

## Policy Recommendations Concerning Response to Conflict Minerals Regulation

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# ABSTRACT

The European Union (EU) Conflict Minerals Regulation came into full force on January 1, 2021. The regulations require companies that import any of four minerals cited as providing a source of funding for conflict in the eastern part of the Democratic Republic of the Congo (hereinafter, DRC)—tin, tantalum, tungsten and gold (referred to collectively as 3TG)—into the EU, or smelter/refiner<sup>1</sup> these minerals, must perform due diligence.<sup>2</sup> These requirements are in line with the Due Diligence Guidance published by the Organisation for Economic Co-operation and Development (OECD) in 2010 (hereinafter, OECD Guidance).<sup>3</sup> Their purpose is the same as previous regulations on the conflict minerals. Regulations on the conflict minerals were made law through Section 1502 of the US Dodd-Frank Act (hereinafter, DFA 1502) in 2010,<sup>4</sup> and several measures have been implemented over the past decade.<sup>5</sup> The EU also adopted as law an approach to stopping conflict in upstream mineral-producing areas by ensuring transparency in minerals trading supply chains, distinguishing between minerals that can be traded and conflict minerals that cannot, and allowing distribution only through closed-pipe supply chains. Even in Japan, which has not established its own regulations, companies are required to conform to the US and EU regulations when doing business with US or European companies. For this reason, Japanese companies that use 3TG also investigate supply chains for conflict minerals (JEITA, 2017).

Meanwhile, over the past decade, the international community has already experienced just how difficult it is to resolve conflicts in mineral-producing areas through the establishment of closed-pipe supply chains. As described later in this paper, a massive amount of effort has been expended to design minerals certification mechanisms to distinguish between conflict minerals<sup>6</sup> and minerals not associated with conflicts (conflict-free minerals), and corporate supply chain investigations focused on conflict minerals have been implemented on a global scale. Despite this, almost half of all companies cannot identify the region where minerals were originally produced (GAO, 2019). In 2018, with the conflict in eastern DRC still unresolved, the US effectively relaxed its regulations by making the previously mandatory reporting on conflict minerals voluntary. Moreover, according to the Armed Conflict Location & Event Data Project (ACLED), which collects information on conflict-related events (battles, riots, looting, violence against civilians, etc.) from around the world,

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<sup>1</sup> The supply chain includes both the process of smelting to extract metals from ore and the process of refining the metals thus extracted, but in this paper, these processes are referred to collectively to avoid unnecessary complexity.

<sup>2</sup> Due diligence refers to the investigation of risk required when undertaking investment or business transactions.

<sup>3</sup> The official name of the OECD Guidance is “Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.”

<sup>4</sup> The official name of the act is the “Dodd-Frank Wall Street Reform and Consumer Protection Act.”

<sup>5</sup> There are differences between US regulation and EU regulation regarding geographic scope, range of applicability to companies, approach (compliance-based or risk-based), and enforceability (Koch and Burlyuk, 2020). While DFA 1502 targets a conflict free supply chain limited to the DRC and surrounding countries, the OECD Guidance, although allowing for a larger scope of application—Conflict-Affected and High-Risk Areas (CHARA)—aims for the more relaxed target of a conflict risk-managed supply chain.

<sup>6</sup> Conflict minerals refer to minerals for which conflict actors such as armed groups, military forces, and national armies are involved in, and continuing to profit from, the processes of mining or trading.

violence associated with conflict in the DRC, far from declining, has in fact increased since the regulation was introduced. In other words, despite efforts by companies to comply with the regulations, they are not able to track down the region where minerals were originally produced, and conflict continues unabated. The commencement of the EU regulations and the effective expansion of the scope of due diligence to include cobalt, a mineral not actually subject to regulation, have placed companies at a crossroads. This paper analyzes the current situation from the perspective of conflict research and proposes recommendations for policies to address it.

Why have regulations on the trade of conflict minerals been unable to contribute to resolving the conflict? This paper proposes the following four points as reasons why regulations cannot stop the conflict.

1. Despite bringing about a change in the behavior of companies, the DRC government, the governments of surrounding countries, European and US governments, armed groups, military forces, the DRC Army, aid organizations and other parties related to the conflict, regulations on the conflict minerals have not functioned as an effective means of resolving conflict because they have not been able to change the mechanisms linking minerals and conflict.
2. Significant problems exist in the upstream sections of the closed-pipe supply chains designed to distribute only minerals certified as not associated with conflicts (conflict-free minerals), and the construction of these supply chains has not been successfully achieved.
3. Surrounding countries continue to interfere in the conflict in eastern DRC through the recruitment and training of soldiers for armed groups and the smuggling of minerals, and the geopolitics of the African Great Lakes Region is not heading for a resolution of the conflict.
4. Pressure from companies downstream in the supply chain and aid donors has not proved strong enough to change the mechanisms whereby the actors involved profit from continuing the conflict.

Based on an analysis of these factors, four recommendations are proposed for policies to be adopted by the Japanese government, aid organizations, researchers, companies, and civil society.

**Recommendation 1: Analyze the effect of regulations on the conflict minerals on the mechanisms linking minerals and conflict**

Despite bringing about a change in the behavior of the governments, armed groups, military forces, and companies involved, the introduction of regulations on the trade of conflict minerals has failed to change the mechanisms linking minerals and conflict. There is no resolution to the conflict in sight because the mining and trading of minerals are used to continue the conflict, while also continuing to act as an incentive to keep the conflict raging. A deeper analysis is necessary, not only of changes in the behavior of the actors due to the regulations but also of the effect of the regulations on the mechanisms linking minerals and conflict.

**Recommendation 2: Strengthen the investigation of supply chains for conflict minerals and the conflict-free minerals certification scheme**

The first step in ensuring the regulations on the trade of conflict minerals function to resolve conflict is to implement them as they were designed. The relaxation of the regulations should not be considered while they are still to be implemented fully. Instead, what is needed is stronger investigation of supply chains for conflict minerals and a more robust minerals certification scheme.

**Recommendation 3: Strengthen support for upstream supply chains (mineral-producing regions) to establish closed-pipe supply chains**

When establishing closed-pipe supply chains for conflict-free minerals, the difficulty lies in the upstream mineral-producing regions. Even if downstream supply chain traceability is improved from the stage of smelters/refiners onward, the entire supply chain will be polluted if the profits collected through the “taxation” of minerals mining and trading in mineral-producing regions is used by conflict actors. It is recommended to strengthen support for upstream mineral certification agencies, to enable downstream companies that perform due diligence to strive not only for the traceability of the downstream supply chain but also to ensure that the mines and transportation upstream are conflict-free.

**Recommendation 4: Analyze the issue based on the geopolitics of the African Great Lakes Region, including DRC, Rwanda, Uganda, and Burundi**

Given the continuing involvement of surrounding countries in the conflict in the eastern DRC, it is necessary to understand the Eastern Congo conflict in the context of the geopolitics of the African Great Lakes Region, including DRC, Rwanda, Uganda, and Burundi, and for the international community to work towards resolving the conflict based on this understanding.

## [Note]

The following research team, part of the SDGs Collaborative Research Unit at The University of Tokyo Institute for Future Initiatives (IFI), is engaged in a research project entitled “Minerals Extraction and Human Rights Violation in Conflict-Affected Area.”

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These policy recommendations are the result of this project and have been formulated based on the following papers.

Kazuyo Hanai “Conflict minerals regulation and mechanism changes in the DR Congo” *Resources Policy*, Vol.74, December 2021.

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Kazuyo Hanai “Minerals mining and conflict in the Democratic Republic of the Congo (DRC): the people who live together with the resources” *Refugee Studies Journal*, Vol. 9, 2020, pp. 67-82. (in Japanese)

In formulating these recommendations, opinions were exchanged with researchers, company representatives, aid organizations and citizens’ groups involved in the DRC’s conflict resources issue and peace-building efforts. The exchange of opinions with the NPOs RITA-Congo and Terra Renaissance, volunteers at the Society of Researchers for International Development (SRID), and the Japan Electronics and Information Technology Industries Association (JEITA), in particular, formed the basis of these recommendations.

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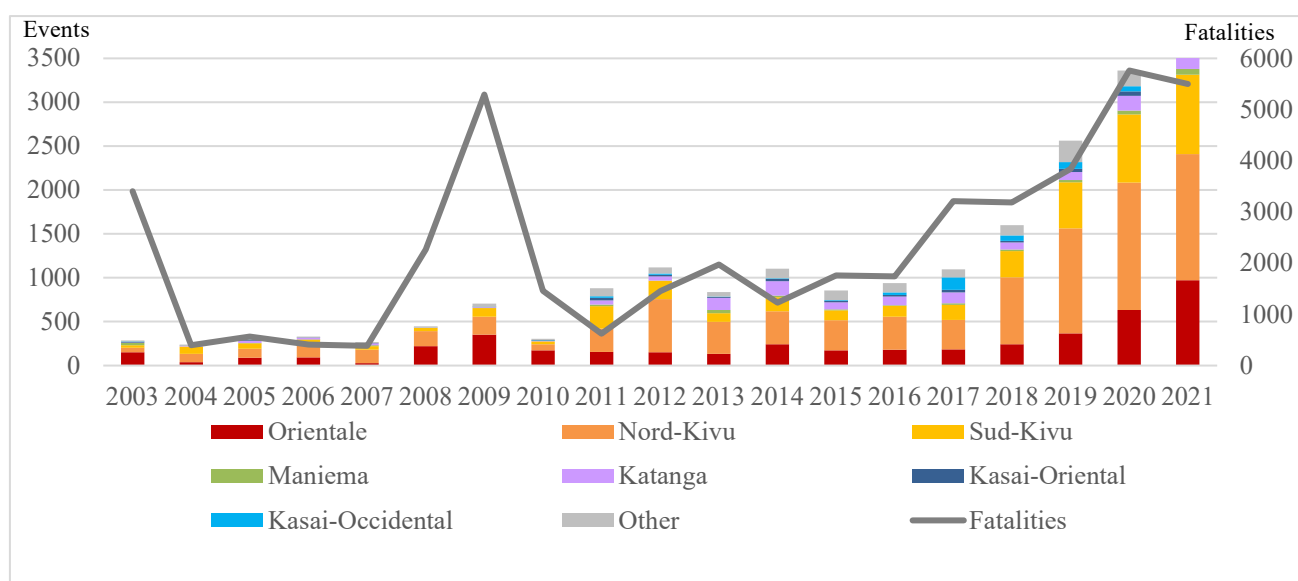
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# 1. Introduction

## 1.1. Locating the problem: the direction of regulations and the continuing conflict

A decade has passed since the regulations on the trade of conflict minerals were established, and debate on their effectiveness is approaching a turning point. It was expected that, even if the introduction of regulations led to a temporary deterioration of conflict or decline in the livelihood of residents of the conflict region, the effect of the regulations would bring about a resolution to the conflict in the longer term. A decade has passed, however, and there is still no sign of a resolution. According to the Armed Conflict Location & Event Data Project (ACLED) which collects conflict statistics from around the world, 3,832 conflict-related events (battles, riots, looting, violence against civilians, etc.) occurred in the Democratic Republic of the Congo (DRC) in 2020, and 5,501 people were killed. A graph of the numbers of conflict-related events and fatalities in the DRC from 2003 to 2021 shows how conflict-related violence has continued to escalate, even since the introduction of regulations in 2010. Over 80% of these have occurred in the former Orientale province,<sup>7</sup> and the North Kivu and South Kivu provinces in the eastern DRC (Figure 1).



**Figure 1. Conflict Related Events and Fatalities in the DRC (2003-2021)**

Note: The old administrative division is used for the area division. Fatalities refer to civilian casualties.  
Source: Author developed, based on ACLED

<sup>7</sup> The former Orientale province corresponds to the present provinces of Ituri, Haut-Uele, Bas-Uele, and Tshopo.

In view of this result, should the regulations be deemed ineffective and relaxed, or tightened further? Faced with this dilemma, the US and EU took separate paths. In the US, the previously mandatory reporting standards on the investigation of supply chains for conflict minerals under Section 1502 of the US Dodd-Frank Act (DFA 1502) have been made voluntary since 2018. By contrast, the EU commenced full enforcement of new regulations from January 2021, making such reporting mandatory, albeit for a limited scope of companies and merely limited to due diligence. There is also a growing trend among companies to expand the investigation of supply chains to include cobalt, which was not originally included among conflict minerals or subject to the regulations. Japanese companies, in the absence of domestic regulations on conflict minerals, had previously followed the US regulations and OECD Guidance as *de facto* global rules. At this turning point, however, they have begun to seek their own direction. In Japan, these initiatives have been led mainly by the Responsible Minerals Trade Working Group established in 2012 by the Japan Electronics and Information Technology Industries Association (JEITA), an industry group composed of electronic device companies. However, the automobile industry has also become involved since the scope was expanded to include cobalt. It has now become necessary for the Japanese government, aid organizations, researchers, companies, and civil society to engage in deeper discussion on how to approach the issue of conflict minerals in the future.

## 1.2. The divergence of evaluation in previous studies

The evaluation of conflict minerals regulation is controversial. In a positive evaluation, studies on corporate social responsibility (CSR) have evaluated the inclusion of conflict as a wicked problem in the CSR framework (Reinecke and Ansari 2016) and maintain that the closed-pipe supply chain can contribute to peacebuilding (Taka 2016). The regulations are recognized as a “game changer” (Vlaskamp 2019) with some research focusing on the process of introducing regulations and whether they would have a California effect that would spread globally (Moncel 2016). A common feature of these studies is that they optimistically believe that these initiatives will bring about conflict resolution in the DRC.

In contrast, researchers who have engaged in field research in the DRC express strong concerns based on pessimistic predictions. One concern is the unintended consequences of the regulations. Seay (2012) claims that DFA 1502 has resulted in a *de facto* embargo in the eastern DRC, leaving miners jobless, even before it was enforced. Parker and Vadheim (2017) argue that regulation has an adverse effect on conflict resolution as the number of conflict-related violence increased between 2010 and 2012, while miners were further impoverished by a decline in the price of minerals. Stoop et al. (2018) supported their argument with an empirical study that extended the time horizon by three years (2013–2015). However, criticism of the exaggeration of temporary unintended effects is notable. Koch and Kinsbergen (2018) point out that business actors who want deregulation exaggerate unintended negative effects. In addition, Koch and Burlyuk (2020) studied how the anticipation of negative unintended consequences factored into EU regulation.

The other concern is the simplistic view of the cause of the conflict. Autesserre (2012) vehemently



criticizes the simple narratives that “focus on a primary cause of violence, illegal exploitation of mineral resources; a main consequence, sexual abuse of woman and girls; and a central solution, extending state authority” as hindering the resolution of the conflict. Cuvelier et al. (2013) also warn of the risk of dealing with complex conflicts with a narrow understanding. Even Nest (2011), whose research focuses on tantalum (coltan) as a conflict mineral, concludes that campaigns on conflict minerals are effective in drawing attention to ongoing violence, but they do not end it. In 2014, 70 researchers, advocacy groups, and other representatives related to the DRC issued an open letter calling for change in policies to shift focus on local dynamics and the root causes of conflict, such as access to land, identity, and political contest in the context of a militarized economy, rather than a narrow focus on minerals (70 signatories, 2014).

As described later in this paper, researchers in the DRC region have gathered extensive evidence of the ways that the introduction of regulation has exacerbated the situation in the eastern DRC, and failure of closed-pipe supply chains to function in mineral-producing regions. However, this weight of evidence does not seem to have had any impact on business research or policy research. Despite the publication of the open letter mentioned above in 2014, there is no end of research citing the conflict minerals regulations as a case study in improving global supply chains.

We agree with field researchers’ caution that the simplistic view of conflict factors, which focuses too much on conflict minerals, might lead to a misunderstanding of the root causes of conflict. However, we emphasize that it is necessary to understand what the regulations have and have not changed before evaluating their effectiveness. Whether the unintended consequences are temporary aggravations that will be overcome in the long term or the aggravated conditions will continue, is determined by how the interests of the related actors have changed due to regulations. As such, this research investigates the mechanisms through which resources and conflict are linked, and then examines whether the regulations on conflict minerals have changed these mechanisms.

### **1.3. Analysis methods: literature review and interviews**

The analysis methods used in this study were literature review and interviews.

The following materials were collected and analyzed as part of the literature review.

- 1) Previous research on the conflict minerals issue and sexual violence in conflict in eastern DRC;
- 2) Publicly-available documents and project reports published by the World Bank and aid organizations;
- 3) Information originating from eastern DRC and reports by UN expert groups and NGOs; and
- 4) Information disclosed by companies and industry groups.

Semistructured interviews were conducted as follows.

- 1) Interviews with forty representatives of Japanese companies including smelters/refiners of tin, tungsten, tantalum and gold (3TG), electronic device companies, audit corporations, and others (interviewed intermittently from 2014 to 2019);
- 2) Field surveys of the International Tin Supply Chain Initiative (ITSCI) of the International Tin Association (ITA) in Rwanda and Uganda (in 2018 and 2019);

3) Semistructured interviews of 23 refugees who had escaped from mineral-producing regions in eastern DRC to surrounding countries (in 2019).

In addition, information was shared and opinions exchanged with representatives of electronic device companies involved in investigating supply chains for conflict minerals, through the JEITA Responsible Minerals Trade Working Group (on five occasions from 2016 to 2021).

## 2. Summary of the conflict minerals issue

### 2.1. Overview of minerals and features of minerals mining in the DRC

#### 2.1.1. Overview of minerals in the DRC

The DRC, located in the center of the African continent, is one of the world's foremost resource-producing countries. The basin of the Congo River, which runs east-to-west across the country, is covered in rainforest, and the mountainous regions of the south and east host deposits of gold, copper, tin, diamond, cobalt, uranium, tantalum, tungsten, niobium, and manganese. For cobalt in particular, the DRC accounts for 68% of global production (USGS, 2021). In contrast, the DRC was ranked 175th out of 189 countries on the Human Development Index (HDI; UNDP, 2021). The wealth of its resources has not been translated to that of its people. Moreover, conflict continues unabated on the country's eastern borders with Uganda and Rwanda, claiming more than 1,000 victims each year. The DRC's rich resources are one reason why the participants continue this conflict.

The DRC's mining industry is regulated by the Mining Law established in 2002 and the Mining Regulations established in 2003 (revised in 2018). The Ministry of Mines has been established to administer the industry, and the mining registry manages mining rights.

Two main types of mining methods are used in the DRC. The first is Large-Scale Mining (LSM), which refers to mechanized mines operated by companies. The numerous copper and cobalt mines in Katanga and Kasai provinces in southern DRC, near the border with Zambia, are operated by state-owned enterprises such as Gecamines, Miba, Sakima, Okimo, Sodimico, and Kisenge Manganese, and mined by joint ventures between the DRC government and foreign companies such as ENRC in Kazakhstan, MMG Limited in Australia, Glencore in Switzerland, and China Molybdenum in China. In LSM by companies, open-pit mining is used, where the topsoil is stripped from the earth and minerals are extracted from the surface. Mines are dug on a large scale using excavators and other heavy machinery. Ores are separated from the soil using conveyor belts and crushers. Some level of technical skill is required to work at these mines, and the mine workers are recruited by the company.



**Photos 1. Example of a Large-Scale Mining (LSM) Operation in the African Great Lakes Region**

Note: The photographs show a tantalum mine in Uganda

Source: Photographed by the author

The second main type of mining method is Artisanal Small-Scale Mining (ASM), using simple tools such as shovels, pickaxes and pumps. Open-pit mining is not suitable in places where the ore deposit is deep underground, and underground mining is adopted instead, with tunnels dug to follow the veins of ore. The miners use river water to separate ores from the sand and soil they have excavated with shovels and pickaxes. The minerals found are carried in bags. Until 1996, the state-owned the Société Minière et Industrielle de Kivu (SOMINKI), a state-owned company, mined some of the many tin, tungsten, tantalum and gold (3TG) mines in the east of the country, but it ceased operation with the outbreak of conflict. Thereafter, local miners entered the mines and began artisanal mining, transporting minerals via trucks or motorbikes to neighboring countries such as Uganda or Rwanda. The Mining Law and Mining Regulations establish artisanal exploitation zones (AEZs) in areas unsuitable for large-scale mining, where those who pay the government for mining rights are permitted to engage in ASM. In reality, however, companies are reluctant to commence mining even in areas outside AEZs where mining rights are recognized, until the conflict is resolved. Illegal mining has become the status quo in the absence of companies, with local power-holders selling unauthorized mining rights and allowing miners to extract minerals at will (Nest, 2011). Miners without legal mining rights are required to come under the influence of forces that will guarantee their access to the mine. This illegal state of affairs makes it easy for conflict actors, such as armed groups and military forces, to interfere in the mining of minerals. In this way, minerals for which conflict actors such as armed groups and military forces including national armies are involved in, and continuing to profit from, the processes of mining or trading, are referred to as conflict minerals. 3TG are designated conflict minerals under the OECD, US, and EU conflict minerals regulations.



**Photos 2. An Artisanal Small-Scale Mine (ASM) in Eastern DRC**

Source: Photographs provided by the Pacific Asia Resource Center (PARC)

### **2.1.2. The mechanism of Artisanal Small-Scale Mining (ASM)**

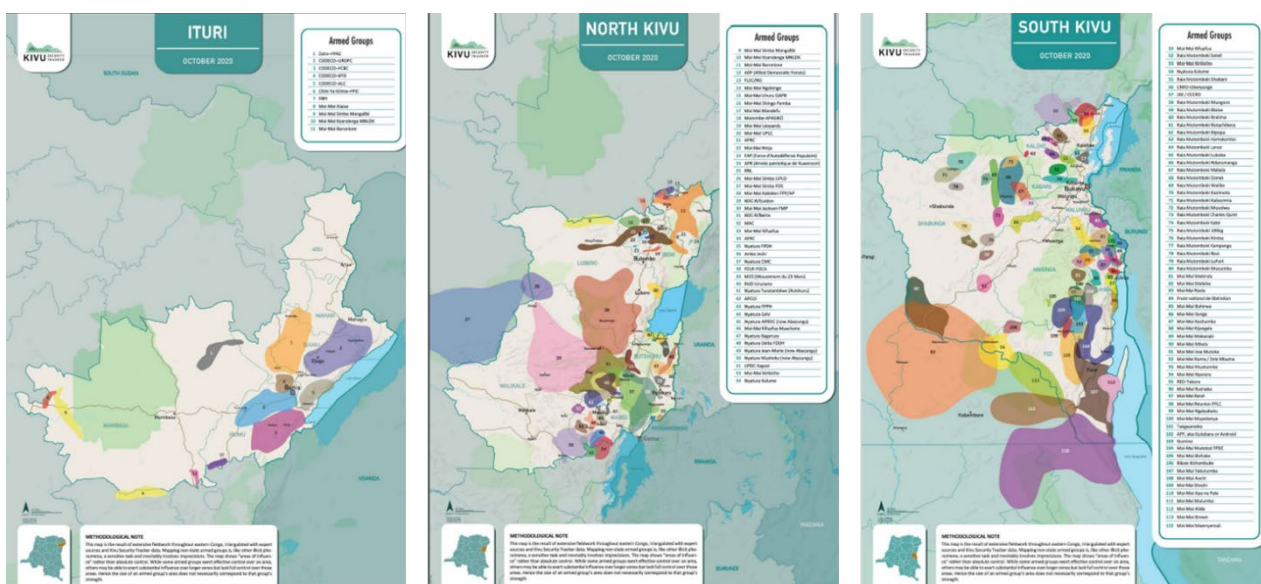
An examination of the process of minerals mining and trading is helpful to understand the reality of ASM.

Teams composed of several miners work together at the mine. The minerals extracted are traded through an intermediary, with cheating and deception by both parties rampant. Miners often mix other stones into the bags of minerals they sell, while buyers often try to cheat on payments. The fact

that many mining teams are formed through networks of family and friends, and the fact that minerals trading tends to be carried out between members of the same ethnic group, are both attributable to the perceived trustworthiness of such partners (Nest, 2011).

In the eastern DRC provinces of Ituri, North Kivu, and South Kivu, mineral-producing regions are also areas of operation for armed groups. There are over 120 armed groups in all, including the Allied Democratic Forces (ADF), originally a Ugandan anti-government militia, the Rwandan Liberation Democratic Forces (FDLR), a Rwandan anti-government militia, the National Council for Renewal and Democracy (CNRD), and self-defense groups called Mai-Mai, formed by local communities or ethnic groups (Figure 2).

When an armed group takes control of a mine, the mining is generally carried out not by soldiers but by local civilians, who give some of the minerals produced to the armed group, and pay mining rent. The chief of the mine is often the commander of the armed group, and the armed group often assumes the role of “providing security.” Sometimes, the units of the DRC army deployed to these regions behave as mining chiefs or commanders in charge of providing security (Nest, 2011). The DRC government prohibits its soldiers and police from becoming involved in illegal minerals mining and trade, including by banning entry to the mines. However, the central government’s control fails to reach the eastern region of the country. Compounded by insufficient salaries, soldiers stationed in eastern DRC continue to be involved in illegal minerals mining and trade.



**Figure 1. Maps of Armed Groups in Three Eastern DRC States**

Source: Kivu Security Tracker (KST) 2021

The fact that minerals mining and trading networks are often along with ethnic lines also makes it easier for miners to become caught up in hostilities between armed groups. For example, much of the land for mines in North Kivu is owned by people of Tutsi ethnicity, originally from Rwanda, who purchased the land during the time of the Mobutu government. However, many of the miners engaged in extracting the minerals are of Hunde ethnicity. Hunde regard Tutsi as “foreigners,” and



feel antipathy towards them for acquiring much of the land during the time of the Mobutu government. At the same time, Hunde are also opposed to Rwandan Hutu, who flowed into the eastern DRC after the Rwandan genocide of 1994, leading to a deterioration in public order. As a result, Hunde Mai-Mai sometimes attack Tutsi land owners, and Hutu armed groups sometimes attack mines, killing Hunde miners.

Sometimes, the local power-holders are armed ethnic groups. At tantalum mines in South Kivu, the land is owned not only by Rwanda origin Tutsi and Hutu, but also by members of Havu, Tenbo, Shi, and Nande ethnic groups, and Shi and Havu work as miners. Just as armed groups are formed by ethnic groups, minerals mining through ASM is also conducted along ethnic lines. It is necessary to understand that discord between ethnic groups is also associated with the link between conflict and resources in the DRC.

The minerals extracted are packed in nylon bags, and transported by carriers to negotiators, who have a contract with the mine, or sold to the town exchange. These intermediaries transport the minerals to Goma, the eastern DRC's main city, or the commercial city Kisangani, and hand them over to exporters. The minerals are then transported to Uganda or Rwanda, where they are purchased by foreign minerals trading companies, and shipped to smelters/refiners in Asia or Europe. Foreign companies tend to avoid doing business in the DRC because of the high risks and choose to purchase minerals through intermediaries. In recent years, however, the number of Chinese traders at exchanges in the DRC is increasing (Bafilemba et al., 2014).

As minerals pass through the hands of the mine managers, transporters, intermediaries, and exporters, cash is exchanged at each stage. The more cash transactions there are, the greater the opportunity for armed groups and army soldiers to collect "tax," and the greater the likelihood that this will be used to fund the conflict. In addition to distribution routes such as these, some minerals are also smuggled into Rwanda and Uganda, and exported as products of those countries. It is estimated that around 90% of gold mined in ASM operations, in particular, is smuggled out of the country (UN S/2014/42). The fact that minerals mining is being carried out by ASM operations facilitates rampant smuggling and makes it easier for armed groups and army soldiers to interfere.

## **2.2. History of the Congo conflict**

### **2.2.1. The Congo conflict**

The DRC was formerly a Belgian colony. Independence in 1960 was immediately followed by the Congo Crisis, and in 1965, President Mobutu Sese Seko seized power in a coup d'état. After the genocide in neighboring Rwanda in 1994, a flood of Rwandan refugees entered the country. Some of the perpetrators of the genocide mingled among the refugees as they flowed into eastern DRC, leading to the invasion of eastern DRC by the Rwandan army and the outbreak of the First Congo War in 1996, after 32 years of dictatorship under President Mobutu. The Mobutu government was toppled from power in 1997, but the Laurent Kabila (L. Kabila) government that replaced it became the target of the Second Congo War, which broke out in 1998 (UN, 2010). Nine surrounding

countries were involved in this conflict, which became known as the African World War. In 2002, a peace agreement was reached between the DRC government, armed groups, and the governments of the surrounding countries that participated in the conflict. However, this “end” of the conflict did not lead to the cessation of fighting between armed groups and the DRC army in the eastern DRC, and the conflict continues today.

The conflict in the eastern DRC is notable for its complexity. Armed groups have continually formed and ruptured ever since the start of the conflict in 1996. There were 40 groups identified in 2012, 70 groups in 2015, and over 120 groups in 2021. Large groups include the Rwandan anti-government militia FDLR, the National Congress for the Defence of the People (CNDP) and its successor the March 23 Movement (M23), which oppose the FDLR, as well as the ADF, a Ugandan anti-government militia. The fact that anti-government forces from surrounding countries use the eastern DRC as their base is also significant. Local ethnic groups and local self-defense groups called Mai-Mai have also been formed to resist these armed groups. The intermittent cooperation and antipathy between these various groups gives rise to the complicated structure of the conflict. Moreover, some units and soldiers in the DRC army have also been associated with human rights violations. According to a UN report, 30% of all human rights violations against citizens are committed by DRC army soldiers and police (UN S/2017/249).

### **2.2.2. The use of conflict minerals**

There are four main ways that conflict actors benefit from minerals.

- 1) Attacking and plundering mineral mines and exchanges;
- 2) Gaining effective control over mines and extracting profits from the minerals produced;
- 3) Imposing “tax” on the transport and trading of minerals; and
- 4) Engaging in other minerals businesses (UN S/2010/596).

Method 1), plundering, was commonly used in the early stages of the conflict. It is used when armed groups expand their areas of control, or attack areas under the control of other armed groups.

Method 2), the extraction of profits, was adopted in the 2000s by armed groups that effectively controlled mineral-producing regions, and by DRC army units stationed in mineral-producing regions. The mining of minerals is delegated to others, including mine managers and miners, with some of the minerals collected in the form of a levy, as well as the collection of cash payments such as mining rent or protection fees.

Method 3), a “tax” on transport and trade, consists of schemes such as blocking roads and taxing vehicles for passing, or taxing intermediaries at town exchanges. This is the most commonly used method since the introduction of conflict minerals regulations and will be examined later in this paper.

Method 4) includes businesses associated with the machinery, equipment and license necessary to mine, trade and transport minerals. Armed groups and DRC army soldiers profit from a wide variety of businesses such as the lease of machinery used to crush ore, as well as using army travel permissions to buy and sell everyday necessities including food for mine laborers and the pumps and generators needed for mining.

This illustrates the extensive use of conflict resources to gain business profits in the eastern DRC.

The conflict actors that utilize conflict resources attack and plunder villages, committing murder and sexual violence to control the local civilian population. In addition to sexual violence associated with the fighting, strategic, large-scale sexual violence is also being committed. The armed groups that attack villages commit the gang rape of females (sometimes males as well) in front of their families and other villagers, and use knives and guns to inflict injuries on their genitals. The female victims of the violence are not only left in physical and emotional pain but are commonly treated as outcasts by their families and villagers. In this way, the armed groups aim to generate discord among families and villagers. For example, at 13 villages in Walikale, armed groups committed sexual violence against at least 387 people (355 females, 32 males) from July 30 to August 2, 2010 (UN S/2010/596). The DRC army is also responsible for some of the violence, with soldiers committing sexual violence against at least 126 people from November 20 to 30, 2012 (UN S/2013/433). The role of the army should be to protect citizens, and the purpose of Mai-Mai should be self-defense. Yet both have become the perpetrators of violence against citizens. In September 2018, organized sexual violence against no less than 17 victims was committed in Shabunda territory by an armed group faction funded by conflict resources (UN S/2018/1133). This is why it has been pointed out that the DRC's rich mineral resources have been the source of violence.

## **2.3. Initiatives by the international community**

### **2.3.1. The introduction of conflict minerals regulations**

That is not to say that the international community was at a loss for how to address these problems. The UN implemented a massive peacekeeping operation (PKO) involving 20,000 troops, while simultaneously targeting armed groups with the arms embargo, the freezing of assets, and travel bans. UN bodies such as the United Nations High Commissioner for Refugees (UNHCR) and the UNDP engaged in activities to protect citizens. However, bans on the export of resources were not implemented due to concerns that they would damage the livelihoods of citizens engaged in minerals mining, and in view of complicated relationships with the interests of national governments and companies.

NGOs in Europe and the US, alarmed at the situation, have worked to raise public concern about the issue internationally since the 2000s. The first report on the DRC's conflict resources issue was released in 2001 by the United Nations Expert Panel on Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo (UN S/2001/49). Subsequently, Global Witness, Human Rights Watch, International Peace Information Service (IPIS) and other organizations began to lobby electronic device companies and industry groups to take appropriate measures. This was because 3TG are often used in the manufacture of electronic devices. In 2007, NGOs visited the Electronic Industry Citizenship Coalition (EICC; currently the Responsible Business Alliance: RBA), an electronics manufacturing industry group, and the Global e-Sustainability Initiative (GeSI) to raise awareness. In 2006, the NGO Enough Project was established



with the aim of stopping genocide and crimes against human rights.

In this trend, the OECD released its guidance on conflict minerals in 2010, demanding that companies take steps to eliminate conflict minerals from their own supply chains. The US established its own conflict minerals regulations in 2010, with the passing of DFA 1502.

DFA 1502 required all listed companies registered with the U.S. Securities and Exchange Commission (SEC) to investigate whether 3TG were necessary for the function and manufacture of their products, the country of origin of any 3TG used, and, in the case of 3TG originating from the DRC or its surrounding countries, whether they were associated with the conflict. Companies were required to submit an annual report on these investigations to the SEC, and disclose the results on their websites. The purpose of this initiative was to stop the flow of funds that fuels the conflict by requiring supply chain transparency from US companies at the bottom of minerals supply chains.

### 2.3.2. Design of the conflict-free minerals certification scheme

Around the same time when conflict minerals regulations were introduced, systems were designed and implemented in upstream, midstream, and downstream supply chains to certify conflict-free minerals not involved in financing armed groups and national armies (Table 1).

**Table 1. Main Conflict-Free Minerals Certification Schemes**

Origin: The Regional Certification Mechanism (RCM)	Upstream Certification of conflict-free mines
Extraction industry: The Extractive Industries Transparency Initiative (EITI)	
Tin industry: The International Tin Association (ITA) ➤ International Tin Supply Chain Initiative (ITSCI)	
Electronic devices industry: The Electronic Industry Citizenship Coalition (EICC)* *The Responsible Business Alliance (RBA) since 2017 ➤ The Conflict-Free Smelter/Refiner Initiative (CFSI)* *The Responsible Minerals Initiative (RMI) since 2017 ➤ The Conflict-Free Smelter Program (CFSP)* *The Responsible Minerals Assurance Process (RMAP) since 2017 ➤ The establishment of the Conflict Minerals Reporting Template (CMRT)	Midstream Certification of conflict-free smelters/refiners (CFS)
Gold industry: The London Bullion Market Association (LBMA)	Downstream Implementation and audit of the investigation of supply chains for conflict minerals
ICT industry: The Global Enabling Sustainability Initiative (GeSI)	

Source: Prepared by the author from information on each organization's website

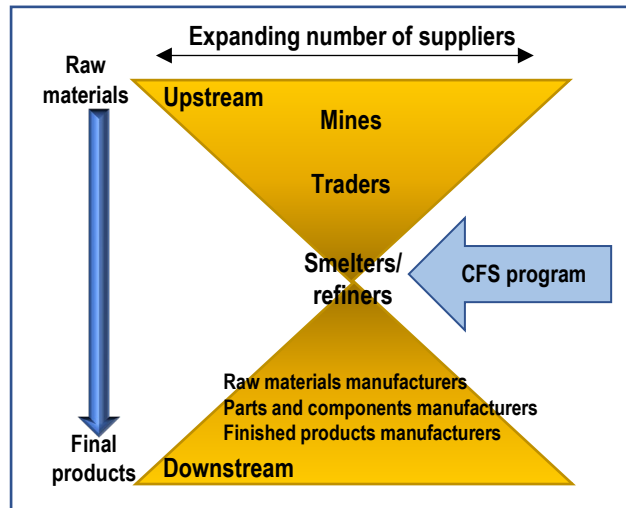
Systems to audit mines were created in mineral-producing regions at the top of supply chains. For example, the Regional Certification Mechanism (RCM) began operation in 2009, under the direction of the International Conference on the Great Lakes Region (ICGLR) and Western European countries. Under the RCM, mines that have cleared criteria such as no involvement from armed groups or armies and no child or pregnant labor are designated green or conflict-free, mines for which conditions are improving are designated amber, and those for which the involvement of armed groups or armies has been observed are designated red (mines yet to be investigated are labeled blue). Tags are then produced for mines designated conflict-free (green). Because exchanges and smelters/refiners only purchase tagged minerals extracted in green mines, this has created a mechanism for the exclusive distribution of conflict-free minerals. After the introduction of regulations in 2010, the RCM has been expanded in collaboration with other minerals certification schemes. As described in section 3 however, there are significant issues with the implementation of the scheme.



**Photos 3. Electronic Tags (Left) and Registry (Right) of the International Tin Supply Chain Initiative (ITSCI) for Tin**

Source: Photographed by the author

Meanwhile, in midstream supply chains, the certification of conflict-free smelters/refiners (CFS; currently Conformant Smelters & Refiners) began. The EICC/GeSI (currently the RBA) conceptualizes the minerals supply chain as shown in Figure 3. Ore from mines around the world collects at around 500 companies at the smelting/refining stage. From there, downstream supply chains branch out extensively as minerals are turned into raw materials, parts and components, and finished products. The designation of conflict-free smelters/refiners that can clearly establish the source of minerals at the smelting/refining stage is an effective way to prevent the pollution of supply chains with conflict resources. The EICC/GeSI has investigated 3TG smelters/refiners since 2010, and certified 236 conflict-free smelters/refiners as of January 2022.



**Figure 2. Conceptual Diagram of the Spread of Suppliers**

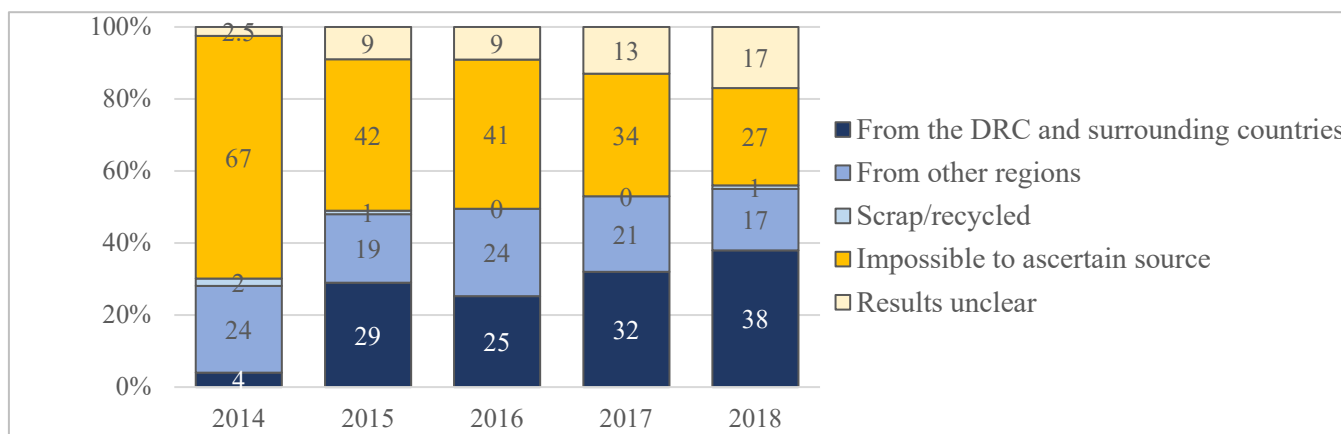
Source: Prepared by the author from information on the EICC/GeSI website

Companies that use 3TG in the downstream supply chain, in developed countries in Europe and the US, are investigating supply chains for conflict minerals on a large scale. Under DFA 1502, companies in the downstream supply chain are required to confirm with their immediate suppliers—product manufacturers—regarding the raw minerals used in their products. Product manufacturers confirm with the parts and components manufacturers that supply them, and these, in turn, confirm with raw materials manufacturers, and so on. In this way, investigations are conducted up the supply chain.

US companies were quick to respond to these regulations. Electronic device companies such as Apple, Dell, HP, Intel, and Philips led the way in increasing the transparency of their resources procurement routes and publicly disclosing this information. Apple, which had been subject to criticism by NGOs, declared that it would identify the source of resources used by each of its suppliers up to the level of smelter/refiner, for the 3TG used in its products. The Public-Private Alliance for Responsible Minerals Trade (PPA) was also established, a collaboration between government, NGOs, companies, and industry groups. The PPA is engaged in a broad range of initiatives to eliminate conflict minerals through cooperation between diverse stakeholders. According to a report by the US Government Accountability Office (GAO), 1,117 US companies reported to the SEC on the results of investigations in 2018 (GAO, 2019). Considering the fact that the investigations by these 1,117 companies included their suppliers, it is likely that these investigations traversed national borders and extended worldwide.

Corporate initiatives such as these were not born of ethics. Socially responsible investing (SRI) indexes that take account of companies' environmental response and social activities are widely used in Europe and the US. Boycotts of companies like NIKE and Apple have also occurred, due to criticism over labor issues at their factories overseas. Conversely, a prompt response allows companies to promote themselves as conflict-free. Corporate initiatives are therefore regarded as strategies to win investors and consumers.

Even in Japan, which has not established its own regulations on conflict minerals, many companies have implemented investigations, primarily in the electronic devices, automobile, and chemical engineering industries, because they themselves have been part of investigations by customers listed in the US. In 2012, JEITA, an industry group composed of electronic device companies, established the Responsible Minerals Trade Working Group, and began efforts to unify and spread investigation methods.



**Figure 3. Results of Supply Chain Investigations into Conflict Materials by US-Listed Companies**

Source: Prepared by the author from GAO, 2019

However, significant difficulties stand in the way of efforts to resolve conflict upstream in the supply chain through initiatives downstream. Unlike minerals such as diamonds, which keep their shape through the distribution process, 3TG ores are mixed together with various other minerals, and follow complicated processing routes. In order to identify the regions where they were originally produced, it is first necessary to identify the smelters/refiners where they were processed. However, the minerals may pass through somewhere between five and eight different suppliers and cross several national borders on their way from smelters/refiners to the companies at the bottom of the supply chain. This makes it extremely difficult to trace supply chains. According to the GAO report mentioned above, as of 2018, only 56% of US companies were able to identify the regions that produced the 3TG they use (GAO, 2019).

Because of the inherent difficulty of investigating supply chains for conflict minerals, there is an evident movement towards finding a resolution through initiatives directly targeting the areas around mines in the eastern DRC. In 2011, the ICT company Motorola Solutions and the tantalum capacitor manufacturer AVX (an affiliated company of Kyocera) set up the Solutions for Hope program, launching an initiative to procure minerals directly through contracts with tantalum mines certified as conflict-free. The US Agency for International Development (USAID), the UK Department for International Development (DFID) and NGOs also support the distribution of seeds and farming tools to enable the reemployment in agriculture of mine laborers made redundant due to the introduction of conflict materials regulations.

The problem is that these initiatives in upstream, midstream and downstream supply chains have not led to a resolution to the conflict in the DRC. The next section analyzes the mechanisms linking minerals and conflict, to evaluate the main reasons why the regulations have not achieved a resolution of the conflict.

## 3. The mechanisms linking conflict and resources

### 3.1. Analysis of conflict in terms of political economy

There is a long history of natural resources serving as sources or funds for conflicts. Minerals, timber, agricultural products, drugs, land rights, and other resources have played a key role in triggering, prolonging, and financing conflicts (Ross, 2003). In the 1990s, after the end of the Cold War, the role of resources in conflict became more prominent. Conflict actors started using resources as a means of funding instead of aid from superpowers.

Even if resources are used, they are not the only cause of conflict. In some cases, hostilities caused by other factors develop into conflicts using resources, or resources are used as funding in the process of continuing conflict. In addition, resources are structurally linked to conflict through their influence on the economics, politics, and societies in and around the mining area. Consequently, several studies have been conducted on the mechanisms through which resources are connected to conflicts in a field of research known as “the political economy of conflict” (Ross 2003; Fearon 2004; Humphreys 2005; Le Billon 2008; Collier et al. 2009). Existing studies have suggested that, depending on the phase of conflict (outbreak/ continuation) and how they are involved (motivation/means), resources are linked to conflict in the following ways: (a) as motivation for the outbreak of conflict, (b) as the means by which conflict breaks out, (c) as the means to continue conflict, and (d) as motivation to continue conflict. Table 2 summarizes these mechanisms.

This section verifies which mechanisms are at work in the Congo conflicts. In this context, it is necessary to define which of the DRC’s abundant resources should be designated as conflict minerals. DRC produces a wide range of minerals. Although the minerals in Katanga and Kasai in the south, cobalt, copper, and diamonds, constitute the DRC’s major mineral resources and support the country’s economy, they are not included in conflict minerals. Since the 2000s, the minerals designated as conflict minerals are the 3TG produced in the ASM in Maniema, North Kivu, and South Kivu in the east. Tantalum is a particularly significant mineral. While its demand has rapidly increased with the global spread of electronic devices since the late 1990s (Nest, 2011), Australia, accounting for 50–60 percent of the world’s tantalum supply, closed its biggest tantalum mine in 2008 (USGS, 2010). This resulted in tantalum mining development in Rwanda and the DRC; since 2011, these countries have produced more than 60 percent of the world’s tantalum supply (USGS, 2015).

#### 3.1.1. Motivation for the outbreak of conflict (A-1 to A-3)

There is room for verifying whether resources motivated conflict actors or external actors during the outbreak of the First Congo War in 1996. Undoubtedly, a resource-dependent economy left the Congo vulnerable to changes in the international price of resources. Based on the declining international price of copper in the 1970s, the country experienced a debt crisis that helped destabilize the Mobutu regime in the 1990s (McCalpin, 2002). Consequently, the Congo has failed to achieve economic growth despite its wealth of resources. Arguably, resources are linked to the

**Table 2. Mechanisms linking resources and conflict**

Outbreak of conflict	
<b>Motivation</b>	<p><b>A-1. Greedy rebels mechanism</b></p> <ul style="list-style-type: none"> <li>• Domestic groups engage in criminal activity to benefit from resources independent from the state</li> <li>• Natural resources increase the “prize” value of capturing the state</li> <li>• Concentration of natural resources in a particular region motivates separatism</li> </ul>
	<p><b>A-2. Greedy outsiders mechanism</b></p> <p>The existence of natural resources may be an incentive for third parties (states and corporations) to engage in or foster civil conflicts</p>
	<p><b>A-3. Grievance mechanism</b></p> <ul style="list-style-type: none"> <li>• Experiencing transitory inequalities as part of the development process</li> <li>• Become more vulnerable to trade shocks</li> <li>• Process of extraction may produce grievance (e.g. forced migration)</li> <li>• Natural resource wealth may be seen as more unjustly distributed than other wealth</li> </ul>
<b>Means</b>	<p><b>B-1. Weak states mechanism</b></p> <ul style="list-style-type: none"> <li>• Weak society-state relations: when citizens are untaxed, government has little compulsion to respond to the demand of their citizens or create structures that engage their citizens</li> <li>• Government has weak incentives to create strong bureaucratic institutions</li> </ul>
	<p><b>B-2. Sparse network mechanism</b></p> <p>Weak manufacturing sectors and low levels of internal trade spoil social cohesion and interregional interdependence</p>
	<p><b>B-3. Feasibility mechanism</b></p> <p>Natural resource financing enables conflict actors to start fighting</p>
<b>Means</b>	<p><b>C-1. Feasibility mechanism</b></p> <p>Natural resource financing creates longer conflict by enabling conflict actors to keep fighting</p>
	<p><b>C-2. Fragmented organizational structures mechanism</b></p> <p>Resource exploitation creates organizational structure among conflict actors, increasing the cost of peace</p>
	<p><b>C-3. Sparse network mechanism</b></p> <p>Weak manufacturing sectors and low levels of internal trade spoil social cohesion and interregional interdependence</p>
<b>Motivation</b>	<p><b>D-1. Military balances mechanism</b></p> <p>As the conflict situation enables resource exploitation, it motivates the maintenance of a stalemate.</p>
	<p><b>D-2. Possibility of pork mechanism</b></p> <p>Presence of natural resources that yield transferable rents make negotiation more difficult by providing subgroups with incentives to renegotiate ex-post</p>
	<p><b>D-3. Domestic conflict premium mechanism</b></p> <p>Groups that benefit during conflict prefer to fight than to win and therefore act as spoilers to the peace process</p>
	<p><b>D-4. International conflict premium mechanism</b></p> <p>Neighboring countries become negative regarding the peace process when they expect more benefits from conflict than from a negotiated settlement</p>

Source: Author developed based on Humphreys (2005) and Oberreuter and Kranenpohl (2008).

outbreak of conflict in the Congo because its economic vulnerability has created an environment that invites conflict (Nest et al., 2006). However, it is uncertain whether this has led to A-3's "grievance" and whether grievance over resources was the reason behind armed groups and neighboring countries initiating armed conflict.

Regarding A-1's "greedy rebels," for the armed groups, overthrowing Mobutu's dictatorship and seizing power may have led to the seizure of resource interests. In addition, Laurent Kabila received support from Western companies to start the conflict. Under Mobutu's regime, state-owned companies dominated the mining industry, making it challenging for foreign companies to enter the industry. Taking advantage of this situation, L. Kabila contacted Western companies and made agreements with U.S.-based American Mineral Fields (AMF) and the Tenke Mining Corporation of Canada, granting them mining concessions once he took power (Dunn, 2002; UN, S/2001/357). Given the above, we can conclude that A-1's "greedy rebels" and A-2's "greedy outsiders" played a role in the conflict to a certain extent. In addition, foreign companies funded the AFDL conflict for concessions to minerals.

However, the First Congo War was triggered by the influx of Rwandan refugees and the militarization of refugee camps in the context of existing hostilities over land, ethnicity, and citizenship of the Banyamulenge—peoples of Rwandan origin who live in the eastern Congo. based on these longstanding issues inherited from the colonial era, the situation developed into a security problem for neighboring countries (Mamdani, 2001; Turner, 2007). Therefore, while the presence of resources could be a structural factor that increased the possibility of conflict, it is difficult to determine whether resources directly caused it.

### **3.1.2. Means for the outbreak of conflict (B-1 to B-3)**

Resources may be linked to the outbreak of conflict in other ways. From the outbreak of conflict until the fall of Kinshasa in May 1997, no assistance was provided to the Mobutu government, either domestically or from the international community, including neighboring countries (McCalpin, 2002). As such, B-1, the "weak state mechanism," played a significant role wherein the government lost its legitimacy because of the economy's resource dependency. In this case, the lack of development was the dominant mechanism connecting resources and conflict.

Moreover, the country lacked a transport network connecting the eastern and western regions. Consequently, resources were exported from production areas in the south and east to neighboring countries, such as Zambia, Uganda, and Rwanda. Poor export routes thus enabled B-2, the "sparse network mechanism."

In addition to these structural factors, as mentioned above, mining concessions were used by armed groups to gain external support. During the Second War, which followed his seizure of power, L. Kabila planned to transfer the diamond concessions of Société Minière de Bakwanga (MIBA), the primary state-owned mining development company in Congo, to a private Zimbabwean company to gain support from the Zimbabwean military (Global witness, 2000). Therefore, B-3, the "feasibility mechanism," which refers to the way in which an armed group uses resources to secure funding, played a role in motivating conflict.



### 3.1.3. Means to continue conflict (C-1 to C-3)

In particular, profits from resources began to be used to finance conflict after its outbreak. At the beginning of the Second Congo War in 1998, all kinds of resources, not just minerals, were subject to looting by conflict actors. The UN Panel of Experts reported that “Burundian, Rwandan, Ugandan, and/or RCD soldiers commanded by an officer, visited farms, storage facilities, factories, and banks, and demanded that the managers open the coffer and doors. The soldiers were then ordered to remove the relevant products and load them into vehicles” (UN, S/2001/357).

When resource stockpiles were looted and exhausted in the first 12 months, an “illicit business” was formed to extract resources. In some mines, foreign soldiers, locals organized by Rwandan and Ugandan commanders, or manpower brought from Rwanda directly extracted minerals. In other mines, commanders and soldiers guarded the entry points of the mining areas, allowed and encouraged the local population to mine, and collected a kind of “tax” from miners (UN, S/2001/357).

Given this report, it can be said that after the outbreak of the Congo War, C-1, the “feasibility mechanism” contributed to this situation. Rwanda and Uganda receive a significant amount of aid from the international community. In addition to bilateral aid, they have received loans from the IMF, implying that their financial accounts were monitored. Donor countries dislike aid money to be used for military purposes. In the case of Uganda, donors cap military spending at 2 percent of GDP. While Rwanda has a looser cap because of security problems at the border, military spending has been capped at 3.4 percent of GDP. However, according to the 2001 report of the UN Panel of Experts, the cost of stationing troops in the DRC exceeded the permitted military spending of both countries. The report provides detailed calculations of the profits gained by both countries through resource exploitation and argues that this income was used for the deployment of troops (UN, S/2001/357).

Even after the official end of the Second Congo War in 2003 and the withdrawal of foreign troops<sup>8</sup>, armed groups have maintained the structure of illegal extraction and minerals trade. They effectively ruled the ASM areas and earned profits by imposing a “tax” on miners, on the extracted minerals, on equipment such as stone crushers, and on the motorbikes and trucks used to transport the minerals (UN, S/2009/603).

These illegal activities occurred in the ASM mines in eastern Congo. When a conflict occurred in 1996, the Société Minière et Industrielle de Kivu (SOMINKI), a state-owned mining company, stopped operating. Thereafter, local miners started to engage in ASM using simple tools, such as shovels, picks, and pumps, and transported minerals in bags via trucks or motorbikes (Nest, 2011). This mining practice enabled the intervention of armed actors. Therefore, C-1 where natural resource financing creates longer conflict by enabling conflict actors to keep fighting, proved to be operational.

In addition to armed groups and foreign troops, the commanders and soldiers of the FARDC have engaged in illegal activities related to mining and trading of minerals, including providing the

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<sup>8</sup> The report by the UN Panel of Experts points out that, even after the official withdrawal of troops who had entered from surrounding countries, many Rwandan soldiers have remained in eastern DRC, dressing as businessmen or impersonating members of local defense groups (UN S/2002/1146).

necessary equipment, transport, and licensure (UN, S/2001/357). This indicates the effect of C-2, the “fragmented organizational structures mechanism,” the mechanism by which resource exploitation creates an organizational structure among conflict actors, increasing the cost of peace.

Meanwhile, in addition to the country’s instability, domestic networks were broken and the government based in Kinshasa in the west could no longer control the east. Furthermore, the FARDC troops deployed in the east were engaged in illegal mining and trading, which testifies to this lack of control. Therefore, this proves that C-3, the “sparse network mechanism” was at work.

#### **3.1.4. Motivation to continue conflict (D-1 to D-4)**

Once resources and conflicts were linked, the armed groups formed to overthrow the government or defend local residents started engaging in illegal economic activities, establishing business networks and structures for systematic exploitation (Nest, 2011). This suggests the possibility that the purpose of conflict shifts from a political struggle or self-defense to gaining economic benefits. In the DRC, the Mining Law (2002) and Mining Regulations (2003) prioritize large-scale mine development by private companies and stipulate that ASM is only permitted in the artisanal exploitation zone (AEZ) established in areas unsuitable for large-scale development by those who pay the government for mining rights. According to these regulations, the majority of ASM in the eastern DRC is considered illegal (Geenen, 2012). The continuation of conflict, which disrupts government rule thus benefits all conflict actors, including armed groups, foreign rebels, and the FARDC troops. As such, D-1, the “military balances mechanism” and D-3, the “domestic conflict premium mechanism” are also at play, referring to how actors reject peace and continue conflict.

This type of financing is one of the reasons why foreign troops were slow to withdraw even after a peace agreement was reached. This proves the presence of D-4, the “international conflict premium mechanism” in the DRC.

This demonstrates the difficulty of determining whether conflict actors use resources as a means of continuing conflict, or if they continue conflict to profit from resources. Thus, it appears that motivation and means unite to become a single goal. Consequently, a cycle has emerged to secure resources for conflict and continue conflicts to secure resources.

## **3.2. Behavioral changes of actors after regulations**

Following the identification of the mechanisms linking resources and conflict in the DRC, we must consider how the conflict minerals regulation, implemented in 2010, have changed these mechanisms. This section illustrates behavioral changes among the actors.

### **3.2.1. DRC government: regulation and military deployment**

The DRC government was one of the first actors to react to the introduction of conflict minerals regulation. This section focuses on three main actions: the minerals embargo by presidential decree, the launch of the certification scheme, and the security sector reform.

First, when the US Congress passed the Dodd-Frank Act in September 2010, Congolese President

Joseph Kabila issued a presidential decree suspending the mineral activities of artisanal miners, mining co-operatives, traders, and export houses in three provinces in the eastern DRC: South Kivu, North Kivu, and Maniema provinces (Bafilemba et al., 2014; Geenen, 2012).

The DRC government had been complaining of resource exploitation and human rights violations by Rwanda, Uganda, and Burundi since 1999, during the Second Congo War. DRC soldiers were also involved in resource exploitation and human rights violations in the eastern DRC, highlighting the government's lack of control. Accordingly, the aim of the mining ban in three eastern DRC provinces between September 2010 and March 2011 was "to remove mafia-like armed groups" (Bafilemba et al., 2014, BBC News, 2010). However, in reality, the ban was supposedly aimed at separating ASM in the three provinces from other minerals. In other words, the ban's objective was to avoid the impact on other mineral exports supporting the Congolese economy, such as copper, cobalt, diamonds, and 3TG, extracted through industrial mining operations in the Katanga and Kasai provinces.<sup>9</sup> President J. Kabila and his kin (siblings and children) owned around 80 companies, including diamond companies (Congo Research Group, 2017). As such, the sustenance of the DRC's mining industry was important for both the government and the president. Moreover, because he was running for a second presidential term in 2011, President J. Kabila aimed to achieve a campaign advantage by demonstrating his response to the resource problem.

Parallel to this temporary mining ban, two state mining service agencies directly overseeing the ASM sector, the provincial Mining Division and Service for Assistance and the Supervision of Artisanal and Small-Scale Mining (SAEMAPE, formerly SAESSCAM), launched a mine validation scheme in collaboration with the UN, the German Institute for Geosciences and Natural Resources (BGR), and other international organizations (UN, S/2011/738). The joint validation team confirms the absence of armed actors at mining sites and other risks outlined in the OECD guidance. Only minerals from validated sites can be certified for export (PRG et al., 2020). Furthermore, after the International Conference on the Great Lakes Region launched the Regional Certification Mechanism (RCM) for conflict-free mineral exports, the DRC became the first country to announce its use.

The DRC government has been making efforts to break the links between minerals and conflict. Although PRG et al. (2020) report that these efforts have improved legal tax collection and public services in the eastern DRC, whether it has changed the weak state mechanism needs further examination. As discussed in the next section, the validation mission has been delayed owing to a lack of resources, and much of the scheme depends on external agencies.

In addition to mineral certification, the DRC government has been working on security sector reform and the suppression of armed groups through military operations with support from the United Nations Organization Stabilization Mission in the DRC (MONUSCO, former MONUC). Notably, after the rebellion of the armed group M23 in 2012, FARDC and MONUSCO implemented large-scale military operations. Consequently, many Mai-Mai discontinued the armed struggle. By

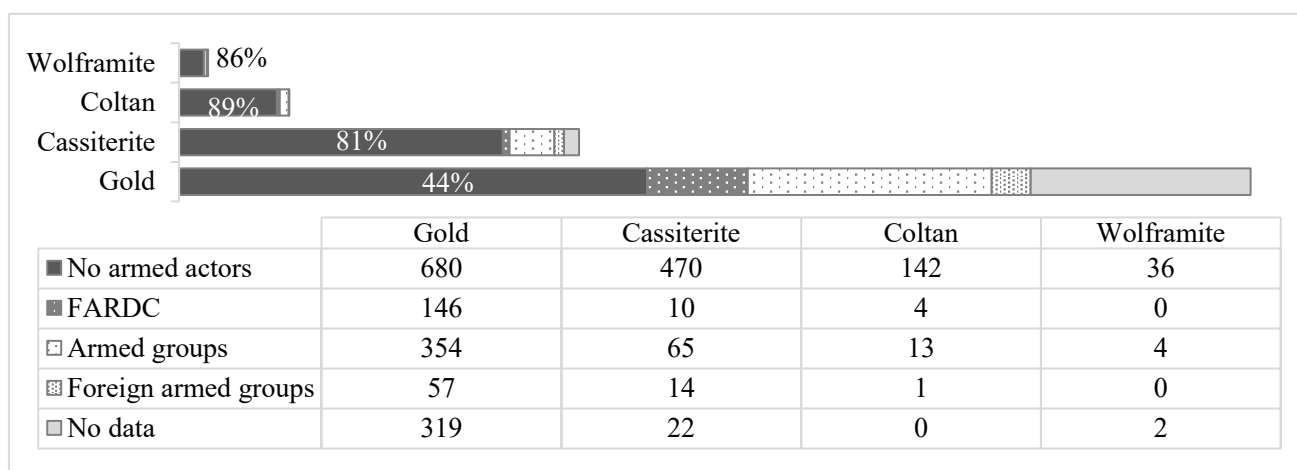
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<sup>9</sup> Geenen (2012) describes four reasons for the ban: cutting the financing of non-state armed groups, reestablishing state control, fighting against fraud, and fighting against the implication of "non-authorized persons" in the sector.

November 2013, 2230 soldiers surrendered from major Mai-Mai, including PARECO, APCLS, NDC (Mai-Mai Sheka), Mai-Mai Hilaire, and Raïa Mutomboki (UN, S/2014/42). However, it should be noted that despite security sector reforms, there have been continuous reports of illegal trade and violence against civilians by security sector personnel such as FARDC soldiers and police (UN, S/2021/560).

### 3.2.2. Armed groups: Withdrawn, but remaining

The question arises, whether the introduction of mineral regulations and military operations demilitarized the mines in the eastern DRC? According to an investigation of 2419 mines in the region by the International Peace Information Service (IPIS), armed groups and military forces have withdrawn from 80 percent of 3T metal (tin, tungsten, tantalum) mines, as shown in Figure 5 (IPIS, 2018).



**Figure 4. Mines in Eastern DRC and conflict actors**

Source: Author developed based on IPIS (2018).

Two reasons allowed the armed groups to withdraw from the mines. The first is the above-mentioned military operations implemented by FARDC and MONUSCO in 2013. Second, because of the establishment of mineral certification schemes accompanied by regulations, the price of conflict minerals fell. According to research conducted by the Enough Project, as buyers are unable to sell minerals to Western electronics company supply chains without going through a certification scheme, only Chinese buyers purchased such minerals, at approximately a 30 to 60 percent discount. Consequently, it became difficult for armed groups to profit from conflict minerals. Moreover, with the spread of the tracing system, a perception grew among armed groups that “one could easily be indicted by The Hague (ICC) if he does not shy away from mining businesses,” encouraging them to withdraw from the mines (Bafilemba et al., 2014).

Nevertheless, two central problems remain. One problem is that many gold mines remain under the control of armed groups. This study highlights four reasons. First, as opposed to 3T, gold is a high-value-to-weight mineral, and thus, miners and traders can conceal the ore and secretly transport it (Sánchez de la Sierra, 2020). Second, while 3T are mostly used as components in electronic devices

and integrated into the supply chains of developed Western countries, gold is often consumed as a precious metal, which often makes markets in the Middle East the final consumption place (UN, S/2021/560). It is difficult to stop gold smuggling in the precious metals market because there is a demand for gold, even without a conflict-free tag. Third, gold is melted and recycled many times and traded repeatedly, making it challenging to identify the country of origin. For this reason, DFA 1502 exempted recycled gold from the survey. The fourth and most serious problem is that while 3T mines are surveyed and certified by the certification body of ITSCI, there is no official monitoring and certification agency for ASM gold mines. Although the NGO, IMPACT, launched the JUST GOLD project in 2012, it only covers several mine sites (IMPACT, 2020). For these reasons, gold is exempted from regulations and rampant smuggling continues. Parker and Vadheim (2017) note that there have been cases of armed groups moving in the vicinity of gold mines when they can no longer profit from 3T mines. Consequently, even after the introduction of regulations, gold smuggling continues. Indeed, only 44 percent of DRC gold mines are certified as “free from conflict actors” in the IPIS report. Therefore, it can be argued that the regulation of conflict minerals has been ineffective in terms of the gold trade.

Another problem is that even if the conflict actors withdraw from the mines, it is impossible to make the transport of minerals conflict-free. While the conflict-free tag is attached to mineral ore in conflict-free mines by ITSCI, this does not prevent the ore from becoming involved in conflict because of the “toll tax” imposed by conflict actors during transport. According to the 2017 IPIS report, there are 798 roadblocks in the North and South Kivu provinces and “roads without roadblocks are rare.” At least 75 percent (597 locations) have one armed actor, 22 percent (174 locations) have armed groups, and 71 percent (569 locations) have government actors comprising administrative entities, the army, police, and so on (Schouten et al., 2017). While the DRC government prohibits its soldiers and police from illegal mining and trade by banning entry to the mines, the central government’s control fails to reach the eastern region of the country. Compounded by insufficient salaries, soldiers and police continue to collect illegal taxes from passing vehicles through roadblocks. Furthermore, certification agencies may deliberately overlook taxation on these roads. Vogel, who conducted a field survey in the North and South Kivu provinces, highlighted the operational problems of the certification agencies. SAEMAPE, ITSCI, and PACT were supposed to certify as a collaboration between external policy and local practice. However, as they do not have sufficient staff in their respective offices, in some areas, only one person covers half a dozen mines over dozens of km<sup>2</sup> and is sometimes not paid. Therefore, while ostensibly pursuing traceability of minerals, he is forced to cope with pressure from miners and traders. In some cases, the ITSCI appears to tacitly approve local control by the Mai-Mai, especially when it is accepted by local people, and many miners belong to self-defense groups (Vogel, 2018). In eastern Congo, where the government is not well administered, stationary bandits have been established by armed actors who have taken effective control of mining areas and provide protection rackets in exchange for tax.<sup>10</sup>

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<sup>10</sup> Stationary bandit is a theory that in a state of anarchy, armed forces that can rationalize theft from the population provide peaceful order and public goods (Olsen, 1993).

Sánchez de la Sierra, who analyzed panel data from 650 sites in eastern Congo since 1995, found that conflict actors implement the “essential functions of a state” (Sánchez de la Sierra, 2020). Krauser, who analyzed mining data from IPIS and conflict data from Uppsala, found that violence within a 40 km radius of mines “taxed” by conflict actors dropped by 35%, and rose by 76% in the 40–56 km region, indicating an “eye of the storm” phenomenon (Krauser, 2020).

Therefore, it can be concluded that while armed groups have with- drawn from direct control of the mine sites, they continue to stay and benefit from minerals trade.

### **3.2.3. Neighboring countries: Indirect engagement**

After the peace agreement of the Second Congo War, the armed forces of neighboring countries withdrew from the territory of the DRC. However, state or non-state actors from some countries have been suspected of continued involvement in the Eastern Congo Conflict, either by supporting armed groups or engaging in illegal mineral trade (UN, S/2021/560). DFA 1502 covered the DRC and nine adjoining countries: the Central African Republic, South Sudan, Zambia, Angola, the Republic of Congo, Tanzania, Burundi, Rwanda, and Uganda. The ITSCI launched a mineral certification scheme in Burundi, Rwanda, and Uganda, as well as the DRC. As mentioned in Section 3, Rwanda has become a major tantalum export country since 2011 (USGS, 2015). Thus, it is important to certify that their export minerals are conflict-free. For this reason, Rwanda has been proactive in establishing a certification scheme (Postma et al., 2021). Uganda is in a similar situation because gold is an important export commodity. Nevertheless, the UN Group of Experts continues to report cases where minerals are smuggled from the DRC to neighboring countries and combatants for armed groups in the DRC are being recruited in those countries.

For example, according to a report published in June 2020 (UN, S/2020/482), smugglers informed that smuggled gold from South Kivu went to Burundi, Rwanda, the United Arab Emirates, and the United Republic of Tanzania. Using information published by the Ugandan authorities, the Group estimates that over 95 per cent of gold exports from Uganda were of non-Ugandan origin in 2019. The report further states that Rwandan authorities showed the untagged and smuggled coltan (tantalum) seized at the border.

Furthermore, the UN Group of Experts has repeatedly reported that armed groups in the eastern DRC, including the Allied Democratic Forces (ADF) and Rwanda National Congress (RNC), have been recruiting combatants in Burundi, Rwanda, and Uganda. A 2018 report describes the details of combatant recruitment networks. Combatants were recruited from neighboring countries, including Burundi, Rwanda, Uganda, Kenya, and South Africa, and sent to the eastern DRC with fake Congolese identity cards (UN, S/2018/1133).

Although the involvement of state actors in these illegal activities is unknown, outsiders surrounding the DRC have been involved in the Eastern Congo conflict.

### **3.3. Have conflict minerals regulations resulted in mechanism change?**

Based on the previous discussion, this section examines whether conflict minerals regulations have changed the mechanisms linking resources to the continuation of conflict. We focus on two of the mechanisms summarized in Table 2: namely, “C: Means to continue conflict.” and “D: Motivation for the continuation of conflict.”

#### **3.3.1. Means to continue conflict (C-1 to C-3)**

Conflict minerals regulations have undoubtedly led to behavioral changes in the actors involved in conflict and minerals trade, as mentioned in the previous section. The creation of a certification scheme and the withdrawal of armed groups from the mine site are dramatic changes caused by regulation. However, these changes may not necessarily mean a change in the mechanisms linking resources to conflict.

Regarding the mechanisms by which resources serve as a means for the continuation of conflict, we noted in Section 3.1.3. three mechanisms at work: C-1, the “feasibility mechanism;” C-2, the “fragmented organizational structures mechanism;” and C-3, the “sparse network mechanism.”

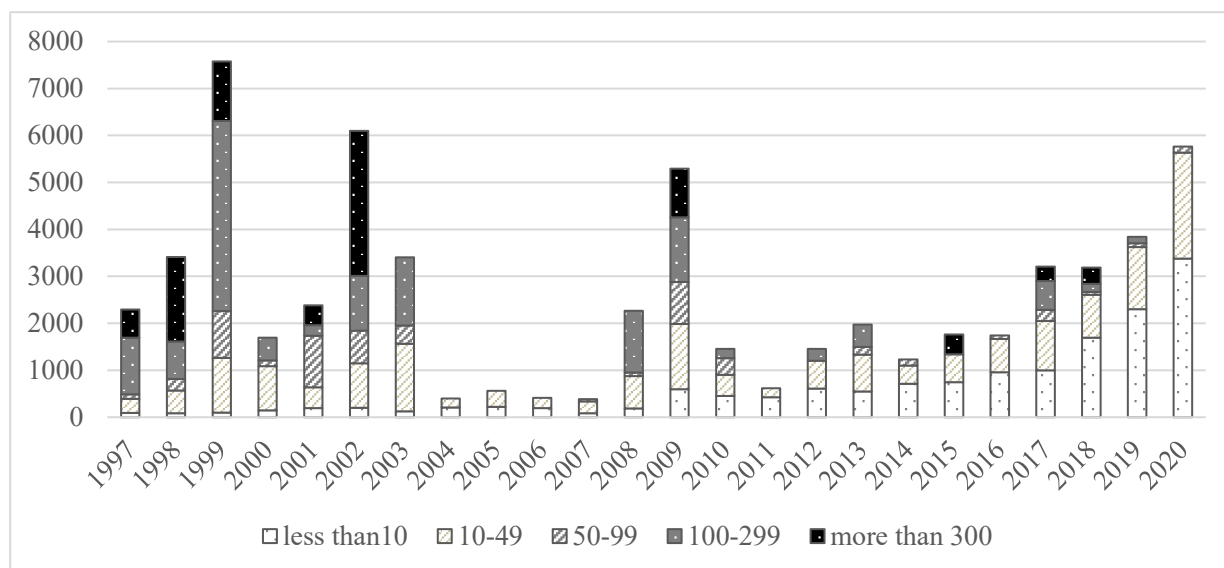
Although NGOs have reported that 80 percent of 3T mines and 60 percent of gold mines are conflict-free (IPIS, 2018), the C-1 remains functional because armed groups act as stationary bandits around ASM mines and receive funding from taxation on minerals-related activities (Sánchez de la Sierra, 2020; Krauser, 2020; Schouten, 2017). Indeed, as claimed in an open letter by researchers, advocacy groups, and other representatives related to the Congo (70 signatories, 2014), minerals are not the only source of funding for armed groups, which are engaged in a variety of economic activities. However, as long as they have enough of a presence to tax in mining areas, it is clear that they profit from minerals regardless of its proportion in their income. In analyzing the feasibility mechanism, it is necessary to consider whether changes in the cost and benefit of illegal mining/trading and conflict are sufficient for the armed groups to abandon their involvement in such activities and find a new way of earning a living by disarming.

After the introduction of regulations in 2010, and since the rebellion staged by the armed group M23 and its subsequent defeat by the FARDC and MONUSCO (UN, S/2014/42), armed groups in the eastern DRC have become increasingly fragmented and small. According to Stearns and Vogel (2015), while the number of armed groups in South and North Kivu increased to more than 70 in 2015, the membership of each group had decreased. Regarding the scale of armed clashes, while the number of armed clashes is increasing, small-scale clashes with fewer than ten deaths account for more than 50 percent of these incidents (Figure 6). The primary reason for this fragmentation is the failure of the FARDC and MONUSCO to disarm groups and internal factional struggles within armed groups (Stearns and Vogel, 2015). However, even if resource profits are reduced, it is still possible to maintain a small armed group, and taxation can serve as a source of funding.

Therefore, even if the amount of profit from mining and trading in mineral resources decreases as a result of regulations, C-1 continues to work because the profit gained still exceeds the cost of peace.

In addition, armed groups have constructed more sophisticated organizations and systematic ways

of funding than in the Congo Wars. Sánchez de la Sierra (2020) found that armed groups imposed a variety of taxes on local residents, including an “entry tax” on miners entering tunnels, a “poll tax” on villages controlled by armed actors, a “toll tax” on transit, and a “turnover tax” on businesses. He highlights that armed actors implement the “essential functions of a state” in the eastern DRC. Based on this situation, it can be concluded that C-2, the “fragmented organizational structures mechanism” continues to work.



**Figure 5. Conflict events in the DRC (by number of fatalities), 1997–2020**

Source: Author developed, based on ACLED.

Finally, even after regulation, C-3, the “sparse network mechanism” did not change because of a lack of development in the manufacturing sector and in internal trade in the eastern DRC.

### 3.3.2. Motivation to continue conflict (D-1 to D-4)

Regarding the mechanisms by which resources motivate the continuation of conflict, we noted in Section 3.1.3 that three mechanisms are at work: D-1, the “military balances mechanism;” D-2, the “possibility of pork mechanism;” and D-4, the “international conflict premium mechanism.”

Clearly, regulations have not changed the D-1 and D-2 mechanisms. The continuation of conflict and lack of government control in the east have allowed armed groups to behave as stationary bandits and profit from the minerals (Sánchez de la Sierra, 2020; Krauser, 2020; Schouten, 2017). All the armed groups seem to find it beneficial to continue profiting from the conflict rather than to win and overthrow the Congolese government to take power.

Regarding D-4, the situation is slightly more complicated. Officially, it should have become unfavorable for conflict actors to continue to engage in conflict because there is a risk that the minerals they are trading will be considered conflict minerals and eliminated from the supply chain as long as conflict in the mining areas continues. For downstream companies, it is extremely difficult to complete the survey on the 3 TG supply chain demanded by the DFA 1502 and OECD guidance. The U.S. Government Accountability Office (GAO) reported that 1117 U.S. companies filed conflict



mineral disclosures in 2018, and 56% of them reported whether the 3 TG in their products came from the Congo or any of the countries adjoining it. For the remaining 44%, the country of origin could not be determined or the origin was not reported. In response to the GAO interviews, company representatives said that although supplier awareness of conflict minerals is increasing, determining the country of origin is difficult because supplier information is not accessible and a huge number of suppliers and processing facilities are involved (US GAO, 2019). In such a situation, the pressure imposed by downstream companies on upstream countries to end the conflict should increase. As mentioned in Section 3.1.3, Rwanda and Uganda are recipients of a large amount of aid from the international community. If donor countries and international aid institutions pressure them to crack down on the illegal mineral trade and hinder the recruitment of combatants, it would motivate them to take the necessary steps to end the conflict. One example is that of the U.S. putting pressure on Rwanda to stop supporting M23 during the 2012 rebellion (Wroughton, 2013). This points to D-4, the “international conflict premium mechanism.” However, downstream companies and countries did not put enough pressure on Rwanda and Uganda to pull out of the Eastern Congo conflict altogether. For companies, the significant task in following conflict minerals regulation is due diligence, not achieving conflict-free minerals trade. Thus, it is sufficient for companies to obtain certification documents from supplier companies. They are not required to ensure the effectiveness of the certification scheme in upstream mining areas. Therefore, as long as the certification scheme exists, companies and donor countries will not be motivated to exert their influence on neighboring countries to shift their cost-benefit balance. In an interview with the author, a tantalum smelter explained that “if we doubt ITSCI’s certification, we will not be able to continue our business, so we have no choice but to believe them.” It can be concluded that the regulations have not changed D-4.

### **3.4. Summary**

This study investigated the mechanisms linking resources and conflicts and analyzes whether the regulation of conflict minerals have changed these mechanisms. Legislated in 2010, these conflict minerals regulations are an ambitious attempt to break the link between minerals and conflict by requiring downstream companies to practice due diligence to halt human rights violations in the mining areas of the DRC. In the ten years since the regulations were issued, mineral certification schemes have been established and conflict actors have withdrawn from many mining sites. However, the mechanisms linking minerals and conflict remain unchanged. Despite huge efforts made by downstream companies and international institutions to construct closed-pipe supply chains to eliminate conflict minerals, as long as conflict actors in the DRC continue to profit from the minerals, the elimination process does not achieve its goal of a mechanism-level game changer. Some companies have claimed that the regulations are ineffective and want them abolished.

Nevertheless, the EU enacted its own regulation of conflict minerals in January 2021. In addition to conflict minerals, human rights due diligence has also become an established policy in the global supply chain after the UN Guiding Principles on the Business and Human Rights was adopted in 2011. Though the U.S. relaxed its regulation, the industry, which has made a commitment

to the responsible sourcing of minerals, is expected to maintain its efforts. At this turning point, this study presents the results of a mechanism-level analysis of the impact of regulation.

Why have regulations on the trade of conflict minerals been unable to contribute to resolving the conflict? Based on the analysis above, this paper proposes the following four points as reasons why regulations cannot stop the conflict.

1. Despite bringing about a change in the behavior of companies, the DRC government, the governments of surrounding countries, European and US governments, armed groups, military forces, the DRC Army, aid organizations and other parties related to the conflict, regulations on the conflict minerals have not functioned as an effective means of resolving conflict because they have not been able to change the mechanisms linking minerals and conflict.
2. Significant problems exist in the upstream sections of the closed-pipe supply chains designed to distribute only minerals certified as not associated with conflicts (conflict-free minerals), and the construction of these supply chains has not been successfully achieved.
3. Surrounding countries continue to interfere in the conflict in eastern DRC through the recruitment and training of soldiers for armed groups and the smuggling of minerals, and the geopolitics of the African Great Lakes Region is not heading for a resolution of the conflict.
4. Pressure from companies downstream in the supply chain and aid donors has not proved strong enough to change the mechanisms whereby the actors involved profit from continuing the conflict.

## 4. Policy recommendations

Based on the analysis of factors above, four recommendations are proposed for policies to be adopted by the Japanese government, aid organizations, researchers, companies, and civil society.

### **Recommendation 1: Analyze the effect of regulations on the conflict minerals on the mechanisms linking minerals and conflict**

Despite bringing about a change in the behavior of the governments, armed groups, military forces, and companies involved, the introduction of regulations on the trade of conflict minerals has failed to change the mechanisms linking minerals and conflict. There is no resolution to the conflict in sight because the mining and trading of minerals are used to continue the conflict, while also continuing to act as an incentive to keep the conflict raging. A deeper analysis is necessary, not only of changes in the behavior of the actors due to the regulations but also of the effect of the regulations on the mechanisms linking minerals and conflict.

### **Recommendation 2: Strengthen the investigation of supply chains for conflict minerals and the conflict-free minerals certification scheme**

The first step in ensuring the regulations on the trade of conflict minerals function to resolve conflict is to implement them as they were designed. The relaxation of the regulations should not be considered while they are still to be implemented fully. Instead, what is needed is stronger investigation of supply chains for conflict minerals and a more robust minerals certification scheme.

### **Recommendation 3: Strengthen support for upstream supply chains (mineral-producing regions) to establish closed-pipe supply chains**

When establishing closed-pipe supply chains for conflict-free minerals, the difficulty lies in the upstream mineral-producing regions. Even if downstream supply chain traceability is improved from the stage of smelters/refiners onward, the entire supply chain will be polluted if the profits collected through the “taxation” of minerals mining and trading in mineral-producing regions is used by conflict actors. It is recommended to strengthen support for upstream mineral certification agencies, to enable downstream companies that perform due diligence to strive not only for the traceability of the downstream supply chain but also to ensure that the mines and transportation upstream are conflict-free.

### **Recommendation 4: Analyze the issue based on the geopolitics of the African Great Lakes Region, including DRC, Rwanda, Uganda, and Burundi**

Given the continuing involvement of surrounding countries in the conflict in the eastern DRC, it is necessary to understand the Eastern Congo conflict in the context of the geopolitics of the African Great Lakes Region, including DRC, Rwanda, Uganda, and Burundi, and for the international community to work towards resolving the conflict based on this understanding.

## [Note]

The following research team, part of the SDGs Collaborative Research Unit at The University of Tokyo Institute for Future Initiatives (IFI), is engaged in a research project entitled “Minerals Extraction and Human Rights Violation in Conflict-Affected Area.”

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These policy recommendations are the result of this project and have been formulated based on the following papers.

Kazuyo Hanai “Conflict minerals regulation and mechanism changes in the DR Congo” *Resources Policy*, Vol.74, December 2021.

<https://doi.org/10.1016/j.resourpol.2021.102394>

Kazuyo Hanai “Minerals mining and conflict in the Democratic Republic of the Congo (DRC): the people who live together with the resources” *Refugee Studies Journal*, Vol. 9, 2020, pp. 67-82.

In formulating these recommendations, opinions were exchanged with researchers, company representatives, aid organizations and citizens’ groups involved in the DRC’s conflict resources issue and peace-building efforts. The exchange of opinions with the NPOs RITA-Congo and Terra Renaissance, volunteers at the Society of Researchers for International Development (SRID), and the Japan Electronics and Information Technology Industries Association (JEITA), in particular, formed the basis of these recommendations.

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