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Did Section 1502 put an end to the trade in tantalum sourced from conflict areas in the Democratic Republic of the Congo?

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Research Paper

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Acronyms

AM	Artisanal Mining
ASM	Artisanal and small-scale mining
CFSP	Conflict-Free Smelter Program
CNMC	Comisión Nacional de los Mercados y la Competencia
DRC	Democratic Republic of the Congo
FARDC	Forces Armées de la République Démocratique du Congo
ICGLR	International Conference on the Great Lakes Region
NGO	Non-Governmental Organisations
OECD	Organization for Economic Cooperation and Development
SEC	Security Exchange Commission
LTC	Long-Term Contracts
TIC	Tantalum - Niobium Intern Study Center
UN GoE	United Nations Group of Experts
USA	United States of America

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Introduction

In the last decade, the concept of due diligence has come to the fore with respect to ethically responsible raw material supply chains.

This research paper focuses on the mineral tantalum, in particular tantalum extracted from coltan ore, and in the context of the Democratic Republic of the Congo (DRC), in central Africa. Extraction of the metal from the neighbouring country of Rwanda is also considered in depth too, given its scale there too and identified commonalities with the DRC.

The most widely known regulation for implementing this due diligence concept in the context of tantalum remains the conflict mineral Section 1502 of the United States of America (USA) Dodd-Frank Act (Section 1502), passed in 2010. The central objective of Section 1502 is to cut the link between financing of the conflict in the eastern DRC and the mineral trade of tantalum sourced from conflict-ridden eastern areas of that country.

The concept of due diligence is prominent in guidance issued by the Organization for Economic Cooperation and Development (OECD)¹ applies to the whole commodity supply chain and imposes certain obligations on companies to establish more transparent management systems. This OECD guidance is discussed extensively in Section II of this research paper, below.

This due diligence concept is particularly relevant for managing risks when sourcing minerals, such as tantalum, produced by artisanal and small-scale mining (ASM) in conflict-affected areas; in any individual instance, can it justifiably be certified as conflict-free? If not, whether due to simple lack of verification or even reliable information that it *is* likely to be a 'conflict mineral' (in the sense of helping to fund a conflict), then the guidance is clear that it would be ineligible for acceptance to any such ethically responsible raw material supply chain.

The purpose of this research paper is to determine whether Section 1502 has successfully fulfilled its central objective, as above. In this critical analysis, the OECD guidance provides a useful comparison and benchmark to that of Section 1502.

¹ OECD, Due Diligence Guidance for responsible Business Conduct (2018)
<<http://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf>>

Section I of this paper will examine the characteristics of tantalum and the role of the mineral in the conflict in the DRC. Section II will further elaborate on the goal of Section 1502, while Section III will discuss its identified unintended consequences. Conclusions are then presented in Section IV.

Section I

1.1 Tantalum Characteristics and Applications

Tantalum is mined both as a primary product and as a by-product from tin, niobium, and lithium extraction.² As a by-product from niobium, tantalum can be found in coltan mineral ore. The market value of the mined coltan depends on its composition. Tantalum is a rare metal which, due to its unique properties, has high-utility applications in numerous industries. Tantalum has a high melting point (about 3,000° C) and is 'a good conductor of heat and electricity and is highly resistant to corrosion by acids'.³ It is used in the form of alloys in vacuum techniques, the process industry, the automotive industry, the medical electronic equipment such as surgical machinery, and surgical devices.

Because tantalum has excellent corrosion-resistant properties, tantalum mill, which is a combination of ingot metallurgy and thermomechanical processing, and fabricated products are utilised for decomposition and heat-resistant chemical plant equipment. On the other hand, 'owing to its high melting point and good strength at inflated temperatures, tantalum is combined with iron, nickel and cobalt to produce superalloys used in aerospace machinery and jet engine components'.⁴ For instance, tantalum combined with nickel produces superalloys used in 'parts such as turbine blades in aircraft engines and land-based turbines considered highly stressed parts'.⁵ Tantalum has high utility application in medical surgery, where is used to replace missing bone material due to the bio-compatibility of tantalum alloys with human tissue. Due to this biocompatibility, tantalum is used in the production of prosthetic joints, implants, surgical instruments and medical devices such as pacemakers. However, due to its high density and price, tantalum is not usually considered for larger implants.⁶

² N.A. Mancheri et al 'Resilience in the tantalum supply chain' [2018] 129(1) Resources, Conservation & Recycling

³ Bleiwas DI, Papp JF and Yager TR, Shift in Global Tantalum Mine Production, 2000–2014 (Fact Sheet, 2015)

⁴ Ibid (n.4)

⁵ The Hague Centre for Strategic Studies, *Coltan, Congo & Conflict: POLINARES CASE STUDY* (Hague Centre for Strategic Studies No 20, 2013)

⁶ K. Vanmeensel et al 'Additively manufactured metals for medical applications' [2018] 1(1) Additive Manufacturing Materials, Processes, Quantifications and Applications

About 60% of tantalum produced globally is used in the form of a metal powder and to manufacture electronic components such as tantalum capacitors.⁷ Thanks to the stability in a broad range of temperatures, tantalum capacitors can easily store electrical charge. Moreover, such capacitors are smaller and lighter than their cheaper alternatives made from aluminium. Due to the features of tantalum capacitors, their applications include communication systems in particular mobile phones, laptop computers, digital cameras and instruments and controls for aircraft, missiles, ships, and weapon systems.⁸

Although there are substitutes for a large part of the application of tantalum and its alloys, the use of substitutes often comes with reduced performance and lower adaptability. For instance, tantalum capacitors are expected to remain the first choice for applications where the primary consideration is not the cost but the high reliability and resistance to inflated temperatures capacitors. According to the data from the Tantalum-Niobium International Study Center (TIC), an international, non-profit association founded in 1974, on shipments of tantalum processors,⁹ due to 'the strong competition from different materials for capacitors and microelectronic demand, the shipments of tantalum processors and their consumption is less likely to increase in the future'.¹⁰ However, the fifth-generation (5G) networks will put greater requirements on the electronics of smartphones where the unique features of tantalum are expected to be of crucial importance'.¹¹ Due to the high price of tantalum, it is likely that tantalum substitutes will become popular'.¹² While tantalum capacitors can be largely replaced by substitutes, they cannot be completely replaced by either aluminium, ceramic or niobium-based capacitors.¹³

Countries, such as the USA, which use tantalum in a variety of commercial and critical defence applications such as aircrafts, missiles, and radio communications, are entirely reliant on foreign sources for tantalum mine production such as the People's Republic of

⁷ Elena Nikishina, 'Niobium and Tantalum: State of the World Market, Fields of Application, and Raw Sources Part I' [2013] 54(6) Russian Journal of Non-Ferrous Metals

⁸ Ibid (n.4)

⁹ Tantalum-Niobium International Study Center and José Isildo de Vargas, Bulletin No 149, ISSN 1019-2026, March 2012, http://tanb.org/webfm_send/166

¹⁰ Ibid (n.6) p.16

¹¹ Roskill Information Services Ltd, 'Tantalum industry to be shaped by supply over next decade' (Roskill, 16 April 2020) <<https://www.globenewswire.com/news-release/2020/04/16/2017499/0/en/Roskill-Tantalum-industry-to-be-shaped-by-supply-over-next-decade.html>> accessed 27 January 2021

¹² George Simandi, 'Tantalum Market and Resources: An Overview' [1984] 1(1) British Columbia Geological Survey (BCGS) 314

¹³ Luis A Tercero Espinoza, 'Case study: Tantalum in the world economy: History, uses and demand ' [2012] 28(1) POLINARES 6

China'.¹⁴ On the other hand, China is dependent on African countries to mine tantalum used in Chinese industrial production, which makes the supply chain traceability of tantalum even more complex.¹⁵

1.2 Global Tantalum Production – Democratic Republic of the Congo and Rwanda

At the beginning of 2000, Australia was by far the major global producer of mined tantalum concentrates with a worldwide production share of 45%, followed by Brazil (17%), Rwanda (12%), and the DRC (9%).¹⁶

However, by 2014 Australian production 'had dropped to 4%' of global production, with a big global switch to Africa being in evidence: in that year, Rwanda produced 50% of global tantalum concentrates (and) the DRC produced 17%.¹⁷

Production cessations in Australia such as the decision to place Wodgina and Greenbushes Mines into care and maintenance provisions in 2008 (i.e. 'mothballing'), to last until market conditions improve sufficiently to incentivise restarted production, significantly contributed to this ending of the dominant position of Australia as a global producer of mined tantalum.¹⁸ This occurred in 2011 and the mines were re-opened.¹⁹

These events were linked to significant headwinds in the global economy; in the aftermath of the global recession of 2007 and the decline in the production of electronics and, therefore, a decrease in the demand for tantalum, Australian mining operations decreased or were partly suspended. This situation was made worse in 2008 and the global financial

¹⁴ United States Government Accountability Office, *Critical Defense Minerals*, (US GAO No 16-335, 2016)

¹⁵ Eric Olander, 'Effects of Chinese Economic Slowdown Now Starting to Hit African Countries in Ways Both Large and Small' (*The ChinAfrica Project*, 13 February 2020)

<<https://chinaafricaproject.com/analysis/effects-of-chinese-economic-slowdown-now-starting-to-hit-african-countries-in-ways-both-large-and-small/>> accessed 27 January 2021

¹⁶ Klaus Schulz, Niobium and Tantalum. in De Young and others (eds), *Critical Mineral Resources of the United States—Economic and Environmental Geology and Prospects for Future Supply* (US Department of the Interior 2017)

¹⁷ Katharine Sanderson, 'Concerns raised over tantalum mining' [2015] *Nature*

¹⁸ Global advanced metals, 'World's largest tantalum producer resumes operations' (*Global Advanced Metals*, 17 January 2011) <<https://www.globaladvancedmetals.com/worlds-largest-tantalum-producer-resumes-operations/>> accessed 25 January 2021

¹⁹ *Ibid* (n.2)

crash of that year, a culmination of the recession that started in the previous year; notably it was in that year that Wodgina, and Greenbushes entered care and maintenance.

Prior to this pronounced downturn, Australian tantalum mines had relatively high operating costs, making them more liable to mothballing or even outright closure.²⁰ In contrast, Brazil maintained its strong position since most of the tantalum concentrate in the country was extracted from relatively low unconsolidated placer deposits. In contradistinction once again, African production is sourced substantially from artisanal mining operations, which are labour intensive but offer production at a lower cost; this is not the case, in particular, for Australian-mined tantalum.

Whilst Brazilian output was largely maintained throughout this turbulent period (approximately from 2007 – 2010), Australian production fell and – in relative terms – failed to regain its global market share, African production boomed and took up this slack. Notably this was the case for both Rwanda and the DRC. This paper focuses on one of those two countries, that is the DRC.

1.3 Characteristics therein of the Supply Chain for Tantalum

The supply chain for tantalum in both the DRC and Rwanda is characterised as lengthy and complex because firstly the process involved multiple actors from distributors and traders to miners and smelters, and secondly, there is little information as to the source of supply of the raw materials. In contrast with large-scale formalised mining in Australia and Brazil, the tantalum mining that takes place in the Great Lakes region in Africa is substantially that of ASM.

Since ASM operations are defined by the mineral and mining laws of the countries, there is no globally accepted definition of this sector. Artisanal Mining (AM), specifically, is often carried out informally and/or illegally by individuals or family units without the use of advanced technologies (and it is this absence that is the core defining feature of AM).²¹ Common negative impacts arising from AM are driven by its poor health and safety record, its frequently hazardous and dangerous working conditions endured by artisanal miners, the

²⁰ Ibid (n.4)

²¹ U Dorner, G.Franken, M.Liedtke and H.Sievers, Artisanal and Small-Scale Mining (ASM) POLINARES working paper n.19, March 2012., p.1

high incidence of child labour, drug and alcohol abuse, violence, and associated (including via gender-based violence) sexual transmission of disease.²²

AM is also important for providing Congolese people with livelihoods and includes production from co-operatives, i.e. it can be legal and formal as well as the opposite. Conflict minerals used to fund the ongoing armed conflict in the DRC also provide livelihoods to many civilians who work as artisanal miners but do not take a direct part in the conflict. AM takes place in remote areas where the local population is very poor, and therefore mining remains more attractive than other alternative livelihood sources. Small-scale mining can be hard to distinguish from AM, excepting that it implies the use of at least some level of mechanized production/ technology.

More broadly, ASM often occurs in the DRC in remote eastern locations lacking in infrastructure and of uncertain governance. In comparison with formalised large-scale mining, which requires many years to bring a sizeable industrial mine into production, the AM is highly flexible because it relies on: people (artisanal miners) rather than technology nor any significant capital investment; and, in the case of informal/ illegal AM, neither mining licenses nor legal tenure.

In comparison with some other metals such as silver, there is 'no official price for tantalum because it is not openly traded on the commodity market and therefore the price is determined between the buyer and seller'.²³ While conventional miners rely on long-term contracts (LTC) with more transparent commerce characteristics, artisanal miners trade predominantly on the spot market, where prices are lower, pass-through prices may be inefficient, and volatility of price much higher compared to the LTC.²⁴ In cases of lower market prices, artisanal miners bear the risk.

Due to the character of AM, the DRC mined tantalum is often not transparent regarding its sourcing, because there may be a lack of sufficient information regarding the value chain of the metal and, in particular, from which part of the DRC it is extracted, and how any resulting

²² The World Health Organization 'Artisanal and Small-Scale gold Mining and Health' Technical Paper #1: Environmental and occupational health hazards associated with Artisanal and Small-scale mining

²³ Tantalum-Niobium International Study Center, 'Valuation basis' (Tantalum-Niobium International Study Center) <<https://www.tanb.org/about-tantalum/tantalum-valuation-basis>> accessed 27 January 2021

²⁴ C. L. Gilbert, 'Price Volatility and Price Risk in the Artisanal and Small-scale Mining Industry' [2013] CEPMLP

revenues are managed. The lack of transparency in the sales of minerals such as coltan ore from which tantalum is produced is one of the major concerns regarding conflict minerals globally. In fact, tantalum is one of the '3Ts', metals that are particularly associated with conflict and conflict financing, namely: tin, tantalum and tungsten.

Artisanally-mined DRC conflict minerals originating in the (eastern) Kivu provinces of the country that border the countries of Rwanda, Burundi and Uganda, are used to finance rebel groups involved in massive human rights abuses including attacks on civilians and sexual violence as part of the ongoing conflict. Moreover, and according to the USA Department of Labour, the DRC experience "the worst forms of child labour²⁵ including coercively via forced labour.

The United Nations Group of Experts (UN GoE) on the DRC and other nongovernmental organizations state that foreign and domestic armed groups took control of many ASM operations that profit from the production of 3Ts. The ASM in the DRC 'is often meticulously organised on the micro-level, governed by multiple rule systems transcending statutory and customary spheres'.²⁶ Non-State armed groups, including those originating from Rwanda, rely on a variety of methods such as the use of force, threatening of force to gain access to the mineral deposits, forced labour, various taxes, protection payments and obligatory fees. Regardless of the methods employed, the force has been a focal point in seizing economic benefits from conflict minerals within the Congolese value chain.

A comprehensive understanding of what constitutes conflict minerals in the DRC must also encompass the active involvement of the regular armed forces of the *Forces Armées de la République Démocratique du Congo* (FARDC), and other State actors, which illegally and autonomously exploit the mining and mineral trade, not least coltan ore and the tantalum produced from it.

1.4 Conflict minerals and impacts on the environment

Apart from the social impacts of mining which constitute severe human rights violations, environmental damage represents another major concern in the region. Aside from the deterioration of the landscape because of mining coltan (notably for its tantalum), another

²⁶ G Nicholas. 'Observations from the DRC.' African Analyst, 1/2008. http://www.resourceglobal.co.uk/documents/Garrett_Af_An_Feb_2008.pdf

issue in the DRC is large-scale deforestation due to the importance of wood in both mining structures and household activities. On the other hand, the development of the mines exposed a risk to the existence of plant species and destroyed the natural habitat of animal species such as the gorilla. Large-scale deforestation further contributed to the erosion of the soil and consequently to silting in rivers. As to the supply chain, tantalum-containing minerals may also contain somewhat elevated levels of naturally occurring, and dangerous, thorium and uranium.²⁷ Thus, ore traders are also responsible for evaluating whether the minerals can be classified as radioactive for handling and transport.

²⁷ Ibid (n.7)

Section II

2.1 Section 1502 and the OECD Due Diligence Guidelines

In response to the ongoing conflict in the eastern DRC that torn the economy of the country apart, 'the US President Barack Obama signed into law Section 1502 in July 2010'.²⁸ Section 1502 required companies to take all necessary steps to determine if the minerals in their products originate from conflict areas in the DRC and neighbouring countries. The stated purpose of Section 1502 was to reduce the ongoing violence in the region by cutting off one of the primary sources of financing for Congolese armed groups. Since 'the New York Stock Exchange and other U.S. capital markets play an important role for corporations worldwide that produce the end-products that use minerals, Section 1502 has had a significant impact on the global supply chains of three (3Ts) of the four conflict minerals.'²⁹ Section 1502 creates reporting obligation for companies publicly listed in the USA to disclose information related to whether or not the minerals that they use in their products funded armed groups from the DRC or neighbouring countries (called 'covered countries' in the Security Exchange Commission (SEC) rule).

Although Section 1502 imposed a disclosure requirement rather than a ban on using conflict minerals, companies would avoid being shamed by non-governmental organisations (NGO) campaigns for using conflict minerals associated with sexual violence and horrific human rights abuses of the war in the DRC. To comply with the law, competitive tech companies sensitive to consumers perception, such as Intel, Hewlett-Packard Development Company, Apple and many more, set up industry-wide auditing systems to better set apart conflict minerals from their supply chains.³⁰ Untraced minerals that are not from verified as being produced from conflict-free 3T mines now typically sell for 30% to 60% less to Chinese buyers.³¹

²⁸ M Sawyer, *Regulating Wall Street: Exploring the Political Economy of the Possible*. in Philip Arestis (ed), *Regulating Wall Street: Exploring the Political Economy of the Possible* (PALGRAVE MACMILLAN 2011) 268

²⁹F Bafilemba, T Mueller, and S Lezhnev,, *The Impact of Dodd-Frank and Conflict Minerals Reforms On Eastern Congo's Conflict*. [Enough Project, 2011] Available at: <<https://enoughproject.org/files/Enough%20Project%20-%20The%20Impact%20of%20Dodd-Frank%20and%20Conflict%20Minerals%20Reforms%20on%20Eastern%20Congo%E2%80%99s%20Conflict%2010June2014.pdf>> [Accessed 24 January 2021].

³⁰ Ibid (n.29)

³¹ N Jordan Jameson et al, 'Conflict Minerals in Electronic Systems: An Overview and Critique of Legal Initiatives' [2016] 22(1) *Science and Engineering Ethics*

Section 1502 has sparked the adoption of meaningful reforms by regional governments, international organizations, and electronics, gold, and other industries which aimed at bringing an end to the minerals trade in eastern DRC, Rwanda, and the region that was financing the deadly conflicts.³² In comparison with Section 1502, which is concerned with importing conflict-free supply chain products, the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas document (OECD Due Diligence Guidance) published in late 2011 emphasized the management-based approach.

Besides the OECD Due Diligence Guidelines, the Conflict-Free Smelter Program (CFSP) and the International Conference on the Great Lakes Region (ICGLR) Regional Certification Mechanism have been adopted. Since smelters are the ones who know the sources of their minerals, the tech companies required smelters to pass the CFSP audits and ensure that they are sourcing conflict-free minerals.

³² R de Koning, 'Conflict Minerals in the Democratic Republic of the Congo: Aligning Trade and Security Interventions [Sipri, 2011] available at: <<https://www.sipri.org/sites/default/files/files/PP/SIPRI27.pdf>>

Section III

3.1 Section 1502's Unintended Consequences

The focal point of discussions over the years was related to whether Section 1502 and subsequent regulations in conflict minerals achieved what thought to be their fundamental objective, *viz.* to reduce the armed conflict and related human rights abuses in the eastern DRC. It has been argued by David Aronson in his article 'How Congress Devastated Congo' that unintended and devastating consequences stemmed from Section 1502 and 'how the (Dodd-Frank) Act imposed an international *de facto* embargo against conflict minerals from the region.'³³ Moreover, according to SEC, the estimated compliance cost of Section 1502 would be 'approximately \$3 billion to \$4 billion, and the annual cost of ongoing compliance between \$207 million and \$609 million.'^{34, 35} Thus, the total exports of the 3Ts of approximately \$170 million (m) from eastern DRC in the peak year of 2008 would be still less than the average estimation of the annual compliance costs done by SEC.

As a result, it is considered that the Section 1502 law does not provide compelling arguments as to its cost-effectiveness. There are two possible solutions regarding the higher compliance cost. On the one hand, the cost is likely to be split between different stakeholders, consumers who will pay higher prices for final products, companies whose profits would be significantly lower due to the additional compliance cost and Congolese miners that will be paid less by the buyers of the minerals. This is because companies buying from the DRC and its neighbours will bear the additional cost of submitting a Conflict Minerals Report to the SEC. On the other hand, 'numerous international mineral traders and smelters were reported to opt-out due to regulatory uncertainty, due diligence risks, customer requirements or cost-saving effects.'³⁶

Meanwhile, smelters from China took advantage of the situation and engaged in the trade of non-certified minerals at lower prices.³⁷ The regulatory uncertainty because of the lack of

³³ D Aronson, 'How Congress Devastated Congo' (The New York Times, 7 August 2011) <<https://www.nytimes.com/2011/08/08/opinion/how-congress-devastated-congo.html>> accessed 25 January 202

³⁴ All \$ quoted are United States Dollars

³⁵ Ibid (n.8)

³⁶ Ibid (n.8)

³⁷ G Mthembu-Salter, 'Taking the conflict out of Congo's 'conflict minerals' (The Africa Report, 4 Sep 2012) <<https://www.theafricareport.com/6736/taking-the-conflict-out-of-congos-conflict-minerals>>

formal guidance and pending definition of implementation rules under Section 1502 together with *de jure* embargo led to reduced demand of tantalum concentrates produced in the region, which constituted a *de facto* embargo. Although artisanal miners in eastern DRC did not entirely cease their activity during the provisional ban from 2010 to 2011, their activities have been significantly reduced, as reported by the International Peace Information Service.³⁸

However, it remains unclear whether the Section 1502 reduced violence and exclude minerals from the legal trade in the DRC or had the opposite effect. It has been argued that those Western reforms on conflict minerals 'increased smuggling, led armed groups to seek other sources of revenue, and left up to two million Congolese artisanal miners out of work.'³⁹ Yet, the accurate number of people directly affected by Section 1502 should be multiplied by roughly five or six times to include the number of direct dependents on each miner too. Therefore, the number might reasonably be estimated at even 12m Congolese civilians.

Left without other livelihood alternatives, many artisanal miners have joined the militia or shifted to the gold sector, which is even less effectively regulated by the Congolese State, and therefore the smuggling is easier. According to Greened, '*a generalised deterioration of the Congolese economy and rising levels of unemployment increased incidence of thefts, robberies, armed attacks and murders during the ban*'.⁴⁰

Moreover, in several DRC mining areas, where the economy is based partly on the exchange of minerals for services, the lack of work in the mining sector spilt over into other sectors of the Congolese economy, resulting in a broader economic downturn. For instance, and as a result of the reduced production of minerals, it was reported that 'there were no planes that flew to remote mining areas to take the product out and carry in basic necessities like petroleum, salt, and candles to places not accessible by road'.⁴¹

³⁸ S Spittaels and F Hilgert, 'Mapping Conflict Minerals: Eastern DRC (2013-2014)', (Antwerp: International Peace Information Service, 2013)

³⁹ L E Seay, 'What is Wrong with Dodd- Frank 1502? Conflict Minerals, Civilian Livelihoods, and the Unintended Consequences of Western Advocacy' [2012] Working Paper 284

⁴⁰ N Stoop et al, 'More legislation, more violence? The impact of Dodd-Frank in the DRC' [2018] 13(8) PLOS ONE

⁴¹ P Schütte, 'International mineral trade on the background of due diligence regulation: A case study of tantalum and tin supply chains from East and Central Africa' [2019] 62(1) Resources Policy

However, the international *de facto* legal ban on Congolese minerals, including tantalum sourced in eastern DRC, did not end the violence in the Kivu provinces, and armed groups were reported to continue to terrorize local populations whilst illegal exports (smuggling) boomed.⁴² Notably, the 2011 Final Report of the UN Group of Experts on Congo notes that ‘the *de facto* embargo has led to an increase in conflict mineral smuggling via Rwanda and pushed Congolese armed groups to seek alternate sources of revenue, including the timber trade’.⁴³

These negative impacts were also exacerbated by parallel negative impacts of DRC public (State) policy too: following the introduction of Section 1502, ‘the Congolese President Joseph Kabila announced a six-month ban on all mining including ASM and exports on conflict-riddled minerals sourced from North and South Kivu and Maniema provinces’.⁴⁴ Although the goal of the ban was similar to the one of Section 1502, the Kabila embargo⁴⁵ was widely perceived to have had an additional, also disastrous impact too: ‘during the ban unemployment rose and the country experienced general deterioration’.⁴⁶

3.2 Wider Congolese Context

Apart from the unintended consequences because of the passing of the Section 1502 some commentators⁴⁷ argued that the conflict minerals are not a ‘key driver’ of conflict in the eastern DRC but simply one dimension of it. According to them the ‘*conflict minerals campaign fundamentally misunderstands the relationship between minerals and conflict in the Eastern DRC*’. They recognized the role of the conflict minerals ‘contributing to, rather than alleviating, the very conflicts they set out to address’. Ben Radley, a ‘signatory to the letter pointed out that the concept of conflict minerals serves the purpose to ease the consciences of Western consumers by inducing even greater hardship for the miners and their families’.⁴⁸ It was argued that Section 1502 overlooked country-specific factors such

⁴² Letter by South Kivu Thematic Group working on Minerals and Natural Resources to the SEC (February 24, 2017) <<https://www.sec.gov/comments/statement-013117/cll2-1597728-132417.pdf>>

⁴³ Ibid (n.41)

⁴⁴ Committee on Financial Services, ‘Dod-Frank Five Years later:What have we earned from conflict minerals reporting?’ [2015] 49(20) US Congress

⁴⁵ Ibid (n.41)

⁴⁶ Ibid (n.32)

⁴⁷ See also the open letter by a group of 70 academics researchers, journalists <<https://ethuin.files.wordpress.com/2014/09/09092014-open-letter-final-and-list.pdf>>

⁴⁸ Lauren Wolfe, ‘How Dodd-Frank Is Failing Congo?’ (Foreign Policy , 2 February 2015) <<https://foreignpolicy.com/2015/02/02/how-dodd-frank-is-failing-congo-mining-conflict-minerals/>> accessed 24 January 2021

as limited governance capacity within the DRC, the lack of local capacity development and inadequate stakeholder engagement. For instance, the informal artisanal miners were not consulted before the passing of Section 1502, yet they are the ones to bear the dreadful consequences of the Act.

The objectives of Section 1502 related to the transparency and accountability of the tantalum supply chain are similar to the diamond certification scheme that can be found under the Kimberley Process Certification Scheme (Kimberley Process⁴⁹). Although both regulatory frameworks attempt to hinder the flow of conflict minerals sold on the international markets and stabilize fragile countries, they differ in terms of the approach taken. Moreover, the multi-stakeholder Kimberley Process was initiated by South Africa and required all 81 participating States to sign agreements that they would not trade with non-members. A focal point in the Kimberley Process is functioning state institutions which is not the case in the DRC, where the corruption among state officials makes smuggling extremely easy even during an ongoing *de facto* embargo. Moreover, in comparison with diamonds sold on the global diamond jewellery market, tantalum is traded between the supplier and the buyer making supply chain traceability even more complex. However, instead of strengthening the existing requirements implemented under Kimberley Process, the legislators of Section 1502 adopted even broader requirements that render compliance with Section 1502 almost impossible.

3.3 Rwandan ‘back door’

In practice and despite Section 1502, companies can continue to process amounts of tantalum originating from the DRC that were either re-exported or smuggled through Rwanda (as a ‘back door’). For instance, Rwanda is ‘considered to be the preferred route for illegally traded minerals financing the conflict parties not only because of its central geographic location but also because exports of tantalum concentrates are not taxed in Rwanda while the DRC has been taxing official mineral exports’.⁵⁰ Moreover, the export tax from eastern DRC is greater than that of neighbouring countries, which further encourages cross-border smuggling.⁵¹

⁴⁹ See also Kimberley Process Certification Scheme <
<https://www.kimberleyprocess.com/en/system/files/documents/KPCS%20Core%20Document.pdf> >

⁵⁰ R Bleischwitz and others, 'Coltan from Central Africa, international trade and implications for any certification' [2012] 37(1) Resources Policy

⁵¹ T Ma, 'China and Congo's Coltan Connection' (*Project 2049 Institute*, 22 June 2009)
<<https://project2049.net/2009/06/22/china-and-congos-coltan-connection/>> accessed 27 January 2021

Although Rwanda is also producing mined tantalum, according to 'Rwandan law, imported minerals could be declared as non-conflict minerals produced in Rwanda if they are further processed in the country and enhanced in value of about 30%'.⁵² Therefore, it can be stated that a typical supply chain of coltan produced in DRC is exported legally or illegally in Rwanda or other central African countries and is bought by Chinese processors. However, these processors are predominantly smaller companies that are not particularly sensitive to consumers perception such as Western companies, and they are not under pressure to disclose information. For instance, 'the state-owned company Comisión Nacional de los Mercados y la Competencia (CNMC) Ningxia Orient Nonferrous Metal Group is one of the world's top three smelters and producers of tantalum'.⁵³ The produced tantalum is used by the largest capacitor manufacturers that 'supply electronics to companies such as Dell, Intel, and Hewlett-Packard'.⁵⁴ In a survey by SEC in 2015, '79 of 100 companies failed to meet the minimum SEC reporting criteria that would ensure their suppliers, meaning that only 15% of the companies surveyed conducted audits beyond their direct supplier'.⁵⁵ Thus, in order to have responsible sourcing of minerals, 'there shall be forces acting not only on downstream product chains but also on upstream smelters and refineries'.⁵⁶

Another shortcoming of Section 1502 was the failure to recognize the economic trades of the armed groups. For instance, 'niobium which is also derived from the same ore as tantalum was not addressed by the Act' (i.e. Section 1502).⁵⁷ Thus, 'if a company decides to use niobium instead of tantalum, there will be no requirement to perform due diligence on the supply chain of the mineral'.⁵⁸

⁵² Ibid (n.48)

⁵³ Ibid (n.17)

⁵⁴ Ibid (n.32)

⁵⁵ One earth future, 'The Dodd-Frank Repeal: What it Means for Conflict Minerals?' (Political Conflict, Business & Governance, 4 August) <<https://www.oefresearch.org/think-peace/dodd-frank-repeal-what-it-means-conflict-minerals>> accessed 27 January 2021

⁵⁶ S B Young, 'Responsible sourcing of metals: certification approaches for conflict minerals and conflict-free metals' [2018] 23(1) Life Cycle Assess p. 1444

⁵⁷ Ibid (n. 32) p.1385

⁵⁸ Ibid (n.32) p.1385

Section IV

4.1 Conclusions

With the advancement of new technologies becoming smaller and lighter, the importance of tantalum will also grow. Apart from the technology sector, tantalum has many other applications in a variety of sectors. However, knowing how and where the mineral has been sourced, the question remains whether the end-user is indirectly funding an ongoing conflict in countries such as the DRC. The answer depends on one major factor, namely whether the so-called conflict mineral is the key driver of the conflict.

In the case of the DRC, it has been demonstrated that tantalum contributes to the ongoing violence and can be substituted for other minerals such as niobium. Although the idea behind the Section 1502 was bringing the conflict in the DRC to an end, that Section 1502 had an adverse effect - alongside the positive impacts also outlined above, for instance a notable reduction in violence in the country. Even acknowledging for this, the unintended consequences that also transpired included that many Congolese miners lost their livelihoods whilst the economy of the DRC experienced a pronounced recession. Moreover, instead of enhancing the supply chain traceability of tantalum, Section 1502 enabled the smuggling of coltan out of the DRC through Rwanda to smelters from China.

Overall, Section 1502, regrettably, overlooked country-specific factors such as limited governance capacity, the lack of local capacity development and inadequate stakeholder engagement. This resulted in unintended negative, alongside intended positive, outcomes for the DRC.

This research paper has illustrated the importance of having a uniform framework that regulates the trade of 'conflict minerals.' However, and as a recommendation, frameworks should be tailored to the specific situation in the country and should examine the potential unintended consequences of the legislation in advance. Furthermore, a prior consultation process with affected parties shall take place to maximise the chances of its efficacy and to avoid repeating the mistakes of both Section 1502 and the additional Congolese ban subsequently introduced, also disastrously, alongside it.

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