

Option 4 Proposal for the Squid 6T Operational Plan Consultation



New Zealand sea lions/ rāpoka

New Zealand sea lions/ rāpoka were once found all around mainland New Zealand and genetic data suggest historically they numbered up to 68,000 individuals¹. Today they are one of the rarest and most highly localised sea lions in the world, with fewer than 12,000 individuals. At the main breeding location, the Auckland Islands, pup production has declined by approximately 55%² since 1998. Scientists link this to a decline in the adult population, particularly breeding females at the Auckland Islands^{3,4,5}.

The overall trend shows Auckland Island pup production (population proxy) is still declining and population models show that sea lions will continue to decline without effective intervention^{5,6}. Despite this trend, the Department of Conservation recently downgraded the threat status of sea lions to “*Nationally Vulnerable*”. The 2017-2022 National Threat Management Plan (TMP) has a vision to “*promote recovery and ensure the long-term viability of New Zealand sea lions*” and lead to a “*non-threatened*” status for the species⁷.

Fisheries New Zealand approach to managing fisheries bycatch

The Ministry’s Quantitative Multi-Risk Threat Assessment shows that sea lions are impacted by multiple and cumulative threats, particularly from fisheries bycatch, disease and nutritional stress (potentially due to fishing pressure and climate change impacts on prey availability)⁸. Fisheries bycatch is identified as the most significant human threat to sea lions^{5,8}, and is the only threat that can be actively managed.

The squid trawl fishery operates around the Auckland Islands and overlaps with sea lion foraging grounds. Sea lions are killed despite the use of sea lion exclusion devices (SLEDs) on trawl nets. The Ministry’s latest science shows that the risk from fishing is low⁶, but the NZ sea lion population is continuing to decline^{5,6} and we must reduce all human impacts as close to zero as possible to achieve population recovery.

The Options put forward by Fisheries New Zealand in the Squid 6T Operational Plan will not achieve the TMP vision and objectives for population recovery. The three proposed options all allow fishing to continue killing sea lions. Option 1 would allow the population to be reduced by an additional 2% above the existing non-fisheries related decline by 2025, Option 2 would allow a 5% population reduction, and Option 3 would allow a 10% population reduction⁹. Increased population decline cannot logically be seen as a way to achieve population recovery which, by the Department of Conservation’s own definition, requires the population to be increasing⁷.

Fisheries NZ incorrectly states that the proposed fishing related mortality limits provide a “*high degree of certainty that the sea lion population will be maintained at a level that ensures their long-term viability*”⁹. In theory this would only be true if the population is growing at an optimal rate. In reality any fisheries impact will contribute to further decline the population, unless the population trend is moving in a positive direction. Roberts (2019) shows the NZ sea lion population is not moving in a positive direction, and is likely to continue to decline⁶.

Option 4

Forest & Bird has worked with other eNGOs and independent sea lion scientists to create an alternative option – Option 4.

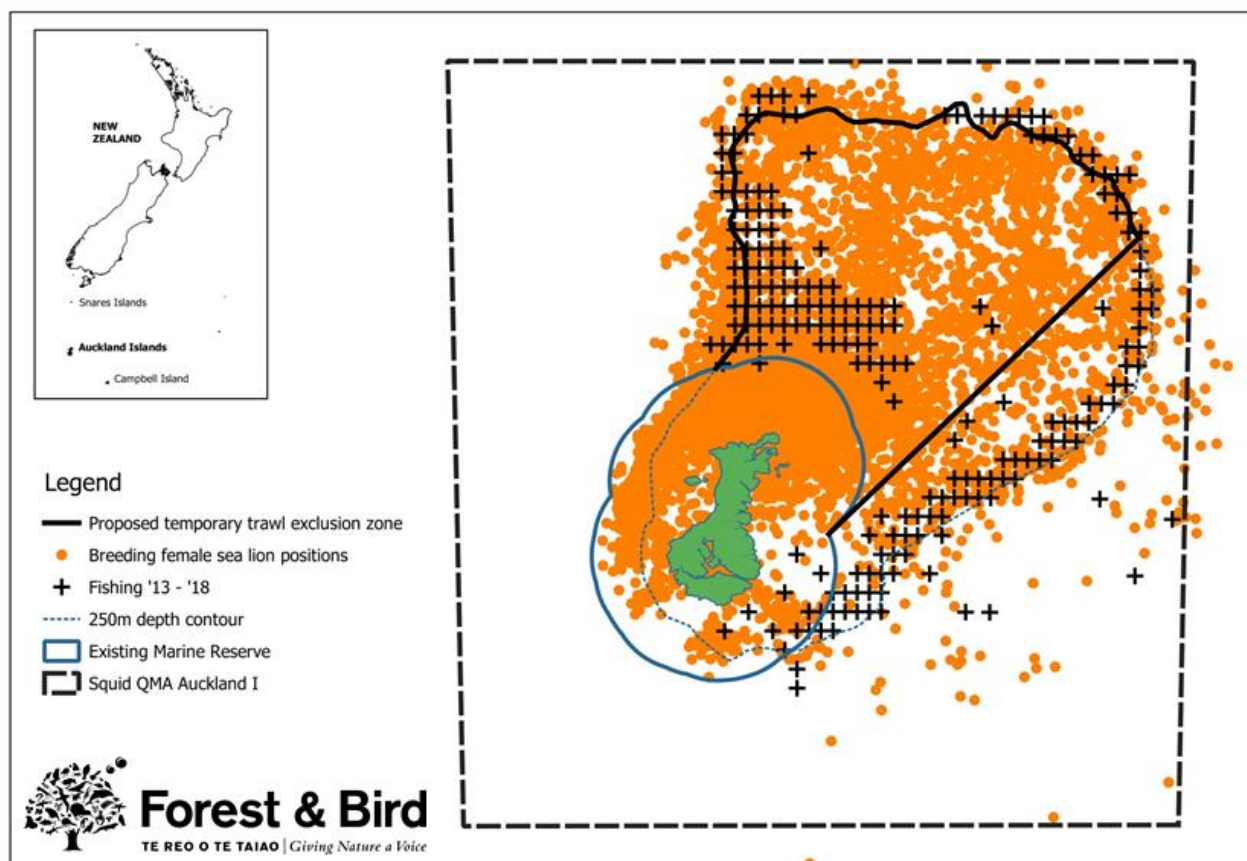
Forest & Bird is proposing as an interim measure the Minister of Fisheries creates a temporary trawl exclusion zone to be implemented for the 2019/2020 fishing season until the TMP is reviewed in 2022 and a holistic approach to manage, mitigate and reduce direct fisheries bycatch can occur across all fisheries that accidentally kill NZ sea lions, not just squid.

The Option is based on the best available information released by Fisheries New Zealand. We have used all available satellite telemetry data to map the foraging grounds of breeding (lactating) NZ sea lions at the Auckland Islands overlaid fishing effort.

Forest & Bird proposes that the temporal trawl exclusion zone would exist during the known breeding season when females are at their most vulnerable and it would only restrict trawling. Female NZ sea lions are restricted in the area and duration they forage by their need to return to their dependent pups on shore^{10,11}. The proposed exclusion area represents 17% of the Auckland Island fishing area (6T hashed box). Importantly, Option 4 would not stop or close the squid trawl fishery or reduce the quota available to commercial fishers. It is the best interim management Option that balances the protection of sea lions against the utilisation of squid. Forest & Bird would like to discuss Option 4 further with officials, industry, tangata whenua, particularly Ngāi Tahu and others.

A recent WWF-NZ survey^{12,13} found that New Zealanders do not consider further bycatch to be “acceptable” for a population such as NZ Sea lions that is endangered and declining. Colmar Brunton found that “84% of New Zealanders think the Government should adopt a zero-bycatch goal – meaning that while there will always be some accidental bycatch in commercial fisheries, we should work to reduce that impact towards zero”¹². When asked about NZ sea lions in particular, “84% of New Zealanders agreed or strongly agreed that the number of NZ sea lions being killed in commercial fisheries should be further reduced”¹³.

Option4: Proposed temporary trawl exclusion zone at the Auckland Islands



References

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- ²Between 1998 and 2019 pup production at the Auckland Islands
- ³Robertson, B.C & Chilvers, B.L. (2011). The population decline of New Zealand sea lion *Phocarctos hookeri*: a review of possible causes. *Mammal Review* 41:253-275
- ⁴Chilvers, B.L & Meyer, S. (2017). Conservation needs for the endangered New Zealand sea lion. *Aquatic Conservation* 27:846-855.
- ⁵Meyer, S., Robertson, B. C., Chilvers, B. L., & Krkošek, M. (2015). Population dynamics reveal conservation priorities of the threatened New Zealand sea lion *Phocarctos hookeri*. *Marine Biology*, 162, 1587-1596
- ⁶Roberts, J. (2019). Population effects of New Zealand sea lion mortality scenarios relating to the southern arrow squid fishery at the Auckland Islands New Zealand Aquatic Environment and Biodiversity Report No. 223
- ⁷Department of Conservation & Ministry for Primary Industries. (2017). New Zealand sea lion / Rapoka Threat Management Plan. <https://www.doc.govt.nz/globalassets/documents/conservation/native-animals/marine-mammals/nz-sea-lion-tmp/nz-sea-lion-threat-management-plan.pdf>
- ⁸Roberts and Doonan, (2016) *Quantitative Risk Assessment of Threats to New Zealand Sea Lions*, New Zealand Aquatic Environment and Biodiversity Report No. 166. Ministry for Primary Industries, Wellington
- ⁹Fisheries New Zealand. (2019). Consultation on the Squid 6T Operational Plan. Fisheries New Zealand Discussion Paper 2019/17. August 2019. New Zealand Government, from <https://www.fisheries.govt.nz/dmsdocument/36435-consultation-on-the-squid-6t-operational-plan>
- ¹⁰Chilvers, B.L. (2008b). Foraging site fidelity of lactating New Zealand sea lions. *Journal of Zoology* 276:28 –36.
- ¹¹Chilvers, B.L., Amey, J.M., Huckstadt, L.A., & Costa, D.P. (2011). Investigating foraging utilisation distribution of female New Zealand sea lions, Auckland Islands. *Polar Biology* 34:565-574
- ¹²WWF NZ research – Colmar Brunton. (2017). Attitudes towards a zero bycatch goal. http://awsassets.wwfnz.panda.org/dow84nloads/report___attitudes_towards_a_zero_bycatch_goal.pptx
- ¹³WWF NZ research - Colmar Brunton, (2019). *New Zealanders' attitudes towards conservation of endangered species: Spotlight on the Māui and Hector's Dolphins*. Wellington, NZ: Endangered Species Foundation and WWF-New Zealand. https://drive.google.com/open?id=1oH8BZM6ExH_jHQnwIACqe66XZ8yPXku

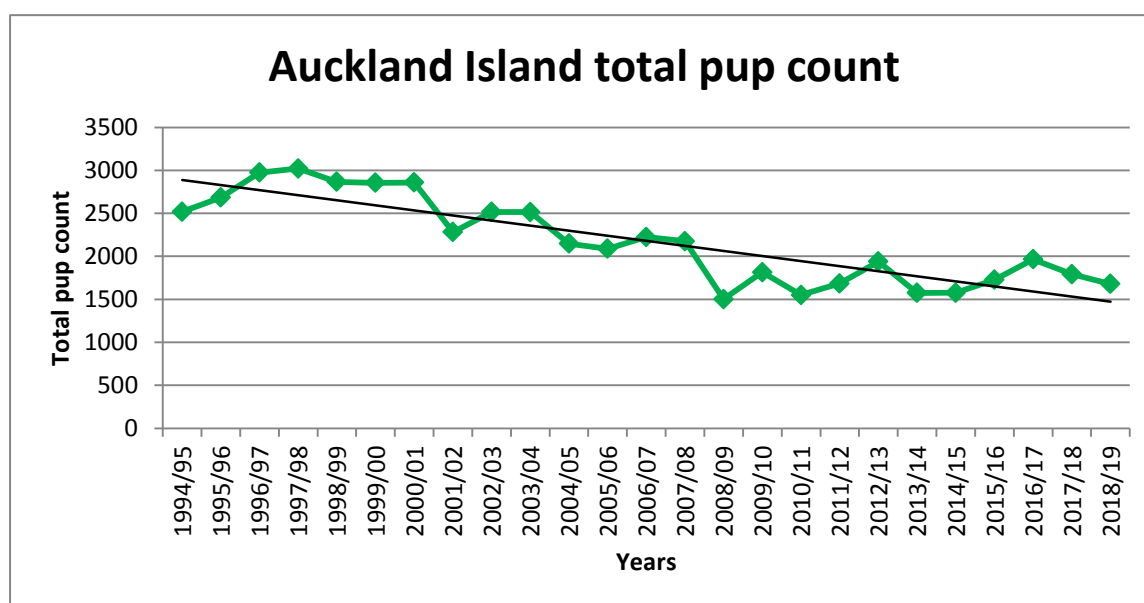


Figure 1: Auckland Island total pup count over time from 1994/95 to 2018/19. Source: Department of Conservation. (2019). New Zealand sea lion monitoring and pup production at the Auckland Islands 2018/2019 Research Report, June 2019 <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marine-conservation-services/reports/pop2018-03-sea-lion-pup-count-2018-19.pdf>

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Fisheries NZ Public Consultation on the SQU6T Operational Plan closes 5pm Sept 20th

More information can be found - <https://www.fisheries.govt.nz/news-and-resources/consultations/draft-squid-6t-operational-plan/>