

STRATEGIC METALS

Your monthly guide to the latest information on the world's strategic metals

China's Stranglehold on World's Rare Earth Supply

All 17 of the rare earth elements are metals. Cerium, dysprosium, erbium, europium, gadolinium, holmium, lanthanum, lutetium, neodymium, praseodymium, promethium, samarium, scandium, terbium, thulium, ytterbium and yttrium – unfamiliar names, yet rare earths are used in most modern and almost all 'green' applications. A few everyday examples are cell phones, computer monitors, DVD players, flat panel televisions, e-readers, iPods, rechargeable batteries for hybrid and electric cars, catalysts in cars and oil refineries, advanced ceramics, superconductors, fiber optics, lasers, CFL light bulbs, wind turbines, and military systems.

About 97% of the world's rare earth supplies originate from China. In fact, there are very few companies outside China producing the metals. Inner Mongolia Baotou Steel Rare Earth Hi-Tech Co. is China's single largest producer of the metals. In 2008, China produced 120,000 tonnes of rare earth metals followed by India with 2,700 tonnes. Brazil and Malaysia were the third and fourth largest producers respectively.

China, Japan and the United States are the largest consumers of rare earth metals. With the growing demand for 'green' products, the demand for rare earth metals is only expected to increase. Supplies however, are facing deep constraints. The annual growth in demand is expected to hover around 10% but according to analysts, China will be able to supply only 160,000–170,000 tonnes of rare earth metals against an expected demand of 200,000–210,000 tonnes by 2014.

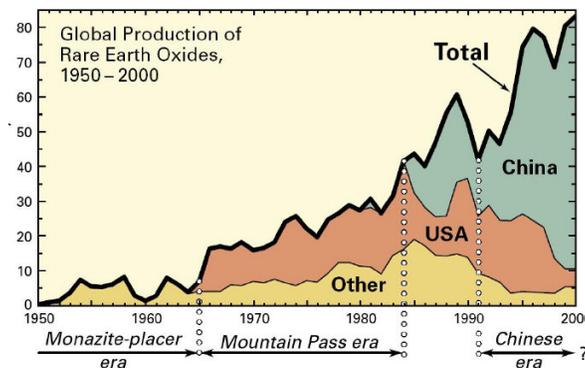
Since 2005, the Chinese government has been imposing export quotas on many of the rare earth metals, resulting in reduced global supply. Higher prices are a natural result of such supply restrictions.

Analysts are of the opinion that by 2012, the rest of the world could face a major supply crisis because of China's reduced or zero supply. The demand-supply is expected to touch 30,000–40,000 tonnes by 2012 in the absence of any new large supplier. China's export quotas for the second half of 2010 have already been reduced by an alarming 40%. Reacting to China's announcement, David Menzie, Chief of the International Minerals Section at the US Geological Survey, said, "Countries and companies that have or plan to develop industries that need rare earth minerals to make products are concerned about China's growing consumption, which they fear will eliminate China's exports of rare earths".

China currently consumes 60% of the global rare earth metals and the nation's growing economy is creating a worldwide threat to supply. China insists that it requires the high supplies to meet the demands of its clean energy and high-tech sectors. Analyst Min Li of Yuanta Securities cautions, "Foreign companies could be facing some material supply risks, unless they decide to move production to China."

The global rare earth market is still relatively small but with both China and South Korea planning to soon increase their electric and hybrid car production by 1 million units each, Toyota Motor Corporation intent on doubling production of the Prius to 2 million units, and the massive increase in demand for wind turbines worldwide, the market is unlikely to remain small for too long.

While the development of new 'green' technologies that are rare earth-free could challenge China's monopoly, it cannot be denied that China will continue to control the global market for some time to come. Several new overseas mine projects are in the pipeline but few are likely to be able to compete with China on prices. Besides, it would require at least a decade before new mines can make an impact on the global market.



Global rare earth element production (1 kt = 106 kg) from 1950 through 2000. Image Credit: USGS

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Steel Giants Can't Play Monopoly

In June 2009, global mining giants BHP Billiton and Rio Tinto proposed to merge their iron ore facilities in Western Australia. The two companies signed a binding agreement in December to merge their operations in the region and thereby save over \$10 billion per year, per company. Ever since the announcement, the \$116 billion Pilbara iron ore joint venture has been attracting a great deal of market speculation and opposition from the global steel industry.

The primary hurdles standing in the way of the merger are approvals from the Australian Competition & Consumer Commission (ACCC) and the European Commission. The deal was initially expected to be finalized within a year but not only has it failed to gain approval from the two abovementioned antitrust bodies, but it is still being analyzed by regulators in Beijing, Berlin, Seoul, Taipei and Tokyo. In July, after three delays since February, the ACCC suspended its timetable for an announcement about the future of the deal.

Chief Executive Tom Albanese of Rio Tinto recently told analysts that it was time to be realistic about the deal and recognize the political and commercial challenges. He said, "We are in an environment of rising iron ore pricing: ... where

annual pricing has moved to quarterly, or even less frequent, pricing. That has raised the political backdrop in this environment ... we're being realistic, we understand that and we recognize that." According to Paul McTaggart, an analyst at Credit Suisse, Albanese's comments indicate that the joint venture is far from being approved.



The future of the deal, which was expected to be finalized by the end of this year, now looks fraught with challenges. A senior mining official has reportedly remarked that the "deal has been dead in the water for months". Albanese has dismissed the remarks.

The global steel sector fears that the merger will create an unhealthy Australian oligopoly that would have an unfair influence over iron ore price and supply. The merger will make the companies the largest mining group with access to over 350 million tonnes of iron ore. The global steel industry is also concerned about the concentration of ownership of the industry's raw materials – iron ore, manganese, and coking coal – given that between the two of them, BHP Billiton and Rio Tinto are global leaders in the production of manganese, iron ore and coal. Both companies also produce molybdenum, another critical raw material of the steel industry.

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The Critical Crystal Ball

On-going Influences on Prices for Molybdenum, Manganese & Magnesium

The fortunes of the global steel industry are on the rebound and prices are once again firming up. Analysts expect Indian steel prices to rise by about 5% from early September as the post-monsoon demand from the automobile and steel sectors heat up. The rise in raw material and freight rates generally drive steel prices upwards but the recently imposed ban on iron ore exports by the state of Karnataka is adding supply constraints to the equation as well.

India's steel production during the current fiscal is expected to touch 65 million tonnes while consumption is expected to increase by more than 10% over the next five years. Similarly, steel prices in China have been on a steady marginal increase triggering production growth. According to Mr Hu Yanping, an International Finance Report analyst, steel prices may undergo corrections in the short term but would continue to rise in the medium term. The price hike also allows steel makers to scale down mill inventories.

July saw China's manganese ore imports rise by almost 11% month-on-month and year-on-year. South Africa, Australia and Gabon were the lead suppliers as always with India, Indonesia, Malaysia, Morocco, Namibia, and Kazakhstan being the other major suppliers. Prices, however, are suddenly turning downward, perhaps as an attempt to settle prices in September. The September shipment prices for various grades of ore have been quoted at 17-24% lower than August prices. The drop in prices is a reflection of the lower prices of domestic manganese ferroalloys in China. The July import numbers are unlikely to be mirrored from August onwards given the surplus stocks of manganese ores at China's wharves.

Global molybdenum prices have remained rather flat at about \$15 per pound because of a slower than expected recovery of the economy and a weak demand for steel outside Asia. The long-term forecast for China and India's demand for steel is promising and that is expected to drive molybdenum prices upwards. Meanwhile, analysts have advised investors to be ready for short-term price fluctuations.

An interesting development in the non-steel sector is the growing close relationship between the prices of molybdenum and silver. Both are used in solar panels and as the demand for alternative energy rises, the demand for molybdenum can only shoot up. Head of Commodity Research at Australia & New Zealand Banking Group Ltd Mark Pervan said, "The solar panel market is particularly strong at the moment, and there's been an uplift for both silver and molybdenum demand for panels... I see this strong correlation continuing, and I think it will tighten up going forward."

Export prices of Chinese magnesium are on the rise although the weaker demand recorded earlier has lowered the price range considerably. Independent market analyst Roskill Consulting expects magnesium consumption to grow by about 6% over the next few years, especially in the alloy market. Meanwhile global consumers are on the lookout for reliable suppliers to sign offtake agreements with since Chinese suppliers have not been able to generate enough confidence in the market.



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