

Hunting endangered elements

Chris Cann in London, [28 November 2012](#)



MAJOR economic woes have pushed the issue of 'strategic' metals supply into the background. The annual 'Endangered Elements' shortlist published by global chemicals and metals manufacturer, American Elements, has attempted to bring what is a long-term problem needing immediate action, back into focus.

American Elements CEO Michael Silver.

In the lead up to the crash in 2008 – and, for that matter, during the bounce through 2010 and into early 2011 when people were more optimistic about recovery and restoration of life as it used to be – demand for raw materials reached fever pitch. It was in that environment that China's policy on rare earths exports brought the wider problem of raw material supply for Western manufacturing operations to centre stage.

Today, demand for mainstream metals is off as reflected in a price drop between 15-40% across the board and China's stockpiles of rare earths sit idle, forcing a U-turn on its pricing structure and giving Western downstream users some respite. But, according to American Elements chief executive Michael Silver, this is no time to be complacent.

"China in the short-term has a glut of rare earths," he told **HighGrade**. "We're in a moment in time when raw materials are not as significant, but the news track of what's happening today isn't the track for the next 20 years."

"At the moment the Chinese have returned to some of the policies from the 90s [but] I'm sure they have a game plan for tightening exports as soon as it makes sense."

Silver said though the news flow on strategic metals shortages had dried up in the West, there were signs that the issue was still prevalent in "long-term thinking" places like Southeast Asia, where ongoing political disputes were the surface expression of the underlying battle to secure raw material supply. This type of foresight and desperation has so far been lacking in Western countries where four or five year political terms often breed myopic policy.

The change in demand and the long-term thinking in emerging markets has driven a couple of changes to this year's 'Endangered Elements' list, with the notable inclusion of niobium at number five in response to speculation that Brazil, responsible for 92% of last year's worldwide production, is soon to graduate to more strategic policy as it attempts to shift its economic drivers further downstream and up the value curve. Niobium is crucial to the military and aerospace industries as an ingredient in superalloys.

The endangered elements that came in at four through to number two were all linked to the automotive industry, which may battle to maintain its competitiveness in light of emerging

market brands. Antimony (4th), strontium (3rd) and platinum (2nd) are used for car batteries, airbags, and catalytic converters respectively. China is responsible for the production of 90% of the world's antimony and dominates strontium production with Spain. About 75% of platinum production comes out of politically troubled South Africa.

The top spot on this year's list was yttrium, which is used in numerous state of the art technologies, including spark plugs. According to American Elements, "access to yttrium will determine which nations will compete in manufacturing many of the innovations of the 21st Century". Yttrium is a rare earth element, of which China produces 97%.

The endangered list relates to elements strategic to the US but is largely analogous to all Western manufacturing economies. Though elements considered strategic may differ from country-to-country, the fact that most Western nations produced only a tiny fraction of their raw material consumption, had become a serious problem by 2010. Depressed demand will not last forever and when the global economy comes off life support this issue will be back making headlines.

What to do

The Western world is a state of political and economic flux and people are being forced to accept that changes are inevitable on a number of fronts. This represents an ideal opportunity to prepare for the resources supply problem that will come with the eventual economic recovery, by taking a major step toward a policy of greater self-reliance and away from the long-running dependence on imports from developing nations. But this is unlikely and the hindrance can be traced to one well-known group, according to Silver.

"The one biggest problem in my mind is the approach that the environmental community brings to mining," he said. "If the approach was to make certain that mines were built properly and with minimal impact on the environment then we wouldn't have any issues, but the environmental community takes the attitude that every day of delay is a good day.

"This doesn't lend itself to building quality, environmentally friendly mines because the mining community hasn't got a counterpart on the environmental side of the fence to work with."

Silver said environmentalists often ignored the fact that most of the ingredients for environmentally friendly automobiles as well as green energy infrastructure had to be mined, a situation he described as the 'environmentalist catch 22'.

He said the only way forward was a combined approach where deposits of strategic raw materials were identified and fast tracked in order to "build that environmentally friendly, low carbon future we all want".

Silver said the fact that there was dialogue on the subject was encouraging and he remained optimistic that environmentalists would get on board with that idea, eventually. But the longer action is delayed, the more critical the situation will become. **HG**

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