



Hoki

Argentina – Australia – Chile – New Zealand

Supply and Insights



Thanks for your help!

- » Mario Inostroza Emdepes, Chile
- » Mariano Mansilla Seaman International, Argentina
- » Doug Paulin Sealord, New Zealand
- » Rosie Hurst NIWA, NZ
- » Greg Johansson Johansson Seafood, NZ
- » Inge Wisselink Deepwater Group, NZ
- » Janice Molloy Southern Seabird Solutions, NZ





BEAUTIFUL
NEW ZEALAND
SEAFOOD

\$515.0M

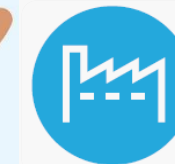
REVENUE IN 2018



43
Vessels

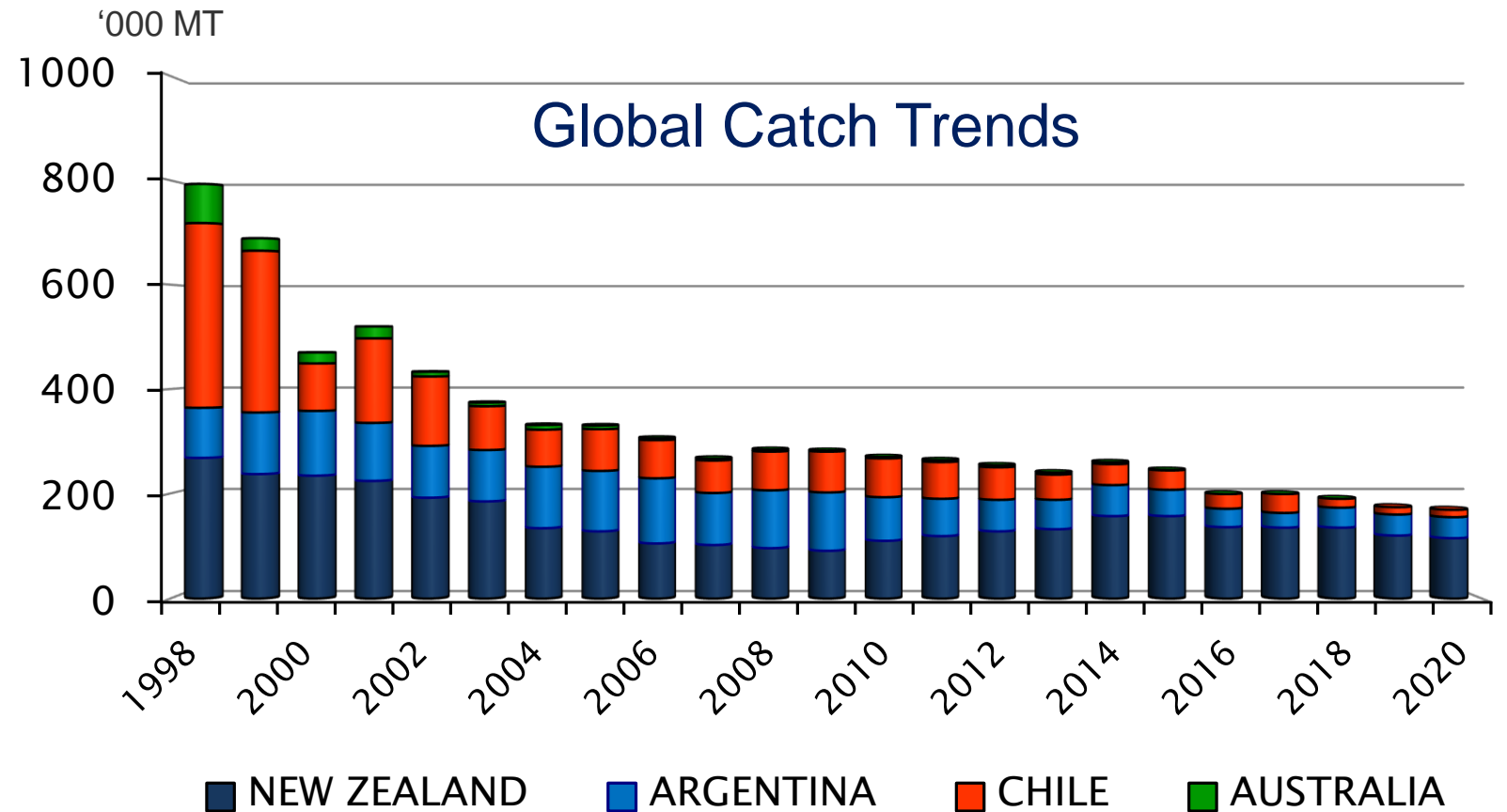


219
Aquaculture
Farms



8
Processing
Sites

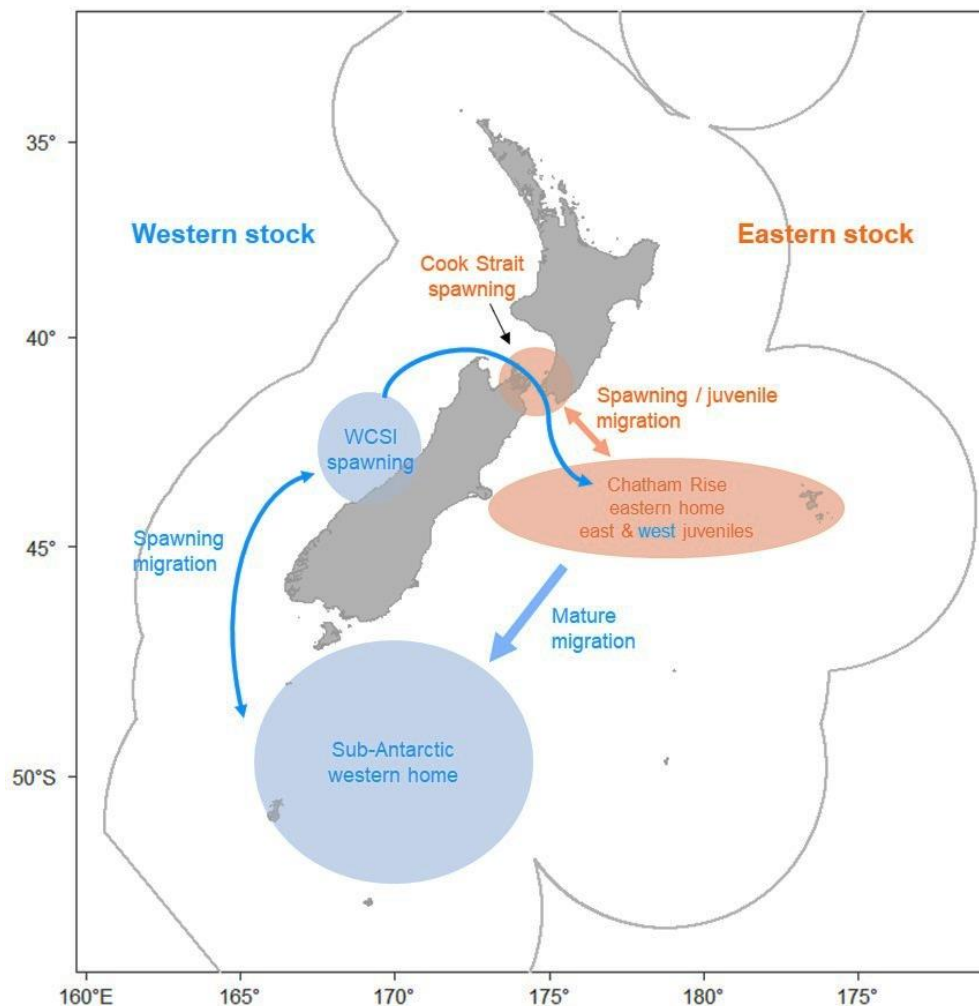
Hoki



Source: until 2017 = FAO; 18 - 20 = GFF

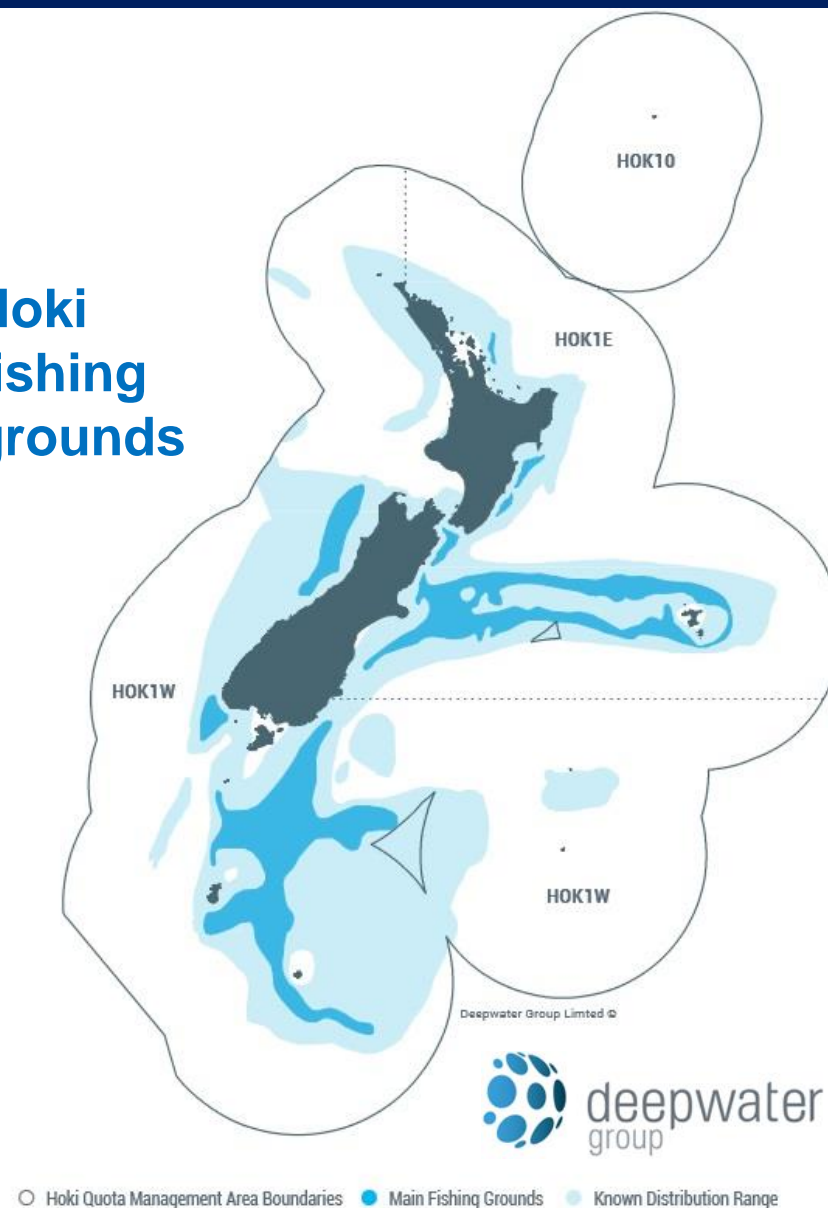
Hoki – New Zealand

Hoki nursery, spawning, and home grounds and hypothetical migration routes



Fisheries New Zealand
Plenary Report 2019

Hoki fishing grounds



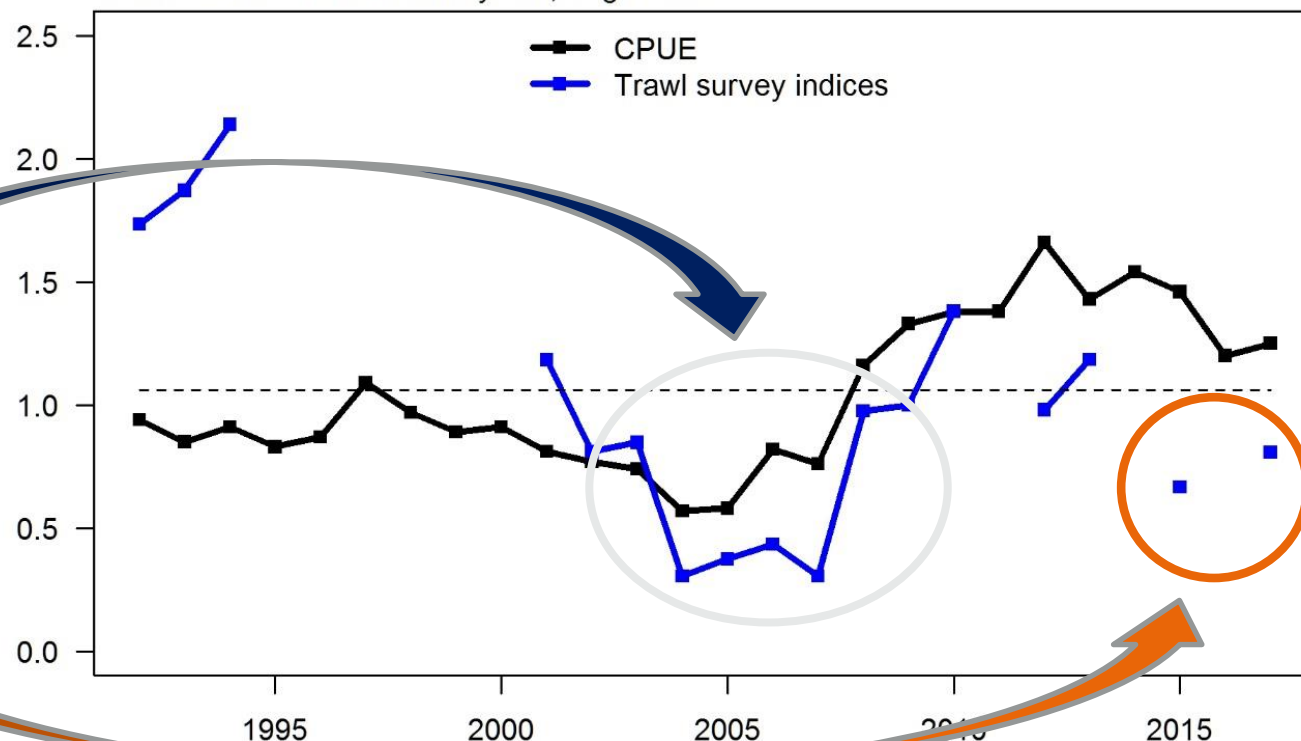
Stock Assessment – Sub-Antarctic Survey Uncertainty

Uncertainty about possible change in catchability in mid 2000's

And how to interpret the recent decline

- Significant warming in northern and western areas around New Zealand
- Tasman (= west coast hoki spawning area) cool periods corresponded to highest hoki year class strengths

Sub-Antarctic: TCEPR tow-by-tow, target hoki

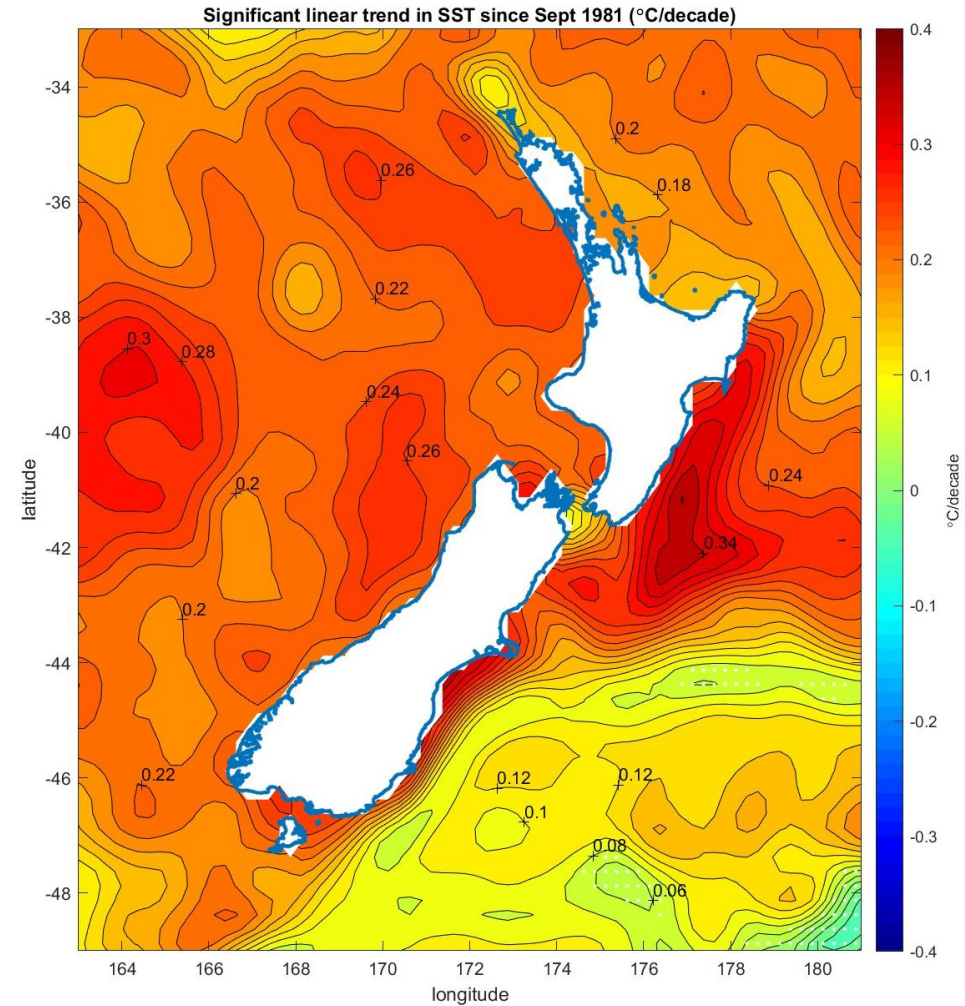


Hoki – New Zealand

Sea surface temperature change around NZ: trend since 1981



Sutton, P., Bowen, M., 2019: Ocean temperature change around New Zealand over the last 36 years. New Zealand Journal of Marine and Freshwater Research.
<https://doi.org/10.1080/00288330.2018.1562945>



Shifting the Focus



SANFORD



2014

commodity fish -> seafood -> beyond food

2019



Sealord Hoki Retail Range



Block Fillet



9 skus in range

Portions



6 skus in range

Fingers/Cakes/Fries/Bites



8 skus in range

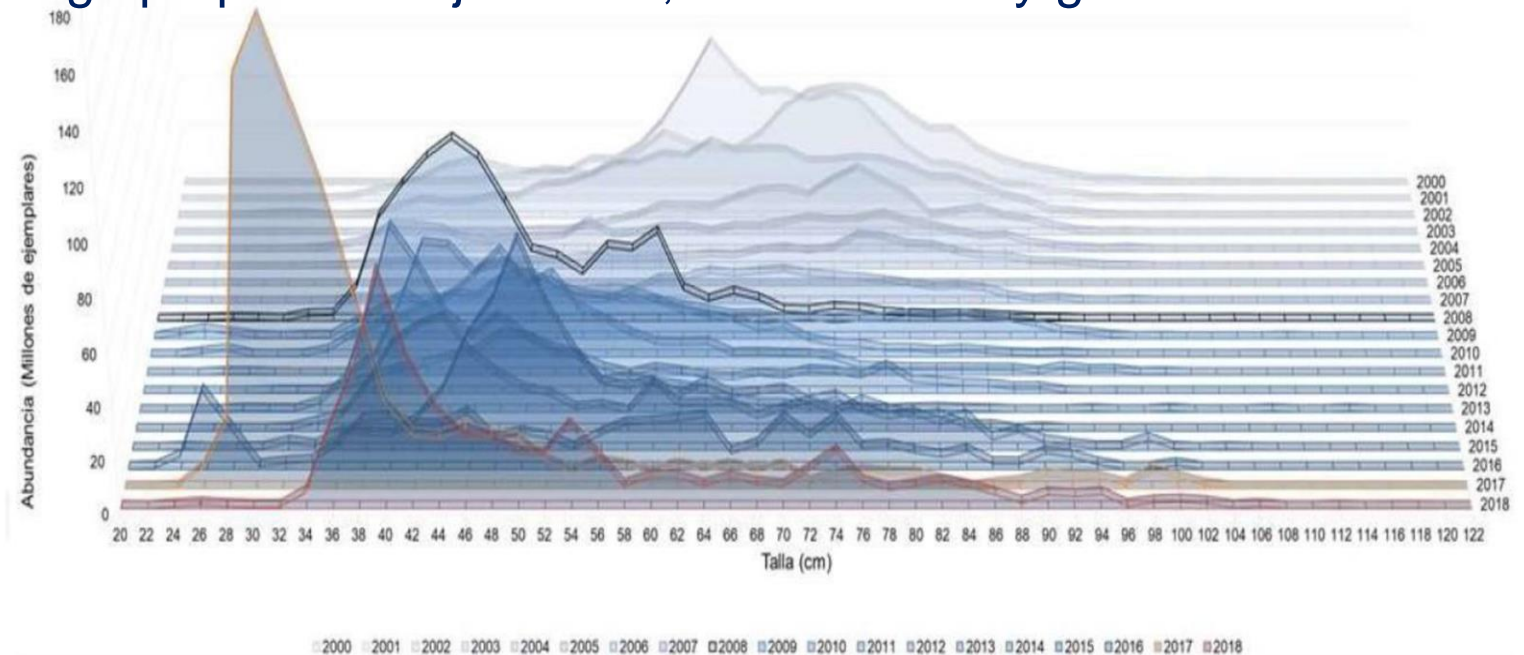
Hoki – Argentina

- » TAC: ~80,000mt
 - » Biomass in good shape
 - » Fishery operates under a ITQ system that is working without problems.
- » Catches: ~40,000mt in 2018 and expected ~40,000mt in 2019
 - » Economical reasons for under catch. Only 2 companies are using their full quota (San Arawa and Pesantar).
- » Product mix
 - » Fish blocks: only San Arawa on one vessel
 - » Surimi: produced by San Awara out of hoki and SBW
 - » Shatterpacked fillets and HGT: Pesantar
- » MSC
 - » Certification temporarily suspended in June 2019 mainly due to issues with juvenile catches
 - » Action plan subsequently presented and approved by MSC
 - » Suspension is expected to be lifted before the end of 2019
- » Company M&A
 - » San Arawa, previously owned by Nichimo Japan, has been bought by a Norwegian group of investors in March 2019. The management of the company is now through another Argentine company, Estremar SA.



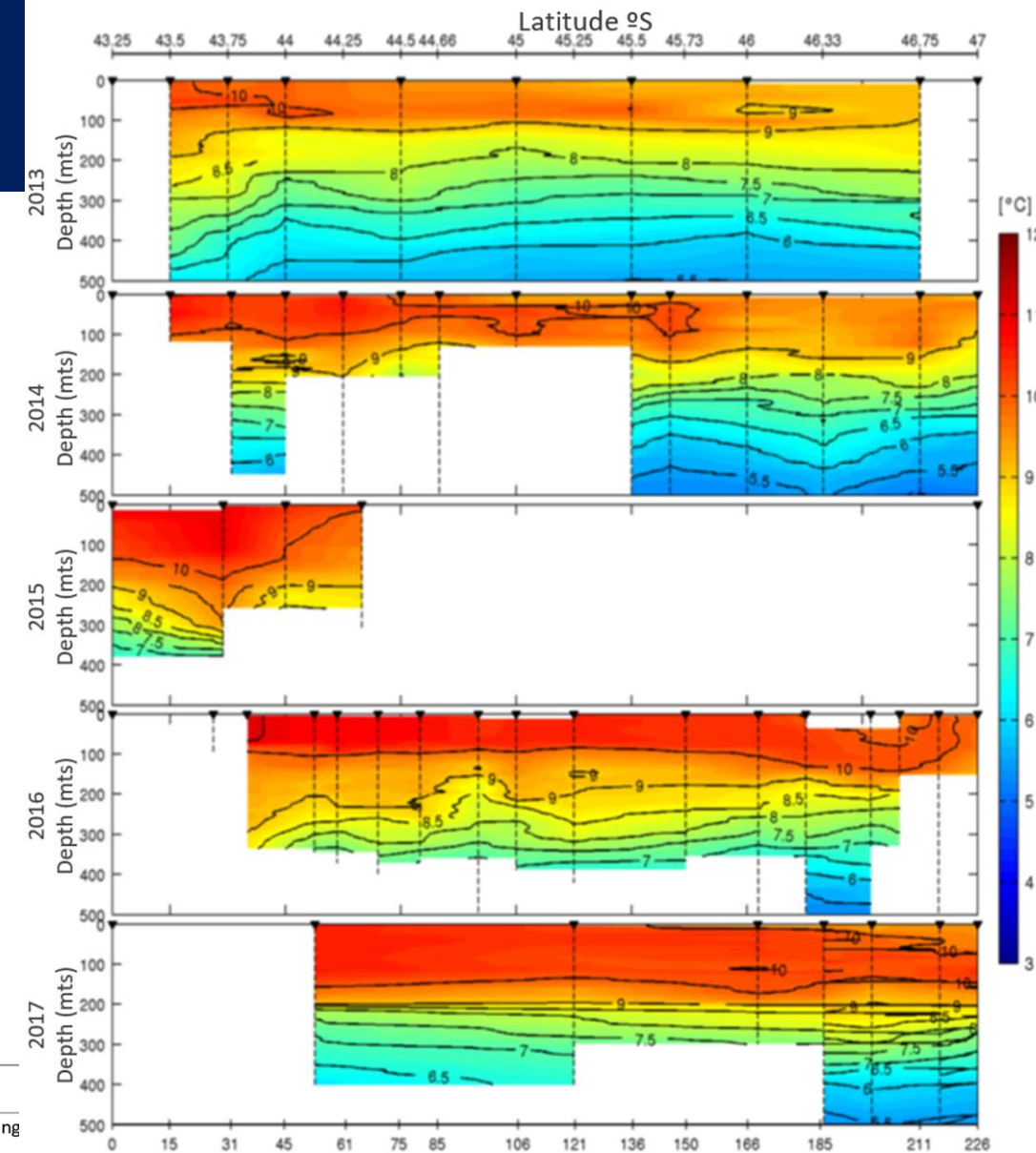
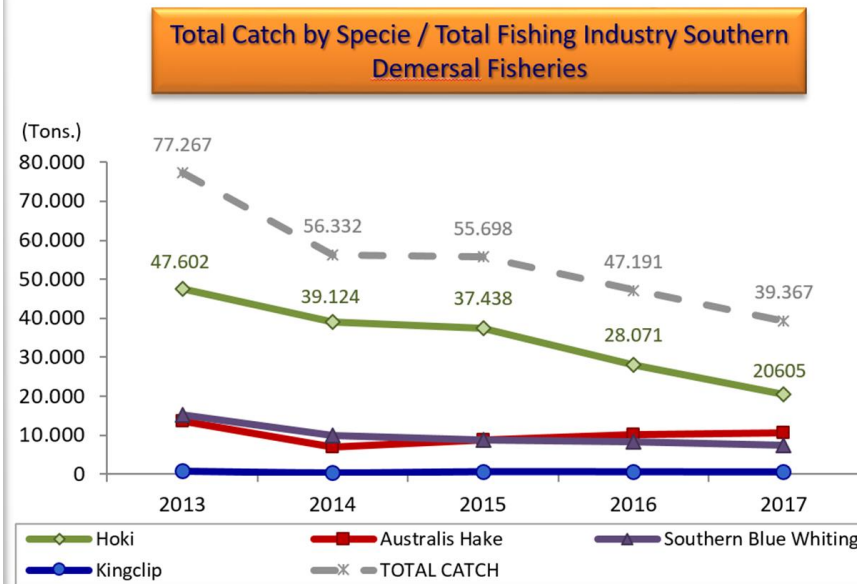
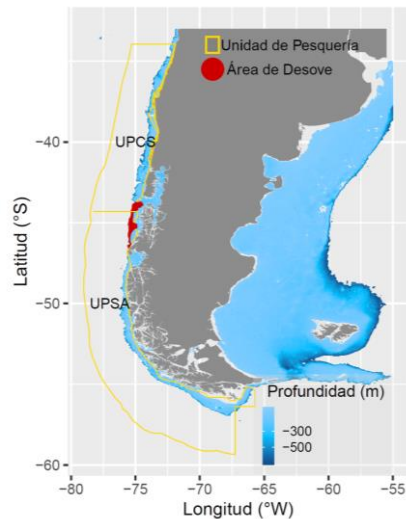
Hoki – Chile

- Hoki fishery in Chile is managed through a well functioning ITQ system
- Catches have decreased significantly over the last few years due to changes in the behaviour of the biomass due to climatic change
- The current biomass has a high proportion of juveniles, which is a very good news for the future



Hoki – Chile

- In 2016 and 2017 a relative increase in the sea surface temperature is observed with a deeper thermocline (~200 m)
- There is a correlation between the increase in the water temperature and the decrease in the total catches
- In all this period, total catches have decreased in the Chilean fishery.



Environmental Effects – New Zealand

Since 2006, reduced interactions with protected species:



Bird captures

▼ **63%**

Estimated captures
1,985 to 744

Albatross by 74%



Sea lion captures

▼ **82%**

Estimated captures
50 to 9

Now close to zero



Fur seal captures

▼ **81%**

Estimated captures
1,041 to 200

Declining



Dolphin captures

▼ **99%**

Estimated captures
85 to 0

Now close to zero



Seabirds

- **New Zealand - seabird capital of the world with over 80 species breeding**
- **Significant actions, interventions and processes – 13 years for trawl, longer for longline**
- **Progress made – benchmarks well with international results**
- **We still have challenges with trawl net captures of birds**



The Need for International Collaboration To Safeguard the Survival of Southern Seabirds



Tracking seabirds
“We breed them – you feed them”

Environmental Effects – New Zealand

Protected Areas



1% of the EEZ is trawled annually

8% of the EEZ has ever been trawled

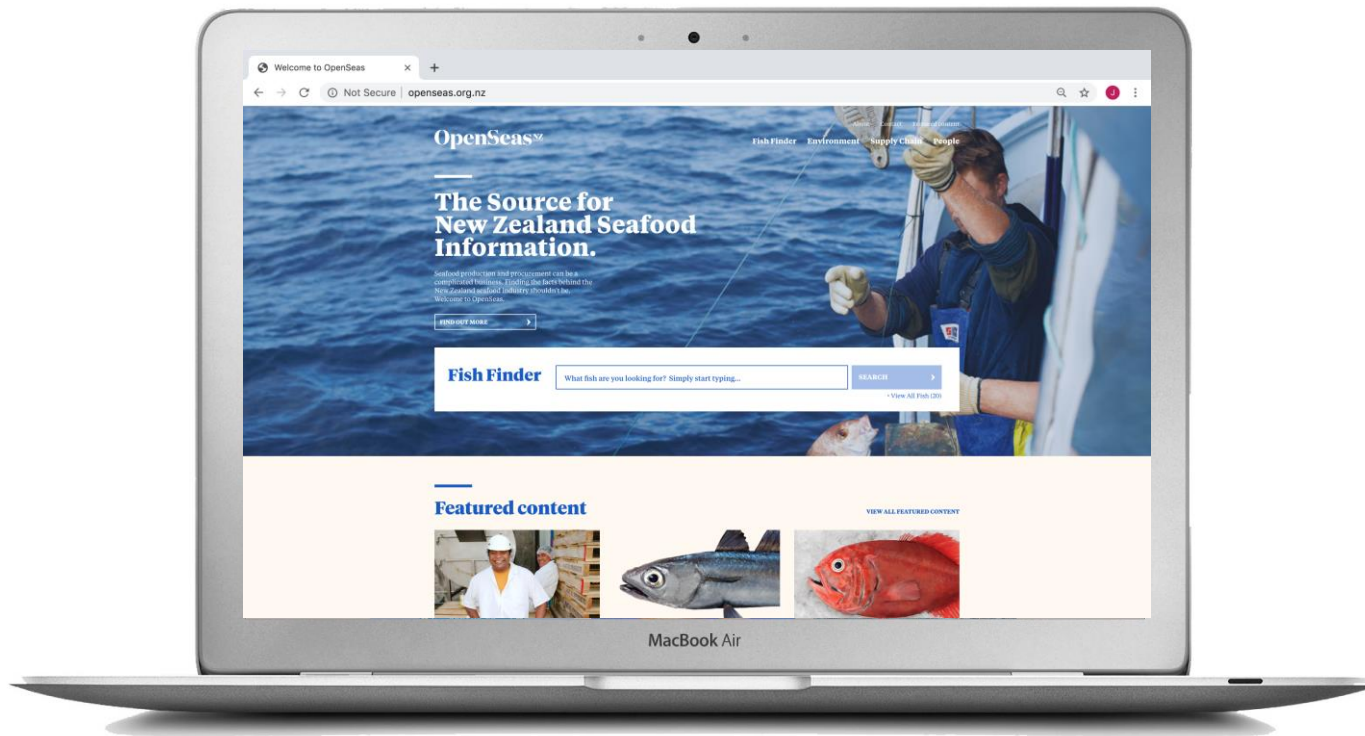
30% of the EEZ is closed to trawling



Building Trust through Transparency – Independently Verified

OpenSeas^{NZ}

The Source for
New Zealand
Seafood Information



www.openseas.org.nz



Seafood production and procurement can be a complicated business.

Finding the facts behind the New Zealand seafood industry shouldn't be.



Precision Seafood Harvesting – Collaborating for Innovation in NZ

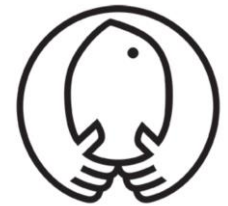
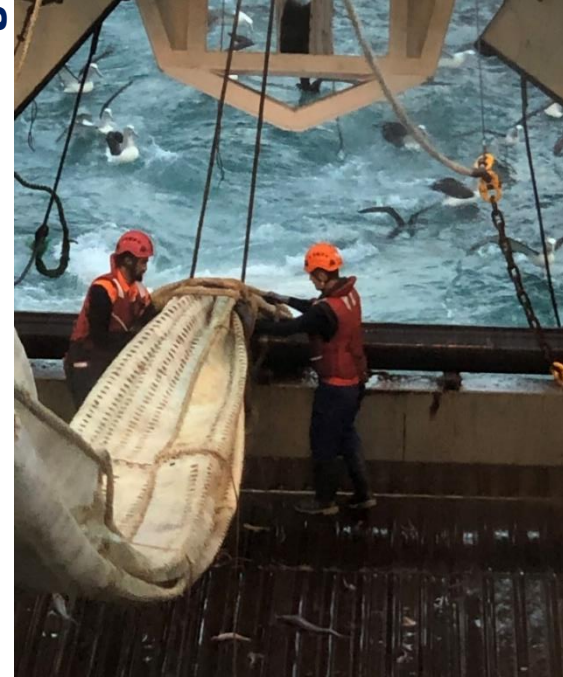
- NZ Regulatory approval for targeting 8 different species
- Vessels from 19m to 83m using PSH daily, fishing from 20m to 600m
- Catch rates maintained (as a minimum) with less fuel burn
- Longline quality (as a minimum) caught by trawl (achieved for a portion of the catch)
- Catch value lift through quality and product cascade
- Reduced cryptic mortality

Next step

- i. Commercialisation



Precision Seafood Harvesting



TIAKI





Thank you!

