

Resource Wars and Information and Communication Technologies

Could accelerating sales of mobile phones test a fragile Congolese democracy?

By Tony Vetter

Some analysts are predicting a major imbalance in the supply and demand of the mineral tantalum in 2008—a key ingredient for compact electronics—and quite possibly a major escalation in its price in the years ahead. In fact, several sources already report a 25–30 per cent increase in tantalum ore spot prices over the last 12 months. This trend is of potential concern since the last price spike in tantalum played a major role in fuelling the bloodiest conflict in the history of Africa. I recently stumbled upon this troubling connection while investigating impacts of information and communication technologies (ICTs) on sustainable development.



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ICTs are often considered a double-edged sword in terms of their contribution to sustainable development. Dematerialization; efficiencies in transportation, energy use, and production; and travel replacement are a few of the anticipated positive contributions. Conversely, some argue that efficiency gains from ICTs can actually encourage net increases in energy usage and consumption by lowering time and investment barriers. A little investigative effort into cradle-to-grave issues also leads one to disturbing images of villages in China, India and Nigeria severely contaminated by e-waste imported from the West. However, I was completely taken aback to learn of the role that demand for ICTs played in the world’s deadliest conflict since the Second World War. Billed by some as the “Great War of Africa,” the 1998–2003 regional conflict centred on north-eastern Democratic Republic of the Congo (DRC), and its aftermath, has been responsible for some 5.4 million deaths since August 1998. The vast majority of these deaths were non-violent but still directly linked to the conflict, with children accounting for 47 per cent. Even more distressing, if possible, are ironic linkages to a 500,000-unit shortfall in PlayStation 2 (PS2) gaming consoles during the Christmas shopping season of 2000.

This shortfall was due to a worldwide shortage of pinhead capacitors. Necessary components for the storage of electrical charge, these ultra-small capacitors, which have helped mobile phones to fit into our pockets, are only made possible by the mineral tantalum. Tantalum is processed from an ore

called columbite-tantalite, also known by its African colloquialism “coltan.” The majority of the world’s demand for coltan is sourced from two mines in Australia; however 80 per cent of the world’s coltan is just below the surface of mineral-rich national parks and reserves in north-eastern DRC, also home to the endangered lowland gorillas. In the heyday of the dotcom boom, the manufacturers of pinhead capacitors were caught off guard by the explosive demand for laptops, mobile phones, play stations and other compact electronics. The cascade effect was that two of the world’s main buyers of tantalum hedged with simultaneous triple orders, thereby creating an artificial global shortage. As it is not traded on commodity metal markets, speculators and traders were able to take advantage of the lack of communication among the various players and increase the price ten-fold from 1999 to 2000.

How this is linked with the “Great War of Africa” is well documented. In 1996 after the Rwandan genocide, the U.S.-trained and backed Tutsi government army pursued Hutu militia into north-eastern DRC, then Zaire, in partnership with Ugandan and Congolese rebels also seeking to overthrow the Zairian regime. Once in control, the leaders of this coalition were contacted by multinationals keen to exploit the region’s wealth on terms not agreeable to the previous regime. The coalition dissolved into conflict in August 1998 over control of these resources. However, it was the dramatic spike in the price of coltan which dumped fuel on the fire. Given its form and proximity to the surface, the region’s coltan was easily extracted by local artisanal mining, and militia-enslaved locals and refugees armed with axes and shovels. The disturbing human rights abuses, environmental damage and wild meat harvesting that ensued are well documented in a series of scathing reports by an expert panel of the United Nations Security Council. During its 18-month occupation, Rwanda made a profit of US\$250 million from sales of coltan. However, the intensity of the conflict diminished when the price of coltan eventually collapsed as panic buying and the dotcom crash led to large inventories. Even so, a third report of the UN panel in October 2002 put a spotlight on the private sector to accept some responsibility for contributing to this resource-based conflict through the purchase of illegally mined material, specifically naming dozens of companies. Disputing the quality of the evidence used by the panel, many of the companies were successful in lobbying for the removal of their names from the

report with the support of their governments, and along with their customers went into damage control mode. Several ICT manufacturers that bore the brunt of NGO-led campaigns responded by publically declaring they had asked their suppliers to follow the situation and requested they avoid purchasing tantalum from the region. Some state they regularly audit vendors to ensure compliance.

Problem solved—right? Not quite. Despite the low price of coltan, illegal mining by militias continued given the non-existent cost of slave labour, as well as by desperate locals. Diplomatic sources reported on dealings between Chinese officials and Rwandan companies involved in coltan export in 2004. Among the many other minerals in the region exploited by militias, there is also cassiterite, an ore for tin. A ban of lead by the EU and Japan in the solder used in ICTs in late 2002 caused a 150 per cent jump in the price of its replacement tin, which re-intensified fighting in the region. Also tracing the origins of such raw materials is near impossible. When asked in a 2006 interview whether there are any safeguards in place to ensure that coltan does not come from DRC conflict zones, Intel’s chairman Craig Barrett replied “not that I’m aware of.” Such responses give little reason for confidence in ICT sector supply chain policies as a first line defence for preventing further coltan-based conflict in the DRC.

With global mobile phone penetration rates having exceeded even the most seemingly outlandish predictions, what has been the impact on coltan markets? During the last coltan price spike in 2000 there were 250 million new mobile phone subscribers. In 2007 alone there were 615 million new subscribers. We recently passed 50 per cent global penetration, at a total 3.3 billion subscribers, and estimates suggest we may reach 5 billion by 2015; however, 2011 seems more likely at current growth rates. For starters, analysts never predicted greater than 100 per cent adoption rates in some industrialized countries. As well, U.S. consumers are replacing their mobile phones approximately every 18 months—only two per cent of which are recycled—which alone drives demand for 150 million new mobile phones annually. Repeated globally at even a fraction of this rate could mean the replacing of up to a billion mobile phones a year. Does this all add up to another coltan price spike? It is reported that the U.S.’s stockpile of tantalum, refined coltan, was to be depleted by the end of 2007 with projections of growing supply deficits to follow. In the

words of one financial advisor the “future price of tantalum [refined coltan] has no where to go but up—big time!” However Australian supplier Talison Minerals is waiting in the wings to reactivate dormant mining operations in Australia when the price is right and claims to be “more than

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capable of meeting any future supply deficit.” The question is what will be the rise in the price of coltan, and could it be enough to reignite conflict in north-eastern DRC?

Recent changes on the ground suggest, however, that a rise in the price of coltan could be timely for the DRC economy rather than being a catalyst for renewed

conflict. Since democratically electing a government in 2006 for the first time in more than 40 years, the DRC has been trying to reign in its lawless mining sector. Periodic reports have been emerging regarding efforts by the Congolese army to shut down militia-run rings smuggling ore from illegal mining. China also announced in September 2007 a strategic partnership with the DRC involving a \$5 billion loan to begin development of a scalable mineral resource extraction infrastructure in exchange for access rights to existing resources. The DRC’s Deputy Mines Minister also announced in March 2008 that “many” mining contracts are being either cancelled or renegotiated after a commission set up last year to review them reported “that none of the contracts met international standards.” The Minister also recently announced that the DRC hopes to set up a scheme to certify coltan produced within its borders in 2009 with the help of Germany’s Federal Institute for Geosciences and Natural Resources. This is all good news for tantalum-using industries which have clearly stated a desire to establish a long-term, transparently negotiated business deal with a Congolese collective, which would pay a fair market price for ethically sourced coltan. Perhaps accelerating global sales of mobile phones, coupled with these recent developments, will lead to DRC’s reserves of coltan being used to accelerate reconstruction in the region instead of reigniting Congolese conflict.

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