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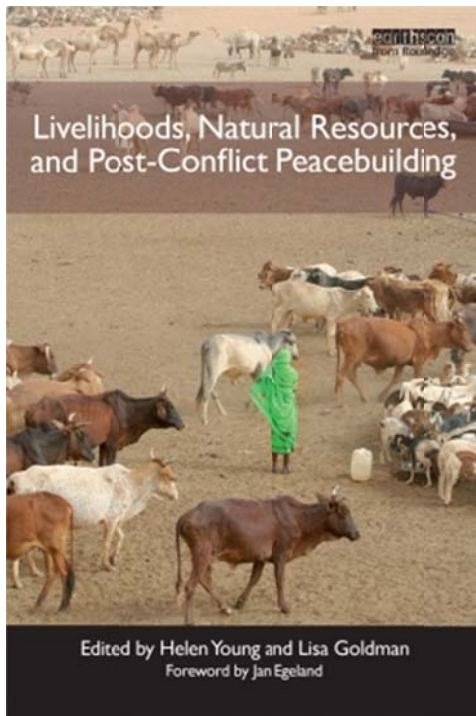
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Mountain Gorilla Ecotourism: Supporting Macroeconomic Growth and Providing Local Livelihoods

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Mountain gorilla ecotourism: Supporting macroeconomic growth and providing local livelihoods

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With a population currently hovering around just 880 individuals, the mountain gorilla (*Gorilla beringei beringei*), endemic to two park systems extending across Rwanda, Uganda, and the Democratic Republic of the Congo (DRC), was considered to be dangerously close to extinction even before major conflicts arose in the region during the 1990s. Despite the proximity of hundreds of thousands of refugees, countless rebels, and national armies that pass through and occupy the parks, the mountain gorilla has miraculously survived an extended period of civil war and genocide. With the return to relative peace in Rwanda and Uganda (although not in the DRC), the mountain gorilla has emerged not only as a national symbol for the countries but also as a vehicle for strengthening conservation efforts, national economies, and local livelihoods through gorilla-related ecotourism. Although mountain gorilla ecotourism existed in Central Africa prior to the conflict, important lessons can be learned from experiences in the post-conflict period.

This chapter analyzes how mountain gorilla ecotourism can be used in Africa's Great Lakes region to support macroeconomic growth and provide livelihoods to local populations following a series of conflicts in the region. Although ecotourism will not solve all economic problems, it can play a prominent role in a broader post-conflict development framework. The chapter first details the conflicts in Rwanda, Uganda, and the DRC and provides an overview of the mountain gorilla population to introduce the post-conflict situation in which

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mountain gorilla ecotourism has developed. It then analyzes the various strategies and approaches used by each country to boost ecotourism. The chapter identifies opportunities and challenges for further developing mountain gorilla ecotourism in the Great Lakes region. Finally, it presents policy recommendations and considerations for future ecotourism operations.

REGIONAL CONFLICT HISTORY

The area most critical to mountain gorilla ecotourism lies at the center of the Great Lakes region of Africa—the Virunga Volcanoes region, shared by Rwanda, Uganda, and the DRC. Each of these three countries plays a part in the region’s complex history. They share borders and a contiguous park that is segmented into each country’s own protected area: Volcanoes National Park (Parc National des Volcans, or PNV) in Rwanda, Virunga National Park (Parc National des Virunga, or PNVi) in the DRC, and Mgahinga Gorilla National Park (MGNP) in Uganda. The shared park contains approximately half of the region’s mountain gorilla population. A separate park, Bwindi Impenetrable National Park (BINP) in Uganda, is home to the other half of the mountain gorilla population (see figure 1).

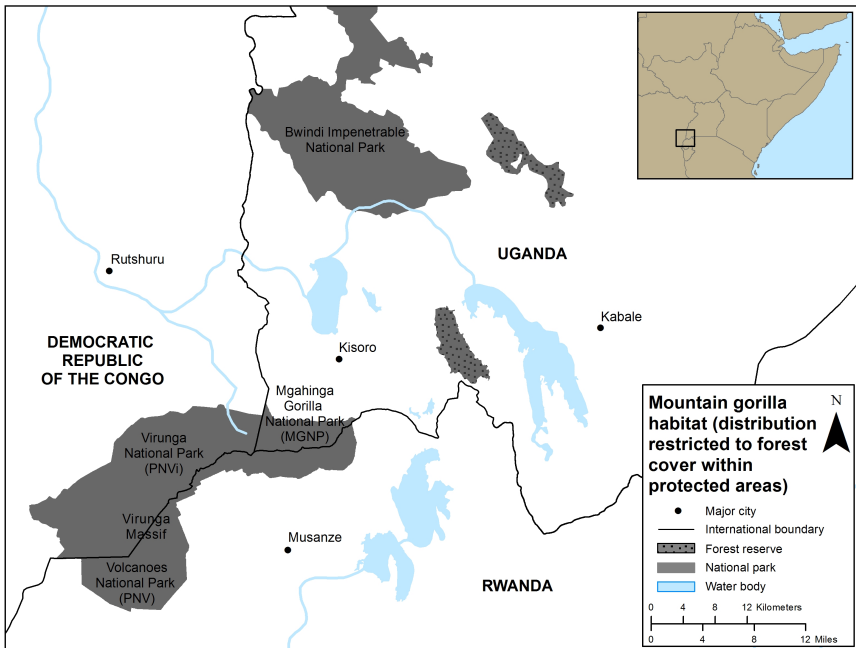


Figure 1. Mountain gorilla habitat
 Source: Blomley et al. (2010).

A variety of forces have driven conflict in the region, including ethnic clashes and competition for natural resources. Rwanda's civil war began in 1990, when the Rwandan Patriotic Front attacked from bases in southern Uganda, and lasted through 1994, when Rwandan president Juvénal Habyarimana was assassinated. His death triggered a genocide that killed almost 1 million Tutsis and moderate Hutus in the span of one hundred days. The genocide resulted in a massive shift of 2 million people from their homes, including the Interahamwe—a group of radical Hutus who are believed to have perpetrated the genocide. Most of the displaced people returned to Rwanda within two years, but many Interahamwe remained in the DRC, attacking Rwanda and putting pressure on those managing PNV and its mountain gorilla population (Lanjouw 2003). Rwandan tourism, which had reached a peak of 22,000 visits in 1990, quickly disappeared during the civil war. It recovered fully by 2002, less than a decade after the genocide ended (Nielsen and Spenceley 2010).

Although the majority of Uganda's internal conflict has been generated by the Lord's Resistance Army in the northern part of the country, far from the mountain gorilla parks, Uganda has played a role in the conflict in eastern DRC and the park region. It supported Laurent Kabila in his overthrow of the Mobutu Sese Seko regime in the DRC (then Zaire), hoping Kabila would stop Allied Democratic Forces (ADF) rebels from attacking southwest Uganda from bases within the DRC's PNVi park. Once it became clear that the central DRC government could not contain the ADF, Uganda began supporting other rebel movements, contributing to the instability in the DRC. Uganda and the DRC signed a treaty in 2002 with deadlines for Uganda to remove its troops from the DRC and for the DRC to gain control over its eastern sector, but both failed to keep their promises (Varga, Draman, and Marriott 2002).

Despite this unrest, mountain gorilla ecotourism has grown steadily in Uganda since its formal introduction in 1991. In 1999, Uganda's tourism industry encountered a setback when members of an Interahamwe group based in the DRC killed eight tourists who had come to see the mountain gorillas (BBC 1999). Surprisingly, tourism numbers recovered quickly after a drop immediately following the incident.

The DRC has played a central role in the region's instability. Civil wars in both 1996 and 1998 involved Rwanda and Uganda as allies to remove Zaire's president Mobutu. Rwanda and Uganda became rivals, fighting over natural resources available in eastern DRC (Hammill and Brown 2006). The eastern part of the country, too far away from the central government to be controlled by it, continued to serve as a shelter for 8,000 to 10,000 Interahamwe, including those involved in the 1999 Uganda tourist massacre (Hatfield and Malleret-King 2007).

Instability due to the presence of rebel groups and Rwandan and Ugandan armies discouraged tourism in the DRC until 1999, and since then most tourists have been DRC residents and nongovernmental organization (NGO) staffers working in the DRC. Prior to these conflicts, the DRC had a well-developed

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mountain gorilla tourism industry, greater than that of either Rwanda or Uganda, but business was devastated by the continued conflict in and around the park (Hatfield and Malleret-King 2007). Concerns about violence and instability in the eastern and northeastern regions of the DRC continue to hinder development of mountain gorilla tourism in the country. For example, the U.S. Department of State has been advising against travel to the DRC because of continued instability and the high risk of violence (U.S. DOS 2013). While some travelers may choose to ignore this warning, it is more likely that they will visit Rwanda or Uganda to see mountain gorillas.

Despite the conflicts noted above, Rwanda, Uganda, and the DRC have collaborated on natural resource management issues, including mountain gorilla protection.¹ The countries' informal transboundary collaboration, facilitated in part by the International Gorilla Conservation Programme, was formalized in 2006 through the Greater Virunga Transboundary Collaboration agreement between Rwanda, Uganda, and the DRC, known as the Transboundary Strategic Plan. An output of eighteen years of collaboration among the countries, the plan provides guidance for managing the transboundary area, with a secretariat to monitor its implementation. Because mountain gorillas cross borders, a crucial aspect of the plan provides for the sharing of revenues among the three countries to prevent tension over the uncontrolled movement of the tourism-generating gorilla population (Refisch and Jenson 2014).

The impacts of mountain gorilla ecotourism are best understood in light of conditions in the communities near the parks. Rwanda, Uganda, and the DRC are among the poorest countries in the world, and population densities surrounding the parks are among the highest in the world—up to 700 people per square kilometer (Plumptre et al. 2004). Over 75 percent of Rwandans live below the international poverty line of US\$1.25 per day, and 90 percent of Rwandans rely on subsistence agriculture for survival (Tusabe and Habyalimana 2010; UNDP, REMA, and UNEP 2006). The 1994 genocide cut Rwanda's gross domestic product (GDP) by 50 percent (UNDP, REMA, and UNEP 2006).² Ugandans are slightly better off, due mainly to the greater degree of political and economic stability Uganda enjoyed during the late 1990s and early 2000s, but residents still suffer from a shortage of land and resources (Plumptre et al. 2004). The three countries fall among the bottom fifteen countries overall by GDP per capita, although their GDP growth rates are among the highest in the world—indicating the potential for continued growth (World Bank 2012a, 2012b).

¹ For a detailed discussion of the various aspects of these collaborations, see Refisch and Jenson (2015).

² For further discussion of Rwanda's post-conflict natural resource management practices, see Sorensen (2015) and Brooke and Matthew (2015).

MOUNTAIN GORILLA POPULATION HISTORY

The mountain gorilla population, split almost evenly between BINP (321 sq km), PNV (160 sq km), PNVi (250 sq km), and MGNP (27 sq km), totals approximately 880 individuals (Gray et al. 2010; Blomley et al. 2010; Hatfield and Malleret-King 2007). This reflects approximately 1.15 percent annual growth from 1989 to 2003 for the shared parks, and approximately 1 percent annual growth for BINP from 1997 to 2006 (McNeilage et al. 2006). The total mountain gorilla population in the Virunga Volcanoes region spanning the three countries has been counted by census eight times since 1970 (Gray et al. 2005, 2010; McNeilage et al. 2006). The 2010 census showed an estimated population of 480 individuals in the region, a 26.3 percent increase in the total population from 380 individuals in the 2003 census (Gray et al. 2005, 2010).

During and after a time of conflict, any growth in the mountain gorilla population should be considered a success (Gray et al. 2005). Only twelve to seventeen mountain gorillas died between 1992 and 2000 due to military activity—approximately 5 percent of the 1989 population (Kalpers et al. 2003). More significant threats came from the local human population, both during and after the conflict period. During the 1990s, pressures to allow refugees to move into the park were enormous, and although such settlement was not allowed, the siting of refugee camps near the parks increased pressures on nearby natural resources. The greatest threats to the mountain gorilla population during this time included habitat loss, direct poaching, indirect poaching, human diseases, and fires (Gray et al. 2005; GEF 2007). Due to the high human population density near the parks and the fact that more than 50 percent of the nearby communities lack agricultural land, there is also great political pressure to free up land within the park for agricultural and charcoal production, which would further reduce the already limited habitat for the mountain gorilla (Gray et al. 2005).

Although many communities around the parks do not eat gorilla meat, direct poaching is still a serious threat, especially from rebel groups living in the park without a source of income or food. More prevalent is indirect poaching, which occurs when traps set for other animals in the park ensnare gorillas and inflict serious and sometimes fatal injury (Plumptre et al. 1997; Hammill and Crawford 2008). Due to the genetic similarity between gorillas and humans, mountain gorillas are also susceptible to many of the illnesses transmitted by humans. Such transmission posed a particular risk during and after the Rwandan genocide, when refugees were moving through the PNV. Currently, tourists are required to remain at least seven meters away from mountain gorillas to minimize this risk. At one point, human-caused fire also posed a significant risk, but this has been reduced since the conflict ended; only four fires were recorded in the Ugandan parks in 2004 (Blomley et al. 2010).

For inhabitants of Rwanda, Uganda, and the DRC, the mountain gorilla has long been considered a national symbol—something to protect and of which to be proud. Many staff at PNV continued to protect the mountain gorilla population

during the civil war because of their pride in their national heritage, despite threats to their own safety (Plumptre 2003). This may help explain why so few mountain gorillas were killed during the conflict. According to José Kalpers (a former staff member of the International Gorilla Conservation Programme) and his colleagues, “many of the warring factions have actually shown commitment and invested resources to ensure that the gorillas were not harmed” (Kalpers et al. 2003, 335).

This transformation from a national symbol to a natural resource has been both a benefit and a threat to the mountain gorilla population. In 2007, nine mountain gorillas were killed in the DRC, and the investigation concluded that the killings were perpetrated by people involved in illegal charcoal production within PNVi (Lovgren 2007; Refisch and Jenson 2014). Rwanda had banned the production of charcoal to prevent deforestation in 2004, making the production of charcoal and its subsequent sale to Rwanda very profitable within the DRC. The perpetrators knew that the mountain gorillas were a source of income for the park service and sought to retaliate against the rangers who tried to shut down their illegal charcoal trade (Lovgren 2007).

In order to capitalize on the mountain gorilla population as a natural resource, Rwanda and Uganda (and more recently, the DRC) have each been promoting gorilla-based ecotourism. Such ecotourism is intended to be low-impact, operate on a small scale, and ideally generate funds to conserve the natural resources at issue. Another principle of ecotourism is to provide financial benefits and empowerment for the local population (Sabuhoro 2006). This can create incentives to conserve both the mountain gorilla population and its habitat, because the entire ecotourism experience is focused on viewing the mountain gorilla in its natural environment. Indeed, rebels in the DRC have realized the profitability of using the gorillas for ecotourism (Burnett 2012); rebel leader Laurent Nkunda even began taking tourists to see gorillas in the park to raise funds to support insurgent activities (Refisch and Jenson 2014). Such opportunity may have motivated the rebels to prevent damage to the mountain gorilla population.

MOUNTAIN GORILLA ECOTOURISM

Rwanda and Uganda used similar strategies and approaches to develop a mountain gorilla-based ecotourism industry during the 1990s and 2000s. This section examines three broad aspects of these actions: pricing and market focus, international outreach, and tourism sector reform. Pricing and market focus involves any actions taken with respect to park entrance and gorilla tracking fees. International outreach includes participation in tourism fairs, the use of national and international marketing strategies, and placement of information in media and documentaries. Tourism sector reform includes interactions with the private sector on such matters as privatization, business law, and tax incentives. Rwanda and Uganda have each employed a mix of strategies within these categories, and

their efforts provide lessons for supporting macroeconomic growth by developing the ecotourism sector.

The growing ecotourism sector

Market focus is a key distinction between ecotourism and mass tourism. Ecotourism is characterized by a small volume of tourists and by intimate experiences, while mass tourism may entail larger crowds and more impersonal experiences. Mountain gorillas are an ideal subject for ecotourism, as they are relatively scarce, require visitors to exercise caution, and are difficult to locate and view. Ecotourism gives the tourism sector an opportunity to focus on the high-end market, which is much more profitable in terms of revenue per visitor.

Having studied tourism sectors in Kenya and Mauritius and learning that the latter was reaching a higher-end market with lower volumes of visitors, leaders in Rwanda sought to emulate this success (Nielsen and Spenceley 2010). Rwanda and Uganda have both focused on the high-end market by raising gorilla tracking fees on multiple occasions (Uganda Investment Authority 2001; Nielsen and Spenceley 2010). Uganda raised its fee incrementally from US\$175 in 1998 to US\$500 in 2013 (Adams and Infield 2003; Hatfield and Malleret-King 2007; Uganda Wildlife Authority 2010, 2013). In Rwanda, the fee was US\$375 in 2004; by 2012, it had increased to US\$750 (RDB 2012). The fee change in Rwanda led to a shift in the income levels of visiting tourists, with more visitors coming from high-income groups and fewer visitors from lower-income groups. An unexpected result was that the average stay per visitor declined, from 4.2 to 3.6 nights (Nielsen and Spenceley 2010). Nevertheless, by capitalizing on this high-end market, the tourism sector in Rwanda is now the country's largest foreign exchange earner, generating projected earnings of US\$317 million in 2013 (Butera 2013).

International outreach played a large role in the growth of mountain gorilla ecotourism, especially in the years following the Rwandan genocide. In Rwanda, national marketing was initially conducted to disassociate the word *tourism* from the negative connotation it had held (in a local language, the term means "wandering around aimlessly") (Nielsen and Spenceley 2010). With improved citizen buy-in, Rwanda began marketing internationally with a focus on security. By contracting with marketing agencies abroad, Rwanda was able to generate interest in mountain gorillas, and increase gorilla-based tourism.

Rwanda invested heavily in its participation in tourism industry trade fairs, winning first prize for the best African display at the ITB Berlin tourism fair for three straight years from 2007 through 2009. Exposure at trade fairs increases interest and investment in safaris and other travel packages put together by private companies, which in turn can generate demand from potential tourists around the world. Rwanda has also gained exposure through media features and various documentaries (Nielsen and Spenceley 2010). Features on international media

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channels, including CNN and the National Geographic Channel, continue to generate demand for mountain gorilla ecotourism and has helped Rwanda maintain consistent visitor numbers despite its significant increases in mountain gorilla tracking fees.

Both Uganda and Rwanda also enacted extensive policy changes to help grow their respective ecotourism sectors. Uganda began in 1992 with its ten-year Tourism Development Master Plan, which focused on community tourism. Similar to ecotourism, but with a focus on learning about Ugandan communities, community tourism helped to grow the official mountain gorilla ecotourism sector, which was established in 1991 (Mehta and Katee 2005). This was followed by the privatization of Ugandan hotels shortly thereafter, with 90 percent being sold to private businesses by 2001 (Uganda Investment Authority 2001). The Rwandan government identified tourism as a development priority in the country's Vision 2020 planning strategy (Spenceley et al. 2010). The Tourism Working Group was established in 2001 to help implement the Vision 2020 strategy, followed by the development of the new Rwanda Tourism Strategy in 2002 (revised in 2007) and the National Tourism Policy in 2006 (revised in 2009) (Nielsen and Spenceley 2010). In 2009, the Rwandan government also approved the Sustainable Tourism Master Plan.

Uganda also offers generous incentives to investors. It permits 100 percent foreign ownership and has one of the lowest nominal corporate tax rates (30 percent) in Africa. This encourages businesses to invest in Uganda, building the infrastructure necessary to support a high-end ecotourism market (Mehta and Katee 2005). In 2003, Uganda revised its policy to further promote regional tourism linkages. The Uganda Tourism Act of 2008 implemented many reforms and incentives to continue to grow the tourism sector, including the reduction or elimination of taxes on many tourism-related expenses (Aboutuganda.com 2007; Nabyama 2008).³

Rwanda has implemented similar policies, with tax exemptions for investors who contribute over US\$100,000 to a tourism facility and tax-free importation of tourist-transporting airplanes. In addition, Rwanda exempts from taxation secondary goods such as bedroom furnishings and swimming pools for hotels, further incentivizing investment. A crucial part of Rwanda's strategy has been to streamline the legal framework in which businesses operate; for example, it is now possible to register and open a business in one day, for approximately US\$43 (Nielsen and Spenceley 2010). By making it easier to form and run a business, Rwanda hopes to increase Rwandan entrepreneurship as well as foreign investment. Economic opportunities around mountain gorilla ecotourism have contributed to the enormous growth around the PNV headquarters in the Kinigi region. In connection with this growth, Rwanda has decentralized much of its control over the park (as well as other parks) and privatized formerly state-owned

³ For the text of the law, see <http://balukusguide.wordpress.com/2012/05/29/uganda-tourism-act-2008/>.

hotels. As a result, in 2009, the tourism industry in the PNV region generated approximately US\$42.7 million from hotel accommodations, tour excursions, and shopping (Spenceley et al. 2010).

The combination of these strategies has enabled mountain gorilla ecotourism to make a significant contribution to the Rwandan and Ugandan economies. One indicator of the impact is park attendance. Rwanda's park attendance disappeared during the civil war and genocide, and stayed low through the late 1990s. PNV reopened in 1999, and attendance grew from 417 visits that year to approximately 17,000 in 2008 (Nielsen and Spenceley 2010). In the period from 2001–2002 to 2004–2005, attendance at PNV (Rwanda) increased from 2,000 to 9,000 visitors, and at BINP (Uganda) from 3,000 to 5,000. Over that same period, attendance at MGNP (Uganda) remained relatively constant, while at PNVi (DRC), it increased from zero to a few hundred (Hatfield and Malleret-King 2007).

Income from ecotourism

According to a study conducted by the African Wildlife Foundation (AWF) in 2005, gorilla tourism in the three-country region generates approximately US\$20.6 million in annual benefits, with 53 percent accruing at the national level, 41 percent at the international level, and 6 percent at the local level (Hatfield 2005). For Rwanda, tourism is the leading source of export revenue (although exports account for a relatively small part of Rwanda's GDP), taking in US\$35.7 million in 2006 (Nielsen and Spenceley 2010; Bush 2009)—80 percent of which was generated by tourism in PNV (Sabuhoro 2006). Rwanda's tourism industry continues to grow: by 2012, tourism-related revenues were US\$281.8 million, up 17 percent from the year before (Kanyesigye 2013). Visitor spending related to mountain gorilla ecotourism is a significant contributor to tourism revenues in Rwanda. The park-specific revenue (such as fees and entry permits, for example) generated in 2005 by PNV accounted for approximately 0.2 percent of Rwanda's GDP (UNDP, REMA, and UNEP 2006). However, under the new method of gathering tourism statistics introduced in 2008, which covers a wider range of tourists (including both holiday visitors and business travelers) and tourism activities, the sector generated over US\$281 million, contributing 3.9 percent of the country's GDP (World Bank 2013). Livelihood creation is a major benefit of the growing ecotourism industry. PNV alone employs over 180 guides, mountain gorilla group trackers, and law enforcement teams such as antipoaching units, and approximately 800 community members are involved in various activities supporting the park (including crop rangers, public-awareness volunteers, and members of conservation teams and porter clubs) (Nielsen and Spenceley 2010). Others are employed by enterprises related to the tourism industry, including hotels and restaurants.

In Uganda, mountain gorilla ecotourism generated approximately US\$46 million in economic impact in 2005, and the potential impact is estimated to be as high as US\$151 million. Nearly 1,700 person-year jobs were generated by

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mountain gorilla ecotourism between 1994 and 1999 (Hatfield and Malleret-King 2007). Overall, tourism brought 200,000 visitors to Uganda in 2001, growing to 945,000 arrivals in 2010 (MTWH 2012). This is the equivalent to approximately US\$800 million in foreign exchange earnings (Uganda Tourism Board 2010). Studies in Uganda in 2000 and 2007 found that tourist expenditure per mountain gorilla viewing increased 50 percent over that time period—from an estimated US\$810 in 2000 to approximately US\$1,228 in 2007 (Moyini and Uwimbabazi 2000; Hatfield and Malleret-King 2007).

Because a variety of business strategies were employed, it is difficult to draw a direct connection between a specific strategy and its impact. However, it is clear that higher fees attract a different clientele. Over 30 percent of visitors to Rwanda and Uganda have an annual income of more than US\$85,000 per year (Nielsen and Spenceley 2010). Furthermore, over 80 percent of tourists coming to view mountain gorillas have received a university or postgraduate degree, and many are highly interested in conservation activities (Bush 2009). This shift in clientele has resulted in increased revenue, but also shorter stays and a greater demand for high-end customer service and facilities. When prices were raised, customer satisfaction fell—presumably not as a result of a change in services, but because of a change in expectations, as wealthier visitors are accustomed to higher levels of service and amenities (Nielsen and Spenceley 2010).

Although there are some differences between Rwanda's and Uganda's mountain gorilla ecotourism programs, they have the same underlying goals—to align and connect local interests and livelihoods with parks and ecotourism. Because conservation of the mountain gorilla is essential to ecotourism, each strategy—whether revenue sharing, construction of a community-owned lodge, or establishment of an antipoaching society—can play a role in ecotourism as a whole. When ecotourism provides livelihoods to people in post-conflict situations, both natural resource management and peacebuilding become easier.

Ecotourism-related livelihoods

The most direct way in which local people can benefit from mountain gorilla ecotourism is through employment—for example, as park rangers,⁴ gorilla trackers, or staff at lodges and restaurants. Jobs can also be generated in businesses that supply food and other goods to park visitors, including souvenirs. For example, approximately 50 percent of mountain gorilla ecotourism-related employment in Uganda is in lodges or tourist shops, with employment in BINP constituting the next largest source of jobs—for a total of roughly 391 full-time jobs, providing approximately US\$360,000 worth of income (Hatfield and Malleret-King 2007). Even in the DRC—a country not yet stable enough to benefit from the

⁴ For an analysis of use of demobilized excombatants as park rangers, see Matthew F. Pritchard, "From Soldiers to Park Rangers: Post-Conflict Natural Resource Management in Gorongosa National Park," in this book.

full economic impact of mountain gorilla ecotourism—tourism-related industries provide considerable livelihood opportunities to local communities, including approximately 800 people directly employed at PNVi and an additional 54,000 people employed in the tourism sector surrounding the park (GOR 2013). The income generated by these jobs is then spent locally on goods and services, multiplying the wealth within the community.

Conservation trusts are another source of local livelihoods for those living around the parks. In Uganda, funds from the Global Environment Facility and the World Bank were used to create the Mgahinga and Bwindi Impenetrable Forest Conservation Trust in 1994, with proceeds paying for local conservation and development (Blomley et al. 2010; GEF 2007). The trust has focused on three pillars—community development, research and monitoring, and park management (GEF 2007). Since 1996, more than US\$4 million has been distributed for community infrastructure projects (Blomley et al. 2010). Over US\$800,000 of that total has been used to provide land to the Batwa people, an indigenous group that was removed from Ugandan parks in the early 1990s (Blomley et al. 2010; GEF 2007).

Local communities have also become engaged in mountain gorilla ecotourism by operating community-owned lodges. In Rwanda, the Sabyinyo Silverback Lodge on the edge of PNV, which holds sixteen visitors, is owned entirely by the local community (Nielsen and Spenceley 2010). Representing a joint venture between the Kinigi and Nyange communities (together represented by the Sabyinyo Community Livelihoods Association), the International Gorilla Conservation Programme, AWF, the Rwandan government, and a private-sector ecolodge company (Governors Camps Ltd.), the lodge capitalizes on the high-end market by charging rates from US\$500 to US\$1,100 per room per night. Governors Camps Ltd., which operates the lodge, contributes US\$50 per occupied bed per night back to the community, as well as 7.5 percent of net sales (Nielsen and Spenceley 2010). Revenues given to the community have been used for community-benefiting projects such as road building, provision of water tanks, and support for schools (Martin et al. 2008). The lodge also purchases agricultural products from local producers and permits the sale of local crafts and cultural activities at the lodge. The lodge creates employment and professional development opportunities for local people: forty-five of its staff members (70 percent of the total staff) come from local communities around the park and receive professional tourism and hospitality training during their period of employment (Nielsen and Spenceley 2010; Martin et al. 2008).

Near BINP in Uganda, visitors can stay at the Buhoma Community Campground, which receives approximately 50 percent of all visitors to the park. The campground employs nine people, who each earn an average of US\$1,000 per year, and it allocates 25 percent of its revenues to community projects (Hatfield and Malleret-King 2007). A similar lodge built by the Nkuringo Conservation and Development Foundation, with funding from the U.S. Agency for International Development (USAID), is leased to a private company for US\$5,000 per year.

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The company operates it as a hotel, and local communities receive a bed-night fee of US\$30 per person per night (Martin et al. 2008).

Engagement with associations of former poachers has also helped to conserve mountain gorillas and strengthen local livelihoods. In Rwanda, the government created the Iby'Iwacu Village in 2005 with the help of a tour operator (Nielsen and Spenceley 2010). The village, which allows tourists to experience local culture, takes in approximately US\$14,000 per year, 40 percent of which goes to expoachers, and 60 percent of which is allocated toward various community projects (Nielsen and Spenceley 2010; Tusabe and Habyalimana 2010). Annual income for these expoachers is approximately US\$1,200, which is comparatively higher than other local incomes (Tusabe and Habyalimana 2010). Rwanda has more than twelve expoacher associations and cooperatives, including a 400-member group that volunteers for park conservation (Tusabe and Habyalimana 2010; Nielsen and Spenceley 2010). Although such groups do not directly provide livelihoods to the expoachers, they can encourage expoachers to develop livelihoods that support conservation efforts and do not degrade the park.

Revenue sharing

Revenue sharing has been a major policy initiative in Uganda since 1994 and in Rwanda since 2005 (Adams and Infield 2003; Nielsen and Spenceley 2010). A percentage of the revenue that tourists pay to the Uganda Wildlife Authority and the Tourism and Conservation Department of the Rwanda Development Board (RDB) is allocated to projects that benefit the communities surrounding the parks. Funds are usually spent on schools, water tanks, soil erosion control, health centers, buffalo walls, and roads (Rwanda Focus 2007; Martin et al. 2008; Tusabe and Habyalimana 2010).

Uganda's program, which began in 1994, initially designated 20 percent of mountain gorilla tracking fees for communities, but the amount was quickly reduced to 20 percent of park entry fees (Adams and Infield 2003). This was a significant drop, as park entry fees are considerably lower than mountain gorilla tracking fees (US\$15 initially, now US\$25 per entry compared with US\$500 for tracking). As a result, the amount shared decreased from approximately US\$20 per visitor in 1994 to US\$2 in 1998 and US\$5 in 2002 (Adams and Infield 2003; Martin et al. 2008). To address the drop, a US\$10 "gorilla levy" was implemented to raise the amount shared with communities (Martin et al. 2008).

In Rwanda, 5 percent of all tourism revenue from park fees is shared with local communities (Nielsen and Spenceley 2010). Although this is a smaller percentage than in Uganda, it generates a larger amount of funding because it includes both entry fees and mountain gorilla tracking fees. Thus, whereas Uganda shared US\$71,500 with local communities in 2006, Rwanda shared over US\$200,000 in 2007 (Martin et al. 2008, Tusabe and Habyalimana 2010). Since 2005, US\$1,830,000 has been allocated to Rwandan community projects through revenue sharing (RDB 2013a). The RDB invests 40 percent of the total

revenue-sharing funds in community enterprises, with the remaining 60 percent funding local infrastructure projects and invested in communities around two other Rwandan parks—Akagera National Park and Nyungwe National Park (IIED n.d.; Rwanda Focus 2009). This shared revenue has supported ten community associations and has paid for the construction of ten primary schools (serving approximately 3,640 students); community water dispensaries; eighty-eight water tanks (each supporting 1,250 people); an eighty-kilometer buffalo wall; health facilities; local tile and brick factories; and beekeeping and agricultural projects such as seed production and storage, agroforestry, and tree planting (RDB 2013b; Nielsen and Spenceley 2010; Rwanda Focus 2007; ORTPN 2008). Some tour companies have also begun returning funds to the community: for example, Rwanda Eco-Tours gives 20 percent of its profits back to local communities for ecotourism development (Rwanda Focus 2009).

One indicator of the impact these benefits have had on local livelihoods is residents' support for parks in Rwanda and Uganda. Local populations around BINP and MGNP in Uganda and PNV in Rwanda "overwhelmingly support" their respective parks, with communities in Uganda identifying ecotourism and income generation as primary benefits of the parks (Plumptre et al. 2004). In contrast, 61 percent of local populations near PNV_i in the DRC consider the forest to be "detrimental to their welfare" (Hatfield and Malleret-King 2007, 49).

Although revenue sharing has been successful, communities are not always aware of its impact. In Uganda, fewer than 50 percent of those surveyed around the parks knew about the revenue-sharing scheme (Blomley et al. 2010). In Rwanda residents and park staff were not knowledgeable about the particulars of revenue-sharing arrangements. For example, a study of PNV park officials found that 68 percent of the staff did not know when revenues were disbursed, and nearly 95 percent did not know how the beneficiary projects were chosen. Within the populations surrounding the parks, the vast majority knew about revenue sharing (87 and 97 percent in two districts), but over 90 percent of them did not know how the money was spent, even though the revenue went to many projects in their districts (Sabuhoro 2006). This lack of awareness raises concern because communities are less likely to support mountain gorilla ecotourism if they do not think it will benefit them.

Community benefits from revenue sharing in Uganda have been mistaken for services provided by the government (Plumptre et al. 2004). Also, the benefits from community projects that were meant to directly assist those living around the park were not perceived as going to people in those communities. In Rwanda, over 80 percent of those surveyed in two districts next to the park said they would prefer individual or household benefits over community benefits. This may be partially due to a belief that community benefits do not reach them, although it is possible that communities simply do not realize what the benefits are (Sabuhoro 2006). A related challenge is that while many local residents want to become involved in the shared-revenue distribution process, those same groups are sometimes not yet comfortable making decisions on their own. For example,

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community-owned lodges are run not by the community, but by a private-sector partner with the relevant expertise (Rutagarama and Martin 2006).

The direct benefits of ecotourism are often distributed in a way that favors those with higher incomes around the park; one study found that only a few of the poorest households benefited at all (Blomley et al. 2010). Many of the poorest communities around the park, including the Batwa in Uganda, live far from centralized tourism hubs and consequently do not experience any tourist traffic or community benefits. Similarly, in Rwanda “the poorest of the poor do not necessarily benefit” from projects funded through revenue sharing (Rwanda Focus 2009). This division is further illustrated by differences in opinion toward the parks: those with higher incomes tend to have more positive attitudes (Blomley et al. 2010). Further, while the revenue-sharing scheme in Rwanda has distributed approximately US\$1,830,000 from its inception in 2005 through 2013 (RDB 2013a), when averaged by population, this amount accounts for only US\$6 per person, thereby reinforcing the perception that the revenue-sharing scheme and thus the parks do not benefit local communities. For example, although the construction of schools is beneficial to many families, those whose children must stay home to protect crops from park wildlife are unable to take advantage of schooling. This inequality poses a challenge but also an opportunity for improving benefit-sharing policies.

OPPORTUNITIES AND CHALLENGES

Many opportunities exist to increase the contribution of mountain gorilla ecotourism to both economic growth and local livelihoods in Rwanda, Uganda, and the DRC. Prior to the outbreak of violence in the 1990s, tourism in eastern Africa was growing at approximately 8.25 percent annually (Moyini and Uwimbabazi 2000). This pre-conflict growth indicates the potential for future growth in mountain gorilla ecotourism in the post-conflict period. One option to promote growth is to more fully exploit the current infrastructure by maximizing visitor capacity. In 2004 and 2005, visitor numbers reached only 34 percent of their potential (Hatfield and Malleret-King 2007). A second opportunity is to increase revenue by raising fees. When fees were increased in Rwanda from US\$375 to US\$750, visitor numbers did not change, but revenue increased dramatically (Bush 2009). Fees could potentially be raised even higher to include more high-end tourists.

Mountain gorilla ecotourism can also be integrated into a wider economic development plan. Because the number of tracking permits is fixed, only limited growth can be gained through higher tracking fees. However, shifting to a more upscale tourism model could induce higher visitor spending through longer stays—although this would run against the trend that wealthier visitors enjoy shorter average stays (Nielsen and Spenceley 2010). Measures to counteract this trend and to integrate mountain gorilla ecotourism into longer visits—including visits spanning neighboring countries—could generate greater revenue for the economy and region.

One significant challenge is how to contain revenue leakage to foreign investors or foreign-owned safari operators, which is estimated to be approximately 55 percent of total tourism revenues—a substantial loss (Sandbrook 2010). Despite this loss, however, a sizable portion of revenue is retained in each country and in the area around the parks. Around BINP in Uganda, approximately US\$366,000 per year is retained—significantly more than the US\$79,900 that is earned from nontourism sources (Sandbrook 2010). Although revenue leakage may simply be a price to pay for the foreign investment driven by Rwanda's and Uganda's governmental policies, its impact could be reduced by a focus on entrepreneurial policies that stimulate the growth of domestic companies that serve the tourism sector.

The DRC has the potential to grow its mountain gorilla ecotourism industry in the same way Uganda and Rwanda have done. Its park, PNVi, harbors seven tourist-habituated mountain gorilla groups (Hatfield and Malleret-King 2007). Despite the serious challenges of insecurity in the area surrounding the park that is still held by rebel combatants, overall stability and security continue to improve in most parts of the country (UNSG 2011). As a result, the DRC's mountain gorilla ecotourism industry was relaunched in early 2009, and international tourists were invited into the country (Virunga National Park 2011).

In 2010, a belated regional joint census of mountain gorillas was conducted (the last one had been undertaken in 2003). The ability to undertake the census is one of the indications of improved security in the Virunga Volcanoes region: census teams could now freely move around the transboundary park to do the counting. Furthermore, new funding sources had emerged to support the census work. In addition to funding from international NGOs working in conservation, such as the International Gorilla Conservation Programme, personal donations were now coming in via the internet, earmarked for specific conservation and community livelihood programs. Through the official home page of PNVi, US\$600,000 has been raised since 2006 to fund necessities such as ranger salaries, uniforms, staff training, and care of orphaned mountain gorillas (Virunga National Park n.d.).

Fundraising via the internet has been an effective resource mobilization measure for shoring up the financial resources of the Congolese Institute for Nature Conservation (ICCN), which manages PNVi. Due to limited funding, at times the park rangers did not receive their salaries on schedule and thus lacked basic necessities such as daily food. Greater security, the strengthened capacity of the ICCN, and more stable sources of funding all make the survival of mountain gorillas more likely, and successful ecotourism may ultimately contribute to macroeconomic growth and the development of local livelihoods in the DRC.

Finally, facilitating community involvement in the ecotourism process is a challenge, whether in shared-revenue distribution or in lodge ownership. Not only do community residents often believe that they do not have the expertise necessary to make programming decisions, they often are unsure about how

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ecotourism processes work. This challenge also presents an opportunity: when local residents are involved, it is possible to use ecotourism revenue to more effectively support local livelihoods. By partnering with local people and growing businesses with them, government officials and others with relevant expertise can provide more long-term development and training to people in local communities.

LESSONS LEARNED

A number of lessons can be learned from experiences with mountain gorilla ecotourism in Rwanda, Uganda, and the DRC, including lessons on how to improve ecotourism's impact on economic growth and local livelihoods, both with respect to mountain gorillas and in post-conflict situations more generally.

Possibly the most obvious but also the most significant lesson is that security and stability are necessary preconditions for an ecotourism industry to develop. Although it is possible to overcome setbacks (such as the massacre in Uganda in 1999), meaningful numbers of tourists will not travel to a region unless they feel comfortable about their safety. The DRC has not yet implemented many of the approaches that have made mountain gorilla ecotourism successful in Rwanda and Uganda, and it cannot do so without first reestablishing security and stability.

A commitment by the government to developing the ecotourism industry is also a necessary condition. In Rwanda and Uganda, business reforms, investment in tourism fairs, and the inclusion of tourism in economic plans all contributed to a massive increase in the number of visitors and to international attention during the post-conflict period. Countries emerging from conflict often do not have the capacity to develop an ecotourism industry, but by enabling the private sector to provide the necessary investment and expertise, they can enable growth such as that experienced in Rwanda and Uganda.

For countries with endemic endangered species that hold interest for tourists, focusing on the high-end tourism market can enable them to charge higher fees for tracking and viewing. Although a high-end market brings additional challenges, such as the need to upgrade facilities and the quality of services, it is a great opportunity to generate revenues from those visitors who are willing to pay the price.

With respect to livelihoods, it is essential to make connections between the mountain gorillas, ecotourism, revenue, development projects, and local populations. In particular, developing revenue-sharing schemes with local input will help ensure that development approaches are well informed and that they build expertise within the target communities. Partnerships with local communities can promote long-term development so that the communities themselves, rather than private corporations, can run the community lodges.

When mountain gorilla-based ecotourism is promoted, tension can arise between boosting macroeconomic growth and providing local livelihoods. Although these two benefits are not mutually exclusive, they are often thought of as such, and Rwanda and Uganda have attempted to balance them through

strategies such as revenue sharing. With appropriate planning, a greater share of the benefits and revenues generated by mountain gorilla ecotourism can be retained within local communities—whether as a higher percentage of revenue shared or in the form of job training to enable community members to work in the tourism industry. It is critical to consider this balance and the synergies between macroeconomic growth and livelihoods when examining how ecotourism fits into a country's or region's development plans, especially for those countries seeking to recover from conflict.

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