

**BEFORE THE ENVIRONMENTAL PROTECTION AUTHORITY
AT WELLINGTON**

IN THE MATTER of the Exclusive Economic Zone and
Continental Shelf (Environmental Effects)
Act 2012

AND

IN THE MATTER of a decision-making committee
appointed to hear a marine consent
application by Trans Tasman Resources
to undertake iron ore extraction and
processing operations offshore in the
South Taranaki Bight

**EXPERT REBUTAL EVIDENCE OF JASON LEUNG-WAI ON BEHALF OF
TRANS TASMAN RESOURCES LIMITED**

7 FEBRUARY 2017



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INTRODUCTION

1. My name is Jason Leung-Wai.
2. I prepared Expert Evidence dated 15 December 2016 (First Statement) with respect to these proceedings on behalf of Trans Tasman Resources Limited.
3. My qualifications and experience as an economist are set out in paragraphs 1-5 of my First Statement.
4. I repeat the confirmation given at paragraph 6 of my First Statement that I have read the Code of Conduct for Expert Witnesses and agree to comply with it.
5. The purpose of this Rebuttal Evidence is to respond to matters raised in submitter evidence. It addresses the following matters:
 - (a) Appropriateness of I-O model;
 - (b) Benefit-cost analysis;
 - (c) Overstated local benefits;
 - (d) Marginal local employment; and
 - (e) No economic analysis of Commercial Fisheries.
6. In preparing this evidence I have reviewed the following statements of evidence:
 - (a) Mr James Binney for Kiwis Against Seabed Mining;
 - (b) Mr Graham John Young for Te Rūnanga O Ngāti Ruanui Trust;
 - (c) Dr Jeremy Graham Helson for Fisheries Inshore New Zealand Limited; and
 - (d) Ms Karen Pratt, non-expert evidence.

APPROPRIATENESS OF I-O MODEL

7. James Binney and Karen Pratt question the appropriateness of an I-O model to determine the economic impacts of the ironsands project as well as its application.
8. Mr Binney states throughout his evidence that an I-O model is inferior, inappropriate, overstates benefits and ignores social and environmental risks.
9. In particular, Mr Binney states (Para 10, 22) that the higher employment determined in the I-O model compared to the earlier CGE analysis is clear evidence that I-O models tend to overestimate impacts.

10. I do not agree. The higher employment impacts identified through the I-O model are more a reflection of the business case (initial activity) than the modelling itself. It is not confirmation that an I-O model overstates impacts relative to a CGE model. If anything I have been conservative in my assessment by not including taxes, royalties, or additional activity identified in the Conditions report.
11. Further, in my view, the I-O model is the most appropriate approach to identifying economic impacts, particularly at a regional level, which was why it was decided to progress from the CGE analysis used in the earlier application.

BENEFIT-COST ANALYSIS

12. At paragraph [19] Mr Binney claims that a comprehensive Benefit-Costs analysis (BCA) is the only appropriate economic assessment methodology to inform the regulatory approvals.
13. I do not agree. Unless there is agreement on the identification, quantification, monetisation of benefits and costs, and application (for example of discount rates and timeframes), such a model is questionable at best. In my view, the BCA model will only create a more contentious piece of analysis due to the high degree of uncertainty and assumptions.
14. I note that TTR's expert evidence suggests that negative impacts will be temporary and negligible, which suggests that costs will be non-existent to minimal over a short period of time.
15. I also note that the temporary nature and level of any negative impacts have not been considered in Mr Binney's example of estimating the economic value of the services that could be lost (paras 44 to 46). If these factors were considered then, even if the highest estimate of economic cost was used (\$2,432/hectare/annum), the potential costs would drop from \$543 million to \$11,000.
16. Further, considering the potential benefits and negative impacts separately allows them to be considered on their own merits rather than providing a potentially flawed and contentious 'net' benefit/cost ratio. The economic impact approach clearly identifies the potential GDP and employment likely to result from the project. As noted in the EPA Key Risks Report, the DMC should not "double count" environmental costs by assessing them against the Act's criteria and then trying to subtract these costs from the positive economic benefits set out elsewhere. My report clearly shows the economic benefit to New Zealand as required by s 59(2)(f).

OVERSTATED LOCAL BENEFITS

17. Karen Pratt, Graham Young and James Binney raised concerns that benefits are overstated due to the high proportion of activity that will be delivered out-of-the region and that applying a single 'project multiplier' would not capture the leakage of activity (Karen Pratt p 93-97).
18. The I-O model determines and excludes out-of-study area expenditure (imports) for first round and indirect business activity for each of the industries. Therefore, direct expenditure that occurs outside the study area is not included in the analysis.
19. I ensured that only operational expenditure or activity that occurs within the study area is applied to the model. I have not included the development and construction phase, which has a large out of study area component.
20. I have not assigned expenditure to a single project multiplier. My approach is consistent with that suggested by Butcher Partners, which Karen Pratt refers to in her evidence. Project expenditure is disaggregated and assigned to the industries where it occurs.

MARGINAL LOCAL EMPLOYMENT

21. Graham Young suggests that at best the employment generated for the local area (South Taranaki/Whanganui) will be 61 jobs. This is incorrect.
22. These 61 jobs are not derived through the model but are the actual number of jobs that TTR proposes will be required to operate the IMV/FSO and the geotech support base in Whanganui.
23. In addition to this, TTR is expected to spend \$25 million in the local area on engineering and other services. Based on the model, this expenditure should support 111 direct jobs, meaning a total of 173 direct jobs in the local area. Discussions by TTR with a number of businesses and agencies suggest that many services can be provided by South Taranaki/Whanganui businesses.
24. My analysis suggests that there will be a total of 299 jobs created in the local area by the ironsands project. In addition to the 173 direct jobs noted above, there will be a further 83 indirect jobs and 43 induced jobs. The indirect jobs are a result of associated expenditure by the businesses that directly provide services to TTR. The induced jobs are a result of expenditure by people employed directly and indirectly in the project or service areas.

NO ECONOMIC ANALYSIS OF COMMERCIAL FISHERIES

25. Jeremy Helson considers that the economic analysis is incomplete as it did not include an economic impact analysis on the commercial fishing sector.
26. As noted in my report, and subsequent evidence, modelling suggested that the effect on fisheries would be negligible. Based on this evidence, a separate economic impact analysis was not warranted.
27. I did, however, provide some context on the size of the commercial fishery within the local area (p 30) to allay concerns about the quantum of the impact on the local and regional economy IF commercial fishing was affected.

CONCLUSIONS

28. I believe that the I-O model is the most appropriate approach to identify the economic benefits from the ironsands project on the local and regional study areas as well as the national benefit.
29. The methodology has been applied appropriately to ensure that out-of-region expenditure and activity is excluded from the analysis and that the estimate of jobs and GDP are not overstated.
30. The economic impact analysis shows economic benefit to the study areas and New Zealand as required by s 59(2)(f).
31. The matters raised in submitter evidence have not changed my view on the economic impacts of the iron sands project.



Jason Leung-Wai

07 February 2017