressions, there is a central plateau that reaches an altitude of 2,000 m a.s.l. This region is covered by hills separated by marshy valleys with flat bottoms rich in alluvium. To the east, along the border with Tanzania, the Akagera River crosses large swamps located at an altitude between 1,300 and 1,500 m a.s.l.” (Byanafashe, Rutayisire 2016: 24). In Rwanda the great animals of the wild are protected from poachers and roam free in the vast national parks.

Rwanda has a high and mountainous relief with an altitude ranging between 900 m a.s.l., and 4,507 m a.s.l., and has a tropical temperate climate due to its high altitude. The average annual temperature ranges between 16°C and 20°C, with no significant variation. Rainfall is abundant, although it presents some irregularities.

Rwanda possesses a relatively big amount of water: rivers, lakes and marshlands occupy an area of 211 ha. That is about 8% of the national territory (Twgiramungu 2006).

According to the *National Biodiversity Strategy and Action Plan* (2016), Rwanda's tourism activities are concentrated in protected areas, particularly in national parks. Biodiversity conservation and poverty reduction alleviation have been two major challenges for Rwanda. Rwanda's tourism development, mostly nature-based can be a key source of development, poverty alleviation and employment. Rwanda's key assets such as protected areas, national parks and nature reserves can sustainably optimize to support eco-tourism efforts. There are several aspects that have contributed to the successful revival of the tourism sector in Rwanda. First and foremost, the government has shown a clear commitment to the development of the tourism sector and has established itself as a safe destination in the region.

Growth of tourism in Rwanda

The number of international arrivals took place in the last years a level 1,5 mln (Table 1), and the biggest group of visitors (87%) reached Rwanda by land (*Rwanda Statistical Yearbook* 2019). While 43% came from the EAC¹ region, the largest group arrived from other parts of Africa (45%).

Tourism revenues amounted to 438 million USD in 2017, constituting almost 50% of export of all services. 94,000 visits to national parks generated 18,7 million USD in revenue (Volcanoes National Park generating >90%). Rwanda was ranked as Africa's 3rd leading MICE² tourism destination by the International Congress and Convention Association (ICCA), (*Rwanda Development Board Annual Report*, 2017). Business travellers brought in the highest share of overall tourism revenue (33%),

Table. 1. Visitor arrivals to Rwanda (years 2013–2017)

Year	2013	2014	2015	2016	2017
Total Arrivals	1,122,150	1,219,529	1,298,472	1,391,018	1,567,943

Source: *Rwanda Statistical Yearbook* 2019, National Institute of Statistics of Rwanda, Kigali.

¹The East African Community (EAC) is a regional intergovernmental organization founded in 1967. The work of the EAC is guided by its Treaty (2000) which established the Community. The EAC is currently made up of six Partner States: Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda.

²Meeting-Incentive-Conferences-Exhibitions.

followed by visits (29%) and holiday travellers (27%). In terms of origin, visitors from the EAC, Europe and the rest of Africa generated the highest revenue across all categories (25%, 22%, 21%) (*Rwanda Development Board Annual Report*, 2017).

Rwanda's natural attractions have always been the country's primary tourist attraction. Developing a more diverse industry has been a recent occurrence, based on the need for the country to create a name for itself in the international tourism market, but also to open space for a more diverse group of visitors into the country (Mazimhaka 2006). Rwanda government's dedication to foregrounding tourism as well as conservation were already demonstrated on June 18th 1973 when ORTPN³ was formed with a mandate to focus on and ensure the promotion of sustainable tourism and the conservation of wildlife.

According to the *Rwanda Tourist Experience Permit Fee & Reservation Guidelines* (2018: 3) "visitor activity fees support conservation efforts in Rwanda. To ensure the support for and benefits from its national parks, Rwanda established a unique Revenue Sharing Program in 2005 in which 5% of all tourism revenues are invested in community development projects adjacent to national parks such as schools, health clinics, water catchments and distribution systems and agricultural projects. This percentage was increased to 10% (2018). To date, 4.4 million USD has been invested into more than 600 projects between 2005 and 2017, anticipated to increase by 400% from 1 million USD to 4 million USD by 2024 – significant benefits for communities and Rwandans living adjacent to Rwanda's national parks!"

Tourism in national parks

The majority of Rwanda's natural attractions are located within its four national parks (Fig. 1, Table 2).

These are the Volcanoes National Park in the northwest, where gorillas may be viewed in their natural habitat; in the southwest is the Nyungwe Tropical Forest, which offers good opportunities for hiking; the Akagera National Park in the north east, a popular destination, but still short on game that could be boosted in numbers for competitive advantage (Mazimhaka 2006). The youngest park Gishwati-Mukura National Park was created in 2016.

Rwandans accounted for 3% of the total visits to the Volcanoes National Park in 2016 and for this very reason the Rwanda Development Board, under the umbrella of the Tourism and Conservation Department, continues to promote domestic tourism in the country through educational trips. The Chief Tourism Officer at the Rwanda Development Board commented: "It is also commendable that domestic

³ Rwanda Office for Tourism and National Parks or Office Rwandais pour Tourisme et Parcs Nationaux (ORTPN).



Fig. 1. Location of the national parks in Rwanda

Table. 2. Number of visitors to the analyzed national parks in Rwanda in 2017

National Park	Volcanoes	Akagera	Nyungwe	Gishwati-Mukura	Total
Number of visitors	35,567	44,054	14,415	No data	94,036

Source: Rwanda Statistical Yearbook 2019, National Institute of Statistics of Rwanda, Kigali.

tourism is growing based on the number of residents visiting the national parks. In 2016 domestic tourists contributed 63% of the total visitors in Akagera National Park and 54% in Nyungwe National Park. In general, domestic tourism grew by 17% in 2016. We continue to urge Rwandans to visit tourist attractions in the country in order to achieve sustainability & educate our youth on the importance of protecting our sustainability.”⁴

Volcanoes National Park (VNP)

The Volcanoes National Park (Photo 1) is located in the northwestern Rwanda, it covers 160 km² of rainforest and encompasses five of the eight volcanoes in the Virunga mountains, namely Karisimbi (4507 m a.s.l.), Bisoke (3711 m a.s.l.), Muhabura (4127 m a.s.l.), Gahinga (3474 m a.s.l.) and Sabyinyo (3634 m a.s.l.).

The volcanoes were first proclaimed as a national park in 1925 as a small area bounded by Karisimbi, Bisoke and Mikeno. It is the oldest park on the African continent, which was separated so as to protect mountain gorillas from poachers. Subsequently, in 1929 the borders of the park were extended further into Rwanda and into the Belgian Congo to form the Albert National Park. A huge area of 8,090 km² was run by the Belgian colonial authorities who were in charge of both colonies at that time. After the Democratic Republic of the Congo gained independence in 1960, the park was split into two and upon Rwanda's independence in 1962 the new government agreed to maintain the park as a conservation and tourist area despite the fact that the new republic was already suffering from overpopulation problems. The park was halved in area in 1969.⁵

According to the *National Biodiversity Strategy and Action Plan* (2016) the VNP has sensitive Afro-Alpine habitats with thirteen species of orchids listed by the CITES, ten plant species endemic to the Albertine Rift and a wetland where rare and endemic species live, including the endangered and endemic Grauer's rush warbler (*Bradypterusgraueri*). The VNP is home of the well-known mountain gorilla, whose current population in the Vulcano-Virunga Region is 480 individuals. You can find there thirteen bird species and sixteen subspecies endemic to the Virunga and Ruwenzori Mountains as well as two vulnerable bird species, Shelley's crimson wing (*Cryptospizashelleyi*) and the Kivu ground thrush (*Zootheratanganyicae*). The VNP constitutes an important area for the hydrology of the Akagera-Nile system

⁴ *Umuseke*, retrieved on 10.11.2021 from <http://www.en.umuseke.rw/rdb-keeps-promoting-domestic-tourism-in-the-country-through-the-tembera-u-rwanda.html>,

⁵ *National parks of Rwanda*, retrieved on 10.11.2021 from https://www.newworldencyclopedia.org/entry/National_parks_of_Rwanda.

and a water catchment zone for the region. It contributes to the water cycle and the reduction of water loss by evaporation. The prosperous tourism industry attracted 23,800 visitors in 2012 and generated much money. The park offers several forest jobs to local people including bee-keeping.⁶

The main tourist attractions include volcanoes, as well as mountain gorillas and the golden monkey occurring in their natural habitat. The history of primatologist Dian Fossey is also interesting. The park is also blessed with a number of bird and plant species. The VNP can be visited with a guide, choosing volcano routes and gorilla routes. Tourist movement is limited. It is possible to visit and actively participate in the work of The Karisoke Research Center (*the Dian Fossey Gorilla Fund International* – the institution which is dedicated to the conservation, protection and study of gorillas and their habitats in Africa).⁷

Gishwati-Mukura National Park (GMNP)

The Gishwati Forest is a secondary mountain rainforest fragment located south of the Volcanoes National Park in western Rwanda (Photo 2), within altitudes of 2,000–3,000 m a.s.l. It is the part of the Congo-Nile divide forest complex that includes the Mukura forest reserve, the Nyungwe National Park, and the Kibira National Park in Burundi. The Gishwati forest is located in the most densely populated areas of Rwanda where unsustainable agricultural practices have led to reduced crop yields and forest adjacent communities have driven to seek out an alternative livelihood. The forest area stood at about 700 km² in 1930, 280 km² in 1960, and at 88 km² in 1990 (Kisioh 2015).

The nature of the Gishwati-Mukura National Park was 20 years ago on a fast track to extinction alongside its wildlife and primate residents after the 1994 genocide against Tutsi due to the stripping of its trees as the local community flocked to the region. Subsequently, soil erosion, landslides, and floods later took their toll in the forest and caused conservationists to sound the emergency ecological alarm. It is their vocal advocacy that has paved the road for the Gishwati-Mukura NP wonderland of today. The Gishwati-Mukura NP was formed in 2016 with the aim of increasing the number of trees in both the Gishwati and the Mukura forest reserves in order to improve soil fertility and stabilize slopes of hills within the reserves and also regulate the flow of water.⁸

⁶ *Republic of Rwanda*, retrieved on 10.11.2021 from <https://www.cbd.int/doc/world/rw/rw-nbsap-v2-en.pdf>.

⁷ *The Dian Fossey Gorilla Fund*, retrieved on 10.11.2021 from <https://gorillafund.org/who-we-are/>

⁸ *Gishwati-Mukura National Park*, retrieved on 10.11.2021 from <https://www.volcanoesparkrwanda.org/information/gishwati-mukura-national-park/>



Photo 1. Volcanoes National Park – entrance (Photo by A. Zajadacz)



Photo 2. Gishwati-Mukura National Park

Source: <https://www.gishwatimukura-nationalpark.com>.

According to the *National Biodiversity Strategy and Action Plan* (2016), the Gishwati Forest Reserve harbors thirteen plants species and fourteen bird species which are endemic to the Albertine Rift as well as two vulnerable species: martial eagle and the grey crowned crane. Three turacos species are in a small number (24 in total) and should be preserved. The Gishwati has also two threatened monkey species which are on the IUCN Red List of Threatened Species namely *Pan troglodytes schweinfurthii*, and *Cercopithecus mitis kandti*. The Gishwati provides vital watershed protection for Rwanda and an important hydrological network for the Akagera-Nile and the Congo River systems. It contributes to the water cycle and climate maintenance in the region and represents a potential economic resource for an ecotourism project planned by the Gishwati Area Conservation Program. The reserve offers several forest jobs to local communities. The park provides many sightseeing options such as bird watching, primate watching, cultural experiences, nature walks and hiking.

Nyungwe National Park (NNP)

The Nyungwe National Park lies in the south-western Rwanda partly abutting Burundi border. It is one of the oldest rainforests in Africa (Photo 3). Nyungwe is rich in biodiversity and especially beautiful. The NNP was established in 2004. Despite the fact that the forest has been in existence for thousands of years, its history in Rwanda began recently in 1903 during the colonial era. Nyungwe, which was a colonial royal land, was declared a forest reserve by the German colonial government. Between the years 1958 and 1973 the area was reduced by 150 km² due to fire, woodcutting, and poaching of animals. In 1984, some biodiversity studies conducted in the area by the wildlife conservation society revealed a vast population of colobus living in groups of up to 400 members. Tourism and research facilities were later set up in the Uwinka Visitor Center, but most of these were destroyed during the genocide in 1994. The restoration work began in 1995 in an atmosphere of uncertainty and instability. The work went on and finally in 2004 the Nyungwe National Park was declared as an officially protected area.

The mountainous region is teeming with wildlife including a small population of chimpanzees as well as twelve other species of primate including the L'Hoest's monkey endemic to the Albertine Rift. There are seventy five known mammals in Nyungwe such as the serval cat, the mongoose, the congo clawless otter, and the leopard to name but a few. With the great floral diversity, the forest is home to more than two hundred different types of trees and a myriad of flowering plants. Nyungwe is the biggest Rwanda's national park at 970 km². The NNP provides vital watershed protection for Rwanda and an important hydrological network for the Congo and the Nile systems. It includes two important wetlands, Kamiranzovu and Uwasenkoko, which contribute to high biodiversity maintenance. Nyungwe constitutes the main

bloc of montane forest remaining in the region and regulates the climate, the water cycle, and the reduction of water loss by evaporation. Socio-economically, the forest offers opportunities for income-generating activities, i.e. beekeeping and different eco-tourism initiatives. In the NNP, the Nyungwe Nziza Project is working to transform the NNP into a viable eco-tourism destination, capable of generating employment, sustainable and equitable income for local communities and other stakeholders, thus providing economic incentives to conserve the rich biodiversity of the park.⁹

According to the *National Biodiversity Strategy and Action Plan* (2016), the NNP harbors many rare and endemic species, including the endangered chimpanzee (*Pan troglodytes*) and the vulnerable owl-faced monkey (*Cercopithecus hamlyni*). The NNP is inhabited by one hundred twenty nine species endemic to The Albertine Rift 57 vascular plants distributed in Kamiranzovu only, and 72 faunal species in the whole park. Three bird species listed as threatened by the International Union for Conservation of Nature (IUCN), namely the kungweapalis (*Apalis argentea*), the Grauer's swamp warbler (*Bradypterusgraueri*), and Shelley's crimson wing (*Cryptospizashelleyi*) can be found there as well. The NNP provides vital watershed protection for Rwanda and an important hydrological network for the Akagera-Nile system. It includes an important wetland, Kamiranzovu, which contributes to the water cycle and the reduction of water loss by evaporation. The NNP offers many sightseeing options such as: hiking-there are 13 hiking trails with over hundred and 30 kilometers of trails through the forest, chimpanzee tracking, monkey tracking, canopy walk or and the hike and birding.

Akagera National Park (ANP)

The Akagera National Park, in contrast to the others is dominated by swamps and lakes which follow the meandering course of the Akagera River. The relatively warm and low-lying plains of Akagera comprise savannah, woodland, wetland, and a dozen lakes.¹⁰ The ANP was founded in 1934 to protect animals and vegetation, It is the largest protected wetland in Africa. It is named after the Akagera River which flows along its eastern boundary.

The park used to cover over 2,500 km² but in 1997 was reduced in size by close to 50%. A lot of lands were reallocated with refugees returning to Rwanda after the 1994 genocide against the Tutsi.¹¹ In 2010, the African Parks began managing Akagera in partnership with the Rwanda Development Board (RDB). This contributed to a better management and protection of the park's nature (Photo 4).

⁹ *Republic of Rwanda*, retrieved on 10.11.2021 from <https://www.cbd.int/doc/world/rw/rw-nbsap-v2-en.pdf>.

¹⁰ *Visit Rwanda*, retrieved on 10.11.2021 from <https://www.visitrwanda.com/tourism/destinations/national-parks/>

¹¹ *Visit Rwanda*, retrieved on 10.11.2021 from <https://www.kagerasafaris.com/akagera-national-park/>



Photo 3. Nyungwe National Park (Photo by A. Zajadacz)



Photo 4. Akagera National Park (Photo by A. Zajadacz)

The Akagera National Park is a mix of vegetation and varied types of habitat including savannah, flood-plain, and marsh vegetation in the Akagera's valley. The extensive wetlands play an important hydrological role (freshwater, climate mitigation) of the Akagera-Nile system and contribute to the water cycle and the reduction of water loss by evaporation. The ANP is home to a variety of wildlife which includes elephants, buffalos, giraffe, zebras, leopards, hyenas, lions. It also has a big number of antelopes such as bushbucks, topics, oribis, water-bucks, roan antelopes, and duikers. You can watch herds of hippos and crocodiles basking in the sun near lake Ihema which is also located in the park. The ANP is inhabited by nearly five hundred bird species. Birds which we can encounter in the park belong to such species as: the fish eagles, the cattle egret, the hamerkop, the sacred and the hadada ibis, the augur buzzard, and the long-crested eagle.

According to the *National Biodiversity Strategy and Action Plan* (2016) the ANP presents a very rich biological diversity including six forest fringed lakes, the largest protected wetland in Central Africa, savannah plains, the Akagera River and the Mutumba hills reaching an altitude of nearly 2,000 meters. A very rich fauna including 7,892 of large mammals, 530 bird species with seven bird species protected by international conventions and one endemic to the area can also be found.

The ANP offers many activities and sightseeing options (*Guidebook ANP*, 2020) such as:

- guided game drive – visitors can explore the park at their own pace on self-drive, or take an experienced guide to accompany you. They are well informed and have a keen eye for spotting wildlife,
- boat safari – meander along the forest-fringed lake edge, disturbing the slumber of hippos and crocodiles basking on shores. The birdlife is specular,
- night drivers – the sun might go down but the park doesn't sleep. Some of the most sought after animals are nocturnal,
- fishing – spend a relaxing day fishing on the shores of Lake Shakani. Catch and cook your own dinner,
- behind the scenes tour – learn more about what happens “behind the scenes” in the management of the park. Visit headquarters, meet the staff, ask questions, and hear more about the conservation efforts in Akagera,
- walk the line – stretch your legs with a 7 km guided walk along the fence line,
- community cultural tours – several options are available for visiting the local community and learning about life in rural Rwanda, accompanied by a Community Freelance Guide.

Conclusion

Rwanda is a country with a small area, but with a large diversity of geographical environment. There are three main areas within the country.

The first zone extends from the west and includes Lake Kivu and the Congo-Nile mountain range. In the north, near the border with Uganda and the Democratic Republic of the Congo, the mountain range turns into volcanoes in the Virunga mountains, where the VNP with the highest volcano Kisorisimbi (4,507 m a.s.l.) operates. These areas include dense African forests in which gorillas live. This territory, with the exception of the coast of Lake Kivu, is less populated than the rest of the country.

The second zone covers the entire central part of Rwanda and extends from the Congo-Nile mountain range in the west to the small lakes and the ANP in the east bordering Tanzania. This area is a picturesque plateau, located at an altitude of about 1,500 m a.s.l. The landscape of the plateau is formed by chains of low hills that pass into wet valleys. There are numerous banana groves, arable fields and coffee and tea plantations. There are two national parks: Nyungwe and Gishwati-Mukura in this area. The central region is inhabited by the largest part of Rwandans. The major cities include the capital Kigali and the city of Butare recognized as the cultural capital of the country.

The third zone is the eastern part of the country, extending from the middle plateau to the border with Tanzania. The hilly landscape here passes into large, flat spaces, partly wooded and partly covered with tall grasses, which are African savannas. The Akagera National Park operates in this zone, and many picturesque lakes can be found.

Parts of landscapes in all zones are protected in the form of national parks. Each of these parks is a unique center of nature-based tourism which includes diverse exotic attractions, active leisure guarantee for tourists, experiencing the "African adventure", as well as meeting local residents. Therefore, tourists, residents, geographical environment of national parks as well as the state economy should be mentioned among the beneficiaries of nature based tourism.

Thanks to domestic and foreign tourism, nature-based tourism in the national parks generates significant financial revenues (*Rwanda Tourist Experience Permit Fee & Reservation Guidelines* 2018). Financial resources resulting from servicing tourist traffic constitute the basic arguments for maintaining the areas of national parks as protected areas, despite the significant population density and the high dynamics of demographic development. Therefore, the tourist function plays a key role not only in nature protection, but also in improving the living conditions of the inhabitants. An important research problem that should be addressed in the next stage of research includes community-based tourism. The social impact of tourism (positive,

negative, neutral aspects) on the quality of life of the residents, taking into account the opinions of the inhabitants of Rwanda, especially the young generation, requires recognition. A recommended background for the results of this type of research would be a diagnosis of ecological awareness (knowledge, but also pro-ecological attitudes) of the Rwandan society.

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