

Rare Earths: A New Geological Weapon for Trade War

Adrian Gallardo

San Luis National University, FCFMyN, Department of Geology, Ejercito de los Andes 950, San Luis 5700, Argentina
CONICET (Argentina National Scientific and Technical Research Council), CCT San Luis, Argentina

Historically, it was gold. It was also silver. Then diamonds, gemstones, platinum. More recently, lithium, the new vedette of the world for its use in batteries and electric cars. And now, in silence, it is the time for rare earths, a set of 17 metals used in every day alloys for computers, mobile phones and superconductors. More importantly, these elements are vital for military equipment, missile systems and aircraft components. Rare-earth oxides have been brought to the front page of newspapers in mid-2019 when China, who controls at least 80 % of their global trade, signalled it may restrict shipments to the United States. Additionally, traditional US allies such as Japan, Canada and Australia were put in alert as they are left in a vulnerable position to any move by Beijing to cut off rare earths exports. Undoubtedly, a disruption in the supply chain could heavily impact on the manufacturing of advanced fighter jets and high-tech electronics. In other words, it could compromise the defence capability of the alliance. The hunger for raw materials is easily explained by the numbers: each F-35 Lightning II aircraft, considered one of the world's most sophisticated and stealthy fighter jets, requires approximately 400 kilograms of rare earth materials [1]. Several countries are now calling for a rapid response to minimise the reliance on China. In this context, Australia appears to be leading the effort by looking at initiatives to promote exploration and eventually produce critical minerals with the help of capital from US, Europe, Japan or South Korea. But challenges are not limited to discovering new deposits. The question is also how to compete with state-owned Chinese companies. Even though labour and costs in China are on the rise, most analysts coincide that the country is still a low-cost producer. So market forces still favours China over its competitors. To counterbalance the Chinese influence, the United States is accelerating the development of the Mountain Pass mine in California [2]. Paradoxically, Mountain Pass ships its product to China for processing, at least until it starts its own processing operations in 2020. Will that be enough to neutralise China's dominance in rare earths? Possibly not. Mountain Pass does not contain the full suite of rare earths required by the industry, particularly heavy elements used for military purposes. Therefore, China still keeps the upper hand in the trade tensions across the Pacific. Where would the situation lead to? Could it escalate? Nothing is for sure in this uncertain world. Rare earths might be used to gain leverage on negotiations between the two world super-powers. By extension, if no agreement is reached and tensions increase, a reduction in rare earth exports could effectively turn into an economic weapon. History shows this geological weapon has already been used against Japan in the Senkaku Islands dispute [3]. So, there is always a possibility for this weapon to be used again. How damaging could it be its use this time? It is widely acknowledged that a cut in supply will be highly disruptive in the short term. It will take some time for western countries to rebuild their rare earths industry, which was mostly left in China's hands due to environmental considerations. Meanwhile, the US technology and defence sector will suffer. On the longer term however, the export restrictions can turn against its master. Limited supply would drive prices up and revive the industry outside China. Alternative mineral sources can be found in other countries such as Australia, Brazil, South Africa and Canada. Mountain Pass will be brought up to speed as well. Rare earths will gradually be brought into production at faster

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and cheaper rates. So this time, market forces will play against China, who could not only lose its current control on rare earths, but also the associated revenues. Furthermore, an unreliable supplier may encourage the industry to secure the product elsewhere, finally killing the golden goose. As a conclusion, a ban on rare earth exports might be a new and powerful weapon, but the consequences will be felt by both sides of the supply chain. Customers will be the first ones to be impacted, but suppliers, in this case Chinese companies, are expected to be hurt in the long run too. As in any conflict, the use of rare earths in a trade war would have no winners. Only losers. As in any conflict, the use of weapons, in this case a geological weapon, should be avoided at all cost.

Competing Interests

The author declare no competing interests.

References

1. Grasso VB (2011) Rare Earth Elements in National Defense: Background, Oversight Issues, and Options for Congress. US Congressional Research Service Report.
2. Iida K (2018) Japan's security and economic dependence on China and the United States. Cool politics, lukewarm economics. Routledge, Taylor and Francis, New York.
3. Bradsher K (2010) Amid tension, China blocks vital exports to Japan. The New York Times, Global business.

Corresponding Author: Dr. Adrian Gallardo, San Luis National University, FCFMyN, Department of Geology, Ejercito de los Andes 950, San Luis 5700, Argentina; E-mail: adgallardo@geowater.com.au

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