



## Sub-Saharan Report [Business Plus]

These reports are by Mr. Ryota Kikkawa, an expatriate employee working in Johannesburg with a view across the region.

### Business Plus

With a growing population, abundant natural resources, and enormous infrastructure and industrial development potential, Africa, particularly sub-Saharan Africa, has been called the “Continent of Hope”. In Marubeni’s mid-term management plan, “Global Challenge 2018”, sub-Saharan Africa has been cited as an important region to actively pursue opportunities to lay the groundwork for future business.

The Marubeni Research Institute has modified the “Sub-Saharan Report”, which basically presented an overview of sub-Saharan countries, to focus on the latest business trends and prominent business models in the region, including Marubeni’s own businesses. This revised version is called “Sub-Saharan Report [Business Plus]”.

## Spotlight on Resource Rich Africa as Advance of EVs Gains Momentum - Zambia’s Copper Ore Trade

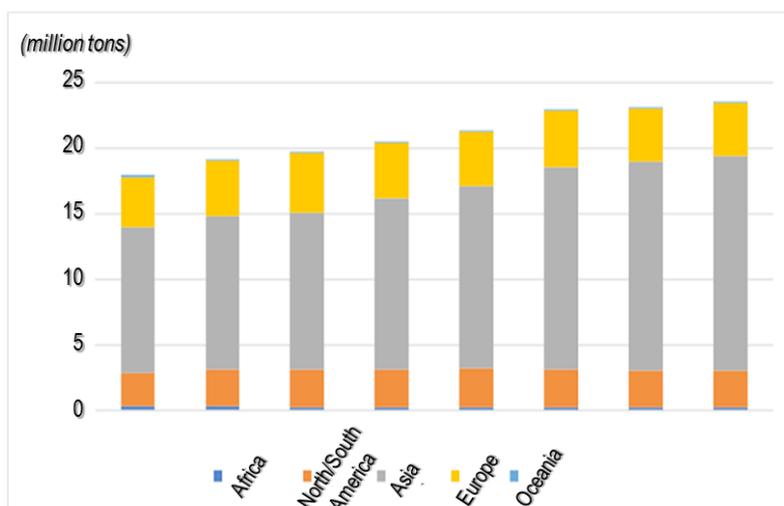
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Copper is a very familiar metal resource as it has been an indispensable material for industrial uses for a long period of time. Zambia, a landlocked country in the south of Africa, is one of the main global sources for copper. So, this time, I want to introduce Zambia’s copper-related business.

### World Copper Market

Looking at the global copper market we see that the world consumed 23.5 million tons of refined copper, with 70% of that consumption being in Asia. Within Asia, China accounts for the largest amount of copper consumption which is 50% of the world total, so it can be said that copper demand trends in China have a strong impact on copper prices. Copper is a highly conductive metal that is widely used for electrical and telecommunication wires and cables, with electric machinery and housing construction each making up 30% of total copper demand, followed by the infrastructure, transportation and industrial machinery industries. Of special note is the changing face of copper demand with the spread of hybrid and electric vehicles that make much greater use of copper than traditional vehicles in the transportation sector expected to accelerate. This means that copper demand fundamentals should be strong in the mid to long-term.

Graph 1: World Copper Consumption

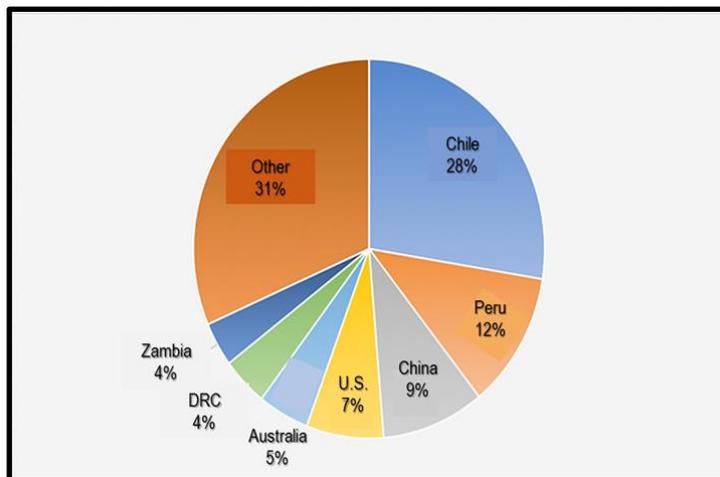


Source: International Copper Study Group

On the other hand, on the supply side, there are large deposits of copper ore on the west coasts of North and South America, with South America's share of worldwide production especially high as Chile makes up 30% and Peru more than 10% of total global production. In Africa, the Democratic Republic of the Congo (DRC) and Zambia are the world's 6<sup>th</sup> and 7<sup>th</sup> largest copper ore producers respectively, each with about 4% of the world total. In terms of copper production, there is always the risk of supply becoming unstable due to the occurrence of strikes at mines or changes to the system introduced by governments in Africa. However, due to the progress being made on new copper mining development projects in the DRC and other countries, supply is expected to improve in the mid to long-term.

As far as copper prices go, they are greatly affected by such factors as China's economy and those factors mentioned above such as mining strikes. As the supply of copper is expected to be somewhat insufficient to meet demand, prices should be firm in the near term.

**Graph 2: Share of Copper Ore Production by Country**



Source: U.S. Geological Survey

**Zambia and Copper Ore**

Zambia is the world's 7<sup>th</sup> largest producer of copper ore and copper ore makes up 70% of Zambia's total exports making it the country's primary industry. Cobalt and other by-products of copper are also produced in the country with mining making up 14% of Zambia's GDP. Zambia began large-scale copper ore production in the 1930s, and by the 1960s boasted the world's 3<sup>rd</sup> largest copper ore production volume following the U.S. and the Soviet Union. Following independence from the UK in 1964, the Zambian government nationalized its mines. After the mining sector was re-privatized in 2000, increased investment



**Picture 1: Zambia's Luanshya Copper Mine**

and technological inputs by foreign companies led to an improved industry and supported by rising copper demand in China Zambia's copper ore production grew from 200 thousand tons in 2000 to 800 thousand tons in 2017.

The supply of electricity is frequently a problem for copper production in Zambia. The country relies on hydro-electric power for 90% of its electricity supply, however, between 2015 and 2017 power supply restrictions were enforced as the water in dam reservoirs fell to precipitous levels due to the lack of rainfall, which in turn negatively affected the operations of many mines. Recently, rainfall volume has recovered, and electricity is also being imported from South Africa, so the electric power situation has stabilized and copper production is picking up.

While Chinese mining companies and such major multinational mining companies as Glencore and Vale own majority interests in most of Zambia's mines, Zambia's national mining company Zambia Consolidated Copper Mines Investment Holdings (ZCCM) also has minority stakes in many of the country's mines. After the Zambian government nationalized the mining industry, mining operations and the mining sector did not fare well. Following re-privatization though, the government left much of ZCCM's investments in the mines to recoup lost capital and use the profits for domestic social and economic purposes.



**Picture 2:** A view of a tunnel from inside Zambia's Konkola Copper Mine

### **Marubeni's Copper Business in Zambia**

Regarding Marubeni's copper business, I think everyone is quite familiar with our copper business in Chile the world's largest producer of copper, with our investment in copper ore mining development in the Esperanza and El Tesoro copper mines with our partner the Chilean mining giant Antofagasta. What is less known is our active copper ore trading business in Zambia. Marubeni purchases copper ore produced from Zambia's Konkola and Luanshya copper mines for export and sales mostly to countries in Southeast Asia. Marubeni now handles about 10,000 tons per year of copper ore from Africa, most of it from Zambia. The copper business is one of our foremost businesses in Africa and we are well ahead of the other Japanese trading companies in this business in Africa. Marubeni is looking to expand the volume of copper ore we handle in Africa by devising value-added functions including improved inland transportation and logistics-related arrangements.



**Picture 3:** Mr. Mugala Kumbukani of Konkola Copper Mines Plc. and Mr. Hattori from the Non-Ferrous Metals Section

**Future Prospects for the Copper Business (Mr. Furukawa, Manager of the Non-Ferrous Metals Section)**

With regards to the copper market, due to the expected advance and increase in electric vehicle demand, among other things, we anticipate copper demand growth will be steady. Currently though, due to a lack of new copper mining projects in the largest copper producing countries, we do not foresee any sharp rise in production volume coming, however, we do expect to see some production increases in emerging and developing economies including Africa (note 1).

In addition to our past existing suppliers, by developing other new sources of supply, such as those in Africa, we are able to maintain a competitiveness not found in the other Japanese trading firms. Going forward we plan to expand our sales especially to Japanese customers.

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**Note 1:** Copper ore production in Africa is expected to increase from 1.2 million tons in 2017 to 2.1 million tons in 2021.

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**Mr. Ryota Kikkawa**  
 Johannesburg Branch  
 Marubeni Corporation

In order for the Marubeni Research Institute to acquire first hand information from the field and contribute to the company's strategy, young Marubeni staff well-versed in economic and industry analysis have been posted to the region.

	<b>Marubeni Research Institute</b>	Telephone: 3282-7687 E-mail: ryan-p@marubeni.com
Address	2-7-1 Nihonbashi, Chuo-ku, Tokyo 103-6060, Nihombashi Tower 21 <sup>st</sup> Floor	
WEB	<a href="http://www.marubeni.co.jp/research/index.html">http://www.marubeni.co.jp/research/index.html</a>	

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