

## Value Chain Matrix for Tantalum

Source Country	Extraction Points	Internal Marketing	Domestic Exit Points	Export Destination	Processing & Refining	Primary Retailer
Colombia and Venezuela:  Amazon region, Colombia-Venezuelan-Brazil border, Indigenous lands	<p><b>Colombia Mining Locations: Colombian Departments:</b> Guainía; Vichada; Vaupés<sup>i</sup> ; Puinawai Natural Reserve<sup>ii</sup>; Cerro Tigre; Zancudo; Guacamaya;</p> <p><b>Venezuelan Mining Locations:</b> Amazonas State<sup>iii</sup>; Bolívar State<sup>iii</sup> ; Parguaza (town on Orinoco River)<sup>iv</sup></p> <p><b>Armed Groups in control of mining sites</b></p>	Colombia Guaviare River → Puerto Inírida <sup>x</sup>	<p><b>Rivers:</b> Guaviare River (Colombia) Orinoco River (Colombia-Venezuela border)</p> <p><b>Towns</b> El Burro (Venezuela) → Puerto Carreño (Colombia) across Orinoco River<sup>xi</sup></p>	<p><b>Unknown</b></p> <p><b>Brazil*</b> (claimed as Brazilian coltan exports, Brazilian smelters)<sup>citation needed</sup></p>	<p><b>Switzerland:</b> PAMP<sup>xii</sup>; Metalor<sup>xii</sup></p> <p><b>UAE:</b> Kaloti Jewelry Intl.<sup>xii</sup>; Emirates Gold<sup>xii</sup></p> <p><b>South Africa:</b> Randgold<sup>xii</sup></p> <p><b>India:</b> Kundan<sup>xii</sup></p>	<p><b>Unknown:</b> Consumer electronic products Medical technology Defense industry Aviation industry</p>

\* Indicates possible association with illicit activity

	<p><b>and smuggling routes:</b></p> <p><b>Colombia</b> FARC<sup>v</sup>; Sinaloa Cartel<sup>v</sup>; Cifuentes Villa family<sup>v</sup></p> <p><b>Venezuela</b> FARC (Amazonas State<sup>vi</sup>)</p> <p><b>International Companies involved in mining:</b> *Korea TPC Development de Venezuela<sup>vii</sup> *Global Impact USA<sup>viii</sup> *Hawk Enterprises<sup>ix</sup></p>					
<p><b>DRC:</b></p> <p><b>Eastern provinces:</b> North Kivu South Kivu Katanga Maniema</p>	<p><b>Eastern DRC Artisanal Mining Locations:</b><sup>xiii</sup></p> <p><b>North Kivu</b> Bibatama D3 Bibatama MHI Birambo</p>	<p><b>Eastern DRC selling locations:</b><sup>xiv</sup></p> <p><b>North Kivu:</b> Bikoka Bududiya Isange Karuba Mabunda</p>	<p><b>Main Trading Centers:</b> Bukavu Goma</p> <p><b>Border Crossings:</b> Kibumba → Rwanda<sup>xv</sup></p>	<p><b>Tanzania:</b> Dar es Salaam (Port of Dar e Salaam)</p> <p><b>Kenya:</b> Mombasa</p>	<p><b>List of Conflict-Free Smelters:</b> Current list available at Conflict-Free Sourcing Initiative's <i>Conflict-Free Tantalum Smelters list</i><sup>xix</sup></p> <p><b>KEMET's List of Known facilities processing conflict minerals for DRC Conflict Undeterminable Products:</b> Aluminum Polymer Surface Mount Capacitors (AO)<sup>xx</sup>;</p>	<p>Electronic components such as capacitors in portable phones, pagers, PCs, automotive electronics (60-70%)<sup>xxi</sup>;</p>

<p>Birumbi/Kasho vu Bundjali Bwanga/Lukala Gakombe D4 Kamatale- Mugunga karuba Bugoroba Koyi Luwowo / Gasasa Rwangara</p> <p><b>South Kivu</b> Biriki mule Itara Ndumba Rambo Buhiza Rusumba- Kakenge Tchongo boma Mukubwa</p> <p><b>Katanga</b> Bovu Kahungwe Luba carrier Luyi premier Lwela Mahende 1 Mahende 2 Malewa Mbulamiti</p>	<p>Mabuo Manguredjipa Ngungu Centre Rubaya</p> <p><b>South Kivu:</b> Lulingu Luza Mulungu Mwenga Nyambembe Pont Hombo Shabunda center Tchonka</p>	<p>Yungu beach in Yakutumba → Kigoma (Tanzania), Burundi<sup>xvi</sup></p> <p>Rubaya → Goma (via ITG cemetery) → Rwanda<sup>xvii</sup></p> <p>Lulingu, Shubaya → Goma (by plane)<sup>xviii</sup></p> <p>Idjwi Island (Lake Kivu) → Rwanda<sup>xviii</sup></p>		<p>Tantalum Non-Surface Mount Capacitors<sup>xx</sup>; Ceramic Non-Surface Mount Capacitors<sup>xx</sup>; Film and Paper Surface Mount Capacitors<sup>xx</sup>; Film and Paper Non-Surface Mount Capacitors<sup>xx</sup>; Electrical Filters<sup>xx</sup>; Machinery for Battery and Capacitor Production<sup>xx</sup>; Electrical Magnetic Transformers<sup>xx</sup>; Electrical Chokes<sup>xx</sup>; Electrical Coils<sup>xx</sup>; Inductors<sup>xx</sup></p>	<p>Super alloys for jet engine and turbine components (10%)<sup>xxi</sup>; Chemical equipment (10%)<sup>xxi</sup>; Carbide cutting tools (~5%)<sup>xxi</sup></p> <p><b>Solutions for Hope Members:</b> AVX<sup>xxii</sup>; BlackBerry<sup>xxii</sup>; Coopérative Des Artisans du Congo (CDMC)<sup>xxii</sup>; F&amp;X<sup>xxii</sup>; FairPhone<sup>xxii</sup>; Flextronics<sup>xxii</sup>; Foxconn<sup>xxii</sup>; Global Advanced Metals (GAM)<sup>xxii</sup>; HP<sup>xxii</sup>; Intel<sup>xxii</sup>; Mining Minerals</p>
---	---	---	--	--	--

	<p>Ombelwa Usinikorege</p> <p><b>Armed Groups in control of mining sites:</b></p> <p><b>North Kivu:</b> FARDC<sup>xiii</sup>, Mai Mai<sup>xiii</sup> UPLD Mai Mai PARECO</p> <p><b>South Kivu:</b> FARDC<sup>xiii</sup>, Raïa<sup>xiii</sup>, Mutomboki<sup>xiii</sup></p> <p><b>Katanga:</b> None</p>					<p>Resources (MMR)<sup>xxii</sup>; Motorola Mobility<sup>xxii</sup>; Motorola Solutions<sup>xxii</sup>; Nokia<sup>xxii</sup></p>
--	--	--	--	--	--	--

<sup>i</sup> O’Gorman, Joey. “Record amount of coltan seized from guerrilla smugglers.” Colombia Reports. September 13, 2012; colombiareports.com/record-amount-of-coltan-seized-from-guerrilla-smugglers/ [Accessed March 12, 2016]

<sup>ii</sup> Crone, Jack. “Colombia sends 600 special forces troops in massive Black Hawk helicopter assault on illegal Amazon rainforest mines.” Daily Mail, May 11, 2015; dailymail.co.uk/news/article-3077281/Colombia-sends-600-special-forces-troops-massive-Black-Hawk-helicopter-assault-illegal-Amazon-rainforest-mines.html [Accessed April 1, 2016]

<sup>iii</sup> Fox, Edward, “FARC Set to Exploit Venezuela ‘Conflict Mineral,’” InSight Crime, March 12, 2012; insightcrime.org/news-analysis/farc-set-to-exploit-venezuela-conflict-mineral [Accessed March 11, 2016]

<sup>iv</sup> Struck-Diaz, Emilia & Poliszuk, Joseph, “Venezuela emerges as new source of ‘conflict’ minerals”

<sup>v</sup> InSight Crime, “Sinaloa Cartel Expands Influence in Colombia,” March 2, 2012; insightcrime.org/news-analysis/sinaloa-cartel-expands-influence-in-colombia [Accessed April 2, 2016]

- 
- <sup>vi</sup> Molina, Thabata. "Intel Leak: FARC Outgun Venezuelan Military to Poach Coltan Mines." PamAm Post. April 17, 2015; panampost.com/thabata-molina/2015/04/17/intel-leak-farc-outgun-venezuelan-military-to-poach-coltan-mines/ [Accessed April 1, 2016]
- <sup>vii</sup> Struck-Diaz, Emilia & Poliszuk, Joseph. "Venezuela emerges as new source of 'conflict' minerals"
- <sup>viii</sup> Ibid.
- <sup>ix</sup> Ibid.
- <sup>x</sup> Gomez, Ignacio. "Colombia's black-market coltan tied to drug traffickers, paramilitaries." The Center for Public Integrity. March 4, 2012; publicintegrity.org/2012/03/01/8284/colombia-s-black-market-coltan-tied-drug-traffickers-paramilitaries [Accessed April 1, 2016]
- <sup>xi</sup> Struck-Diaz, Emilia & Poliszuk, Joseph. "Venezuela emerges as new source of 'conflict' minerals"
- <sup>xii</sup> Human Rights Watch, "Precious Metal, Cheap Labor"
- <sup>xiii</sup> Steven Spittaels & Filip Hilgert. "Analysis of the interactive map of artisanal mining areas in Eastern DR Congo" International Peace Information Service. Antwerp, November 2013; srz.com/files/upload/Conflict\_Minerals\_Resource\_Center/IPIS\_Analysis\_of\_the\_Interactive\_Map\_of\_Artisanal\_Mining\_Areas\_in\_Eastern\_DRC%20.pdf [Accessed March 1, 2016]
- <sup>xiv</sup> Ibid.
- <sup>xv</sup> Enough Project, "Congo: Key Minerals Smuggling Ring is in Good Health in Goma." October 23, 2012; enoughproject.org/files/CNDP-Smuggling-Dispatch.pdf [Accessed March 2, 2016]
- <sup>xvi</sup> United Nations Environment Programme "Experts' background report on illegal exploitation and trade in natural resources benefitting organized criminal groups and recommendations on MONUSCO's role in fostering stability and peace in eastern DR Congo," April 15, 2015; postconflict.unep.ch/publications/UNEP\_DR Congo\_MONUSCO\_OSESG\_final\_report.pdf [Accessed March 1, 2016]
- <sup>xvii</sup> Security Council, "Letter dated 22 January 2014 from the Coordinator of the Group of Experts on the Democratic Republic of the Congo addressed to the President of the Security Council," January 23, 2014, S/2014/42 2015
- <sup>xviii</sup> Ibid.
- <sup>xix</sup> Conflict-Free Sourcing Initiative, "Conflict-Free Tantalum Smelters," 2016; conflictfreesourcing.org/conflict-free-smelter-program/smelter-refiner-lists/tantalum-testing/ [Accessed March 1, 2016]
- <sup>xx</sup> KEMET Corporation, "Conflict Minerals Disclosure and Report," May 29, 2015; kemet.com/Lists/FileStore/FY2015\_Q4\_Conflict-Minerals-Report.pdf [Accessed March 2, 2016]
- <sup>xxi</sup> Business for Social Responsibility "Conflict Minerals and the Democratic Republic of Congo: Responsible Action in Supply Chains, Government Engagement and Capacity Building," May 2010; bsr.org/reports/BSR\_Conflict\_Minerals\_and\_the\_DRC.pdf [Accessed February 21, 2016]
- <sup>xxii</sup> Solutions for Hope. "List of Participating Companies," solutions-network.org/site-sfhtantalum/participants/ [Accessed March 1, 2016]