

## Rare Earths and the East China Sea: Why hasn't China embargoed shipments to Japan?

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As tensions persist between China and Japan in the East China Sea, it is interesting to note that one of the most symbolic actions of the previous crisis has yet to make an appearance this time around. The stoppage of rare earth shipments to Japan in the fall of 2010 lasted nearly two months, threatened the health of vital Japanese industries, and placed this once obscure raw materials issue on the front page of newspapers across the globe. China's near monopoly on the global production of rare earth oxides – metals that have become essential components in making a range of high tech products that include vehicles, wind turbines, consumer electronics, medical equipment and defense systems – proved to be a useful tool for applying pressure on Japan. Two years later, the possibility of China cutting off Japan's access to rare earths has been floated once again in the Chinese press<sup>1</sup>, but has yet to take place. So why hasn't China played the rare earth card?

The opacity of China's decision-making apparatus and of the rare earth business itself makes precise answers hard to come by, but a number of related points are worth noting and ultimately serve to contextualize China's real power to use rare earths as an economic weapon today. In particular, the risks for China seem to be higher today than in 2010 while the potential impact on Japan is much lower.

### **China's economic strength is less certain**

It is often overlooked, but the stoppage of rare earth shipments to Japan in 2010 hurt the Chinese economy as well. Before rare earths began to flow again, manufacturers in China that depend on parts and components made in Japan using rare earths began to complain that their activity was being affected by disruptions in the supply chain.<sup>2</sup> It is fair to conclude that the risk posed to China's manufacturing sector was an important factor in the decision to put an end to the interruption in rare earth trade back in 2010, as Chinese jobs were ultimately on the line. Still, China was more confident about its economy back then, having seemingly steered its way clear of any major repercussions from the global economic crisis and even being credited as the cornerstone of a global economic recovery. This time around there is more uncertainty about the stability of China's economy. Official growth has slowed to an annual rate of 7.5%, though concerns that the real figures are much lower have been multiplying. In this context, China must be careful not to rock the economic boat beyond a minimum level of control. Overtly using a symbolic economic weapon such as rare earths against one of its top trading partners would take the crisis to a new level and could yield disastrous consequences, as there is no clear end in sight to the diplomatic crisis. After all, economic growth and wellbeing is the real source of legitimacy of China's ruling elite and with a once-in-a-decade transition of power looming just one month away, China's leadership is likely to think twice before taking on the added risk.

### **Japan is less dependent on Chinese rare earths today**

Even if China's authorities – or in the least a grouping of likeminded customs officials – were to target rare earth exports to Japan, such action would be much less effective than two years ago. Japan's overall demand for rare earths has fallen dramatically since then. Imports in the first six months of 2012 totaled only 6,100 tons, putting the country on pace for a 67% drop from the annual import total of 28,500 tons in 2010.<sup>1</sup> This decline in demand is largely due to economic stagnation and the disruption caused by the Great East Japan Earthquake and tsunami on the country's high-tech industry. Yet it is also a result of efforts by Japanese companies and the government to increase the efficiency of raw material use, recycle waste material and find substitutes. Among numerous examples, producers of rare earth-based (NdFeB) magnets have found ways to collect and recycle waste made during production processes and recover up to 30% of their demand in raw materials.

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<sup>1</sup> All of Japan's import statistics used in this paper have been calculated using Japanese customs data, [www.customs.go.jp](http://www.customs.go.jp) based on HS codes 2846 and 2805.30

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Some high-end glass makers have also been able to substitute rare earths such as Cerium oxide with other materials, including zirconium, for use in polishing powders.<sup>3</sup> More solutions such as these are expected as reducing the structural demand for rare earths has been a priority for research and development in Japan for the better part of 5 years.<sup>4</sup> But not only have Japan's imports fallen, its dependence on China has also been reduced. Whereas in 2010 Japan imported 82% of its rare earths directly from China, that figure has dropped to 49% thus far in 2012.<sup>5</sup> Indeed, as overall rare earth demand has dropped, imports from China have been the first to go. If China were to target rare earth exports, there would be fewer shipments to Japan to disrupt today.

### **Japan has more effectively buffered itself from targeted supply disruptions**

The diplomatic crisis with China in 2010 proved to be a difficult lesson for Japan. China's dominant position in supplying the market gave Japanese companies little choice in the short-term, and Japanese trading houses were hard-pressed to find innovative solutions to satisfy the needs of their customers back home. One quick way to do this was to use intermediary third parties through which to ship rare earths. This ultimately complicates the targeting of exports labeled as "Japanese". Vietnam – which is currently developing rare earth production with Japanese assistance but is not expected to produce significant quantities of its own before next year – appeared for the first time as a point of origin of Japanese rare earth imports in 2009. By 2011 these imports had quadrupled and in the first half of 2012 accounted for nearly 13% of Japan's total rare earth imports.<sup>6</sup> In 2011 Laos, which has no operating rare earth mines, also appeared for the first time as a source of imports and accounted for slightly fewer than 2% of Japanese imports from January-June 2012. Traditional rare earth intermediaries such as France (Japan's second largest source of rare earth imports) and the United States have also seen their exports to Japan surge since 2010. Japanese imports of rare earth products from France since 2010 have been nearly 50% higher than the average of the last 10 years (see graphs below for more details). In order to have a real impact on rare earth supplies to Japan, China would have to also disrupt a broader network of trading partners.

### **Japan has strengthened its relationships with the US and the EU on rare earths**

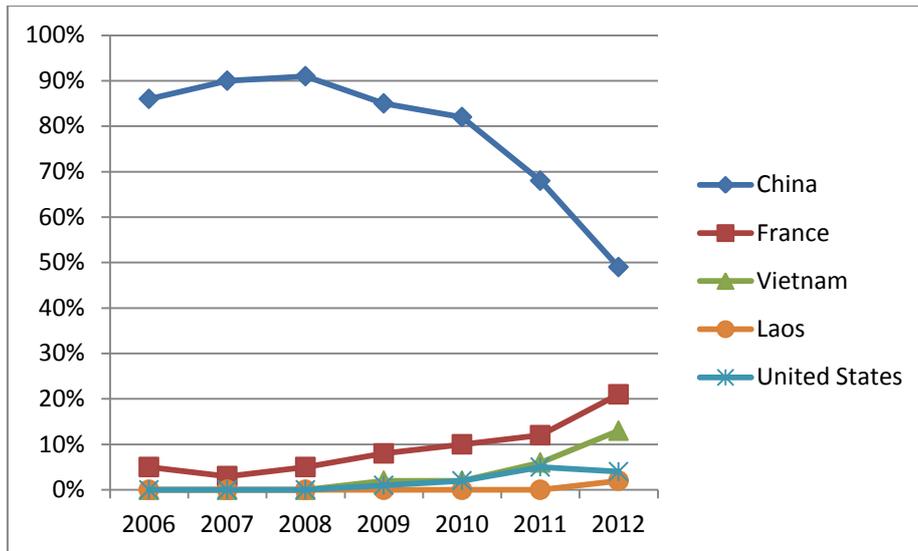
In addition to strengthening trade relationships with existing rare earth partners and building new ones, Japan also strengthened its relationship with the United States and the European Union on political and technical grounds. Since 2010 a number of official round tables have been organized between Japan, the US and the EU to build mutual understanding and brainstorm solutions to rare earth supply issues. In March 2012 Japan joined its two partners in filing a case against China on rare

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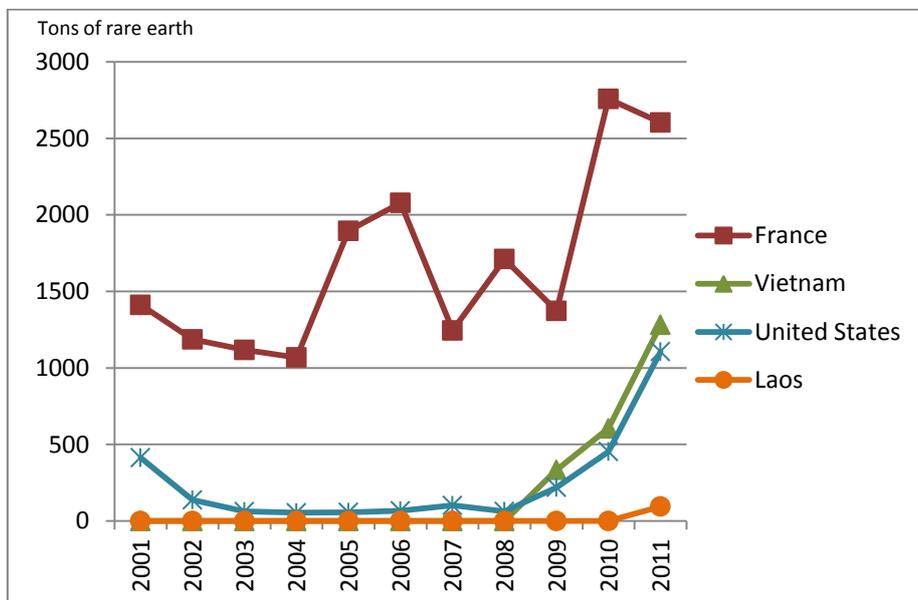
earths at the WTO, marking the first time Japan had ever filed a complaint against China before the multilateral body. Using rare earths as a tool for political gain at this juncture could have negative consequences for China's case or, in the least, draw the ire of Japan's co-plaintiffs. Indeed, if China were to introduce rare earths into the East China Sea debate once again, Japan would be standing with stronger partnerships than it did two years ago.

Ultimately, China's ability to impact the Japanese economy by cutting off rare earth supplies is much lower today than it was in 2010 and the diplomatic and economic fallout from such a measure would likely prove more harmful for China than for Japan. Still, given the degree of tension between the two countries at present, it is not beyond the realm of possibility that rare earths enter the crisis, either officially or unofficially.

**Proportion of selected origins of Japanese rare earth imports 2006-2012**



**Volume of selected origins of Japanese rare earth imports 2001-2011**



**Source:** Japanese customs data, [www.customs.go.jp](http://www.customs.go.jp) based on HS codes 2846 and 2805.30

**Note:** Data only display a selection of import origins. Other somewhat significant non-Chinese origins include Estonia, Kazakhstan, and Russia.

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<sup>1</sup> “打经济战 中国承受力定比日本强 ?” People’s Daily Online, 18 September 2012,  
<http://it.people.com.cn/GB/n/2012/0918/c1009-19040450.html>

<sup>2</sup> Keith Bradsher, “China Restarts Rare Earth Shipments to Japan”, *The New York Times*, 19 November 2010,  
<http://www.nytimes.com/2010/11/20/business/global/20rare.html>

<sup>3</sup> Examples taken from author’s interviews with various industry representatives and government officials in Japan, August-September 2011.

<sup>4</sup> See METI presentation “The Situation Regarding Rare Earth Elements”, March 2011 at TREM Center  
[http://www.tremcenter.org/index.php?option=com\\_attachments&task=download&id=46](http://www.tremcenter.org/index.php?option=com_attachments&task=download&id=46) and “METI Moves to Slash Domestic Rare-Earth Demand by 30%”, Nikkei Report, 8 February 2012

<sup>5</sup> All of Japan’s import statistics used in this paper have been calculated using Japanese customs data,  
[www.customs.go.jp](http://www.customs.go.jp) based on HS codes 2846 and 2805.30

<sup>6</sup> Anonymous interviews with trading companies conducted in September 2011 support these conclusions. Japanese trade statistics show imports of rare earth material from Vietnam rising from 334 tons in 2009 to 1282 tons in 2011 and 782 tons from January to July of 2012.