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Mountain gorilla tourism generating wealth and peace in post-conflict Rwanda

Miko Maekawa, Annette Lanjouw, Eugène Rutagarama and Douglas Sharp

Abstract

Today only around 880 mountain gorillas (*Gorilla beringei beringei*) inhabit the Afromontane forests shared by Rwanda, Uganda and the Democratic Republic of the Congo (DRC). In this region, mountain gorillas serve as flagship species, attracting public support and international tourists as well as drawing attention to their habitat. This paper examines the prominent issues in mountain gorilla conservation and nature-based tourism in Rwanda in a post-conflict recovery context. Also analyzed are the critical issues of restoring and developing the capacities of institutions, improving the transboundary dialogue, and developing cooperation for the management of natural resources.

Keywords: Nature-based tourism; mountain gorillas; Rwanda; biodiversity conservation; transboundary cooperation.

1. Introduction¹

This paper concerns the prominent issues in mountain gorilla conservation and nature-based tourism in Rwanda in a post-conflict recovery context. The objectives of the paper are to examine how conservation efforts around mountain gorillas and gorilla-based tourism have fared before, during and after the conflict and to examine how nature-based tourism has been managed with respect to a broad range of impacts and dimensions.

In this paper, the post-conflict (more precisely post-armed conflict) period in Rwanda will be regarded as the years from the end of genocide in 1994 to 2003, when the Presidential and Legislative elections were held and the new Constitution was issued. 2003 marked a historic moment for Rwanda, when sovereignty was transferred from the military regime to a democratically elected civilian regime. However, the justice and reconciliation efforts are still

ongoing in 2012 at the time of writing, and the peace-building process is not yet a continuous national undertaking.

The area most critical to mountain gorilla tourism lies at the center of the Great Lakes region of Africa: the Virunga mountain range, shared by Rwanda, Uganda, and the Democratic Republic of the Congo (DRC). Each of these three countries plays a part in the region's complex history. They share borders and a contiguous park that is broken into each country's own protected area: Parc National des Volcans (PNV) in Rwanda, Parc National des Virunga (PNVi) in the DRC, and Mgahinga Gorilla National Park (MGNP) in Uganda. The shared park contains about 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).

Kenya, Tanzania, and South Africa, are African neighbours that fare well as international nature-based destinations, earning substantial tourism income (Strasdas *et al.*, 2007). Particularly in developing countries, highly attractive and accessible areas (such as UNESCO World Heritage sites) are very popular and generate substantial profits. Less attractive or less accessible areas have fewer chances of receiving tourists and gaining large commercial benefits. They tend to rely on financial and technical support from donors and focus primarily on environmental and social benefits (Strasdas *et al.*, 2007). The charismatic mountain gorillas have attracted world-class conservation efforts and attention. The Virunga region, with its highly

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¹ An earlier version of this case study, which focused on macroeconomic growth and local livelihoods, has been submitted to be published in *Strengthening Post-Conflict Peacebuilding through Natural Resource Management (PCNRM), VOLUME 4: Livelihoods and Natural Resources in Post-Conflict Peacebuilding* by Earthscan (2013).

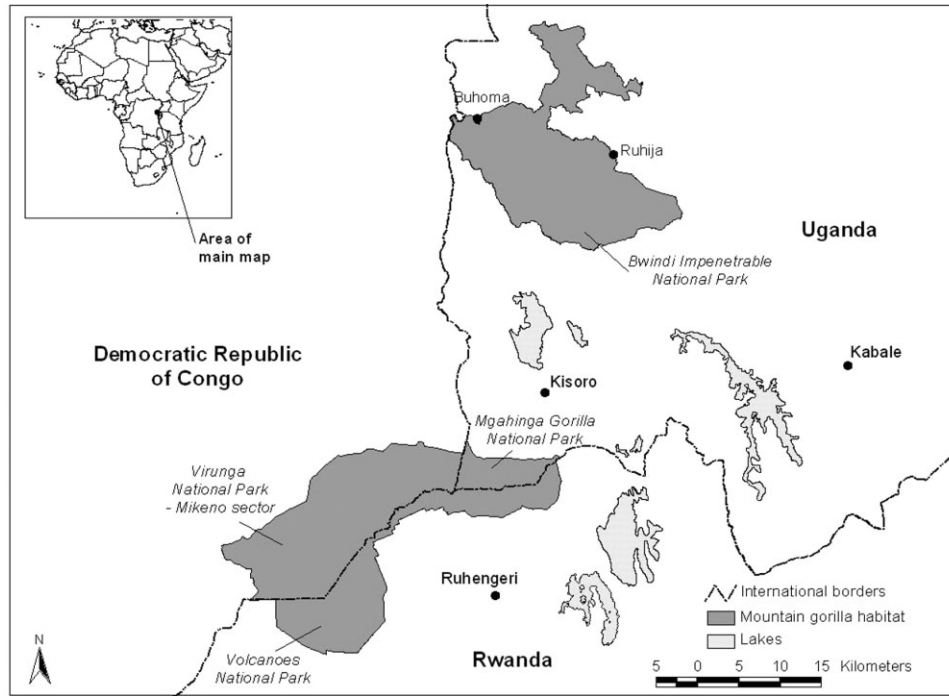


Figure 1. Map of the Great Lakes region, including national parks.
 Source: Blomley et al. (2010).

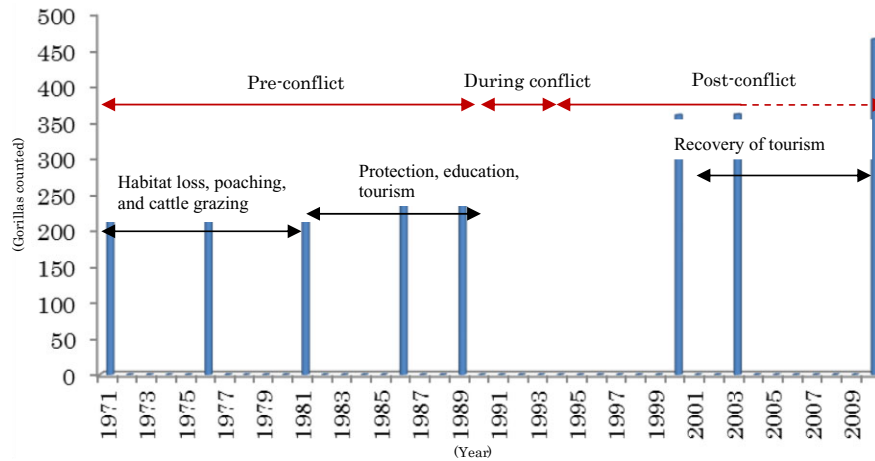


Figure 2. Virunga mountain gorilla population from 1971 to 2010.
 Sources: Gray et al. (2005; 2010); Bush (2009).

attractive wildlife, has been receiving a good number of international tourists, even though the infrastructure and tourist facilities, such as hotels and restaurants, are often much simpler than those found in other, high-end safari destinations in Kenya or South Africa.

The impacts of mountain gorilla tourism are best understood in light of the 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% of Rwandans live below the international poverty line of US\$ 1.25 per day, and 90% of Rwandans rely on subsistence agriculture for survival (Tusabe and Habyalimana, 2010; Musahara et al., 2006). The 1994 genocide cut Rwanda's gross domestic product (GDP) by 50% (Musahara et al., 2006). The three countries are in the bottom twenty-five countries by GDP per capita, although their GDP growth rates are among the top twenty in the world (CIA, 2010a; 2010b).

The remainder of the article is constructed as follows. Section 2 briefly reviews the background of regional

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1 conflict as it affected gorilla-based tourism and
2 conservation efforts in the region and examines the strategy
3 of the Rwandan Government for nature-based tourism over
4 the years. Section 3 reviews the experience prior to, during
5 and post- conflict, in terms of trends in the gorilla
6 population, trends in gorilla tourism, and benefits generated
7 by the gorilla industry. Section 4 reviews institutional gaps.
8 Section 5 draws lessons from this case study. Section 6
9 concludes.

11 2. Conflict and tourism development in the region

13 2.1. Regional conflict history

14 A variety of forces have helped to drive conflict in the
15 region, including ethnic clashes and competition for natural
16 resources. Rwanda's civil war began in 1990, when the
17 Rwandan Patriotic Front (RPF) attacked from bases in
18 southern Uganda, and lasted through 1994, when Rwandan
19 president Juvénal Habyarimana was assassinated. His
20 assassination triggered a genocide that resulted in the
21 killing of almost a million Tutsis and moderate Hutus over
22 the span of a hundred days. The genocide led to a massive
23 shift of two million people from their homes, including the
24 *interahamwe* — a group of radical Hutus who are believed
25 to have perpetrated the genocide. Most of the displaced
26 people returned to Rwanda within two years, but many
27 *interahamwe* remained in the DRC, attacking Rwanda and
28 putting pressure on those managing the park and its
29 mountain gorilla population (Lanjouw, 2003). Rwandan
30 tourism, which had reached a peak of 22,000 visits in 1990,
31 quickly disappeared during the civil war. It had recovered
32 fully by 2002, long after the genocide ended (Nielsen and
33 Spenceley, 2010).

34 The DRC, formerly Zaire, has played a central role in the
35 region's instability. Civil wars in the country in both 1996
36 and 1998 involved Rwanda and Uganda as allies to the
37 cause to remove Zaire's president Mobutu. Rwanda and
38 Uganda subsequently became rivals, fighting over the
39 natural resources available in the eastern DRC (Hammill
40 and Brown, 2006). The eastern part of the country, too far
41 away to be controlled by the Government, continued to
42 serve as a shelter for 8,000 to 10,000 *interahamwe*,
43 including those involved in the 1999 Uganda tourist
44 massacre (Hatfield and Malleret-King, 2007). Prior to these
45 conflicts, Zaire had a well-developed mountain gorilla
46 tourism industry, greater than that of either Rwanda or
47 Uganda, but business was devastated by the continued
48 conflict in and around the park (Hatfield and Malleret-King,
49 2007). Instability prevented any tourism in the DRC until
50 1999, and since then, most tourists have been DRC
51 residents and non-governmental organization (NGO)
52 staffers working in the DRC.

53 Uganda has played a key role in the conflict within the
54 DRC and in the shared national park. Uganda and the DRC

55 signed a treaty in 2002 that included deadlines for Uganda
56 to remove its troops from the DRC and for the DRC to gain
57 control over its eastern sector, but both sides failed to keep
58 their promises (Varga *et al.*, 2002). Despite this unrest,
59 mountain gorilla tourism has grown steadily in Uganda
60 since its formal introduction in 1991. In 1999, however,
61 Uganda's tourism industry encountered a setback when
62 members of an *interahamwe* group based in the DRC killed
63 eight tourists who were visiting gorillas. Surprisingly,
64 tourism numbers recovered quickly after a drop
65 immediately following the incident.

67 2.2. Nature-based tourism in Rwanda

68 Nature-based tourism uses “natural resources in a wild or
69 undeveloped form — including species, habitat, landscape,
70 scenery and salt and fresh-water features. Nature tourism is
71 travel for the purpose of enjoying undeveloped natural areas
72 or wildlife” (Goodwin, 1996). Nature-based tourism can
73 provide economic viability for biodiversity conservation
74 and raise public awareness through environmental
75 education (Goodwin, 1996). As with other natural resource
76 uses, nature-based tourism causes both negative and
77 positive impacts depending on how the visitation is
78 managed. In order to seek net benefits from tourism in the
79 realm of environmental, social, cultural and economic
80 impacts, the concept of ecotourism was developed.
81 Ecotourism evolved as an ambitious and complex mission
82 to be achieved that generated over 85 definitions worldwide
83 (Fennell, 2001). The very essence of ecotourism embraces
84 strong components of education, taking into account the
85 principles of ecological, socio-cultural and economic
86 sustainability sensitivity (Weaver and Lawton, 2007). The
87 Quebec Declaration, in the framework of the 2002 United
88 Nations International Year of Ecotourism, further embraces
89 the operational elements, and boasts the following
90 principles: (1) Contribute actively to the conservation of
91 natural and cultural heritage; (2) Include local and
92 indigenous communities in the planning, development and
93 operation, contributing to their well-being; (3) Interpret the
94 natural and cultural heritage of the destination to visitors;
95 and (4) Lend itself better to independent travelers and
96 organized tours for small size groups (UNEP, 2002).

97 In Rwanda, tourism has been used effectively as a
98 vehicle for conservation. In practical terms, visitations to
99 national parks in Rwanda can be more appropriately
100 categorized as nature-based tourism rather than by
101 stretching the definitions of ecotourism. From 1979 on,
102 the tourism sector, including nature-based tourism, rose to
103 become the third foreign exchange earner in Rwanda,
104 surpassed only by tea and coffee (Weber, 1987). Led by
105 nature-based tourism focusing on mountain gorilla
106 viewing, the tourism sector in Rwanda now has risen to
107 the largest foreign exchange earner, followed by coffee
108 and tea, generating around US\$ 200 million annually
109 (Nielsen & Spenceley, 2010).

Rwanda and Uganda have each employed a mix of strategies combining pricing and market focus, international outreach, and tourism sector reform. Market focus is a key distinction between nature-based tourism and mass tourism. Nature-based tourism 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 nature-based tourism, as they are relatively scarce, require visitors to exercise caution, and are difficult to access. Nature-based tourism 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 the tourism sectors in Kenya and Mauritius, leaders in Rwanda learned that the latter was reaching a higher-end market with lower volumes of visitors, and they decided to mimic this model (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 an initial US\$ 175 in 1998 to US\$ 500 currently (Adams and Infield, 2002; Hatfield and Malleret-King, 2007; Uganda Wildlife Authority, 2010). In Rwanda, the fee was originally US\$ 375 (in 2004); now it is US\$ 750. The fee change in Rwanda resulted in a shift in the type of visiting tourists: more visitors came from high-income groups, and fewer visitors came from lower-income groups. An unexpected result was that the average stay declined from 4.2 to 3.6 nights (Nielsen and Spenceley, 2010).

Rwanda invested heavily in its participation in tourism industry trade fairs, and it won first prize for the best African display at the ITB Berlin tourism fair for three straight years: 2007, 2008, and 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 channels, including CNN and the National Geographic Channel, continue to generate demand for mountain gorilla tourism, and they are one of the reasons Rwanda has been able to maintain constant visitor numbers despite the significant increases in tracking fees.

The combination of these strategies has enabled mountain gorilla tourism to make a significant contribution to the Rwandan economy. One indicator of the impact is park attendance. Rwanda's park attendance disappeared during the civil war and genocide and stayed quite low during the late 1990s. PNV reopened in 1999, and attendance has subsequently grown from 417 visits that year to over 17,000 in 2008 (Nielsen and Spenceley, 2010). In the periods 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.

For Rwanda, tourism is the leading source of export revenue (though exports account for a relatively small part of Rwanda's GDP), contributing US\$ 35.7 million in 2006 (Bush, 2009; Nielsen and Spenceley, 2010). With 80% of national tourism income generated by PNV, it is clear that visitor spending related to mountain gorilla tourism is a significant contributor to this revenue (Sabuhoro, 2006). The park-specific revenue (fees, entry permits, and other related income) generated in 2005 by PNV accounted for approximately 0.2% of Rwanda's GDP (Musahara *et al.*, 2006). However, with the new method of gathering tourism statistics used since 2008, which covers a wider range of tourists, including both holiday visitors and business travelers, the sector generated over US\$ 138.7 million, contributing 3.7% to the GDP (Office Rwandais du Tourisme et des Parcs Nationaux (ORTPN), 2008).

3. Analysis of experiences

3.1. Conservation success of mountain gorillas

Mountain gorillas are currently considered critically endangered by the International Union for Conservation of Nature (IUCN). Although the Virungas were given national park status in 1925 to conserve the gorillas, the population received little attention until the 1970s. Following the pioneering study by George Schaller, long-term research and conservation efforts were first initiated in the late 1960s by Dian Fossey, the well-known gorilla advocate and author of *Gorillas in the Mist* (2000). The population nevertheless continued to suffer from habitat degradation and poaching. Major conservation programmes were underway by the end of the 1970s, which concentrated on three broad issues: the development of sustainable and economically viable gorilla-based tourism, support for anti-poaching programmes, and conservation education targeting resident populations around the Virungas. Under these programmes, the conservation status of the Virunga massif was greatly improved during the 1980s (Kalpers, 2005).

The mountain gorilla population, split between BINP (321 km²), PNV (160 km²), PNVi (250 km²), and MGNP (27 km²), totals about 880 individuals (Gray *et al.*, 2010; Blomley *et al.*, 2010; Hatfield and Malleret-King, 2007). This reflects about 1.15% annual growth from 1989 to 2003 for the shared parks, and approximately 1% annual growth for BINP from 1997 to 2006 (McNeilage *et al.*, 2006). Mountain gorillas in the Virunga Volcanoes of Rwanda, Uganda, and the DRC have been counted by census eight times since 1970 (Gray *et al.*, 2003; 2010; McNeilage *et al.*, 2006). There was an interruption during the period of war and political unrest in the 1990s. The gorilla census in 2010 estimated the current gorilla population in the Virunga Volcanoes Region to be 480 individuals. This represents a

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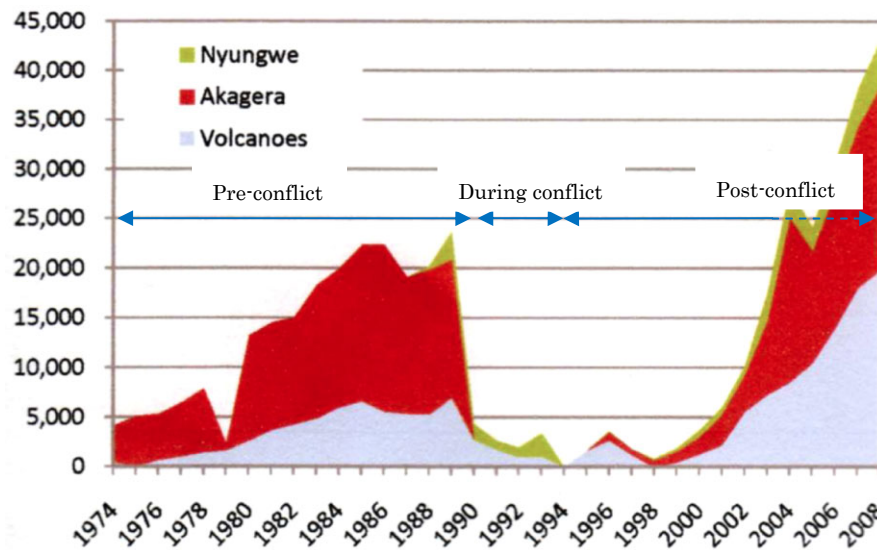


Figure 3. National park visits 1974 to 2008.

Note: Arrows indicating conflict periods by the author.

Source: Nielsen & Spenceley (2010:19, based on ORTPN).

26.3% increase in the total population from 380 in 2003, or a 3.7% annual growth rate (Gray *et al.* 2003), which is higher than the projected growth rate calculated at 3.1% from Leslie matrix models using birth rates and age-specific survivorship values. Even during the period between 1989 and 2003, an annual 1.15% growth rate was observed, and it is regarded as a conservation success considering the climate of war and political unrest in the 1990s (Kalpers, 2005).

To provide an overview, a former IGCP staff member, Kalpers summarizes the factors contributing to gorillas' survival as following: (1) the resident communities in the Virunga region do not eat gorillas for cultural reasons, even though there has been an increase in trapping of some large mammals such as antelopes; (2) the size of the entire Virunga massif is relatively small (437 km²), which makes it easier to access and control; and (3) the Virunga gorillas are still recognized as an important economic resource (through tourism) by the national and local authorities of the three countries sharing this forest block; during the various phases of the conflict, many of the warring factions actually have shown commitment and invested resources to ensure that the gorillas were not harmed; (4) conservation strategies developed in the past three decades probably had a durable impact on local people's attitudes and on the commitment of park staff (Kalpers, 2005).

3.2. Recovery of gorilla-based tourism

After the launch of gorilla tourism initiated by the Mountain Gorilla Project in 1979 (Weber and Vedder, 2001), the Volcanoes National Park and the Parc National des Volcans (PNV) began to attract international tourists, and recorded

6,900 tourists in 1989. During the year of the genocide in 1994, tourism to PNV collapsed, recording 61 visitors, including members from the United Nations Peacekeeping Operation, the United Nations Assistance Mission for Rwanda (UNAMIR), who started to visit PNV as early as three months after the halt of the genocide in July 1994 (Rutagarama, 2009). Four hundred and seventeen people visited the park in 1999 after its reopening (Nielsen & Spenceley, 2010), after which there was a steady increase in the number of tourists. After the recovery from conflict and insecurity in 2008, about 17,000 people visited the Volcanoes National Park (PNV) to participate in gorillas tracking (see Figure 3).

3.3. Local livelihoods and how the benefits from gorilla-based tourism are shared

According to the study "Economic Value of Virunga and Bwindi Mountain Gorilla Protected Forests" conducted by the African Wildlife Foundation (AWF) in 2005, overall, gorilla tourism generates US\$ 20.6 million per year in benefits, with 53% accruing to the national level, 41% to the international level, and 6% to the local level. The largest benefit component is international tourist consumer surplus (28% of total benefits) followed by national income generation (17%) and national tax impact (15%). International travel revenue and gorilla tracking fees both represent 13% of the benefits. As indicated in Figure 4, local gains within the total pie of the benefits compose the smallest proportion.

The term "pro-poor tourism" describes tourism that aims to address poverty reduction by generating benefits for poor communities. By considering poverty reduction as a goal of

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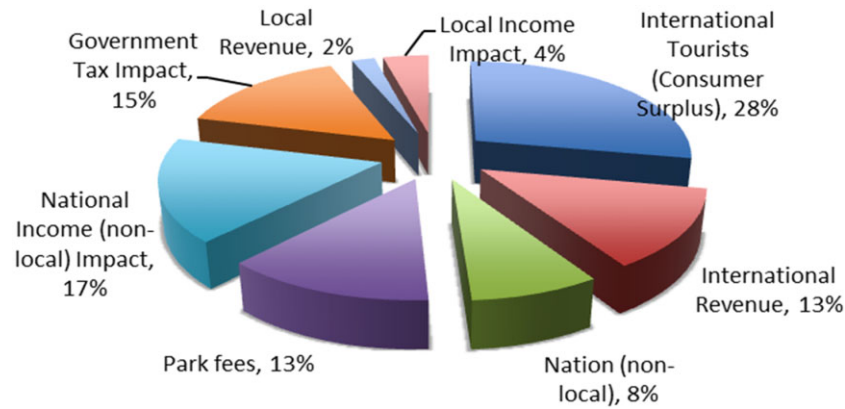


Figure 4. Annual benefits accruing from gorilla-based tourism.
Source: Hatfield (2005:5).

tourism, government policies and tourism strategies can address socio-economic inequities, create local livelihood opportunities, and generate needed revenue (Spenceley *et al.*, 2010). Rwanda's gorilla-based tourism strategy incorporates elements of pro-poor tourism and generates both monetary and non-monetary benefits for the communities adjacent to the parks. Financial gains from tourism typically fall into six categories: (1) livelihood and income generation; (2) income from joint ventures with local communities; (3) cultural tourism; (4) local crafts; (5) fruit and vegetable production; and (6) community grants (Spenceley *et al.*, 2010). Virunga National Park directly employs approximately 800 people for park management and maintenance, and an additional 54,000 people are employed in the tourism sector around the park (Government of Rwanda, 2012). Over 180 people are employed by PNV as guides, gorilla trackers, and anti-poaching units. Additional benefits to local communities include non-financial returns such as land access, effective natural resource management, and community development supported by national and regional revenue-sharing schemes (Spenceley *et al.*, 2010).

Since 2005, revenue-sharing has been implemented in Rwanda. Of tourism revenue (park fees), 5% is injected into communities by the ORTPN (now the Rwanda Development Board (RDB)). The RDB invests 40% of total revenue-sharing funds to support community enterprises with the remaining 60% funding local infrastructure (IIED, 2013). To date, 10 schools have been constructed accommodating approximately 3,640 pupils; 88 water tanks built providing water to around 40,000 people; and 10 community associations were supported for income generating activities (Nielsen and Spenceley 2010, RDB, 2013a). Other community projects funded by revenue-sharing include health facilities, local tile and brick factories, bee keeping projects, and agricultural projects such as seed production and storage, agroforestry, and tree planting (RDB, 2013b).

Revenue-sharing also funded construction of the Sabyinyo Silverback Community Lodge, a joint venture

project between the Rwandan government, the Kinigi and Nyange communities, which are together represented by the Sabyinyo Community Livelihoods Association (SACOLA), and a private sector eco-lodge company (Governors Camps Ltd.) (Spenceley *et al.*, 2010). The lodge directly employs 45 locals, who receive professional tourism and hospitality training. Management purchases agricultural products from local producers, therefore injecting more revenue into the community, and traditional cultural activities and local crafts are available. Although privately managed, the terms of the joint venture agreement require a percentage of profits to be paid to the local communities. It is estimated that returns will account for approximately \$100,000 annual investment in the surrounding region.

Since 2005, the revenue-sharing scheme has disbursed an estimated US\$ 1,830,000 to community projects (RDB, 2013b); but when averaged by population, it only accounts for around US\$ 6 per person since its launch. This small amount of local investment creates a number of challenges. First, when the revenue-sharing was launched, the fund was disbursed from the Ministry of Local Government instead of the ORTPN (or RDB). As a result, local people did not see the link between the building of infrastructure in their neighbourhood and the revenue shared by the PNV. RDB quickly rectified this situation and started to handle the disbursement of funds and relevant infrastructure management themselves (RDB, 2009). It is useful to point out that the revenue-sharing scheme applies an infrastructure oriented approach that is not genuinely responsive to the needs of the poor in the local community (Martin *et al.*, 2008). The equity issue remains a significant challenge in terms of loss and benefits felt by the local communities due to the national park activities, with a special reference to the Batwa community, who feel that they benefit less from the Park compared to other groups in the community because they had been less privileged in terms of livelihoods and social status. (Martin *et al.*, 2008). As the poorest populations most often depend on and use natural resources from the protected forests (Bush, 2009), the revenue-sharing scheme should strategically target

1 the poorest segments of society for both social and
2 environmental reasons.

3 The annual household income in 2009 for communities
4 adjacent to PNV was estimated at US\$ 540 per household,
5 which is just above the national average of US\$ 500 (Bush
6 *et al.*, 2010). To meet the growing livelihood needs of the
7 local population and to compensate for the losses imposed
8 by limited access to park territory on the local community
9 members, measures should be enhanced to fundamentally
10 boost the livelihood capacities of the local population. The
11 benefit-sharing scheme can only reach a limited number of
12 beneficiaries. As Spenceley *et al.* (2010) indicate by their
13 study of value chains relating to nature-based tourism, there
14 are promising opportunities to extract commercial gains
15 that favour the poor. Encouraging the private sector and
16 training the local population, however, are key (Spenceley
17 *et al.*, 2010). In order to embrace a larger group within the
18 local communities, it is crucial to redistribute tourism
19 benefits for the purpose of enhancing the productive
20 capacities of the local population by improving agricultural
21 output and agro-processing.

22 23 **4. Overcoming capacity gaps in institutions**

24 This section focuses on the issue of institutional capacities
25 of stakeholders engaged in mountain gorilla conservation
26 and tourism. The capacity gaps and basic conditions of
27 regional and local security emerged as the most essential
28 challenges in post-conflict settings.

29 30 31 *4.1. National capacity for biodiversity conservation in 32 Rwanda prior to conflict*

33 As early as the late 1980s, before the civil war, the ORTPN,²
34 gained administrative and financial autonomy from the
35 Rwandan Government and began financing its operations
36 with Government subsidies, park fees, and grants from
37 private donors and partner organizations. As an autonomous
38 organization, the ORTPN was then able to cross-subsidize
39 salaries, park patrols and operating costs in the protected
40 areas of Rwanda, Akagera National Park and the Nyungwe
41 Forest Reserve (Plumptre & Williamson, 2001). This
42 contrasts with many of the parks and park systems around
43 the world, which are poorly funded because of inadequate
44 tourism development or insufficient income derived from
45 tourism (Bushell *et al.*, 2007). For gorilla tourism revenue
46 to cover the recurrent costs of the three national parks (the
47 Nyungwe Forest Reserve was upgraded to a national park in
48

49
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51 ² The Office Rwandais du Tourisme et des Parcs Nationaux (ORTPN) was
52 created in 1973 as the national authority managing Rwanda's parks and
53 tourism sector. In 2008, the mandate and functions of the ORTPN were
54 transferred to the Rwanda Development Board (RDB).

2004) in Rwanda and pay for the regional revenue-sharing
scheme in Rwanda, the DRC and Uganda — that is a
notable achievement.

55 56 57 58 59 *4.2. Institutional capacity during the conflict*

60 On the institutional side, during the height of the conflict
61 years, culminating in 1994, NGOs, such as International
62 Gorilla Conservation Programme (IGCP), provided
63 politically impartial support for the conservation of the
64 protected area and the park authorities. IGCP continued its
65 financial and technical support to the park staff and rangers
66 who remained in the Park and continued to carry out their
67 work. The junior staff remained in the park and kept up
68 operations. Technical, moral and financial support was
69 important; the fact that salaries reached the field-level staff
70 was essential to keeping park operations functioning.
71 Bilateral and multilateral donors such as USAID, German
72 Agency for Technical Cooperation (GTZ), the European
73 Union and World Wildlife Fund (WWF) also provided
74 support to the protected areas during the period of conflict
75 and genocide in the region. In particular, the support
76 provided to ORTPN by IGCP immediately after the
77 genocide, starting from October 1994, to assist the
78 organization in regaining staff and resuming operations was
79 essential to prevent the rapid destruction of the forest. The
80 National Volcanoes Park in Rwanda and the Southern
81 Sector of the National Virunga Park in DRC were extremely
82 vulnerable due to the presence of up to 750,000 refugees on
83 the borders of the park and from the regular movement of
84 people through the forest. Only with coordinated deflected
85 action from park authorities on both sides of the border
86 could the poaching and habitat destruction be contained.

87 88 89 90 91 *4.3. Restoring and developing capacities in 92 the post-conflict period*

92 In 1995, Rwanda ratified the Convention on Biological
93 Diversity (CBD) and its National Strategy and Action Plan
94 for Conservation of Biodiversity was adopted in 2003. The
95 restructuring of ORTPN took place in 2003. The Rwanda
96 Environment Management Authority (REMA) was
97 established in 2005 under the Organic Law on Environment
98 Protection and Management, and the National Forestry
99 Authority (NAFA) was founded in 2008. The umbrella
100 organization for overall environmental management is the
101 Ministry of Natural Resources (MINIRENA), previously
102 known as the Ministry of Lands, Environment, Forestry,
103 Water and Mines (MINITERE) until May 2011 (Global
104 Environmental Facility and Government of Rwanda, 2007).

105 To restore governance and management capacity, the
106 Rwandan Government enacted significant policy changes to
107 help grow the nature-based tourism sector, including
108 identifying tourism as a development priority in the
109 country's Vision 2020 strategy (Spenceley *et al.*, 2010). A
110 Tourism Working Group, including representatives from

1 both public and private sector industries, was established in
2 2001, followed by the development of a new Rwanda
3 Tourism Strategy in 2002 (revised in 2007) (Nielsen and
4 Spenceley, 2010). In 2006, the Government approved a
5 National Tourism Policy, which was revised in 2009 in light
6 of the recently approved 2009 Sustainable Tourism Master
7 Plan. Rwanda also implemented policies offering tax
8 exemptions for investors who contribute over US\$ 100,000
9 to a tourism facility and tax-free importation of tourist-
10 transporting airplanes. In addition, Rwanda exempts
11 from taxation secondary goods like bedroom fittings and
12 swimming pools for hotels, further incentivizing
13 investment.

14 A crucial part of Rwanda's strategy has been to
15 streamline the legal framework in which businesses operate;
16 for example, it is now possible to register and open a
17 business in one day, for only around US\$ 43 (Nielsen
18 and Spenceley, 2010). By making it easier to form and
19 run a business, Rwanda hopes to increase Rwandan
20 entrepreneurship and foreign investment. Economic
21 opportunities around mountain gorilla tourism have
22 contributed to the enormous growth around the PNV
23 headquarters in the Kinigi region. In connection with this
24 growth, Rwanda privatized formerly state-owned hotels and
25 decentralized much of its control over parks. Due to
26 industry friendly policies, the tourism industry in the PNV
27 region in 2009 made an estimated US\$ 42.7 million from
28 hotel accommodations, tour excursions, and shopping
29 (Spenceley *et al.*, 2010).

30 4.4. Security dimension

31 With regard to security pertaining to conservation, it is
32 acknowledged that there was a strong commitment by the
33 military to ensuring security around the national park,
34 which borders neighbouring countries. Military escort was
35 provided for mountain gorilla research and tourism until
36 2004, which was totally funded by the national military
37 budget (Fawcett, 2009). Security was a necessary condition
38 for tourism to pick up again. Para-military training was
39 provided to people working in the conservation community,
40 and training on natural resource management was provided
41 to the military personnel by the conservation community.
42 The presence of the military provided a "sense of security"
43 appreciated by the local people, which can be seen as one of
44 the positive results of the national park on the local
45 communities (Gasigwa, 2009). The return of international
46 tourists also gave assurance to the local communities that a
47 certain level of security had been restored.

48 Security in this region is crucial for both tourism and
49 local livelihoods. Natural resources provide a bundle of
50 services and benefits, and it is important to consider the
51 interplay between diverse resources and the human interests
52 associated with them. A lack of security can significantly
53 interfere with natural resources, including the parks that
54 support gorilla tourism. For example, in 2007, the Mikeno
55

56 Sector of the Virunga Volcano massif in the DRC was
57 seized by the rebel group CNDP (National Congress for the
58 Defence of the People/*Congrès national pour la défense du*
59 *peuple*), led by Laurent Nkunda and funded in part by
60 income generated from gorilla tourism. The seizure lasted
61 until Nkunda's arrest in Rwanda in 2009. However, in 2012,
62 a reformed group of Congolese rebels, known as M23,
63 again took control of the park, siphoning off tourism funds
64 to support rebel militants. Recent tensions also have arisen
65 between groups engaged in charcoal production and trading
66 and the DRC park authorities. In 2007, ten gorillas were
67 massacred in the Mikeno Sector to disrupt income
68 generated from gorilla viewing and to send a message to the
69 park staff not to interfere with private business in the park
70 (Refisch and Hammill, 2012).
71

72 4.5. Transboundary cooperation

73 The Virunga Volcano massif and Bwindi Impenetrable
74 Forest are the two forest blocks in the Albertine Rift region,
75 which is shared by Burundi, Rwanda, Tanzania, Uganda and
76 the DRC (Rainer *et al.*, 2003). One of the primary habitat
77 areas for the mountain gorilla population, the Virunga
78 Volcano massif hosts three adjoining parks: Parc National
79 des Virunga (PNVi) in DRC, which has been designated a
80 World Heritage site; Parc National des Volcans (PNV) in
81 Rwanda, which has been designated a Man and Biosphere
82 Reserve; and Mgahinga Gorilla National Park (MGNP) in
83 Uganda.
84

85 While traditional approaches to transboundary
86 conservation have been primarily adopted in high-level
87 policy agreements among Governments, recent trends in
88 field practice and research demonstrate the effectiveness of
89 a "bottom-up" approach to conservation (Stern *et al.*, 2003).
90 In "bottom-up" approaches, conservation goals are set at a
91 local or community scale with an aim to respect the human
92 rights and dignity of the local populations. The local
93 populations also serve as the source of wisdom and
94 knowledge about the environment in which they have lived
95 (Stern *et al.*, 2003).
96

97 For around 15 years, facilitated by IGCP, there have been
98 active transboundary collaboration efforts among the
99 protected area authorities and field-based park staff in
100 the Virunga Volcano massif (Rainer *et al.*, 2003). Because
101 the three national parks share a common ecosystem and
102 because the wildlife, including the mountain gorillas, move
103 beyond the national borders, a collective regional approach
104 to conservation proved to be more effective than the
105 respective parks working in isolation. The cultural and
106 ethnic groups around the parks have similar languages,
107 cultures, and traditions, providing a solid basis for regional
108 collaboration in development and conservation (Lanjouw
109 *et al.*, 2001). The main areas supported by IGCP for
110 regional efforts at the field level were communication,
111 planning and cooperation in collaborative activities as well
112 as regional monitoring. The major achievements of regional

co-operation were the: (1) organization and facilitation of bilateral and trilateral meetings between the protected area managers; (2) development of a communication network and system for regular information exchange between the three countries, for example, wardens' coordination meetings; (3) organization and facilitation of joint patrols between the field-based staff of the DRC, Uganda and Rwanda; (4) development of a number of independent but common activities in the three countries. These include the development and monitoring of tourism and the development of a regional ecological monitoring programme; (5) capacity-building of protected area authority staff, particularly at the field level; and (6) improved monitoring of gorillas and other key species as well as poaching activities, leading to the improvement of ecosystem management (Rainer *et al.*, 2003).

The field level collaboration proved effective not only in biodiversity conservation but also for joint tourism activities and promoting broader regional dialogue. In 2006, an innovative revenue-sharing scheme was set-up among countries to share 50% of tourism revenue from the sale of gorilla tracking permits when a habituated gorilla group crossed a border between the country of origin and the receiving country. This agreement prompted the signing of the Virunga Transboundary Strategic Plan in 2006 (Refisch and Hammill, 2012).

In the early stage of exchanges among field level staff of the park authorities, the absence of higher political commitment posed a risk to maintaining the collaborative framework. However, the long-term efforts and the results on the ground laid a foundation for the collaborative framework to trickle up to an official diplomatic track at the Ministerial level. The on-the-ground initiatives were formalized by the following agreements and plans: a Memorandum of Understanding among protected area authorities of the DRC, Rwanda and Uganda in 2004; two Ministerial Declarations in 2005 and 2008; the Virunga Transboundary Strategic Plan in 2006; and a Memorandum of Understanding on the "Collaborative Monitoring of and Sharing Revenues from Transfrontier Tourism Gorilla Groups". A Transboundary Secretariat was established in 2008 to maintain regular contact between these three countries, and to coordinate activities. With the signing of the Virunga Transboundary Strategic Plan, IGCP gradually handed over the role of facilitation to the Transboundary secretariat to enhance national ownership in the transboundary collaborative processes.

This could be seen as a remarkable case of track two diplomacy (non-official mediation between civil society actors) promoting more active dialogue for track one diplomacy (official negotiations between political and military elites or, in other words, top-down efforts) for regional collaboration (Goodhand, 2006). Based on this working relationship, developed from the joint mountain gorilla conservation efforts, there are new initiatives emerging to scale up transboundary collaboration activities

to also deal with fisheries and energy issues in the region. The region has experienced armed conflict for over two decades, creating tension in the relationships between countries, such as in 2002, when Uganda and Rwanda were engaged in DRC fighting over Congolese natural resources. Although high-level political cooperation at that time was extremely difficult, at the technical level, collaboration between park wardens was still possible (Refisch and Hammill, 2012). Although natural resources remain a source of competition and conflict among the parties, the natural resource base can also be a foundation for cooperative relationships and open dialogue. This finding reinforces the previous research result, which manifests that "natural resources can form the basis for international cooperation and diplomacy, even among States with histories of tense relationship[s]" (Bruch *et al.*, 2011:368). In cases when negotiations between States are not possible, a grassroots approach facilitated by neutral non-State actors, such as locally-based international NGOs, can initiate and enhance environmental diplomacy.

Researchers to date have provided little systematic evaluation of the effects of track two interventions on conflict termination and "no empirical evidence that [unofficial intervention] has contributed or can contribute to the resolution of ethnic conflict" (Rouhana, 1995:268). Despite this lack of research, the regional collaboration in the Virunga region provides a compelling example of how parties from countries in conflict situations can communicate and act in cooperation on concrete technical issues to jointly manage shared resources. Cooperation on a regional scale prompts parties to work together, which can lead to improved conservation results and even encourage higher level political dialogue. The platform for cooperation can also be scaled up to address broader areas, including livelihoods and socio-economic development. This provides a good case study for other transboundary protected areas around the world, and may offer some useful lessons for countries facing conflict situations.

5. Lessons learned

Possibly the most obvious — but also the most significant — lesson is that security and stability are necessary preconditions for the nature-based tourism industry to develop. Although it is possible to overcome setbacks (such as the massacre in Uganda in 1999), tourists will not travel to a region if they fear for their safety. In resuming conservation and tourism activities, the support from the military was indispensable. Tourism and security go hand in hand.

For countries with endemic endangered species that are interesting to tourists, focusing on a high-end market can enable them to charge high fees for tracking and viewing. Although a high-end market brings additional challenges, such as the need to upgrade facilities and the quality of

1 services, it is a great opportunity to capture wealth from
2 those visitors who are willing to pay the price.

3 In Rwanda, the protected area forests generate positive
4 benefits, both tangible and intangible, relative to costs. For
5 example, local communities derive financial gains from the
6 production, marketing and sale of products to visitors of
7 nearby protected areas. Local communities also receive
8 support through national and regional revenue-sharing
9 schemes. However, the bulk of the benefits is enjoyed by the
10 international community, with few benefits reaching the
11 countries of the protected areas themselves. This suggests
12 that the international community should be paying a greater
13 share for the benefits it enjoys, and that the distribution of
14 larger portions of benefits should be allocated to the local
15 community, especially investing in local small-holder
16 agricultural livelihoods (Hatfield, 2005).

17 On the livelihoods side, it is essential to make
18 connections between the mountain gorillas, tourism,
19 revenue, development projects, and local populations. In
20 particular, developing revenue-sharing schemes with local
21 input will help ensure that development approaches are well
22 informed and that they build expertise within the target
23 communities. Partnerships with local communities can
24 promote long-term development so the communities
25 themselves, rather than private corporations, can run the
26 community lodges.

27 Supporting the institutional capacity of park authorities is
28 essential. Even during the height of insecurity, continuous
29 internal and external support is critical to the technical,
30 moral and financial aspects of managing the park. In this
31 case, extensive education programmes were operational
32 prior to the war, and some projects continued their outreach
33 activities during the conflict years. In addition, several
34 international conservation organizations continued their
35 support to the park authorities throughout the war, assisting
36 with surveillance and management efforts, by supplying
37 equipment, paying staff salaries and capacity-building.
38 Long-term support prevented these authorities from
39 undergoing major institutional collapse (Kalpers, 2005).
40 During the conflict, in the absence of a legitimate
41 Government, national NGOs could be effective partners for
42 external donors.

43 Government commitment to developing the industry is
44 also a necessary condition. In Rwanda and Uganda,
45 business reforms, investment in tourism fairs, and the
46 inclusion of tourism in economic plans all contributed to a
47 massive increase in the number of visitors to the park and
48 generated international attention during the post-conflict
49 period. Countries emerging from conflict often do not have
50 the capacity to develop a nature-based tourism industry, but
51 by enabling the private sector to provide the necessary
52 investment and expertise, they can enable growth such as
53 that experienced in Rwanda and Uganda.

54 Transboundary cooperation worked well with a
55 bottom-up rather than top-down approach. The top-down
56 approach could have instead created a vacuum at the local

level. In this particular case, track two interventions
influenced the track one interventions positively. This shows
that the natural resource base can effectively promote
cooperative dialogue and relationships among parties even
in the conflict situations. When negotiations between State
actors are not possible, a grassroots approach, facilitated by
neutral non-State actors, may prove more effective in
promoting cooperation.

6. Conclusion

The case of mountain gorillas in the Virungas provides
evidence that wildlife populations can increase, even during
the height of insecurity and armed conflict, when intensive
conservation efforts are put in place. Despite the fact that
mountain gorillas and their habitat were victims of armed
conflicts and its aftermath, mountain gorilla conservation
and tourism have made positive contributions to post-
conflict recovery and transboundary collaboration in the
region. Overall, the foundation for transboundary
collaboration is solid and may provide a platform for
enhanced collaboration on this and other critical issues
affecting the region.

In Rwanda, mountain gorilla conservation and tourism
generated positive results in the socio-economic,
governance and security domains. During the post-conflict
period, gorilla-based tourism generated income to cover the
operation costs of the three national parks in Rwanda.
However, the benefits generated by gorilla-based tourism
have been shared with the local communities only on a
limited basis. In addition, the success of mountain gorilla
conservation and the growing nature-based tourism
industry could place pressure on the limited capacity of the
national parks and their wildlife and habitat in the future.
Such challenges necessitate continued regional cooperation
and conservation efforts of gorilla populations.

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