

From Riches to Rags – the Paradox of Plenty and its Linkage to Violent Conflict

Pelin Ekmen*

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* Student of law, i.e. Public International Law with University College London; formerly student assistant to the chair of Prof. Dr. Stephan Hobe (University of Cologne) and to Dr. Ralph Wilde (University College London); previous placements include the German Embassy London and The United Nations International Criminal Tribunal for the former Yugoslavia. E-mail: pelin.ekmen@ucl.ac.uk

Abstract

The article addresses the economic phenomenon of the so called Dutch Disease, also known as the Paradox of Plenty, as faced by countries rich in natural resources. Rendering a rough definition of this occurrence, the article continues to dwell on the linkage between violent conflict and illicit resource trade in the Democratic Republic of Congo (DRC).

Using the example of coltan, which is a rare metallic ore essential to the power-storing parts of consumer electronic products, the article explores why the DRC has so far failed to benefit from its large deposits in this highly demanded resource. While in the case of illicit diamond trade the establishment of a certificate of origin scheme has already increased awareness for the matter, a similar certification scheme for coltan is not in place yet. The article thus reviews past experiences made with the Kimberly Certification Scheme against blood diamonds, to find whether its regulatory structures could be applied to coltan trade as well. Identifying the role of law and the Security Council within this debate, the author finally argues in favor of a model akin to the scheme for coltan, which obligates participant states to pass implementing legislation while operating on the basis of voluntariness. However the article also concludes that a certification scheme alone will not be sufficient to combat the resource curse and thus offers a brief insight into possible assisting mechanisms.

A. Introduction

Having analyzed factors that lead to internal armed conflicts in resource dependent states, economists, as well as NGO's, have found reason to believe that states rich in resources are more likely to find themselves faced with internal violent conflicts than other states.¹ In these states it is said that local rebel forces finance arms purchases by trading natural resources such that the international community and their private actors deal with so called "conflict resources". Conflict resources originate from areas controlled by forces or factions opposed to legitimate and internationally recognized governments. These resources are mostly used to finance military action in opposition to those legitimate governments, or in contravention of the decisions of the Security Council.²

While the role of law in addressing conflict generally has been debated many times, this article aims at focusing on the intersection of trade regulation and the prevention or abatement of internal conflict. Due to the currently less than systematic debate on the subject, this article seeks to ascertain how legal scholars currently evaluate the ability of international initiatives to relieve resource curses and improve resource management.

As case studies have demonstrated, providing an analytical framework for the grounds that lead to resource curse requires an individual approach from country to country. Different dynamics apply to different countries depending on the resources involved and their characteristics. Therefore, this article focuses only on the policy responses to the Democratic Republic of Congo (DRC) in the case of its deposits of the rare natural resource "coltan".

¹ 'The Sinews of War' report of Global Witness estimates a higher probability of 23%. 'The Sinews of War' (November 2006) available at http://www.globalwitness.org/sites/default/files/import/the_sinews_of_war.pdf (last visited 26 April 2011). See R. M. Auty (ed.), *Resource Abundance and Economic development* (2001); I. de Soysa, 'Resource Curse: Are Civil Wars driven by Rapacity or Pacity?', in M. R. Berdal & D. Malone (eds), *Greed and Grievance: Economic Agendas in Civil War* (2000).

² United Nations Department of Public Information, 'General Assembly Adopts Resolution on 'Conflict Diamonds'' (21 March 2001) available at <http://www.un.org/peace/africa/Diamond.html> (last visited 26 April 2011).

B. The Paradox of Plenty in the Case of the DRC

The ‘paradox of plenty’ is a term that refers to the situation in which some countries, despite the plentitude of natural resources in their domain, have the unfortunate experience of underperforming in virtually every other area of national endeavor.³ Countries that have deposits of natural resources in abundant quantities have exhibited a gnawing tendency to perform worse on economic indicators than those that are less well endowed with resources.⁴ Their natural resource endowments may put them in the paradoxical position of suffering from underdevelopment precisely because of their riches, a phenomenon generally referred to as the Dutch Disease.⁵

In combination with ethnic divisions and governance structures, the abundance of natural resources brought about that nearly “[fifty] armed conflicts active in 2001 had a strong link to natural resource exploitation, in which either licit or illicit exploitation helped to trigger, intensify, or sustain a violent conflict”⁶.

At the same time some of these most common hypothesis on how resources may influence a conflict, do not always withstand case study data.

³ E. Duruigbo, ‘The global energy challenge and Nigeria’s emergence as a major gas power: promise, peril or paradox of plenty?’, 21 *Georgetown International Environmental Law Review* (2009), 423. R. M. Auty, *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (1993), 1-7.

E. Duruigbo, ‘The World Bank, multinational oil cooperations, and the resource curse in Africa’, 26 *University of Pennsylvania Journal of International Economic Law* (2005) 1, 5; see generally: A. Gelb & Associates, *Oil Windfalls: Blessing or Curse?* (1988).

⁵ J. J. M. Kremers, ‘The Dutch Disease in the Netherlands’, in J. P. Neary & S. van Wijnbergen (eds), *Natural Resources and the Macroeconomy* (1986), 96-136; The term was coined in 1977 by *The Economist* to describe the decline of the manufacturing sector in the Netherlands after the discovery of a large natural gas field in 1959.

⁶ I. Bannon & P. Collier, ‘Natural Resources and Conflict: What We Can Do’, in I. Bannon & P. Collier (eds), *Natural Resources and Violent Conflict: Options and Actions* (2003), 1,7; General empirical review see: M. Ross, ‘What do we know about resources and civil war’, 41 *Journal of Peace Research* (2004), 337-56 and the same author ‘How Do Natural Resources Influence Civil War? Evidence from Thirteen Cases’, 58 *International Organization* (2004) 1, 36; The relationship with preexisting grievances is also stressed by C-P. David & J-F. Gagné, ‘Natural Resources: A Source of Conflict?’, 62 *International Journal* (2006/2007) 1, 7.

The number of correlations and mechanisms attributed as causal by writers appears endless.⁷

They satisfy the demand for quick compelling evidence by linking most of the problems to domestic affairs and the behavior of rebel forces.⁸ In fact, from a statistical point of view the prominent thesis cited most frequently by academics, which investigates the subject of resource curse, laid down in a paper by participants in the World Bank's economics project Paul Collier and Anke Hoeffler, which also takes that approach, could not gain support in all its aspects.⁹

For instance, many scholars explore the connection between the onset of war with the presence of resource wealth. They believe that rebels use looted resource wealth to fund the initial costs to incite a rebellion, including the purchase of arms and hiring of soldiers. This subsequently allows them to challenge government forces strongly enough, to generate at least one thousand battle-related deaths, thus producing a conflict large enough to be classified as a civil war.¹⁰

Responding to this and other common hypotheses on the link between resource abundance and conflict, Michael Ross, who has published widely on the political and economic problems of resource-rich countries, evaluated thirteen cases on the onset, duration, and intensity of civil war.¹¹ He found that in these thirteen cases selected, rebel groups never gained funding from the extraction or sale of natural resources or from the extortion of others who extract, transport, or market resources before the war broke out.¹² Another example is the wide spread idea among, mainly, journalists that resource extraction creates grievances among the local population, because resource extraction companies expropriate the land, force the population to leave the area since they do not provide sufficient job opportunities, such that these social disruptions and grievances provoke civil war. But this aspect could not be validated by the cases examined and the favoring of rebel oriented explanations appears arbitrary.¹³

⁷ M. Humphreys, 'Natural Resources, Conflict, and Conflict Resolution - uncovering the mechanisms', 49 *Journal of Conflict Resolution* (2005) 4, 508-537.

⁸ *Id.*, 511-518

⁹ P. Collier & A. Hoeffler, 'Greed and grievance in civil war', 56 *Oxford Economic Papers* (2004), 563-95.

¹⁰ *Id.*

¹¹ M. L. Ross, 'How Do Natural Resources Influence Civil War? Evidence from Thirteen Cases', 58 *International Organization* (2004) 1, 35-67.

¹² *Id.*, 50.

¹³ *Id.*, 51.

Furthermore it is held that the logic of the resource curse theories is wrongly presented as an economic necessity, when actually resource revenue may allow for higher savings.¹⁴ This may facilitate capital accumulation and generate a more propitious economic environment for growth.¹⁵

However in the case of the DRC it is not only particularly evident that this volatile region did not benefit from such effects, but also in 2006 Security Council Resolution 1698 officially recognized the linkage between illegal exploitation of natural resources, the illicit trade of them and the proliferation of arms which fuel local conflicts.¹⁶ Prior to that, a United Nations (UN) Panel of Experts had repeatedly found a link between the exploitation of natural resources, arms trafficking, and armed conflict in the Great Lakes region, in particular in the DRC. The UN Panel of Experts had also identified individuals and companies from all parts of the world who conducted business with these armed groups and intended to extract and trade natural resources or to provide the armed groups with weapons or ammunition. These activities resulted in the foreign individuals and companies fueling the conflict in the region. Armed groups controlling areas rich in natural resources, have built a self-financing economy centered on the trade of natural resources, one of them being the highly sought after ore “coltan”.¹⁷ “Coltan” is short for columbite-tantalite, a metallic ore. It is a combination of two rare ores, columbium and tantalum, which when refined become metallic tantalum.¹⁸ Eighty percent of the world's coltan deposits

¹⁴ A. Bryant Banat, ‘Solving the problem of conflict diamond in Sierra Leone: proposed market theories and international legal requirements for certification of origin’, 19 *Arizona Journal of International & Comparative Law* (2002) 3, 970.

¹⁵ R. Hausmann & R. Rigobon, ‘An Alternative Interpretation of the ‘Resource Curse’: Theory and Policy Implications’, 9 *National Bureau of Economic Research* (2003) Working Paper 9424.

¹⁶ SC Res. 1689, 31 July 2006, para. 3; see also UN Security Council on Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo in the following resolutions: Res. 1385, 19 December 2001e; Res. 1408, 6 May 2002; Res. 1478, 6 May 2003a; Res. 1459, 28 January 2003b.

¹⁷ UN Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo (UN Experts Panel): UN Doc. S/ 2003/1027, 23 October 2003, in particular para. 43-47; UN Doc. S/2002/1146, 16 October 2002, in particular para. 12-21, and UN Doc. S/2008/773, 12 December 2008.

¹⁸ See British Columbia Institute of Technology – BCIT Chemistry Resource Center, ‘Tantalum’ available at <http://nobel.scas.bcit.ca/resource/ptable/ta.htm> (last visited 26 April 2011).

are located in eastern DRC.¹⁹ Coltan is collected off the ground then mined heavily and sold to processing companies to get broken down into tantalum. Tantalum is one of the hardest metals and can tolerate the highest heating levels.²⁰ The high reliability, low failure rates, and capacity to withstand great changes of temperatures, make coltan a crucial element in the production of tantalum capacitors, which provide electrical storage. Tantalum, derived from coltan, is essential for the power-storing parts, semi-conductors and capacitors of cellular phones, nuclear reactors, PlayStations, and computer chips.²¹ Between 1990 and 1999, sales of tantalum capacitors used in the electronics industry for cellular phones, PCs, and automotive electronics increased by 300 percent.²²

The supply chain of coltan from the DRC passes through about ten intermediaries from supply to consumption.²³ The three main phases after the ore has been mined include firstly the processing phase. Three key processors consume eighty per cent of the ore: the U.S. based Cabot Corporation, German based H. C. Starck and the Chinese state-owned Ningxia Non-ferrous Metals Smeltery.²⁴ These companies export the processed tantalum mainly to capacitor producers. In the second phase the capacitors are assembled into circuit boards. These are then sold to

¹⁹ J. Cuvelier & T. Raeymaekers, 'Supporting the War Economy in the DRC: European companies and the coltan trade' (January 2002), available at <http://www.grandslacs.net/doc/2343.pdf> (last visited 26 April 2011), paras 7-8; however Australia is the largest producer of tantalum where production costs are double the price.

²⁰ A. M. Helmenstine, 'Chemistry: Tantalum Facts' available at <http://chemistry.about.com/od/elementfacts/a/tantalum.htm> (last visited 26 April 2011).

²¹ N. D. Ware, 'Congo War and the Role of Coltan' available at <http://www1.american.edu/ted/ice/congo-coltan.htm> (last visited 26 April 2011), part I, para. 2.

The former US Government is known to have classified the ore as strategic mineral, see N. Laljii, 'The Resource Curse Revised: Conflict and Coltan in the Congo', 29 *Harvard International Review* (2007) 3, 34-38.

²² D. Montague, 'Stolen Goods: Coltan and the Conflict in the Democratic Republic of Congo', 22 *SAIS Review* (2002) 1, 103-118; Coltan is also needed for the manufacture of night vision goggles, camera lenses, fiber optics, CB radios, smoke detectors, nuclear reactors, and airbags. It is also used in surgical equipment for bone repair, internal stitching to connect torn nerves, and woven gauze to bind abdominal muscles.

²³ K. Essick, 'Guns, Money and Cell Phones' (11 June 2001) available at <http://www.globalissues.org/article/442/guns-money-and-cell-phones> (last visited 26 April 2011).

²⁴ T. Ma, 'China and Congo's coltan connection' (2009) available at http://project2049.net/documents/china_and_congos_coltan_connection.pdf (last visited 26 April 2011), 3.

electronics manufacturers like Apple, Nokia, Dell, IBM, Motorola, Canon and Samsung.

C. Desirability of a Certification Mechanism for Coltan

Although most coltan is found in the DRC, the supply chain for coltan-derived tantalum is complex. The mined coltan is passes through many middle men before it reaches the international market. Once the coltan is sold onto that market, it is nearly impossible to trace its origins from the end product back to the mines.²⁵

In accordance with the Protocol Against Illegal Exploitation of Natural Resources, the International Conference on the Great Lakes agreed on putting a regional certification mechanism in place, for the monitoring and verification of natural resources within the Great Lakes Region in Africa. There are, thus, two questions this section would like to address. The first is whether a well-structured ‘certificate of origin’ regime could be an effective means, of ensuring that only resources from government-controlled areas reach markets. The second and related question is whether such a regime would be a desirable approach?

The Protocol Against Illegal Exploitation of Natural Resources cited the widely known commodity tracking system with regard to diamond trade – the so called Kimberley Process Certification Scheme (KPCS) – as its inspiration.²⁶ Countries in Southern Africa, the corporate entity De Beers, and human rights NGOs formed a coalition to undertake systematic action in form of a certification scheme to intercede with the trade of “blood diamonds” that financed rebel forces and deadly conflicts in Liberia, Sierra Leone, and the DRC.²⁷ As the General Assembly put it, all other Member States were to be encouraged to participate in the Process.²⁸

The Participants were to (1) establish a system of internal controls; (2) utilize tamper resistant containers; (3) enact implementing and enforcement legislation, including “dissuasive and proportional penalties for

²⁵ D. Montague, ‘Stolen Goods: Coltan and the Conflict in the Democratic Republic of Congo’, 22 *SAIS Review* (2002) 1, 103-118.

²⁶ ‘Kimberley Process Certification Scheme’ (November 2002) available at <http://www.kimberleyprocess.com/download/getfile/4> (last visited 26 April 2011), preamble.

²⁷ I. Smillie, ‘The Kimberley Process Certification Scheme for Rough Diamonds’ (October 2005) available at http://www.pacweb.org/Documents/diamonds_KP/kimberley-process.pdf (last visited 26 April 2011), 2.

²⁸ GA Res. 55/56, 29 January 2001.

transgressions”; and (4) “collect and maintain relevant official production, import and export data, and collate and exchange such data”²⁹.

Since it is suggested that the Kimberley Process serves an example for managing conflicts regarding other commodities, it needs to be examined if its regulatory structures could be applied to the coltan trade as well.

I. Scope of a Certification Scheme: the Structural Approach of Voluntariness

Usually, state participants of the KPCS strive to fulfill the above mentioned obligations by adapting adequate national legislation and instructing their domestic authorities. Similarly the scheme includes voluntary self-regulation initiatives both for the diamond industry and organizations within their capacity as participants. The participants individually provide for information on the measures taken to obtain a degree of compliance and for statistical data on the effects of those measures.

As a voluntary system, however, the KPCS is only as effective as the participants’ own internal control mechanisms.³⁰ But does the structural approach of voluntariness also deprive the initiative of its legal value? Membership with the KPSC requires the establishment of regulations regarding the export and import of the conflict resource, as well as a coherent certificate design and the existence of domestic penalties. Hence the KPCS did not decide to operate without hard law but rather shifted the highly legalized obligations onto the domestic level. In spite of the discretion left to states as to how the national laws will be adapted, eventually they have to prove the implementation of binding law to become a member. States have been attracted by the voluntary, rather than mandatory, agreement and have had a vital interest in proving these efforts. For instance when Liberia initially failed to do so it took the state several,

²⁹ Kimberley Process Certification Scheme, *supra* note 26, para. IV (see also for further obligations that are not mentioned here).

³⁰ M. Kaplan, ‘Carats and Sticks: Pursuing War and Peace Through the Diamond Trade’, 35 *New York University Journal of International Law & Politics* (2003) 3, 604; see S. A. Malamut, ‘A band-aid on a machete wound: the failures of the Kimberley Process and diamond-caused bloodshed in the DRC’, 29 *Suffolk Transnational Law Review* (2005) 1, 48.

petitions to enter the KPCS, until it demonstrated the presence of sufficient internal controls.³¹

Interestingly, many states were attracted to the KPCS including those that either had a vital interest in continuing trading their resource or those that anticipated jeopardy to the bargaining position of their companies if the KPCS was not implemented. Apparently governments were aware that effective chain of custody schemes for natural resources can help, for instance, in building confidence with potential investors.³² But the KPCS was faced with members that struggled to implement their obligations under the scheme into their domestic systems. Also, country visits to monitor compliance with the KPCS standards could only be carried out with the consent of that country.

Having established the KPC as a widely recognized scheme, in these events the international community remained wary of maintaining the stability of the system. This is illustrated by the following cases when the community responded actively to some members' failures to comply with their obligations.

In 2004, Brazil had been accused that its loose internal regulations led to many certificates being issued fraudulently. It later became evident that this was the case concerning at least 30 percent of KP certificates issued by the domestic authorities.³³ Nevertheless, it was interesting to observe that Brazil's own internal review cooperated in finding these figures. The authorities went on to work together with the KPCS Peer Review team that was sent to Brazil to investigate the accusations.³⁴

After a report to the UN Security Council in 2006 had found that significant volumes of conflict diamonds from the rebel-held area of the

³¹ U.N. News Service, 'UN Hands Over Control of Diamond Certification Office to Government' (2 May 2007) available at <http://unmil.org/1article.asp?id=2187&zdoc=1> (last visited 26 April 2011).

³² L. A. Whitmore, 'Intervention and post -conflict natural resource governance: lessons from Liberia', 17 *Minnesota Journal of International Law* (2008) 2, 428.

³³ L. Truong, 'The Greatest Story Ever Sold Is a Fantasy Covered in Blood' (4 January 2007) available at <http://www.wisebread.com/the-greatest-story-ever-sold-is-a-fantasy-covered-in-blood> (last visited 26 April 2011).

³⁴ Summary of Kimberley Process Review Visit to Brazil 1: (24-29 April 2006) available at p. 40 of the 2006 KPCS review submitted by the Ad Hoc Working Group: [http://www.worlddiamondcouncil.org/download/resources/documents/Kimbeley%20Process%20Third%20Year%20Review%20\(1-11-2006\).pdf](http://www.worlddiamondcouncil.org/download/resources/documents/Kimbeley%20Process%20Third%20Year%20Review%20(1-11-2006).pdf) (last visited 28 April 2011).

Côte d'Ivoire were entering the market,³⁵ many NGOs expressed concern about those diamonds being smuggled to Ghana to be then sold as legitimate stones, in an open letter to the Kimberley Process Chairman Kago Moshashan.³⁶ As a result, the Final Communique from the Kimberley Process Plenary in Botswana investigated in the case and confirmed the concerns expressed, resulting in Ghana agreeing to tighten its internal controls so as to not endanger its further membership in the KPCS.³⁷

Apparently, the KPCS lacked adequate controls to ensure that its certificates were only issued for rough diamonds mined in or legitimately imported into the country.³⁸ This was one of the reasons why the Republic of Congo, after joining the initiative, could continue to engage in illicit trade of diamonds and was consequently expelled in 2004. Once it was accepted by the review team that the Republic of Congo made “very serious domestic effort to put their house in order and to get their domestic systems to the level required” the country was readmitted in November 2007.³⁹ A similar story happened with Turkey where readmission was possible but equally tied to the proof of sufficient effort made by the country to comply with the standards.

Additional evidence for this constant activity of the project is reflected in the fact that once the KP had proven to be a widely respected scheme its participants gradually agreed to more regulations.⁴⁰ The Working Group on

³⁵ The Diamond Registry, ‘United Nations: Ivory Coast Diamond Smuggling a Concern’ (November 2006) available at <http://www.diamondregistry.com/News/2006/un.htm> (last visited 26 April 2011).

³⁶ Letter from Shane Kelleher, Amnesty International *et al.*, to Kago Moshashane, Chair, Kimberley Process (3 November 2006)

³⁷ Kimberley Process Plenary, ‘Final Communique’ (6-9 November 2006) available at www.kimberleyprocess.com/download/getfile/324 (last visited 26 April 2011), para.1.

³⁸ It should be stressed that initially the KPCS struggled in many fields which author Tracey Michelle Price explains with: “Diamonds are the centerpiece of a multi-national, multi -billion dollar industry that has thrived on tradition, elitism, and secrecy for hundreds of years. The legal diamond business operates behind closed doors, on handshakes and trust[...].The industry's initial reluctance to embrace the KP as a new way of doing business is not surprising”, see, T. M. Price, ‘The Kimberley Process: conflict diamonds, WTO obligations, and the universality debate’, *12 Minnesota Journal of Global Trade* (winter 2003) 1, 29.

³⁹ M. Deibert, ‘Trade: Blood Diamonds No Longer Congo-Brazzaville's Best Friend’ (30 November 2007) available at <http://ipsnews.net/news.asp?idnews=40296> (last visited 26 April 2011).

⁴⁰ European Commission, ‘Kimberley Process: Commission Welcomes Boost to Diamond Scheme Transparency’ (2 April 2007) available at <http://europa.eu/>

Statistics reviewed that the KPCS “monitored \$37.6 billion in rough diamonds exports representing more than 500 million carats of rough diamonds”. “Participants issued 59,000 certificates to accompany those shipments”⁴¹.

Surely the KP could have introduced a non-voluntary system to agree to this degree of openness right from the beginning in 2002, when it established only a minimal set of enforcement mechanisms. But it is highly questionable whether this could have resulted in the same amount of acceptance and legitimacy that the project can rely on today, as the mentioned figures indicate that most of the participants believe in the authority of the Kimberley Process.

Since one of the main challenges in establishing trade regulation in a market benefiting from political conflict consists of aligning different interests of different actors with different degrees of power, the structural approach of voluntariness facilitates the cooperation between them and appears preferable to be adapted by a probable future certification scheme for coltan.

II. Limits of a Certification Scheme: Economic Consequences of Government Control

The KP regulations are designed to cut off rebels’ access to diamond rents and the certifications enable trade via government control only.

But is a certification scheme fostering this policy adequate and sufficient to combat the resource curse?

The process of resource curse is often accompanied and marked by human rights violations suffered by the civilian population.⁴² For instance, in 2001 a sudden increase in coltan demand led firstly to the violent

rapid/pressReleasesAction.do?reference=IP/07/456&format=html&aged=0&language=EN&guiLanguage=en (last visited 26 April 2011).

This has also been heavily criticized, for the Republic of Congo allegedly managed to evade KPCS controls and continue to serve as a hub for the smuggling of conflict and illicit diamonds at the time of readmission, see, H. B. Goldman, ‘Between a hard ROC and a hard place: The Republic of Congo’s illicit trade in diamonds and efforts to break the cycle of corruption’, 30 *University of Pennsylvania Journal of International Law* (2008) 1, 359.

⁴¹ Kimberley Process Plenary, *supra* note 37, para. 5.

⁴² I. J. Tamm, ‘Dangerous Appetites: Human Rights Activism and Conflict Commodities’, 26 *Human Rights Quarterly* (2004) 3, 687, 702; J. Graff, ‘Corporate war criminals and the International Criminal Court and profits in the DRC’, 11 *Human Rights Brief* (2004) 2, 23.

expulsion of many farmers and their families from their land at the hands of rebel groups and businessmen and, second to the use of slave labor.⁴³ Many scholars criticized the KPCS's restriction to trade regulation as not desirable, for that would only end access of rebels to the commodity but not necessarily terminate human rights violations. They consider the initiative to be a means for the state to regain its hegemony over the use of force without requiring it to improve its human rights or governance practices.⁴⁴ The KPCS is reproached for not bearing in mind the probability of a state not being willing or capable to invest in the improvement of such standards. Against the backdrop of the aforementioned active process within the KPCS, however, even the implementation and acceptance of mere trade regulations took time and was a gradual process. Overloading an economically focused scheme with these expectations will not help towards reaching prosperity for countries suffering from resource curse. At the same time economic wealth serves as a firm basis for the implementation of human rights. A certification scheme not claiming competence over this matter shall therefore not be regarded as compromising human rights goals, but rather as a chance to prepare a foundation for them. Therefore the following analysis shall only review from an economic perspective, as to whether a low-income, resource-exporting country really prospers, if all resource revenues are managed by the state.

Assessing the way government officials have dealt with the amount of resources that were officially traded, figures from 2003 analyzing revenues collected by the government in the DRC under the tax regime then claim, that 96 percent of them went directly to the government officials or to employees who collected the money.⁴⁵ But even a government that has no such issues might instigate rebellion within society for the mere fact that economies which depend on natural resource exports tie their revenues to the highly volatile global commodity prices. If prices drop, governments

⁴³ Letter dated 23 October 2003 from the Secretary-General addressed to the President of the Security Council, para.10, U.N. Doc. S/2003/1027 (23 October 2003).

⁴⁴ L. Wexler, 'Regulating resource curses: Institutional design and evolution of the blood diamond regime', 31 *Cardozo Law Review* (2010) 5, 1717, 1736.

⁴⁵ In 2005-2006, between 60 and 80 percent of customs revenue was estimated to have been embezzled, see, Freedom House, 'Country Report: The Democratic Republic of the Congo' (2010) available at <http://www.freedomhouse.org/template.cfm?page=22&year=2010&country=7954> (last visited 26 April 2011); see also N. Cahn, 'Corporate governance divergence and sub-Saharan Africa: lessons from out here in the fields', 33 *Stetson Law Review* (2004) 3, 908.

with bad saving policies might raise taxes without offering the benefits of government services in return, creating widespread dissatisfaction which results in a strengthening of opposition movements.⁴⁶

According to the 2001 UNSC Panel of Experts' report on the illegal exploitation of natural resources, the DRC government, in its efforts to defend its territory and secure the supply of weapons, signed mining contracts worth several millions of US dollars with different countries including Zimbabwe, China and South Korea.⁴⁷ At the same time the Human Development Index of the United Nations ranks the DRC on 168 out of 169 countries.⁴⁸ So apparently many issues governments are faced with cannot be addressed by a certification scheme.⁴⁹

Firstly in countries where rebel forces reigned over resource revenues, governments will tend to have less information than an experienced resource extraction company as to the likely value of extraction rights.⁵⁰ It would need the government to acquire geological data to strengthen their basis of negotiation and prevent the underestimation of value. At the same time, in a post-conflict environment like in the DRC, no code or recommendation can serve as a substitute for the government to actually be committed to gain the best price for the extraction rights.⁵¹ This can secondly form a problem in the course of negotiations, if a government wary of its transitional character anticipates not being in power anymore in the future. Thus it might tend to design contracts in a way, which will increase

⁴⁶ C-P. David & J-F. Gagné, 'Natural Resources: A Source of Conflict?', 62 *International Journal* (2006/2007) 1, 14.

⁴⁷ United Nations Panel of Experts, Addendum to the Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo, UN Doc. S/2001/1072, 2001.

⁴⁸ United Nations Development Programme, 'Human Development Index (HDI) – 2010 Rankings' available at <http://hdr.undp.org/en/statistics/> (last visited 2 May 2011).

⁴⁹ Amongst other economists Paul Collier recently pointed out the fields in which specifically designed codes and laws to improve the economic governance of resource rents for resource exporting countries. The section in this article refers to his suggestions mostly. See P. Collier, 'Laws and codes for the resource curse', 9 *Yale Human Rights & Development Law Journal* (2008) 1, 11.

⁵⁰ *Id.*, 15.

⁵¹ See for an overview of the DRC'S history and current post conflict status: G. S. Gordon, 'An African Marshall Plan: changing US Policy to promote the rule of law and prevent mass atrocity in the DRC', 32 *Fordham International Law Journal* (2009) 5, 1361; B. Todd, 'Congo, Coltan, Conflict', 3 *The Heinz Journal* (2006), 1.

current revenues, but at the expense of revenues in the future and consequently risk the country's overall prosperity.⁵²

This goes together with the above-mentioned problem of revenue capture by political elites.

But, even if presuming a more stable political leadership, decisions will need to be made, as to at which level saving rates for resource revenues is recommended. So the third issue is that first, a significant proportion of revenues from resource extraction will need to be saved in order to avoid overall depletion of assets and second, constitutional provision establishing basic principles of the savings decision must be introduced limiting the freedom of a future government in charge to deplete assets.⁵³

It is suggested that governments failing to amend their overall economic strategies will fuel the ongoing conflicts and are one of the reasons for rebels to exploit resources themselves - with or without the existence of a certification scheme.⁵⁴ There are therefore a number of issues that cannot be solved by such a scheme and might require separate approaches so that remedy from resource curse can only be accomplished with an overall set of codes.

III. Limits of a Certification Scheme: the Need of Assisting Mechanisms

Finally the efficiency and success of a regional certification scheme for coltan will not only require the incorporation of structural and economic aspects mentioned so far but also as illustrated by the KPCS the integration of the consumers plays a vital role in establishing international awareness of the project which results in new participants being attracted to becoming members.

Consumers nowadays are aware that the globalization of trade forges certain interconnections. Interest in resource-based conflicts is higher as it can affect every individual more directly. The KPCS could benefit from this. Especially having the De Beers company as a highly outstanding

⁵² In fact in the case of Congo this has occurred in 2006 see, Collier, *supra* note 49, 17.

⁵³ *Id.*, 20, the author furthermore suggests codes dealing with how extraction rights need be sold in professional auctions, the time horizon of extraction rights and a code covering the procedures for public investment.

⁵⁴ N. Cahn & A. Gambino, 'Towards a typology of corporate responsibility in different governance contexts: what to do in the absence of responsible country governance?', 39 *Georgetown Journal of International Law* (2008) 4, 655, 671.

participant from the diamond industry made it easy for the awareness campaign to focus responsibility and attention that would potentially damage a company and demand immediate action. In comparison to that, there is not one single mining company or tantalum processing company with the same stature as a De Beers to focus attention on. Furthermore, diamonds are easier for people to conceptualize than coltan, a mineral that looks like piece of lava rock, hardly as appealing as diamonds. An international awareness campaign will face the challenge of making coltan visually perceivable so that the relationship of the consumer's role and the violent conflicts is portrayed in a tangible way. The DRC's former colonial ruler Belgium is one of the coltan trading centers of the world. In 2001, 18 Belgian NGO's made an attempt to launch such a campaign under the slogan "No blood on my mobile! Stop the plundering of the Congo!"⁵⁵. The campaign was able to exercise pressure on international corporations like Apple, Intel or Sony who requested their retailers to not supply any "blood coltan". However it was not feasible for these major companies to control their subcontractors and they left it to them to control their external suppliers in Africa. In the same year, the aforementioned UN Expert Panel investigated those foreign companies who drew coltan from the DRC. As a result those manufacturing companies took the initiative to supervise their suppliers who collect the coltan from the source. When most of their suppliers failed to prove that the coltan did not originate from conflict areas the German company HC Starck, which refines coltan into tantalum, decided to no longer draw coltan from the DRC.⁵⁶ Due to the accusations, which became public, the reputation of the company suffered and led it to decide to separate from former retailers. At the same time, the company has expressed interest in reviving its business with the DRC once a technical device is invented that can mark the good and guarantee its origin.⁵⁷ Following the path a piece of coltan ventures on before reaching a tantalum processing plant is not a tangible feasible option for coltan suppliers. Thus for instance a certificate of origin regime cannot fully guarantee a clean supply chain that prevents illicit minerals being mixed into fairly traded

⁵⁵ IPIS, 'Supporting the War Economy in the DRC: European companies and the coltan trade' (January 2002) available at <http://www.grandslacs.net/doc/2343.pdf> (last visited 26 April 2011), 7.

⁵⁶ Ma, *supra* note 24, 3.

⁵⁷ J. Lublinski, M. Griebeler & C. Farivar, 'Coltan mines to be 'fingerprinted', German scientists say' (13 August 2010) available at <http://www.dwworld.de/dw/article/0,,5907446,00.html> (last visited 26 April 2011).

shipments. A certificate of origin regime therefore needs to work hand in hand with separate efforts put into the invention of assisting needs to be more specific this is only an introductory phrase to the next bit which specifies the technology.

Only recently the Federal Institute for Geosciences and Natural Resources in Hannover, Germany, invented a so called “fingerprinting” technique based on reference samples from 75 percent of the world’s coltan mines.⁵⁸ To determine which coltan samples are conflict free, color print-outs of pictures taken with an electron microscope are compared with the reference samples. Depending on its origin every raw material has a different mineralogy comparable to an individual human fingerprint. On top of that the geologists use a so called electron microprobe that hits the sample with an electron beam. The emerging x-rays indicate which chemical elements are contained in the sample.⁵⁹ The chemical composition of each mine is unique and can therefore be traced. If a legitimate mine registers its fingerprint with the authorities’ beforehand field samples can be compared to what is already known about that mine. Thus, the geochemical fingerprinting for coltan is one way to enhance transparency of the mineral’s trade and attract companies to draw the raw mineral from the suppliers at the mines directly and not through a number of devious middle men.

The example given illustrates how companies will not be interested in trafficking in the mineral without rebel groups from whom they can buy the same good cheaper than from any government, if certificate of origin regimes are not accompanied by public awareness, forcing companies to protect their reputation. It also illustrates that adequate fingerprinting systems will help both companies and retailers in Africa, to benefit from the rich deposits of coltan in a non-abusive way.

Therefore as a third conclusion of this section, a certificate of origin regime can only be as strong as the public awareness it brings about and as the advanced technologies developed to support its motives.

⁵⁸ Federal Institute for Geosciences and Natural Resources (Bundesanstalt für Geowissenschaften und Rohstoffe), “Coltan-Fingerprint’ der BGR macht Zertifizierung von Handelsketten möglich’ (10 March 2010) available at http://www.bgr.bund.de/cln_116/nn_322882/DE/Themen/Min__rohstoffe/Projekte/Rohstoff-Forschung/LF__Herkunftsnachweis__COLTAN__Newsletter01-2010.html?__nnn=true (last visited 26 April 2011).

⁵⁹ Lublinski, Griebeler & Farivar, *supra* note 57.

D. Role of the Security Council

What is the role of the United Nations Security Council (UNSC) actions under Chapter VII including military capture of resource regions from rebel forces and secondly economic sanctions?⁶⁰

Military capture has not proven effective in cases of resources that are difficult to control by the government in the first place. Since coltan is a mineral, it is easier for rebels to handle it than resources like oil that fall more easily under government control.⁶¹ But even if rebels can be forced into agreements and settlements by military means, this rarely develops into steady peace.⁶² Therefore the main question would be how UNSC resolutions on economic measures would succeed.

Pursuant to Art. 103 of the UN Charter, Security Council resolutions trump other inconsistent legal instruments. Art. 103 has broad implications: Chapter VII resolutions will trump international agreements on trade, investment, and commerce.⁶³ But does the matter of controlling resource flows to rebels lie within the Council's competence?

In 2007, when Belgium organized a session on how natural resources fuel and prolong conflict since "illicit trade in natural resources has become a principal source of revenue" for rebels, governments, and organizations fueling conflict, this brought about an open debate within the Security Council.⁶⁴ The matter was not regarded as an extraordinary occurrence, since the Council started to consider economic affairs as part of its

⁶⁰ In the aforementioned report issued in 2001 by the UN Panel of Experts also recommended an immediate, temporary embargo on the import or export of coltan, timber, gold, and diamonds from or to Burundi, Rwanda, and Uganda and sanctions against any country breaking this embargo, for the proceeds from the sale of coltan are fueling the forces of those three neighboring countries, see Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo, UN Doc. S/2001/357, 12 April 2001, para. 42.

⁶¹ P. Le Billon, 'Securing Transparency: Armed Conflict and the Management of Natural Resources Revenues', 62 *International Journal* (2007) 1, 93, 103; UN Panel of Experts on Liberia, Report of the Panel of Experts Appointed Pursuant to Security Council Resolution 1395, UN Doc. S/2002/470, 19 April 2002, 142.

⁶² *Id.*, 101.

⁶³ R. Bernhardt, 'Article 103', in B. Simma (ed.), *The Charter of the United Nations: A Commentary* (2002), 1292, 1298.

⁶⁴ Security Council, Security Council Underscores Need for Peacekeeping Mandates to Consider Helping States Prevent Illegal Exploitation of Natural Resources from Fueling Conflict, UN Doc. SC/9060, 25 June 2007.

jurisdiction over the maintenance of international peace and security a long time ago. As Art. 39 of the Charter already regards threats to international peace as a basis for action, the economic dimension of a conflict can be a reason to ground jurisdiction, to prevent the outbreak or intensification of violence.⁶⁵ Evidently, the Council's involvement in economic issues grew when, in 1992, the President of the Security Council emphasized new emerging threats: "[T]he absence of war and military conflict amongst States does not in itself ensure international peace and security. The non-military sources of instability in the economic [...] and ecological fields have become threats to peace and security"⁶⁶. Also, in post-conflict environments the Council's peace-building strategies include the motivation to stabilize the ownership of natural resources.

At the same time, the integration of economic factors into the terms "peace and security" has sometimes provoked suggestion that where economic and security issues overlap, the Security Council should not exercise its Art. 39 jurisdiction, but should instead defer to specialized institutions like the IMF, the World Bank, and ECOSOC.⁶⁷ However, independent of the desirability of this more political than legal argumentation on jurisdiction,⁶⁸ an in-depth discussion on whether the Security Council has jurisdiction in conflicts involving resources appears redundant, if economic enforcement measures that were resolved in the past have not been capable of terminating the threat to peace and security. A brief retrospective on the Security Council resolutions attempting to fight illicit diamond trade mirrors the minor success.

In 1998, the Security Council put an embargo on the trade of unofficial Angolan diamonds through Resolutions 1173 and 1176, but it did

⁶⁵ C. Willson, 'Changing the Charter: The United Nations Prepares for the Twenty -First Century', 90 *American Journal of International Law* (1996) 1, 115, 118.

⁶⁶ President of the Security Council, Note by the President of the Security Council delivered to the Security Council, UN Doc. S/23500, 1 January 1992, 3.

⁶⁷ G. del Castillo, *Rebuilding War-Torn States: The Challenge of Post-Conflict Economic Reconstruction* (2008), 55; it has also been doubted if the expansion of jurisdiction to the current extend has been originally envisioned by the drafters of the Charter, see, K. E. Boon, 'Coining a new jurisdiction: the Security Council as economic peacekeeper', 41 *Vanderbilt Journal of Transnational Law* (2008) 4, 991, 1001.

⁶⁸ This argumentation is questioned by those who do not believe in the World Bank's policies so far to establish peace, see article in the case of coltan in the DRC: K. Horta, 'Rhetoric and reality: human rights and the World Bank', 15 *Harvard Human Rights Journal* (2002), 227, 233.

not end the trade which went on to continue through neighboring countries.⁶⁹ Stressing the linkage between the civil war and the diamond trade in Sierra Leone in 2000 the Security Council ruled through Resolution 1306 that all states should take necessary measures to prohibit the direct or indirect import of all rough diamonds from Sierra Leone into their territory, which was not respected as well.⁷⁰

UNSC embargoes were not very successful in curtailing the trade in conflict diamonds, in fact diamond-trading companies and individuals continued to deal in illicit diamonds in defiance of the UNSC Resolutions. The inadequacy of tracking systems among countries to monitor the diamond trade made it difficult for the UN to identify non-compliant companies and individuals. Thus, the implementation and enforcement of a global diamond certification and verification system became necessary in the first place. But even after the KPCS was established the Security Council continued to struggle with the implementation of resolutions in this field. In November 2006, a report to the UNSC found that significant volumes of conflict diamonds from the rebel-held area of the Côte d'Ivoire were entering the legitimate diamond trade.⁷¹ Though the UNSC imposed a diamond embargo on the Côte d'Ivoire the report stated that between “\$9 and \$23 million worth of stones were entering the [diamond] market”⁷².

Also with the experience made especially with the Iraq sanctions from 1990, resulting in a high number of civilian deaths, an erosion of support for the economic embargo took place.⁷³ Thus the Security Council has crucial

⁶⁹ M. Koyame, ‘United Nations Resolutions and the struggle to curb the illicit trade in conflict diamonds in sub-Saharan Africa’, *1 African Journal of Legal Studies* (2005), 84.

⁷⁰ *Id.*, 88-89 explains certain positive effects the Council’s involvement brought about but also draws an overall negative conclusion.

⁷¹ The Diamond Registry, ‘United Nations: Ivory Coast Diamond Smuggling a Concern’ (November 2006) available at <http://www.diamondregistry.com/News/2006/un.htm> (last visited 26 April 2011).

⁷² SC Res. 1643, 15 December 2005.

⁷³ The general concern stemming from that experience that embargos tend to be more detrimental to the interests of the local communities than a help for them need be considered in the case of coltan as well since the average Congolese worker earns around ten dollars a month whereas a good coltan miner can make up to fifty dollars a week, see, J. Parkinson, ‘Black gold: On the Coltan trail’ (23 September 2006) available at <http://greatreporter.com/mambo/content/view/1322/2/> (last visited 26 April 2011); see also, Mvemba Phezo Dizolele suggesting that taking away the income proceeding from the coltan industry may seriously jeopardize the future of poor local communities highly dependent on the coltan trade: M. P. Dizolele,

image and legitimacy problems arising out of its past interventions in economic and financial matters. Unlike international arms embargos or sanctions, which typically are created by states without the express involvement of the arms industry, the Kimberley Process's legitimacy lies in large part with the fact that it is a product of the global diamond industry itself.⁷⁴ If the UN continues to support certifications schemes as it has done in the case of illicit diamond trade and also in recommending a scheme for coltan trade, this will certainly assist the enforceability of such regimes. However emphasis should be placed on specialized, private agreements like the KPCS rather than on the role of the Security Council.

E. Conclusions

The KPCS illustrates how International Law incorporates more than traditional treaty arrangements.⁷⁵ A model akin to it for coltan, which obligates participant states to pass implementing legislation, contemplating a system of national laws and operating as a system of common minimum international standards for national certification regimes, appears favorable. If the system proves itself, states will gradually agree to more regulation and work towards transparent supply chains. However there are limits as to the changes certification schemes can bring about. In respect of these limits, this article has firstly pointed out economic difficulties governments need to work on separately in order to benefit from certification regimes. Secondly the article contended that public awareness of the subject needs to be regarded as a significant factor in establishing wide recognition of the authority of such a regime. Thirdly adequate technical “fingerprinting” methods will attract participants and should therefore accompany a prospective coltan certification regime.

⁷⁴ ‘Millions have Died for Our Cell Phones (8 August 2007) available at <http://www.pulitzercenter.org/openitem.cfm?id=276> (last visited 26 April 2011).

An interesting article enumerating available legal alternatives to UN embargos mainly revolving around a possible accountability of companies and enterprises involved can be found in: M. M. Molango, ‘From “Blood Diamond” to “Blood Coltan”’: should international cooperations pay the price for the rape of the DRC?’, 12 *Gonzaga Journal of International Law* (2008-2009), 1, IV.

⁷⁵ Wexler, *supra* note 44, 1779.