

Promoting Environmental Security & Poverty Alleviation in Virunga–Bwindi, Great Lakes region, Africa



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Introduction

Environmental security is the availability of environmental services for man and nature. Natural resources such as water, arable land, fisheries and forests form an important livelihood basis for many people. The depletion, overexploitation or degradation of these resources can lead to scarcity, reducing people's possibilities for survival or development. Growing scarcity can therefore be a reason for significant tensions between states, or between different groups within a state. These tensions can even result in violent conflict. Thus, environmental security is vital to human security and wellbeing.

The Institute for Environmental Security (IES) is an international non-profit non-governmental organization established in 2002 in The Hague, The Netherlands with liaison offices in Brussels, London and Washington, D.C. Our interdisciplinary work programme, Environmental Security for Poverty Alleviation (ESPA), aims to secure the natural resource livelihood bases of local communities, by conservation of ecosystems and their related services and by the implementation of the international ecological legal order. Special attention within our programme is currently focused on three regions, i.e. the Matavén area in Colombia, Kalimantan in Indonesia and the tri-national Virunga-Bwindi region in the Great Lakes region, Africa.

The project in the Great Lakes region focuses on a part of the Central Albertine Rift, the border region between Rwanda, Uganda and the Democratic Republic of Congo (DRC). The main objectives of our project in this region are to monitor and analyse the threats posed to the ecosystems and their related services, and to empower people and local organisations to quickly respond to these problems, in order to ensure their livelihoods and reduce tensions.

This booklet briefly tries to describe the situation and some opportunities in this region. More information about the region, about our recent work and the activities of other organisations working on the promotion of environmental security is available on the IES website: <http://www.envirosecurity.org>.

The Great Lakes region

Land and Violence

The Great Lakes region, characterised by highly fertile soils, unique biodiversity and enormous population densities, also was the theatre of massive violence during the end of the past century; and even currently the violence in eastern DRC is continuing. The structural factors behind these violent conflicts were in many cases strongly related to the availability of natural resources. In all societies in this region land has always been the primary economic asset, given the fact that almost all people are farmers and few off-farm activities exist (*Huggins and others 2004*). The enormous population growth that took place in this fertile region has increased population pressure, resulting in more struggle for land and other resources. Since under the Belgian colonial administration access to land became increasingly related to ethnicity, tensions between different 'ethnic' groups increased, e.g. between the ethnic groups of Hutu and Tutsi, as well as between Hema and Lendu in Ituri region, DRC. The structural factors behind the extremely violent conflicts in Rwanda and Burundi and the persistent violence in the Democratic Republic of Congo are therefore strongly related to matters of environmental security.

Mineral resources

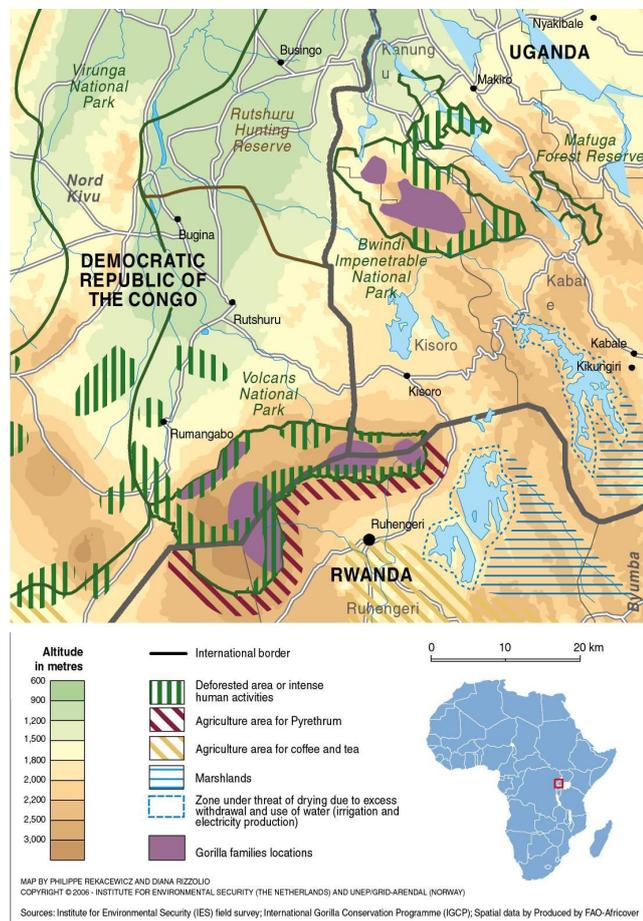
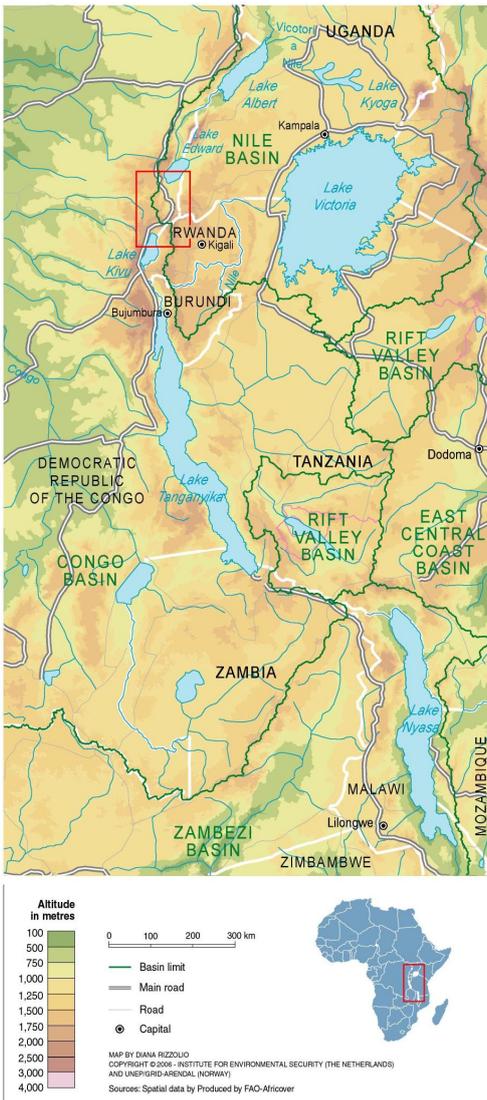
The availability of mineral resources was not the primary cause of violence in the Great Lakes region. It is however without any doubt that the attraction of mineral resources in the DRC is a major factor in explaining how the violent crises evolved into a large African war, taking down the whole region. Especially the eastern and southern parts of the Democratic Republic of Congo, before 1997 known as Zaire, are extremely rich in mineral resources, such as coltan, cassiterite, gold and diamonds. The mining and trade of these resources have provided huge economic opportunities for neighbouring states and rebel movements. The AFDL invasion of Zaire in 1997, followed by the involvement of many adjacent countries has strongly prolonged the violence and chaos in the Great Lakes region.



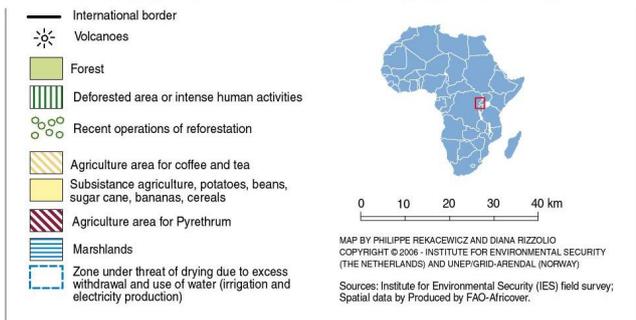
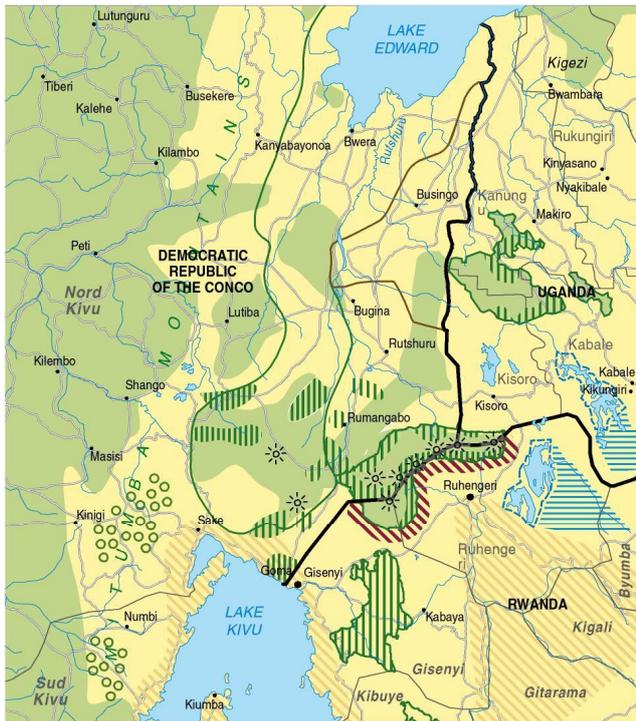
Nowadays state control in eastern DRC is still weak and mineral resources continue to provide great economic opportunities for rebel movements and splinter groups of the national army. The humanitarian consequences are dramatic; it is estimated that as much as 4 million people have been killed as a direct or indirect result of the violence in the DRC.

Virunga-Bwindi region

Our project in the Great Lakes region mainly focuses on the Central Albertine Rift, an area of high conservation value. The Central Albertine Rift encompasses the natural habitats from the northern tip of Lake Albert to the southern tip of Lake Tanganyika and stretches to about 100 km on either side of the international border of the Democratic Republic of Congo (DRC). The high altitude forests in the Albertine Rift contain most of the threatened and endemic species but the lakes and wetlands are also important for certain species. It is one of the most densely populated rural areas of Africa.



In the midst of this turbulent Great Lakes region, on the Central Albertine Rift, several protected areas have been established. Located in the border region of Uganda, Rwanda and the DRC an area of high conservation value is called the Virunga Volcanoes region, named after the volcanic mountain area where Rwanda, Uganda and the DRC share their borders. It is the habitat of an estimated 380 mountain gorillas, which is more than half of the total global population of these endangered species. Tourism and the work of Dian Fossey brought the mountain gorillas in the Virunga Volcanoes region into the international spotlight in the 1980's. Each of the three countries protects its own portion of the Virunga Volcanoes: Virunga National Park in the DRC, Volcanoes National Park in Rwanda and Mgahinga National Park in Uganda.



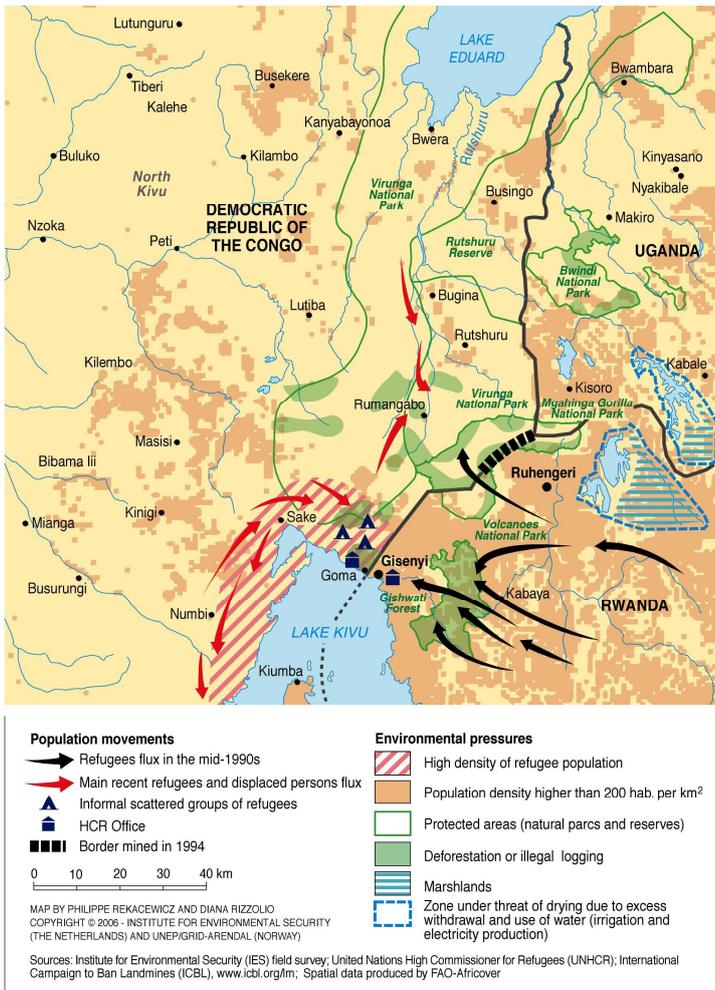
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In Uganda, about 40 kilometres to the north, the other mountain gorilla habitat is located. It is estimated that about 320 mountain gorillas live in this protected area, called Bwindi Impenetrable National Park. Together these four protected areas and their surroundings can be referred to as the Virunga-Bwindi region.

Subsistence agriculture is the main activity of over 90 percent of the population in the Virunga-Bwindi region. Main food crops are maize, sorghum, Irish potatoes, cassava, beans, banana, sugar cane, cabbages, onions, leeks, carrots, spinach, peas and sweet potatoes. Cash crops produced in this area are mainly pyrethrum and tea, and to a lesser extent also coffee.

Environmental pressures

Main environmental problems in this region are strongly related to the demographic and the socio-economic situation. The population density in the areas surrounding the protected areas is very high. According to population censuses and estimates, densities in the districts adjacent to the protected areas were higher than 300 inhabitants per km² in Uganda, and even over 600 inhabitants per km² in certain Rwandan districts. In the DRC population densities around Virunga National Park are slightly lower, but still much higher than the average of the rest of the country. Subsistence farming is the livelihood basis of over 90 percent of the people living here. Such a high population density, the strong dependency on land and the search for firewood and fodder leads to a very high pressure on the natural resources in the area. The need for fertile agricultural land pushes farmers to encroach the forest, despite their status as national parks. As a result of this pressure, the forest area in both Uganda and Rwanda has been significantly reduced in the past fifty years (Plumptre, Kayitare, Rainer, Gray, Munanura, Barakabuye, Asuma, Sivha, Namara, 2005). For example, since the creation of Volcanoes National Park in 1925, its area has been officially reduced by nearly 50%, shifting from 328 km² to 165 km², mainly for agricultural purposes particularly to grow pyrethrum (Plumptre, Kayitare, Rainer, Gray, Munanura, Barakabuye, Asuma, Sivha, Namara, 2005). The high need and speed of agricultural encroachment became visible in 2004, when Rwandan settlers converted 15 km² of the mountain gorilla habitat in the Mikeno sector in Virunga National Park, DRC, within a few weeks (UNEP 2004).



A major effect of deforestation and the overexploitation of farmland is soil erosion, whereby soil loss and soil depletion considerably reduces land fertility and productivity. An example is the Gishwati forest area, where as a result of overexploitation the soil is totally depleted, leaving the land unsuitable for agriculture. In addition to fertility loss, erosion can destroy infrastructure such as houses, roads and bridges.

Access to land

Land distribution is an enormous challenge, especially in Rwanda, where the demographic pressures are highest and where civil war has resulted in major forced population displacements in the mid-1990's. Land security is still one of the most important issues in society. Effective land reform and land management, benefiting the poor, is crucial for long-term-peace in Rwanda (Huggins and Musahara 2004). The national government of Rwanda recently adopted a new land act and land policy aiming to improve land administration and land use management. However, it remains to be seen whether the implementation of this land policy will actually benefit the poor and landless.

Opportunities

Tourism

Gorilla tourism is currently possible in both national parks in Uganda and in Rwanda's Volcanoes National Park. Tourism is currently tightly controlled at the park. Although the demand for viewing the mountain gorillas is increasing, the mountain gorilla population is too small and too fragile to make it possible to expand the number of daily visitors. Yet, tourism can, if managed carefully, create a win-win situation for all parties: the mountain gorillas, the surrounding communities, the park authorities, the national government, the scientific community and the tourists. After all, gorilla tourism was in the first place introduced as a means 'to make the gorillas pay for themselves'. Tourists currently pay US\$375,- to spend an hour with mountain gorillas in Rwanda. The revenues can help the park authorities to cover salaries and operating costs in all the protected areas of the country. Tourism creates not only direct revenues, but also enhances international awareness and concern for the plight of gorillas. It therefore generates funds for conservation activities and research.

Gorilla tourism attracts many visitors to the region, who should be encouraged to prolong their stay. This can be done by developing other tourist attractions and investing in existing attractions. In Uganda other attractions in that region include the Rwenzori mountains, Fort Portal and Queen Elizabeth National Park. Rwanda is already developing its shore at Lake Kivu for tourism and offers the magnificent Nyungwe National Park, and Akagera National Park. Extending tourism facilities would therefore be beneficial for the wider region and can potentially attract a lot of foreign currency.

Gorilla ecotourism can be a way to help local communities generate income. People can work as a ranger for the park authorities or offer tourism-related activities, such as accommodation, making and selling souvenirs, restaurants, expositions, organize boat trips on Lake Bulera and Lake Ruhondo, or facilitate hikes through the region outside of the parks. Both UWA and ORTPN invest a part of the revenues in local development projects (IGCP 2005; WWF 2004).

Peace park

Transboundary cooperation between the three park authorities ORTPN, ICCN and UWA already exists. The International Gorilla Conservation Programme plays a facilitating role in this cooperation. In October 2005 the 'Tripartite Declaration on transboundary natural resources management' has been signed by the three national ministers responsible for natural resources management. This was followed by the recent adoption of the 'Transboundary Strategic Plan for the Central Albertine Rift Transboundary Protected Area' and a 'Memorandum of Understanding on the sharing of revenues from gorilla tourism'. In practice cooperation has taken place in the form of joint patrols between Rwandan and Congolese rangers. There are quarterly meetings between the three park authorities where issues of shared management are being discussed.

Transboundary cooperation on natural resources management certainly brings the three countries together. This cooperation can even be regarded as a peacebuilding tool, as the sustainable development of the region is a common interest for the three countries.

Recommendations from the Virunga-Bwindi region Case Study

A. On mapping and monitoring

1. While the focus of these recommendations is to strengthen the peace park functions of especially the tri-national Virunga Volcanoes park complex, the first recommendation is to have a full analysis of all ecological values of the region and to determine the whole set of ecosystem services (as defined by the Millennium Ecosystem Assessment) which the region is providing to its immediate surroundings, the wider region and river basins, and the global community. The area is important as the habitat for the last population of mountain gorillas, for other unique biodiversity, and for the strategic hydrological role of the Central Albertine Rift. The analysis of the USDA Forest Service and of the GEF-funded Global International Waters Assessment (and any others) should be continued, also with special attention to the relevance for the Nile Basin Initiative.

2. The threats to the maintenance and delivery of ecosystem services should be identified on the various levels: local (e.g. population pressure); regional (violent conflicts, migration, etc.); international (mining and logging for export markets); and global (impact of climate change is highest in Africa "where poverty limits options for adaptation.")

3. Ecological assets and threats should be laid down on maps so as to give policy-makers on the various levels a direct and integrated view of the issues to be addressed.

4. A system of continuous monitoring of the ecology (and the threats there-to), based upon (radar) remote sensing with systematic ground-truthing by local authorities and counterparts such as IGCP, should be set up. There should be periodic reporting of this monitoring, for example, on the occasion and for the benefit of the quarterly tripartite meetings of the park authorities to discuss the joint management of the parks. The results of the monitoring should also be made available to the governments and all other relevant decision-makers in order to allow them to take adequate action in time.

B. On diplomacy and law

5. Informal channels of communication should be established with MONUC to prevent invasions of the parks or using them as shelter and to strengthen park protection if needed. (See also the attached recommendations by International Crisis Group of 14 September and 19 October 2005.)

6. The pertinent international legal regimes should be identified so as to define the responsibilities, obligations and rights of the various actors in and relevant for the region. It is recommended strongly to take the responsibilities and obligations of the countries in the Virunga-Bwindi region under the international environmental conventions seriously and work together as Parties to these *binding* law agreements. There is great need for adequate capacity to translate the international obligations into national, enforceable, law and to fully participate in the meetings of the international

conventions. The IUCN Environmental Law Centre in Bonn should carry out a needs assessment of the countries in relation to the implementation of these conventions on the national, regional and international level.

7. Tripartite consultations among rangers and park authorities, facilitated by IGCP, may benefit from updated remote sensing monitoring reports. The Trilateral Declaration on the Transboundary Resources Management between the three States of October 2005 could be upgraded to a “Legal Framework for a Transboundary Area” implying a binding treaty between the three states. The steps towards such an arrangement should be very carefully planned and built upon concrete progress of the on-going consultations between the three park authorities.

C. On finance and economics

8. Adequate, long term financing for monitoring and management is an absolute requirement for the Virunga-Bwindi area to be successful as a peace park, as habitat for unique biodiversity and as “water tower” for the surrounding regions and the connected river basins. It is therefore recommended to critically review the performance of the Mgahinga and Bwindi Impenetrable Forest Conservation Trust Fund (MBIFCT) and to design a mechanism which would also include the Rwandan and DRC parts of the peace park area, looking at all ecological values. A model for a new multi-donor trust fund construction can be found in the World Bank/GEF trust fund construction for the protected areas in Colombia.

9. To lessen pressure on the Virunga region and on the ecology in general, the highest priority has to be given to generate sources of income and employment outside the subsistence agriculture in which 90% of the population is working. Support for small to medium industries and to the ICT sector, and energy (in the form of electricity) is an absolute requirement. A country like Rwanda faces a dilemma, when water for hydropower is diverted towards agriculture, thus increasing the need to use “dirty diesel” to produce electricity and decreasing the options to earn income from producing carbon credits under the Clean Development Mechanism (CDM) of the Kyoto Protocol. Building on existing (UNIDO/GEF) initiatives, Dutch development cooperation through its bilateral and multilateral channels should strongly support a clean energy strategy for the countries sharing the Virunga Massive, including creating options for CDM projects. Reforestation to prevent erosion and sedimentation of water bodies suitable for hydropower could at the same time qualify for the CDM. The Dutch CDM office at the ministry of VROM should be consulted to see whether now or in the future the obligatory Dutch greenhouse gas emission reductions via the CDM could be realized, for example, through energy and/or forestry projects in Rwanda.

10. Special attention should be given to the integration of the environmental management needs in the (Economic Development and) Poverty Reduction Strategy Papers (PRSP). With further deterioration of the environment, poverty and conflicts will increase. The embassies in the region and the Executive Directors of the Netherlands at the World Bank and the IMF will have to scrutinize the PRSP's when they come up for decision-making.

D. On empowerment and training

11. After demobilisation and repatriation, the rebels, militias and refugees need to be trained in skills outside subsistence agriculture, such as for example environmental restoration and protection, wildlife and park management and as tourist guides, managers of lodges, etc. The international donor community should assist with providing incentives and training modules.

12. Empowerment of women is key to the necessary demographic transition. To provisions like in Rwanda where a minimum percentage of civil servants should consist of women, the promotion of educational, health and credit facilities relevant for women in the rural areas should be added.



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