



2013 Minerals Yearbook

RWANDA

THE MINERAL INDUSTRY OF RWANDA

By Thomas R. Yager

In 2013, Rwanda was the world's leading producer of tantalum, accounting for 51% of global output. Rwanda also accounted for nearly 1% each of world tin and tungsten production. Domestic consumption of minerals was not globally significant. In 2013, the manufacturing sector accounted for 4.8% of Rwanda's gross domestic product, and the mineral sector, 1.9% (African Development Bank Group, 2014; Shedd, 2015; Tolcin, 2015; Papp, 2015).

In July 2010, the U.S. Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act, which contains provisions concerning the use of minerals to finance military conflict in the eastern part of the Democratic Republic of the Congo [Congo (Kinshasa)]. The U.S. Securities and Exchange Commission (SEC) issued regulations in final form in accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act in August 2012 (U.S. Securities and Exchange Commission, 2012, p. 56274–56275).

Under the new regulations, all companies registered with the SEC that sell products containing cassiterite, columbite-tantalite, gold, or wolframite are required to disclose whether these minerals originated from Congo (Kinshasa) or adjoining countries. Companies that sell products containing cassiterite, columbite-tantalite, gold, or wolframite that originated in Congo (Kinshasa) or adjoining countries are also required to submit annual reports to the SEC that describe the due diligence measures taken, the smelters that processed the minerals, and the companies' efforts to determine the mine of origin. The reports also are required to describe products that contain conflict minerals, and the reports are to be published on the companies' Web sites (U.S. Securities and Exchange Commission, 2012, p. 56274).

In December 2010, the Government of Rwanda and the International Tin Research Institute (ITRI) started the ITRI Tin Supply Chain Initiative (iTSCI) certification scheme for domestically produced tantalum, tin, and tungsten to meet the end user requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act. By the end of 2013, 224 mining companies that operated 638 mine sites were participating in the iTSCI. Starting in July 2013, ITRI started a mineral sampling program at numerous mine sites; 324 out of the planned 480 samples were collected by yearend (International Tin Research Institute, 2014b).

Production

In 2013, production for tantalum increased by an estimated 94% compared with that of 2012; niobium, by an estimated 89%; natural gas, by an estimated 50%; and tungsten, by an estimated 33%. The country's only cement plant continued to operate at full capacity in 2013 (table 1; National Institute of Statistics of Rwanda, 2014, p. 83).

Structure of the Mineral Industry

Privately owned companies, cooperatives, and artisanal miners produced cassiterite, columbite-tantalite, crushed stone, gemstones, gold, peat, and wolframite. Kibuye Power 1 Ltd. (KP1), which produced natural gas, was a state-owned company. In March 2013, the Government announced plans to sell its shares in Bayview Mining Co., Gatumba Mining Concessions Ltd. (GMC), and Rutongo Mines Ltd.

Cassiterite, columbite-tantalite, and wolframite were produced by at least 224 mining companies that operated at least 638 mine sites. About 200 of the mine sites operated by companies participating in iTSCI were inactive or suspended from mining for various reasons. In 2013, a total of 53 new mining companies started operations in Rwanda (International Tin Research Institute, 2014b).

Commodity Review

Metals

Niobium (Columbium), Tantalum, and Tin.—Columbite-tantalite was mined by numerous companies and artisanal mining cooperatives. In 2013, reported columbite-tantalite exports increased to 2,466 metric tons (t) from 1,145 t in 2012. Increased exports were attributable to new mining companies starting operations. Production in Western Province's Rutsiro District was 140 t in 2013; Nyabihu District, 122 t; Rubavu District, 104 t; and Ngororero District, 59 t; and in Southern Province's Ruhango District, 56 t. In 2012, production in Rubavu District was 99 t; Rutsiro District, 78 t; Nyabihu District, 47 t; Ngororero District, 46 t; and Ruhango District, 6 t (International Tin Research Institute, 2014a, b; National Institute of Statistics of Rwanda, 2014, p. 83).

Rutongo Mines Ltd. (a subsidiary of Tinco Investments Ltd. of the United Kingdom) was Rwanda's leading cassiterite producer; cassiterite was mined by numerous companies and artisanal mining cooperatives. In 2013, reported cassiterite exports increased to 4,895 t from 4,637 t in 2012. Production in Rulindo District (Northern Province) was 944 t in 2013; Kayonza District (Southern Province), 280 t; Gatsibo District (Eastern Province), 239 t; Muhanga District (Southern Province), 229 t; and Rutsiro District, 212 t. Production in Rulindo District was 1,126 t in 2012; Kayonza District, 228 t; Rutsiro District, 219 t; Gatsibo District, 188 t; and Muhanga District, 120 t (International Tin Research Institute, 2014a; National Institute of Statistics of Rwanda, 2014, p. 83).

Substantial amounts of mixed cassiterite and columbite-tantalite were produced in Rwanda. The Rutsiro District produced 705 t in 2013; Muhanga District, 517 t; Rubavu District, 469 t; Gakenke District (Northern Province), 427 t; and Ngororero District, 352 t. The Muhanga District produced 286 t in 2012; Ngororero District, 268 t; Rutsiro District, 196 t;

Gakenke District, 71 t; and Rubavu District, 66 t. Mixed cassiterite and columbite-tantalite was separated into cassiterite and columbite-tantalite before export (International Tin Research Institute, 2014a).

Tungsten.—Eurotrade International S.A. (a subsidiary of Tinco Investments) was Rwanda's leading wolframite producer; wolframite was mined by numerous companies and artisanal mining cooperatives. In 2013, reported wolframite exports increased to 2,218 t from 1,751 t in 2012; increased exports were attributable to new mining companies starting operations. Production in Ngororero District was 322 t in 2013; Rulindo District, 298 t; Burera District, 296 t; Rutsiro District, 227 t; and Muhanga District, 166 t. Production in Rulindo District was 298 t in 2012; Ngororero District, 283 t; Burera District, 278 t; Muhanga District, 196 t; and Rutsiro District, 186 t (International Tin Research Institute, 2014a, b; National Institute of Statistics of Rwanda, 2014, p. 83).

In late 2013, Rwanda Allied Partners Ltd. (RAP) (a subsidiary of RAP Holding) was producing wolframite at the rate of 240 metric tons per year (t/yr). The company planned to increase its output to 480 t/yr by yearend and to 1,200 t/yr by May 2014. By 2017, Rwanda Allied Metals (a subsidiary of RAP Holding) was expected to open a new plant that would process wolframite to sodium tungstate (Salem, 2013).

Industrial Minerals

Cement.—Rwanda's cement demand amounted to about 350,000 t/yr, of which about 100,000 t/yr was supplied by Cimenterie du Rwanda Ltd. (Cimerwa). Cement was imported from Kenya, Tanzania, Uganda, and other countries. In December 2012, PPC Ltd. of South Africa purchased a 51% share in Cimerwa. PPC planned to expand Cimerwa's capacity to 700,000 t/yr by 2015 (Global Cement Magazine, 2013; International Cement Review, 2014).

Gemstones.—By the end of 2013, Sapphire Miners Cyangugu Ltd. (SMC) of Thailand was expected to start mining in Rusizi District (Western Province). SMC planned to produce between 1 and 3 kilograms per day of sapphire. At yearend, the company had not started mining operations (Ministry of Natural Resources of Rwanda, 2013).

Mineral Fuels and Related Materials

Natural Gas.—KP1 extracted natural gas from Lake Kivu for use in its 4.5-megawatt (MW)-capacity gas-fired power station. The company was expected to increase its electricity-generating capacity by 20 MW in 2014 and in annual increments of 10 MW between 2015 and 2017. Kivu watt Ltd. (a subsidiary of ContourGlobal LLC of the United States) planned to extract

natural gas from Lake Kivu and to start a new gas-fired power station by 2013. The station's initial capacity was likely to be 25 MW, with increases to 100 MW by 2015 and 200 MW by 2017. The startup date was subsequently revised to 2014 (Stopforth, 2013; Ngoboka, 2014).

Peat.—Peat Energy Co. (a subsidiary of Rwanda Investment Group S.A.) produced about 24,000 t/yr of peat for use in cement production. Rwanda Auto Services supplied peat to prisons for cooking fuel. The Government planned to complete a total of six new peat-fired power stations with a total capacity of 260 MW by 2017. The first 15-MW power station was expected to be completed in 2014, and two additional 15-MW power stations were scheduled to be completed in 2016 (Stopforth, 2013).

References Cited

- African Development Bank Group, 2014, Rwanda, *in* African statistical yearbook 2014: Tunis-Belvedere, Tunisia, African Development Bank Group, p. 292–296.
- Global Cement Magazine, 2013, PPC expands into Rwanda with Cimerwa: Global Cement Magazine, January, p. 48.
- International Cement Review, 2014, Expansion strategy update: International Cement Review, January, p. 9.
- International Tin Research Institute, 2014a, iTSCI Rwanda data summary—Q2 2011 to Q4 2013: London, United Kingdom, International Tin Research Institute, unpaginated.
- International Tin Research Institute, 2014b, Status report iTSCI Rwanda field operations—July–December 2013: London, United Kingdom, International Tin Research Institute, unpaginated.
- Ministry of Natural Resources of Rwanda, 2013, Thailand company to mine and export Rwandan sapphire: Ministry of Natural Resources of Rwanda, October 9. (Accessed January 14, 2015, at http://minirena.gov.rw/index.php?id=61&tx_ttnews%5Btt_news%5D=228&cHash=11b61b525440f040009b6a89049f5a71.)
- National Institute of Statistics of Rwanda, 2014, Statistical yearbook 2014: Kigali, Rwanda, National Institute of Statistics of Rwanda, 211 p.
- Ngoboka, Ivan, 2014, Rwanda—Kivu watt to add 25MW to national grid by Sept as production target: New Times, [Kigali, Rwanda], May 26. (Accessed January 14, 2015, at <http://www.newtimes.co.rw/section/article/2014-05-26/75569/>.)
- Papp, J.F., 2015, Tantalum: U.S. Geological Survey Mineral Commodity Summaries 2015, p. 160–161. (Accessed June 1, 2015, at <http://minerals.usgs.gov/minerals/pubs/commodity/niobium/mcs-2015-tanta.pdf>.)
- Salem, Mohamoud, 2013, Rwanda—Mining for a better future: Mining Business and Investment Eastern Africa Conference, 3d, Nairobi, Kenya, October 17–18, 2013, Presentation, [unpaginated].
- Shedd, K.B., 2015, Tungsten: U.S. Geological Survey Mineral Commodity Summaries 2015, p. 174–175.
- Stopforth, Kieron, 2013, How Rwanda could leapfrog to a future with 100% access to clean electricity: Bloomberg New Energy Finance, November 11, 13 p. (Accessed January 14, 2015, at <https://www.bnef.com/InsightDownload/8796/pdf/>.)
- Tolcin, A.C., 2015, Tin: U.S. Geological Survey Mineral Commodity Summaries 2015, p. 168–169.
- U.S. Securities and Exchange Commission, 2012, 17 CFR parts 240 and 249b conflict minerals; final rule: Federal Register, v. 77, no. 177, September, p. 56274–56365.

TABLE 1
RWANDA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²		2009	2010	2011	2012	2013
Cement		92,100	95,101	94,100	100,000 ^e	100,000 ^e
Gold, mine output, Au content ³	kilograms	30	3	-- ^r	-- ^r	--
Niobium (columbium) and tantalum: ³						
Columbite-tantalite concentrate:						
Gross weight	kilograms	952,000	560,000	890,076 ^r	1,144,684 ^r	2,466,025
Nb content ^e	do.	120,000 ^r	70,000 ^r	110,000 ^r	140,000 ^r	310,000
Ta content ^e	do.	200,000 ^r	120,000 ^r	190,000 ^r	240,000 ^r	530,000
Cassiterite concentrate:						
Gross weight		4,205	5,293	6,952 ^r	4,637 ^r	4,895
Nb content ^e	kilograms	40,000	50,000	70,000	50,000	50,000
Ta content ^e	do.	60,000	80,000	100,000	70,000	70,000
Natural gas, dry ^e	million cubic meters	1	3	2 ^r	2 ^r	3
Peat ^e		19,000	29,000	46,000	46,000	46,000
Stone: ^{e, 4}						
Limestone		88,000	91,000	90,000	96,000	96,000
Pozzolanic materials		28,000	29,000	28,000	30,000	30,000
Sandstone		11,000	11,000	11,000	12,000	12,000
Tin, mine output, cassiterite concentrate: ³						
Gross weight		4,205	5,293	6,952 ^r	4,637 ^r	4,895
Sn content ^e		2,600 ^r	3,300 ^r	4,400 ^r	2,900 ^r	3,100
Tungsten, mine output, concentrate: ³						
Gross weight		870	764	1,006 ^r	1,751 ^r	2,218
W content ^e		410 ^r	360 ^r	480 ^r	830 ^r	1,100

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through February 27, 2015.

²In addition to the commodities listed, brick clay, gemstones (such as sapphire and tourmaline), lime, and steel are also known to be produced, but information is inadequate to make reliable estimates of output.

³Reported exports.

⁴For use in cement production only.

TABLE 2
RWANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Cimenterie du Rwanda Ltd. (Cimerwa) (PPC Ltd., 51%)	Plant at Cyangugu	100,000
Natural gas million cubic meters	Kibuye Power 1 Ltd.	Plant at Lake Kivu	11 ^e
Niobium (columbium) and tantalum, columbite-tantalite ore and concentrate ¹	Various companies and cooperatives	Mines in Rutsiro District	500 ^e
Do.	do.	Mines in Rubavu District	340 ^e
Do.	do.	Mines in Muhanga District	280 ^e
Do.	do.	Mines in Ngororeno District	240 ^e
Do.	do.	Mines in Gakene District	230 ^e
Do.	do.	Mines in Nyabihu District	140 ^e
Do.	do.	Mines in Bugesera District	130 ^e
Do.	do.	Mines in Gatsibo District	120 ^e
Do.	do.	Mines in Nyamasheke District	120 ^e
Do.	do.	Mines in Rubavu District	110 ^e
Do.	do.	Mines in Ruhango District	75 ^e
Peat	Peat Energy Co. [subsidiary of Rwanda Investment Group S.A. (RIG)]	Mine at Gishoma in Rusizi District	26,000
Do.	Rwanda Auto Services	Mines in Northern and Eastern Provinces	22,000 ^e
Sapphire kilograms	Sapphire Miners Cyangugu Ltd. (SMC)	Mines in Rusizi District ²	1,100 ^e
Stone, crushed:			
Limestone	Cimenterie du Rwanda Ltd. (Cimerwa) (PPC Ltd., 51%)	Mine at Nyakabuye	110,000 ^e
Pozzolanic materials	do.	do.	34,000 ^e
Sandstone	do.	Mine at Nengo	13,000 ^e
Tin:			
Cassiterite, ore and concentrate ¹	Rutongo Mines Ltd. (subsidiary of Tingo Investments Ltd.)	Gasambya, Gisanze, Karambo, Mahaza, Masoro, and Nyamyumba Mines in Rulindo District	1,200
Do.	Various companies and cooperatives	Mines in Rutsiro District	570 ^e
Do.	do.	Mines in Muhanga District	500 ^e
Do.	do.	Mines in Gakene District	400 ^e
Do.	do.	Mines in Gatsibo District	350 ^e
Do.	do.	Mines in Rubavu District	330 ^e
Do.	do.	Mines in Kayonza District	310 ^e
Do.	do.	Mines in Nyamasheke District	280 ^e
Do.	do.	Mines in Bugesera District	230 ^e
Do.	do.	Mines in Ngororeno District	210 ^e
Refined	Metal Processing Association	Smelter at Gisenyi ²	200
Tungsten, wolframite ore and concentrate ¹	Eurotrade International S.A. (subsidiary of Tingo Investments Ltd.)	Nyakabingo Mine in Rulindo District	480
Do.	Various companies and cooperatives	Mines in Ngororeno District	330 ^e
Do.	do.	Mines in Burera District	300 ^e
Do.	Rwanda Allied Partners (RAP)	Kilimbari Mine in Kayonza District	270 ^e
Do.	Various companies and cooperatives	Mines in Rutsiro District	230 ^e
Do.	do.	Mines in Muhanga District	170 ^e
Do.	do.	Mines in Rwamagama District	170 ^e
Do.	do.	Mines in Musanze District	110 ^e
Do.	do.	Mines in Gasabo District	90 ^e
Do.	do.	Mines in Kirehe District	90 ^e

^eEstimated. Do., do. Ditto.

¹Gross weight of concentrate.

²Not operating in 2013.