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TOURIST USE OF RWANDA NATIONAL PARKS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT. SELECTED ASPECTS

Abstract: Tourism is recognized as a priority sector for economic development in Rwanda. National parks are the main value of tourism development. The conditions of nature-based tourism were identified, and the development of tourism was presented, using statistical data on tourist arrivals, visits to national parks, and the development of tourist facilities. During the analysed period, there is an increase in the number of tourists visiting Rwanda's national parks. The most popular are Volcanoes NP and Akagera NP. This is largely due to these parks' better transport accessibility compared to Nyungwe NP and Gishwati Mukura NP. The development of tourism in national parks has a positive impact on all aspects of sustainable development, i.e., it is an impulse to improve the living conditions of local communities, the progress of the economy of regions and the state, and to strengthen of the idea of environmental protection in Rwanda.

Keywords: national parks, tourism, sustainable development, Rwanda

INTRODUCTION

Sustainability covers a very wide range of activities (Rey et al., 2022). It refers to the protection and shaping of the natural and socio-cultural environment, and the economic development on various interrelated spatial scales (from local to global conditions). It covers, among other things, issues related to local climate, air quality, population density, as well as job assurance, but also aspects related to health and well-being, education, social inclusion, safety, access to services, or renewable energy sources. Many regions, in developing countries, use tourism as one of their sustainable development strategies, based on arguments related to generating employment, ensuring income from tourist spending, and supporting the improvement of local infrastructure (Du Cros, McKercher, 2015; Matteuccia et al.,

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2022). However, economic growth caused by the development of tourist services does not always translate into the greater well-being of host communities (Jurowsky et al., 2006). In many studies (e.g., Hall, 2011; Higgins-Desbiolles et al., 2019; Sharpley, 2020) it has been shown that the continuous development of tourism has a detrimental impact on local communities and the natural environment and leads to the failure of the strategy of treating the tourism services sector as an antidote to the problems of functioning of tourist destinations. The force of anthropopressure has significantly increased recently (Gren and Huijbens, 2014; Braidotti, 2019). In addition, the negative impact of the COVID-19 pandemic on the development of tourism casts a shadow on the future of tourist destinations.

The discourse that takes place in the literature on the role of tourism in sustainable development, as well as many case studies observed in the field which show the implementation of the principles of sustainable development in a specific local context, prompted the undertaking of research on the primary conditions (constituting the core) of tourism development in Rwanda. In this small country, with its high dynamics of demographic development and high population density, whose economy is based primarily on the export of coffee and tea, the development of tourism based on both natural values (*nature-based tourism*) and socio-cultural ones (*community-based tourism*) has been observed for years.

In this study, we focus on the tourist use of national parks in the context of sustainable development. Therefore, the original conditions for the development of tourism in Rwanda have been limited to the natural potential and the attitude of the local community to the development of this economic branch. The goal of the research was to identify the basic natural determinants of tourism and the tourist flow in national parks in Rwanda in the context of sustainable development. The text was based on the analysis of documents of the Rwandan government regarding the development of tourism, statistical data, and literature on the subject, as well as observations made by the authors during their visit to Rwanda (January-February 2020).

PRINCIPLES OF SUSTAINABLE DEVELOPMENT IN TOURISM AND DIFFICULTIES IN THEIR IMPLEMENTATION

The concept of sustainable tourism development refers primarily to the determination of the acceptable level of increase in the tourist traffic volume which will not cause negative changes in the natural environment, and which – in turn – is important for the quality of life in the future (Nijkamp, Verdonkschot, 2000). According to Coccossis and Parpairis (2000), sustainable development of tourism is expressed through:

- protection of the natural, historical, cultural, and social environment, which is understood as prevention and counteracting degradation and as conservation protection; giving priority to quality over the quantity of services offered, and
- striving to provide a sense of safety for tourists and local communities during tourist stays.

The concept of *sustainable tourism* should not, therefore, be identified with a form of tourism, but with the way the tourism economy is organized and managed in the reception area (Mika, 2007). Moreover, the assumptions of sustainable development in tourism cannot be seen from the perspective of one of its components. All aspects of tourism activities are important and analyzed from the point of view of demand and supply (Durydiwka et al., 2010). This undoubtedly constitutes a considerable obstacle to the implementation of the principles of sustainable development in tourism, especially in poor countries with unstable economies, in which economic considerations come to the fore.

When talking about sustainable development, one should also consider the social and natural aspects. An important condition for the implementation of the principles of sustainable development in tourism is, therefore, the attitudes of local communities not only as regards the increase in income of territorial units and individual households resulting from tourism development, but also as regards incoming tourists, who often represent different cultural patterns, as well as readiness to undertake activities in tourist services while making available tourist values and complying with the provisions governing the use of protected areas.

An obstacle, and often even a barrier, to the implementation of the principles of sustainable development in tourism, especially in developing countries, maybe the lack of funds for investments. As Brown (2000) noted, the percentage share of FDI in tourism is still low, particularly in African countries, as compared to the increase in business services, utilities, and telecommunication services. Although hotels and restaurants represent the major portion of tourism, FDI data show that there has not been much FDI in tourism, especially in hotels and restaurants, in developing countries (Endo, 2006). The preferences of the tourists themselves also seem crucial (Durydiwka et al., 2010); they often refer not only to the values of the visited area but also to the standards of tourist development.

As Novelli (2005) shows, nature-based tourism is an umbrella term including various forms of niche tourism, such as wildlife tourism, ecotourism, and adventure tourism (Räikkönen et al., 2021). It can also be considered a form of special-interest tourism (Agarwal et al., 2018). Despite the many forms of nature-based tourism, it often takes place in protected areas and is dedicated to protecting natural and cultural heritage and to maintaining biodiversity and ecosystem services (Spenceley 2008; Räikkönen et al., 2021). Nature-based tourism requires governance in the context of responsible tourism, understood as “tourism that maximizes benefits for local communities, minimizes negative social or environmental impacts, and helps residents preserve fragile cultures and habitats” (Center for Responsible Travel 2018, p. 1). This approach fosters the implementation of sustainable tourism, defined as tourism that takes fully into account its current and future economic, social, and environmental impacts, responding to the needs of visitors, industry, environment, and host communities (UNWTO, 2022).

CONDITIONS AND STRUCTURE OF TOURIST FLOW IN RWANDA

Tourism has been identified as a priority sector of economic development in Rwanda. This is evidenced by both government documents (e.g., *Rwanda Tourism Policy*, 2009) and scholarly studies (e.g., Alluri, 2009; Nielsen, Spenceley, 2010). Under Rwanda’s Vision, 2020 and the Economic Development and Poverty Reduction Strategy (EDPRS II), tourism is expected to contribute to the increase in government revenues, better balance of payments, and sustained economic growth with equitable distribution of benefits to all Rwandan nationals (Geoffrey et al., 2019, p. 536). On the other hand, according to *Rwanda Tourism Policy* (2009, p. 5), through well-managed marketing, development, and public-private partnerships, Rwanda will be able to become a leading wildlife and eco-tourism destination and regional conference hub, with a high-quality, diversified tourism product that increasingly contributes to the overall socio-economic development of the country. Hence, one of the main aims listed in *Rwanda’s Tourism Policy* is tourist product diversification and – in this framework – the development of nature-based tourism, especially in national parks. *Rwanda Tourism Policy* (2009, p. 9) also proposes sustainable tourism as the key guiding principle for tourism development, to ensure environmental, social, and economic sustainability.

According to Alluri (2009, p. 3), “in a post-conflict country, tourism has the potential to not only contribute to economic growth and physical reconstruction but also sustainable development, affirmative action and the protection of vulnerable groups”. The tourism sector recovered relatively quickly after the Rwandan genocide in the mid-1990s. The tourism industry took risks and made investments that led to a quick revival of tourist traffic and a restructuring of the sector as a whole (Alluri, 2009).

However, tourism in Rwanda started at the end of the 19th century (Briggs and Booth, 2007). It was the time when British and German environmentalists and explorers were interested in researching the vast volcanic mountains in Rwanda and the rare species of mountain gorillas whose habitat is the Virunga Mountains (Spencer and Rurangwa, 2012). In the 1960s through 1980s, hence before the civil war and genocide, the tourist product was built on “gorillas in the mist”¹ (Shackley, 1995; Alluri,

¹ It is the title of the memoirs of Dian Fossey, who in 1967 established the Karisoke Research Center in the Volcanoes National Park: a centre of research on gorillas. Based on the book, a biographical film was made in 1988 showing the activities of Dian Fossey in Rwanda, entitled *Gorillas in the Mist: The Story of Dian Fossey*.

2009). This rare species of mountain gorilla became the main attraction for conservationists and tourists alike (Spencer and Rurangwa, 2012). “Gorilla tourism” emerged “in the 1980s as a strategy to help ensure the protection of the Volcanoes National Park and the monitoring of the gorillas. It reached its peak in 1984 with tourist arrivals at 39,000, with numbers decreasing to 17,000 at the beginning of the civil war in 1990 and dropping to almost zero with the outbreak of the genocide in 1994” (Alluri, 2009, p. 16) (Fig. 1).

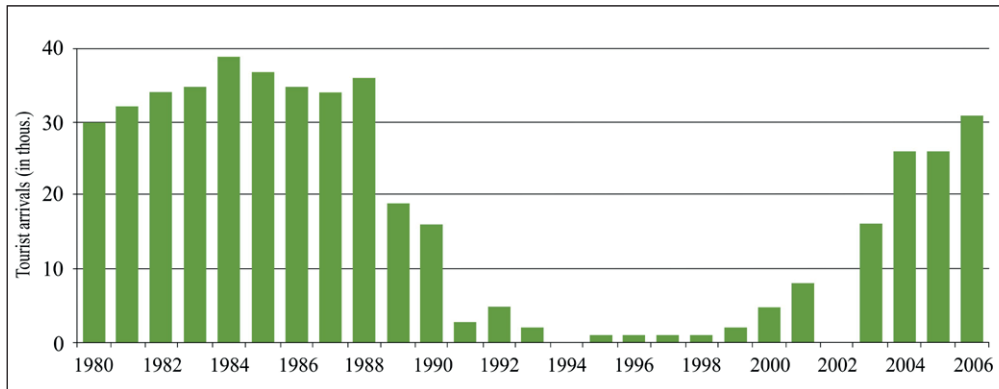


Fig. 1. Tourist arrivals in Rwanda in 1980-2006
Source: own elaboration based on Alluri (2009, p. 19).

Since the mid-2000s, a high dynamic of the development of foreign inbound tourism to Rwanda has been observed. From 2007 to 2019, the number of tourists visiting the country increased from 609.7 thousand to over 2.6 million. Only the COVID-19 pandemic and related restrictions introduced by the Rwandan government halted the trend of a steady increase in the number of arriving tourists (Fig. 2).

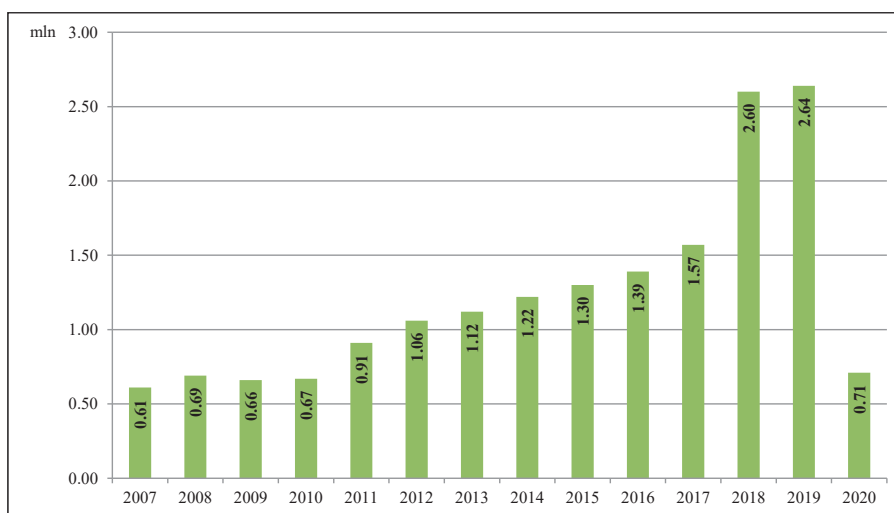


Fig. 2. Tourist arrivals in Rwanda in 2007-2020

Source: own elaboration based on Rwanda Statistical Yearbooks (2010, 2012, 2015, 2019, 2021).

Rwanda is a country more and more frequently visited by foreign tourists, mainly from Africa². Domestic tourists account for only 1.2% of tourist flow (Table 1), which is largely due to the low income of a significant part of the population and the lack of tradition of tourist trips among the local population.

² Almost 70% of tourists visiting Rwanda are from the DRC and 30% from the rest of the EAC countries.

Table 1. Tourists in Rwanda in 2019 according to the region of origin

Region of origin of tourists	Tourists	
	Number	%
Total	2,644,806	100.0
Africa	2,418,534	91.4
Europe	85,152	3.2
North America	49,790	1.9
Asia	49,645	1.9
Rest of the world	10,968	0.4
Nationals	30,717	1.2

Source: own elaboration based on Rwanda Statistical Yearbooks (2021).

From 2007-2019 changes in travel destinations occurred (Table 2). The importance of Rwanda as a holiday destination has increased. In 2007, 2.6% of tourists declared holidays as a destination to Rwanda, and in 2019, 6.6%, with tourists from Europe (about 24%) and America (34%) indicating this destination most often. Less often, however, tourists come to visit friends and relatives (VFR: Visiting Friends and Relatives). VFR is most often indicated as a destination by tourists from the Middle East, Africa, and Europe; almost one-third of tourists from these regions declare VFR as a destination to come to Rwanda. It is also worth adding that for a growing number of tourists, especially from other African countries and from the Asia-Pacific region, Rwanda is a transit country (around 40% and 30%, respectively).

Table 2. Changes in visitor arrivals in Rwanda according to the purpose of the visit

Purpose of visit	2007	2010	2015	2019	2020
	%				
Holiday / Vacation	2.6	10.2	6.6	6.6	5.2
Visiting friends and relatives (VER)	40.2	30.2	36.7	19.0	17.1
Business / Conference / Official	33.4	46.1	31.6	15.2	28.5
Transit	18.2	4.1	4.6	57.1	46.5
Other purposes	5.7	9.4	20.6	2.1	2.7
Total tourist arrivals	100.0	100.0	100.0	100.0	100.0

Source: own elaboration based on Rwanda Statistical Yearbooks (2010, 2012, 2015, 2021).

The analysis of the tourism offers of Rwanda allowed distinguishing five main forms of tourism that are implemented in Rwanda. These are nature tourism (including gorilla tourism), coffee tourism, genocide tourism, religious tourism, and business tourism. This shows a certain diversification of the tourist offer; nevertheless, national parks, especially those with mountain gorillas, constitute the core of Rwanda's tourist product (see also: Maekawa et al., 2013).

TOURIST POTENTIAL OF NATIONAL PARKS IN RWANDA

Rwanda referred to as the "land of a thousand hills" is located in the great lakes region of East Africa and covers an area of 26,338 km². Nature tourism is based primarily on the values of national parks. In Rwanda, there are four national parks with diverse values: Volcanoes National Park, Akagera National Park, Nyungwe National Park, and Gishwati Mukura National Park (Fig. 3, table 3), with the youngest of them, that is, Gishwati Mukura NP, being the least popular among tourists, as well as – as shown by the research of Zajadacz and Uwamahoro (2022) – among residents. There is also a lack of information on it in national statistical annuals³.

³ Therefore, Gishwati Mukura NP was omitted in the analysis of the offer and the size of tourist traffic.



Fig. 3. National Parks in Rwanda

Source: own elaboration.

Table 3. The main characteristics of the national parks in Rwanda

Volcanoes National Park	Gishwati Mukura National Park	Nyungwe Forest National Park	Akagera National Park
<ul style="list-style-type: none"> - UNESCO biosphere reserve - five volcanic cones - high biodiversity - cross-border park - mountain gorillas – the symbol of the park 	<ul style="list-style-type: none"> - two separate forest areas - high biodiversity - many waterfalls - landscape restoration program - the involvement of the local community 	<ul style="list-style-type: none"> - one of the oldest rainforests in Africa - high biodiversity - the farthest source of the Nile - the major catchment area in Rwanda 	<ul style="list-style-type: none"> - low-lying plains - include savannahs, forests, wetlands, and lakes - the largest protected wetland in Africa - the involvement of the local community

Source: own elaboration.

They were created at different times, occupy different areas (table 4), are located in different parts of the country (Fig. 3), and thus in different landscape conditions (Mazimhaka, 2006), but typical for this part of Africa.

Table 4. Rwanda national parks according to the year of establishment and area occupied

National parks	Year of establishment	Area in square km
Volcanoes National Park	1925	160
Gishwati Mukura National Park	2016	36
Nyungwe Forest National Park	2004	1020
Akagera National Park	1934	1122

Source: elaboration based on <https://www.africanparks.org> and <https://theculturetrip.com> (last accessed: 20.08.2022).

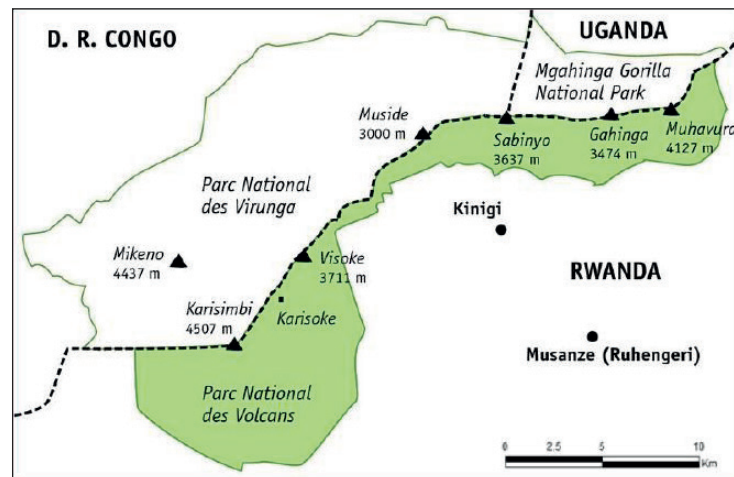


Fig. 4. Volcanoes National Park

Source: elaboration based on

<https://www.berggorilla.org/en/gorillas/protected-areas-for-gorillas/volcanoes-national-park/> (last accessed: 23.08.2022).

Volcanoes National Park (VNP) “consists of about 160 km² of montane forest which, until Rwanda’s independence in 1962, was a part of Africa’s first national park (Parc National Albert). This was created in 1925 with an intention of protecting the great apes” (Nielsen & Spenceley, 2010, p. 3) and since 1983 it has also been a UNESCO biosphere reserve (UNESCO, 2022). It is in the Virunga volcanic massif and includes five volcanic cones of this massif (Bisoke, Karisimbi, Muhavura, Gahinga, and Sabinyo). Combined with the national parks in the Democratic Republic of the Congo (DRC) and Uganda, it is an example of the only cross-border park in Rwanda (Fig. 4).

The park is characterized by zonality of vegetation, ranging from bamboo forest (at an altitude of 2300-2600 m) to Afro-Alpine vegetation resembling tundra (from 4200 m to the peak of Karisimbi, 4507 m a.s.l.). Topoclimate (high altitude, high rainfall, low temperature) results in differentiated biodiversity (*National strategy...* 2003, 12). It is home to mountain gorillas, which are a sort of symbol of the park and its main attraction, although golden monkeys, among other animals, also live here.



Photo 1. Entrance and the symbol of the VNP

Source: Małgorzata Durydiwka (01/2020).



Photo 2. Lake in one of the craters in the VNP

Source: Voitek Pendrak (01/2020).

The main goal of the VNP is to increase the number of mountain gorillas, whose population drastically decreased during the civil war. Conservation and educational activities of the park contributed to the restoration of the population of the mountain gorilla (Fig. 5). In 2015-2016, another census of gorillas in the Virunga Volcanoes was conducted and a minimum of 604 individuals were found in the area, an increase of 124 since the last census. The total number of mountain gorillas is around 1000 individuals. Unfortunately, however, illegal hunting still occurs in this region; for example, in 2007, a family of seven gorillas was shot.

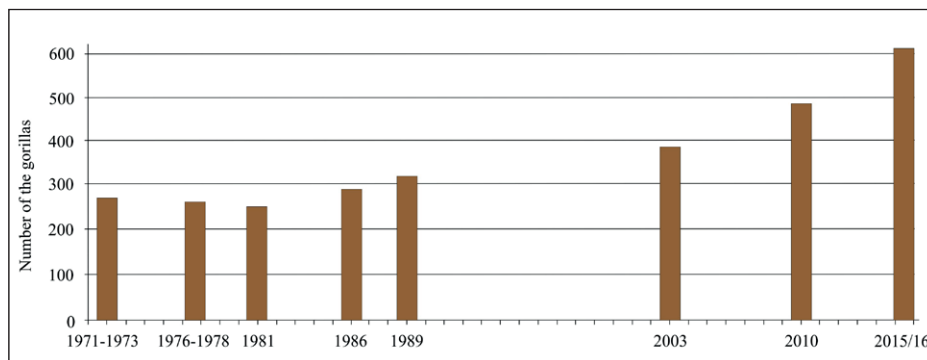


Fig. 5. Population development of the Virunga gorillas with census years

Source: own elaboration based on <https://www.berggorilla.org/en/about-us/success-stories/success-stories/number-of-virunga-gorillas-increased-again/> (last accessed: 23.09.2022).

Gishwati Mukura National Park (GMNP) is a piece of rainforest located south of the VNP in western Rwanda (at an altitude of 2000-3000 m a.s.l.). It consists of two separate forest areas: the larger Gishwati and the smaller Mukura (Fig. 6), which cover an area of 34 km² surrounded by a buffer zone⁴. The forests cover a mountain ridge separating the Congo and Nile basins, along the extremely biodiverse Albertine Rift. Its biodiversity includes eastern chimpanzees, L'Hoest (mountain monkeys) and golden monkeys, small mammals, amphibians, reptiles, over 120 bird species, and over 250 plant

⁴ <https://www.visitrwanda.com/destinations/gishwati-mukura-national-park/> (last accessed: 14.08.2022).

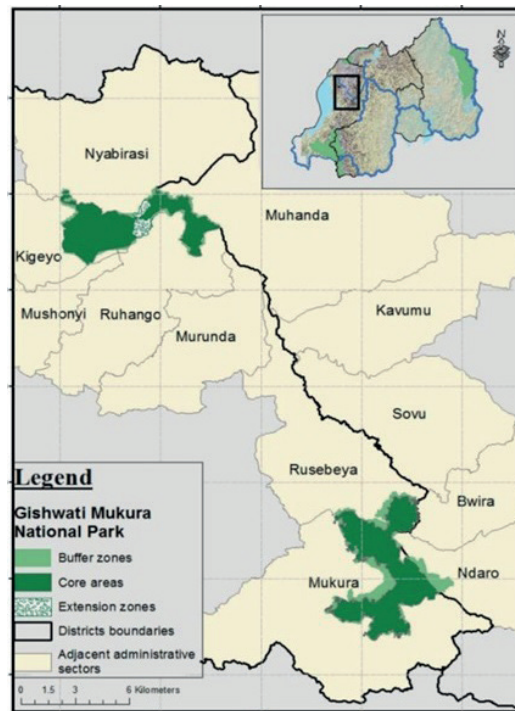


Fig. 6. Gishwati Mukura National Park

Source: <https://www.rwandawildlifesafari.com/map-of-gishwati-mukura-national-park/> (last accessed: 23.09.2022).

species (RDB, 2017). Waterfalls are also an important tourist attraction of GMNP. Many trails have been marked out in the park. Along the trails, tourists can enjoy hiking, trekking, biking, and birding, as well as exploration of nature, wildlife, and local community products.

The formalization of its National Park status in 2015 aims to help redress the balance, to increase the number of trees to improve soil fertility, stabilize slopes and regulate stream flow⁵. Nowadays, the GMNP is part of a landscape restoration program, since in recent years the forest area has decreased by half due to spontaneous settlement and tree felling. The program aims to increase the number of trees, improve soil fertility, stabilize slopes and protect biodiversity. In GMNP, many species have been lost because of deforestation and human habitation (*Gishwati Forest Reserve...* 2015).

Nyungwe National Park (NNP) was established in 2004 and lies in southwestern Rwanda, partly near the border with Burundi. It is one of the oldest rainforests in Africa, characterized by high biodiversity. It is located in a mountainous area with a small population of chimpanzees, as well as 12 other primate species, including the L'Hoest monkey endemic to the Albertine Rift. There are 75 species of known mammals in the NNP, such as the dwarf cat, mongoose, and leopard.

Thanks to its enormous floristic diversity, the forest is home to more than 200 different tree types and countless flowering plants. The NNP is Rwanda's largest national park with an area of 970 km²⁶. The watershed of the Congo and Nile rivers runs through the park; a stream, indicated as the farthest source of the Nile, is also located in the park.

The spectacular mountainous topography and unique biodiversity give this park enormous potential to emerge as one of the continent's most extraordinary tourism destinations.

⁵ <https://www.visitrwanda.com/destinations/gishwati-mukura-national-park/> (last accessed: 14.08.2022).

⁶ <https://www.cbd.int/doc/world/rw/rw-nbsap-v2-en.pdf> (last accessed: 14.08.2022).



Photo 3. Rainforest landscape in the NNP
Source: Małgorzata Durydiwka (01/2020).



Photo 4. L'Hoest monkeys in the NNP
Source: Małgorzata Durydiwka (01/2020).



Fig. 7. Nyungwe National Park
Source: Matthews et al., 2019, 3.

Akagera National Park (ANP) is a place to observe, safari-style, primarily large animals, including the so-called “big five”. The ANP is located in the northeast of Rwanda on the border with Tanzania. Its name comes from the Akagera River, which flows along the eastern border of the park. Unlike other national parks, it is dominated by swamps and lakes located in the vicinity of the meanders of the Akagera River. The relatively warm and low-lying plains of Akagera include savannahs, forests, wetlands, and a dozen or so lakes.⁷ The park was established in 1934 to protect animals and vegetation. It is the largest protected wetland in Africa. Once it occupied over 2500 km², but in 1997 its size was reduced to 1122 km². Many lands were transferred to refugees returning to Rwanda after the 1994 Tutsi genocide⁸. In 2010, African parks took over the management of the ANP in cooperation with the Rwanda Development Council (RDB). This has contributed to better management and protection of the park’s nature. From the beginning there was a clear joint vision, to transform Akagera from a depleted landscape overrun by more than 30,000 cattle into an income-generating park for the benefit of people and wildlife.



Fig. 8. Akagera National Park

Source: <https://africageographic.com/stories/akagera-national-park/> (last accessed: 27.09.2022).

⁷ <https://www.visitrwanda.com/tourism/destinations/national-parks/> (last accessed: 14.08.2022).

⁸ <https://www.kagerasafaris.com/akagera-national-park/> (last accessed: 14.08.2022).



Photo 5. Savannah landscape in the ANP

Source: Małgorzata Durydiwka (01/2020).



Photo 6. Lake Ihema in the ANP

Source: Katarzyna Duda-Gromada (01/2020).

TOURIST FLOW IN THE NATIONAL PARKS OF RWANDA: SIZE AND ORGANISATION

One of the most important tourist destinations in Rwanda is the national parks. The number of visitors to national parks in Rwanda has been steadily increasing until the period of the COVID-19 pandemic (Fig. 9). In 2005, the number of tourists who visited the national parks was 24,000, and in 2019, 111,000. In March 2020, due to the pandemic, the parks were closed to visitors for fear of infection of animals with the SARS-CoV-2 virus. As a result, the number of visitors decreased to 36,000.

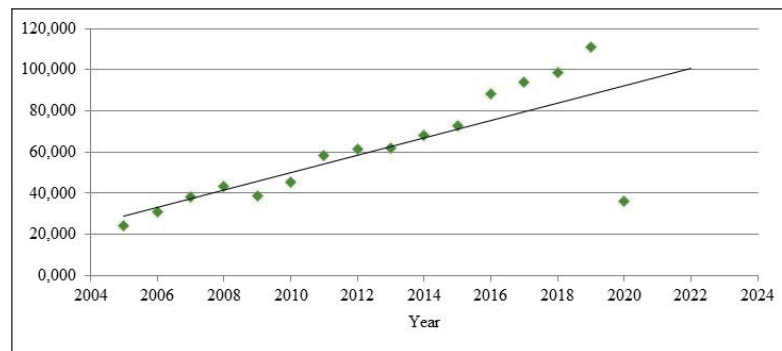


Fig. 9. The number of visitors to Rwanda’s National Parks in 2005–2020
Source: elaboration based on Rwanda Statistical Yearbook 2021.

Since 2013, the most visited park is the ANP. In 2017, 47% of all visits to Rwanda’s national parks were visits to the ANP, while visits to the VNP accounted for 38%, and visits to the NNP, for 15% (Fig. 10).

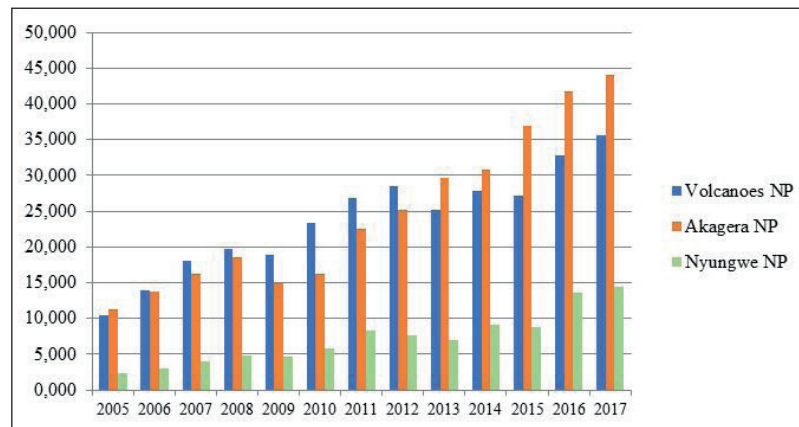


Fig. 10. The number of visitors to Rwanda’s National Parks in 2006–2017⁹
Source: elaboration based on Rwanda Statistical Yearbook (2021).

There is a clear correlation between the accessibility of the park and the number of visitors. In Rwanda, the main center of tourist traffic distribution is Kigali, which is also a starting point for day trips. This is due to the best-developed accommodation base in the capital region, but also the presence of an international airport, the largest in Rwanda. National parks in Rwanda are mainly visited by foreign tourists, although a modest increase in the number of domestic tourists is observed. In 2008, they accounted for 23% of the total, and in 2019, for 31%. The distances and travel time from Kigali to individual parks are diverse (Table 5). An interesting example is the NNP, which is located relatively close to the capital (in a straight line), but due to poor road infrastructure, the travel time is significantly extended. Therefore, a visit to the park during a day trip from Kigali is not feasible. The poor accessibility of the NNP is, probably, one of the important determinants of lower tourist traffic in this park.

⁹ No data are available for GMNP. From 2018, statistical summaries only present aggregate data for all national parks, there are no data on the number of visitors to each park.

Table 5. Distances from Kigali to individual national parks

National Parks	Distance	Time of arrival
Volcanoes National Park	106 km	2 h 17 min.
Akagera National Park	107 km	2 h 25 min.
Nyungwe National Park	218 km	5 h
Gishwati Mukura National Park	160 km	3 h 52 min

Source: elaboration based on Google Maps.

Land in Rwanda is now privately owned by the people, so according to *Rwanda Tourism Policy* (2009), a framework to facilitate and guide access to land by tourism investors is needed, for land both within and outside protected areas. These regulations must apply to both the availability of land in the context of road construction and accommodation facilities. Particular emphasis is placed on the creation of tourist circuits (including the construction of roads, ports, airports, accommodation facilities, etc.).

The task undertaken in *the Rwanda Tourism Policy* (2009) to expand the transport infrastructure is successively implemented. In 2005-2020, both the length of roads in total and that of paved roads increased (Table 6). This is largely the result of Chinese investments, but still, the density of paved roads is not adequate and is only 19.85 km per 100 km².

Table 6. Length of roads in Rwanda

Type of road	2005	2010	2015	2020
	Length (km)			
Paved roads	1,075	1,145	1,357	5,228
Total	4,699	4,707	6,655	6,674

Source: elaboration based on Rwanda Statistical Yearbook (2012, 2019, 2021).

It is worth noting that accommodation facilities are increasingly being built near national parks. Newly built facilities are often high-standard hotels and lodges. The best in terms of accommodation (outside the Kigali region) are the districts in the immediate vicinity of the VNP, but in recent years a distinct expansion in the districts surrounding the NNP can be noticed. The development of accommodation in the districts around the ANP is progressing somewhat slower (Table 7). It can also be noticed that the number of accommodation facilities is increasing faster in areas where the density of paved roads has increased in the last decade. The actions of the Rwandan authorities are, therefore, aimed at creating new tourist distribution centers, which will undoubtedly shorten journeys and improve the comfort of sightseeing for tourists, but at the same time will be an important element of local development and the creation of new jobs.

Table 7. Number of hotels and lodges in the districts adjacent to Rwanda's National Parks

District	2010	2015	2020
Volcanoes National Park			
Burera	1	2	5
Musanze	38	48	87
Nyabihu	-	-	3
Rubavu	59	62	76
Nyungwe National Park			
Karongi	5	6	37
Nyamagabe	6	7	10
Nyamasheke	1	2	10
Nyaruguru	-	-	4
Rusizi	10	12	34

District	2010	2015	2020
Akagera National Park			
Gatsibo	-	-	8
Kayonza	3	5	12
Nyagatare	4	5	16

Source: elaboration based on Rwanda Statistical Yearbook (2012, 2019, 2021).

The offer of excursions for tourists in the individual national parks of Rwanda is diversified. In addition to the obvious proposals related to the main tourist values of the parks, such as a hike to a volcano crater, a stay among a family of mountain gorillas, or a safari, we can find offers with other proposals. For example, in the ANP these are car trips, boat safaris, night trips, angling, a “behind the scenes” tour, a walk “along the line” and cultural tours (Table 8).

Table 8. Excursion offer in the Akagera National Park

Excursion	Short description
Car trips	Explore the park at your own pace, traveling alone or with an experienced guide to help you spot wild animals.
Boat safari	Wander along the shores of a forest-surrounded lake, watching hippos and crocodiles bask on the shores and the colorful world of birds.
Night expeditions	You can sleep, but the park does not. Some of the most sought-after animals lead a nocturnal lifestyle.
Angling	Spend a relaxing day angling on the shores of Lake Shakani. “Catch and cook” your dinner.
“Behind the scenes” tour	Learn more about what’s going on “behind the scenes” in park management. Visit the park headquarters, meet the staff, ask questions and learn more about conservation activities at the Akagera National Park.
Walk “along the line”	Stretch your legs during a 7-km walk with a guide along the fence line. You will learn how the fence works and its significance for the park and the local community.
Cultural tours	There are several options available to visit the local community and learn about life in rural Rwanda, in the company of a local guide.

Source: elaboration based on <https://www.africanparks.org/the-parks/akagera/visit-akagera> (last accessed: 14.08.2022).

An important issue in the case of tourist flow in African countries is the organization of tourist trips in the field and their safety. Therefore, there exist strictly defined rules for behavior and movement in each national park. Due to the close border with the Democratic Republic of the Congo, during their hikes in the VNP, the tourists are accompanied by soldiers with weapons. Since tourism is an important sector of Rwanda’s economy, keeping an eye on the safety of tourists seems crucial.

As has been mentioned many times earlier, tourist flow in Rwanda is growing quite dynamically. The same happens in individual national parks. Thanks to this, the demand for a variety of services, including guide services, is increasing. In the context of sustainable development, the activation of local communities is particularly important. In 2014, the Community Freelance Guide Programme was launched at the ANP, thanks to which unemployed young people from local communities obtained an opportunity to broaden their knowledge and skills, and – above all – an opportunity to earn money. These persons are selected during recruitment and undergo multi-stage training. The freelance guide community creates a kind of connection between tourism and the local community. They are the driving force behind grassroots initiatives related to cultural tourism. Thanks to this, their income increases, but they also enrich the park’s tourist offer and provide tourists with a deeper cultural experience¹⁰. Also, in the GMNP there

¹⁰<https://www.africanparks.org/the-parks/akagera/visit-akagera> (last accessed: 14.08.2022).

exist many projects and tourist products offered by the local community living in the vicinity of the park. They include traditional medicine, handcraft, bee-keeping, cattle rearing, farmstay, homestay, traditional dance or tea plantation, and production. The local community contributes much to park conservation in the framework of the Community Partnership Programme.

RWANDA'S NATIONAL PARKS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

In the context of sustainable development, the potential of Rwanda's national parks can be considered in three aspects: ecological, economic, and social. Nature conservation is important for maintaining biodiversity and values for the development of tourism. The status of a national park protects these areas, particularly forests, from the threat of logging, agricultural intensification, and mining (Banerjee et al., 2017) (e.g., NNP, GMNP, VNP) and also from settlement intensification (e.g. VNP and ANP). On the other hand, the importance of these areas is water provisioning. Especially "Nyungwe generates 70% of Rwanda's rainfall input in the country's principal river systems, including the Nyabarongo and Akagera river systems of the southern Nile Basin to the east, and the Lake Kivu and Congo River systems to the west" (Banerjee et al., 2017, p. 4-5).

The economic aspect of national parks concerns the development of tourism. According to Geoffrey et al. (2019, p. 536), "Rwanda is reliant on wildlife-based tourism for 90% of its tourism generated revenues", and Rwanda's national parks have great potential for the development of tourism, especially since they are characterized by high biodiversity, as evidenced by the high number of species of plants and animals. Based on visitor numbers (fig. 9 and fig. 10) and TripAdvisor data, we can say that national parks are a major tourist attraction in Rwanda. Of the 1,867 reviews on TripAdvisor, 79.9% rated them as excellent and 15.0% as very good (table 9).

Table 9. Rating of national parks in Rwanda by TripAdvisor users

Rating category	Akagera NP	Volcanoes NP	Nyungwe NP	Gishwati Mukura NP	TOTAL	
	Number of reviews					%
Excellent	220	1,098	174	nd	1,492	79.9
Very good	125	84	70	nd	279	15.0
Average	31	11	24	nd	66	3.5
Poor	6	5	4	nd	15	0.8
Terrible	2	4	9	nd	15	0.8
TOTAL	384	1,202	281	nd	1,867	100.0

Source: own elaboration based on TripAdvisor data: <https://www.tripadvisor.com/> (access: November 25, 2022).

The reviews emphasized the unique values of nature as well as the involvement and professionalism of the guides:

I had an amazing time here (...)The staff there were friendly and helpful. We had an amazing tour guide and driver; they answered all our questions. We saw baboons, impalas, waterbuck antelopes, buffalos, crocodiles (though in the lake), giraffes, zebras, and an elephant. We didn't see a lion though (ANP: October 2022)

Best experience ever in Rwanda. Cesar is a very nice and professional guide who knows the park very well. We saw all big 5 in a perfect blue sky day (ANP: July 2022)

Unbelievable experience. Well coordinated. Loved seeing the golden monkeys and going on the gorilla trek. PCR covid test within 72hrs required. Masks required when near primates to help prevent transmission of Covid. Staff was friendly. Guides were excellent! (...) The porters were amazing help. (VNP: July 2022)

Would highly recommend. We did a trek in Uganda and Rwanda, and the Rwanda experience was definitely more polished and you were able to get closer to the gorillas. (VNP: February 2020)

Amazing. (...) The canopy bridge was beautiful. Especially loved the chimpanzee trek. Keep in mind they're fast so it can be a pretty intense vertical trek. Walking sticks are complimentary. Overall such a wonderful experience! (NNP: January 2022)

We started our canopy walk at 8 o'clock, with our amazing guide Shandak. The canopy was beautiful, but it was our guide who made the trip unforgettable. He seemed to know everything about the plants, flowers and animals. He showed us different types of monkeys and squirrels on the way, he supported my mom on the slippery tracks (wear good shoes during rainy season) and he helped me cross the bridge and made my fear of heights disappear! (NNP: February 2020)

The satisfaction of tourists and the increase in the number of tourists visiting Rwanda and national parks have an impact on the development of other sectors of the economy. This was described by Geoffrey et al. (2019) using multiplier effects.

The social dimension of national parks is related to the two above-mentioned aspects and concerns the creation of jobs for local communities, educational programs, and their involvement in the activities of parks. Geoffrey et al. (2019) noticed the influence of tourism on the creation of jobs, especially in sectors such as hotels and restaurants, food and drinks, transport, and retail trade.

The involvement of the local community in the activities of the park very often determines the success of managing such an area. Residents of neighboring areas must see and understand the real benefits of the park to support activities related to its development and nature conservation. One of the most such direct benefits is employment. In the ANP there is around 260 local staff at any one time employed in road works, construction, fire breaks, and more. Moreover, about 10% of the park's revenue goes directly to local communities and is allocated to the development of small businesses and local infrastructure. Every year, 2,000 schoolchildren visit the ANP to see and understand the environmental efforts taken in the area¹¹. In the GMNP an opportunity to improve the quality of life of the local population is creating new jobs, popularizing local handicrafts among tourists, as well as making tea plantations available for sightseeing¹².

The employees of national parks also paid attention to the involvement of local communities in work in the parks (VNP) and the creation of educational programs and workshops preparing people for work in national parks, e.g., as guides (ANP)¹³. Educational programs and training for local people in the field of tourist services influenced the quality of these services. This was proved by the reviews of TripAdvisor users. But these activities also improved the quality of life of residents (creating new jobs and improving the standard of services).

Zajadacz and Uwamahoro (2022), presenting the opinions of young Rwandans, also showed a positive impact of tourism. First of all, the implementation of economic and social goals was indicated, and less often that of ecological ones. Zajadacz and Uwamahoro (2022) also noticed the systemic impact of tourism on the support of all aspects of sustainable development in Rwanda (fig. 11).

¹¹ <https://africageographic.com/stories/akagera-national-park/> (last accessed: 27.09.2022).

¹² <https://www.visitrwanda.com/destinations/gishwati-mukura-national-park/> (last accessed: 14.08.2022).

¹³ In January 2019, during the stay in Rwanda, the authors had the opportunity to conduct short talks with VNP and ANP employees.

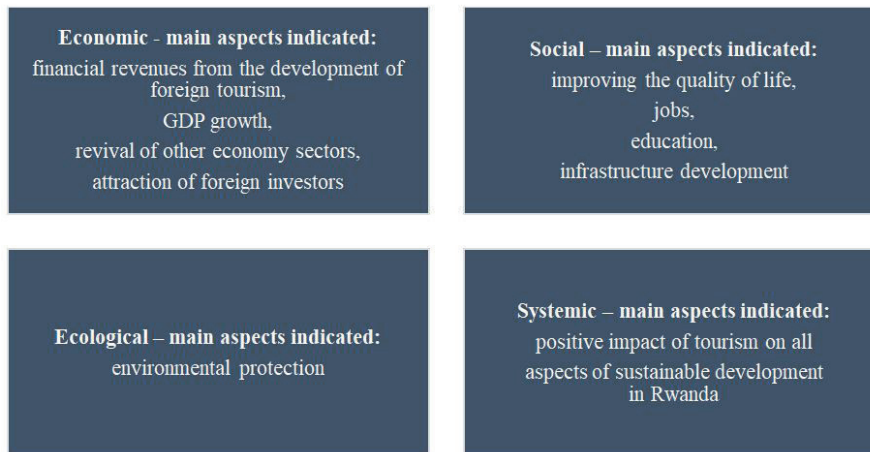


Fig. 11. Opinions of young Rwandans on the impact of tourism on the sustainable development of Rwanda

Source: own elaboration based on Zajadacz, Uwamahoro (2022).

CONCLUSION AND REFLECTIONS

The Rwandan travel and tourism industry represented 10% of the total GDP in 2019, with this economic activity supporting nearly 338,000 jobs (equivalent to more than one in every 11 jobs) (*Driving the Tourism Recovery in Rwanda*, 2021). And this is one of the reasons why tourism is treated as a priority sector of the economy.

Several factors influenced the development of nature-based tourism in this African country:

1. The natural potential of the country, which, according to the *Rwanda Tourism Policy*, is treated as the basis of tourism development. Rwanda is endowed with rich biological diversity consisting of a great diversity of plants, animals, and habitats which make this country unique; the Government of Rwanda is committed to the conservation and sustainable utilization of biodiversity (*National Biodiversity... 2016*). Nature is protected using a system of national parks managed by the Rwanda Development Board. Their functioning is conducive to the protection of endangered and endemic species, such as mountain gorillas or L'Hoest monkeys, which are the main tourist attraction in the VNP and NNP, as well as to the restoration of species that have become extinct in Rwanda (such as lions and rhinos in the ANP). An important role of national parks in the context of sustainable development is also activation and educational programs addressed to local communities aiming at their inclusion in the chain of nature protection and local development following the principles of sustainable development (for instance, the Community Freelance Guide program was developed in the ANP, which supports development and employment opportunities, especially for young and unemployed people, thanks to the increase in the number of visitors to the ANP and the surrounding areas).
2. The promotion of Rwanda as a tourist destination has been developed. Exposures at tourism industry trade fairs (e.g., at the ITB Berlin) intensified interest and investment in safaris and other travel packages offered by private companies, which, in turn, can generate demand among potential tourists around the world. Features on international media channels, such as CNN and the National Geographic Channel, continue to generate demand for mountain gorilla tourism, which is one of the main reasons Rwanda has been able to maintain constant visitor numbers despite significant increases in tracking fees (Maekawa et al., 2013).
3. The development of tourist infrastructure in the vicinity of national parks, as evidenced by the increase in the number of hotels and lodges in the districts adjacent to Rwanda's National Parks (from 127 in 2010 to 302 in 2020), not only improves the comfort of travel and sightseeing for tourists, but also potentially creates new jobs for local communities, and thus becomes an

impulse to improve their quality of life. Thus, the economic and social aspect of sustainable development as regards local communities is respected.

4. The safety of tourists has been strengthened. Ensuring the safety of tourists is important on a “difficult” (in terms of nature) terrain (such as steep slopes of volcanoes in the VNP, dense rainforest in the NNP and GMNP, and wild animals in the immediate vicinity). Therefore, before going out into the field, tourists meet with a guide and are instructed on how they should behave. Ensuring safety is important also because of the occurrence of poaching as well as the existence of smuggling routes in the VNP and NNP). Therefore, groups of tourists are often accompanied by soldiers with weapons.
5. Taking care to not allow for excessive tourist flow in national parks, is important for the protection of endangered species. An example of the potential hazards of excessive tourist traffic is excursions organized in the VNP to view mountain gorillas in their natural habitats. There are no official limits on entries to the park, while the prices of admission tickets, and especially the prices of “mountain gorilla tours” constitute an independent limitation on the entrance¹⁴.

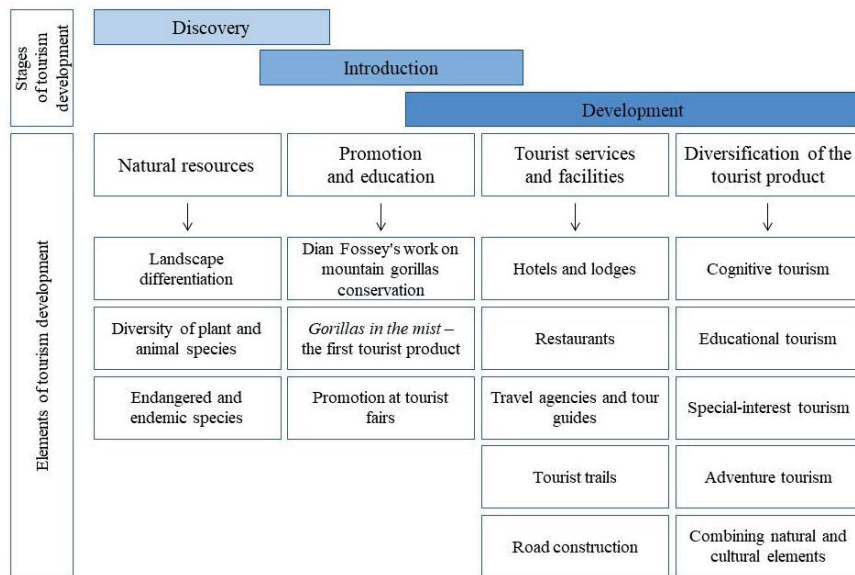


Fig. 12. The development of nature-based tourism in Rwanda: stages and elements
Source: own elaboration.

Considering natural resources and the activities of the state and the national parks, three basic stages can be distinguished in the development of nature-based tourism in Rwanda (Fig. 12). These are the stages of discovery, introduction, and development. The transition between these stages was possible thanks to promotional campaigns, the development of tourist and road infrastructure, and the diversification of tourist products.

The analysis of the elements impacting the current development of tourism in the national parks of Rwanda proves that the basic assumptions of sustainable development are being implemented. It can be expected that in the coming years these activities will continue, especially since the young generation in Rwanda sees many positive aspects related to the protection of the natural environment and the implementation of the principles of sustainable development.

¹⁴In January 2020, an hour-long tour cost USD 1450.

Unfortunately, the coronavirus pandemic halted the increase in tourist traffic to Rwanda. It is estimated that in 2020, tourist spending in Rwanda decreased by over USD 300 million, which could lead to the loss of over 175,000 jobs in the tourism economy. These losses can have long-lasting repercussions not only for the tourism sector but also for the entire economy of Rwanda (*Driving the Tourism Recovery in Rwanda*, 2021).

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