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## Rising Tensions Over China's Monopoly on Rare Earths?

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The United States, Japan, and the European Union—the three key consumers of Chinese rare earth materials—formally complained to the World Trade Organization (WTO) in March about Chinese restrictions on its rare earth exports. Several weeks later, China announced the establishment of a 150-plus member association with the official aim of promoting sustainable development within this sector. Some analysts wonder if this is part of a Chinese plan to circumvent international complaints by instituting an oligopolistic arrangement to control its rare earth exports. Others ask if this could be another step in an escalating dispute with China over the global supply of rare earth materials.

**Jane Nakano, Fellow with the Energy and National Security Program at the Center for Strategic and International Studies, explains that “the current rare earth contention should serve as a reminder of the fundamental importance of supply diversification, and the enduring value that research and development plays in meeting many of the energy and resource related challenges society faces today.”**

The creation of an industry association should not come as a surprise. This development is consistent with China's on-going efforts to consolidate its domestic rare earth industry, which has been riddled with environmental degradation and illegal mining. The traditional rare earth production process in China uses toxic acid for refining, and the presence of radioactive materials like thorium in rare earth mines poses dangers to miners. Essentially, increasing scrutiny and enforcement of environmental standards in rare earth production processes in the late 1980s drove costs too high for most mines outside of China to stay in business.

Although rare earths—a set of seventeen elements in the periodic table and key ingredients in many high-tech products like smart phones, hybrid car batteries, and laser targeting systems on military applications—are not rare, China currently accounts for over 90 percent of global supply. As Chinese society has become more aware of the environmental consequences associated with its rapid economic development—and the rare earth sector being only one of the micro-universes therein—it has introduced a series of measures to address negative conditions in the industry. For example, the country instituted a rare earth production quota in 2001, followed by an export quota in the mid-2000s.

The export quotas during the early years generally met global demand. However, China began tightening its export quota in the late 2000s, leading to steep price hikes for some rare earths in early 2010. China's dominance on global rare earth supplies and its prevailing influence on price levels were further underscored in fall 2010, when the temporary halt of Japan-bound Chinese rare earth exports followed a territorial dispute between Tokyo and Beijing over what Japan calls the Senkaku Islands and China refers to as the Diaoyu Islands in the East China Sea.

The US decision to take the case to the WTO comes after years of close examination and American business complaints about Chinese practices in this industry. Washington has concluded that China's restrictive export policies artificially raise

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prices for producers outside of China, leading to unfair advantages for domestic Chinese producers. Washington has also pointed to the pressure such export restraints exert upon producers from the United States and others to move their operations and technologies to China.

The WTO filing in March initiated a period of consultations among the parties concerned to seek a solution to the dispute. If the consultation process fails, the dispute may be referred to a WTO panel for ruling—a process that can take several years. The filing over Chinese rare earth policies follows a WTO ruling earlier this year in favor of the European Union, the United States and Mexico, which challenged Chinese export practices over other raw materials like bauxite, magnesium and zinc.

Chinese rebuttals will most likely center on the environmental degradation argument as the WTO allows for export restrictions on environmental and health grounds. China will also likely stress that their restrictive policies constitute measures “relating to the conservation of exhaustible natural resources.”

However, the United States and its fellow complainants will most likely counter-argue that the Chinese rare earth production quota has been on an upward trend, while the export quota has been on a downward trend since the late 2000s.

Regardless of how the proceedings unfold, it is unclear if a WTO ruling favorable to the complainant countries would necessarily ensure the secure supply of these materials in the global marketplace. By the time the ruling might be issued—if the case is referred to a WTO panel—two or three years could have passed, and many of the production capacities outside China would be nearing the operational stage.

Also, some industry analysts point out that China may become a net importer of rare earths by the middle of this decade. Therefore, the utmost value of the WTO process may pertain to the international effort to continue to encourage China to respect and adhere to the rule of law in international transactions.

Many foreign entities that utilize rare earth materials in their supply chain have been aware of their dependence upon China for these products for some years. Since China severely reduced the export quota in 2010, these foreign consumers have accelerated efforts to diversify their supply outside of China.

Non-Chinese mines with strong prospects for commercial extractions include those in Australia, Brazil, Canada, and the United States. Additional efforts by the foreign consumers include developing technologies that reduce the amount of rare earths needed in the manufacturing process, or utilizing alternatives to rare earth materials.

The recent Chinese industry consolidation may not be a welcome development as it will most likely increase the price of many rare earth materials. However, it is probably too short-sighted to view this move as a simple measure to side-step international complaints about China’s restrictive export policies on rare earth materials. In reality, the consolidation likely has multiple objectives, such as to demonstrate to the Chinese public an effort to both curb pollution and eradicate illegal mining, to ensure an adequate level of supply to domestic consumers, and to encourage higher value exports—if the consolidation leads to an in-flow of foreign rare earth processors to China. It would be neither easy nor particularly meaningful to determine which factor is most dominant.

Meanwhile, the current rare earth contention should serve as a reminder of the fundamental importance of supply diversification, and the enduring value that research and development plays in meeting many of the energy and resource related challenges society faces today.

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