

Consultation submission form

A Draft Critical Minerals List for New Zealand
September 2024



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MBIE is developing a critical minerals list for New Zealand to identify the minerals that are:

- essential to New Zealand's economy, national security, and technology needs, including renewable energy technologies and components to support our transition to a low emissions future; and/or
- in demand by New Zealand's international partners to enable us to benefit from international economic opportunities, contribute to the diversification of global mineral supply chains and improve the pipeline of the end-use products for which these minerals are essential; and
- susceptible to supply disruptions domestically and internationally. In some instances, we rely on domestic sources of minerals, but the supply of these minerals can be constrained, for example by regulatory factors and social licence. Internationally, supply chain disruptions could arise due to geopolitical risks and external market forces.

Minerals play an essential role in New Zealand's economic growth through high-paying jobs, Crown royalties, direct positive impact in the regions where mining takes place, and through export revenues. Minerals are also critical inputs into products that are necessary for other sectors to thrive, including the use of aggregates in construction and infrastructure.

Minerals are also essential to modern economies as they are needed to manufacture advanced technologies such as semi-conductors, defence applications and medical equipment. Minerals are also critical for a clean energy transition as low emission technologies requires more mineral inputs than those fuelled by fossil fuels.

The extraction and processing of the minerals essential to New Zealand and our international partners are concentrated in a few countries. Any disruption that interrupts operations at a large facility or group of facilities can have a major impact on supply availability, and therefore on prices. The greater the concentration of production the larger the affect a disruption can have.

In addition, New Zealand does not manufacture a wide range of technologies, we are generally an end consumer of many products produced internationally and rely on the functioning of international supply chains and their access to resilient supplies of minerals.

The development of a critical minerals list is one of the key actions identified in the draft Minerals Strategy that was publicly consulted on from 23 May – 31 July 2024. Due to the technical nature of the list, MBIE engaged a consultancy with specialist expertise, Wood Mackenzie, to support the development of the list.

We are seeking feedback on the content of the draft list that has been developed by Wood Mackenzie for New Zealand. It identifies the minerals that are critical to New Zealand and summarises the reason for their inclusion in the list. Once the list is finalised, actions could be identified to help us reduce the 'criticality' of those minerals, i.e., secure better access to them.

Please see the draft Critical Minerals List attached below for more information.

Questions for the consultation

1. Have we missed the inclusion of any mineral(s) on the draft Critical Minerals List?

Yes, (please provide more details below) No, the list is okay. Not sure/no preference
Is there anything you would like to tell us about the reason(s) for your choice?

We are very pleased to see the importance of essential nutrients imported to New Zealand to support farm production and the New Zealand economy are recognized in the Critical Minerals List.

Imported fertiliser nutrients are critical to enabling productive agriculture, where the NZ food and fibre industry generates export revenue of \$55 billion or 80% of our merchandise exports (MPI -Situation and Outlook report p4 - [Link](#))

Most notably we support the recognition of phosphate and potassium. These mined nutrients are needed in large volumes and the potential for geo-political risk to these global fertiliser supplies have been evident in recent years. Other nutrients included in Appendix A in the Critical Minerals List explicitly recognized as having application in agriculture are Manganese and Selenium. This is also supported.

There are other elements included in this list as critical minerals, but their use as essential elements in agriculture is not mentioned. These elements are: Zinc, Molybdenum, Cobalt, Copper, Boron, and Magnesium. We would request please that agricultural uses are identified in this list of uses on the first table in Appendix A, because with no access to these nutrients, agricultural production in some sectors would be significantly constrained.

Other essential nutrients for agriculture which are mentioned but excluded for supply risk include iron and iodine, plus the minerals lime and dolomite which are used to manage soil pH to support productive agriculture. The reasons for excluding these are accepted.

Two nutrients not included or mentioned, which are required in large volumes and are essential for agricultural production are nitrogen (N) and sulphur (S). We understand these elements are out of scope because their source is industrial processing rather than mined extraction. However, Sulphur, in particular, will become a critical mineral as the petrochemical industry declines. (The petrochemical industry is currently the primary source of sulphur). Nitrogen fertiliser production requires very high energy input, with green energy still in development. Although not meeting the definition of minerals and therefore not within scope of the report, we feel nitrogen and sulphur should be acknowledged for the critical role they play in agricultural production and New Zealand's economy.

As has occurred with other examples, such as hydrogen, lead, lime, iodine, iron etc., the reasons for their exclusion from the critical mineral list, should be noted in the report.

2. Have we included any mineral(s) that you think should not be on the list?

Yes, (please provide more details below) No, the list is okay. Not sure/no preference
Is there anything you would like to tell us about the reason(s) for your choice?

3. Do you have any further feedback on the list, or the methodology under which it was developed?

Yes, (please provide more details below) No, the list is okay. Not sure/no preference
Is there anything you would like to tell us about the reason(s) for your choice?

The assessment methodology is described as considering 94 minerals. 79 minerals were identified as essential to New Zealand, making up the Long List which proceeded to the supply risk assessment.

A further 34 minerals were assessed but ultimately excluded from the Long List due to one of the following reasons: lack of New Zealand demand; not having a defined chemical composition; where constituent element(s) were captured individually or being deemed out of scope.

It is understood nitrogen and sulphur were deemed out of scope; however, against the methodology criteria, Nitrogen and Sulphur, have high demand, have a clear chemical composition which cannot be substituted, and are critical to New Zealand agriculture and New Zealand economy.

The outcomes of assessment methodology (risk scores) are summarised on Tables 13 and 14, including for hydrogen, iron, lime and dolomite.

Even though the process may well exclude some essential elements, such as imported nitrogen and sulphur from the Critical Minerals List, it is still warranted to acknowledge their importance to the New Zealand economy and document the reasons for their exclusion from the List when following this process.

Thank you

Thanks for your feedback, we really appreciate your insight on the development of New Zealand's Critical Minerals List.