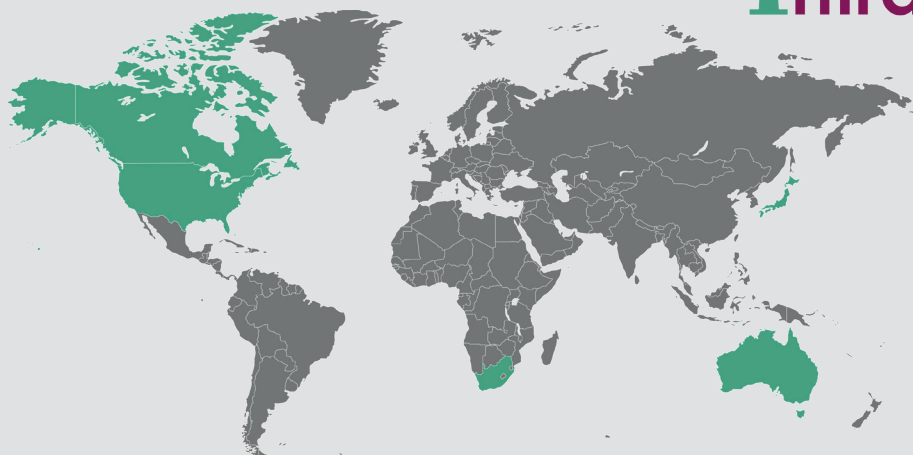


INDUSTRY & TRADE

Current and future challenges

**BASIC DETERMINANTS**

Rule of law
Stable institutions
Availability of skilled workforce (LABOUR)
Competitive energy prices (ENERGY)
Transport infrastructure (INFRASTRUCTURE)
Availability of capital markets and risk finance

SPECIFIC CONDITIONS

Rich mineral endowment

COMPETITIVE ADVANTAGES

- Mineral ownership rights scheme (access to land)
- Stable mining regulatory framework and tax regime
- Public reliable geological data
- Low population density
- Government support

**OUTPUT**

Export oriented minerals industry

SPECIFIC CONDITIONS

Large domestic market

COMPETITIVE ADVANTAGES

- Sophisticated demand
- Easy access to R&D infrastructure

**OUTPUT**

Import oriented minerals industry (processing industry)

Outline for basic factors determining the development of a minerals industry. Source: INTRAW, 2016.

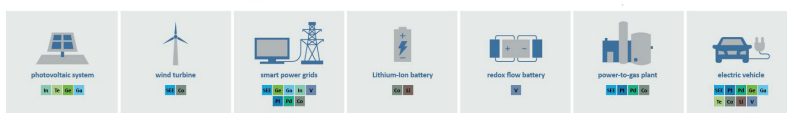
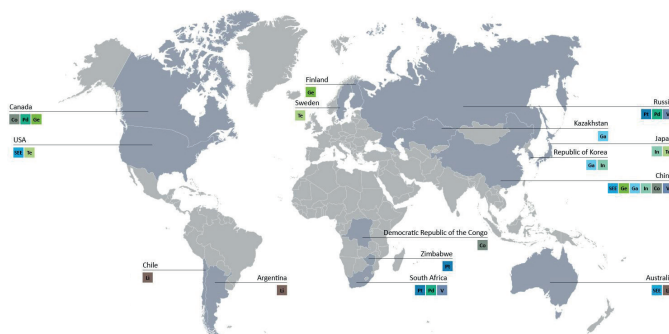
The competitiveness factors affecting the Industry & Trade of Raw Materials have increased in importance over the last few years and their importance is expected to grow even more in the future. **The mining of valuable metals and minerals is controlled by a small number of countries.**

With a declining number of players and companies controlling an increasing share of raw materials, the markets are often highly opaque. Individual countries and companies can abuse their market power and render access to important raw materials more difficult. If metals become too expensive, investments in more climate friendly technologies are less profitable. In addition, mining methods presenting ethical, health or ecological risks can threaten the social acceptance of raw material production.

Figure 1 defines the basic factors for a strong mineral industry taking into consideration basic determinants and country specific settings. This encompasses key conditions and defines, based on those conditions, two distinct pathways that determine whether minerals industry development is likely to be export oriented or import oriented.

Along with other high-tech products, renewable energy plants, energy storage capability (batteries), grids and the most recent changes in energy used in mobility are causing a paradigm shift. Consequently it is expected that some business models and raw materials procurement methods will be profoundly changed (e.g. the requirement for larger quantities of a growing variety of metals to support these technologies).

Within this context there is advantage both to the EU, and to the 5 reference countries analysed (Australia, Canada, Japan, South Africa, USA), to working collaboratively on a long-term raw material policy to foster open and transparent markets as well as high environmental and social standards.



No energy transition without metals. Source: BGR/DERA, USGS, 2017.