

SUBMISSION

Submission from Straterra To the Productivity Commission Improving Economic Resilience April 2023

Introduction

1. Straterra is the industry association representing the New Zealand minerals and mining sector. Our membership is comprised of mining companies, explorers, researchers, service providers, and support companies.
2. We welcome the opportunity to make this submission on the Productivity Commission's inquiry into the resilience of the New Zealand economy to supply chain disruptions and specifically on the [discussion document Improving Economic Resilience](#) (the document).

Key points

- The role and uses of minerals and their importance as material inputs in a range of supply chains are set out in this submission.
- Many of the supply chain disruptions in our sector relate to government policy.
- Labour shortages are a particular risk for the sector as skilled labour is easily able to shift to the potentially more lucrative Australian extractive sector.
- The mineral industry's access to some business inputs is sometimes constrained in the name of the "ethical investment movement" where those businesses want to demonstrate high ethical standards, as believed to be perceived by customers of those businesses.
- The New Zealand mineral industry has the potential to address global supply chain disruptions and market shortages by providing minerals that exist in New Zealand but are currently not mined in New Zealand.
- We recommend that the Commission engage with Ministry of Business, Innovation and Employment (MBIE) on that agency's work on critical minerals given their importance to supply chains and the global work that is being done to secure mineral supplies.
- We recommend the Commission undertake a study of New Zealand's potential to grow its productivity through growing the mining sector (whilst maintaining its high environmental standards) and on how government policy can be more enabling for mining.

Background

3. Minerals are material inputs into virtually all supply chains. Almost everything manufactured is made from minerals or relies on minerals for its production and distribution. This is encapsulated by the slogan “if it is not grown, it’s mined”.
4. This submission gives examples of where minerals are indispensable in supply chains and where these supply chains are susceptible to disruptions. It also demonstrates where the Government can enhance economic resilience to supply chain disruptions in the extractive industry to enable continued operations.
5. The New Zealand minerals sector is small by many countries’ standards, but it has the potential to be much larger. The endowment is likely present but access to economic mineral deposits is not.
6. We agree with the emphasis the document places on supply chains for improving productivity and enhancing the wellbeing of businesses and communities.
7. The document seems to focus on export and import supply chains. We note that goods and services for the domestic market are also susceptible to supply chain disruptions and should be given more emphasis in the inquiry.

Minerals are a key component of many supply chains

8. Here we provide examples of where New Zealand mined minerals are used in supply chains. This is important to discuss, because the role of mining and the minerals sector in New Zealand is often overlooked and is sometimes subject to misinformation.

New Zealand mined minerals are essential to local supply chains

9. Aggregates – crushed rock and sand are essential components in construction used specifically, as well as other things, for concrete, roading and other infrastructure and construction.
10. Coal – Coal is an essential input in the manufacture of steel; it is used as a backup source for electricity generation; it is used to provide industrial process heat in the food processing, hothouse horticulture, and manufacturing industries; and is also used for heating in institutions such as schools and hospitals.
11. We note that the Government has a policy to phase out coal for these uses (except steel) and many companies have indicated they plan to transition into lower emission alternative fuels over the coming years and decades. In the meantime, coal is an irreplaceable source of heat for many businesses where alternatives aren’t available and may not be available for some time. Likewise, the Government has an aspirational goal of 100% renewable electricity, but the reality is some back up is needed for dry years or when the sun isn’t shining and the wind not blowing, and this will be the case for many years.
12. Coal mining was an “essential service” or a “key utility” in regulation and government practice during Covid-19 lockdowns because of its necessity in the provision of food and hospital services.
13. In terms of steel, coal is a mineral input as well as a source of heat. It is currently impossible to make steel at scale without coal. New Zealand Steel at Glenbrook, near Auckland, supplies an estimated 65 percent of New Zealand steel demand. Its operation is important for safeguarding the supply chain for steel, and coal in turn is an essential input into its production. The Government and, separately,

the Climate Change Commission acknowledge the special case of coal use in steel manufacture for the foreseeable future.

14. Likewise cement, an essential component in the construction sector as a binder in concrete, is dependent in turn on extracted limestone, aggregate, sand, coal, and some other minerals.

New Zealand mined minerals essential to global supply chains

15. New Zealand minerals are also an important input into global supply chains. Coking coal is exported for steel manufacture. New Zealand coking coal is of superior quality and has lower emissions than many overseas sourced coals which would otherwise be used for this large-scale steel making.
16. Gold – the document highlights gold as an important export to Australia. It is in fact New Zealand’s largest goods export to that country. The reason is that the gold is further refined in Perth, Western Australia, and then enters the world market for investment, jewellery, electronics, and other applications, including in modern medicine.

Potential to supply other supply chains

17. The New Zealand extractive industry also has potential to supply a number of other minerals that are in demand locally and globally and are increasingly important in the high tech/low carbon economy. For example, vanadium, tungsten, lithium, and rare earth elements, for use in electronics, wind turbines, electric vehicles, solar panels and batteries etc.
18. Many of these minerals are highly sought after and are attracting high unit prices. They are also highly topical due to the geopolitical rivalries referred to in the Productivity Commission document, as discussed later in the Straterra submission.
19. Other examples include opportunities to establish a domestic supply chain of natural, low-carbon partial substitutes for cement, known as “pozzolans”, located in the central North Island and comprising mainly high-silica volcanic ash and pumice deposits, as well as certain types of clay mineral deposit. If commercialised at scale, these could also create an export industry.
20. Straterra advocates for supportive and enabling government policies which allow for the minerals exploration and mining sector to explore the potential for, and shift into, these minerals.

Questions

21. Here we answer the four questions raised in the Discussion Document.

1. What supply chain disruptions and trends are you worried about?

22. There are a number of potential disruptions to the extractive sector’s ability to provide businesses, overseas and local, with New Zealand-mined minerals. Many of these relate to central and local government policy, legislation and regulation.

Mining on Conservation Land

23. For example, the Government is considering policy banning new mines on conservation land. (There is already a ban on National Parks – 35% of the conservation estate – and certain other land which

the industry fully supports.) The proposed ban would apply to the remaining conservation estate.¹ This would reduce the supply of minerals available and disrupt business operations, as well as have a chilling effect on investment in New Zealand and building and retaining a skilled workforce in this industry. It would also disregard how much mining actually occurs on conservation land (very little) and the work, as per consent, that mining companies undertake to restore, and in some cases enhance, the environment.

24. The implications of a ban on new mines on conservation land are also contrary to the Government's other priorities including those set out in its Minerals and Petroleum Resource Strategy, [Responsibly Delivering Value](#) such as:
- security of affordable resources to meet our minerals and energy needs (including security of energy supply);
 - constraints on industrial minerals (including aggregate supply) which could limit regional infrastructure goals and objectives;
 - job losses in regions and loss of royalties and taxes for the Crown;
 - not adhering to Treaty settlement commitments, particularly as they pertain to vested minerals (eg pounamu) and other taonga minerals;
 - New Zealand's international reputation and sovereign risk profile for investment; and
 - the risk of a disorderly and chaotic transition away from fossil fuels.

Resource management reforms

25. The current resource management reform has the potential to further constrain access to economic mineral deposits, because, unfortunately, much of the proposed replacement legislation for the Resource Management Act 1991 is unworkable for minerals exploration and mining, as well as introducing layers of bureaucratic complexity, and therefore, added time and cost to gaining regulatory approvals.

Local government planning

26. Economic mineral deposits occur where they are found. They are locationally constrained. It is important therefore that local government planning does not sterilise areas of land with minerals prospectivity. The Government recognises this and has recently allowed a consenting pathway for the extraction of minerals in or near wetlands, subject, of course, to measures to offset or compensate for impacts on wetlands.

Labour shortages

27. A major risk of disruption faced by the sector is labour shortages - particularly as skilled labour is easily able to shift to the potentially more lucrative and reliable Australian mining sector.

¹ Currently miners can apply for temporary access and applications are considered on a case-by-case basis with very high environmental standards needing to be met. A ban would rule out the ability to make applications. For more information on this see [here](#).

28. Due to the high labour productivity of the mining sector, New Zealand mining incomes are high relative to other sectors in the New Zealand economy. (The average mining income is more than 50% higher than the New Zealand average). However, they are significantly lower than those available in Australia, and this mining income gap is larger than the general income gap between the two countries.

Strategic minerals and geopolitical rivalries

29. The document in a number of places refers to geopolitical tensions and rivalries with governments in large economies seeking to achieve strategic autonomy or dominance. This is playing out in the international mineral sector to a significant degree with minerals deemed to be “strategic” or “critical” in certain strategic industries.

30. The security and industry policies many countries are adopting in response are designed to increase resilience to supply chain disruptions but are actually contributing to the disruptions as countries counter/respond with further protectionist measures. This is something New Zealand policy makers should try to avoid.

31. However, as stated earlier, New Zealand does have an opportunity to help meet the demand for strategic minerals and New Zealand’s potential to supply many of these, whether for global supply chains or for New Zealand manufacturers, should not be understated.

Imports as an alternative to locally sourced minerals

32. Where there are supply chain disruptions and minerals cannot be accessed locally, for whatever reason, local users may be able to turn to imported minerals as an alternative, and already do. We have no objection to this where it makes commercial sense, and we are not seeking protectionist policies in this area.

33. We point out however the costs of importing minerals include emissions, delays, transport/logistics, and uncertainty – especially given their bulky nature, and the fact that there may be competing international demand for those minerals. We would also note that the provenance of some of these minerals cannot match New Zealand’s when it comes to health and safety of workers and impact on the environment, which in New Zealand is highly regulated.

Misconceptions about environmental standards and ethical investment

34. Mining in New Zealand can have negative connotations in the public mind often due to images of unsound practices in other countries, or historical practices that are no longer relevant. While its true mining, like all industries, has some negative environmental impacts it has less environmental impact than many perceive and certainly less than in many other countries. Sound environmental regulations that miners have to meet in New Zealand plus a willingness by the industry to demonstrate high environmental standards are the reasons for this. The same applies to labour standards and other human rights which are an issue in many other countries but not New Zealand.

35. These misperceptions about mining in New Zealand mean that the industry is sometimes constrained in attracting business inputs which disrupt our supply chains. This is often in the name of the “ethical investment movement”. For example, there are cases where banks have stopped lending to coal miners so they can demonstrate to their shareholders what they believe the shareholders to perceive as high ethical standards, but they are happy to lend to industries using coal. This virtue signaling can be a significant disruption for the sector and is not grounded in facts and evidence.

2. What is your industry/community currently doing or planning to do to address supply chain concerns?

Debunking myths about mining and the environment

36. To address some of the misconceptions about environmental standards referred to above, the mineral sector has been active in showing the public the reality on the ground. For example, we have provided these [case studies](#) to demonstrate the steps mining companies have taken to minimise environmental impact.
37. We support the sound regulation of extraction of minerals and the associated high environmental standards. We support a case-by-case assessment of proposals on their merits to ensure environmental standards are maintained.

Addressing international supply chain concerns

38. The New Zealand mineral industry has the potential to address global supply chain disruptions and market shortages by providing mined minerals currently not mined in New Zealand. These may be used in local or offshore manufacturing.

Government policy

39. As stated above, many of the disruptions to the extractive sector's ability to provide businesses – overseas and local – with New Zealand-mined minerals relate to central and local government policy, legislation and regulation.
40. To address local supply chain concerns the industry advocates for sound regulation, based on facts and evidence, which is enabling of extraction of mineral deposits. We recommend that the Commission investigate how government policy can be more enabling for mining.

3. How can the Government help to enhance the resilience of your industry/ community to supply chain disruptions?

41. Because of our regulations and the high weight New Zealand miners place on environmental and social factors, New Zealand is able to access minerals with lower environmental impact than other countries, and so is able to contribute to the global supply chain at much lower environmental and societal costs than most other countries. The Government should recognise this and adopt enabling policies which allow the minerals/extractive sector to play its part.
42. The Government must allow New Zealand Steel to continue operating (i.e. not force its closure with over-exuberant emissions reduction policies), to safeguard the steel supply chain for the New Zealand construction industry. Access to local coal and ironsand deposits is an important consideration for New Zealand Steel to continue operating at Glenbrook, south of Auckland.
43. As stated earlier, one thing the Government should avoid in seeking to enhance the resilience of our industry and others is to revert to activist industrial policy and protectionist measures. These tend to compound the problem as adoption of such policies by other countries proliferates.

4. What should the Commission study to learn more about the economic resilience of industries and communities?

Mining and productivity

44. Mining contributes greatly to productivity in New Zealand. Labour productivity in the mining and exploration sector was \$520,800 per FTE worker, compared with \$148,600 across the economy (according to Infometrics) and is the number one ranked sector in New Zealand for productivity. Mining revenue per hectare is higher than other primary production uses including dairying and horticulture.
45. In this regard we recommend the Commission undertake a study of New Zealand's potential to grow its productivity through growing the mining sector – whilst maintaining its high environmental standards and a provenance story that makes our minerals attractive as exports.

Critical minerals

46. The Ministry of Business, Innovation and Employment (MBIE) has been preparing a discussion document on how to develop a list of critical minerals, and what this list should be used for which, we understand, is due to be released shortly.
47. MBIE has identified critical minerals as a key to increasing economic resilience. To quote from the Government's Minerals and Petroleum Resource Strategy, [Responsibly Delivering Value](#) dated November 2019: "Many countries maintain a list of critical minerals, which is a key part of building resilience within the economic system. New Zealand does not currently have such a list. However, we will work to identify which minerals are critical to the wellbeing of New Zealanders."
48. This work will encourage a public debate on New Zealand's role/potential in providing critical minerals into global supply chains and so is directly relevant to the Productivity Commission's inquiry. We note reference to this work is absent from Table 4 (which outlines existing sectoral strategies) or anywhere else in the document.
49. We fully support this work and recommend the Productivity Commission get involved. As follow up work, the Government should develop a critical minerals strategy for New Zealand, drawing on overseas experience, which is extensive. It is fair to say that New Zealand is a laggard when it comes to developing strategy for critical minerals supply chains.
50. Arguably, almost all minerals are critical to the wellbeing of New Zealanders, however, we accept that some minerals are more critical than others. The Government is also undertaking an Energy Strategy. It will be important for the Commission to draw on this given the supply chain disruptions which occur in the energy sector, many of which have been discussed in this submission.

Comments on mining and climate change

51. The document in a number of places makes reference to climate change and the broader government objectives of a low-emissions economy. Mining is sometimes misleadingly associated with climate change, so we make the following important points in relation to mining and climate change.
52. Mining companies are emitters like many other energy intensive sectors but are not excessive, falling roughly in the middle of a ranking emissions intensity sectors.

53. Coal is one mineral mined in New Zealand responsible for emissions. But note the emissions occur when it is consumed, or converted to energy, not mined (other than a small quantum of fugitive emissions of methane). Consuming imported rather than locally produced coal does nothing to reduce emissions; rather, the carbon miles of transport add to emissions.
54. Mining is in fact part of the solution to the climate change issue, not the problem.
55. The products of mining will play an important role in reducing global emissions - wind turbines, solar panels, batteries, electric vehicles etc - as the world transitions towards a lower-carbon economy. As stated earlier in the submission, New Zealand has the potential to supply some of these “green minerals”, e.g. vanadium, lithium and rare earth elements.
56. Minerals and aggregates including coal (as a mineral component of steel) also have an essential role in helping New Zealand adapt to the changing climate. For example, aggregates and steel-reinforced concrete are needed to strengthen sea walls to adapt to sea level rise and provide flood protection. They are needed to make infrastructure more resilient to resist greater-intensity storms and extreme weather events.
57. The document points out transportation systems sustaining global supply chains are major sources of climate emissions. This applies to the transportation of minerals. We need to take a whole-of-production approach to emissions i.e., the issue is not just about the transport emissions. Emissions from production and consumption should also be taken account of and in the case of New Zealand, our mining techniques are less emissions intensive and have a lower environmental impact than many other countries. In the case of coal consumption our high-quality coal has lower emissions intensity than many other.
58. We are happy to discuss our submission with the Productivity Commission and welcome ongoing engagement.