

TTR Evidence

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Evidence Structure

- Summary of primary evidence
- Salient points from Expert Conferencing
- Other matters

Primary Evidence—Context

- New Zealand seafood industry [12-16]
 - Important earner of export revenue
 - Large employer, especially in regions
 - Inshore finfish c. \$527 m GDP contribution in 2015
- Quota Management System [35-40]
 - Sets sustainable catch limits on all stocks
 - Catching rights established and secure, ITQ freely traded
 - Accepted as world class

Primary Evidence—Context

- Treaty Settlement [41-45]
 - Significant settlement between Crown and all iwi
 - Settlement included quota shares as currency for Settlement
 - Activity that undermines the value of commercial quota rights also impacts on the value of the Settlement
 - Other submitters will elaborate

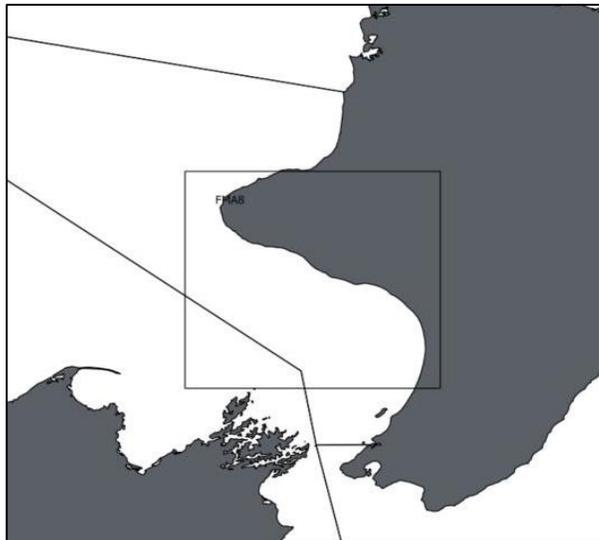
Primary Evidence—Impact Assessment

Impact on Fisheries [46-60]

- Seafood industry has many actors: 1,356 quota owners, 1,170 vessels, 203 LFRs (licensed fish receivers)
- Complex contractual arrangements in place
- TTR's assessment simplistic: adopts a “numerator / denominator” approach
- Numerator
 - Based on **fish** distribution, not current fisheries [49-50]
 - Effects based on biological considerations, e.g. proportion of **habitat** affected [51]
 - Nature of affected **fisheries** not considered
 - Avoidance threshold of 2 mg/l used but, “**responses ... likely to be species-specific**” [53]
 - Changes in fish distribution for each species have effects on fisheries (e.g. ACE, deemed values, catching costs) [54-56]

Primary Evidence—Impact Assessment

- Denominator
 - The Study Area used as the denominator is arbitrary, incorrect to use an area that straddles two quota management areas [58]
 - Illustrative of lack of consideration for effects on fisheries



Helson BOE
24 Jan 2017

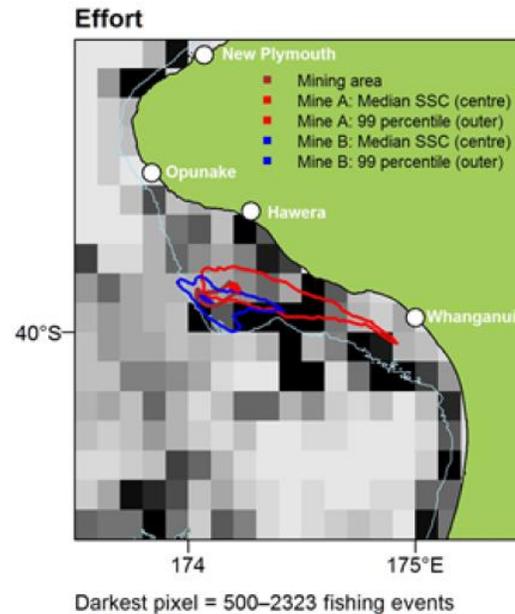


Figure 3.1, Report 18

Primary Evidence—Impact Assessment

Economic analysis [61-68]

- “\$” does not appear in Report 18
- Assumption of negligible affect on fisheries
- No economic analysis conducted
- Brief description of industry not a suitable analysis [64-65]

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Key Findings and Issues Remaining

- Effects on recreational and customary fisheries not considered (Page 6)
- “**All agreed** that a fishery is combination of a biological resource to exploit, economic investment, fishing technology and knowledge, and rules and regulations to administer the fishery” (Page 7)
- “**All agreed that NIWA** was commissioned by TTR to explore only the biological effects on fished species. Identifying those people or groups with an interest in fisheries or potential effects on them was not asked for by TTR and not produced by NIWA” (Page 7)

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Key Findings and Issues Remaining

- “**All agreed** for the species where there is a legal division between stocks in QMA 7 and QMA 8 that the catch and effort data in cannot not be combined for the purposes of evaluating effects in QMA8 as was done in NIWA Report #18” (Page 9)
- There remains disagreement about whether the assessment of **biological impacts** is sufficient to determine the impact of the proposed mining operation on **fisheries** in the STB

Other Matters

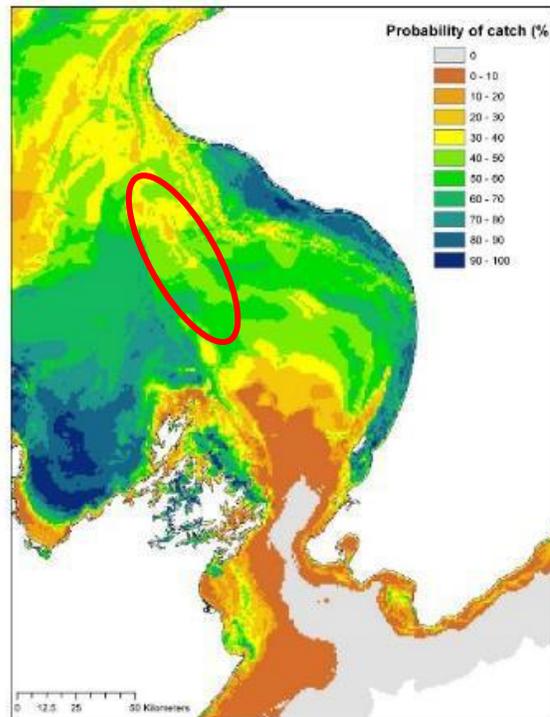
- **Compounding uncertainty** [69-77]
 - Uncertainty about plume (discussed by experts)
 - Uncertainty about subsequent effects on primary production (discussed by experts)
 - Effects averaged over SMD. Experts consider this scale is appropriate for ecosystem-scale effects, but effects relevant to fisheries not considered
 - No sensitivity analysis regarding effects on fisheries to accommodate uncertainty of plume and other matters

Other Matters

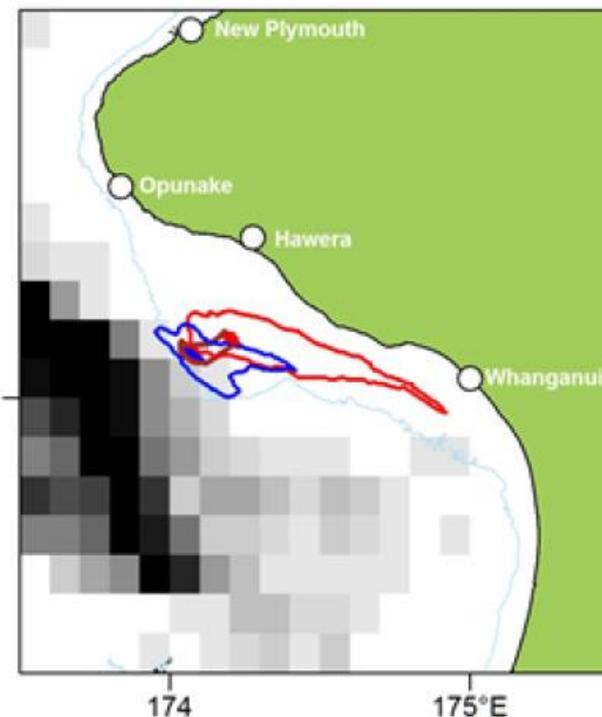
Uncertainty—modelling inaccurate

- Applicant discusses effects on marine species, e.g. eagle ray (Report 17)

Jack Mackerel, chance of catch (p 26 #17)



Midwater trawl catch (Fig 3.4 #18)



Darkest pixel = 2500–7345 t

“In terms of both effort and total catch, midwater trawling for jack mackerel has been the most important fishery in the area, with almost 90,000 t caught during the period”
(Page 16, Report #18)

Other Matters

Reputational risk

- New Zealand trades on its reputation as a supplier of premium seafood
- Potential effects on fish quality
- ANZECC Guidelines—no significant adverse effects on the aquatic ecosystem
- Market may have a much lower threshold for effects on quality
- Economic consequences