The U.S.-China Trade Dispute and Scarce Minerals

The U.S.-China trade dispute is once again directly impacting the optical communications sector, following last year's ban on sales to Chinese equipment maker ZTE. Now a White House executive order has imposed sanctions on Huawei, a telecom giant with over US$ 100 billion in revenues, but one highly dependent on foreign suppliers of chips and software. Swept up in this are the companies directly impacted by the sanctions, as well as companies on all sides that may benefit from the disruption in the supply chain. Complicating this are announcements of exemptions, delays, and a timeline to review the policies. And there are the ripple effects to stock prices, consumer and business confidence, currency exchange rates, and the economy more broadly.

No one can sincerely claim to know where it's all going, but experts warn that while the leaders may avert an all-out trade war, the two countries cannot go back to where things were. The world has changed, and trade will remain a top issue for the foreseeable future, and just one tool of a larger confrontation on national security.

Almost unnoticed is that all this may make scarce minerals an issue again. On 20 May 2019, Chinese President Xi Jinping and his top trade negotiator appeared at the facility of a manufacturer of magnets based on rare earth elements, to make the point that China could restrict export of rare earths again, as leverage in the trade negotiations (see here). About 80% of U.S. demand for rare earths is supplied by Chinese producers, amounting to about US$ 160 million of imports in 2018. Following the visit from Xi Jinping, Chinese stocks related to rare earths advanced, and a Hong Kong company doubled in value, in just two days.

Rare earth elements form just one set of exotic materials used in optics and photonics and other high tech industries, such as to manufacture electric cars. "Rare" does not refer to their relative scarcity, but to their place in the periodic table. Terms used in the context of scarcity or vulnerability include: scarce materials, critical materials, or strategic materials (such as those identified in the European Commission's list of Critical Raw Materials).
The figure illustrates the scarcity of elements, according to European Chemical Society. It shows that most of the rare earth elements are in "plentiful supply," but that refers only to the ability to extract it, not to political controls over its trade. The U.S. Geological Survey reports rare earth minerals in annual reports (here), including information on production, imports, exports, tariffs, and stockpiles.

Trade in rare earth elements is as complicated as the trade dispute itself. An export embargo by China might be counterproductive by pushing other countries to other sources. It might upset supply chains for products that China imports that use rare earths. And in fact, China actually imports some rare-earth ore from a U.S. mine in California. China's Ministry of Land and Resources has non-voting minority ownership in the U.S. mine, through a holding company (see here). A dispute over rare-earths could have implications far beyond today, extending into a reevaluation of critical materials generally and long term investments in mines and mineral processing facilities.

OIDA last reported on the rise and fall of rare earth mineral prices in the July 2015 OIDA newsletter. OIDA has also addressed trade topics in previous issues, such as the U.S. solar panel tariffs in the February 2018 OIDA newsletter. For more on OSA's government relations effort, click here or contact David Lang, Senior Director, at dlang@osa.org

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