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RWANDA

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The Mineral Industry of Rwanda

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In 2012, Rwanda played a significant role in the world's production of tantalum, tin, and tungsten. The country's share of world tantalum output was about 12%; tin, 2%; and tungsten, 1%. Rwanda accounted for 24% of U.S. imports of tantalum ores and concentrates in 2012. Domestic consumption of minerals was not globally significant. In 2011 (the latest year for which data were available), the manufacturing sector accounted for 6.6% of Rwanda's gross domestic product, and the mineral sector, 1.3% (Banque Nationale du Rwanda, 2012, p. 106; Carlin, 2013; Papp, 2013, 2014; Shedd, 2013).

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 operations in eastern Congo (Kinshasa). The U.S. Securities and Exchange Commission (SEC) issued regulations in final form in accordance with the Dodd-Frank 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 describing 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 a certification scheme for domestically produced tantalum, tin, and tungsten to meet end users' requirements under the Dodd-Frank Act. By the end of 2012, about 450 cassiterite, columbite-tantalite, and wolframite mines in Rwanda were covered by the scheme (International Tin Research Institute, 2013b).

Production

In 2012, estimated production of tantalum increased by 146%; niobium, by 138%; and tungsten, 30%. Tin production decreased by an estimated 45%; and natural gas, by 25% (table 1). Reported lime production increased by 59% in 2011, and bricks and tiles, by 34% (Banque Nationale du Rwanda, 2012, p. 41, 43). Niobium production decreased by 37% from 2008 to 2012, and tantalum, by 35%.

Structure of the Mineral Industry

Privately owned companies, cooperatives, and artisanal miners produced columbite-tantalite, cassiterite, crushed stone, gold, peat, and wolframite. Kibuye Power 1 Ltd. (KP1), which produced natural gas, was a state-owned company. The Government also held a 50% share in Rutongo Mines Ltd. and a 49% share in Gatumba Mining Concessions Ltd. (table 2).

Cassiterite was produced exclusively at about 85 mines in Rwanda; wolframite, at 52 mines; and columbite-tantalite, at 26 mines. The remaining mines produced at least two commodities each. In 2010, about 35,000 workers were employed in the Rwandan mineral industry (International Tin Research Institute, 2011; Kay Nimmo, Network Leader—Sustainability, International Tin Research Institute, written commun., June 26, 2012).

Commodity Review

Metals

Gold.—In 2012, Canadian companies Desert Gold Ventures Inc. and Simba Gold Corp. engaged in drilling programs at Byumba and Miyove Gold, respectively. Desert Gold hoped to increase resources at Byumba, which were estimated to be 5.55 million metric tons at a grade of 1.48 grams per metric ton gold (Desert Gold Ventures Inc., 2012; Simba Gold Corp., 2012).

Niobium (Columbium) and Tantalum.—Columbite-tantalite was mined by 44 producers in 2011; Rwanda's columbite-tantalite production amounted to 249,534 kilograms (kg). Increased niobium and tantalum production in 2012 could be attributable to the startup of new mining companies and artisanal cooperatives. The five leading producers in 2011 were DEMICO, which accounted for 38,131 kg; ETS Munsad Minerals, 33,643 kg; ETS Kalinda, 29,897 kg; EPROCOMI, 21,846 kg; and KUAKA, 14,677 kg. In the first 9 months of 2012, the Rubavu District accounted for 20% of national columbite-tantalite output; the Rutsiro District, 13%; and the Nyabihu District, 11% (Kanzira and Mukamurenzi, 2012, p. 45–46; International Tin Research Institute, 2013a, unpaginated).

Tin.—Cassiterite was mined by 104 producers in 2011; Rwanada's cassiterite production amounted to 5,197 metric tons (t). The five leading producers were Rutongo Mines, which accounted for 1,057 t; Natural Resources Development Rwanda Ltd., 210 t; KODUBU, 133 t; ETS Sindambiwe, 128 t; and ETS Munsad Minerals, 122 t. In the first 9 months of 2012, the Rulindo District accounted for 38% of national cassiterite output; the Rutsiro District, 8%; and the Kayonza District, 7% (Kanzira and Mukamurenzi, 2012, p. 38–42; International Tin Research Institute, 2013a, unpaginated).

Tungsten.—Wolframite was mined by 39 producers in 2011; Rwanada's wolframite production amounted to 1,235 t. Increased tungsten production in 2012 could be attributable to the startup of new mining companies and artisanal cooperatives.

The five leading producers in 2011 were Eurotrade International S.A., which accounted for 262 t; Rwanda Allied Partners, 261 t; Wolfram Mining and Processing Ltd., 145 t; New Bugarama Mining Co., 130 t; and African Primary Tungsten SARL, 125 t. In the first 9 months of 2012, the Kayonza District accounted for 25% of national wolframite production; the Rulindo District, 13%; and the Burera District, 11% (Kanzira and Mukamurenzi, 2012, p. 43–44; International Tin Research Institute, 2013a, unpaginated).

Industrial Minerals

Cement.—Rwanda's cement consumption amounted to about 350,000 metric tons per year (t/yr), of which about 100,000 t/yr was supplied by Cimenterie du Rwanda Ltd. (Cimerwa). Domestic cement demand was likely to increase because of the country's strong economic outlook. Cimerwa planned to increase its plant's capacity to 700,000 t/yr by 2014. In December 2012, PPC Ltd. of South Africa purchased a 51% share in Cimerwa (Global Cement Magazine, 2013).

Clay and Shale, Crushed Stone, Gypsum, and Pumice and Pumicite.—The African Bank Development Group (2010, p. 2–3) estimated that an increase in Cimerwa's cement production capacity to 600,000 t/yr would result in additional consumption of about 570,000 t/yr of limestone, 180,000 t/yr of pozzolanic materials, 70,000 t/yr of sandstone, 51,000 t/yr of clay, and 24,000 t/yr of gypsum. Cimerwa planned to increase production from its limestone, pozzolanic materials, and sandstone quarries, and to open a new clay quarry. Gypsum was expected to be imported from Kenya.

Mineral Fuels and Related Materials

Natural Gas.—Lake Kivu was estimated to contain 60 billion cubic meters of natural gas. KP1 extracted natural gas from Lake Kivu for use in its 4.5-megawatt (MW)-capacity gas-fired power station. Kivuwatt Ltd. (a subsidiary of ContourGlobal LLC of the United States) planned to extract natural gas from Lake Kivu and to build a new gas-fired power station. In the first phase of the project, the plant was expected to have a capacity of 25 MW by the end of 2012. Depending on financing and the success of the first phase, Kivuwatt planned to increase capacity to 100 MW by 2015 (Rwanda Development Board, 2012, p. 24, 25).

Peat.—Peat Energy Co. (a subsidiary of Rwanda Investment Group) produced about 24,000 t/yr of peat for use in cement production. Rwanda Auto Services supplied peat to prisons for cooking fuel. In 2012, the Government was building a new 16-MW-capacity peat-fired power station at Bugurama. The Government also planned to complete two new 100-MW-capacity peat-fired power stations by 2017 (Rwanda Development Board, 2012, p. 32, 34–35).

References Cited

African Bank Development Group, 2010, Cimerwa—Cement project in Muganza, Rusizi District, Western Province, Rwanda—Summary of environmental and social impact statement: Tunis-Belvedere, Tunisia, African Bank Development Group, 15 p.

Banque Nationale du Rwanda, 2012, Annual report 2011: Kigali, Rwanda, Banque Nationale du Rwanda, 146 p.

Carlin, J.F., Jr., 2013, Tin: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 170–171.

Desert Gold Ventures Inc., 2012, Desert Gold provides an update on drill results at the Rubaya project, Rwanda: Vancouver, British Columbia, Canada, Desert Gold Ventures Inc. press release, August 1, 3 p.

Global Cement Magazine, 2013, PPC expands into Rwanda with Cimerwa: Global Cement Magazine, January, p. 48.

International Tin Research Institute, 2011, Rwanda mining companies boosting production: Tin in the News, July 6, p. 4–5.

International Tin Research Institute, 2013a, Data on the minerals trade within the iTSCi programme—Q2 2011 to Q3 2012—Rwanda: London, United Kingdom, International Tin Research Institute. (Accessed June 20, 2013, at https://www.itri.co.uk/index.php?option=com_mtree&task=att_download&link_id=53074&cf_id=24.)

International Tin Research Institute, 2013b, Resume of implementation progress: iTSCi News Bulletin, no. 22, January, p. 1.

Kanzira, Hildebrand, and Mukamurenzi, Gaudence, 2012, Promotion of extractive and mineral processing industries in EAC—Rwanda status: Kigali, Rwanda, Rwanda Geology and Mines Department, 51 p.

Papp, J.F., 2013, Tantalum: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 162–163.

Papp, J.F., 2014, Niobium and tantalum, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2012, v. I, p. 52.1–52.14. (Accessed July 18, 2014, at http://minerals.usgs.gov/minerals/pubs/commodity/niobium/myb1-2012-niobi.pdf.)

Rwanda Development Board, 2012, Energy—The opportunity in Rwanda: Kigali, Rwanda, Rwanda Development Board, 44 p. (Accessed June 20, 2013, at http://www.rdb.rw/uploads/tx_sbdownloader/Opportunities_Energy_Sector.pdf.)

Shedd, K.B., 2013, Tungsten: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 176–177.

Simba Gold Corp., 2012, Simba Gold announces drill results: Vancouver, British Columbia, Canada, Simba Gold Corp. press release, November 29, 3 p.

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 COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2008	2009	2010	2011	2012[e]
Cement		103,244	92,100	95,101	94,100	100,000
Gold, mine output, Au content[3]	do.	40	30	3	3 [e]	3
Natural gas, dry[e]	million cubic meters	-- [4]	1	3	4	3
Niobium (columbium) and tantalum, columbite-tantalite ore and concentrate:						
Gross weight	kilograms	922,000	952,000	560,000	249,534 [r]	600,000
Nb content[e]	do.	300,000 [r]	310,000 [r]	180,000 [r]	80,000 [r]	190,000
Ta content[e]	do.	230,000 [r]	230,000 [r]	140,000 [r]	61,000 [r]	150,000
Peat[e]		6,000	19,000	29,000 [r]	46,000 [r]	46,000
Stone:[e, 5]						
Limestone		99,000	88,000	91,000	90,000	96,000
Pozzolanic materials		31,000	28,000	29,000	28,000	30,000
Sandstone		12,000	11,000	11,000	11,000	12,000
Tin, mine output, concentrate:						
Gross weight		2,848	4,205	5,293	5,197 [r]	2,900
Sn content[e]		1,600	2,400	3,000	2,900 [r]	1,600
Tungsten, mine output, concentrate:						
Gross weight		1,309	870	764	1,235 [r]	1,600
W content[e]		700	460	410	660 [r]	860

[e]Estimated; estimated data are rounded to no more than three significant digits. [r]Revised. do. Ditto. -- Zero.

[1]Table includes data available through February 21, 2014.

[2]In addition to the commodities listed, brick clay, lime, and sapphire are also known to be produced, but information is inadequate to make reliable estimates of output.

[3]Reported exports.

[4]Reported data.

[5]For use in cement production only.

TABLE 2
RWANDA: STRUCTURE OF THE MINERAL INDUSTRY IN 2012

(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		DEMICO	Kagihima Mine in Kazirabonde Cell	39 e
Do.		Ets Munsad Minerals	Masoro Mine in Kabageshi Cell	34 e
Do.		Ets Kalinda	Rubare Mine in Gishyeshye Cell	30 e
Do.		EPROCOMI	Mizbiri Mine in Ruhembe Cell	22 e
Do.		Gatumba Mining Concessions Ltd. (GMC) (Kivu Resouces Ltd., 51%, and Government, 49%)	Mines in Ngororeno District	17 e
Do.		KUAKA	Giseke Mine in Nyarubuye Cell	15 e
Do.		KODUBU	Gihinga Mine in Terimbere Cell	15 e
Do.		Vision Mining Co.	Ndama Mine in Rwikiniro Cell	11 e
Do.		37 other producers	Various locations	85 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 North and East Provinces	22,000 e
Sapphire		Artisanal miners	Mines at Cyangugu	NA
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		Rutongo Mines Ltd. (Tinco Investments Ltd., 50%, and Government, 50%)	Gasambya, Gisanze, Karambo, Mahaza, Masoro, and Nyamyumba Mines in Rulindo District	1,200
Do.		Natural Resources Development Rwanda Ltd. (NRD)	Nemba Mine in Bugesera District	168
Do.		do.	Rutsiro Mine in Rutsiro District	60
Do.		KODUBU	Mines in Rutsiro District	140 e
Do.		Ets Sindambiwe	Gashorera Mine in Gashorera Cell	130 e
Do.		Ets Munsad Minerals	Masoro Mine in Kabageshi Cell	130 e
Do.		Modern Mining	Rusheshe Mine in Bihembe Cell	130 e
Do.		Gatumba Mining Concessions Ltd. (GMC)	Mines in Ngororeno District	110 e
Do.		Wolfram Mining and Processing Ltd.	Rwinkavu Mine in Rwinkavu Cell	110 e
Do.		SEMICO	Rwobe Mine in Kagihima Cell	110 e
Do.		95 other producers	Various locations	3,200 e
Refined		Metal Processing Association	Smelter at Gisnyi[1]	200
Tungsten, wolframite ore and concentrate		Eurotrade International S.A. (subsidiary of Tinco Investments Ltd.)	Nyakabingo Mine in Kabaraza Cell	480
Do.		Rwanda Allied Partners	Kirimbari Mine in Nyamiyaga Cell	270 e
Do.		Wolfram Mining and Processing Ltd.	Gifurwe Mine in Gifurwe Cell	150 e
Do.		New Bugarama Mining Co.	Bugarama Mine in Kiringa Cell	130 e
Do.		Africa Primary Tungsten SARL	Kabukoko Mine in Ruhango Cell	130 e
Do.		34 other producers	Various locations	320 e

[e]Estimated. Do., do. Ditto. NA Not available.
[1]Not operating in 2012.