



The Eastern Lowland Gorilla: Saving the Victims of Coltan

Amy Costanzo
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University of Baltimore Law School

This paper is dedicated to Dushishoze, the baby mountain gorilla my best friend Matt Hardiman adopted for me as a result of the research I conducted to write this paper.

For Matt, for being Matt (and Mario).

To Professor Steven Davison for all of his help and assistance in helping me write this paper.

And for my dad, with whom I have watched countless hours of Discovery Channel and TLC, and who excused me from Easter activities so I could perfect this paper. Love you.

INTRODUCTION

The world is connected.

Technologically speaking, anyways. Distance has never been less of an issue as it is today. We are a global society in motion, one whose members can board a plane and be on the other side of the world in less than a day and where a person can send a message around the world virtually cost free. Part of this ongoing pattern in the breakdown in communication barriers is due to wireless capabilities. Cellular phones and laptop computers make it possible to be connected without being plugged in. Connectivity plays a major role in our lives; call it a communications revolution, if you will, and the revolution only continues to grow. Approximately 50-80% of the population in Europe has access to a Universal Mobile Telecommunications System, a computer network through which they can connect to the Internet.¹ In a recent AP-AOL-Pew poll of 1,503 adults, 1,286 were cell phone users.²

As the world continues to move more and more towards globalization, the number of connected people will only increase. The question then becomes: at what cost? For every phone service provider and computer company playing Che Guevara in this communications revolution (“Viva la revolucion” has changed to become “buy our \$50 a month plan with unlimited texts and free weekends and the

¹ Stephen McClelland, *Look For The Laptop Factor*, at http://www.telecommagazine.com/article.asp?HH_ID=AR_1218 (accessed Oct. 4, 2005).

² Associated Press, *Poll: Cell Phones Annoying But Useful*, at <http://www.cnn.com/2006/TECH/ptech/04/03/cell.phone.poll.ap/index.html> (Apr. 3, 2006).

phone is free”), there are countless lives that will be adversely affected by these communication activities. Among those affected are those with no voice, no vote, and certainly no use for a cell phone or a laptop. But if these living beings could communicate and be united on a single issue pertaining to the communications revolution happening around them, their issue would be simple and straightforward: survival and avoiding extinction.

What do survival /avoidance of extinction and the communications revolution have to do with each other? In one area of Africa, the simple answer is coltan. At present, the survival of the Eastern Lowland gorilla of Africa currently is critically threatened because of the worldwide demand for coltan, a key substance used in many computers and cellular telephones and which is most abundant in areas that are prime habitat for the gorillas.

Action to protect the Eastern Lowland gorillas must come quickly if they are to survive; because their numbers are critically low, the demand for coltan is rising, and the habitat of the gorillas is being destroyed at alarming rates. International intervention must occur and must occur soon to prevent extinction of these gorillas. If the Eastern Lowland gorillas are to be saved, their salvation can only come through collective international action through international agreements and the enforcement of those agreements under the guidance of non-governmental organizations (NGOs) and local governments. We as a global society are facing a new era of technology and development; with new challenges that we have never faced before, and as such, new international conventions and laws must be created

and adopted to ensure that as we enter the future, we do so responsibly. This means that new relationships between NGOs and governments must also be formed; and new forms of cooperation must occur. The Eastern Lowland gorilla's future is at a critical crossroad; while only time will tell what the future holds for the gorillas, the laws affecting them and the cooperation (or lack thereof) of national governments and NGOs will play a large role in determining if the Eastern Lowland gorillas will thrive in the jungles of Africa as they once did or if we are witnessing the vanishing of one type of great apes.

This paper will address the ways in which the world can combat the threatened status of the Eastern Lowland gorilla, highlighting what has already been done and what remains to be done. This paper proposes a revision of some existing international conventions in order to more adequately address the problem of declining gorilla populations. This paper also discusses ways in which corporations using coltan and nations exporting coltan can become more accountable for their use of it. Finally, the creation of a new international convention specifically aimed at coltan mining and the countries who export it is proposed in this paper.

BACKGROUND

Most people do not know what coltan is, yet most of them have a source of it in their households. Coltan, a shortened term for columbite-tantalite, is a

metallic ore comprised of the chemical elements Niobium and Tantalum.³ With the appearance of a black, tar-like substance, the tantalum component of coltan is a vital part of many electronic devices, especially cellular telephones and laptop computers. When coltan is refined, coltan becomes the heat resistant powder metallic tantalum.⁴ In this physical state, tantalum can serve as a capacitor for electronic devices.⁵

In the late 1990s, demand for coltan increased dramatically due to a rapidly growing technology market.⁶ Much of the tantalum that is generated is used in the production of capacitors.⁷ Sales of tantalum capacitors increased 300 percent between 1990 and 1999.⁸ Of the 525 tons of tantalum used in the United States in 1998, 60% was used in tantalum capacitors.⁹ In 2001, the market price of coltan jumped from just \$30 per pound to over \$400 per pound.¹⁰

The main source of natural tantalum at the present time is Australia. Other countries such as Ethiopia, Canada, Brazil, China, and Egypt also mine coltan and produce tantalum. The main reserves of coltan, however, are in the Democratic

³ Karen Hayes and Richard Burge, *Coltan Mining in the Democratic Republic Of The Congo: How tantalum-using industries can commit to the reconstruction of the DRC*, at <http://www.gesi.org/docs/FFI%20Coltan%20report.pdf> (accessed July 12, 2006).

⁴ Coltan, Gorillas, and Cell Phones, at <http://www.cellular-news.com/coltan/> (accessed March 5, 2006).

⁵ *Tantalum*, The Columbia Encyclopedia, Sixth Edition (2001-2005) at <http://www.bartleby.com/65/ta/tantalum.html> (accessed July 12, 2006).

⁶ Dena Montague, *Stolen Goods: Coltan and Conflict in the Democratic Republic of the Congo*, at <http://www.worldpolicy.org/projects/arms/news/22.1montague.pdf> (accessed March 5, 2006).

⁷ Hayes and Burge, *supra* note 3.

⁸ Montague, *supra* note 6.

⁹ Larry D. Cunningham, *Columbium (Niobium) and Tantalum*, at <http://minerals.usgs.gov/minerals/pubs/commodity/niobium/230498.pdf> (accessed July 12, 2006).

¹⁰ Chris Smallwood, *Live Wire, Dead Gorilla*, at <http://www.harvardindependent.com/ViewArticle.aspx?ArticleID=8089> (Apr. 25, 2002).

Republic of the Congo (DRC), which contains 80% of the world's coltan supply.¹¹ However, the DRC is a nation rife with civil war, influxes of refugees fleeing genocide, government corruption, and ethnic tension. Born in 1997 from the country formerly known as Zaire¹², the DRC is a highly politically unstable nation. In its long history, the DRC has been colonized, invaded, occupied, and finally restored to the status of a free nation, all at the cost of hundreds of thousands of people being killed or displaced.

Rwandan and Ugandan forces supported a rebellion by some Congolese against the Congolese government in 1998 and invaded the eastern region of the DRC in that year.¹³ Although a ceasefire was signed in 1999, the eastern region of the DRC remains highly volatile and unstable. To date, the DRC remains seriously challenged in the areas of stable government, free elections, and respect for human rights.

Another area in which the DRC is challenged in is protection of the environment, particularly with regard to proper management of its the nation's coltan reserves. Coltan mining in the DRC has devastated forests, polluted waterways, and decimated populations of certain animals. In particular, the

¹¹ Helen Vesperini, *Congo's coltan rush*, at <http://news.bbc.co.uk/2/hi/africa/1468772.stm> (August 1, 2001).

¹² Congo, Democratic Republic of, at <http://www.cia.gov/cia/publications/factbook/geos/cg.html> (June 29, 2006).

¹³ *Id.*

population of the Eastern Lowland gorilla, found only in the forests of the eastern Congo, has been affected greatly by the mining of coltan in the DRC.¹⁴

Gorillas in the DRC are affected by the mining of coltan in several ways. First, the main area where coltan is mined also contains the DRC's Kahuzi-Biega National Park (KBNP), which is the home of many Eastern Lowland gorillas.¹⁵ See Appendix A. Mining in the park is illegal under DRC law, but only five to ten percent of the park (all of which is the highland areas that are habitat for the gorillas) is accessible to wardens and rangers. The other 90-95 per cent of the park presently is under the control of various armed factions, including branches of the Mai-Mai and the Interahamwe.¹⁶ These rebels have entered the park and are mining for coltan, which the rebels sell for revenue.¹⁷ Land in the park is cleared by these rebels to make mining of coltan easier, destroying the gorillas' food sources and habitat.¹⁸

The mining of coltan also causes pollution of waterways that are the source of water in the gorilla's habitat. Coltan is found in soft rock by streambeds, and miners dig with shovels to loosen it. The loosened mixture is placed in a sieve, with the remaining pieces washed in a bowl until only the large pieces of coltan

¹⁴ *Id.*

¹⁵ Ian Redmond, *Coltan Boom, Gorilla Bust: The Impact of Coltan Mining on Gorillas and other Wildlife In Eastern DR Congo*, at <http://www.bornfree.org.uk/coltan/coltan.pdf> (May 2001).

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

remain.¹⁹ From this process, streams are polluted by silt and severe erosion occurs as unprotected land is washed away by rain.

The gorillas are also caught by rebels as “bushmeat” (wild game caught in the jungle) and eaten by the miners who enter the park to mine for coltan. The gorillas who are caught but escape often escape maimed and injured by the snares used to catch them or other animals.²⁰

Experts have predicted that as a result of these various mining and poaching activities, populations of gorillas and other great apes might become extinct over their range in the next ten to twenty years.²¹ This concern with imminent extinction unfortunately has also led to a rapid rise in the killing of great apes for bushmeat and in the trading of bushmeat.

In 1996, prompted by the rise of bushmeat trading, the Ape Alliance sought Cambridge zoologist Evan Bowen-Jones to serve as an independent consultant (IC) to assess the gorilla population in central Africa. His report for the IC stated that he saw hunters leave the mining camps daily and return with the bodies of large apes and other animals. Gradually, he observed that hunters began to leave the mining camps and return a week later empty-handed.²² At one point, he saw no elephant meat for one month and he observed no elephant tracks, leading the IC to report that the elephants in the region he surveyed were all but extinct as a result

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

of poaching.²³ The IC also mentioned in his report the use of firearms by hunters, which resulted in tree dwelling species, such as monkeys and birds, also being hunted and eaten as another form of bushmeat.²⁴

The killing and capture of gorillas causes many baby gorillas to become orphans. This has led to the illegal trade of baby gorillas as pets. The prices for baby gorilla pets range from \$1,000 to \$5,000 per animal.²⁵ Most of these baby gorillas do not receive the care they require in order to survive the stress of being separated from their mothers and social groups and being handled by humans while en route to being sold, and most do not survive. Often what happens is hunters will kill a group of adult gorillas to eat, sparing only the baby gorillas to be sold and capturing all of the babies in the hopes that maybe one will survive long enough to be sold on the black market.²⁶ Between 2004 and 2005, at least nine infant gorillas were confiscated being sold in marketplaces right outside of KNP by wildlife authorities.²⁷

These practices have had a devastating effect on the populations in the wild of the three species of Eastern Lowland gorilla, as well as other species of wild animals in the DRC. Prior to the mining of coltan, KNP contained an estimated 8,000 gorillas and 3,600 elephants. The only accurate data of how many of these animals presently remain in the park is from the highland region; the

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

lowland region is too inaccessible for data to be collected. The highland data shows that all 350 of its elephants and half of its 258 gorillas have been lost to poaching.²⁸ Between 3,000 and 4,000 elephants were killed in the park between 1994 and 1999²⁹; two tons of ivory tusks were traced to KBNP in late 2000.³⁰ Some sources place the Eastern Lowland gorilla population in KBNP at between 3,000 and 5,000 individuals. From other sources, it appears that the Eastern Lowland gorilla population may be fewer than 1,000.³¹ Neighboring Maiko National Park in the DRC was once thought to have avoided heavy poaching, but recent reports show that the population of 17,000 gorillas in that park may have decreased to 2,000 – 3,000 in the past three years, translating into a 80-90% decline.³² Maiko National Park also has coltan deposits, making it a target for miners and poachers.³³

THE UNITED NATIONS' POSITION

The United Nations is fully aware of the problems of coltan mining in the DRC. It has described the mining of coltan as the “engine of the war”, referring to

²⁸ *Id.*

²⁹ Alex Chadwick, *Radio Expedition: Coltan and the Congo*, at <http://www.npr.org/templates/story/story.php?storyId=1122310> (NPR and National Geographic Society 2001) (radio broadcast).

³⁰ Redmond, *supra* note 15.

³¹ Redmond, *supra* note 15.

³² Redmond, *supra* note 15.

³³ Redmond, *supra* note 15.

the continuing conflict in the DRC, where rebel forces have been accused of using the profits from illegal coltan mining to finance civil war.³⁴

Although the World Bank has praised Uganda for the way its economy has flourished, since Ugandan troops went into the DRC in 1998, Uganda has started exporting mass quantities of gold and diamonds from the DRC. In the year after Uganda invaded the DRC, Ugandan coltan production went up 2,800% lending support to the theory that Uganda is profiting from the DRC's coltan resources (Uganda does not have substantial coltan deposits to support this increase).³⁵ In a 2001 U.N. report, the U.N. Security Council named Presidents Kagame of Rwanda and Museveni of Uganda as "godfathers" of the illegal exploitation of DRC resources and reported that the profits from this exploitation was directly financing armed conflict in the Congo.³⁶ A second UN report suggested that the neighboring Rwandan army made \$250 million in U.S. dollars from selling coltan in less than eighteen months, despite there being no coltan in Rwanda to mine.³⁷ The implication is that the Rwandan army is illegally mining coltan in the DRC and selling it for its own profit. The military forces of Burundi are also implicated in smuggling coltan out of the DRC for resale in Belgium.³⁸

The United Nations is also well aware of the plight of the gorillas impacted by coltan mining in the DRC. In May of 2001, the executive director of

³⁴ *Gorilla Killers: The Environmental Cost of Electronics*, at <http://www.headeritage.co.uk/uknow/features/index.php?id=41> (Jan 29, 2003).

³⁵ *Id.*

³⁶ Dena Monatague and Frida Berrigan, *The Business of War in the Democratic Republic of the Congo*, at http://www.thirdworldtraveler.com/Africa/Business_War_Congo.html (July/August 2001).

³⁷ Coltan, Gorillas, and Cell Phones, *supra* note 4.

³⁸ Coltan, Gorillas, and Cell Phones, *supra* note 4.

the United Nations Environmental Programme (UNEP), Dr. Klaus Toepfer, launched the Great Apes Survival Project (GRASP) to confront the problem of rapidly declining populations of great ape and their habitats throughout Africa.³⁹ The main goal of GRASP is to save great ape populations from the threat of extinction and to form partnerships with other organizations and nations to ensure that this protection is accomplished. The first intergovernmental GRASP meeting was held in Kinshasa, DRC from September 5 – 9, 2005, to discuss ways of addressing the problems facing gorillas and other great apes.⁴⁰ The meeting was attended by over 200 international delegates, as well as 300 delegates from the DRC.

On September 9, 2005, the Kinshasa Declaration was signed by the heads of the delegations, NGOs, and Ministers, in which they affirmed their commitment to saving great apes in the wild, as well as working to protect their habitats.⁴¹ Even with this progress, however, the U.N. has not taken a strong enough position on behalf of the gorillas and other species of animals in the conflicted regions. In October 2003, a U.N. panel of experts released a report accusing Rwanda, Uganda, and Zimbabwe of systematically exploiting Congolese resources and recommended that the Security Council impose economic sanctions on

³⁹ *United Nations Environment Programme: Great Apes Survival Project*, at <http://www.unep.org/grasp/> (accessed March 10, 2006).

⁴⁰ GRASP Newsletter Issue 3, at http://www.unep.org/grasp/Newsletters/GRASP_Newsletter_3E.pdf (May 2004).

⁴¹ *Id.*

these nations. However, the U.N. never followed up on the report's recommendations.⁴²

This failure is alarming considering the fact that KBNP, the source of much of the world's coltan, is a World Heritage Site, which means that it is a place that the U.N. has designated being worthy of protection and preservation. World Heritage Sites are supposed to have management and security plans, emergency assistance should they be in immediate danger, and participation from national governments to protect cultural and natural heritage.⁴³

A 2001 U.N. report recommended a temporary embargo on exports of minerals (including coltan) from Rwanda and Uganda and the suspension of international aid to the two countries. But governments in the developed world were reluctant to take any such actions against the two countries for economic reasons; they have investment interests in coltan. Furthermore, as of 2001, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) had not given African nations the money it had promised to support gorilla conservation programs.⁴⁴

Today, the demand for coltan remains strong throughout the world. The sales of coltan amount to over \$6 billion per year worldwide.⁴⁵ While the U.N.

⁴² Eva Weymuller, *Congolese Mineral Wealth As Coveted As Ever*, at <http://www.ipsnews.net/news.asp?idnews=31665> (accessed March 11, 2006).

⁴³ *World Heritage*, at <http://whc.unesco.org/en/about/> (access April 21, 2006).

⁴⁴ Redmond, *supra* note 15.

⁴⁵ Redmond, *supra* note 15.

has repeatedly stated that they do not condone the killing of wildlife in Africa to harvest coltan, they have not taken any decisive action to address the problem.

ADDRESSING THE PROBLEM: WHAT HAS BEEN DONE

There have been many proposed solutions to address the problem of illegal coltan mining in the DRC. These solutions include more funding for national parks and conservation programs in the DRC, purchasing only coltan that has been certified as being legally mined, and establishing programs for local populations in the DRC to provide them with basic education to find other jobs so that they do not need to abandon school in order to mine coltan as a source of family income.

Some commentators have also called for an outright ban on imports, exports and sales of tantalum originating from the DRC and neighboring countries. The Dian Fossey Gorilla Fund (“Fund”), however, asserts that a direct ban on African coltan is not a viable solution. The Fund is a non-profit organization dedicated to the preservation and understanding of mountain gorillas. Founded by Dian Fossey in 1978, it is one of the most respected conservation organizations in the world and has played an integral part internationally in protecting gorillas in their natural environment.⁴⁶ The Fund considers a total ban on imports, exports and sales of African coltan as simply another way to drive the lucrative market of

⁴⁶ *The Dian Fossey Gorilla Fund International*, at <http://www.gorillafund.org/> (accessed March 10, 2006).

coltan into the hands of illegitimate parties. The Fund also notes that for many of the region's poor people (the status of the majority of the people in the region), the mining of tantalum has been a positive economic boost.⁴⁷ The Fund believes that the solution to the coltan problem is program that would work with local groups, NGOs, and industry leaders to create a situation where benefits from coltan mining can be reaped without harming gorillas and other wildlife.⁴⁸

In support of this alternative approach, in 2001 the Fund began a four point plan to address illegal coltan mining.⁴⁹ The first phase of the plan was publicity. The Fund sent out press releases to the general media describing the problem in KNBP and Maiko National Park and conducted awareness events in order to educate the public worldwide about the threats to the gorillas from the mining of coltan. The second part of the plan was researching "gorilla friendly" mining technology. In this stage, leaders from the Fund met with mining, computer and cellular telephone industry leaders to discuss ways of making their activities less harmful to gorillas. They had success in convincing many industry leaders that illegally mined coltan had deleterious effects on gorillas, but had difficulty getting industry leaders to verify that their products did not contain illegally mined coltan.⁵⁰ The third point of the plan was conflict resolution, in which leaders from the Fund employed the services of the Independent Project

⁴⁷ Redmond, *supra* note 15.

⁴⁸ Redmond, *supra* note 15.

⁴⁹ *Campaign for Gorilla-Friendly Technology Report: March-October 2001*, at http://www.iucn.org/themes/wcpa/newsbulletins/news/pressreleases/Coltan_Camp_rpt.pdf (2001).

⁵⁰ *Id.*

Trust (IDP), an organization with an excellent international reputation for conflict management, to meet with Rwandan and Congolese leaders to discuss the political, economic, and environmental effects of coltan mining.⁵¹ After such a meeting was held in 2001, leaders from both nations agreed to continue this dialogue in South Africa. The fourth and final stage of the Fund's plan was working on projects, such as reforestation and job creation, for the economic benefit of people living near gorilla habitat around KBNP, while also protecting the gorillas. These jobs would create income for the local people that is not dependent on coltan mining. These jobs were also geared towards women, to empower women to have more of a role in their local economy.⁵²

These efforts by the Fund seem to be working to some extent. In a recent 2005 survey of 2000 square kilometers (approximately 1200 miles) of the southern region of Maiko National Park in the DRC, the gorilla population was estimated to be 600 individuals, with reports of even more gorillas having been spotted.⁵³ See Appendix B. This report contrasts greatly with a survey conducted between 1989 and 1992 in which only two small and isolated gorilla populations were found in the Maiko park.⁵⁴

In addition, in 2005, with the cooperation of the Congolese national parks authority, ICCN (Institut Congolais pour la Conservation de la Nature) and the Mountain Gorilla Veterinary Project, the Fund helped confiscate three baby

⁵¹ *Id.*

⁵² *Id.*

⁵³ Redmond, *supra* note 15.

⁵⁴ Redmond, *supra* note 15.

gorillas being offered for sale by poachers.⁵⁵ The men offering the gorillas for sale were apprehended and were expected to undergo prosecution for the poaching and trafficking of endangered wildlife.⁵⁶

Since their founding, the national parks of the DRC have been recipients of more than \$4.2 million dollars from the U.N. Foundation, a charitable organization created to support United Nations causes.⁵⁷ UNESCO has also granted \$4 million to preserving the biodiversity of the five World Heritage Sites in the DRC.⁵⁸

Programs to educate local people in the DRC also have proved successful. Since 1999, the Fund has been educating the children of field staff of the Karisoke Research Center (the center where research is being conducted by the Fund in the DRC) to provide school fees, supplies, and equipment.⁵⁹ The Fund has also financially sponsored the education of children in rural villages so that they may continue going to school instead of leaving school to mine for coltan. Educating residents of local communities is a critical aspect of saving the gorillas, considering that in 2001 school attendance in areas of the DRC near gorilla habitat dropped by thirty percent as students left school to mine coltan.⁶⁰

While these efforts show promising results, more must be done in order to help protect gorillas in the DRC. International law can play a role in seeing that

⁵⁵ Redmond, *supra* note 15.

⁵⁶ Redmond, *supra* note 15.

⁵⁷ Redmond, *supra* note 15.

⁵⁸ Redmond, *supra* note 15.

⁵⁹ *Education for Karisoke Children*, at http://www.gorillafund.org/006_conserv_frmset.html (Feb. 2006).

⁶⁰ Redmond, *supra* note 15.

this result happens. Through revision of already existing international conventions, reduction of the demand for coltan by its main consumers, and adoption of new international agreements, as well as continuation of local gorilla conservation efforts in the DRC, the Eastern Lowland gorilla will have a much stronger chance at survival, as a result of receipt of more international legal support and stronger enforcement actions to protect African gorillas.

THE NEED FOR A REVISION OF CITES OR THE BIOLOGICAL DIVERSITY CONVENTION

There are several international conventions which address the problem of threatened wildlife. One of them is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.⁶¹ Drafted in 1967, agreed upon in 1973, and put into force in 1975, it currently has 169 members and is considered one of the most important conservation agreements in the world.⁶²

⁶¹ *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, at <http://www.cites.org/eng/disc/what.shtml> (accessed March 10, 2006).

⁶² *Id.*

Not a single species of plant or animal has become extinct since CITES came into effect.⁶³ Gorillas are listed in Appendix I of CITES as a protected species.⁶⁴ However, a common criticism of CITES is that it only regulates international trading of animals and not domestic trading, taking or hunting of them. The problem facing the gorilla is not always international trade; rather, a larger problem is the poaching of gorillas to further a domestic trade in bushmeat. This problem is not one that CITES can address in its current form.

Another international convention that seeks to protect wildlife is the Convention on Biological Diversity (CBD). Created at the 1992 Earth Summit in Rio de Janeiro, it identifies three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources.⁶⁵ The CBD is based largely on the precautionary principle, which states that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.⁶⁶ With 188 signatories⁶⁷, the CBD is an important instrument in developing ways to sustain biological diversity throughout the world.

⁶³ Willem Wijnstekers, *Managing Wildlife Trade and Conservation: CITES at 30*, at <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=443&ArticleID=4827&l=en> (accessed July 12, 2006).

⁶⁴ *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, *supra* n. 61

⁶⁵ *The Convention on Biological Diversity*, at <http://www.biodiv.org/doc/publications/guide.shtml?id=web> (accessed July 12, 2006).

⁶⁶ *Id.*

⁶⁷ *Id.*

Although the CBD is a promising agreement, it is also worded in such a way that leaves it very ambiguous and subject to varying interpretations by each ratifying nation. This problem is compounded by the lack of any significant formal enforcement provisions in the CBD. Much of the language leaves the responsibility of protecting biodiversity within each nation state's own judgment. For example, Article 6, entitled General Measures for Conservation and Sustainable Use, states “Each Contracting Party shall, in accordance with its particular conditions and capabilities: (a) Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the Contracting Party concerned; and (b) Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.”⁶⁸ While these goals are noble and appropriate, they are much too vague to require any particular actions by a ratifying nation. The language of Article 6 of the CBD must be made more specific if it is to help threatened species such as African gorillas. It should list specific types of programs, deadlines for the submission of detailed program plans (including funding needs) and goals, and specific means of how to make conservation part of policies that are created.

⁶⁸ *Id.*

Another part of the CBD, Article 8, states “Each Contracting Party shall, as far as possible and as appropriate...(f) Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies.”⁶⁹ This provision would be much more effective in protecting gorillas if it was expanded to require regulation of domestic trading and takings of endangered species of wildlife, as well as making the restoration of gorilla habitat a priority. In order to do this, more specific language should be added to the Biological Diversity Convention. Such language should outline exactly how habitat restoration is to occur, such as banning any human activities (except scientific research when necessary) near or in the gorillas’ habitat to allow the existing habitat to recover. Language regarding the domestic trading and taking of gorillas should be worded strongly to prohibit takings and trades of endangered wildlife under penalty of law of the country in which the violations occurred. Such strong language is essential if the CBD is to be effective in protecting wildlife.

The CBD should be amended to require nations to prohibit the taking of protected animals. Takings is defined by the United States’ Endangered Species Act as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”⁷⁰ The United States Fish and Wildlife Service has defined "harm" as "an act which actually kills or injures

⁶⁹ *The Convention on Biological Diversity*, *supra* note 65.

⁷⁰ Patrick W. Ryan and Galen Schuler, *The Endangered Species Act – A Primer*, at <http://www.mrsc.org/subjects/environment/esa/esaprime.aspx?r=1> (accessed May 11, 2006).

wildlife," including " ... significant habitat modification where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." This definition of a prohibited "take" is appropriate for inclusion in the CBD when addressing the problem of declining gorilla populations. Under this definition of "taking", the CBD would require any ratifying nation to prohibit any person from actively hunting, injuring, or killing gorillas and also would prohibit any ratifying nation from permitting any person to engage in any such prohibited action . If a requirement to prohibit "harm" to endangered species of wildlife was added to the obligations imposed upon ratifying nations by the CBD, significant habitat modification, such as the kind that occurs when people mine for coltan, could also not be permitted by a nation that was a party to the CBD, thus protecting the habitat of the gorillas and keeping them even more safe.

This strong language, at least for the time being, should only appear in the CBD and not CITES. While it is very important that legislation and international agreements all be unified in an effort to save wildlife, and more legislation can see this done, these kinds of changes will take time for nations to adjust to. CITES also contains stronger enforcement mechanisms than the CBD. While ideally both CITES and the CBD would be revised to include stronger conservation language (especially CITES with its stronger enforcement provisions), the process of protecting gorillas in other wildlife needs to progress gradually in order to adequately prepare nations for the changes. Changing too much too soon would

have an adverse effect on those nations whose support would be solicited; they would feel unprepared, as well as possibly feeling that their sovereignty had been encroached upon. Changes in the CBD first would allow these nations to try to afford more protection for their wildlife by the means of change included in the CBD's new language, and then if these measures proved ineffective, the international community could look to amend CITES for stronger measures. The situation of the Eastern Lowland gorillas is a dire one, to be sure, but it would be better to attempt changes in one international agreement at first rather than two in order to have a better chance at securing international support and cooperation instead of risking none at all.

Many African nations will probably protest addition of such stricter and more precise provisions in the CBD, on the grounds that international policy would impermissibly intrude into matters of a sovereign's nation's management of its own domestic resources. Such concerns can be overcome by developed nations promising and providing technological and financial assistance to these nations in order to encourage and assist them to implement these requirements. Such assistance can come in the form of money and technology (such as equipment to detect and prevent poachers), assistance with research and training of government personnel in methods to protect endangered wildlife, and programs to stimulate economic development so that people do not have to engage in mining of coltan to make a living. These positive incentives to comply with CBD obligations also would overcome the lack of any strong formal enforcement provisions in the

CBD. When a country is given the resources to do something, that country then cannot say they are powerless to amend a poor situation.

Revising the CBD to add provisions similar to the U.S. Endangered Species Act's takings prohibitions could potentially be a very effective means of preserving African gorillas. According to a recent study, the longer an animal is protected from takings under the Endangered Species Act, the more likely it is to recover.⁷¹ Three factors under the US ESA were studied: how long a species was covered by the act, whether its habitat had been protected, and whether specific recovery plans were in place.⁷² When an animal was listed for two or more years and specific plans were put in place to aid in the species' recovery, the species had a much greater rate of survival and recovery. The US Endangered Species Act also protects the "critical habitats" of endangered and threatened species of wildlife, defined as the specific geographic areas, whether occupied by the species or not at the time of listing, which contain the physical or biological features essential to the species' conservation and may require special management consideration or protection.⁷³ If the CBD were revised to also require party nations to provide protection for the "critical habitats" of protected animals, the Eastern Lowland gorilla would have an excellent chance at real recovery from the brink of extinction.

Enforcement of these new provisions would require serious inter-government cooperation and regulation. Effective enforcement of these

⁷¹ Maryann Mott, *US Endangered Species Act Works, Study Finds*, at http://news.nationalgeographic.com/news/2005/04/0418_050418_endangered.html (April 18, 2005).

⁷² *Id.*

⁷³ Ryan and Schuler, *supra* note 70.

requirements would require nation states, that have signed and ratified the old version of the CBD, to approve these changes to the CBD and to ratify the amended form of the CBD. Upon nations signing and ratifying the new version of the CBD, the United Nations Environmental Program, the body of the U.N. that administers the CBD, would be responsible for ensuring compliance with the new provisions.

Fulfillment of this this responsibility would require several steps. First, more game wardens and park rangers would need to be employed by member states to ensure that no protected animals were being illegally taken. Part of the problem of current domestic endangered species protection laws and programs is that there are not enough park officials to ensure that gorillas and other protected wildlife are receiving adequate protection; in the past, former poachers have been trained to be game wardens.⁷⁴ But many of the rangers currently employed in the DRC have not been paid in years, thus diminishing the desire to protect the animals they are employed to protect. The U.N. should guarantee more funding for training and salaries of game wardens and park rangers in nations that are party to the CBD and that are attempting to comply with CBD obligations, especially for nations that are developing nations where the protected wildlife species reside largely in World Heritage Sites. The DRC meets both of these qualifications.

⁷⁴ Jo Thompson, *The Situation in Maiko National Park*, Gorilla Journal 21, at <http://www.berggorilla.org/english/gjournal/texte/21maiko.html> (December 2000).

The United Nations Environmental Program should also work closely with groups such as the Fund and other NGOs that are seeking to ensure the survival of gorillas. Groups such as the Fund have vast amounts of knowledge about groups of gorillas, their behavioral styles, their migration patterns, and their breeding habits. NGOs like the Fund closely affiliate with the people living locally where these problems are occurring; and they understand local cultural and economic issues. The U.N. should utilize the knowledge and contacts of these NGOs in their efforts to preserve African gorilla species. NGOs and local groups have also had success in rescuing gorillas from being sold illegally as pets. Cooperation between these groups and the U.N. would only guarantee more success in protecting gorillas.

CORPORATE RESPONSIBILITY

Saving the Eastern Lowland gorilla is not a job solely for NGOs and the U.N. alone. In order to ensure their future, the corporations that are the source of the demand for coltan also must be addressed. The U.N. has passed many resolutions condemning the the invasion of the DRC by warring nations such as Rwanda in their search for coltan, but has done nothing to address the Western corporate demand for coltan.

By the end of 2006, 2 billion cell phone subscribers probably will be using cell phones throughout the world.⁷⁵ This use will be supported by corporations that will be manufacturing these cell phones and supplying these 2 billion people with cell phones, as well as corporations supplying people with laptop computers and other devices that utilize coltan

These corporations will have to take a more proactive approach if the Eastern Lowland gorilla is to be saved. Already, some coltan purchasers have asked coltan suppliers to ensure that coltan does not come from the DRC or neighboring countries; American-based Kemet is one of these companies.⁷⁶ Kemet Corporation requires all its suppliers of tantalum material to provide a Letter of Certification that they do not or will not: (a) illegally mine any tantalum material from DRC Congolese mines, (b) purchase any illegal material containing tantalum, including coltan, from Congolese mines or (c) sell any illegal material to Kemet from such mines.⁷⁷

Kemet is in the minority of companies, however, in these practices. In October of 2002, a U.N. Panel of Experts accused the Cabot Corporation (the largest supplier and refiner of coltan in the world), along with several other US corporations, of helping to fuel the wars in the DRC by purchasing coltan from the DRC and Congo area during the conflict and illegally plundering the country's

⁷⁵ *Industry Forecasts*, at http://www.cellular-news.com/industry_forecasts/ (accessed March 12, 2006).

⁷⁶ Coltan, Gorillas, and Cell Phones, *supra* note 4.

⁷⁷ *Kemet*, at

<http://www.kemet.com/kemet/web/homepage/kechome.nsf/WebEn/43DCBFD57C5CE64ACA2570A5002CBC5B> (accessed March 12, 2006).

natural resources.⁷⁸ Cabot has publicly denied the allegations, but a report by the Belgian Senate states that Eagle Wings Resources International had a long-term contract to supply Cabot with coltan purchased from the Congo during the war. Eagle Wings was also identified in the UN report as contributing to the war.⁷⁹ Another large supplier, H.C. Starck, stated in a press release that "we only purchase raw materials from established trading companies that have worked in various African countries for a long time and are headquartered in Europe or the United States." The press release goes on to claim: "These trading companies have confirmed that H.C. Starck is not being supplied with material from the crisis areas of central Africa."⁸⁰ While H.C. Starck is adamant that it is not being supplied with black-market coltan, one of its *own* suppliers, U.K.-based trading company A&M Minerals and Metals, is less sure as to its own situation. A&M works mostly with Nigerian and Bolivian miners, but also buys up to 3 tons of tantalum-bearing ore a month from Uganda. "I couldn't tell you for 100 percent that this material [from Uganda] didn't come from the Congo," says A & M's managing director James McCombie. "It could have been smuggled across the border."⁸¹

Corporate responsibility can certainly help curb illegal coltan mining.

Indeed, individual statements issued by many companies reiterate the point that

⁷⁸ Jason Leopold, *Bush's Choice for Energy Secretary*, at <http://www.greens.org/s-r/37/37-08.html> (May 5, 2005).

⁷⁹ *Id.*

⁸⁰ Kristi Essick, *Guns, Money, and Cell Phones*, at <http://www.globalissues.org/Geopolitics/Africa/Articles/TheStandardColtan.asp> (June 11, 2001).

⁸¹ *Id.*

illegal coltan mining is morally and ethically wrong. In a press statement, cell phone giant Motorola stated: "We deplore the activities alleged against illegal miners in the environmentally protected region of the Congo and fully support the efforts of relevant authorities to protect regions where the environment or wildlife is threatened."⁸²

Electronic company Ericsson, however, is not in favor of cutting suppliers just because they might use some products from the Congo. "If we found out our suppliers were getting tantalum from the Congo, we wouldn't kick them out, that would not help," says the company's Mat's Pellback-Scharp, the company's environmental manager of consumer products. "We would rather try to influence them to stop doing business there."⁸³

A PROPOSED NEW COLTAN CONVENTION

Perhaps the most effective way to deal with the coltan problem is simply not to rely on corporations to act independently, but to create new international and domestic laws to address the problem, with which companies would have to comply. Currently, there is no international convention that addresses the illegal mining of coltan and its devastating effects.

⁸² *Id.*

⁸³ *Id.*

In order to more appropriately and specifically handle this issue, a new international convention must be created that denounces illegally mined coltan and requires that coltan mined from Africa be government certified as not having been mined illegally in the DRC. The convention should specifically prohibit practices such as clearing massive areas of jungle and refining and washing coltan in streams and waterways. If coltan is to be mined, it must be mined through carefully monitored facilities and factories instead of on the banks of vital areas of habitat for wildlife.

Intense international pressure must be placed on countries such as Rwanda, Uganda, and the DRC to comply with this new convention. All signatories to this convention must agree to not purchase any African coltan unless the governments of African nations where coltan is mined can certify that the coltan was mined legitimately. The reason for signatories agreeing to such a bold provision is because most coltan reserves in the world are, in fact, located in Africa; it would be irresponsible and uneconomical not to use this resource to help Africa become a more stable continent, but it would be just as irresponsible to allow such a valuable resource as coltan to continue to be exploited to the benefit of a few instead of the benefit of nations as a whole. Like any industry, the coltan industry must be regulated so that it can be sustained for the future, so the environment can be protected, and so the people benefitting from the industry may be protected as well. If African nations want to continue profiting from coltan, they should have to do so legally, with illegally mined coltan not being

purchased by any nation signing the agreement or by any corporations subject to the jurisdiction of these nations.

Corporations such as cell phone and computer manufacturers also should be subject to regulation by nations ratifying this convention. A corporation's failure to comply with requirements imposed under this agreement should result first in a warning and then civil or criminal fines, then possibly that company losing its charter or authority to operate in any nation that has signed the coltan convention. A company's compliance with the convention's requirements should be monitored by the nation states in which it operates. A provision in the convention should require all nations to conduct government audits and records requests of corporations dealing in coltan products to ensure that they are indeed complying with the convention by only buying legally mined coltan.

To enforce this new convention, the U.N. should be the monitoring body. The U.N. should work with the governments of ratifying nations to ensure it is complied with. Enforcement measures should include coltan operating facilities being open to U.N. inspectors, proper training and education for coltan miners about environmental and human right issues, and annual government reports being submitted to the U.N. describing coltan mining practices and exports. These measures will allow countries in Africa to properly manage their coltan reserves and to avoid companies refusing to purchase coltan from them.

The key to enforcement of the convention will be transparency: all mined coltan will need to be recorded, and those records must be accessible to the U.N.

as the monitoring body. Nations that refuse to comply with this new convention should be sanctioned by not being permitted to export or import coltan and by being denied economic aid. Because many of countries in Africa are still fully developing their economies, a refusal to comply with this convention could prove to be very detrimental to their future.

If a developed nation imported illegally mined coltan, a possible consequence would first be warnings from the U.N., as well as condemnation of such acts by other nations who had signed the agreement. If these actions did not deter such developed nations, the severance of diplomatic relations temporarily could serve to make those nations revise their stance on coltan imports. It is difficult to compel any nation to take actions to which they are opposed, especially developed nations because their need for different forms of assistance will most likely be much less than that of a developing nation. Therefore, only swift, firm action will cajole a developed nation to enforce such an agreement.

Like any industry, the coltan industry must be properly regulated so that coltan can be sustained for the future, so the environment can be protected, and so the people benefitting from the industry may be protected as well. If African nations want to continue profiting from coltan, they will have to do so legally, for illegally mined coltan should not be purchased by any nation that signs and ratifies the new international agreement.

CONCLUSION

The Eastern Lowland gorilla is in dire need of protection. Left without legal protection, these gorillas will not survive in a world of rapid globalization and advancing technology. They can be saved through cooperation of government, NGOs, and private corporations through the creation of more effective international agreements, and proper enforcement of those agreements. Through the guidance of the U.N. and other organizations, the survival of these gorillas can become a reality and no longer just a goal.

Several things must happen in order for this to occur. First, the U.N. must take a stronger position on protecting gorillas from the illegal activities occurring in the DRC and other African nations with coltan reserves. The U.N. should begin monitoring of coltan mining in African countries to ensure that it is being done in an economically and environmentally responsible and sustainable manner. By monitoring and offering aid to countries with coltan reserves, the U.N. will act as a leader in environmental protection and conservation of natural resources, and protection of the gorilla populations of Africa will be made considerably easier.

Secondly, the Convention on Biological Diversity must be revised to include "takings" in its list of prohibited activities. Where the gorilla is concerned, illegal trading is only part of the threat; the bigger threat comes from takings and trading within the nations in which they reside, when local people kill them for "bushmeat" food. If the Convention on Biological Diversity is revised to

prohibit “takings” of protected animals, gorillas will be afforded a higher level of protection than at present and thus be able to better survive.

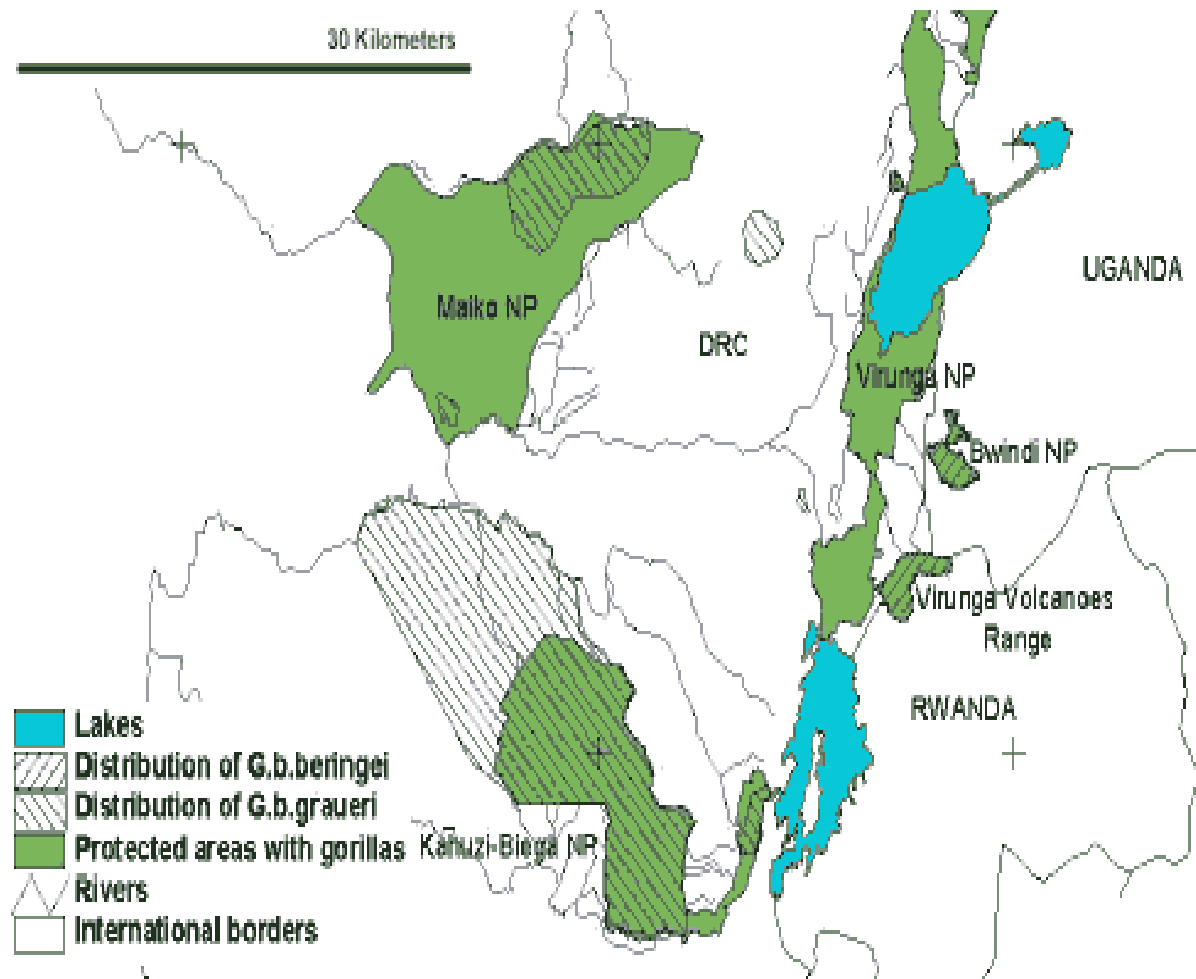
Lastly, a new convention specifically addressing illegal coltan mining must be drafted and signed by all nations who mine, sell, and buy coltan. This new convention needs to regulate not only nations, but also private corporations and companies operating and dealing with coltan products within those nations. The U.N. should be responsible for overseeing the implementation of this convention in ratifying nations as well as monitoring compliance by private corporations using coltan. Through these combined efforts, the fate of the Eastern Lowland gorilla would be more favorable and promising than ever before.

The Eastern Lowland gorilla is a precious resource. Its future hangs in the balance, however - it is a balance involving competing economic and political interests. The gorillas' future is uncertain – they will either thrive once again in the jungles of Africa or be forced to extinction by illegal activity. Whatever the future holds for these majestic creatures, one thing above all is certain: their fate is up to the actions of human beings. The international community must come together and act as one to protect these animals.

This kind of environmental issue affects everyone, no matter where they live. The technology seen in the world today is unlike anything the world has ever experienced before, and the world must be prepared to benefit from this technology while at the same time doing so responsibly and ethically for all of the living plant and animal creatures affected by the technology.

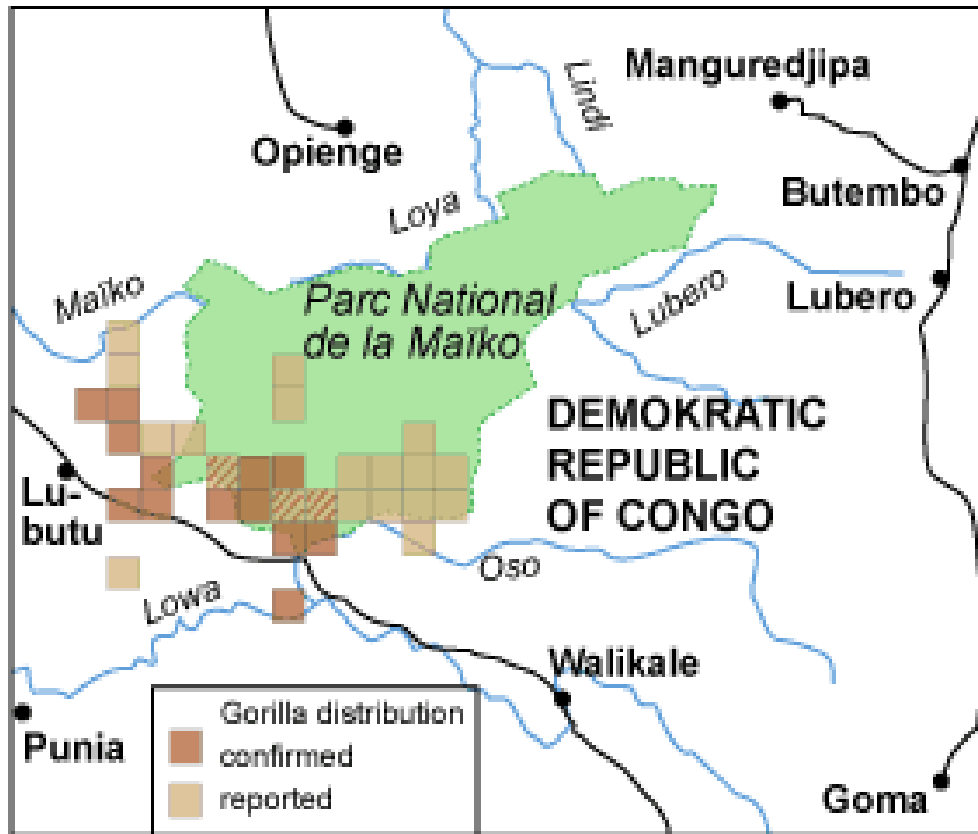
After all, the world is connected.

APPENDIX A



Source: Coltan Boom, Gorilla Bust: The Impact of Coltan Mining on Gorillas and other Wildlife In Eastern DR Congo (2001)

APPENDIX B



Source: Grauer's Gorilla and Other Wildlife in the Maïko South Region, Gorilla

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