Trade in critical raw materials (CRMs)

Main challenges

SUMMARY *EU industry depends almost entirely on a handful of countries for imports of 14 critical raw materials (CRMs). These are of high economic significance and are at particularly high risk of supply shortages. Geographical concentration of CRM production, growing global demand and a tendency of main suppliers to apply export restrictions to reserve CRM stocks for domestic industrialisation has rendered access to CRM markets increasingly difficult.*

In the absence of progress in filling the gaps in the WTO regulatory framework, EU trade policy for raw materials has focused on addressing provisions on export restrictions in WTO accession negotiations. The EU has also sought to integrate such provisions in bilateral Free Trade Agreements (FTAs), Partnership and Cooperation Agreements (PCAs) and in regional Economic Partnership Agreements (EPAs), to secure access to undistorted markets.

EU strategy also concentrates on the enforcement of existing trade "disciplines" through the WTO dispute-settlement mechanism and on awareness-raising through a wide range of outreach activities. EU efforts to diversify sources of CRM supplies have been complemented by national raw material strategies developed by some Member States.

© [Anyka] / Fotolia

In this briefing:

Critical raw materials (CRMs)

The European Commission has classified as "critical" 14 raw materials. These 14 are not only of high economic significance for EU industry, but are vital to numerous high-tech applications and the development of green technologies. Moreover, they are also at particularly high risk of a supply shortage in the next 10 years. Supply constraints result both from high concentration of production in a few countries, marked by potential economic and political instability, and the low rate of substitutability and recyclability of CRMs. The 14 CRMs are: **antimony, beryllium, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, platinum group metals (PGMs), rare earths elements (REEs), tantalum and tungsten**.

EU dependence on CRM imports

Geological deposits and production through mining of CRMs are geographically highly concentrated in a small number of countries located outside the EU, such as Brazil, China, the DR Congo and South Africa[1]. China holds the world's largest reserves of antimony (56%), tungsten (67%) and REEs (58%), and accounts for 91%, 75% and 97% of global production respectively[2].

While the geological availability of most CRMs is potentially high, access to the CRM markets of exporting countries has nevertheless become increasingly difficult.

Author: Gisela Grieger
Contact: gisela.grieger@ep.europa.eu

Relative scarcity of CRMs has arisen because supply has not kept pace with the rapid rise in global demand, spurred in particular by the needs of the fast-growing emerging economies. Furthermore, supply has been constrained by export restrictions imposed by major suppliers.

Types of export restrictions: export bans, export quotas, export taxes, duties and charges, export licensing, mandatory minimum export prices and reduction of value added tax (VAT) rebates on exports[3].

In 2009, export taxes on **tungsten** were applied *inter alia* by China, Russia and Vietnam and on **antimony** by China and Vietnam, while Argentina, China and the Philippines imposed export licensing requirements for **cobalt**. China and India resorted to the widest range of different measures.

In 2010, the share of global exports affected by export taxes equalled 96% for **REEs**, 58% for **magnesium**, 48% for **tungsten** and 18% for **cobalt**. The maximum level of export taxes was 45% for **magnesium**, 30% for **tantalum**, 27% for **cobalt**, 25% for **REEs**, 20% for **tungsten** and **antimony**.

Fig. 1 Main suppliers of CRMs to the EU in 2006/07

	China	Brazil	Bolivia	RD Congo	South Africa	Russia	USA	Other countries
Antimony	15%		77%					8%
Cobalt				71%		19%		10%
Fluorspar	27%				25%			48%
Germanium	72%						19%	9%
Graphite	75%	8%						17%
Indium	81%						4%	15%
Magnesium	82%					3%		15%
Niobium		84%						16%
PGM					60%	32%		8%
Rare earths	90%					9%		1%
Tantalum	46%							54%
Tungsten			7%			76%		17%

Note: suppliers of Beryllium and Gallium change from year to year

Less than 20% of all imports

Between 20% and 70% of all imports

More than 70%

Data source: European Commission: Tackling the challenges in commodity markets and on raw materials, (COM(2011)25), February 2011, pp. 21-22.

The EU's dependence on imports of antimony, cobalt, germanium, indium, magnesium, niobium, PGMs, REEs and tantalum amounts to 100%.

The key exporting countries' wide discretion to influence global supply, and thus to command price building by restricting exports, has led to trade in CRMs being marked by increasing prices and price volatility. In March 2013, South Africa and Russia announced they would set up a consortium modelled on the Organisation of Petroleum Exporting Countries (OPEC) to manage PGM supplies. Moreover, some CRMs, such as rare earths, gallium and indium, are not traded on international commodity markets like the London Metals Exchange (LME), or only a small proportion is traded on such markets, as with cobalt[4].

WTO disciplines on export restrictions

Legal gaps in the WTO regulatory framework

There is no WTO agreement specifically regulating trade in raw materials, thus the general WTO disciplines (rules) on imports and exports apply. Unlike import restrictions which are governed by comprehensive WTO disciplines, export restrictions are an area of 'under-regulation'. The relevant WTO provisions neither list the circumstances warranting quantitative export restrictions nor regulate export taxes[5].

WTO disciplines on export restrictions are set out in the 1994 General Agreement on Tariffs and Trade (GATT). Under Article XI:1:

- quantitative restrictions (quotas) on exports are prohibited

Article XI:1 GATT provides: "No prohibitions or restrictions **other than duties, taxes or other charges**, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or **on the exportation or sale for export** of any product destined for the territory of any other contracting party."

- exceptions (Article XI:2) are allowed, for instance quantitative restrictions on exports if "*temporarily* applied to prevent or relieve *critical shortages* of (...) products *essential* to the exporting contracting party"
- "temporary", "critical shortage" and "essential products" are not defined in the GATT but have been interpreted in WTO case law (e.g. *China - Raw Materials*, DS395)
- export licensing and minimum export price requirements were found to be inconsistent with Article XI:1 in *China - Raw Materials*
- export taxes/duties are **not** prohibited.

Pending WTO dispute DS432 over China's export restrictions on rare earths.

In 2012, the EU lodged a WTO complaint against China, alleging that a series of export restrictions on rare earths, including export duties, export quotas, minimum export price requirements, export licensing requirements, are inconsistent with Articles VII, VIII, X and XI of the GATT and other relevant obligations under China's Accession Protocol.

In September 2012 a single panel was established, also covering similar complaints from the US (DS431) and Japan (DS433).

The combination of the Article XI:2 exceptions and the Article XX public policy exceptions, particularly sub-paragraph (g) on the conservation of exhaustible natural resources, have in practice provided robust cover for export restrictions on raw materials[6].

WTO plus commitments of acceding members
Acceding WTO members which are granted access to the markets of other members are expected to reciprocate by opening up their domestic market. Therefore, they are required to make additional commitments going beyond the WTO rules under their accession protocols.

These country-specific arrangements, which limit acceding members' leeway to impose export restrictions, vary widely in scope and nature among countries like Mongolia, China, the Ukraine and Russia, which acceded in 1997, 2002, 2008 and 2012 respectively[7].

Past WTO dispute settlements (*China - Publications*, DS363 and *China-Raw Materials*) have shown that export restrictions invoked on environmental or resource conservation grounds may fall within the scope of the general exceptions of Article XX GATT, depending on whether the specific commitments concerning export duties have a *textual linkage* to this Article[8].

In *China - Raw Materials*, concerning **fluorspar** and **magnesium** among others, the Appellate Panel upheld that Article 11.3 of China's Accession Protocol does **not** allow China to rely on the exceptions under Article XX of the GATT 1994 to justify export duties that are found to be inconsistent with China's obligations under Article 11.3 of its Accession Protocol.

Article 11.3 Accession Protocol: China shall eliminate all taxes and charges applied to exports unless specifically provided for in Annex 6, which contains 84 tariff lines with maximum levels of export duties. Of the 14 CRMs only **antimony** and **tungsten** are included with a maximum export tax allowed of 20%, and **niobium**, **tantalum** with a maximum export tax allowed of 30%.

Proposals to fill the regulatory gaps
In 2006, Japan, the US and Korea submitted a proposal for a WTO protocol on transparency in export licensing[9].

In 2008, the EU tabled a revised proposal for a WTO agreement on export taxes for non-agricultural products in the context of the Doha Development Agenda's negotiations on non-agricultural market access (NAMA)[10]. It sought to schedule and bind export taxes, allowing for only a few general exceptions and for some flexibility for developing countries. The EU proposal encountered strong opposition from WTO members reluctant to give up their freedom to levy export taxes for a wide array of policy objectives[11].

EU trade policy for raw materials

The trade pillar of the 2008 Raw Materials Initiative contains a set of trade and regulatory policies aimed at promoting EU access to raw materials on undistorted global markets. These policies have been reorganised in the Raw materials policy 2009 annual report which sets out three objectives:

- insertion of trade disciplines on export restrictions into multilateral and bilateral trade agreements, as well as in WTO accession protocols, to target trade-disruptive measures
- tackling trade-distortive measures
- outreach to third countries

European Parliament position

In its 2011 resolution on an effective raw materials strategy for Europe, the EP proposed as a concrete target of the EU's raw-materials diplomacy, to diversify the sources of certain raw materials on which the EU is import-dependent, from South-East Asia towards Latin-America and Africa. It held the view that alternative raw-materials sources should be explored in order to avoid European dependence on a limited number of countries. Furthermore, it welcomed the inclusion of explicit guarantees on non-discriminatory market access to raw materials in EU trade agreements and as a prerequisite for WTO membership.

The EP underlined that the resource sovereignty of countries must be respected and that trade agreements should be sufficiently flexible to support developing countries in linking the extractive industry to local industry. It asked the Commission to balance opposition to export taxes in developing countries by employing a differentiated approach, taking account of the various national contexts so that development goals and industrialisation of developing countries are not jeopardised.

The 2012 second activity report on the EU trade policy for raw materials takes stock of how its three pillars have been put into practice.

Multilateral trade negotiations at WTO level

From the raw-material supply perspective, WTO negotiations on the accession of **Azerbaijan**, **Belarus**, **Kazakhstan**, **Russia** and **Tajikistan** have been of vital interest for the EU.

Tajikistan, which became the 159th WTO member in 2013, has rich deposits of antimony and fluorspar. Tajikistan has committed itself to eliminating export duties, taxes, fees and charges, except on about 300 specific tariff lines. Export-licensing requirements and quantitative restrictions would be made compatible with WTO rules.

Trade disciplines in bilateral agreements

The EU trade strategy for raw materials distinguishes between market access-driven Free Trade Agreements (FTAs) and Partnership and Cooperation Agreements (PCAs), and Economic Partnership Agreements (EPAs), which include a development dimension.

- FTAs and PCAs

The **EU-Korea FTA** eliminates export duties and taxes or other fees and charges on exports in excess of those imposed on like goods for internal sale (Article 2.11). It incorporates Article XI GATT on export restrictions (Article 2.9) and the Article XX GATT general exceptions (Article 2.15). Exports of **gallium**, **indium** and **niobium** from Korea to the EU are duty free. Currently Korea accounts for 9% of global production of indium.

Article 23 of the **EU-Columbia/Peru FTA** incorporates Article XI GATT on export restrictions, Article 25 prohibits duties and taxes on exports, and Article 26 makes the GATT rules on import licensing procedures available for exports. Exports of **antimony**, **cobalt** and **platinum** from Peru are duty free. Peru accounts for 6% of EU imports of antimony.

Prior to the negotiations on the **EU-Ukraine Association Agreement**, including a Deep

Author: Gisela Grieger
Contact: gisela.grieger@ep.europa.eu

and Comprehensive Free Trade Area (DCFTA), the EU had agreed with Ukraine in 2008 that all export duties exceeding its WTO accession commitments would be eliminated with the entry into force of the planned agreement. Accordingly, Article 31 of the draft Association Agreement provides that no new export duties may be introduced and that those export duties in place cannot be maintained, with deadlines set for them to be phased out. Article 35 on export restrictions incorporates Article XI GATT. Dual pricing is prohibited under Article 270, and disciplines on licensing are set out in Articles 104 and 105.

Canada is a significant global supplier of **cobalt**, **PGMs** and **indium**. The 2012 impact assessment on the proposed **EU-Canada CETA** points out that tariff liberalisation is unlikely to lead to increased exports of mining products from Canada to the EU because zero tariffs are already in place. On the contrary, investment liberalisation is likely to have an impact on output and exports in Canada's mining sector. Canada accounts for 16% of EU imports of **niobium** and 3% of **graphite**.

The envisaged prohibition of export taxes on raw materials in the future **EU-India FTA** has raised considerable concern from NGOs. It is argued that depriving India of its policy space to reserve raw materials for domestic downstream integration would reinforce the country's dependence on unprocessed raw material exports. India is a producer of **graphite** and **rare earths,** with a global market share of 13% and 2% respectively.

FTA negotiations are on-going with Vietnam, Malaysia and Mercosur, while those with Singapore were finalised in 2012.

A non-preferential **EU-Mongolia PCA** was signed in April 2013. It defines the use of export duties and other restrictions in respect of raw materials. Mongolia has large deposits of minerals, including **rare earths**, **tungsten** and **fluorspar**.

In 2010, negotiations on agreements with **Australia**, **Kazakhstan** (review of PCA) and **Russia** (replacement agreement) were launched. The trade and investment section of the Association Agreement with **Azerbaijan**, which is being negotiated to upgrade the existing PCA, is set to include disciplines on licensing in mining[12].

The European Commission's June 2013 position paper on raw materials, for the ongoing **EU-US** negotiations on a **Trans-atlantic Trade and Investment Partner-ship (TTIP)**, reveals its strong ambition to include general and specific raw-materials-related export disciplines in the agreement. It believes this could serve as a model for subsequent negotiations with third countries. EU-US cooperation in the Transatlantic Economic Council (TEC) has been marked by joint efforts to promote the principle of elimination of export duties in their bilateral trade agreements with third countries.

- Economic Partnership Agreements (EPAs)

Disciplines on export restrictions have taken different forms in different EPAs[13]. The provisions are equivalent to Article XI:1 GATT, but neither include the Article XI:2 exceptions nor the full range of general exceptions under Article XX GATT[14].

The strictest disciplines have been inserted into the full EPA with Cariforum. Article 14 of the **EU-Cariforum EPA** completely bans customs duties on exports, but allows Guyana and Suriname to phase out export duties for a limited number of items in existence within three years of signing of the EPA (Annex I).

The interim EPAs with the six other regional groupings all feature a general prohibition both on introducing *new* export taxes or charges having the same effect, and on increasing the level of those already in place.

Except for the interim EPA with **Eastern and Southern Africa (ESA)**, which allows Zambia to maintain some export duties, they provide for limited grounds for the temporary introduction of new export taxes for a limited number of additional products.

Such grounds are specific revenue needs, the protection of infant industries or the environment in the interim EPA between the EU and the **Southern African Development Community (SADC)** (Article 24), and the development of the domestic industry or currency value stability in the interim EPA between the EU and the **East African Community (EAC)** (Article 15). Export taxes have remained a contentious issue in the on-going negotiations on the comprehensive EPAs.

Tackling trade-distortive measures

While the Market Access Partnership and the Trade Barriers Regulation are instruments to gather information on trade-distortive measures, bilateral consultations with third countries and the enforcement of WTO disciplines through the dispute-settlement mechanism aim to eliminate them.

Trade-defence instruments are another tool to counter trade distortions. The Commission proposal for a review of the Anti-dumping and the Anti-subsidiary regulations envisages in cases of structural raw material distortions resulting from export taxes being imposed or dual pricing schemes being operated, among others to remove the "lesser duty rule" (recital 8).

The lesser duty rule requires the measures imposed by the EU to be lower than the dumping or subsidy margin, if such lower duty rate is sufficient to remove the injury suffered by EU industry. **Source**: European Commission

Raw Materials Diplomacy Dialogues

In 2012 the Commission signed a Letter of Intent on cooperation on raw materials with the Greenland Government. It lays the groundwork for EU-Greenland cooperation aimed at diversifying Greenland's economy, building stronger EU-Greenland industrial relations, contributing to Greenland's economic development and securing sustainable supplies of raw materials for EU industry. Greenland has a high potential for **REEs**, **tantalum**, **niobium**, **PGMs** and **graphite** production.

Similar letters of intent were signed with Chile and Uruguay in 2011 and with Columbia and Mexico in 2012, to launch bilateral cooperation on raw materials. A memorandum of understanding to this effect was signed with Tunisia and Morocco in 2012.

Outreach to third countries

Outreach activities include pursuing raw-materials diplomacy by engaging with resource-rich countries (see box), with a view to gaining access to sustainable raw material supplies, and with resource-dependent countries to devise joint action and common positions in international fora such as the G8/G20, UNCTAD, the OECD and WTO. A case in point is the 2013 trilateral EU-Japan-US conference on critical materials. The most recent OECD activities have focused on analysing alternative policies, which are less trade-distortive than export restrictions, and on reviewing existing disciplines on export restrictions in regional trade agreements (RTAs).

Member States' resource partnerships

Some Member States have developed a national raw materials strategy which includes a foreign trade dimension. France, Germany and Italy, among others, have opted for a diversification of their raw material suppliers by entering into several resource partnerships.

France

In France, the Comité pour les métaux stratégiques (COMES) has identified four fields of action for the raw-materials strategy, including international cooperation. Building on its strategic partnership with Kazakhstan of 2008, France in 2011 entered into a technical cooperation agreement on the exploration of rare-earth metals with Kazakhstan. In 2012, it established a bilateral resource partnership with Australia.

Author: Gisela Grieger
Contact: gisela.grieger@ep.europa.eu

Germany

The German raw materials strategy focuses on providing suitable economic framework conditions (guarantees for untied financial loans, investment and export guarantees as well as geological studies) and political backing for its industry, to enable it to secure sustainable raw-material supplies. In 2011, Germany signed a joint declaration with Australia on a resources and energy cooperation. It concluded a resource partnership with Mongolia and Kazakhstan in 2011 and 2012 respectively. In 2013 it entered into a raw materials dialogue with Chile, with Peru and South Africa to follow.

Italy

Italy has no official strategy for the minerals sector. However, in April 2011, Italy signed a memorandum of understanding on the promotion of economic cooperation with Afghanistan, to foster private-sector investment in the Afghan mining sector and to support the exploration of marble. Afghanistan has rich deposits of minerals, including rare earths. A three-pronged economic and industrial cooperation agreement including mining and rare-earth minerals was signed with Mongolia in September 2011.

Stakeholders' views

BusinessEurope, and specifically the Chemical Industry Council (Cefic), have welcomed the EU's approach to securing access to sustainable raw-materials supplies and the modernisation of EU trade-defence instruments.

In contrast, NGOs criticise the EU's trade strategy on raw materials, as reflected in the EPAs, for being inconsistent with its development policy objectives. They assert that restricting developing countries' leeway to use export taxes as instruments to protect infant industries and to enhance value-added processing, to stabilise commodity prices and to ensure sufficient domestic supply, severely undermines their development prospects. It is argued that export taxes are needed in least developed countries (LDCs) such as Rwanda to discourage exports of raw materials and to encourage local processing industries.

Further reading

Critical raw materials. Report of the ad-hoc working group on defining critical raw materials. European Commission, Directorate-General Enterprise and Industry, 30 July 2010.

Economics of export restrictions as applied to industrial raw materials/ K. C. Fung and J. Korinek, OECD trade policy paper no 155, April 2013.

Fragmentation or cooperation in global resource governance? A comparative analysis of the Raw Materials Strategies of the G20/ H. Hilpert and S. Mildner, German Institute for International and Security Affairs (SWP) and Federal Institute for Geosciences and Resources (BGR), March 2013.

Multilateralising regionalism: disciplines on export restrictions in regional trade agreements/ J. Korinek and J. Bartos, OECD trade policy working paper no 139, 29 June 2012.

China's export restrictions on rare earth elements, J. Lecarte, Library Briefing, 18 July 2013.

Taking stock of measures restricting the export of raw materials: analysis of OECD inventory data/ B. Fliess and T. Mård, OECD trade policy papers, no 149, 2012.

Disclaimer and Copyright

http://www.library.ep.ec
http://libraryeuroparl.wordpress.com

Author: Gisela Grieger
Contact: gisela.grieger@ep.europa.eu

Annex

Production concentration of critical raw materials

Source: European Commission

Endnotes

[1] Critical raw materials. Report of the ad-hoc working group on defining critical raw materials. European Commission, Enterprise and Industry, 30 July 2010, pp. 77-81.

[2] Export restrictions on strategic raw materials and their impact on trade and global supply. OECD, October 2009, pp. 7 and 6.

[3] TA/MA/W/15/Add.4/Rev.5. Settling Trade Disputes over Natural Resources: Limitations of International Trade Law to Tackle Export Restrictions/ S. Mildner/G. Lauster, Göttingen Journal of International Law 3 (2011) 1, p. 257.

[4] Critical materials strategy/ US Department of energy, December 2010, p. 44.

[5] Defining the legal boundaries of export restrictions: a case law analysis/ B. Karapinar, Journal of International Economic Law 15(2) (2012), p. 443.

[6] Multilateralising Regionalism: Disciplines on Export Restrictions in Regional Trade Agreements/ J. Korinek and J. Bartos, OECD Trade Policy Papers no 139, 2012, p. 12.

[7] Reforming WTO Discipline on Export Duties: Sovereignty over Natural Resources, Economic Development and Environmental Protection/ J. Qin, Journal of World Trade 46, no. 5 (2012), p. 1161.

[8] Ibid, p. 1155.

[9] Access to raw materials: the EU's pursuit of new trading rules on export restrictions/ C. Wu, in: The EU's role in global governance. The legal dimension/ B. Van Vooren/ S. Blockmans/ J. Wouters (eds.), Oxford 2013, p. 180.

[10] Securing Access to critical raw materials: What role for the WTO in tackling export restrictions? Four proposals for a transatlantic agenda/ S. Mildner, Transatlantic Academy, 2011, p. 18.

[11] World Trade Report 2010, Trade in natural resources/ WTO, p. 184.

[12] EU trade policy for raw materials. Second activity report/ European Commission, Directorate-General for Trade, 30.5.2012, p. 12.

[13] The raw materials race. How the EU uses trade agreements to grab resources in Africa/ K. Gregow, Global Studies no 3, 2010, p. 48.

[14] Contentious issues in the interim EPAs. Potential flexibility in the negotiations/ D. Lui/S. Bilal, European Centre for Development Policy Management, discussion paper no 89, March 2009, p. 13.

Author: Gisela Grieger
Contact: gisela.grieger@ep.europa.eu