

The background is a collage of industrial and mining scenes, including a large factory building, a mining pit with heavy machinery, and a close-up of industrial components. A large, semi-transparent white number '1' is overlaid on the left side of the image. The entire image has a strong red color overlay.

BLOOD ON THE GREEN DEAL

**How the EU is boosting the mining
and defence industries in the name
of climate action**



**Corporate
Europe
Observatory**



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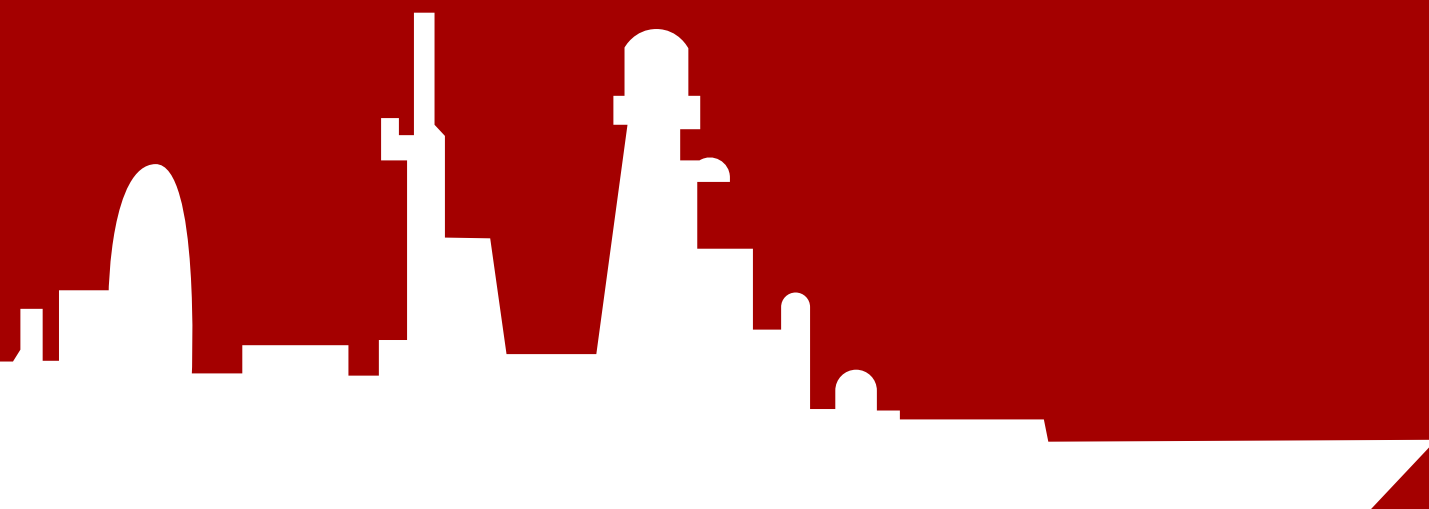


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Executive summary and key findings



The EU Critical Raw Materials Act, or CRMA, is in the final stages of its adoption. Unlike other flagship legislations under the ‘Green Deal’, which have been the subject of fierce political battles, the CRMA enjoys broad support from all sides of the political spectrum. There seems to be a widespread consensus on the need to secure Europe’s supply of critical minerals for the climate transition through financial support and favourable regulations. This has given a new aura of respectability to the mining industry, which is intrinsically dirty and generates massive greenhouse gases.

This report shows that other players still - whose activities and objectives have little to do with the EU’s climate goals or are in direct contradiction with these goals - have very opportunistically taken advantage of the CRMA debate. This is particularly true of the aerospace and defence industry.

- ★ Publicly presented as climate-friendly legislation, the CRM Act has turned into an “open bar” for industry, which has actively lobbied to make sure that the metals they were interested in would enjoy the same public support and environmental deregulations as those that are really useful for the climate transition.
- ★ Corporations and lobby groups from the defence and aeronautics sectors such as Airbus, Safran or ASD have been particularly active at all stages of the CRMA legislative process, through meetings with decision-makers, events and sometimes opaque working groups.
- ★ They have been actively supported in their lobbying by allies within the Commission itself (notably Commissioner Thierry Breton and DG DEFIS), as well as by Member States such as France and Spain.
- ★ The defence and aerospace sectors have made sure in particular that the official EU list of critical minerals would indeed include aluminium and titanium, two metals that are essential to their interests but of limited use (especially titanium) for the climate transition.
- ★ The criteria for classifying minerals as “critical” have been made more flexible, and there are provisions allowing new minerals to be added to the list of “strategic” minerals in the future without public scrutiny.
- ★ The CRM Act contains no provisions for discriminating between the different uses of so-called “critical” minerals or for prioritising “green” uses of metals over problematic sectors.

Under the public pretext of climate action, the European Union is preparing to write a blank cheque to mining companies and questionable industries without asking the necessary questions about **which minerals are actually critical and for which uses and which objectives, and without prioritising and discriminating between uses**. This cannot but ultimately jeopardise the EU’s climate objectives, making the Green Deal more costly and less popular with populations affected by mining. And it probably won’t make Europe more secure either, as the metals will be used to build arms which are to be exported all over the world.

Questioning the EU's new critical materials rules

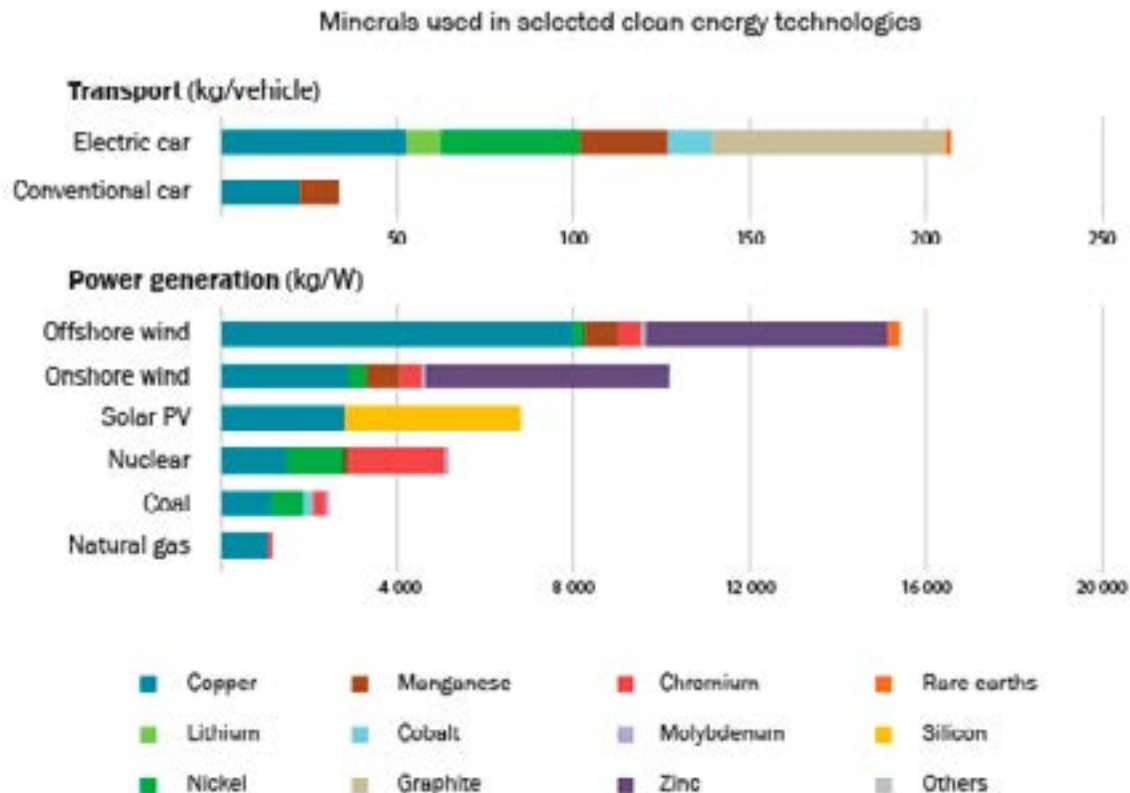
There's no getting away from the fact that, while charging the battery of your electric bicycle has a much lower impact on the environment than filling the tank of your SUV with fossil fuels, nevertheless batteries are made of raw materials which have to be mined, and mining is a dirty business.

Today, a wide range of key technologies across all industries, from chips to batteries, rely on the unique physical properties of certain

critical raw materials (CRMs). Many of these technologies are deemed crucial to a successful energy transition. For instance, manufacturing an electric car requires lithium, graphite, cobalt, nickel and manganese for batteries and the traction motor is generally made of a permanent magnet with rare-earth elements – dysprosium, neodymium, praseodymium and terbium – or of copper coils¹. Indeed, electric cars use four times as much copper as fossil fuel cars².

Source : International Energy Agency (2021)³

The rapid deployment of clean energy technologies as part of energy transitions implies a significant increase in demand for minerals

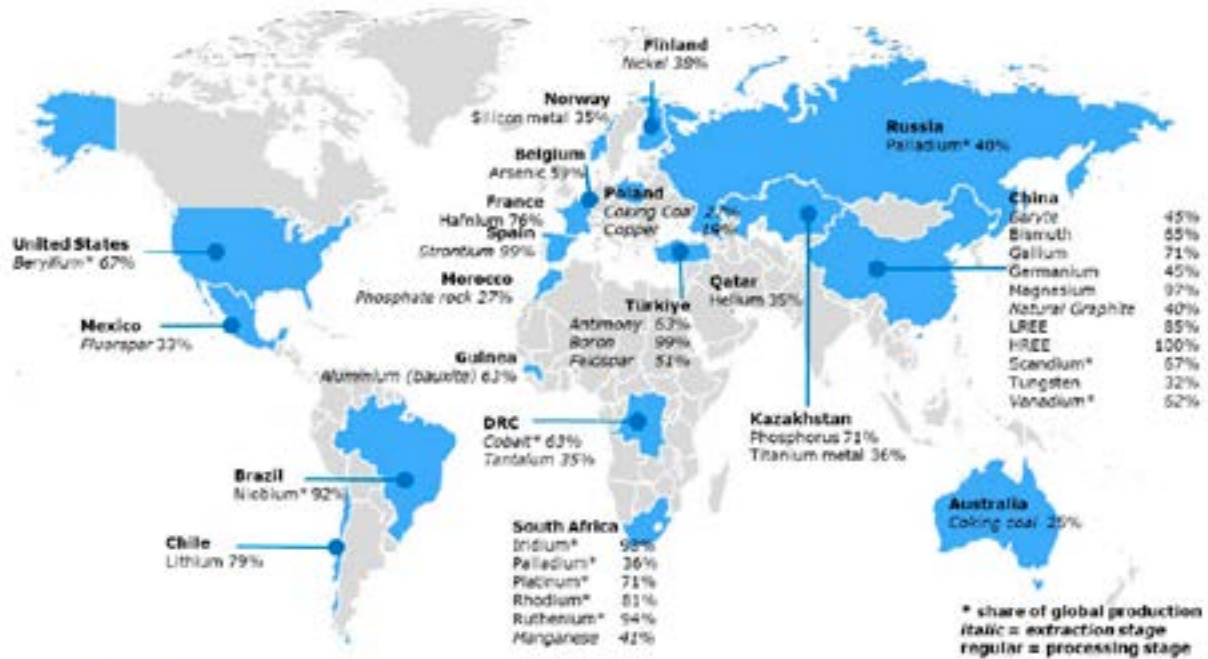


1. European Parliament (2023) Critical raw materials act [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI\(2023\)747898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI(2023)747898_EN.pdf)

2. EEB and Friends of the Earth Europe (2021) Green mining is a myth: The case for cutting EU resource consumption https://eeb.org/wp-content/uploads/2021/10/Green-mining-report_EEB-FoEE-2021.pdf

3. IEA (2021) The role of critical minerals in clean energy transitions. World Energy Outlook Special Report

Figure 1 – World map of the main CRM suppliers to the EU (2023)



Source: [European Commission](#), 2023.

Extract from a research of the European parliament⁴

Critical Raw Materials are defined by the EU as those raw materials which are “economically and strategically important for the European economy but have a high-risk associated with their supply” (more below about how this definition is applied).

CRMs will be increasingly necessary in the future - the actual quantity will depend on levels of economic growth, political decisions on environmental legislation and on limiting energy and material demand, technological choices and more. But the vast majority of CRMs are sourced outside of Europe, making it a point of strategic attention for EU decision-makers... and corporate players too, who have been getting in on the act.

Whilst there has been a lot of talk in recent years at the EU level about turbo-charging the green transition, there has been far less attention to the underlying need for minerals and to the dirty reality of mining. Now, however, things have changed. Industry, governments and many other actors seem to agree that we urgently need more minerals, and therefore more mines.

That means more support to mining companies and mining projects, possibly opening new mines in Europe itself, and a more strategic and proactive approach to “securing” Europe’s supply of strategic materials.

What seems to be lost in this mainstream consensus is an exact sense of what the allegedly ‘critical’ minerals are critical for. Before they were incorporated into the Green Deal narrative, critical raw materials were actually defined by their benefit to the EU economy and their supply chain risks. For many years, for instance, European leaders have been talking about the “twin green and digital transition” as if they were equivalent, even though the digital industry in its current form involves colossal pollution. More recently, as we show in this report, new and even more problematic uses - such as manufacturing arms and planes - have similarly gained a new aura of respectability.

4. European Parliament (2023) Critical Raw Materials Act. Briefing EU Legislation in progress [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI\(2023\)747898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI(2023)747898_EN.pdf) (Accessed on 22nd July 2023)

Without critical raw materials, we will not lead the digital decade and will not be able to develop our defence capabilities either⁵

Commissioner Thierry Breton, September 2022

Even within the scope of the energy transition itself, broadly defined, there is a case for differentiating between uses; for instance between the minerals necessary for wind or solar energy and those needed for the rollout of electric vehicles (EVs) and their associated batteries. While an improvement on fossil-fuelled vehicles, EVs still create environmental and societal problems, and do not solve the need to reduce the number of individual vehicles in European cities. In general, the emphasis on the need for critical minerals goes hand in hand with a focus on technology as the sole solution to climate and environmental issues, as opposed to other policy options that involve changing usage and reducing consumption at the source (e.g. reducing energy consumption instead of just making it greener).

► **The emphasis on the need for critical minerals goes hand in hand with a focus on technology as the sole solution to climate and environmental issues.**

What's in the new EU law on Critical Raw Materials?

At the EU level, some green discourses are being transformed into laws – more or less smoothly depending on the topic. On raw materials for instance, the EU is finalising the Critical Raw Materials Act, a regulation which will apply to all Member States. While there have been fierce battles in Brussels in recent months to finalise laws on sustainable agriculture, renewable energy, and the phasing out of fossil-fuel cars, this legislation is progressing with remarkable ease and seems widely consensual.

No batteries without lithium, no wind turbines without rare earths, no ammunition without tungsten....⁶

Commissioner Thierry Breton, March 2023

The upcoming EU law currently sets out ambitious targets to be achieved by 2030:

- In order to increase its autonomy, the EU should extract 10% of its annual consumption of Strategic Raw Materials (compared with 3% today), process and refine 50% (in or outside the EU through a formalised partnership) and recycle 45% (taking into account technical and economic feasibility) ;
- In order to reduce its dependence on third countries, the EU must not be dependent on any single third country for more than 65% of imports of each Raw Material at any relevant stage of processing.

5. https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_22_5523

6. AFP La Commission européenne propose des allègements réglementaires en faveur des industries vertes 16th March <https://www.connaissancedesenergies.org/afp/la-commission-europeenne-propose-des-allegements-reglementaires-en-faveur-des-industries-vertes-230316> (Translated by the authors)

The proposal provides for the identification of Strategic Projects (in the EU but also in third countries). When categorised as such, mining projects benefit from a streamlined permit process and support in obtaining access to finance from public and private funds.

The law will lead to more mining in the Global South and possibly in parts of Europe for the EU's ever-growing consumption of raw materials. To increase the number of mining projects outside the EU, the Commission plans on signing new trade agreements (with Chile and Australia for instance) and Strategic Partnerships on Raw Materials with materials-rich countries. The Commission has already signed strategic partnerships with Canada, Ukraine, Kazakhstan and Namibia, and is negotiating with eight others⁷. Last but not least, the Commission will also provide money for mines to open through the Global Gateway, an investment fund of 300 billion euros launched by the EU to support investments in third countries for different objectives, including the security of global supply chains of critical raw materials.

At the time of writing, the law is being discussed between the Council (Member States) and the European Parliament, the final stage of the EU legislative process. In both institutions, there is a high level of political consensus on the need to open new mines and few political actors (excepting some members of the European Parliament in the Green and Left parties and from countries where mines could be opened) have dared to criticise the consequences of more materials extraction in Europe and in the Global South.

NGOs however have voiced serious concerns on the CRM Act, and recently launched the Raw Materials Coalition to monitor its implementation and advocate for changes⁸. One concern is that the act does not give enough priority and impetus to reducing the consumption of raw materials. It's all about producing more. The current compromise includes wording to

“mitigate the Union's increase in demand of critical raw materials” and demands for future EU research to include low raw material demand scenarios. However, this is not considered comprehensive enough by NGOs. Indeed, the Act does not envisage a monitoring of the uses that will be made of future mineral production, and does not include any binding material reduction target with measures to achieve that target.

Furthermore, for the moment, the CRM Act does not impede exploration and extractive projects in protected areas, Natura2000 sites, the Arctic, and the deep sea⁹. The argument of the need for a green transition is even used to weaken

► **The argument of the need for a green transition is even used to weaken EU environmental law, through the notion that mining critical minerals is of “overriding public interest”.**

EU environmental law, through the notion that mining critical minerals is of “overriding public interest” and should allow mining companies to circumvent the water framework, habitats and birds directives - even when there are no guarantees that the materials mined would effectively be used for the green transition

“**In the name of economic security, the EU is pushing reckless extraction around the globe to meet an unsustainable EU material demand, when we need it to champion demand reduction**”¹⁰

*Friends of the Earth Europe,
September 2023*

7. Investigate Europe (2023) Green transition, dirty business: Europe's struggle to tear loose from Chinese minerals 26th October <https://www.investigate-europe.eu/posts/green-transition-mines-metals-minerals-china-europe>

8. <https://eurmc.org/publication/a-turning-point-the-critical-raw-material-acts-needs-for-a-social-and-just-green-transition/>

9. Friends of the Earth Europe (2023) New changes to Raw Materials laws still give way to EU's extraction worldwide <https://friendsoftheearth.eu/press-release/new-raw-materials-laws-give-way-to-eus-extraction-worldwide/>

10. Friends of the Earth Europe (2023) New changes to Raw Materials laws still give way to EU's extraction worldwide <https://friendsoftheearth.eu/press-release/new-raw-materials-laws-give-way-to-eus-extraction-worldwide/>

An ‘open bar’ for the defence and aerospace industry

Almost all of the public conversation around the CRM Act has revolved around the urgent need of minerals for the green transition. In reality, if you listened closely to industry insiders and EU leaders, the Act is about a lot more than that. It is also about fostering the digital transition, supporting European competitiveness in general, and also boosting the defence and aerospace sectors. The latter industry has been extremely active and influential with regards to the CRM legislation.

The growing influence of weapons makers in Europe

“For a peace project, the European Union is building a pretty generous war chest – and lobbyists are gearing up to pry it open.”¹¹

Politico, March 2023

For a long time, defence issues have remained peripheral to the European Union, which was focussed on building peace and

cooperation across the continent predominantly through market mechanisms. Not anymore. Defence and security issues have grown steadily in importance over the last decade. The agenda of the defence industry, supported by some member states such as France, has gained traction within the Commission itself, with a growing number of policy initiatives, cooperation mechanisms and, increasingly, public funds for arms development and arms purchases, such as the establishment of Permanent Structured Cooperation (PESCO) in 2017, the creation of Directorate-General Defence Industry and Space (DG DEFIS) in 2019, and the launch of the €8 billion European Defence Fund (EDF) in 2021¹² and the 2021-2027 European Peace Facility, providing €5 billion to cover EU military missions and arms deliveries to Ukraine¹³.

This growing influence can be seen in the growing echo chamber of defence lobbying voices, and the increasingly open doors to EU decision-makers and policy-making.

Airbus is a familiar name for most Europeans. It is widely seen as a success of European cooperation in the aerospace sector. But Airbus does not only manufacture planes. Airbus is also an arms company. It produces military aircraft, unmanned aerial systems for wars (including drones) and solutions for military communications¹⁴. Airbus is also a familiar name for the European Ombudsman. In 2021, she opened a revolving door case on the European Defence Agency. The latter

11. Politico (2023) Defense lobbyists send their big guns to Brussels 23rd March <https://www.politico.eu/article/defense-policy-lobby-european-union/>

12. See ENAAT, A militarised Union. Understanding and confronting the militarisation of the European Union, 2021. <https://www.rosalux.eu/en/article/1981.a-militarised-union.html>

13. European Council European Peace Facility <https://www.consilium.europa.eu/en/policies/european-peace-facility/> (Consulted 31st October 2023)

14. <https://www.airbus.com/en/defence> (Viewed 24 September 2023)

had allowed its former Chief Executive (until January 2020) become, in August of the same year, head of public affairs of Airbus Spain and strategic advisor for Airbus Defence and Space¹⁵.

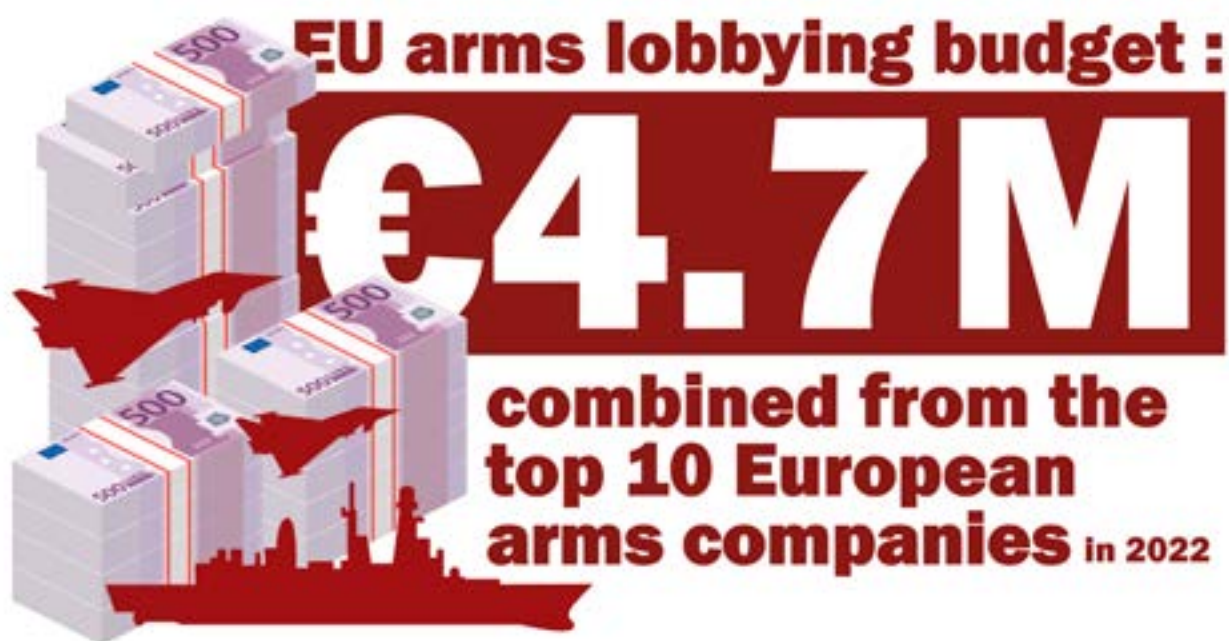
Airbus spent more than €1,250,000 in trying to influence EU decision-makers in 2022¹⁶, including through controversial lobby consultancies such as Avisa Partners (accused of spreading disinformation and whitewashing the images of Qatar and Uber)¹⁷. Other defence companies also disclose massive lobbying expenses, such as the Rheinmetall Group (over €700,000 annually as declared in 2020¹⁸). and Indra (with a declared annual spend of over €1 million in 2021¹⁹).

In 2022, the combined annual EU lobbying budget of the top ten European arms

companies was €4,7 million²⁰. Those figures do not include the lobbying budget of their trade associations, associated think tanks and forums.

The defence and aerospace lobby, like any other lobby, regularly meets members of the Council, the Commission, and the European Parliament. Airbus is the company with the second highest number of lobbying meetings with EU officials; only Google has more²¹. Thales, Safran, Leonardo, Indra, and Elettronica, for example, recently met with Timo Pesonen, the Director General for EU Defence and EU Space policy in the European Commission, during the Salon du Bourget in Paris in the summer 2022²².

Thales also met with French Renew MEP, Nathalie Loiseau, chair of the European Parliament's Security and Defence sub-



15. European Ombudsman (2021) European Defence Agency should have forbidden former Chief Executive from becoming strategic advisor at Airbus Defence 15th July <https://www.ombudsman.europa.eu/en/news-document/en/144363>. For more background on this RD case and Airbus lobbying, see: <https://corporateeurope.org/en/2021/05/eu-defence-agency-under-pres-sure-change-rules-after-airbus-revolving-doors-scandal>

16. <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=2732167674-76> (Viewed 24 September 2023)

17. Politico (2023) EU Influence: Commission ethics gap — Targeting local graft — Avisa cuts bait 15th June <https://www.politico.eu/newsletter/politico-eu-influence/commission-ethics-gap-targeting-local-graft-avisa-cuts-bait-2/>

18. <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=708107818892-23> (Viewed 24 September 2023)

19. <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=208351410839-33> (Viewed 24 September 2023)

20. According to the EU Transparency Register on 16th October 2023. Figures for Thales, Indra and MBDA are of 2021 and for Naval of 2020. UK companies have been excluded from the list.

21. Lobbyfacts.eu

22. <https://integritywatch.eu/ecmeetings.php> (Viewed 8th October 2023)



commission on 17th March 2023 in Paris²³. Loiseau wrote a defence policy paper for the Renew political group calling for measures to stimulate the defence industry across Member States, arguing that European defence companies are currently weak.²⁴

Loiseau and Pesonen are no strangers to the defence industry. They both participated at a 14 June 2023 event hosted by the Kangaroo group in the European Parliament, on “Reducing strategic dependencies of the European Defence Technological and Industrial Base²⁵”. The group is an ‘informal gathering’ for Members of Parliament and the defence industry.²⁶

Thierry Breton, French Commissioner for the Single Market, is another key ally of the defence and aerospace industry. He is close to the French government, and France is the Member State with the largest defence industry in the EU, and which has constantly pushed

to increase European spending on defence. Furthermore, in 2019 Breton had moved to the Commission directly from his previous position as chief executive officer of Atos, a French tech and security firm, also involved in aerospace and defence electronics. Atos is for instance a regular invitee to the annual conference of the European Defence Agency²⁷. In November 2021, Breton spoke during an event organised by the EU defence lobby, arguing that the industry needs “fair access to finance, like for any strategic EU industry”²⁸. The same year, he established a Permanent Dialogue Group between the Commission and the military and security industry: the Commission expert group on Policies & Programmes relevant to EU Space, Defence and Aeronautics Industry. The Group gives its members a constant opportunity to offer inputs on all programmes and policies that it deems relevant, and is made of representatives of large arms companies (Airbus, Dassault, Indra, Leonardo, Rheinmetall, Saab, Safran, Thales, and others), research institutes, and industry lobby organisations, including the AeroSpace and Defence Industries Association of Europe (ASD) and national platforms.²⁹

► **In 2021, Thierry Breton established a Permanent Dialogue Group between the Commission and the military and security industry.**

ASD is a particularly important lobby group for the defence industry at EU level. It has a membership of 20 large European arms companies and national defence industry associations.

23. https://www.europarl.europa.eu/meps/fr/197494/NATHALIE_LOISEAU/meetings/past#detailedcardmep (Viewed 8th October 2023)

24. Renew Europe (2022) Towards a European Defence in 2030 <https://reneweuropegroup.app.box.com/s/t4qqnkgi7j9fsqy1g-nozi2gahpx9b3y>

25. <https://x.com/TimoPesonen1/status/1668966058194006020?s=20> (Viewed 8th October 2023)

26. Vredesactie (2017) Securing profits. How the arms lobby is hijacking Europe's defence policy. https://www.vredesactie.be/sites/default/files/pdf/Securing_profits_web.pdf

27. Corporate Europe Observatory (2019) Thierry Breton, the corporate commissioner? <https://corporateeurope.org/en/2019/11/thierry-breton-corporate-commissioner>

28. <https://twitter.com/ThierryBreton/status/1458497796303212544> (Viewed 15 November 2021)

29. Stop Wapenhandel and the Transnational Institute (2022) Smoke Screen How states are using the war in Ukraine to drive a new arms race <https://www.tni.org/en/publication/smoke-screen>

“And let me say that we are very proud and happy to consider you as “our Commissioner”³⁰”

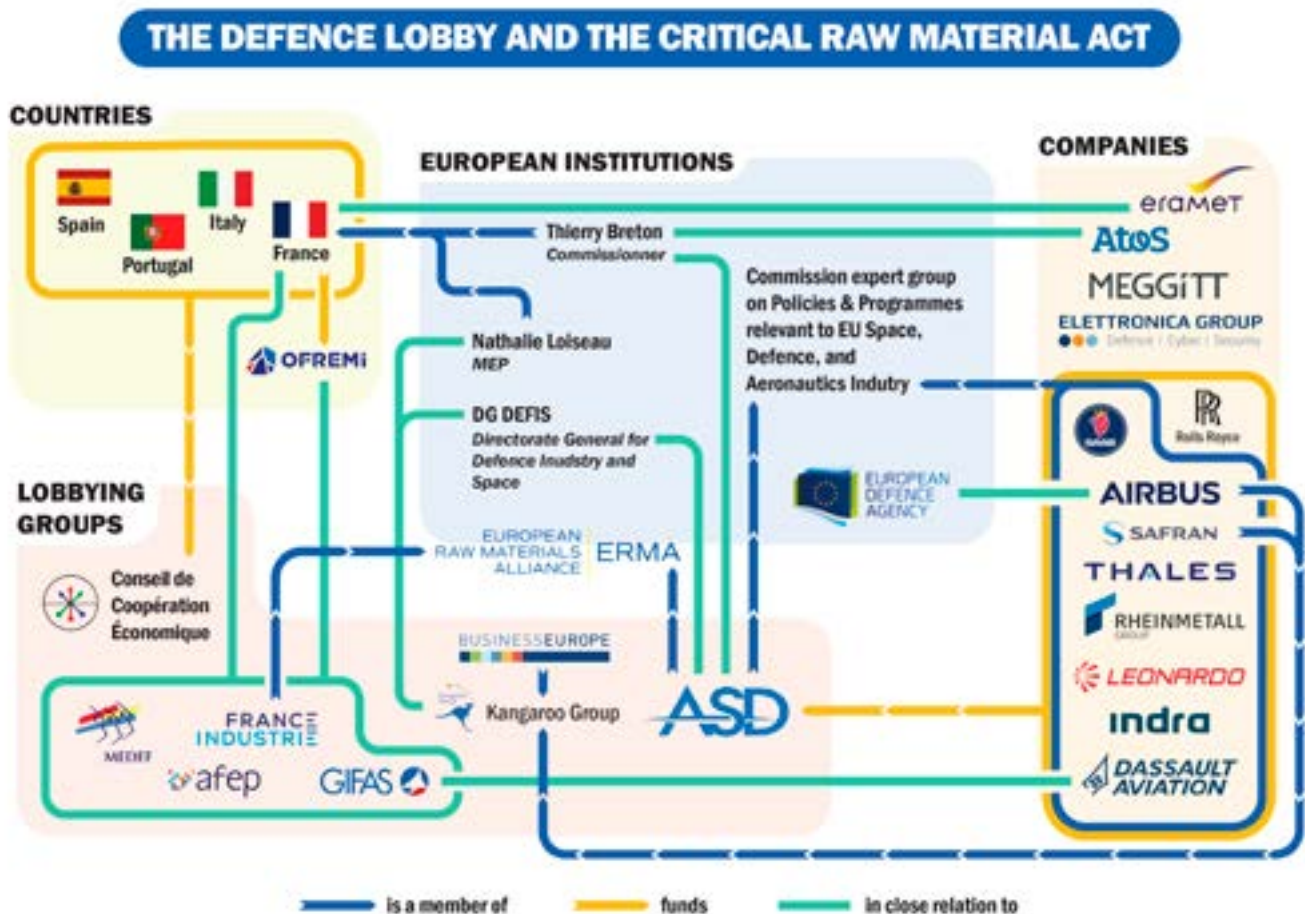
Letter from ASD to EU Commissioner Thierry Breton, November 2021

The hand of the defence industry lobby has been even more strengthened since the war in Ukraine, which has been a game-changer in the narrative around defence in EU institutions. From the outset of the Russian invasion, the war has been used to justify increased military spending. The discourse is that boosting defence capacity will make us safer, overlooking the fact that Western

nations are already extremely over-armed, that they export arms to violent and repressive regimes, and that militarism does not make us safer (more below). It is in this context that the Critical Raw Materials Act has been bent towards the priorities of the defence industry.

“It has been easier since the war in Ukraine to show the strategic importance of Critical Raw Materials for the defence industry and the security of Europe³¹”

Christina Wilen, DG DEFIS, European Commission, September 2023



30. https://www.asktheeu.org/en/request/10446/response/35066/attach/9/Document%202.pdf?cookie_passthrough=1

31. Webinar (2023) The CRM Act and Europe's strategic industries: How do CRMs support the EU's defence agenda? 26th September Organised by the CRM Alliance

Industry lobbyists join the CRMA fray

One of the fundamental principles of successful lobbying is “the earlier, the better”, that is, being among the first to monitor and influence EU laws. So even when the idea of a law on critical raw materials was only an idea in the mind of EU officials, it was already on the agendas of mining industry lobbyists.

Since the European Commission started publishing details of its highest-level lobby meetings in December 2014, mining companies, metals-and minerals-using companies, and their associated lobby groups have had nearly 1,000 lobby meetings with Commissioners, their cabinets, and Commission Director-Generals – that equals roughly two meetings a week³². They have also spent more than €21 million a year lobbying and hosted numerous sponsored events.

And all those efforts proved successful as many demands of the mining industry were reflected in the EU draft CRM legislation.

The wish list of the industry is mirrored to a concerning degree in the Commission’s March 2023 proposal for a CRM Act³³

Friends of the Earth Europe, July 2023

Larger business groups also supported the CRM Act through their national and European federations. French top business organisations, for instance, wrote to the Swedish Presidency of the Council in November 2022 that French companies welcomed the announce of a “CRM” Act and would support its development during the Swedish Presidency³⁴. Brussels corporate lobby BusinessEurope also hailed the principles of the CRM Act and its objectives to support “the green and digital transitions as well as defence capacities”³⁵.

On the Critical raw materials Act, we have been working on how to make the EC proposition even more ambitious as it is right now, with the French administration and some MEPs³⁶

Extract of an email from Eramet (French mining company) to the Cabinet of Vice-President Šefčovič, April 2023

Access to strategic minerals has long been a concern for the arms and aerospace industry and its allies in Brussels and European capitals. As early as 2013, the Commission was already talking about the importance of raw materials for the defence sector³⁷. The 2016 European Defence Action Plan in 2016 also mentions raw materials, on the basis of a Commission study which received input from Rolls Royce, Airbus,

32. Friends of the Earth Europe (2023) Mining the depths of influence. How industry is forging the EU Critical Raw Materials Act <https://friendsoftheearth.eu/wp-content/uploads/2023/07/Mining-the-depths-of-influence.pdf>

33. Friends of the Earth Europe (2023) Mining the depths of influence. How industry is forging the EU Critical Raw Materials Act <https://friendsoftheearth.eu/wp-content/uploads/2023/07/Mining-the-depths-of-influence.pdf>

34. AFEP, France Industrie and MEDEF (2022) Déplacement du Medef, de l’Afep et de France industrie à Stockholm. Préparation de la prochaine présidence suédoise du Conseil de l’Union européenne https://www.asktheeu.org/en/request/12721/response/43770/attach/5/Position%20Medef%20Afep%20FI%20Swedish%20presidency.pdf?cookie_passthrough=1

35. BusinessEurope (2022) Comments on the upcoming European Critical Raw Materials Act https://www.besneurope.eu/sites/buseur/files/media/position_papers/rex/2022-12-23_busesneurope_comments_on_raw_materials_act.pdf

36. European Commission (2023) ‘Meeting between Dimitri Lorenzani and ERAMET’. <https://www.asktheeu.org/en/request/12997/response/48604/attach/html/6/Ares%202023%203570834%20EASE%202397%201%20ERAMET%20position%20Redacted.pdf.html>

37. <https://www.statewatch.org/media/documents/news/2013/nov/eu-com-defence.pdf>

► **Access to strategic minerals has long been a concern for the arms and aerospace industry and its allies in Brussels and European capitals**

So the defence and aerospace sectors also jumped on the opportunity presented by the development of the Critical Raw Materials legislation, and mobilised very early on and all throughout the process, through various channels and circumstances, to win over EU decision-makers and make sure their industry's interests would be accommodated.

“We have discussions with ASD and the big industrial companies”³⁹

Christina Wilen, DG DEFIS, European Commission, September 2023

Safran for instance has met in February and May 2023 with the Executive Vice-President of the European Commission to discuss the Critical Raw Materials Act. The first meeting of the team of Nicola Beer, the leader in the European Parliament for this file in March 2023, was also with Safran⁴⁰. Airbus has also been actively lobbying on the Critical Raw Materials Act. In February 2023, Airbus met with the Spanish ambassador to the EU⁴¹ (Spain currently holds the Council presidency) and it also met with the cabinets of both the Commissioner for the European Green Deal and the Commissioner for digital to talk about... raw materials.

In 2023 alone, Airbus has had 14 meetings with Commissioners or members of their Cabinet⁴². This is probably only the tip of the iceberg as not all meetings with Commission officials or Members of the European Parliament are disclosed on official websites.

It seems the defence industry has also been able to voice its concerns on the CRM Act to top EU politicians through an industry task force set up by an opaque think tank/lobby group: the Conseil de Coopération Économique, a group under the permanent patronage of the French, Italian, Portuguese and Spanish governments. It describes itself as “the most active senior business advisory board, officially consulted by EU institutions and national governments” with 60 Chairmen and CEOs⁴³ but the exact corporate membership is unknown except for Equinor, Sanofi and Suez⁴⁴. This Conseil met the Defence Industry and Space adviser of Ursula von der Leyen, President of the Commission, in March 2023 to discuss the Critical Raw Materials (CRM)⁴⁵. According to disclosed Commission documents, Conseil de Coopération Économique set up a dedicated taskforce with experts from 30 leading European companies to support the European Commission in the preparation of the Critical Raw Materials Act. Requests for more details on the composition and exact role of this task force to the European Commission have been denied⁴⁶.

“Overall, ASD supports the Commission’s ambitious proposal”⁴⁷

ASD – Aerospace, Security and Defence Industries Association of Europe, June 2023

38. <https://op.europa.eu/en/publication-detail/-/publication/5d0ca1b4-aaff-11e6-aab7-01aa75ed71a1/language-en>

39. Webinar (2023) The CRM Act and Europe’s strategic industries: How do CRMs support the EU’s defence agenda? 26th September Organised by the CRM Alliance

40. www.integritywatch.eu (Consulted on 20th September 2023)

41. <https://es-ue.org/erp/> (Consulted 2nd October 2023)

42. <https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=2732167674-76> (Consulted 3rd October 2023)

43. Conseil de Coopération Économique (2020) Presentation <https://www.asktheeu.org/en/request/8421/response/29477/attach/html/4/Ares%202020%207314009%20CCE%20Presentation%20EN.pdf.html>

44. <https://ec.europa.eu/transparencyregister/public/consultation/searchControllerPager.do?declaration=Conseil+de+Coop%C3%A9ration&search=search> (Consulted on 18th October 2023)

45. European Commission (2023) Meeting between Anthony Whelan and Conseil de Coopération Économique 1st March

46. https://www.asktheeu.org/en/request/meeting_between_anthony_whelan_a_7

47. <https://www.asd-europe.org/considerations-on-the-ec-legislative-proposal-for-a-regulation-on-critical-raw-materials>

Industry allies in Brussels and European capitals

But companies often did not even have to lobby very hard to promote their interests. They had allies on the inside.

“We are “the defence industry voice” within the Commission to highlight the need of the defence industry to make sure that the CRM Act is not only about economic and green considerations, although they are very very important but that we must also take into account the security dimension.”⁴⁸

*Christina Wilen, DG DEFIS,
European Commission,
September 2023*

We have mentioned above the key role of Commissioner Breton in supporting the arms industry at EU level. Within the Commission, DG DEFIS is also committed to defending the interests of the industry, including in relation to the CRMA. Furthermore, the Commission

has set up a number of groups made up of industry representatives that are supposed to give ‘advice’ or help develop policies on defence and critical materials and projects to implement these policies. The Commission has for example created an expert group for the defence industry (see above), as well as an expert group on raw materials of which the defence industry lobby group ASD is a member⁴⁹.

► **The Commission has set up a number of groups made up of industry representatives that are supposed to bring ‘advice’ or help develop policies on defence and critical materials**

In parallel, the Commission has also launched the European Raw Materials Alliance. The role of this “alliance”, as for similar initiatives in other allegedly strategic sectors such as hydrogen, is to boost European-level cooperation on critical raw materials and to create new avenues for public funding of corporate projects. The members of the alliance include many small and big mining companies, their trade associations, research institutes, one EU NGO and one EU trade union, as well as ASD⁵⁰.

The European Defence Agency also has a project on critical raw materials for the needs of the defence industry⁵¹ and is a clear ally of the European defence industry on the CRM Act.

We would like to congratulate and applaud the Commission and European Defence Agency on the CRM⁵²

*Jan Pie, Secretary General of
ASD, September 2023*

48. Webinar (2023) The CRM Act and Europe’s strategic industries: How do CRMs support the EU’s defence agenda? 26th September Organised by the CRM Alliance

49. <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3391>

50. <https://erma.eu/network/> (Viewed on 8th October 2023)

51. <https://eda.europa.eu/what-we-do/eu-policies/if-ceed/project-circles/critical-raw-materials/>

52. Webinar (2023) The CRM Act and Europe’s strategic industries: How do CRMs support the EU’s defence agenda? 26th September Organised by the CRM Alliance

“For industries, it is a big issue. The correspondence at the government level has to be done. This is why we put a lot of effort in the CRMA, we hope it will create a new narrative at the EU level.”⁵³

Giuseppe Daquino, European Defence Agency, September 2023

The arms industry has also found strong support in some European capitals. France, in particular, has always been a staunch ally of the defence lobby. France has

► **The European Defence Agency also has a project on critical raw materials for the needs of the defence industry**

designated a high-level official in charge of critical raw materials, who has spent most of his career in the Defence Ministry, to coordinate among ministries the discussions in Paris and in Brussels on the CRM Act⁵⁴. It has also created a national-level “state-industry group” on the supply of critical raw materials (OFREMI). GIFAS (Groupement des Industries Françaises Aéronautiques et Spatiales), the main lobby group of the French defence and aerospace industry, headed by the CEO of Dassault, is part of OFREMI, and has shown interest in financing it. Defence will be one of the priority sectors of OFREMI⁵⁵.

When discussing the draft version of the CRM Act in the Council of the EU, both the French and Spanish governments (the latter currently holding the rotating presidency of the Council) dutifully echoed a specific demand of the defence lobby ASD, to include civil aeronautics in the scope of the Act.



Demands of the ASD

ASD welcomes the newly developed concept of strategic technologies. However, we regret that it only encompasses the defence and space part of our sector but not its civil aeronautics leg. While defence and space must remain in scope, we call for the inclusion of aerospace and defence.



Demands of the French government

Critical raw materials are needed at the beginning of many industrial value chains and are often indispensable inputs for a wide set of strategic sectors including renewable energy, the digital industry, and the aerospace and defence sectors.



Demands of the Spanish government

Spain would like to understand why the civil aeronautics sector has not been included as a strategic technology. This means including the changing “space” for “AEROSpace” on recitals 1, 4 and 16, and articles 2(31), 19.3(e) y 27(10).

53. Webinar (2023) The CRM Act and Europe’s strategic industries: How do CRMs support the EU’s defence agenda? 26th September Organised by the CRM Alliance

54.. <https://www.linkedin.com/in/benjamin-gallezot-2a302bb6/details/experience/>

55.. La Lettre A (2022) Les industriels de la défense se placent dans la roue de Bercy sur les métaux stratégiques 6 Octobre

Aluminium and titanium: a win for defence and aerospace

The Critical Raw Materials Act will also be leveraged to benefit the European defence industry to ensure that it has all the necessary supplies to tackle the substantially increased demand for its products.⁵⁶

*European Parliamentary
Research Service,
June 2023*

In 2011, the European Commission introduced a list of critical raw materials (CRMs)⁵⁷ for the EU, which is subject to review and update every three years. Until 2020 CRMs were defined through the combination of two criteria: their economic importance to the EU (value added created by the manufacturing of goods with these materials in the EU), and the level of risk associated with their supply. In these first assessments, the use of these materials in military applications were excluded from the scope of the study. In 2023, in the most recent assessment on which the first proposal of the CRM Act is based, the definition was changed. A new category of “strategic raw materials” was created, in addition to the list of critical

raw materials. “Strategic raw materials” are defined as materials of strategic importance and this importance shall be determined based on “the relevance of a raw material for both the green and digital transition, and defence and space applications”⁵⁸.

In comparison to CRMs, which are based on clear criteria, the “strategic” nature of SRMs seems vaguer. The details of how and why the selection of which certain minerals are deemed strategic are not publicly available. Their definition is also more future-oriented, in contrast with the definition of CRMs that is based on data for the past five years. SRMs are more about expected supply problems in the future. Above all, the definition of SRMs explicitly includes the defence industry uses that were previously excluded. Hence nickel and copper are now considered strategic raw materials in the CRM Act. But they are not in the list of critical raw materials, as neither fits in the criteria for being deemed “critical”.

► **“Strategic raw materials” are defined as materials of strategic importance and this importance shall be determined based on “the relevance of a raw material for the green and digital transition as well as defence and space applications”**

56. European Parliamentary Research Service (2023) Reinforcing the European defence industry [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/749805/EPRS_BRI\(2023\)749805_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/749805/EPRS_BRI(2023)749805_EN.pdf)

57. https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en

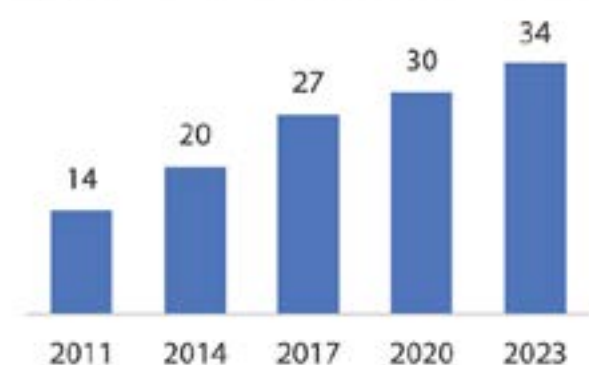
58. Proposal for a Regulation of the European Parliament and of the Council establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) 168/2013, (EU) 2018/858, 2018/1724 and (EU) 2019/1020, Annexe I section 2 : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0160>

The EU list of the CRMs is based on the technical assessment, but involves high level political decision by the whole Commission⁵⁹

*European Commission,
February 2023*

Overall, the list of CRMs has been growing steadily since it was first published in 2011. Since 2020, it includes two raw materials that are strategic to the defence and aerospace sector: aluminium and titanium.

Figure 2 – Number of CRMs for the EU



Source: EPRS.

From European parliament research⁶⁰

The defence and aerospace sectors have asked for new minerals to be added to the list through many channels, as shown below in the case of aluminium and titanium. They have also made sure that future channels are

available if their current lobbying efforts are not successful.

Within the Commission's expert group on defence - which is made up of representatives from research institutions and the defence industry, but none from civil society - the Commission said in 2022 that the raw materials list was designed to meet everyone's needs in the aerospace and defence industrial ecosystem, including the civil aeronautics sector (a demand from ASD, as seen above). In the same meeting, the Commission reassured the defence industry that the list of raw materials would be constantly updated⁶¹.

Indeed, the corporate sector is actually getting ready to have new minerals added to the list as soon as the European law on critical materials is approved. In February 2023, at the expert group of the Commission on defence, the Commission and industry representatives agreed that after the CRM Act would be adopted, there would be further discussions in the next meetings of the defence subgroup⁶². BusinessEurope has also shared amendments with Members of the European Parliament asking for the list of strategic materials to be periodically reviewed and, if necessary, updated on an ad-hoc basis to facilitate projects in case the supply situation unforeseeably changes (i.e. wars, conflicts, natural catastrophes etc.)⁶³. This amendment is included in the parliament position on the CRM Act adopted on 14th September 2023.⁶⁴

59. European Commission (2023) 4th Meeting of the Subgroup on Defence 9th February <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=48778&fromExpertGroups=3775>

60. European Parliament (2023) Critical Raw Materials Act. Briefing EU Legislation in progress [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI\(2023\)747898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI(2023)747898_EN.pdf) (Accessed on 22nd July 2023)

61. The European Commission (2022) 2nd meeting of the EG Subgroup on Critical technologies and Supply chains 31st March <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=39834&fromExpertGroups=3775>

62. European Commission (2023) 4th Meeting of the Subgroup on Defence 9th February <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=48778&fromExpertGroups=3775>

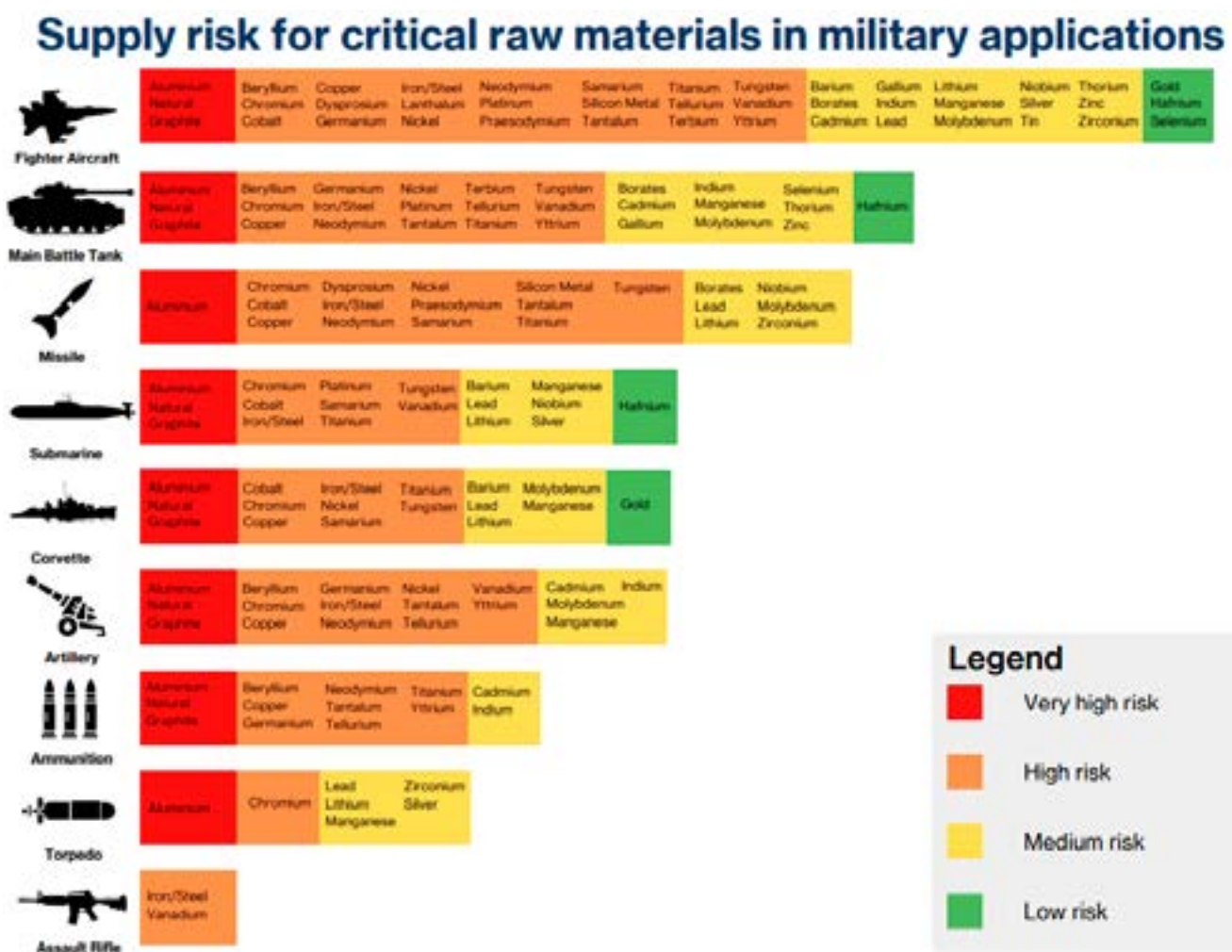
63. BusinessEurope (2023) Comments and proposals for amendments to the Critical Raw Materials Act May https://www.besuisseurope.eu/sites/buseur/files/media/position_papers/rex/2023-05-22_crma_proposal_-_businesseuropes_comments_and_amendments.pdf

64. European parliament (2023) Framework for ensuring a secure and sustainable supply of critical raw materials 4 September 2023 https://www.europarl.europa.eu/doceo/document/TA-9-2023-0325_EN.html#title1

The latest draft of the EU law empowers the Commission to amend the list of strategic raw materials through delegated acts, leaving an open door for further lobbying by the defence and aerospace industry and other corporate players, without public debate nor parliamentary scrutiny. For example, it's reasonable to assume that the addition of uranium - proposed by MEP Hildegard Bentele on behalf of the EPP parliamentary group and rejected in the European Parliament vote in September - will come up again.

► **The corporate sector is actually getting ready to have new minerals added to the list as soon as the European law on critical materials is approved**

► **The latest draft of the EU law empowers the Commission to amend the list of strategic raw materials through delegated acts, leaving an open door for further lobbying by the defence and aerospace industry and other corporate players, without public debate nor parliamentary scrutiny**



Source: The Hague Center for Strategic Studies (2023) Strategic raw materials for defence. Mapping European industry needs

Case study: Aluminium

“Proposing aluminium as a strategic raw material raises questions. It doesn’t align with the Commission’s methodology, suggesting industry influence⁶⁵.”

*European Commission,
February 2023*

Aluminium is the second largest metal industry in the world (63 million tonnes produced in 2019), far behind iron (1.5 billion tonnes), but well ahead of copper (20 million tonnes)⁶⁶. It is used in a wide range of sectors. Building, transport, packaging account for more than half of all aluminium uses in Europe⁶⁷.

The automotive industry is a prominent user of. In Germany, it accounts for 47 per cent of all the aluminium used in 2019⁶⁸. Moreover, the use of aluminium by the automotive industry is only expected to increase globally⁶⁹. Carmakers argue that this growth in consumption is necessary because of the

crucial role of aluminium in making vehicles lighter. However, while the use of lighter steels (e.g. niobium) and aluminium does have an impact on vehicle weight, these potential improvements are offset by the relentless increase in vehicle size that has been observed in recent years as carmakers prioritised the design and sale of ever-larger and heavier vehicles such as SUVs. As a result, the average weight of cars has been steadily increasing⁷⁰.

The aviation industry is also a major consumer. For example, 66 per cent of the 118 tonnes of an Airbus A340 aircraft is aluminium. It also represents 60 per cent of the structural weight of an Airbus A380⁷¹.

Aerospace and defence are also important users, even if it is difficult to find reliable figures of the absolute consumption of these sectors. In the aerospace industry, we know that for example Ariane V’s main tank is made of aluminium: 23m high, 5m in diameter, 2mm thick⁷². The European Commission mentions aluminium alloy as the first of the most relevant ‘aerospace materials’⁷³.

Aluminium is also used to build military aircraft (see illustration below), naval vessels, bombs, tanks, helicopters, drones, missiles, a host of small arms⁷⁴, etc. During the two World Wars, about 90 % of U.S. aluminium production

65. Friends of the Earth Europe (2023) New changes to Raw Materials laws still give way to EU’s extraction worldwide <https://friendsoftheearth.eu/press-release/new-raw-materials-laws-give-way-to-eus-extraction-worldwide/>

66. From USGS, 2021 : <https://pubs.usgs.gov/publication/mcs2021>

67. Data obtained by summing the quantity of aluminium in laminated semi-finished products in 2021 and extruded semi-finished products in 2019. See : <https://lelementarium.fr/element-fiche/aluminium/>

68. <https://www.rainforest-rescue.org/topics/aluminum> (Consulted 8th October 2023)

69. <https://aluminiumtoday.com/news/aluminium-usage-in-cars-surges-as-automotive-industry-shifts-towards-electrification>

70. https://www.researchgate.net/figure/The-trend-of-weight-increase-of-cars-during-the-last-decades-are-shown-for-three_fig2_303313423

71. <https://lelementarium.fr/element-fiche/aluminium/>

72. Société chimique de France: <https://lelementarium.fr/element-fiche/aluminium/>

73. Critical Raw Materials for Strategic Technologies and Sectors in the EU A Foresight Study, DG Grow, European Commission, 2020. <https://ec.europa.eu/docsroom/documents/42881>

74. Critical Raw Materials for Strategic Technologies and Sectors in the EU A Foresight Study, DG Grow, European Commission, 2020. <https://ec.europa.eu/docsroom/documents/42881> and <https://thereader.mitpress.mit.edu/the-uneasy-alliance-between-aluminum-and-warfare/>

ELECTRO-OPTICAL SYSTEMS:

Cadmium
Tellurium
Mercury
Germanium
Neodymium
Yttrium
Aluminium
Copper
Beryllium
Indium
Tantalum
Cobalt

WINGS:

Carbon Epoxy
composites
Titanium
Aluminium
Vanadium
Copper
Magnesium
Manganese

ENGINE:

Nickel
Cobalt
Chromium
Molybdenum
Aluminium
Titanium
Hafnium
Vanadium
Tantalum
Tungsten

CANOPY:

Spacial Glass

TAIL:

Carbon Epoxy

NOSE:

Kevlar

NOZZLE & POST-COMBUSTION:

Carbon Carbon
composite

SENSORS & ELECTRONICS:

Gallium
Cadmium
Tellurium
Mercury
Rare earths
Beryllium
Silver

FUSELAGE:

Carbon Epoxy
composite
Aluminium
Zinc
Magnesium
Copper
Zirconium

LANDING GEAR:

Carbon Epoxy
composite
Aluminium

FLAPS:

Iron
Chromium
Nickel
Molybdenum
Aluminium
Titanium

■ raw materials

■ critical raw materials

Materials used in different parts of the combat aircraft Rafale from Foresight Study DG GROW

went into military uses⁷⁵. According to a 2023 survey of industry experts by the European Commission, aluminium is one of the most critical raw materials for European defence companies⁷⁶.

The aluminium industry helped to modernise warfare, and warfare helped to modernise the aluminium industry⁷⁷.

Mimi Sheller, The MIT Press, 2019

In a nutshell, aluminium is mostly used for packaging, for cars, for civil aviation and armament sectors; none of which are not especially known for their contribution to building a more sustainable future. Yet, in its public discourse, the aluminium industry has focused on the contribution of aluminium to the green transition. In response to the CRMA consultation, the industry lobby group argued: “Aluminium is critical for a wide range of applications necessary for the green transition and an indispensable component of Europe’s strategic industrial ecosystems, above all, renewable energy generation and electricity transmission, electric vehicles and batteries, aerospace, energy-efficient buildings, as well as medical and food packaging and defence applications⁷⁸.

► **Aluminium is mostly used for packaging, for cars, for civil aviation and armament - sectors which are not especially known for their contribution to building a more sustainable future**

The fact that aluminium is used in some clean technologies applications doesn’t mean that increasing aluminium production is inevitable. The need for aluminium in the energy transition sector could be met by reducing uses in sectors that are not useful or harmful to climate goals (such as air transport), and by pushing for enhanced recycling and material efficiency. It is also a matter of technological choices. The International Energy Agency has developed different scenarios in this regard. In its Clean Technology Scenario, for example, aluminium demand is 17 per cent lower in 2060 than in the Reference Technology Scenario⁷⁹, suggesting that technological choices can change the historical pattern of aluminium consumption.

It must be noted that aluminium was not considered strategic by the European Commission in 2023⁸⁰, which makes its sudden addition to the CRMA’s list of strategic metals by the European Parliament and Council (Member States) somewhat surprising. However, in the 2020 foresight study, the European Commission noted that aluminium could be a concern for aerospace⁸¹.

75. <https://thereader.mitpress.mit.edu/the-uneasy-alliance-between-aluminum-and-warfare/>

76. European Commission (2023) 4th Meeting of the Subgroup on Defence 9th February <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=48778&fromExpertGroups=3775>

77. The MIT Press Reader (2019) The Uneasy Alliance Between Aluminum and Warfare <https://thereader.mitpress.mit.edu/the-uneasy-alliance-between-aluminum-and-warfare/>

78. European Aluminium (2022) Feedback on the Critical Raw Materials Act https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13597-European-Critical-Raw-Materials-Act/F3359330_en

79. Material efficiency in clean energy transitions, <https://www.iea.org/reports/material-efficiency-in-clean-energy-transitions>

80. Study on the critical raw materials for the EU 2023. <https://op.europa.eu/en/publication-detail/-/publication/57318397-fdd4-11ed-a05c-01aa75ed71a1>

81. Critical raw materials for strategic technologies and sectors in the EU :a foresight study, 2020 ; and the Study on the critical raw materials for the EU 2023. <https://op.europa.eu/en/publication-detail/-/publication/57318397-fdd4-11ed-a05c-01aa75ed71a1>

The industry Push

The inclusion of aluminium as a strategic raw material in the European legislation has been a demand of the defence lobby from the onset. It became a reality in 2023 in the European Parliament thanks to an amendment

► **The need for aluminium in the energy transition sector could be met by reducing uses in sectors that are not useful or harmful to climate goals**

to the Act proposed by MEP Hildegard Bentele in the name of EPP (conservatives) group, and in the Council thanks to the position of the majority of Member States⁸². Bauxite – the raw material needed to produce aluminium – however, has been in the official list of critical raw materials of the European Commission since 2020⁸³. In order for aluminium to be also included in the strategic raw material list, which underpins most of the advantages given to industry in the CRMA, the defence lobby has been exerting pressure all along the legislative process.

ASD, the arms industry lobby organisation at the EU level, has advocated for the inclusion of aluminium in the SRM list as it is a key component in aeronautics, defence and space structures, which often have a similar composition⁸⁴. They have also argued that the European aluminium producers are shutting down and that more EU-sourced aluminium is needed⁸⁵.

The European Raw Materials Alliance has also been asking for aluminium to be

“rightfully added to the list” as it “is also widely used in aerospace, defence, medical, packaging and building applications. All these sectors rely on the unique properties of aluminium to enhance efficiency and reduce their carbon emissions.⁸⁶”

Furthermore, in June 2023, the French, German and Italian economy ministers had a meeting on the supply of critical raw materials⁸⁷. One of the objectives of this meeting was to extend the list of strategic raw materials in order to include aluminium⁸⁸.

82. European Commission (2023) Critical raw material act: Council adopts negotiating position 30th June <https://www.consilium.europa.eu/en/press/press-releases/2023/06/30/critical-raw-material-act-council-adopts-negotiating-position/>

83. European Commission (2020) Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0474>

84. ASD (2023) Considerations on the EC Legislative Proposal for a Regulation on Critical Raw Materials 8th June <https://www.asd-europe.org/considerations-on-the-ec-legislative-proposal-for-a-regulation-on-critical-raw-materials>

85. Webinar (2023) The CRM Act and Europe's strategic industries: How do CRMs support the EU's defence agenda? 26th September Organised by the CRM Alliance

86. <https://eitrawmaterials.eu/aluminium-the-critical-raw-material-acts-blind-spot/>

87. Council of the European Union (2023)

88. Ministère de l'Economie, des Finances et de la souveraineté industrielle et numérique (2023) Sécuriser l'approvisionnement de l'industrie en matières premières critiques <https://www.entreprises.gouv.fr/fr/actualites/securiser-l-approvisionnement-de-l-industrie-matieres-premier-res-critiques>

Impacts

In the EU, Greece holds the most significant exploitable bauxite deposits⁸⁹. and while currently they are not being mined, the CRM Act could change this given it is the raw material used to make aluminium. However, mining bauxite raises several concerns:

- ★ Across the world, bauxite mines are almost entirely open-pit, requiring access to large land areas, often within or close to protected natural areas and tropical forests and/or indigenous land. For example, bauxite mining is the most significant contributor to the deforestation of the Brazilian Amazon in terms of mining leases⁹⁰
- ★ The extraction, transport, and transformation of bauxite generate a considerable amount of pollution as it releases environmental toxins in the air, soil and water. This reduces communities' access to water for drinking, washing, and cooking. People living around mines and aluminium factories also complain of skin diseases and fish die-offs.
- ★ The transformation of bauxite into aluminium generates residues of bauxite, under the form of "red mud", a toxic waste and a serious environmental hazard.

All of those negative impacts often create conflicts⁹¹ as ecological factors increasingly impact on communities and contaminated resources can increase tensions over those that remain available.

In 2023, 63 per cent of the bauxite supplied to the EU comes from Guinea⁹². In 2018, a human rights group found that the bauxite mining boom in Guinea has caused many adverse social, environmental (air and water pollution), political (riots) and health impacts⁹³.

On top of these local impacts, the aluminium industry is an important contributor to climate change. Aluminium production emits nearly 270 Mt of direct CO₂ emissions in 2022 (about 3 per cent of the world's direct industrial CO₂ emissions)⁹⁴. These emissions are due to considerable production volumes and high energy requirements for the smelting of aluminium via electrolysis, especially in producer countries with highly carbon-intensive energy mixes. In that sense, producing more aluminium will result in more greenhouse gas emissions. The fact that some of it might be used for the energy transition will not be enough to offset this increase.

89. <https://www.rainforest-rescue.org/topics/aluminum> (Consulted 8th October 2023)

90. European Commission Joint Research Centre (2021) Sustainability aspects of Bauxite and Aluminium https://rmis.jrc.ec.europa.eu/uploads/library/jrc125390_sustainability_profile_bauxite_aluminium_online.pdf

91. European Commission Joint Research Centre (2021) Sustainability aspects of Bauxite and Aluminium https://rmis.jrc.ec.europa.eu/uploads/library/jrc125390_sustainability_profile_bauxite_aluminium_online.pdf

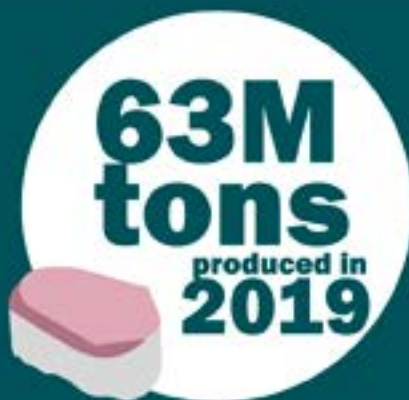
92. European Parliament (2023) Critical Raw Materials Act. Briefing EU Legislation in progress [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI\(2023\)747898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI(2023)747898_EN.pdf) (Accessed on 22nd July 2023)

93. Human Rights Watch (2018) "What Do We Get Out of It?" The Human Rights Impact of Bauxite Mining in Guinea https://www.hrw.org/sites/default/files/report_pdf/guinea1018_web2.pdf

94. IEA : <https://www.iea.org/energy-system/industry/aluminium>

ALUMINIUM

added in 2023 in the Strategic Raw Materials list



2nd biggest
metal industry in the world

low risk

regarding supply according
to the European Commission



in 2022
(3% of the
world's direct
industrial
emissions)

Main uses :



Automobile



Aviation



Packaging

"The aluminium industry
helped to modernise war-
fare, and warfare helped to
modernise the aluminium
industry."

Mimi Sheller, The MIT Press



Its inclusion in the CRM Act is a big win for:



EUROPEAN
RAW MATERIALS
ALLIANCE | ERMA

governments



Case study 2: Titanium

Titanium is used for industrial applications (49 per cent in 2013), consumer goods, defence (9 per cent), space and civil aviation⁹⁵. Titanium and titanium alloys are the ideal material for building planes, spacecraft and arms. Every working day of 2018, Airbus used 50 tonnes of titanium⁹⁶. Military aviation uses an even higher proportion of titanium in its construction: 9 per cent of the Airbus A380's weight is titanium (i.e. 82 t), while the F-22 stealth bomber contains 39 per cent. While it's true that titanium can be used for fuel cells and batteries⁹⁷, this use is low in comparison to that of aircraft and defence, and does not present a supply risk. Indeed, these uses of titanium were not considered to be of concern either in the Commission's metals criticality study⁹⁸, or in the IEA's study of cleantech raw material requirements⁹⁹.

In contrast, according to the 2023 survey of industry experts by the European Commission, titanium is one of the most critical raw materials for European defence companies¹⁰⁰. The European Defence Agency also mentioned titanium as critical at a recent industry webinar¹⁰¹.

In 2023, the scope of the critical raw material assessment was slightly changed for titanium to remain in the list. The Commission opted not to

look at all titanium production, but only that of Titanium metal, which is more of interest to the defence and aerospace industries: "Titanium metal, being a Strategic Raw material and used in aerospace and defence, stays critical as in 2020. Titanium in all forms, around 80% used as white pigment, is not critical."¹⁰²

The industry push

Airbus has been lobbying for the inclusion of titanium as a critical material for the defence and aviation industry. During the 2022 summit of the EIT Raw Materials Alliance, an Airbus representative described how the aerospace and defence industries are heavily dependent on metals such as titanium, used widely in aircraft and engine manufacturing and said that "we need more mining capacity and more melting even if these topics are often taboo in Europe"¹⁰³. ASD argues the same line: "The inclusion or the confirmation that aerospace grade titanium is included in the SRM list would encourage investment in this highly concentrated market and support existing European players in their development to become more competitive"¹⁰⁴.

95. Webinar (2023) The CRM Act and Europe's strategic industries: How do CRMs support the EU's defence agenda? 26th September Organised by the CRM Alliance and Société chimique de France : <https://lelementarium.fr/element-fiche/titane-2/>

96. Société chimique de France : <https://lelementarium.fr/element-fiche/titane-2/>

97. Critical Raw Materials for Strategic Technologies and Sectors in the EU A Foresight Study, DG Grow, European Commission, 2020. <https://ec.europa.eu/docsroom/documents/42881>

98. Study on the critical raw materials for the EU 2023 Final report, 2023 : https://single-market-economy.ec.europa.eu/publications/study-critical-raw-materials-eu-2023-final-report_en

99. The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions, revised version March 2022, IEA : <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/mineral-requirements-for-clean-energy-transitions>

100. European Commission (2023) 4th Meeting of the Subgroup on Defence 9th February <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=48778&fromExpertGroups=3775>

101. Webinar (2023) The CRM Act and Europe's strategic industries: How do CRMs support the EU's defence agenda? 26th September Organised by the CRM Alliance

102. European Commission (2023) 4th Meeting of the Subgroup on Defence 9th February <https://ec.europa.eu/transparency/expert-groups-register/screen/meetings/consult?lang=en&meetingId=48778&fromExpertGroups=3775>

103. Argus Media (2022) Airbus calls for a metals stockpile policy in EU 24th May <https://www.argusmedia.com/en/news/2334654-airbus-calls-for-a-metals-stockpile-policy-in-eu>

104. ASD (2023) Considerations on the EC Legislative Proposal for a Regulation on Critical Raw Materials 8th June <https://www.asd-europe.org/considerations-on-the-ec-legislative-proposal-for-a-regulation-on-critical-raw-materials>

The Conseil de Coopération Économique (see above) has also been lobbying for the inclusion of titanium. In March 2023, its representatives told the Defence Industry and Space adviser to Ursula von der Leyen, President of the Commission, that one of the main Critical Raw Materials (CRM) for Aerospace and Defence needs for industry is titanium¹⁰⁵.

The importance of titanium for the defence industry was one of the motivations behind the creation of OFREMI (see above), the public-private organisation in charge of analysing the supply of strategic metals for France: “The creation of OFREMI had been envisaged before the invasion of Ukraine, but the war further increased tensions on strategic metals such as titanium, indispensable to the aerospace industry”¹⁰⁶.

Impacts

As with all mining, titanium extraction requires land, a bone of contention in itself. However, unlike other critical raw materials, titanium is not in itself toxic. What is toxic, though, is the chemical used to refine the ore: chlorine.

Moreover 36 per cent of titanium metal supplied to the EU in 2023 comes from Kazakhstan, an authoritarian regime, where little is known about the human, social or environmental impacts of this mining on the ground¹⁰⁷.

The bitter irony is that the European Union is so dependent on titanium for its defence and aerospace industries that it decided to block a 2022 proposal to sanction Russian metals

company VSMPO-Avis ma PJSC, a critical supplier of titanium to Airbus¹⁰⁸. Indeed, between the start of the war and March 2023, Airbus imported at least \$22.8 million worth of titanium from Russia; a fourfold increase in value and tonnes compared to the previous 13 months¹⁰⁹.

I welcome the Strategic Partnership Roadmap with Kazakhstan as a very positive step towards mutually beneficial industrial projects, for instance in the field of cobalt, titanium or tungsten, all strategic raw materials for the European Union.¹¹⁰

Thierry Breton, Commissioner for Internal Market, May 2023

105. European Commission (2023) Meeting between Anthony Whelan and Conseil de Coopération Economique 1st March <https://www.asktheeu.org/en/request/13001/response/45304/attach/html/3/Ares%202023%201612124%20CCE%20Critical%20Raw%20Materials%20Consolidated%20Recommendation%20Redacted.pdf.html>

106. La Lettre A (2022) Les industriels de la défense se placent dans la roue de Bercy sur les métaux stratégiques 6 Octobre

107. European Parliament (2023) Critical Raw Materials Act. Briefing EU Legislation in progress [https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI\(2023\)747898_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI(2023)747898_EN.pdf) (Accessed on 22nd July 2023)

108. Reuters (2022) EU blocks proposal to sanction Russian titanium maker VSMPO-Avisma 21st July <https://www.reuters.com/article/eu-sanctions-vsm-po-avisma-idINFWN2225IM>

109. InvestigateEurope (2023) Russia: Europe imports €13 billion of ‘critical’ metals in sanctions blindspot 24th October <https://www.investigate-europe.eu/posts/russia-sanctions-europe-critical-raw-materials-imports>

110. European Commission (2023) EU-Kazakhstan strategic partnership becomes operational 19th May https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2815

TITANIUM

added in 2020 in the Critical Raw Materials list

USES IN AERONAUTICS

AIRBUS
used

50t
Titanium

every
working
day in
2018



MILITARY AVIATION

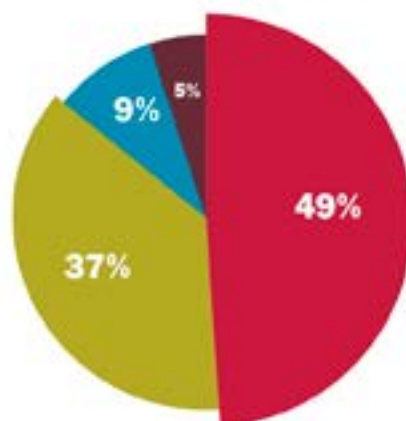
uses a higher proportion of titanium

an **F-22 Stealth Bomber**

contains **39%** titanium



World uses 2013



- Industrial applications
- Commercial aeronautics
- Military applications
- Others

"The inclusion or the confirmation that aerospace grade titanium is included in the SRM list would encourage investment in this highly concentrated market and support existing European players in their development to become more competitive."

ASD (Arms lobbying group)



**No supply risk
for ecological
uses**

according to the
European Commission



Lobbyists for its inclusion in the CRM Act

AIRBUS

ASD



EUROPEAN
RAW MATERIALS
ALLIANCE | **ERMA**

Conseil de Coopération
Économique

Bad news for communities, climate, and Europe

Our research shows that behind the apparent consensus over the need to secure access to critical minerals to deliver on the EU Green New Deal and reach the EU's climate objectives, other, more obscure forces and motivations have been at play. With the support of EU leaders, some industries have managed to push for the inclusion of new minerals and for other objectives and other industrial uses to be considered equivalent to - or as important as - the need for a green transition. As a result, these industries – prominently among them the arms and aerospace industries - will benefit from the same support and the same environmental rollback in their procurement as renewable energy players. Worse still, they might be able to have new minerals added to the list in the future without adequate scrutiny.

One of the risks of this law is that it could miss its stated objectives, by not creating any safeguard to ensure that the critical metals will help extract and bring to the EU will indeed be used for the energy transition. But it could also have direct adverse effects on the ecological transition by contributing to an indiscriminate increase in the production of all the metals listed and to their use in sectors that are harmful to the environment.

► **Mining in itself is a huge emitter of greenhouse gas, and the indiscriminate expansion of mining would cancel the climate benefits of renewable energy rollout**

More mining means more greenhouse gas emissions

According to the International Panel on Resources set up by the United Nations Environment Programme¹¹¹, metal production was responsible for 10 per cent of climate change and of health impacts due to particulate matter - two key planetary boundaries - in 2011. Over the period 2000-2015, these impacts have doubled. The OECD (2019) predicts that the total environmental impact of the production and consumption of the seven most-produced metals will double (and in some cases quadruple) by 2060¹¹². This dire assessment is actually based on optimistic assumptions about the increasing efficiency of production techniques. Recent studies also indicate that even if we imagine the best-case green innovation scenario, if we want to stay in line with the Paris Agreement, high income countries will need to start decreasing their consumption of metals by 2030 - including industrial metals, such as copper, aluminium, and nickel included in the list of strategic raw materials in the CRMA¹¹³. In other words, mining in itself is a huge emitter of greenhouse gas, and the indiscriminate expansion of mining would cancel the climate benefits of renewable energy rollout.

We should therefore seek to minimise the need for new mining. This concern that is

111. Global Resources Outlook 2019 : Natural Resources for the Future We Want (Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya). (2019). IRP,. <https://doi.org/10.18356/689a1a17-en>

112. Global Material Resources Outlook to 2060 : Economic Drivers and Environmental Consequences. (2019). OECD. <https://doi.org/10.1787/9789264307452-en>

113. Watari, T., Nansai, K., Giurco, D., Nakajima, K., McLellan, B., & Helbig, C. (2020). Global Metal Use Targets in Line with Climate Goals. Environmental Science & Technology, 54(19), 12476-12483. <https://doi.org/10.1021/acs.est.0c02471>

partly reflected in the CRM legislation with the inclusion, for instance, of recycling objectives, but it is done in a way that is far from sufficient to tackle the challenge of reducing our ever-growing consumption of raw materials.

No discrimination between the different uses of critical minerals

An all-encompassing, indiscriminate notion of ‘critical minerals’ that includes many different kinds of uses is not helpful. It serves the interests of certain industries to deliberately obscure the difference between minerals needed for renewable energy, for instance, and minerals needed for aviation or arms.

- **It serves the interests of certain industries to deliberately obscure the difference between minerals needed for renewable energy, for instance, and minerals needed for aviation or arms.**

There should be a different level of priority between minerals needed for renewable energy, minerals needed for electric car batteries (with the associated question of whether the number of individual cars in general should not be reduced compared to the current situation), minerals for the digital sector, minerals for aviation etc. European authorities have been deliberately blurring those differences for quite some time now, for instance by pushing a narrative of the “twin climate and digital transitions” in the design of the EU Resilience and Recovery Facility (recovery plans), as if these were similar and indistinguishable. Now they have taken an even more problematic further step, by including a whole range of allegedly “strategic” uses. This makes it harder to question some choices that have been made in the interests of the digital, aviation and defence sectors, without appearing as though it is also an attack on the ecological transition.

There are currently no provisions in the CRM legislation or at national level to differentiate between uses nor to prioritise uses for the energy transition rather than, say, building more planes. This makes it impossible to control what would happen to future European production of metals, and today nothing prevents lithium produced in France or Portugal from being used in smartphone batteries in Korea. Public financial support and regulatory fast-tracking will be available to all mining and supply projects regardless of the future uses of the metals.

It will be critical to prioritise certain uses and avoid competition between those sectors that are indeed essential to the Green Deal and those that are not. Indeed, as we have seen before, more aluminium will be needed for electrification, or even for lighter cars. But to ensure a resilient, efficient and sustainable supply of aluminium for these critical uses, we also need to: set a limit on the overall use of aluminium to stay in line with the Paris Agreement; ensure that the use of aluminium effectively contributes to green objectives, for example that cars get lighter but not bigger ; and last but not least, prioritise uses according to ecological priorities. So if we need aluminium for electric grids, we have to use less aluminium in other sectors, especially sectors like air transport that have adverse impacts on climate change.

- **There are currently no provisions in the CRM legislation or at national level to differentiate between uses nor to prioritise uses for the energy transition rather than, say, building more planes.**

Regulatory privileges for minerals that benefit the arms sector

The CRM legislation introduces a range of mechanisms aimed at supporting and facilitating access to minerals - including through financial support and regulatory fast-tracking - in the name of the climate emergency. This new legislation allows for a weakening of EU environmental standards in the name of an “overriding public interest”. New projects will be allowed to circumvent, for instance, the water framework, habitat and birds directives. If the EU wants to tackle the challenge to remain within safe planetary boundaries, these facilitation mechanisms should not apply indiscriminately to large swathes of the mining industry, which is known to be a big consumer of water and to have adverse effects on biodiversity¹¹⁴, and for an all-encompassing range of industrial uses.

► We could end up fueling more environmental and human rights abuse in the name of the climate emergency.

The priority given to securing access to minerals will also impact the EU’s trade and foreign policy. More emphasis will be given to signing trade deals with suppliers of minerals, which will involve economic and political trade-offs that could be detrimental to populations both in those countries and in Europe. Again, our urgent need for climate action should not be used as an excuse to legitimise deals and policies that have actually very little to do with the climate.

In a nutshell, we could end up fuelling more environmental and human rights abuses in the name of tackling the climate emergency

Making Europe’s energy transition more costly and less socially acceptable

Already the need for minerals appears as a key obstacle to Europe’s energy transformation. We will make it more difficult if we add more minerals than needed for the actual transition, and create more opposition than needed from populations in Europe and elsewhere that are directly impacted by mining.

The CRM involves adding more support - financial or political - to the corporate sector. This is money and political energy that could be wasted on a set of projects and priorities that have little to do with the transition. It could turn into yet another “open bar” for the corporate sector, with little climate benefits and possibly an adverse climate impact overall.

Does supporting the arms industry actually serve Europe’s security?

In the current context of regional conflicts, it might be understandable that European leaders worry about the continent’s security and feel the need to boost the block’s defence – a topic which until recently was not in the EU’s mandate.

However, in doing so, they are ignoring some century-old lessons that security and defence policy is too important to be left to the military, and even more so to arms dealers. The new concern for security and the EU’s long tradition of close cooperation with corporate interests creates a toxic mix whereby arms corporations play an outsized role in setting the bloc’s security agenda.

114. <https://www.nature.com/articles/s41467-020-17928-5>

There are many reasons to challenge the need to focus on supporting Europe's arms industry as the sole response to the Ukraine invasion:

- ★ An arms race is by no means by itself a guarantee of security, and could actually create insecurity if the strategic adversaries are incentivised to pile up weaponry, or if the arms find their way unto undesired destinations through back channels.
- ★ Arms manufactured by Europe's defence corporations will also and sometimes mostly be sold globally to clients in Africa, Asia and elsewhere, which in itself will not help Europe's security and possibly create more security risks.
- ★ Expanding mining projects in third countries will likely create more harm to populations and political instability abroad, which in turn might have adverse impacts on Europe.

Conclusion



The climate crisis and the general consensus on the need for a secure supply of minerals critical to the green transition, seems to have given the mining industry a new aura of respectability, which is evidenced by the smooth adoption of the EU Critical Raw Materials Act (CRMA). Everybody seems to agree that we need more minerals, and more mines including perhaps in Europe, even if it means bringing more support to corporate players and rolling back environmental safeguards.

This report reveals that industrial sectors which have little to do with the energy transition – most prominently the defence and aerospace industry – have been allowed to shape the CRMA to reflect their own interests, often in direct contradiction to the EU's climate objectives and to the image of the EU as a peace project. At the Commission, the Council and the Parliament, the adoption of the CRMA has turned into an open bar for industry lobbyists. Under the radar, a number of new minerals such as aluminium and titanium have been deemed “strategic” at their behest, even though their use in the energy transition is modest at best. Nevertheless, they will benefit from the same financial support and environmental deregulations. Supporting arms manufacturers and exporters has been made equivalent to putting Europe on the path of a carbon free future.

Under the convenient pretext of the energy transition, the European Union is preparing to write a blank cheque to mining companies and questionable industries without asking the necessary questions about **which minerals are actually critical and for which uses and which objectives, and without prioritising and discriminating between uses.** This cannot but ultimately jeopardise the EU's climate objectives. Significant resources will be wasted on supporting sectors that have nothing to do with the Green Deal, or which have significant climate impacts that are in direct contradiction to its objectives. This will increase the cost of change for taxpayers and consumers. The uncritical pressure to open new mines, which will inevitably trigger social resistance, will also undermine the social acceptability and legitimacy of the Green Deal both in Europe and in the rest of the world.

