



The Politics of Coltan: An Interview with Michael Nest

28 November 2016

In this interview, Dr. Nest discusses the political, environmental, ethical and social issues surrounding the mining of columbite–tantalite (coltan).

Q. In the past, arguably very few had heard of coltan. Yet in the past two decades it has entered into discussions in the UN and featured in several international media outlets' reports. What is coltan and what is it used for?

Coltan is the nickname for the mineral 'tantalite'. When processed, the mineral tantalite is called tantalum – so tantalum is the metal.

Coltan – or properly speaking, the metal 'tantalum' – has a wide application. About two-thirds of coltan is used in a device called a 'capacitor'. Capacitors are found in electronic products, especially consumer electronic products such as mobile phones, laptops, gaming platforms, and ipads, and are used to store and regulate the flow of electricity from the source of power (such as a battery) to the working parts of the device. Capacitors have a crucial role in ensuring there is no power surge or fluctuations to the device that could disable or break it. Coltan is also used for special alloys (mixtures of different metals), in memory chips for electronic consumer goods, and special coatings (such as on camera lenses).

Q. In which parts of the world is coltan mined?

Coltan comes from three sources: as a by-product of tin slag (20% of supply) – 'slag' is the waste material that sits in dumps around historic tin mines; recycling (30% of supply); and mines (50% of supply).

Coltan is extracted from tin slag in Brazil, Malaysia and Thailand. Coltan that comes from recycled scrap materials is extracted at metal recycling plants in many countries around the world.

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In terms of mines producing coltan/tantalite, these are found around the world. In 2016, according to the US Geological Survey, the biggest producers of coltan are Rwanda, D.R. Congo, Brazil, China, and Australia (in this order), although historically Canada and Ethiopia have also been significant producers, and Australia was the largest producer until the global financial crisis in 2008. There are lower levels of mine production in Mozambique, Namibia, Nigeria, and Zimbabwe. Tantalite deposits have been identified and are being explored in Canada, Colombia, Egypt, Greenland, Madagascar, Namibia, Saudi Arabia, Sierra Leone, South Africa, Tanzania, Venezuela, and Zimbabwe.

Q. There has been some literature examining the relationship between coltan extraction and violence with a fair amount of discussion focused on the Democratic Republic of the Congo (DRC). What role did coltan play in the DRC's war?



Image of coltan via [Responsible Sourcing Network/Flickr](#)

The allegation made by activist organisations focused on reducing conflict in the D.R. Congo is that profits from coltan mining were a *primary* source of funding for armed militias waging war against the government. These militias, so the argument goes, used coltan profits to buy weapons and food, which allowed them to wage war. Militias in the DRC are notorious for their attacks on civilian populations, so the argument was not just that coltan profits perpetuated conflict against the government, but also that these profits were a chief cause of massacres of civilians, systemic rape and widespread destruction of property of civilians who live in Eastern DRC where coltan mines are located.

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In the late 1990s and early 2000s, activist organisations – as well as some media, academics and the UN – made connections between coltan profits and conflict in Eastern DRC, and focused overwhelmingly on coltan and not other minerals. Many journalists continue to portray coltan as a major cause of conflict, although other commentators have now backed away from such simplistic claims and talk more broadly about ‘conflict minerals’ and acknowledge that conflict in the DRC occurs for a complex range of reasons.

Conflict in Eastern DRC occurs for multiple reasons, including:

- Local level struggles by powerful individuals for political domination
- Competition for land for agricultural purposes
- Ethnic rivalry
- For control of natural resources, especially minerals
- To protect land from outsiders seeking to exploit it (e.g., miners and loggers)
- Poor men waging war as a means of making a living through theft and looting

There were also broader factors around national-level conflict over the past 20 years that have drawn in local level actors and created incentives for war, including: military campaigns in DRC territory by the Rwandan and Ugandan armies (supported by their local Congolese allies) focused on security concerns regarding opponents of their respective governments; defensive military campaigns by the DRC armed forces and government-allied local forces against the Rwandans and Ugandans and their proxies in the DRC, including retribution against civilian populations when they have regained territory; and armed groups with regional political agendas that oppose the DRC national government. Fighting over mineral deposits was a minor element in all of these conflicts (a UN estimate of 1,500 local-level conflicts in the early 2000s was


that fighting over natural resources accounted for only 8% of all conflicts), and conflict over *coltan* deposits was even less significant.

As I argue in my book *Coltan* (Polity 2011), some armed groups did, however, profit from coltan and undoubtedly these profits were used to buy weapons, food and other material used to wage war. These profits were gained in four ways: armed groups stole coltan stocks from mine sites and mining companies' depots; armed groups directly controlled production of coltan by controlling mines themselves; armed groups taxed the trade of coltan into and out of territory they controlled (as they did for other minerals and goods); and armed groups became directly involved in the export of coltan from Central Africa to the buyers on the international minerals market. Calculating profits made from coltan is difficult, but I estimate that the total amount made by the Rwandan army from coltan in 1999 was approximately US\$62m; by the Rwandan army and its Congolese-based ally (the RCD-Goma) in 2000 approximately US\$10m; and by all armed groups in 2008 approximately US\$11.8m. Note that the high total in 1999 was largely because the price of coltan on the international market boomed that year and in 2000.

In sum, the war in the DRC was never just about minerals, and was certainly never just about coltan (gold, tin and tungsten were also important sources of mineral revenue in the 2000s). Tracing the role of coltan in war in the DRC, however, can tell us a lot about the connections between natural resources and conflict *generally* and research into these connections have helped broaden our understanding of the relationships between these natural resources and war.

Q. Were any Western corporations responsible for indirectly financing armed groups during the war in the DRC through purchasing coltan from the

country?

Luwowo Coltan mine near Rubaya, North Kivu the 18th of March 2014. © MONUSCO/Sylvain Liechti Luwowo is one of several validated mining site that respect CIRGL-RDC norms and guaranties conflict free minerals. Luwowo coltan mine near Rubaya, North Kivu, DRC. Image by MONUSCO/Sylvain Liechti/[Flickr](#)

During the wars between 1998 and 2003 companies from many different countries were involved in the coltan trade, including Western corporations. The UN's *Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and other Forms of Wealth in the D. R. Congo* (April 2001) identified scores of private trading, brokerage, banking and transportation firms that participated in the illegal exploitation of natural resources from the DRC by trading or importing coltan from the DRC.

While almost none of these transactions were directly with armed groups (with the probable exception of some transactions involving Rwandan and Congolese firms), foreign firms were an important element of the coltan commodity chain that enabled armed groups in the DRC to profit from the production and export of illegally mined coltan to the rest of the world.

Because of the conflicted and dangerous conditions in Eastern DRC at the time, few foreign companies sent representatives into the country. Instead, smaller Congolese or Rwandan trading firms bought and transported coltan into Rwanda, from where international minerals trading companies then imported it. The UN identified twenty-seven firms from the following countries that imported coltan from the DRC via Rwanda: Rwanda (2 firms), Malaysia (1 firm), Germany (3 firms), Belgium (10 firms), Switzerland (1 firm), Netherlands

(4 firms), UK (2 firms), Kenya (1 firm), India (1 firms), Pakistan (1 firm), and Russia (1 firm). These firms sold the coltan they imported on to other minerals trading firms, or they sold it directly to processing plants.

Three big minerals processing plants bought much of the coltan that was exported via Rwanda during the early phase of the Congo Wars: Cabot from Canada, HC Starck from Germany and Ningxia Non-Ferrous Metals Smelter from China. After 2001, Cabot and HC Starck released statements saying they no longer bought Congolese coltan.

Several airlines were involved in flying coltan out of Rwanda to second destinations, including Alliance Express (then 49% owned by South African Airways and 51% owned by the Rwandan government), Kencargo International (20% owned by Martinair), Airflo, Astral Aviation, and Martinair Holland, as well as the former Swissair and Sabena before these airlines collapsed.

The UN's final report into the illegal exploitation of natural resources in the DRC (published October 2002), recommended placing financial sanctions on 29 companies from Belgium, South Africa, Zimbabwe, Rwanda, Uganda and the DRC itself, that were identified as being involved in the illegal coltan trade. The same report identified businesses from OECD countries that the UN considered to be in violation of [the OECD Guidelines for Multinational Enterprises](#), including from the UK, USA, Belgium, Switzerland, and Germany. Firms from non-OECD countries that were also identified as having violated these guidelines were from Malaysia, China, Hong Kong, South Africa, and St Kitts. The UN did not recommend sanctions on these OECD and non-OECD firms. Rather, it brought attention to the firms' breaches of these guidelines, presumably with a view to the companies then being reported to the national reporting contact point for such breaches in the relevant OECD country.

Q. In addition to the human rights issues attached to the coltan industry, is the mining process itself environmentally harmful?



Workers in a coltan mine in DRC. Image (cropped) via [Responsible Sourcing Network/Flickr](#).

Yes, there are environmental harms associated with coltan mining. In the DRC, coltan mining overwhelmingly uses artisanal and small-scale (and occasionally medium scale) methods, although the harms these methods cause to the environment are not distinctive in that there is nothing specific about mining coltan that creates a different kind of harm to, for example, tin or tungsten. Compare this to gold, where there are harms associated with the use of mercury.

In the DRC when a coltan deposit is found, miners rush in to exploit the site, regardless of whether it is on agricultural land or in a national park, and the mining destroys the potential for the land to be used for grazing or cropping, or as a biological reserve for fauna and flora. Like other artisanal mining of minerals, artisanal coltan mining involves stripping forest and bush cover, then any topsoil, and digging pits to a depth of about 6m to get access to the ore deposit. Water, provided through a pump system where a generator can be used, or by diverting a creek or river if a generator is not available, is used to soften the earth and rock, to break it up, and then to separate mineral ore from soil and to wash away the soil. Water use is a major factor in the environmental harm caused by mining.

As I outlined in my book *Coltan* on pp.49-50, specific environmental effects of artisanal coltan mining include the following:

- Forest clearance to expose soil for mining;
- Cutting of timber to build worker camps;
- Cutting of firewood;
- Removing the bark from trees to make panning trays to wash coltan;
- Pollution of streams by silt from washing process;
- Diversion of streams from their original course;
- Cutting lianas to make baskets to carry coltan;
- Hunting animals, including for food, ivory and other body parts;
- Animals injured after escaping snares;
- Disturbance of fauna due to people resident in, and moving through, reserves;
- Reduced population of invertebrates and reduced photosynthesis in aquatic plants due to silting of streams;
- Reduced fish stocks in lakes and rivers affected by silt pollution;
- Erosion, including landslides, of unprotected ground during rains;
- Ecological changes due to loss of key species, such as elephants;
- Long-term changes in watershed due to rapid run-off in deforested areas;

There have been some studies that document these impacts. A study of mining communities in the Kahuzi Biéga National Park in 1999 found that they ate elephants, gorillas, chimpanzees, buffalo, and antelope – all poached from the park. However, a subsequent report in 2001 found that tortoises, birds, small antelope, and monkeys were being eaten because all the big animals had been killed.

Q. Do you feel that there are any plausible ways for companies to be certain that the coltan they use in manufacturing their products is not from a conflict zone or unethically produced?

A company can improve certainty around the origins of any coltan used in its products, if it sources metals directly through a smelter that has an exclusive long-term contract with a coltan producer in a country such as Brazil, China, or Mozambique. In such smelters, supply from these producers is so consistent there is virtually no likelihood of it being ‘contaminated’ by ore from other destinations. The [conflict-free smelter programme](#), which works with over 200 smelters, has safeguards in place to verify the origins of minerals processed by its members. While there is always a chance that these consignments of minerals could be mixed with ore from militia-controlled mines in the D.R. Congo, this would be fairly unlikely as the reputation of the smelter (and the programme) is at stake and there is considerable due diligence around the provenance of minerals.

The challenge of sourcing ethically produced coltan is complicated when companies are buying components, especially components manufactured from yet other components, to manufacture their final goods, e.g., electronic items. It is impracticable for an end-manufacturer to check the origin of all the metals that are used in all components – because literally thousands of components may be involved – and unrealistic to think that companies are able to do this. The best they can do, is try to identify component manufacturers that have declared they will abide by ethical standards for sourcing minerals and have systems in place this claim to be verified – and of course end-product manufacturers should insist on seeing evidence of such checks.

It is important that all D.R. Congo coltan is not seen as being a ‘conflict mineral’, in a way that became common after the US Government first passed its conflict minerals Dodd-Frank legislation in 2010. Civilian Congolese producers of coltan should be allowed to sell their product on the world market, and such production and trade is one of the few economic opportunities available to many Congolese. The emphasis in terms of due diligence around ethical production of coltan should be on determining if coltan comes from conflict zones and is produced by armed groups, rather than if it comes from the DRC itself – this is an important distinction. There are various schemes in place, or being established, in the DRC to ensure civilian-produced coltan is traced through to export. The most well-known of these is the industry traceability and due diligence programme for coltan, tin and tungsten, which is managed by [the International Tin Research Institute](#).

Q. As you mention, there have been a range of international efforts that have endeavoured to address the ethics surrounding coltan mining. Overall, do you feel that current efforts are succeeding or falling short?

Efforts have brought attention to ongoing violence and instability in the DRC, which is a good thing. The problem is that the focus of activists, and even government initiatives such as the US Dodd-Frank legislation, has often been solely on conflict minerals as a cause of violence rather than a range of factors. Thus, while there is heightened attention, there is also a simplified narrative being propagated that is detrimental to understanding the causes and consequences of the conflicts.

There is no doubt that international efforts have had an effect on the mining industry in DRC, but also Rwanda. The passing of US legislation and consequence temporary embargo by the DRC government in late 2011 on any

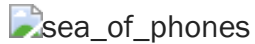
exports of conflict minerals, severely curtailed mining and trading of these minerals in eastern provinces (it was business as usual for mining in other provinces, such as Katanga). This showed that international efforts can definitely have an impact (presumably President Kabila of the DRC felt that he had to impose the embargo to appear to be doing something about the conflict minerals trade). New OECD regulations, the conflict-free smelter program and the International Tin Research Institute's 'tag and bag' scheme for tin and coltan in Rwanda and some mines in DRC are also closing opportunities for 'laundering' conflict minerals through civilian-controlled supply chains, while also guaranteeing opportunities for civilian-produced and traded minerals.

There are criticisms of these schemes, especially ITRI's tracking scheme which is expensive for participants, and regional governments and officials feel they are excluded from its data or operations. Nevertheless, in a complex and difficult political and economic environment, the combination of regional and international efforts have resulted in more mines and more mineral transactions coming under civilian control, and therefore generated economic opportunities for Congolese civilians. This said, anti-government militias and the DRC army are still involved in some mining and trading of the 3Ts and gold.

The big question is whether current political tensions around President Kabila's possible election to a third term, will cause the ITRI scheme to be suspended, see renewed militias activity in Eastern provinces, and a resumption of widespread smuggling of minerals out of Eastern Congo into Uganda, Rwanda and Burundi.

Q. Do you think China will complement the efforts of Western organizations and the DRC's own efforts at cracking down on the conflict mineral trade or

will China's status as the world's largest coltan refiner make matters more difficult?



Coltan is used in electronic devices such as mobile phones. Image via Wikimedia.

To answer this question properly, we have to pull apart the idea of 'China'. The Chinese government may have some interest in protecting its international reputation by participating in or publicly supporting international *government* initiatives to control the production and trade of conflict minerals. This might include passing some minimal regulation on its own industry (possibly that it has no intention of enforcing). It will have no interest in supporting activist initiatives, as it will not want to fuel or strengthen independent civil society, let alone one that might actually have influence over aspects of international commerce. The Chinese minerals industry, on the other hand, is aware of its strong and growing position in the global mining and minerals sector – a sector that the Chinese government itself sees as strategic. Without pressure from its own government to desist from importing, smelting or otherwise trading in conflict minerals, the Chinese minerals industry will see no reason to change the current situation. Some Chinese consumer product manufacturers, especially in the electronics sector, will be aware of the potential for boycotts by Western consumers to damage their sales and reputation, but Western consumers are not significant for some electronics manufacturers. Asian (especially Chinese), African and Latin American consumers will be far more important, and awareness or concern by these consumers about conflict minerals is low. In sum, while Chinese actors may be interested in some international efforts to regulate the trade of certain

products, conflict minerals will be low on the list of priorities and there is unlikely to be any Chinese effort in this regard.

Q. Looking to the future, what impact do you feel Donald Trump's presidency may have on tackling the problem of conflict minerals?

Trump made it clear during his campaign that he is in favour of minimal regulation for business and that the US should be more isolationist in terms of spending less time and effort worrying about global affairs. Given that responses to conflict minerals are based around additional regulations for business (regulations that everyone agrees have a cost in terms of compliance), which also represent an effort by OECD governments to shape conflict minerals production and trade in Central Africa, a Trump administration is highly unlikely to have much, if any, interest in such initiatives. US business groups have already contested the regulations of the Dodd-Frank Act, and they will see a Trump presidency as creating another opportunity to exert pressure and have the regulations pared back or abolished. A Trump administration is also likely to cut funding for USAID projects focused on capacity building for Central African governments to regulate production and trade of the mining industry.

Michael Nest has expertise in political and social issues around mining. He is also an anti-corruption expert and formerly worked for the Independent Commission Against Corruption in Sydney, Australia. He has recently focused on building capacity to prevent corruption in community development programmes, including a research paper on corruption in local-level development



schemes funded by mineral revenues. Michael is the author of **Coltan** (Polity Press, 2011), which is about the changing global supply chain for the mineral 'coltan' (or tantalum), the new US legislation focused on conflict minerals, and China's emerging role in the market for this mineral. In 2012 and 2014, Michael advised African governments on the new certification mechanism for tin, tantalum, tungsten and gold being established to prevent conflict minerals from Central Africa entering the supply chain. His latest co-authored book, *Still a Pygmy: the unique*

struggle of one man's fight to save his identity from extinction (Finch, 2015) is the first memoir by a Pygmy ever published.

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