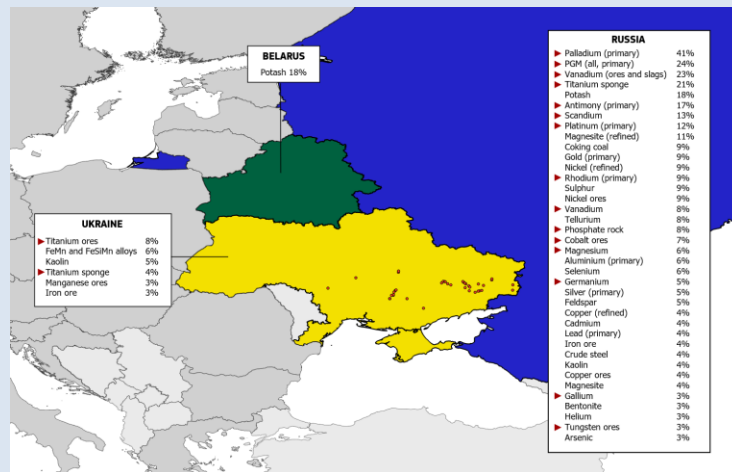


This is a special edition of the European Commission's Raw Materials Information System (RMIS) newsletter. It provides key information related to Ukraine's, Russia's and Belarus' raw materials production and trade, as well as insights on the effects of the ongoing crisis on Europe's security of supply.

Share of global raw materials production in Ukraine, Belarus and Russia



Ukraine and Belarus are significant global suppliers of titanium, Mn-ferroalloys, kaolin and potash.

At the same time, Russia controls a considerable share of the global supply of a long list of raw materials. The world, including the EU, depends on Russia to a great extent for certain commodities – from base metals (steel, aluminium, copper and nickel) to critical raw materials (platinum-group metals, titanium, vanadium, antimony) and fertilizers (potash, phosphate rock).

In the figure: the red triangles indicate the Critical Raw Materials (CRMs), referring to the EC 2021 List of CRMs, the red dots represent the location of the mining sites of non-food, non-energy raw materials in Ukraine (source: S&P Global Market Intelligence). Finally, the materials with a share of less than 3% are excluded.

Ukraine – Russia crises: how will it impact EU's security of supply?

Following Russia's military aggression of Ukraine, the uncertainty in international commodity markets of non-food, non-energy (NFNE) raw materials has ramped up with significant and immediate implications in the EU and worldwide. Among the major threats for the EU's security of supply and EU's economy can be identified:

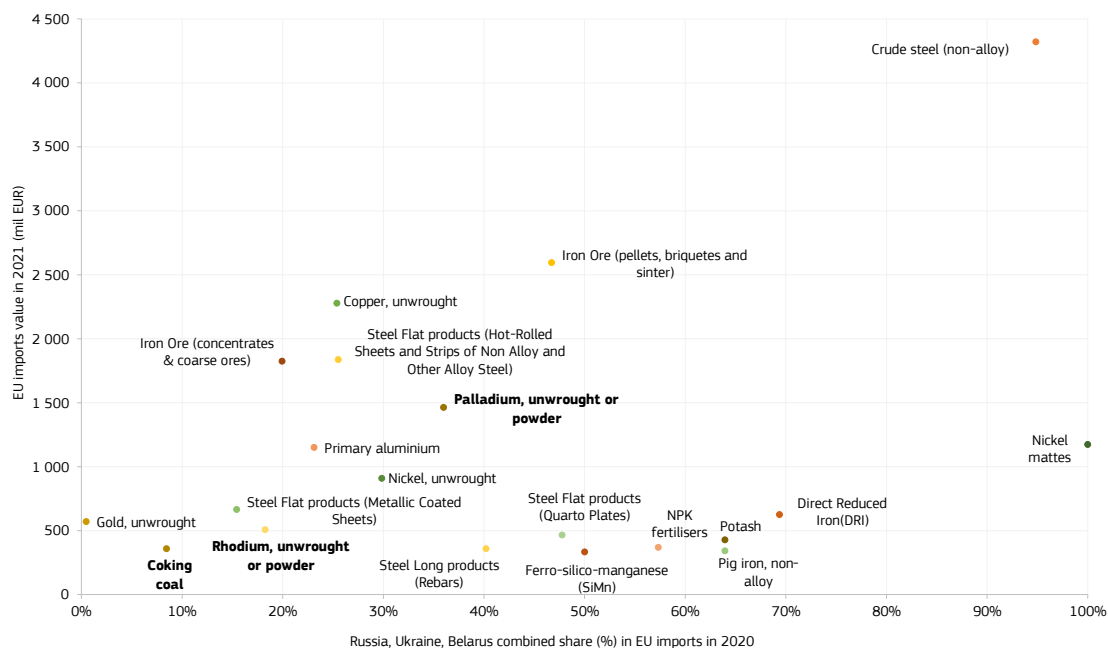
- The sanctions affecting the financing of the Russian mining and metal industry and its ability to import raw materials or export finished products will likely disrupt the global and EU supply chains.
- The targeted export/import restrictions of specific raw materials in the context of additional sanctions from the EU and/or countermeasures from Russia.
- The commodity price increase due to restricted supply and high energy prices, and the disruption of EU exports to the countries involved in Ukraine-Russia war.

Key materials and sectors likely to be most affected

- Ukraine and Belarus control a considerable share of the global supply for specific raw materials such as potash and titanium.
- In 2020, Russia, Ukraine and Belarus accounted for 12.3% of total EU imports of the NFNE product group¹. At the same time, EU exports destined to Russia, Ukraine and Belarus amounted to 3.8% of total EU exports of the NFNE product group. EU imports consist mostly of refined/processed materials and primary raw materials. On the contrary, EU exports principally semi-finished and downstream products.
- Disruption in steel, aluminum, copper, fertilizer raw materials, and industrial mineral imports from Russia, Ukraine and Belarus could strain severely the supply chains of important industries such as Construction, Transport, Industrial Machinery, Fertilizer.

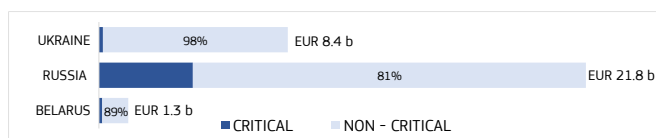
¹ The product scope excludes manufactured end-use (e.g. batteries containing nickel, catalysts containing platinum), some chemical products (e.g. synthetic rubber), as well as wood and paper products.

Figure 1: Top-20 products by value in EU imports of NFNE products originating from Russia, Ukraine and Belarus, in 2021 (in **bold** the CRMs)



- The list of NFNE raw materials identified as having high import value and share in total EU imports (Figure 1) comprises products required for strategic EU value chains (e.g., PGM for the automotive industry, titanium metal for aerospace applications, electrical steel for electric motors, nickel metal for superalloys in turbines and batteries). Critical raw materials are mainly imported from Russia (Figure 2).

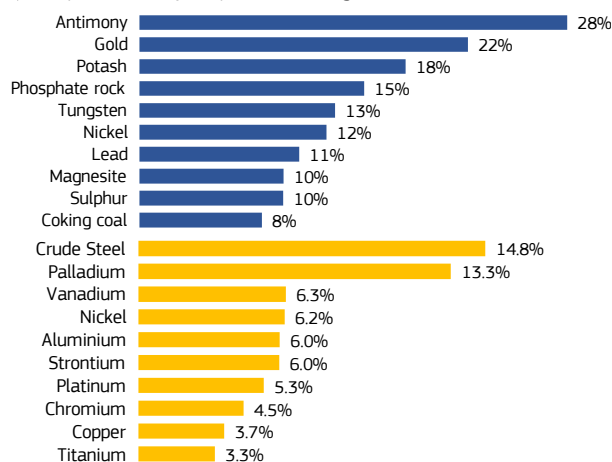
Figure 2: EU imports from the Russian Federation, Ukraine and Belarus of the NFNE product aggregate, by critical & non-critical materials (total values and percentages)



Focus on Russia

Russia supplies multiple NFNE raw materials and related products (Figure 3). The world, including the EU, depends on Russia to a great extent for certain commodities – from **base metals** (steel, aluminium, copper and nickel) to **critical raw materials** (platinum-group metals, titanium, vanadium, antimony), and from fertilizer raw materials (potash, phosphate rock) to industrial minerals (magnesite, kaolin, sulphur).

Figure 3: Top-10 commodity groups exported Russia, by global share in 2019: primary (blue) and refined/processed (orange)



2021 JRC report on trade data also addressing Ukraine

A recent [JRC Technical report](#), published in 2021, highlights that:

- NFNE raw materials accounts for more than one third of Ukraine's total exports of goods (to the rest of the world, as well as to the EU).
- Three chapters - Iron and steel, Ores and Wood - are contributing with a significant trade surplus to the overall trade balance of goods.
- The EU was the major destination of Ukraine's exports of NFNE raw materials, with 42% of them going to the EU in 2018. The top three raw materials exported by Ukraine to the EU were semi-finished products of iron/non-alloy steel and iron ores and concentrates, both agglomerated and non-agglomerated.
- As for NFNE raw materials imports, the EU was the second sourcing country in 2018 (with a share of 22%), after the Russian Federation (36%). In the same year, the top 20 NFNE raw materials imported by Ukraine from the EU included mainly paper and paperboard, but also fertilizers and products of iron/steel.

Additional information for 152 countries (including, Ukraine, Russia and Belarus) are available in the RMIS section [raw materials trade flows](#), as well as in the [ECONOMICS AND TRADE](#) module, which includes a series of [trade-related country fiches](#). New/updated trade-related country fiches are being developed for Ukraine, Russia, Belarus and China, focusing on the most relevant value chains/product clusters for EU trade and identifying possible shifts towards other trading partners.

This is a special edition of the European Commission's Raw Materials Information System (RMIS) newsletter. It is hosted by the Land Resources Unit of the Sustainable Resources Directorate (JRC-D) of the Joint Research Centre (JRC) in Ispra, Italy. The newsletter is circulated to a broad selection of scientists and stakeholders. Please click [here](#) should you wish to be removed from the newsletter mailing list. The JRC manages e-mail addresses as personal data.

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For more information and insights on the activities carried out within the Raw Materials project, check out the [News page in the RMIS](#).