# The Global Observatory of Transnational Criminal Networks

# Coltan Trafficking Network in the Democratic Republic of Congo

No. 5

Estefanía López Guevara Eduardo Salcedo-Albarán (Authors and Researchers)

Luis Jorge Garay Salamanca (Scientific Director) This research was elaborated through protocols and technologies developed by Vortex Foundation (http://www.scivortex.org).



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Scientific Director Luis Jorge Garay

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#### Disclaimer

The facts and the analysis presented herein are sustained in documents and interviews exposed in mass media and judicial records related to the criminal networks analyzed. No primary information uncovering facts has been gathered, which means that only secondary sources were consulted, from legal to media documents. In the case of the names mentioned, quoted or referenced on indictments —with the exception of those specifically mentioned, quoted or referenced in the text as definitively condemned-, the presumption of innocence, in observance of individual rights is always preserved.

The judicial truth is the jurisdiction of the courts, which by law will decide whether the defendants are innocent or guilty.1 It is stated that belonging to, participating in, being connected to, or appearing on a network, as analyzed herein, does not imply having committed a criminal act or being engaged in a criminal enterprise. It is always possible to belong, participate, be connected, or appear on a network as an agent promoting interests that are socially and institutionally beneficial, or as a result of coercion, among other reasons unrelated to criminal acts committed by the agent.

## Introduction

Trafficking of Coltan is the main economic, social and political source of instability in The Democratic Republic of Congo (DRC) and surrounding countries, including Rwanda and Burundi. The illegal market of the ore has roots in transnational and domestic corruption, financial support to armed groups, violation of workers' rights, multinationals collusion, instability of international prices minerals and lack of diversification. Armed groups earn hundreds of millions of dollars every year by trading coltan that is smuggled out of Congo throughout neighboring countries and then shipped to smelters for refinement. Once the coltan is processed, it is difficult to trace its origin, so it easily makes its way all over the world, mainly, in electronic products.

The sophisticated trafficking system of coltan is based on elite networks that operate mainly in DRC, linked to transnational organized crime and also to transnational lawful agents, such as corporations. Several lawful and unlawful agents conform each network. In fact, it has been reported that there is "competition between corrupt generals and rebels. In the case of the militia groups profits go on buying arms on the black market. With the generals, some [profits] go on arms, but lots of it goes on luxury things like villas. The profits are funding the war for everyone - both sides. It's a self-supporting war." (France 24, 2008)

This document is the analysis of a criminal network traffics coltan, diamonds, arms, gold, and other minerals and commodities *across* the DRC and surrounding countries. The document has five parts: The first part is an introduction; the second part is a description of the methodology and the concepts related to Social Network Analysis, which is the methodological approach herein applied; the third part is a presentation of a criminal **network defined as a "coltan trafficking and elite network** in DRC", as well as the sources gathered and processed in this analysis; the fourth part is a presentation of the characteristics of the criminal structure, which includes a description of the types of nodes/agents, the interactions established, and the nodes/agents concentrating direct interactions and the capacity to arbitrate resources. The fifth part includes conclusions related to the characteristics the analyzed network.

# 1. Methodology and basic concepts

## Social Network Analysis

Social Network Analysis (SNA) is a collection of procedures that facilitates an understanding of interactions among individuals or groups. In the present paper, SNA was used to illustrate how social agents interacted over a period of time in order to accomplish criminal objectives.

The social agents participating in the present network were classified through categories generated according to the analyzed information. On the other hand, the interactions established by those social agents were classified under three main categories or dimensions: (i) Economic interactions, which groups subcategories consisting of the physical movement of money and financial transactions, (ii) political interactions, which groups interactions established with and among political leaders, candidates and some officials, and (iii) violent and coercive interactions. Although interactions can be usually classified under any of these categories, there are cases in which additional categories must be applied. SNA allows interactions established by various types of social agents to be illustrated and analyzed, rather than just shown in a traditional hierarchy.

Through algorithms, SNA allows the relevant agents intervening in the network, the subnetworks, the emerging structures, the types of social agents and the types of relationships to be identified and highlighted. In the present analysis, the "relevant" social agents are (i) the 'hub' of the network, on which direct interactions are concentrated, and (ii) the structural bridge with the greatest capacity to arbitrate among the flows of resources and information. Due to the possibilities of analysis and visualization, SNA has been used to analyze the structure and characteristics of illicit networks (Morselli, 2008; Johnson, Reitzel, Norwood, McCoy, Cummings, & Tate, 2013; Radil, Flint, & Tita, 2010).

# The Graph

The criminal situation analyzed in this paper requires interactions of collaboration or confrontation; therefore, it can be analyzed as a social network: "Social networks can be defined as 'a group of collaborating (and/or competing) entities that are related to each other" (den Bossche & Segers, 2013, p. 39). Social networks are analyzed through nodes that represent individuals and lines or arcs that represent the interactions or ties.

Therefore, "(...) a network is defined as a set of nodes connected by ties" (Worrell, Wasko, & Johnstn, 2013, p. 128).

The present case was modeled through a technology of analysis and graphing developed by Scientific Vortex Incorporated. The technology, consisting of protocols for processing, categorizing and analyzing information, generates a database of nodes and interactions. This database allows subsequently analyzing information and characteristics related to specific nodes or interactions.

The first protocol for analyzing the sources of information, consists of identifying "relationships" or "interactions" between two agents, according to the following grammar structure:

[[Name Actor 1][Description Actor 1]][interaction[verb word  $\wedge$  action word]] [[Name Actor 2[Description Actor 2]]]

Each section of this grammar structure is included and processed in the system, through specific protocols that consolidate the mentioned database. The database is then analyzed through additional protocols to generate SNA graphs like the ones presented below, and to calculate and identify the centrality of each node.

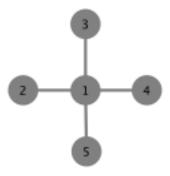
In the present analysis each node represents a social agent; therefore, the concept of "node/agent" is used to identify each individual or corporation participating in the network. As previously stated, each line connecting two nodes represents a social interaction. Also, the arrow in the line represents the specific direction of that interaction: "For instance, if the node/agent X interacts *with/to* node/agent Z, then there is an arrow from a node representing X to a node representing Z." (Salcedo-Albaran, Goga, & Goredema, 2014).

# Indicators of Direct Centrality and Betweenness

Regarding the "centrality" of a node/agent, it is important to differentiate two meanings of centrality: The most connected node/agent or the node/agent with the highest capacity to intervene in the routes of the network. On the one hand, the direct centrality indicator allows identifying the amount of direct interactions established by each node/agent. For instance, in the figure 0 the node/agent 1 has 4 direct interactions, while the nodes 2, 3, 4 and 5 only have one direct interaction with the node 1. Since there is a total of 8 total interactions, the node/agent 1 concentrates 50% (4) of the total direct interactions, the

nodes/agents 2, 3 and 4 concentrate 12,5%. In this situation, the node/agent 1 is the hub of graph 1, because it registers the highest direct centrality indicator.

Figure o. Example of a graph with 5 nodes/agents interacting



The second meaning of "centrality" allows identifying the node/agent with the highest capacity to arbitrate or intervene in the geodesic routes of the network, known as "the structural bridge". While in graph 1 there are only 4 direct interactions, there is a higher amount of geodesic routes, which are the paths that indirectly connect all the nodes/agents. For instance, there is a geodesic route connecting the nodes 2 and 3 through the node 1, and there is another geodesic route connecting nodes 2 and 4 also through node 1, etc. Those geodesic routes, therefore, represent the paths of information and resources that flow across the network.

After calculating the total amount of geodesic routes connecting the nodes/agents of the network, it is possible to identify through the betweenness indicator the node/agent with the highest capacity to intervene in those geodesic routes. As it can be observed in graph 1, the node 1 intervenes in every route of the network because there is not a single path that doesn't go through the node/agent 1, therefore it registers a betweenness indicator of 100%.

# 2. Coltan trafficking and elite networks in DRC

In 2002, a group of experts at the United Nations reported and analyzed a list of actors implicated in the illegal exploitation of natural resources in the DRC. According to the report, "anti and pro-government forces have built up a self-financing war economy centered on mineral exploitation" (ONU, 2002). These armed groups are part of criminal networks linked to armies of Rwanda, Uganda, Zimbabwe and the Government of the Congo, which configures a complex and transnational dimension. In the past, those armies directly controlled the access to valuable resources. However, local militias usually known as Mai-Mai, as well as politicians, have replaced them: "The looting has been substituted with organized systems of embezzlement, tax, fraud, extortion, the use of stock options as kickbacks and diversion of State funds conducted by criminal organizations" (ONU, 2002). Therefore, criminal structures are made up "elite networks" (gilt-edged networks), and their operational schema works through advanced mechanisms of State cooptation. As discussed below, similar mechanisms involving cooptation and coercion have already been observed in other regions and countries where criminal networks infiltrate and manipulate legal and illegal institutions.

In the DRC, the group of experts at the United Nations analyzed three elite networks linked to transnational organized crime. Depending on the territories controlling each structure, the gilt-edged networks operate where the governments of (i) Congo, (ii) Zimbabwe and (ii) Rwanda have domain. The three networks analyzed by the UN share elements that determine how they traffic and illegally exploit minerals.

The core of each network, described in the 2002 report as "cells", consists of politicians, military, businesspeople, and rebel leaders. The relations among their members are based on the cooperation to generate profits and to consolidate local control: "The gilt-edged networks ensure the viability of their economic activities through control over the military and other security forces that they use to intimidate, threaten violence or carry out selected acts of violence" (ONU, 2002). Nevertheless, the criminal structures do not only build a "fort" through the control of the military forces, they also form "entreprises-écran" or front companies that serve to "legally" accomplish not only the ore traffic, but also the smuggling

<sup>&</sup>lt;sup>1</sup> It is a developed concept by ONU experts. In order to facilitate the references to that approach the researchers have adopted the synonym *gilt-edged networks*.

<sup>&</sup>lt;sup>2</sup> We called "the fort" the mechanism of protection that the criminals built in order to guarantee their operations. Therefore, the fort is based on the dominium over the military forces and the setting-up of front companies.

of goods and wildlife; these networks have a specialized mechanism for establishing alliances with air transport companies and organizations related to the illegal arms dealing.

This mechanism comprises an enormous trafficking scheme, due to the extent of the smuggling. According to *l'Union Africaine*<sup>3</sup>, the contraband in West and Central Africa is rarely defined as organized crime since it has always been part of the everyday life for most communities (L'Union Africaine, 2014), as informal and unregulated economic activities. Therefore, the smuggling of goods, seen as a normal activity, is the mean for a crime of bigger dimensions: "the routes of contraband serve as arteries to the passage of merchandise of greater value as minerals, drogues, human beings and wildlife. The example is the network of Sahel, which in the past it only smuggled cigarettes, but now it deals with cocaine having previously turned into the traffic of hashish" (L'Union Africaine, 2014). In general, what is usually defined as informal economic and commercial activities, sustain various criminal activities across West and Central Africa, such as drug trafficking and arms trafficking (Salcedo, 2014).

Studies conducted by *l'Union Africaine* have determined that several agents involved in illicit goods trafficking do not distinguish among the products they carry. In fact, since mid-2000s, the criminal networks have professionalized the transport system in order to evade authority controls'. For instance, these networks frequently mix goods with merchandise of greater value as minerals. Thus, "for all products, they have made agreements about the transportation prices, as well as the participation of members of the local communities, individuals providing security, and the level of implication of Custom and immigration officers" (L'Union Africaine). Traffickers agree on fake documents with public servants of the ministry of mines in order to evade border controls. Besides, illegal cargos easily bypass inspections after truck drivers pay bribes to the officers in dollars.

#### The Government Elite Network in DRC

Due to his affiliation to the Unified Lumumbist Party<sup>4</sup>, member of the presidential majority, and to his Katangan origins, Martin Kabwelulu Labilo is the Minister of Mines since February the 7<sup>th</sup>, 2007. Kabwelulu was the deacon of a church in Kisenso, a Kinshasha deprived neighborhood. His purchasing power has radically changed to such a level of

<sup>&</sup>lt;sup>3</sup> International organization founded as the Organization of *African* Unity to promote cooperation among the independent nations of Africa.

<sup>&</sup>lt;sup>4</sup> Parti Lumumbiste Unifié, PALU.

being able to buy four villas in Macampagne, a posh area of the city. After a while, the former deacon left the party with the objective of conforming his own network and became member of Balubakat Association that gathers the Luba, the most powerful ethnic group of Katanga, and whose member is the President of the Democratic Republic of the Congo, Joseph Kabila (Africa Mining Intelligence, 2013).

Being part of the Balubakats allowed Kabwelulu to come closer to Augustin Katumba Mwanke, the former Counselor to the President that accidentally died in 2012, as well as to Zoe Kabila, the DRC president's brother. In 2011, Kabwelulu used his contacts for being renewed to his post and for appointing his sons at the Minister of Mines. Therefore, the cabinet is currently conformed as follows:

Table 1. Cabinet in DRC, 2013.

Name	Duties
Mamie Bovie K.	Works for the Evaluation, Expertise and Certification Centre for precious and semi-precious substances, CEEC[1].
Graci K.	Experts in the Technical Unit for Coordination and Mining Planning, CTCPM [2]
Tino K.	Works for the Mining Cadastre.
Gloria and Thoms K.	Exert in the Extractive Industries Transparency Initiative[3], ITIE, and in the gold producer, Kibali, branch of Randgold Resources.

Source: Africa Mining Intelligence. Insiders Mining, les cercles d'affaires des décideurs, 26 July 2013.

The **DRC's M**inistry of mines is a familiar cabinet where corruption and secrecy are common. Briberies and fraud scandals, as well as the lack of transparency in the divulgation of concessions and contracts, constantly undermine and generate questions around the ministry management. Scores of mining contracts in Congo have not been made fully public even though the ministry of mines is required by law to publish them. For instance, in **February 2015**, "the Carter Center and three Congolese NGOs identified 62 contractual documents for 17 mining projects that were not made completely available to the public" (Reuters, 2015).

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One of the projects is "Mutanda Minng" whose aim is the exploitation of copper and cobalt in southeastern Congo, owned by Glencore and **Dan Gertler's Fleurete Group**. The reviewing organizations found out that three amendments to the original contract were not published. Regarding the lack of clarity on **bargains**, "the Extractive Industries Transparency Initiative, EITI, which audits disclosure of payments by mining companies to governments, has lauded Congo's progress on transparency, particularly in publicizing project owners" (Reuters, 2015). Nevertheless, Reuters interviewed Elisabeth Caesens, member of the research Carter Center team and she claimed that "contrary to public perception, and contrary to what the most recent EITI DRC report 2012 claims, there's a whole range of mining contracts missing: not a single project had all of its contracts published" (Reuters, 2015).

The aforementioned findings are proof of the relapse into the ministry failures to enforce the law. In fact, recently "the IMF called off a \$530 million loan program in 2012 after the [DRC] government failed to provide sufficient details on the cession of mining assets by state miner Gecamines to a British Virgin Islands-based company" (Reuters, 2015).

The anti-transparency on mining contracts disclosure is linked with the irregular actions of Kabwelulu, his cabinet and allies. In the highlighted **United Nations'** report, the experts identified three circles of power in the elite network: (i) Congolese, and (ii) Zimbabwean government officials, as well as (iii) businessmen, composed the structure. In 2002, Mwenze Kongolo, who operated inside the Congolese branch, was in charge of the National Security Ministry. Kongolo was a shareholder and a deal-broker for diamond and cobalt ventures (ONU, 2002). At present, Richard Muyej, one of the co-founders of the PPRD of Joseph Kabila, is the minister of Interior, Security, Decentralization, and Customary Affairs. Muyej took advantage of his position and, in the same way as Kabwelulu did, he appointed his son to take charge of deals related to customs clearance of all of imports in the ministry (Congo Vox, 2015).

Muyej is a shareholder in various firms and he has a role of deal-broker for all mining companies. In fact, he has a **network of** "entreprises-écran" (screen-companies) that he has quickly established, for obtaining mining contracts: "A source at Kolwezi, who is specialized in subcontracting with mining ventures, regrets the insistence with which Muyej is trying to force the ventures to cancel all the contracts with citizens' small and medium enterprises in order to benefit his business" (La Voix de L'Afrique au Canada, 2015). The

minister also has a customs agency in Bas-Congo for evading taxes and other fees that should be paid to the Congolese state. Muyej was recently appointed Special Commissioner of the province of Lualaba and he decided to open another branch of his agency in Lubumbashi.

The commissioner of Lualaba is also accused of diversion of State resources in DRC; In fact, the newspaper *La Voix de l'Afrique au Canada* reported on November 19<sup>th</sup>, 2015, his attempt to swindle 50 million USD<sup>5</sup>. The apparent reason for committing the crime was the acquisition of the soccer team of Lupopo (La Voix de l'Afrique au Canada, 2015).

In Lubumbashi, *La Voix de l'Afrique au Canada* talked to a lawyer specialized in business who affirmed that Muyej was short of money and, therefore, he had a plan B called "Hold-Up operation", using a known trick: Calling the public attention against the plundering of public resources when, in fact, Muyej itself has apparently been part of that plundering. According to the informant, the minister pretended a robbery with the support of other special commissioners.

The special commissioner of Lualaba is not only involved in corruption and diversion of resources, since he was also accused of giving ordering, to the general Kanyama and to Séguin Ngoie, the execution of the kalunas during the operations Likofi 1 and 2 which were antibanditry police operations launched in Kinshasa between November 2013 and February 2014. Those orders were, apparently, given in complicity with Joseph Kabila. According to Human Rights Watch, Likofi aimed at ending crime by members of organized criminal gangs known as kaluna: "The kuluna had been responsible for a surge of armed robberies and other serious criminal acts across the country's capital, Kinshasa, since 2006. They were known to carry machetes, broken bottles, or knives, and to threaten or exact violence to extort money, jewelry, mobile phones, and other valuables. The kuluna have also been used by political leaders for protection or intimidation of their opponents during elections" (Human Rights Watch, 2014).

Many criticized the brutality of Likofi. In fact, in October 2015, Kinshasa expelled the head of the UN Office for the Human Rights at DRC, Scott Campbell, after the UN reported at

<sup>&</sup>lt;sup>5</sup> In fact, *La Voix de l'Afrique* interviewed a member of the team who asserted that "it is no longer a secret since he personally told me, and he even would tell anyone who will listen to his promise to the youth of this soccer team, and other personalities of Katanga, that he has the cash to buy it"La Voix de l'Afrique au Canada. Jean-Luc Kienge, Alerte! Planification de détournement de 50 millions USD par Richard Muyej, Commissaire spécial de Lualaba, pour acheter Lupopo, 19 November 2015. Available in: http://goo.gl/jkFGxn

least 41 victims during the operation (nine "summary executions" and 32 "disappearances").

#### Relevant actors

Kabwelulu and Muyej are just two members of Kabila's gilt-edged network. In 2002, the Minister of Portfolio, Augustin Katumba Mwanke, played a key role in the trafficking of minerals. A former employee of Bateman's mining company in South Africa and a power broker, Mwanke was in charge of the diplomatic deals linked with the illegal mining (ONU, 2002). Currently, his participation has been replaced for that of Louise Munga Mosozi, minister of portfolio.

Joseph Kabila's accomplice, Elie Kayitura, is in charge of corruption and underground operations of the ANR<sup>6</sup>. He is connected with criminal organizations in Eastern Europe (Serbia, Bulgaria and regions of Russia) that operate in Lille, France, and in Liège, Belgium. Kayitura is in charge of the local and foreign press surveillance, and handles a mole network in the Internet that controls the contents of social networks and forums for monitoring the opponents abroad, and infiltrating the movements of Congolese fighters (DAESC-Wondo, 2015).

Agustin Kasanda Ngoy Tshipepele is secretary of the ministry of mines. One of his contacts is Jacky Propser Ngandu, former head of Simon Tuma-Waku's<sup>7</sup> cabinet, exminister of mines. Kasanda has been the strategic decision-maker of the ministry: until 2006, he organized the Technical Unit of Coordination and Mining Planning, CTCPM<sup>8</sup>. From 2007 to 2009 he was the general reporter of the interdepartmental committee for reviewing mining contracts and in 2009 he accepted the position of general management of mines. According to Africa Mining Intelligence, Kasanda is involved in the trafficking of diamonds in the Mining Society of Bakwana, MIBA<sup>9</sup>. In the CTCPM, Kabwelulu is related to Alexis Mikandji<sup>10</sup> and Donat Kampata, his key adviser. Kampata is also the general organizer of technical affaires at the CTCPM and the cabinet's director of the ministry of mines since 2007.

<sup>&</sup>lt;sup>6</sup> Agence National de Renseignements, ANR.

<sup>&</sup>lt;sup>7</sup> Currently chairman and director of the operating unit of Katanga Mining Ltd.

<sup>&</sup>lt;sup>8</sup> Cellule technique de coordination et de planification minière

<sup>&</sup>lt;sup>9</sup> Sociète Minière de Bakwana, MIBA

<sup>&</sup>lt;sup>10</sup> In April 17<sup>th</sup> (2012) the joint union of the CEEC caught Mikandji purchasing a building of \$5 million USD in Gombe; he is accused of misallocation of financial resources, asserted Africa Mining Intelligence.

Kampata is related to Jean-Félix Mupande Kapwa, who is the president of the Association of the Congolese Geologists, AGECO. Since November 2005, Kapwa heads the Mining Cadastre, but his official term expired in 2010. He remains in the post thanks to his relationship with the presidential circle. According to Africa Mining Intelligence, Kapwa management has granted mining concessions in protected lands, such as the national park of Kahuzi-Biega in South Kivu, in contradiction with the international commitments and the 1969 Congolese law. In 2002, the Technical Director of COSLEG11, Mfuni Kazadi, wrote joint venture contracts that fit the private interests of the elite network (ONU, 2002), but now is Kapwa who accommodates, beyond contracts, the concessions in their favor. Other actors playing a pivotal role on behalf of the private interests are (i) the President of the State diamond company, MIBA, Jean Pierre Tshibangu Kasthidi Kaya, (ii) the planning minister, livier Kamitatu, and the Director General of Gécamines, (iii) Jacques Kamenga Tshimuanga, who facilitated several asset-stripping joint ventures between the State mining company and private companies<sup>12</sup>.

In 2002, the key strategist for the Zimbabwean branch of the elite network was Emmerson Dambudzo Mnangagwa, Speaker of the Parliament and former National Security Minister. Senior military and intelligence officers supported him for promoting an aggressive policy in the DRC (ONU, 2002). Since September 3rd, 2013, Jacob Mudenda succeeded Mnangagwa in his post. The actual cardinal planner got very involved in the Willowvale scandal. According to The Standard.com, the scandal was about a resale of automobile purchases by government officials: "Politicians who were implicated in the scandal but have since been cleared over time include Fredrick Shava (Zimbabwe's Ambassador to China), Jacob Mudenda (Zimbabwe Human Rights Commission) and Reuben Marumahoko (deputy minister Regional Integration)" (The Standard, 2010) Mnangagwa had a key ally, the Commander of ZDF, General Vitalis Musunga Gava Zvinavashe, whose position has been taken by General Constantine Chiwenga. Chiwenga is part of the Joint Operations Command, JOC<sup>13</sup>, the top echelons of Zimbabwe's military establishment: "The members of the Joint Operations Command, JOC, take part in the diamond trade through

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<sup>&</sup>lt;sup>11</sup> COSLEG: COMIEX-OSLEG, Congo-Zimbabwe joint stock company.

<sup>&</sup>lt;sup>12</sup>Report updating of the panel of experts of United Nations, 2002.

<sup>&</sup>lt;sup>13</sup> The JOC includes Defence Minister Emmerson Mnangagwa; General Constantine Chiwenga, commander of the Defence Forces; Air Marshall Perence Shiri, commander of the Air Force, Lt. General Philip Sibanda, commander of the National Army, Augustine Chihuri, commissioner of the Zimbabwe Republic Police; Major General Paradzayi Zimondi, head of the prison service; Happyton Bonyongwe, director-general of the Central Intelligence Organization; Gideon Gono, governor of the Reserve Bank of Zimbabwe.

two enterprises: Nusunuguko Nkululeko Holdings and Impetus Capital, based out of Clarion House on Sam Nujoma Street in Harare. They trade approximately \$50 million diamonds on an average month. The heart of this commerce is Zimbabwe Defence Industries, ZDI, a government procurement agency that traded top gem quality Marange diamonds from the Minerals Marketing Corporation of Zimbabwe, MMCZ, to dealers in Johannesburg, who later trafficked them to Dubai" (Partnership Africa Canada, 2012). According to United Nations, ZDI also makes deals with the Ukrainian diamond and arms dealer Leonid Minim (ONU, 2002).

Among the businessmen in the elite network, George Forrest<sup>14</sup> is a Belgian businessman who made his fortune in the mines in the DRC with the collusion of highly placed government officials who provide mining licenses and export permits in return for private gain. He is accused of gunrunning in favor of Joseph Kabila and his father, Laurent-Désiré (Le Parisien, 2012).

Regarding the Rwandan branch, members of the elite network of Rwandan origin maintain commercial ties with transnational criminal networks. In 2002, Victor Bout<sup>15</sup>, Sanjivan Ruprah and Richard Muamba Nozi were in charge of transporting (i) coltan and cassiterite, (ii) supplies into mining sites, and (iii) military troops and equipment. Nevertheless, in April 2012 Viktor Bout was sentenced to 25 years in a U.S prison for charges of terrorism, but he left an active network behind: "His associates assembled on the Indian Ocean island of Mauritius to prepare a new launching pad for gunrunning to UN-embargoed countries. From Iran, through United Arab Emirates, to their new base in Mauritius, with tentacles stretching to the Democratic Republic of the Congo and Sudan. Leading the charge are

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<sup>&</sup>lt;sup>14</sup> Groupe George Forrest, GGF.

<sup>&</sup>lt;sup>15</sup> "Known as the Merchant of Death, Bout is alleged to be a notorious arms trafficker. Viktor Bout is a Russian businessman who made his fortune in air cargo. He has been accused and indicted for illegal weapons trafficking although he denies the charges. The United States and other countries allege that Bout made a fortune in providing arms to all sides in various African civil wars, busting sanctions and trading with terrorist organizations. Bout graduated from the Military Institute of Foreign Languages and is said to speak six languages. He served in the Soviet military as a translator and possibly spent time in Mozambique. He may have also served in Soviet military intelligence. Numerous allegations exist about Bout selling arms to various groups including Hezbollah, and to groups immersed in conflicts in the Congo and Columbia. Despite the many charges, Bout has been difficult to track. His planes are often registered and re-registered in various countries although his main base of operations seems to be Sharjah, in the UAE. His companies have been suspected of working with other weapons traffickers but he also has a large legitimate business. He has shipped weapons for the US Government (which used him in the Gulf and Afghan wars), United Nations and other governments. He was arrested in Thailand in 2008 on an international warrant. The US asked for extradition charging him with conspiracy to materially support a terrorist organization, the Revolutionary Armed Forces of Colombia (FARC), conspiring to murder Americans, and conspiring to acquire and use anti-aircraft missiles. The Thai government was initially hesitant to allow his extradition, but eventually ruled in favor of the US in 2010. He is currently being tried in New York for the charges against him". Source: http://goo.gl/N6EOqK

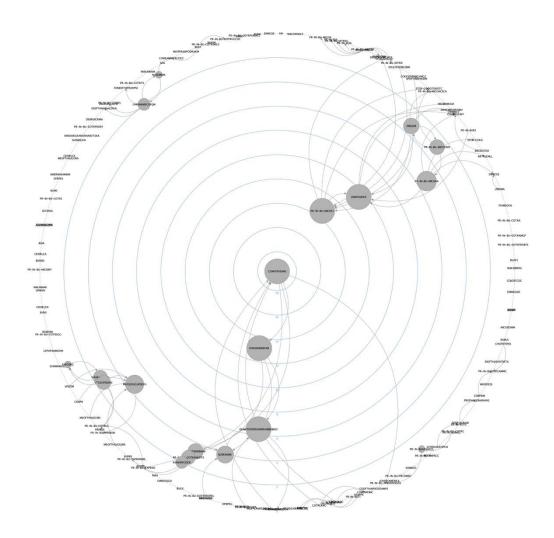
two Russians, Andrei Kosolapov and Sergey Denisenko, both under U.S. watch" (Lynn Austin, 2012). According to Kathi Lynn Austin, the three primary regions that the trafficking networks have in their gunrunning sights include (i) The Middle East via Iran, (ii) the Great Lakes Region via the Democratic Republic of the Congo and (iii) the Horn of /East Africa via Sudan and Somalia (Lynn Austin, 2012)

## 3. Network's Characteristics

## Nodes/agents

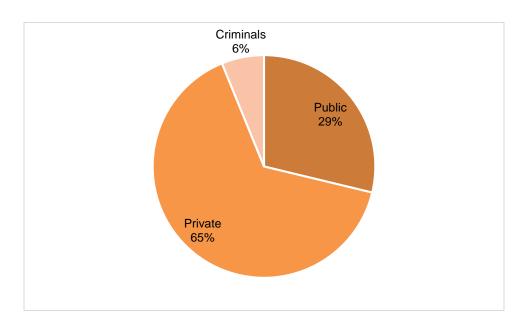
After processing the UN report described above, a total of 146 nodes/agents were identified; however, the sources only allowed establishing relationships between 81 of those nodes/agents, which means that 65 nodes/agents are isolated in the resulting model. Additional information is required for identifying and modeling specific interactions among the isolated nodes/agents.

Figure 1. The Government Elite Network in DRC. The size of the nodes represents the indicator of direct centrality (percentage of direct interactions).



The nodes/agents were categorized as private (65,0%), public servants (28,70%) and criminals (6,10%).

Figure 2. Nodes/Agents of the Government Elite Network in DRC.



The most relevant type of nodes/agents identified in this case groups the members of the private sector: the category "Private" constitutes 65% out of the total amount of nodes/agents. Most of individuals grouped under this category are international mining companies, businessmen, joint ventures, minerals trading firms (comptoirs) and employees of the companies. According to the United Nations research, the mineral assets of DRC are moved into joint ventures that are controlled by the network's private companies: "These transactions, which are controlled through secret contracts and off-shore private companies, amount to a multi-billion-dollar corporate theft of the country's mineral assets" (ONU, 2002). Some 50 international mining companies, 19 businessmen, 17 joint ventures, comptoirs and employees of the companies are the main beneficiaries of these arrangements.

Figure 3. Private nodes/agents of the Government Elite Network in DRC.

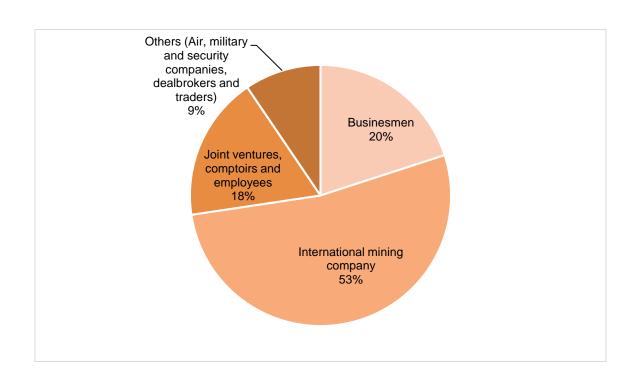
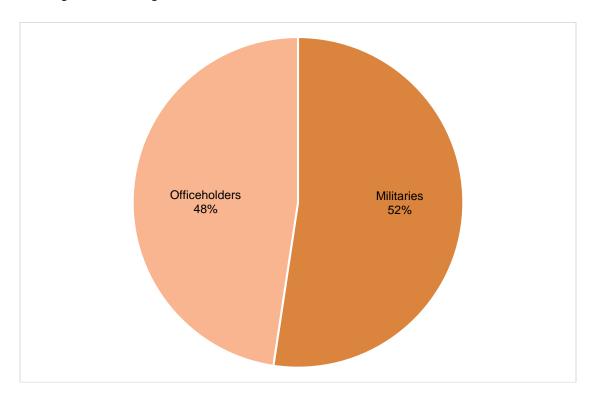


Figure 4. Nodes/agents clasified as Public servants. Government Elite Network in DRC.



Other relevant types of nodes/agents group the members of the public sector: the category "Public servants" constitutes 29% out of the total amount of nodes/agents. Most of the members grouped under this category are officeholders (48% out of the public sector nodes/agents) and militaries (52% out of the public sector nodes/agents) who are the main beneficiaries of the overpriced subcontracting and procurement arrangements established with companies and criminals linked to the network. In fact, "the officers controlling security at the main joint venture sites have been involved in high levels of theft from production" (ONU, 2002). Managers in several companies, supported by public servants, collude in those thefts.

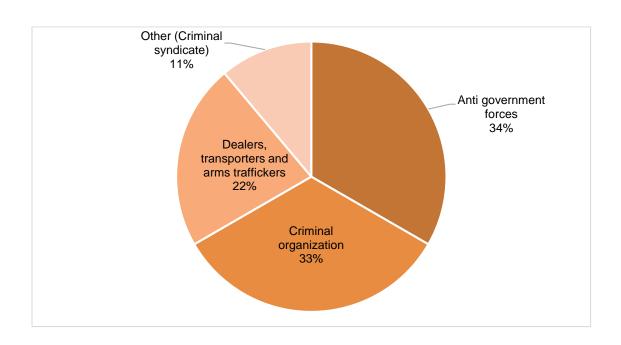


Figure 5. Nodes/agents clasified as "criminals". Government Elite Network in DRC.

In total, 9 nodes/agents were classified as members of the "pure" criminal structure, specifically 3 were classified as belonging to "Criminal Organizations" and 3 were classified as belonging to "Anti-government forces". The remaining "criminals" were classified as "Dealers, transporters or arms traffickers" (2 cases) and members of a criminal syndicated (1 case). As it has previously stated, the sophisticated trafficking mechanisms implemented by this criminal network lies in the connections between privileged members (Businessmen, militaries and civil servants) of the elite network, who

run joint ventures linked to the smuggling of precious metals and gems, arms trafficking, illegal foreign exchange trading and money-laundering.

#### **Interactions**

A total of 92 interactions were registered and modeled, distributed under the following 4 categories: Economic (57,60%), logistics (29,34%), political (11.9%)and Violence/Coercion (1,08%). The category consisting on "Economic interactions" registered 53 relationships in which some of the main participating nodes/agents are DRC villagers, local defense groups and négociants selling coltan to comptoirs and international mining companies. For instance, the subcategory "Selling Coltan" registered 12 interactions, with 2 of those interactions being established between (i) COTRLRNG, (ii) villagers selling coltan, and (iii) COMITRFIMC, a comptoir. The beneficiaries of these exchanges are some Rwandan army officers who own the comptoirs and some Congolese citizens.

The interactions grouped under the Economic category, expose the sources of revenues of the gilt-edged network. Although the network exercise monopolistic control over various RDC's minerals, including coltan, diamonds and cassiterite, mining profits are not its only source of revenues, since the network also obtains profits through criminal activities including theft, embezzlement and diversion of "public" funds, undervaluation of goods, smuggling, false invoicing, non-payment of taxes, kickbacks to public officials and bribery. As shown below, under this variety of criminal activities, several types of economic and financial interactions are established among the private, public and criminal nodes/agents interacting in the network.

The following are the specific and detailed interactions categorized as "Economic":

Table 2. Economic Interactions

Selling coltan	12
Fraudulently evacuating wood	4
Counterfeiting operations	4
Being a member of the Tremalt-ZDF forum	4
Making deals- profit-sharing agreement	3
Making illegal foreign exchange transactions	3
Pillaging- Looting diamonds	3
Others	20

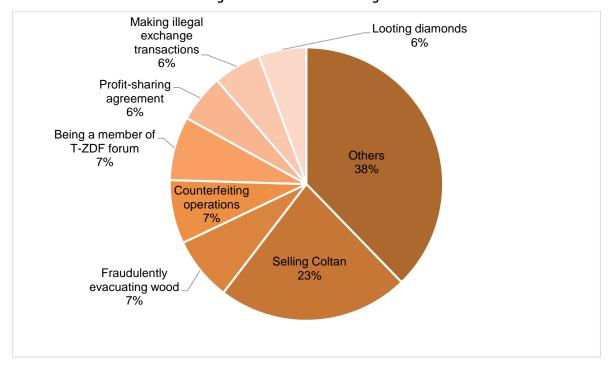


Figure 6. Economic Sub-Categories

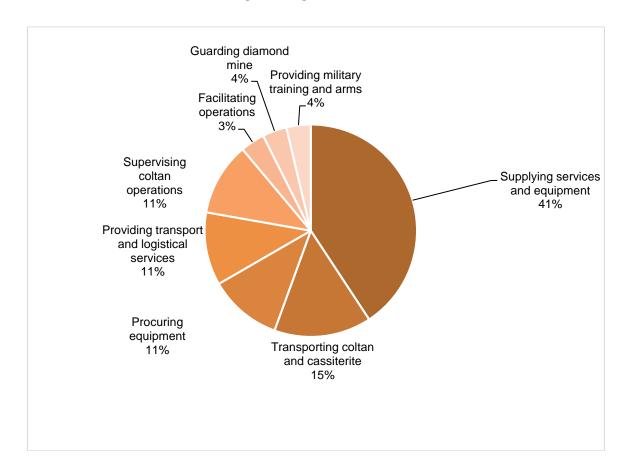
As it can be observed, "Selling Coltan", "Maintaining commercial ties with transnational criminal network for counterfeiting operations" and "Fraudulently evacuating wood" are the three most relevant types of economic interactions. Nevertheless, the subcategory "Participating in a plan - Being a member of the Tremalt - ZDF forum" is critical, since it refers to a forum that has been established between **Tremalt** (a company owned by Zimbabwe national **John Bredenkamp**, that held 80% of the **Kababankola Mining Corporation**, KMC) and the Zimbabwe Defence Forces, ZDF, to, apparently, "look after the interests of the Zimbabweans" (ONU, 2002). However, one of the forum main members, ZIBUJAB, got involved in procurement of equipment to the ZDF and in illegal foreign exchange transactions. All of them are listed of persons for whom the United Nations panel recommended a travel ban and financial restrictions in 2002.

The second most relevant type of interactions describes the following logistic activities of the network:

Table 3. Logistics Interactions

Supplying services and equipment	11
Transport of coltan and cassiterite	4
Procuring equipment	3
Providing transport and logistical services	3
Supervising coltan operations	3
Facilitating operations	1
Guarding diamond mine	1
Providing military training and arms	1

Figure 7. Logistics Interactions



The four most relevant types of logistics interactions are: (i) "Supplying services and equipment", (ii) "Transporting coltan and cassiterite", (iii) "Procuring equipment" and (iv) "Providing transport and logistical services". These types of interactions, being the most relevant among the logistic interactions, illustrate how related are the mining trafficking and paramilitary operations. Also, as it can be observed, this category includes interactions

that are not strictly criminal, therefore illustrating how relevant are grey interactions that happen within lawful institutions for the general operation of the criminal network.

The elite network maintains close commercial ties with transnational criminal networks, including those of DEANTROFWEANMIVABBBBBSV, described as dealer and transporter of weapons and minerals, BUSRSNMK, described as businessman, and CODITRRMNMN, described as a Congolese diamond trader: "The dealer's aircrafts are utilized for a number of purposes including transport of coltan and cassiterite, the transport of supplies into mining sites, and the transport of military troops and equipment" (ONU, 2002).

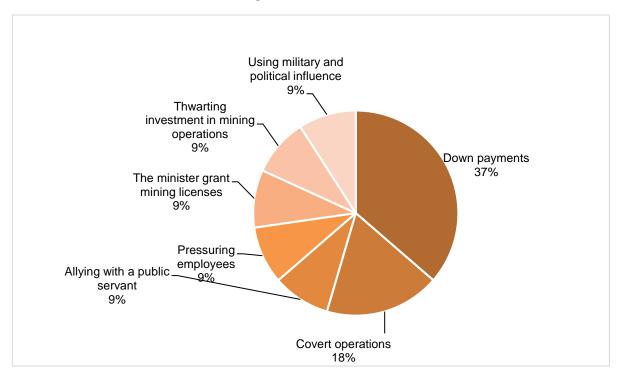


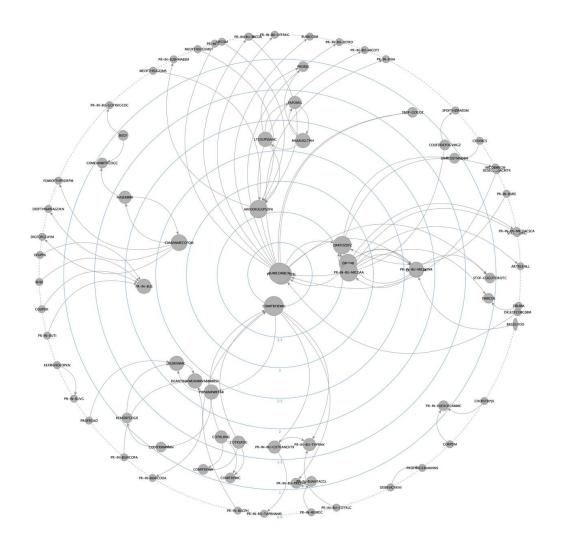
Figure 8. Political Interactions

The third most relevant category groups the "Political" practices of the network and is mainly characterized by the subcategories "Paying a bribe" and "Consulting to obtain support for covert operations". These types of interactions sustain a high-scale looting through organized systems of embezzlement, tax fraud, extortion, the use of stock options as kickbacks and diversion of State funds conducted by militaries and officeholders who are linked with domestic and transnational criminal organizations. For instance, CAMIANMECOFQM, a Canada-based mining and metals company offered a down payment of USD \$100 million, cash payments and shares held in trust for Government

officials in DRC. The payments list included ministers, such as as NASEMIMK, and other civil servants (ONU, 2002).

#### **Direct Interactions**

Figure 9. Radial distribution, Government Elite Network in DRC. Location and size represent the indicator of direct centrality (amount of direct interactions established).

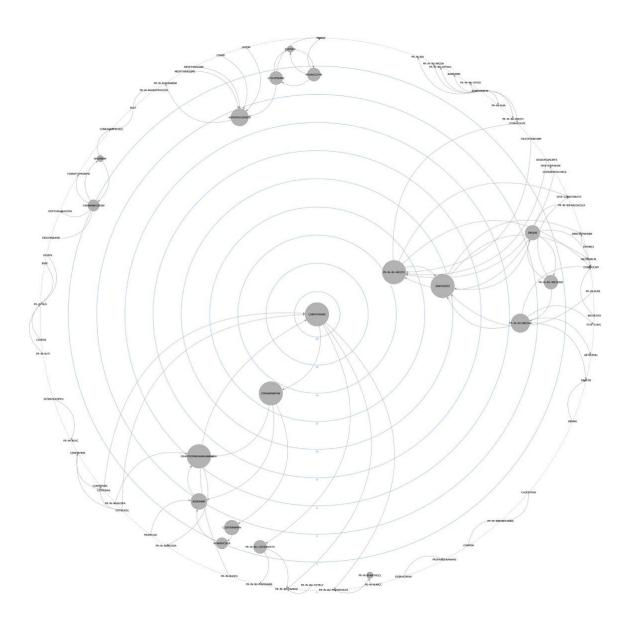


The three nodes/agents with the highest degree of "direct individual centrality" are BUMICOMBCM (4,5%) and PR-IN-BU-MICOTL (4,5%), both described as a mineral business companies, and COMITRFIEWRI (4,0%), a joint venture between the Dutch company, **Chemie Pharmacie** Holland BV (CPH) and **Trinitech Holdings**. These 3 nodes/agents concentrate 13% of the total direct interactions of the network.

The node/agent identified with the code BUMICOMBCM is the Democratic Republic of the Congo-Zimbabwe joint venture that represents Zimbabwe's interests in the diamond trade: "It buys and markets production from the diamond mining company, DIMICOS, which has attempted to conceal its links with ZDF. The Mineral company [identified with the code BUMICOMBCM] uses Zimbabwe's military and political influence to evade the legal requirements of the DRC and to avoid paying the licensing fees" (ONU, 2002). The node/agent identified with the code PR-IN-BU-MICOTL is a mining company incorporated in the DRC that provides the Congolese and Zimbabwean militaries with motor vehicles, trucks, buses and cash payments subtracted from the profit shares. COMITRFIEWRI (4,0%), described as a joint venture between the Dutch company, Chemie Pharmacie Holland BV (CPH) and Trinitech Holdings, the holding company for Ohio-based companies, Eagle Wings Resources LLC and Trinitech International, Inc.

## Arbitration of information

Figure 10. Radial distribution, Government Elite Network in DRC. Location and size represent the indicator of betweenness (amount of geodesic routes in which each node/agent intervenes).



The nodes/agents with the highest "betweenness" indicator are (i) COMITRFIEWRI (19,6%), categorized as a comptoir-minerals trading firm, (ii) PR-IN-BU-MICOTL, categorized as a Private-International Mining company, (13,4%), (iii) POPAINRWRPAR (13,1%), categorized as a Political party in Rwanda, and (iv) ZIARFOZDFZ (10,5%), categorized as Zimbabwe armed forces. This group of four nodes/agents, which

intervenes in 56,6% of the geodesic routes, illustrates the collaboration between the private sector, a Rwanda political party and the Zimbabwe armed forces. This group of four nodes/agents therefore represents the economic, political and violent core of the network, mobilizing legal and illegal resources that are critical for the entire criminal operation.

According to The United Nations panel of experts, "the manager of COMITRFIEWRI in Kigali has close ties to the Rwandan regime and that the company operates in the DRC as a Rwanda-controlled comptoir with all the privileges derived from this connection" (ONU, 2002). As previously stated, COMITRFIEWRI is a comptoir and joint venture between the Dutch company, Chemie Pharmacie Holland BV, CPH, and Trinitech Holdings. On the other hand, the Rwandan regime is charged with mass-scale looting, systemic exploitation, and the organization of an elite network centrally located in the Rwandan Defense Department with the express objective of capturing revenues through the exploitation of the DRC's natural resources.

The mining company identified with the code PR-IN-BU-MICOTL, the second highest betweenness indicator (13,4%), is formally represented by ZIBUJAB, a British resident based in Berkshire, who has an extensive network of companies banned by the European Union black list. Among the companies linked to ZIBUJAB, which are also banned by the US, are the Breco Group and several of its affiliates as well as PR-IN-BU-MICOTL, described as a mining company incorporated in the DRC.

The political party in Rwanda, identified with the code POPAINRWRPAR, organizes the plundering of mineral resources such as diamonds, coltan and gold creating an intricate network of corruption led by the "Congo Desk", the Directorate Military Intelligence or DMI's secret services, and Rwandan companies –among them, Tristar Investment- all of whom were backed by multinational corporations and Western powers.

According to the UN, the senior officers of the Zimbabwe armed forces, identified with the code ZIARFOZDFZ, have increased their personal fortunes through the Congo's mineral assets under the pretext of arrangements set up to repay Zimbabwe for military services. ZIARFOZDFZ also supports armed groups opposing Rwanda and Burundi.

Other nodes/agents with a high betweenness indicator are (i) DEANTROFWEANMIVABBBBSV (6,5%), described as an arms trafficker and Russian

businessman who made his fortune in air cargo and arms supply to all sides participating in various African civil wars, busting sanctions and trading with terrorist organizations" (Reporting Project, 2010), (ii) PR-IN-BU-MICOAA (5,2%), described as is a military company that supplies services and equipment to the Zimbabwe Defense Forces [ZDF], and the Congolese Armed Forces [FAC], and organized logistics and transportation operation of mining equipment for DIMICOS, (iii) ARFOOFUGUPSDFU (4,6%), described as Uganda People's Defense Forces, who protects various armed groups that exploit extensively coltan in Orientale Province of the RDC. ARFOOFUGUPSDFU also supervises the coordinated coltan operations under the front company PR-IN-BUTI.

Finally, (iv) BUSRSNMK (3,9%), described as a Kenyan that was charged in Brussels for criminal association and for travelling with a false British passport, has worked within DEANTROFWEANMIVABBBBBSV, previously described as an arms trafficker and Russian businessman who made his fortune in air cargo: "On 7 February 2002, he was arrested in Belgium on suspicion of planning to provide 6 million new zaire banknotes — still valid in the eastern Democratic Republic of the Congo — to RCD-Goma with financing by diamond dealers based in Belgium. The President of RCD-Goma, [identified in the model as PROFRCAO], who has kinship and business ties with BUSRSNMK, played a key role in this counterfeit operation" (ONU, 2002).

# **Conclusions**

The criminal network analyzed herein illustrates the collaboration between the private and the public sectors to sustain a situation of generalized corruption, as well as humanitarian, social and political instability in the Democratic Republic of Congo and surrounding countries such as Rwanda and Burundi. Despite the lack of official sources informing about the corruption happening in the DRC, at the local and national levels, at the beginning of the century the UN carried out critical efforts to identify criminal networks that facilitated the flows of resources between lawful and unlawful agents in the country. As it has been previously observed in several other regions, in 2002 the UN reported a complex and deteriorating situation in which criminal networks are articulated by political leaders, public servants, mining companies and criminals such as militias, paramilitary groups and arms traffickers. The reported actors have therefore established decentralized subnetworks in charge of trafficking arms and minerals across the DRC, Rwanda, Zimbabwe and Burundi. In the present research, the information reported by the UN in 2002 was updated to elaborate and analyze the models herein discussed.

Due to the high amounts of minerals' concentrations, during the last couple of decades the DRC has been reported as a hotspot for various criminal markets and trafficking activities, including trafficking of humans, minerals and firearms. Even children trafficking has been reported in the DRC, although it is not possible to establish at this point whether trafficking of children is executed by criminal networks involved in other criminal markets.

High mineral concentrations in the DRC call the attention of domestic and international private mining companies that extract and process minerals through lawful and unlawful procedures that include corrupt arrangements with political leaders and public servants. Additionally, situations of cooperation between companies, political leaders, militias and paramilitary groups are registered as part of the criminal networks.

Although the DRC Government has enforced regulations to control the operation of criminal agents, specifically banning mineral extraction in areas where Mai-Mai militias and paramilitary groups operate, the high amount of criminal agents and the institutional weakness exceed the enforcement efforts. As a result, new Mai-Mai constantly emerge and operate, while political leaders and public servants keep providing institutional resources that sustain trafficking activities to produce illicit profits. In fact, the private sector is critical in the articulation of the criminal networks modeled and analyzed in this

document, representing 65% out of the 146 nodes/agents identified, while public servants represent 28.7% and "pure" criminals, 6.10%. This criminal network therefore illustrates a complex situation of grey actors who mainly operate within lawful institutions but still providing critical resources for illegitimate activities that include the extraction, processing and trafficking of minerals.

It is also important that a half of the private actors registered in the network (53%) was categorized as international mining companies, which illustrates how institutional weakness and corruption are critical conditions used by corporations to sustain a scheme in which mineral corporations sometimes operate within lawful conditions but interact with unlawful actors. On the other hand, 52% of the nodes/agents categorized as public servants were identified as militaries, which also illustrated the close interaction with militias and paramilitary groups that provide information, security and other resources to the criminal operation.

A total of 92 interactions were identified and modeled, distributed in 4 main categories: Economic (57,60%), logistics (29,34%), political (11,9%) and Violence/Coercion (1,08%). The grey nature of the criminal network, reflected in the high amount of lawful private actors involved, is also reflected on the high amount of economic interactions that articulated the network. In fact, "pure" criminal interactions, such as those consisting on violence and coercion, account just for 1% of the identified interactions. This means that the operation of the criminal network is based on lawful and usually unregulated economic interactions, such as informal trades, as well as other sophisticated interactions consisting of money laundering schemes and fake companies. The high amount of economic interactions, however, does not mean that violence and coercion are uncommon forms of interactions in the political and social environment of the DRC; it only reflects the main form of interaction of the analyzed network.

The present analysis reveals how the problem of mineral trafficking originated in the DRC affects various surrounding countries. The minerals trafficking, especially the one related to coltan, has an obvious transnational scale; however, the increasing participation of lawful and unlawful agents from several countries imposes a particular complexity that exceeds the technical capacities of domestic policy makers and enforcement agencies in the DRC. As revealed above, "pure" criminal agents represent only a small part (28.7%) of the entire criminal structure, which means that focusing enforcement and policy resources

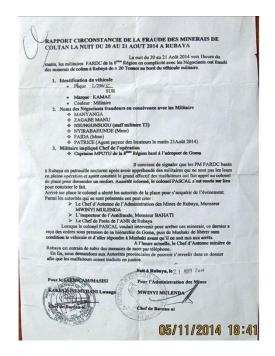
on only confronting those criminal agents is insufficient. Although the minerals trafficking market sustains several criminal activities, any effort to confront the problem should include a comprehensive approach in which individual and corporative lawful agents remain highly accountable to policy makers and enforcement agencies. Bearing in mind the increasing demand of minerals for producing electronic hardware, additional research efforts should focus on understanding the lawful but illegitimate roles of domestic and transnational individuals and corporations that currently favor the exploitation, processing and global trafficking of coltan, among other minerals.

## **Annex**

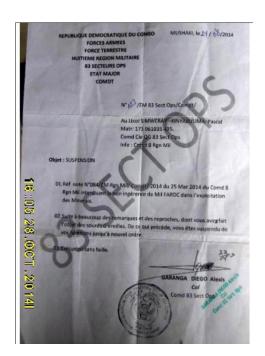
## Reported actions of coltan trafficking

(i) "During the night between 20 and 21 February 2014, Congolese army officers arrested Colonel Mugabo at the checkpoint at Mubambiro, after military police spotted bags of minerals in his vehicle. An inspection of the car determined that he had 21bags of coltan, weighing 1,363 kg. He was heading to Goma from Bihambwe in the company of his driver and three soldiers. During his arraignment, Colonel Mugabo acknowledged that he had been arrested because he was transporting minerals in his vehicle but also said that he did not know who owned the minerals. In June, négociant Kabirigi Rukebesha claimed the minerals from the central bank in Goma. The 8th military region, at that time under the command of the late General Lucien Bahuma, freed Colonel Mugabo without further investigation or punishment; his case was not even referred to the military prosecutor" (ONU, 2015).

(ii) "Congolese army Captain Mputu used an Kamaz truck belonging to the army to smuggle minerals from Rubaya. A négociant, a senior provincial mining official and two witnesses told the Group about the smuggling incident, which took place between 20 and 21 August, 2014. That night, Lieutenant Colonel Simweray-Kinyabuuma Pascal, commander of an army company in the 83rd sector of operations in Rubaya, tried to seize the truck in which Captain Mputu and 12 soldiers were transporting bags of minerals, but Lieutenant Colonel Simweray's superiors told him to release the truck. The only action taken by leaders of the 8<sup>th</sup> military region was to suspend Lieutenant Colonel Simweray" (ONU, 2015)



This letter dated August 21<sup>st</sup>, 2014, describes an incident that happened on the nights of August 20<sup>th</sup> and 21<sup>st</sup>, when FARDC Capt. Mputo was caught smuggling coltan from Rubaya in an FARDC KAMAZ truck. The letter also identifies the négociants with whom Mputo was working. Source: ONU 2014.



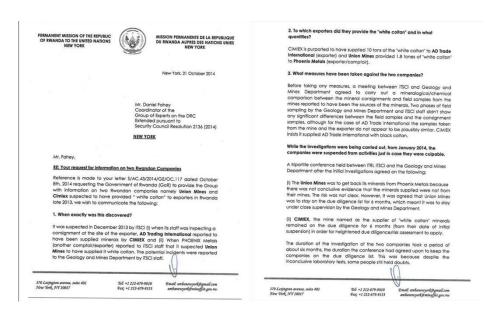
Letter dated August 24<sup>th</sup>, 2014, from Col. Garanga, Commander of 8<sub>3</sub> Sect. Ops, suspending Lt. Col. Simerway. Source: ONU 2014.

(iii) "The Group of experts of United Nations investigated two specific cases of suspected smuggling of white coltan16 from the Democratic Republic of the Congo to Rwanda involving the Rwandan companies CIMIEX and Union Mines. In response to an enquiry from the Group, the Government of Rwanda replied that, in December 2013, "CIMIEX is purported to have supplied 10 tons of the 'white coltan' to AD Trade International (exporter).

To determine whether the minerals had been smuggled, the Government of Rwanda had them compared to samples from the mining sites that had been "fingerprinted" as part of Rwanda's traceability efforts. [Regarding the CIMIEX minerals], the Government of Rwanda told the UN Group that the field (mine) samples and the consignment (suspect) samples "do not appear to be plausibly similar". During the investigation, the Government of Rwanda suspended CIMIEX and AD Trade International from the tin supply chain initiative [during] six months. CIMIEX denied that it had supplied the white coltan to AD Trade International, which was allowed to sell the minerals after a warning about the incident was issued to members of the initiative, and AD Trade International agreed to notify buyers that the minerals came from an indeterminate source" (ONU, 2015)

"In the same letter to the [UN] Group about CIMIEX, the Government of Rwanda also noted that "(...) Union Mines provided 1.8 tons of 'white coltan' to Phoenix Metals (exporter/comptoir)". Phoenix Metals told the Group that, in December 2013, it had received a consignment of 1,011.7 kg of coltan from Union Mines. The Government of Rwanda told the Group that the mineralogical and chemical comparison of the coltan sample showed that there was not "any significant difference" between "the mineral consignments and field samples from the mines reported to have been the sources of the minerals"; Phoenix Metals told the Group that its own testing, however, showed that the consignment sample contained two types of coltan. The company's test found that 8 oper cent of the sample was made up of black coltan of the kind mined in Rwanda and that 20 per cent was made up of white coltan, which was not found in Rwanda" (ONU, 2015).

<sup>&</sup>lt;sup>16</sup> It is only produced in the DRC. Once in Rwanda, white coltan is mixed with black coltan produced in Rwanda before being introduced into the supply chain.





Source: ONU 2014

(iv) "Two people involved in the minerals trade in Rwanda and a civil society organization told the Group that small-scale mineral traders in Rwanda play a crucial role in the laundering of Congolese minerals. According to these sources, exporters in Kigali provide money to small-scale traders who buy minerals that are either smuggled from the Democratic Republic of the Congo or stolen or diverted from Rwandan mines. This is done with the tags and official papers delivered in the framework of the tin supply chain initiative, which can be obtained in Rwanda. In fact, the [UN] Group obtained all the necessary documents from the cooperative Kamico, Kamusheshe Mining Cooperative. With such tags and papers, anyone could introduce coltan into the supply chain in Rwanda" (ONU, 2015).



The experts obtained two tags shown above from Gisenyi, Rwanda. They were assigned to Kamico. The document above, left, authorizes the designated person to transport minerals on behalf of Kamico to a comptoir. **Source:** ONU 2014.

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