ASSOCIATION négaWatt

ANALYTICAL REVIEW

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Response to call for evidence Critical Raw Materials Act

The world's major economies, including the European Union, are driving an unsustainable demand for the exploration and exploitation of raw materials. The European Union represents only 6% of the world's population but consumes 25-30% of the metals produced in the world. In this context, the question of equity in the global consumption of resources must be asked[1]. Every year, resource mining affects more communities and biodiversity, contributes to climate change, and generates more health impacts, as highlighted by the OECD and UNEP[2]. The accelerating growth in the consumption of metal resources is a major threat to global balances and in particular to biodiversity[3]. A response that simply consists of scaling up operations at each stage of supply chains to meet this demand from rich economies to the detriment of others, would not ensure a truly just ecological transition. Conflicts over 'easy' access to raw materials and control of supply chains also increase geopolitical tensions.

The approach of future legislation on critical raw materials will have to reflect this systemic reality and work in a cross-cutting way to tackle the roots of the problem, i.e. to **urgently put in place a sufficiency approach to reduce the EU's demand for raw materials in order to promote a sustainable economic model.**

[1] See this article, in which negaWatt sets out the first steps towards resource use quotas on a French scale. Rauzier, Emmanuel, and Edouard Toulouse. "The Material Impacts of an Energy Transition Based on Sufficiency, Efficiency, and Renewables. *ECEEE 2022 SUMMER STUDY*, 2022, 10.

[2] United Nations Environment Programme. *Global Resources Outlook 2019: Natural Resources for the Future We Want*. UN, 2020. https://doi.org/10.18356/689a1a17-en.

OECD. *Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences*. OECD, 2019. https://doi.org/10.1787/9789264307452-en.

[3] Sonter, Laura J., Marie C. Dade, James E. M. Watson, and Rick K. Valenta. "Renewable Energy Production Will Exacerbate Mining Threats to Biodiversity." *Nature Communications* 11, nº 1 (December 2020): 4174. https://doi.org/10.1038/s41467-020-17928-5.

Thus, to minimise "structural supply risks that could compromise the EU's ability to achieve the ecological and digital transitions", as stated in the call for evidence, and to limit the impact of mining on the environment and local communities, legislation on critical raw materials should not only focus on reacting to changes on the supply side, but also actively influence the demand. **Such legislation should develop an alternative approach to the use of raw materials, through the establishment of an industrial ecosystem that prioritises demand reduction (sufficiency), reuse of goods, increasing their life span and finally recycling, over the extraction of primary resources**.

Indeed, the consumption of critical raw materials in the European Union obviously depends on the demand for capital and consumer goods, which is itself influenced by three main criteria (see attached article[4]):

- **Sufficiency**, one of the three pillars of the négaWatt approach, which consists of creating the conditions to moderate our energy and material needs. This can be dimensional sufficiency (e.g. optimising the size of a fridge to our real needs), usage sufficiency (e.g. reducing the frequency of use of appliances), or collaborative sufficiency (e.g. increasing car-pooling).
- The reuse of products which exist for the second-hand market (e.g. vehicles). It can be increased for packaging through deposit systems for instance.
- Increasing the lifetime of **goods**, which concerns reparability, availability of spare parts and appropriate after-sales services.

The studies carried out by the négaWatt association (see attached article[4]) on the evaluation of the material footprint of the ecological transition **show that the effects of a sufficiency approach are particularly effective**. For lithium, for example, which is currently at the heart of the EU's concerns and is one of the critical raw materials, in the case of France, a transition trajectory including sufficiency measures (such as a reduced car fleet, with small electric cars with batteries not exceeding 60 kWh) would make it possible to strongly contain the increase in consumption, with a cumulative level of 130,000 tonnes of lithium in 2050, instead of approximately 340,000 tonnes without sufficiency measures, **i.e. a reduction of 2.6 times**.

On the other hand, this study highlights that **without sufficiency measures, the consumption levels achieved for raw materials are very high and could not be provided under fair conditions at the global level**. In the light of current research on the environmental footprint, it is also certain that this trajectory without sufficiency would generate irreversible impacts from an ecological point of view [2 and 3].

We are concerned that future legislation does not seem to take up this perspective of sufficiency, even though it was envisaged in the **November 2021 European Parliament resolution.**

[4] Rauzier, Emmanuel, and Edouard Toulouse. "The Material Impacts of an Energy Transition Based on Sufficiency, Efficiency, and Renewables. *ECEEE 2022 SUMMER STUDY*, 2022, 10.

Demand reduction should be integrated into an overall EU-wide material footprint reduction target, developed in partnership with other DGs. The forthcoming European Commission's prospective study on critical raw materials should also develop scenarios that take demand reduction into account. Modelling such demand reduction strategies is a cutting-edge area of academic and policy research - one that is increasingly being pursued by governments and international bodies.

Furthermore, given the "urgent acceleration of the energy transition" that the call for evidence highlights, **a prioritisation of resource use through a specific public supply policy is necessary**. This could take the form of prioritising critical raw materials for the technologies and infrastructures of the ecological transition (decarbonised public transport, energy renovation, renewable energies, a reduced car fleet, car-sharing, made up of small electric cars with batteries of no more than 60 kWh), serving to cover "essential" needs (maintenance of electrical infrastructures, food supply, etc.) and to limit demand in other "less necessary" or even environmentally harmful sectors. Prioritising essential public policy needs means being vigilant about resource supply beyond the EU's list of critical raw materials. For example, the European Parliament called in its **November 2021 resolution** "for the Commission to pay attention not only to critical raw materials, but also to the potential criticality of **other raw materials** needed for strong supply chains...; [pointing out] that in addition to specialised ores, **'commonly produced' raw materials such as copper,** helium and nickel **are also becoming critical,** as demand for these raw materials increases".

The law on critical raw materials can be a political signal that the European Commission intends to act to set this global target for reducing demand for materials in its next mandate.

Moreover, the methodology for establishing the list of critical raw materials will have to be reviewed in accordance with the European Parliament's November 2021 resolution on the EU strategy for critical raw materials. As stipulated by this resolution, it should take into account "**future demand** scenarios **for critical raw materials** and other raw materials, as well as **social and environmental criteria based on the UN Guiding Principles on Business and Human Rights and the SDGs**. The aim is to provide a broader picture of the conditions of extraction around the world [... and] to give due **consideration to the full environmental impact of extraction and processing when** analysing supply risks. [The Parliament] furthermore calls for **a thorough debate** involving all stakeholders.

Finally, we would like to point out that the methodology for drawing up the list of critical raw materials[5] **does not currently take into account the phenomena of resource depletion**, which should be a major concern for our highly consumer societies. Indeed, while the prospect of stock depletion is a medium- or long-term one**, the decline in the quality of resources over time (depletion) is already observable and is leading to a worrying increase in the environmental and health impacts of extraction**[6]. Any environmentally sound industrial planning of our supply systems should therefore address this phenomenon.

[5] European Commission. *Methodology for Establishing the EU List of Critical Raw Materials*. Joint Research Centre. LU: Publications Office, 2017.

[6] See the numerous academic works on the subject, notably by Prior and Mudd:

Prior, T., D. Giurco, G. Mudd, L. Mason, and J. Behrisch. "Resource Depletion, Peak Minerals and the Implications for Sustainable Resource Management." *Global Environmental Change* 22, nº 3 (August 2012): 577–87. https://doi.org/10.1016/j.gloenvcha.2011.08.009.

Giurco, Damien, Benjamin McLellan, Daniel M. Franks, Keisuke Nansai, and Timothy Prior. "Responsible Mineral and Energy Futures: Views at the Nexus." *Journal of Cleaner Production* 84 (December 2014): 322–38. https://doi.org/10.1016/j.jclepro.2014.05.102.

Mudd, G. M. "An analysis of historic production trends in Australian base metal mining". *Ore Geology Reviews* 32, nº 1-2 (2007): 227-61.

---Global trends in gold mining: Towards quantifying environmental and resource sustainability? *Resources Policy* 32, nº 1-2
(2007): 42-56.

---Sustainable Mining: An evaluation of changing ore grades and waste volumes. In *International Conference on Sustainability Engineering & Science. Auckland, New Zealand. 6-9 July*. Auckland, New Zealand, 2004.

---The Sustainability of Mining in Australia: Key Production Trends and Their Environmental Implications. Research Report 5.
Australia: Joint Research Report Mineral Policy Institute (MPI) and Department of Civil Engineering, Monash University, 2007.