Resource scarcity

The pressures of population growth, economic growth and climate change are placing incredible stress on finite, non-renewable resources such as fossil fuels and minerals. Demand for these resources will only intensify as new global actors emerge and join the competition for the world's remaining deposits of minerals and fossil fuels – especially shale gas and unconventional oil.
In response to these challenges, governments are ramping up their resource protectionism efforts; China, for example, has already significantly reduced exports of its rare earth metals. Extractive companies are also moving into more challenging operating environments in a bid to find new sources of supply, which increases their risk of complicity in fuelling violent conflicts, looting state assets or propping up autocratic regimes. [1]
Industries and countries whose economies are predominantly dependent on non-renewable resources are also having to reconsider their assets and transition to a more sustainable growth model.
Footnotes:

1. [1] CIVICUS, State of Civil Society / The great challenges of the 21st century, pg 82

Implications

• Increased conflict and political tension – especially over resources – could occur as food, energy and water consumption patterns change. [1] Securing resources domestically and internationally via strategic relationships will therefore become even more critical for governments and businesses. [2]

• More regulation – both directly relating to environmental changes, and indirectly through taxation and similar types of incentives/disincentives – is likely to appear. [3]

• As resources become increasingly scarce, a circular economy would be highly beneficial from a materials and costs point of view. Its emergence is currently at an early stage; barriers to scale include the need for regulatory change, new technology, cross-industry collaboration and changes in consumer behaviour.However, the momentum behind the circular economy is expected to gather pace over the next two decades.

Footnotes:

1. [9] PricewaterhouseCoopers (2014, April). Five megatrends and their implications – investors edition.
2. [10] PricewaterhouseCoopers (2014, April). Five megatrends and their implications – investors edition
3. [11] PricewaterhouseCoopers (2014, April). Five megatrends and their implications – investors edition.

Current trajectory

• Humanity currently uses resources at a rate 50% faster than they can be regenerated by nature. By the early 2030s we are projected to need more than two planets worth of resources to meet demand, compared to half a planet's worth in the 1960s. [1]

• The oil and gas industry is now looking for resources in hard-to-reach places like the Arctic, even as their costs mount and their returns diminish. As of 2014, about 10% of the world's oil and one-quarter

of its natural gas production came from the Arctic region. [2]

• Resource demand from emerging markets in the last 10 years – particularly in Asia – has reversed the price declines of the 20th century. For example, after declining throughout the 20th century metal prices jumped 176% from 2000 to 2014. [3]

• Money from minerals will be the main income for many of the world's poorest countries, such as Zambia, for the foreseeable future, dwarfing aid, debt relief and other forms of trade. [4]

• Today, 80% of countries consume more biocapacity (e.g. cropland, fisheries, forests, etc.) than is available within their borders. [5] Copper, zinc, tin and nickel have seen a near exponential rise in production, according to Barclays Capital. [6] Based on the levels used in Western lifestyles today, there is no longer enough copper to meet the demands of the future global population.

Footnotes:

1. [2] International Resource Panel (IRP) (2014, June). Decoupling 2: Technologies, Opportunities and Policy Options.
2. [3] Earth Policy Institute (2014, September). Fossil Fuel Development in the Arctic is a Bad Investment.
3. Earth Policy Institute (2014, September). Fossil Fuel Development in the Arctic is a Bad Investment.
4. International Resource Panel (IRP) (2014, June). Decoupling 2: Technologies, Opportunities and Policy Options.
5. [6] CIVICUS, State of Civil Society / The great challenges of the 21st century, pg 82.
6. [7] World Dialogue (2012, Spring). Ecological Footprint: Economic Performance and Resource Constraints