

Deepwater Council 2022-23 Annual Report

Presentation at Deepwater Council Meeting
13 December 2023



Sustainable deepwater fisheries

DWC unites quota owners, leads sustainable management

Effective, professional,
collaborative
representation
– world leading

Main deepwater stocks
are **within or above**
target range,
others are rebuilding

Sustainability of these
fisheries has been
achieved through robust
science and
co-management
– led by industry

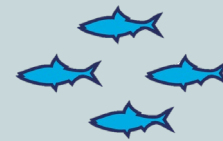
Deepwater Council members



44
seafood companies
have appointed
representatives in
Deepwater Council



82
vessels
operated these 44
seafood companies



91%
of quota
for deepwater
fisheries owned by
these 44 companies



40%
of quota
for deepwater
fisheries is owned
by Māori

Deepwater fisheries at a glance



242,581
tonnes

of fish caught by
DWC members

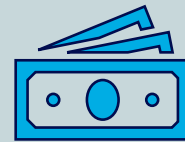
95% of all deepwater catch
(FishServe)



\$599
million

export value of the
9 main deepwater
fisheries

\$647m last year
(SNZ)



\$2.7
billion

Annual contribution
of all deepwater
fisheries to the NZ
economy
(BERL)

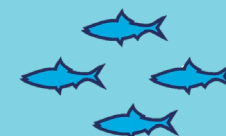


8,500
people
employed

in the deepwater
seafood sector

(BERL)

According to the Fisheries Industry Transformation Plan (ITP) 96% of landings from stocks of known status were from stocks with no sustainability concerns.



2022-23 was another busy year...

October 2022

MSC publishes V3 of Fishing Standard – to come into effect May 23

DWC media release on Fisheries Amendment Bill (consultation started Jan 22)

Inaugural OPG meeting
(Environmental Risk Management Operational Group)

Workshop DWC, FishServe, FNZ – Review of Catch Split
Agreements and Management

November 2022

December 2022

DWC submits on Bottom Trawling in EEZ

GC and RW farewelled

MSC GAP analysis V2 vs V3

Aaron meeting with ASF and MSC

January 2023

February 2023

SNZ, FINZ, and DWG amalgamate

DWC organises Symposium on Seafood Production

ORH Characterisation presented at DWWG

HOK MSE/HCR presented at DWWG

CSIRO to discuss SMART-Cam, five-year research plan

ORH 2023 Stock Assessment unsuccessful

March 2023

April 2023

Draft Fisheries ITP out for consultation April - June

Ben Steele-Mortimer presents at ACAP

May 2023

AgResearch publishes *The carbon footprint of fish from the NZ deepwater trawl fleet - A preliminary study*

ORH 3B (ESCR) 2020 Stock Assessment set aside by FNZ Stock Assessment Plenary

June 2023

Annual FNZ | DWC Vessel Operators Compliance and Management Meeting

OpenSeas ISO audit

July 2023

Submission on SQU 6T Operational Plan

August 2023

Seafood Conference – DWC presentation

Submissions on SWA 3 & ORH 3B 2023-24
Sustainability Proposals

MSC Fisheries Standard V3 workshop Wellington

HOK, HAK, LIN, SBW 4th surveillance audit (against V1.3)

InfoPortal deployed for testing
Sea lion TMP forum

September 2023

... and throughout the year we also worked on

ELI Judicial Review

EEZ Bottom Trawl Forum

Prep for orange roughy 1st first surveillance audit (Oct 2023)

DOC CSP (Conservation Services Programme) and FNZ Aquatic
Environment Working Group – project reviews and engagement

Project TAGS (Towards a Global Sustainability Standard)

2022-23 Management and Performance of key deepwater fisheries



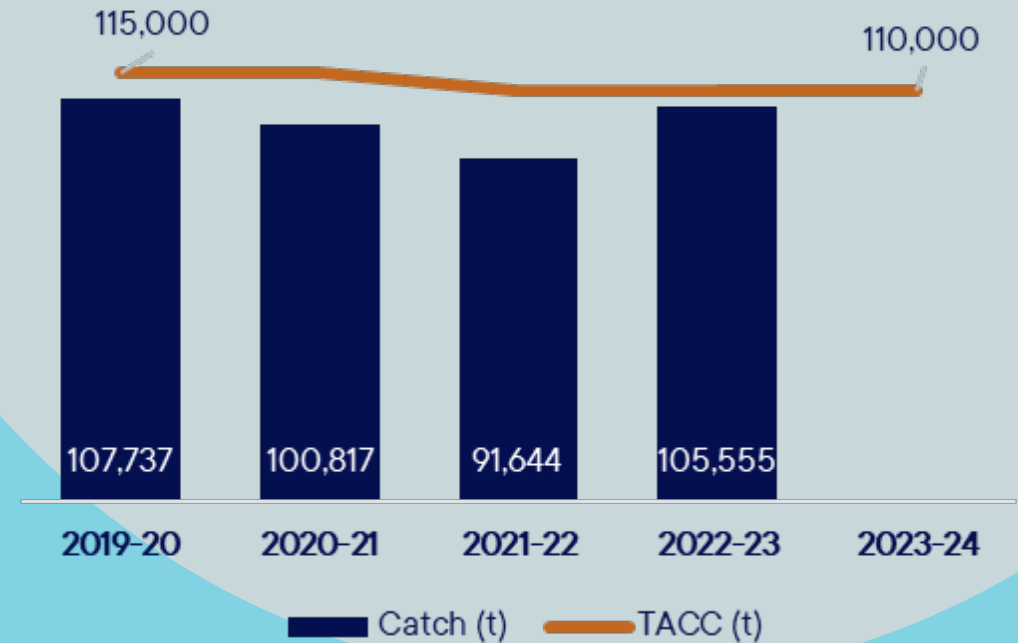
Hoki

The 2022-23 TACC remained at 110,000 t. Quota owners agreed to hold catches to 100,000 t.

Catches increased from 91,644 to 105,555 t.

No change to the 2023-24 TACC.

HOK 1 was not reviewed at the 2023 Sustainability Round but is being assessed for consideration for October Round 2024.

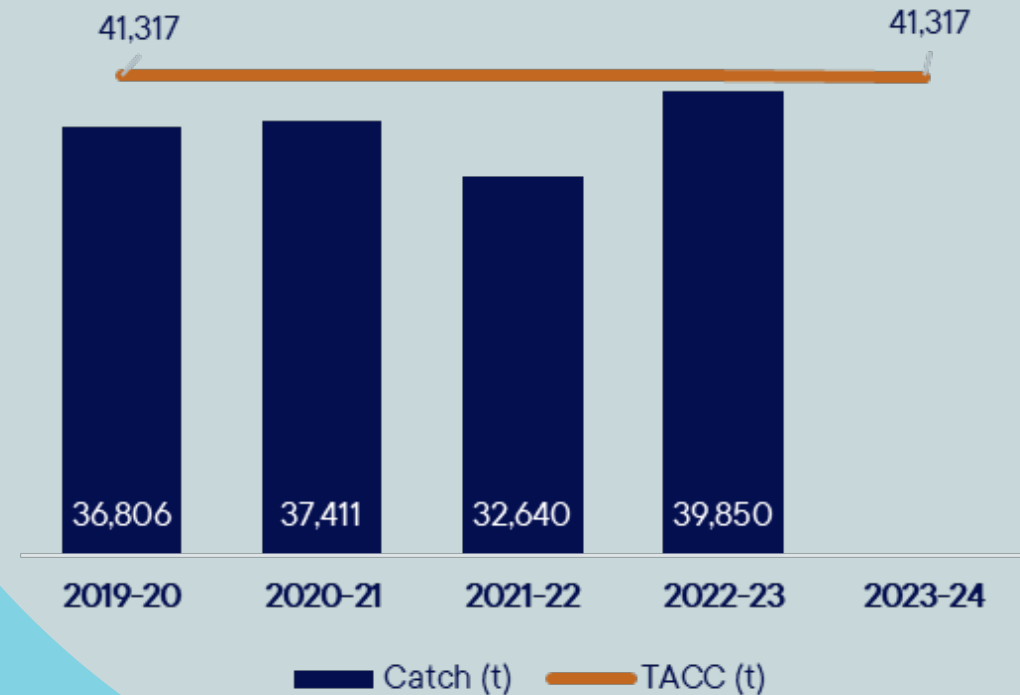


Jack Mackerel (JMA 3,7)

The 2022-23 TACC remained at 41,317 t with catches up 22% to 39,850 t, largely due to an increase in JMA 7 catch.

No change in 2023-24 TACC.

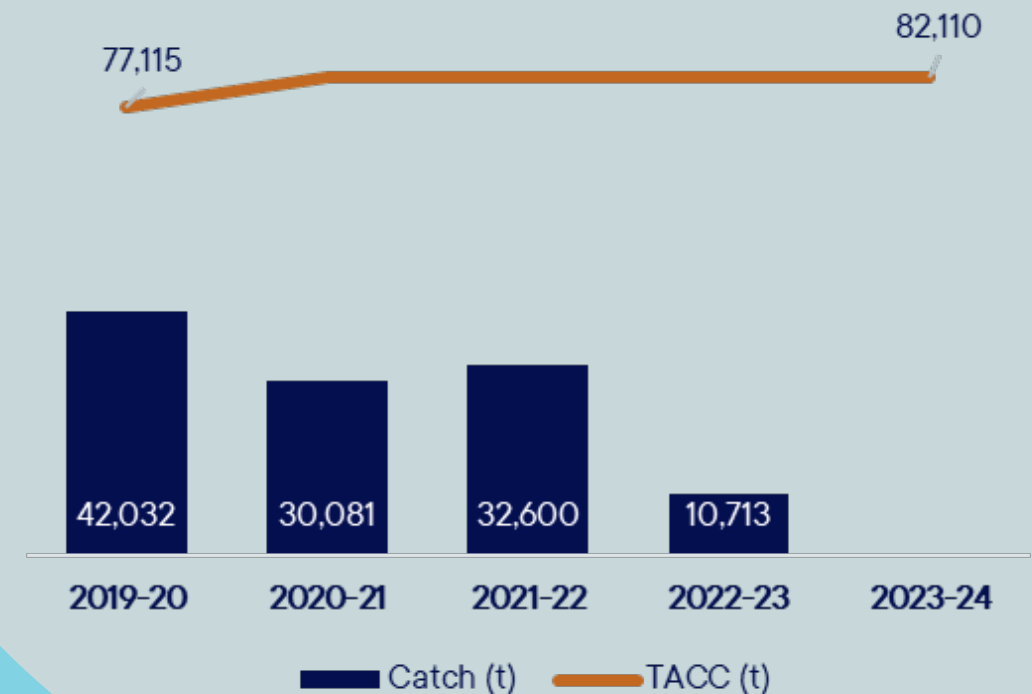
JMA 7 is being assessed for consideration for October Round 2024.



Squid

The 2022-23 TACC remained at 82,110 t with catches dropping off quite dramatically to 10,713 t. The 2023-24 TACC is unchanged.

Mormede & Dunn project - Development of Harvest Strategy, work with FNZ and scientists to establish management strategy ongoing.



Southern blue whiting

The 2022-23 TACC was reduced from 49,268 t to 48,702 t.

Catches increased to 23,410 t, 98% of which was caught in SWB 6I.

No change to the 2023-24 TACC.

SBW 6B is being considered for the April 2024 Sustainability Round, thanks to a successful acoustic survey for SBW 6B earlier this year.



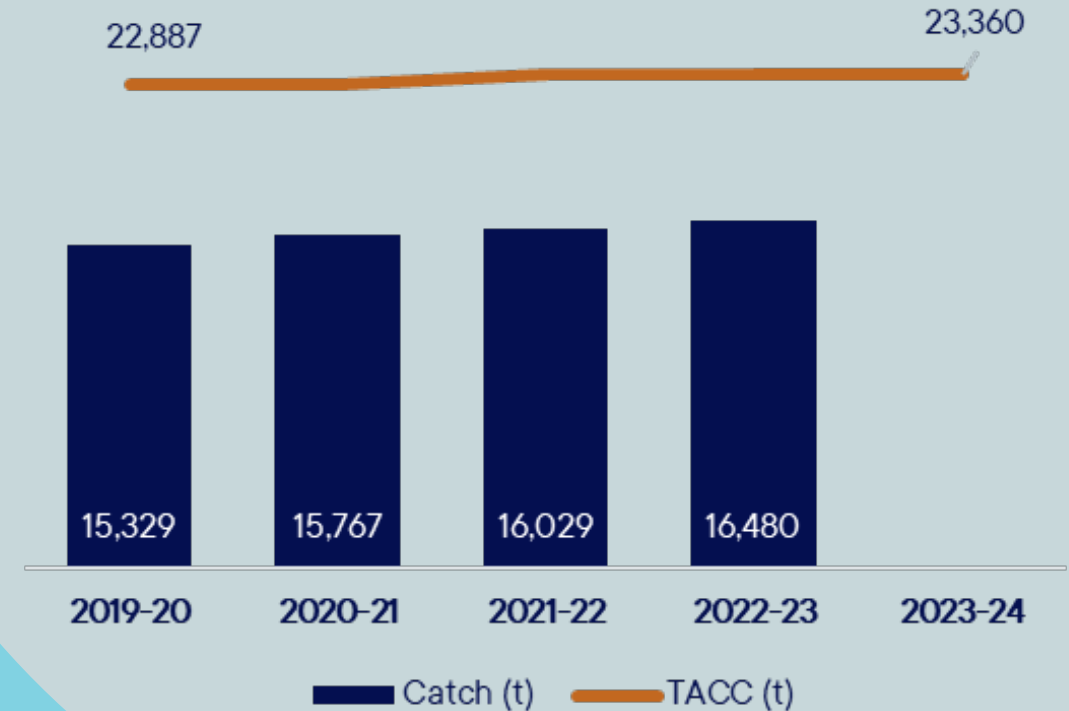
Ling (LIN 3-7)

The 2022-23 TACC remained at 23,360 t and catches increased slightly to 16,480 t.

No change to the 2023-24 TACC.

LIN 5 and LIN 6/6B are being assessed for consideration for the October Round 2024.

The stock assessment is considering whether LIN 6 and LIN 6B are the same stock.



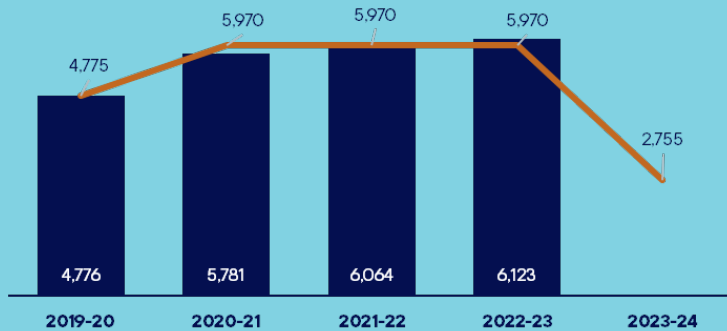
Orange roughy

2022-23 TACC remained at 12,151 t with catches down slightly to 9,508 t.

The 2023-24 TACC was reduced by 3,215 t. This cut was applied to ORH 3B ESCR, reducing it by 53%.



ORH 3B ESCR Catch v TACC



ORH 7A being assessed for consideration for the October Round 2024.



Oreos

There was no change to the 2022-23 TACC, which remained at 15,450 t.

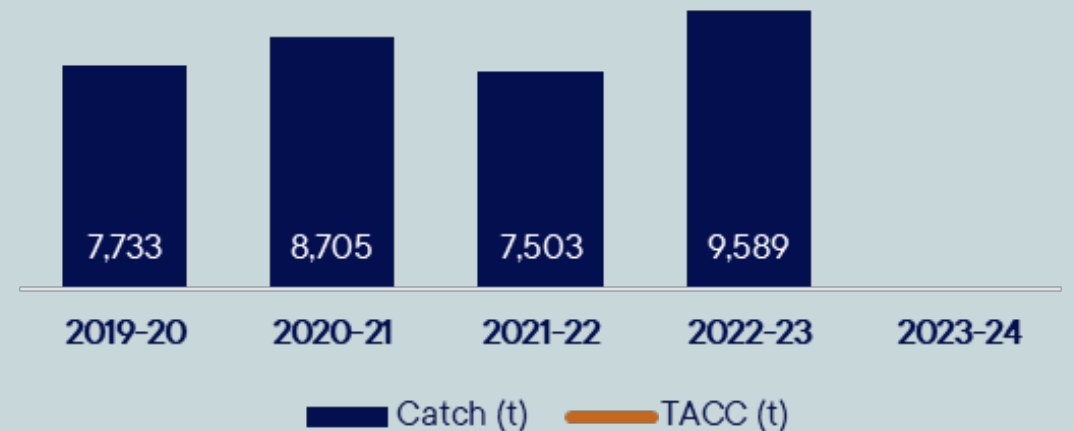
Catches up 28% to 9,589 t (mostly due to catches in OEO 6 up by 92%).

No change to the 2023-24 TACC.



15,450

15,450



Hake (HAK 1, 4, 7)

The 2022-23 TACC remained at 7,773 t.

Overall catches down slightly to 2,902 t, with HAK 1 decreasing and HAK 7 increasing.

The 2023-24 TACC is unchanged.

HAK 7 stock assessment is currently being updated for MSC purposes.



Scampi (SCI 1-3, 4A, 6A)

The 2022-23 TACC increased by 13 t (all in SCI 1) to 1,337 t.

Catches were steady at 1,124 t.

There was no change in the 2023-24 TACC.

SCI 6A is being assessed for consideration in October Round 2024. Current TACC is 306 t.



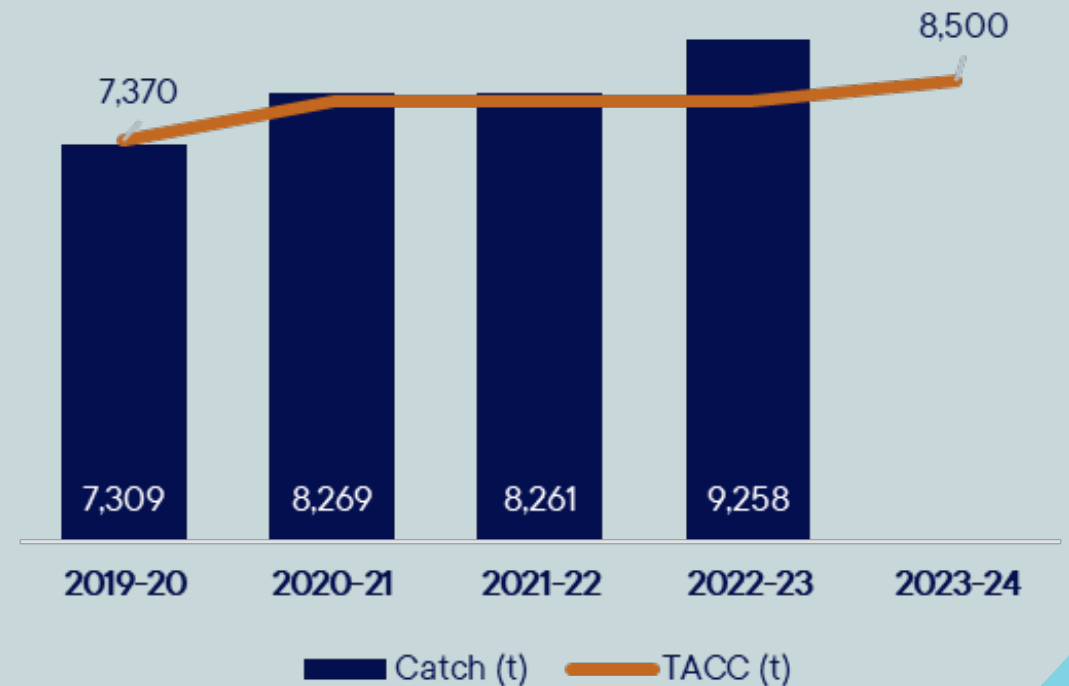
Silver warehou (SWA3, 4)

The 2022-23 TACC remained at 8,110 t with catches increasing to 9,258 t.

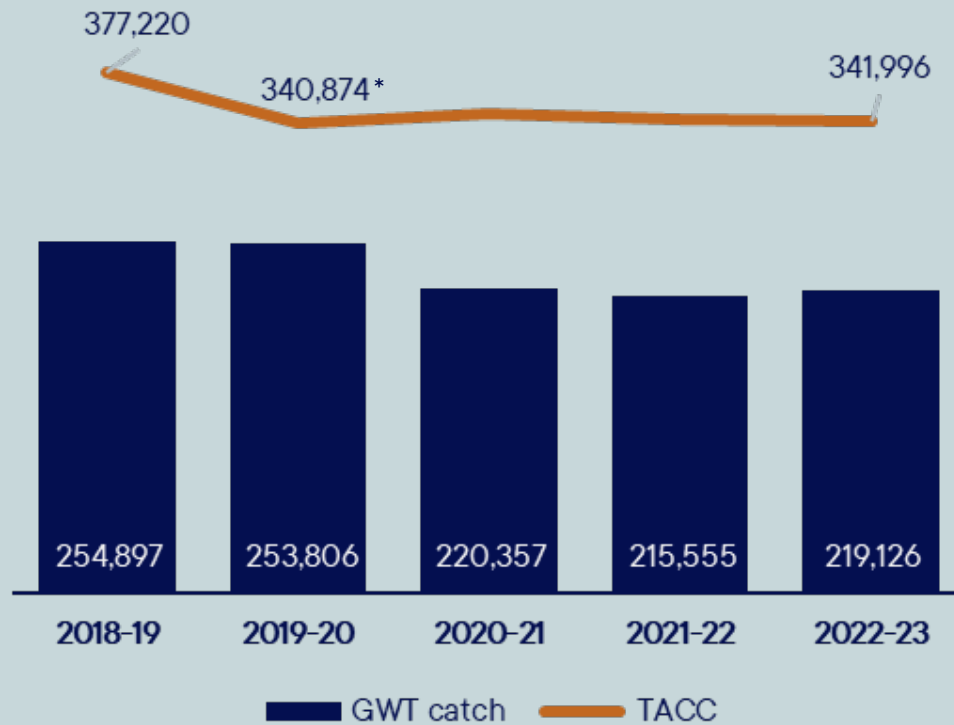
The 2023-24 TACC increased to 8,500, with SWA 3 going up 10% from 3,610 to 4,000 t.

SWA 4 is being considered for review in April 2024 (4,500 to 5,000 t), and we're in discussion with FNZ about a further increase in SWA 3 also.

SWA stock has proved very difficult to assess. A recent stock assessment - although not accepted - did confirm that there was no evidence to establish that SWA 3 and SWA 4 were different stocks.

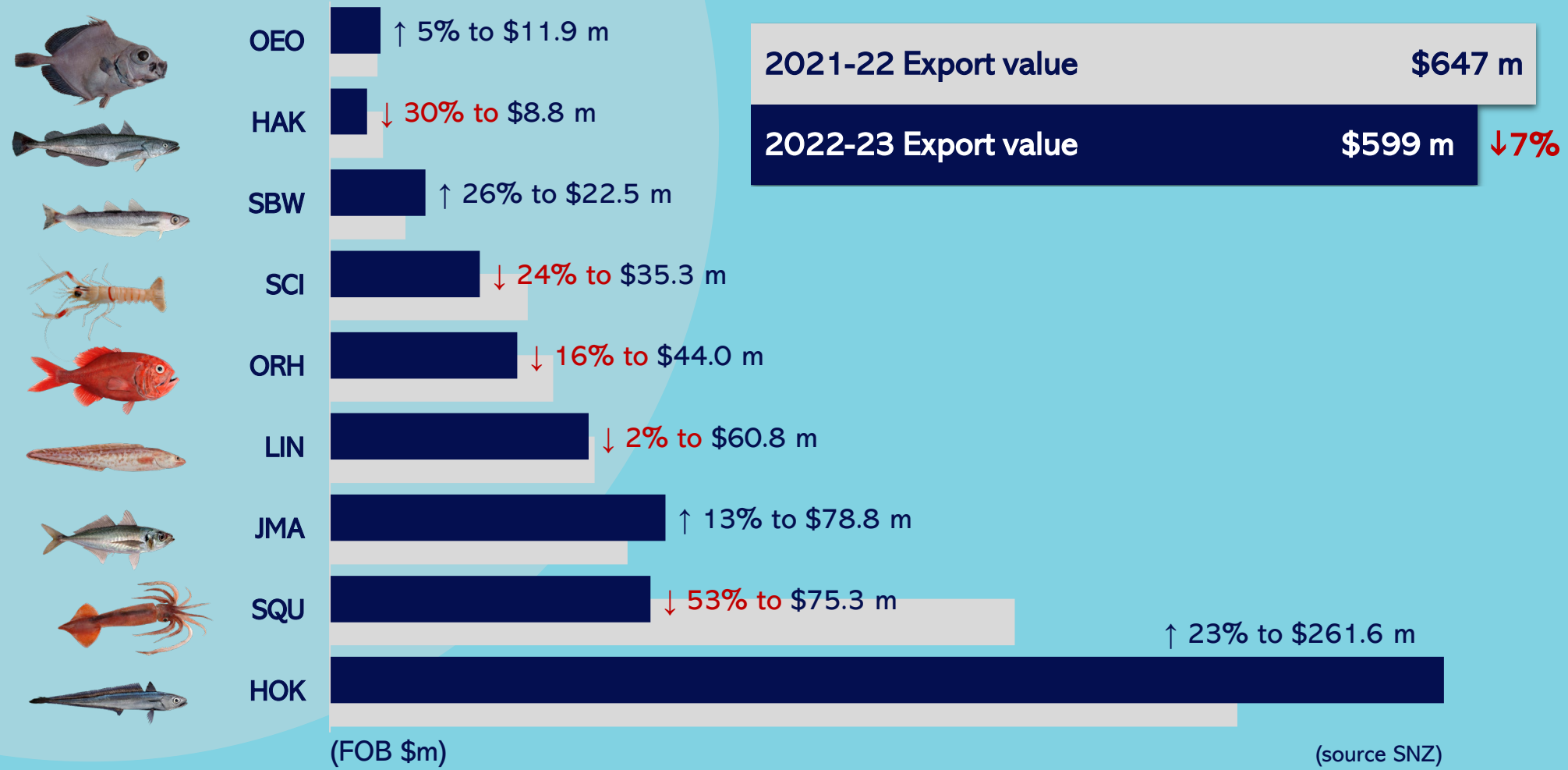


The GWT catch of our nine Tier 1 species for 2022-23 increased by 2%.



* In 2019-20 the TACC for HOK 1 was reduced from 150,000 t to 115,000 t explaining the ~10% reduction in TACC for the nine species that year.

Export values of our Tier 1 species decreased by 7% from \$647 m to \$599 m



(FOB \$m)

(source SNZ)

Top 10 seafood export destinations

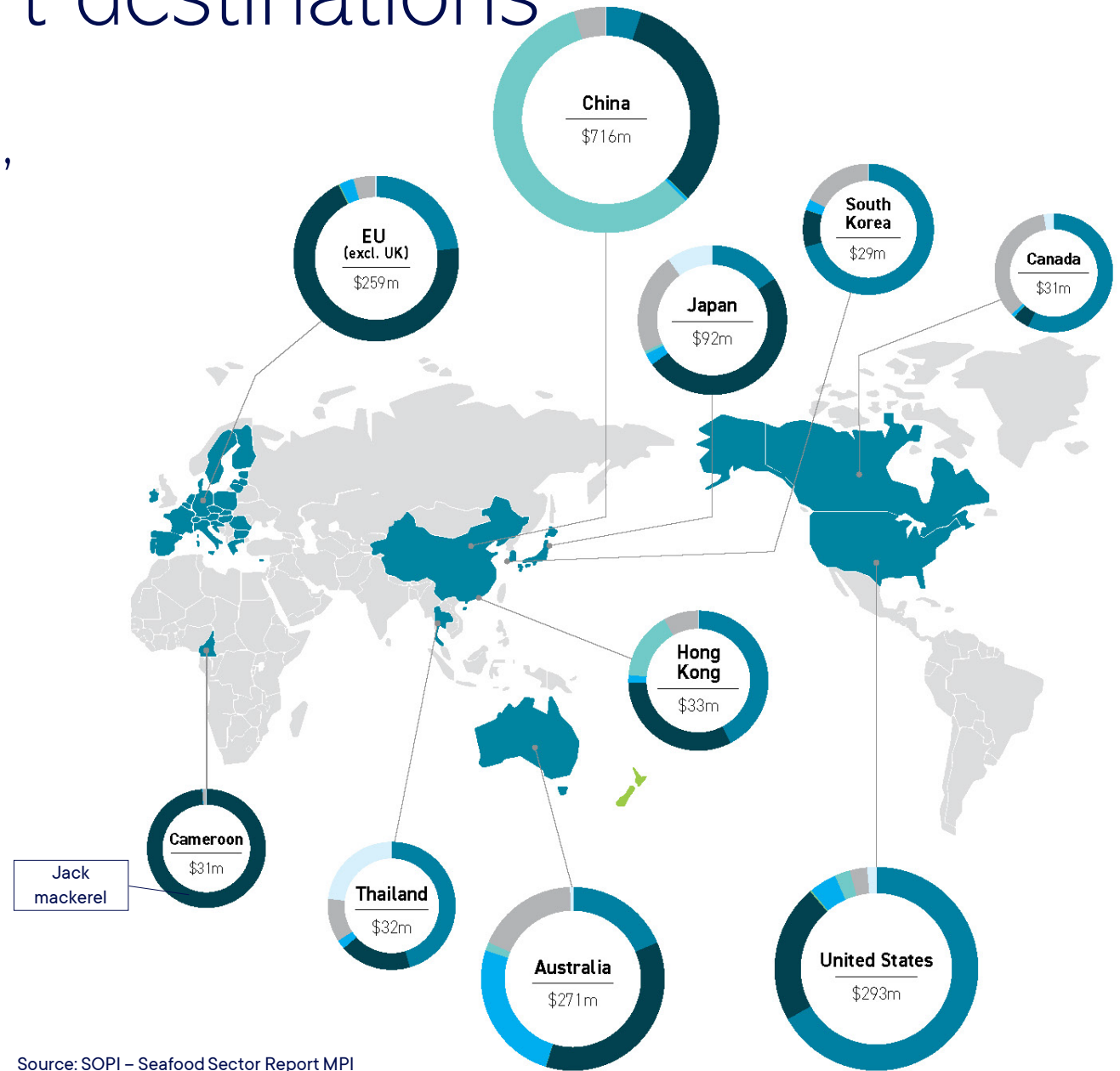
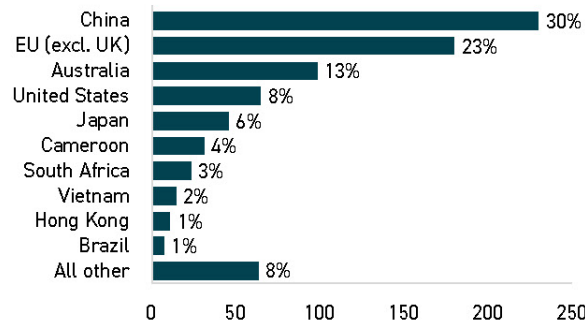
Year to 31 March 2023, NZ\$ million

Total export revenue for deepwater \$765m, up from \$709m in the previous year.

Product	Export revenue (NZ\$ million)	% of total
Deepwater	765	38%
Aquaculture	486	24%
Inshore shellfish	447	22%
Inshore finfish	107	5%
Pelagics	27	1%
Freshwater	3	0.1%
Other fish products	172	9%
Total	2,007	100%

Source: Stats NZ.

Deepwater



Source: SOPI – Seafood Sector Report MPI

Certified as Ecologically Sustainable

HOK, HAK, LIN, SBW

The hoki, hake, ling and southern blue whiting fisheries are to commence the certification process in 2024 against MSC v3.0. The current certificate expires in February 2025.

ORH

First surveillance audit for orange roughy (ORH 3B NWCR & ESCR and ORH 7A) in October 2023. Given that the Plenary has set aside the 2020 stock assessment for ORH 3B ESCR, quota owners have supported a precautionary reduction in the TACC and have agreed to self-suspend their ORH 3B ESCR MSC Certificate at the upcoming audit. The current certificate expires in August 2027.

19
deepwater fisheries
certified by MSC,
representing

~64%
of the 2022-23
deepwater catch

3  orange roughy
fisheries

2  hoki
fisheries

2  hake
fisheries

10  ling
fisheries

2  southern blue whiting
fisheries

2022-23 Key Industry Science Projects

Hoki projects

In 2022-23, DWC contracted Oritain to undertake geo-location analysis using chemical isotope and metal compound analysis to see if they could detect differences between samples of fish taken from WCSI, CS and Pegasus. This work is still being finalised.



DWC also contracted Trophia to undertake a Management Strategy Evaluation (MSE) of the hoki fisheries and develop Harvest Control Rules (HCR) to support management. Two Harvest Control rule scenarios were chosen as they achieved the agreed key performance indicators. (e.g., a catch based on at least 50 kt in both the Chatham Rise and WCSI/SubA). This year we were able to use these rules successfully in setting catch limits for the hoki fisheries.



Orange roughy projects

DWC | CSIRO \$11m five-year research programme

A successful survey acoustic biomass survey in 2022 produced results that were used in the management of ORH 3B NWCR and ESCR fisheries for the 2023-24 year.

While a benthic biodiversity survey was planned for selected areas on Chatham Rise, this was not able to be completed in 2022-23.

The development of the SMART-Camera system is on track to be tested in the coming year under New Zealand conditions. This camera system will be deployed on the headline of commercial trawls to monitor the seabed habitats we trawl across.

Carbon footprint (kg CO₂e / kg edible weight)

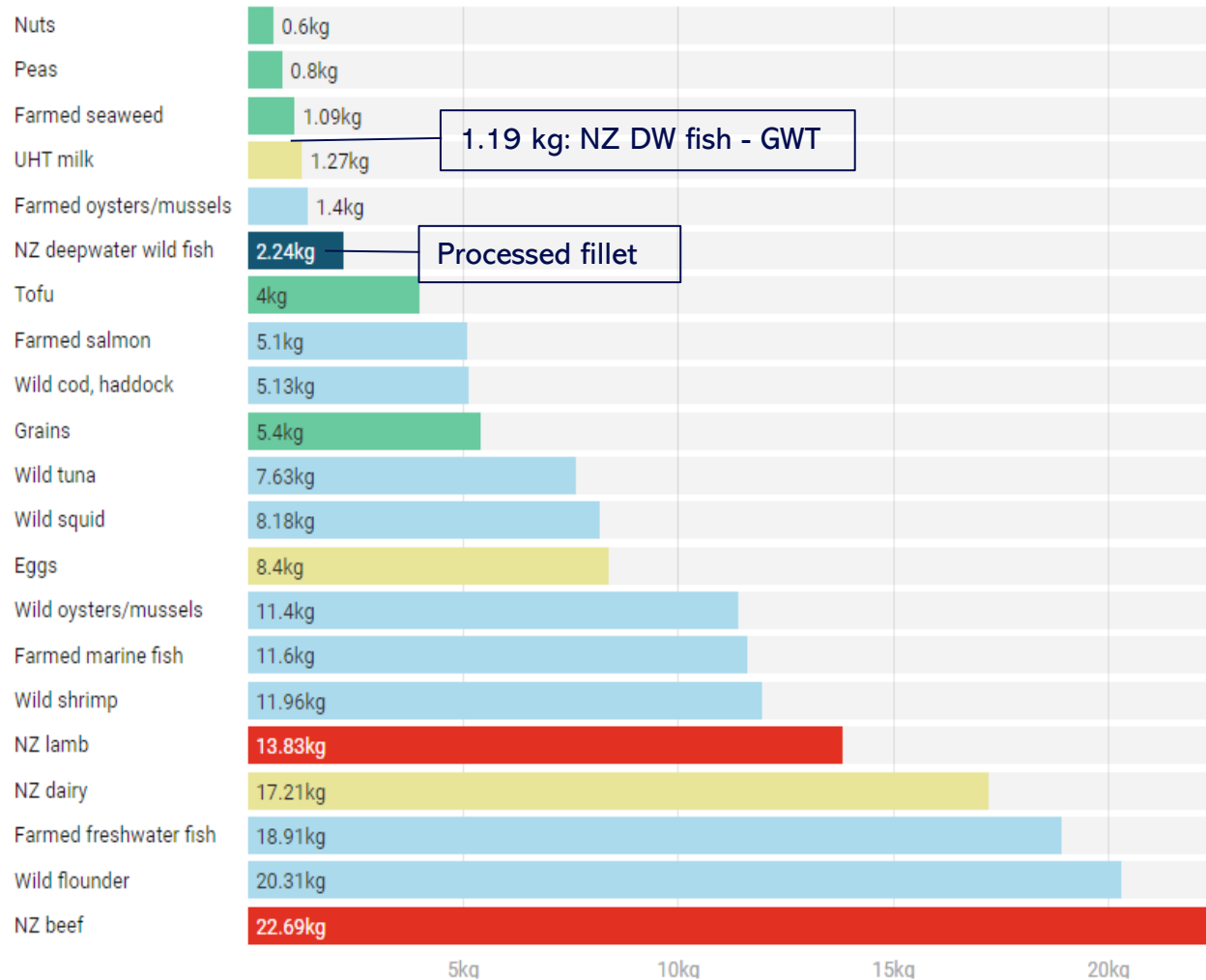


Chart: Jonathan Milne / Newsroom Pro • Source: Mazzetto & Ledgard; Poore & Nemecek • Get the data • Created with Datawrapper

Assessment of carbon footprint in deepwater trawl fisheries

In 2021-22 DWC contracted AgResearch to undertake a carbon life cycle assessment of harvesting by New Zealand deepwater trawlers in the EEZ.

In February 2023, AgResearch released its results at the Symposium on Seafood Production in Wellington.

Results show emissions (cradle-to-gate) to be around 1.19 CO₂e/kg. The lowest by some margin when compared to other sources of protein.

A partial extended study of processed fillets on board deepwater vessels found that in comparison to other forms of protein NZ deepwater fish per 100 grams is one of the lowest sources of protein in the world.

Review of Bottom Trawling in EEZ

In 2022, after a call by eNGOs to ban bottom trawling on 'seamounts' (referring to all UTFs not only true seamounts) a petition was presented to the Environment Select Committee. After hearing submissions, the Committee made a recommendation to have matters of bottom trawling addressed in an EEZ Forum.

At the direction of the Minister, FNZ established the EEZ Bottom Trawling Forum, which met throughout 2022-23.

At this forum, DWC made the following submissions:

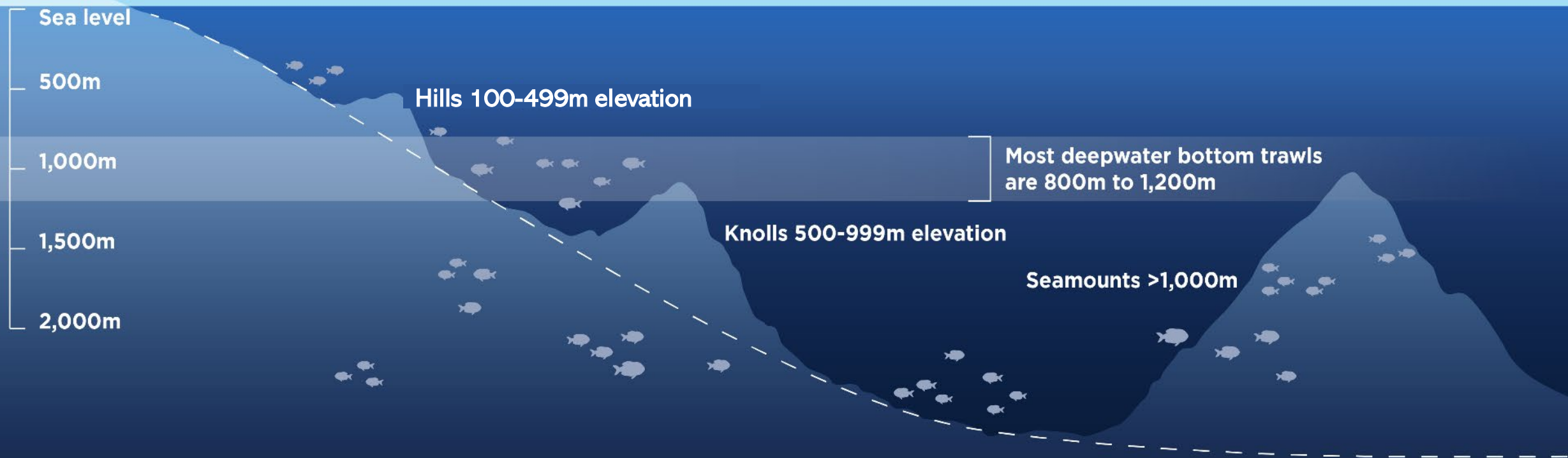
- The Fisheries Act anticipates impacts as a result of fishing but requires fishers to avoid, remedy, or mitigate adverse effects on the aquatic environment.
- In any given year, deepwater fisheries contact less than 2% of the EEZ, fishing the same tow lines again and again. In total, since 1989, just over 11% of the EEZ has been contacted once or more by trawl, leaving 89% of the untrawled or protected from bottom trawling (Seamount Closures, BPAs).
- There are 144 seamounts over 1,000 m in the New Zealand EEZ. Only 15% of these have been contacted once or more by bottom trawls.



144 seamounts within New Zealand's EEZ

85% of seamounts are either closed to trawling or have never been trawled.

15% of seamounts have been trawled once or more.



Seamounts are underwater features extending 1,000m or more above the surrounding seabed. Hills and knolls are much smaller underwater features.

Current seabed habitats protection

1.3%

of the EEZ is bottom trawled annually – same fishing grounds year-on-year.

89%

of the EEZ is untouched and has never been bottom-trawled

The latest trawl footprint information, from the AEWG meeting held on 1/11/22, provides a 'deepwater footprint' of 43,633 km² in **2020-21**, which equates to **1.11%** of the EEZ.

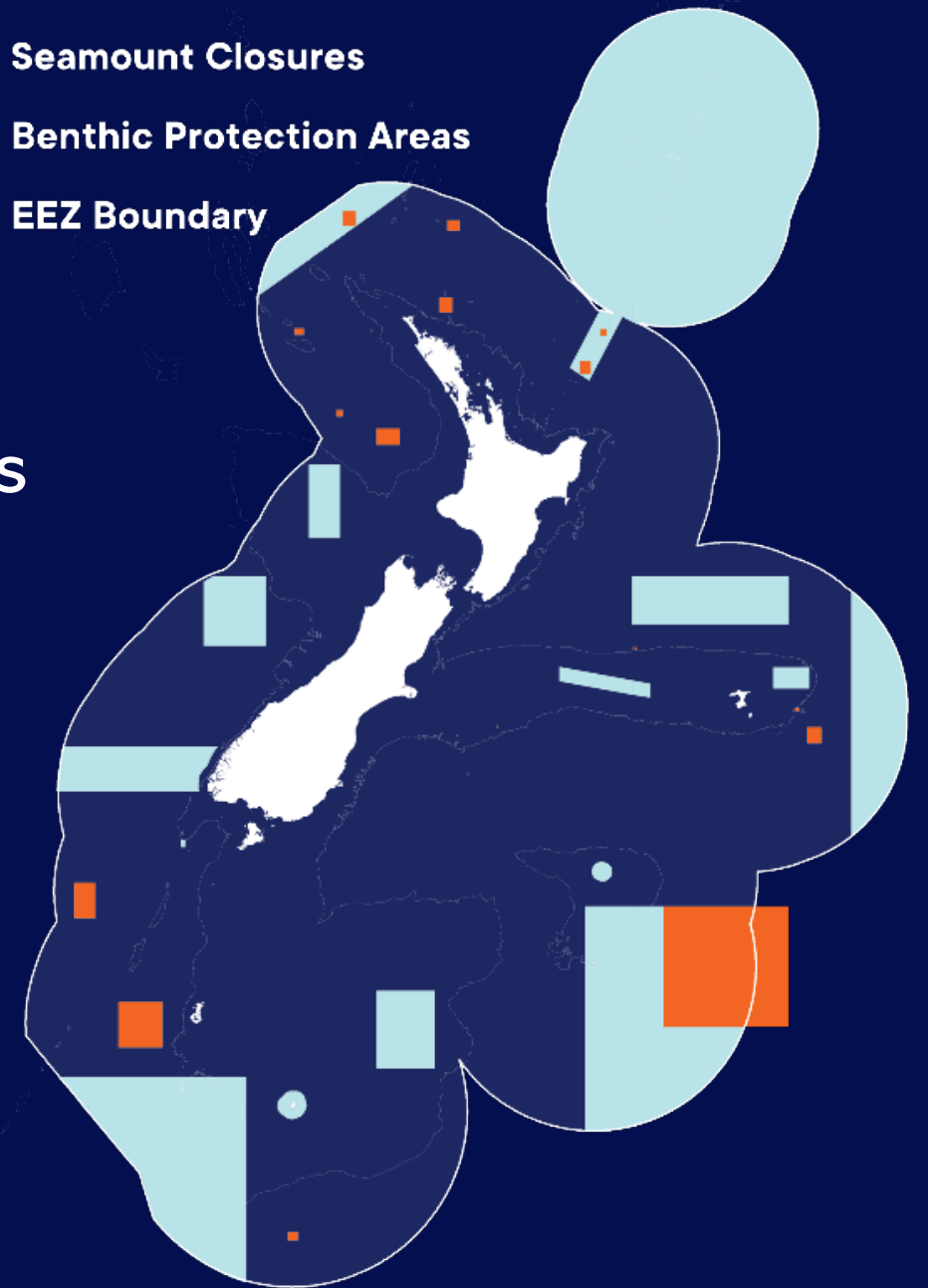
31%

of the EEZ is closed to bottom trawling

Seamount Closures

Benthic Protection Areas

EEZ Boundary

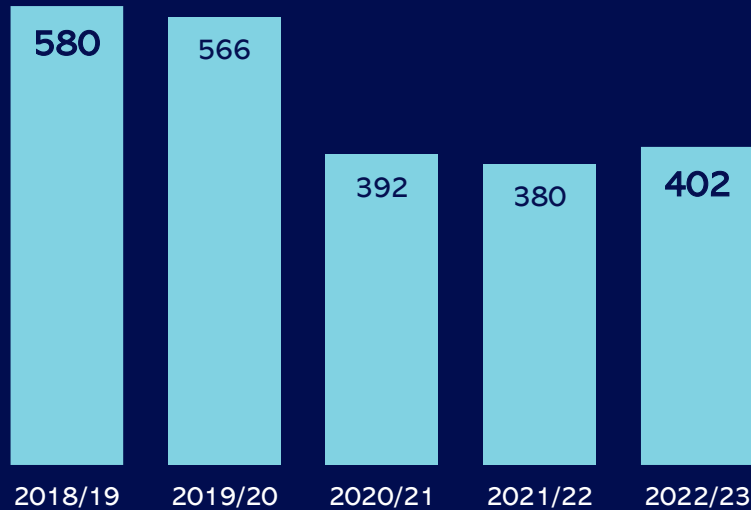


PROTECTED SPECIES MANAGEMENT



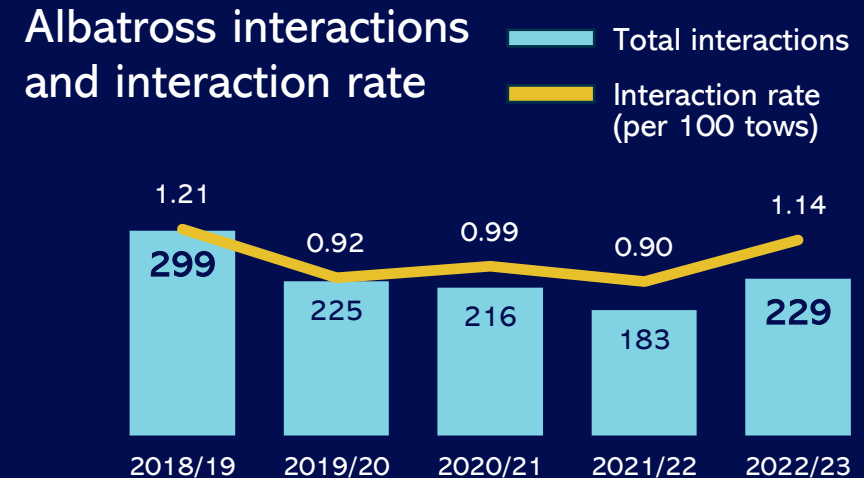
Seabirds

Reported seabird interactions



Total reported **seabird interactions** from the deepwater trawl fleet reduced by **30%** between 2018/19 and 2022/23, despite the small increase last year.

Albatross interactions and interaction rate

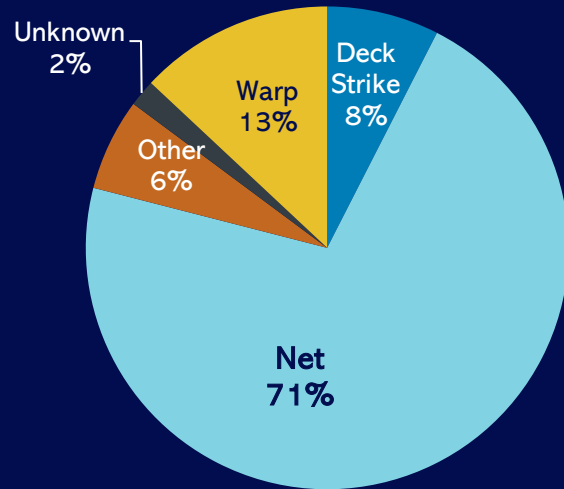


Albatross **interaction rates (per 100 tows)** have remained relatively steady in recent years.

Total albatross interactions declined between 2018/19 and 2021/22 but increased in 2022/23.

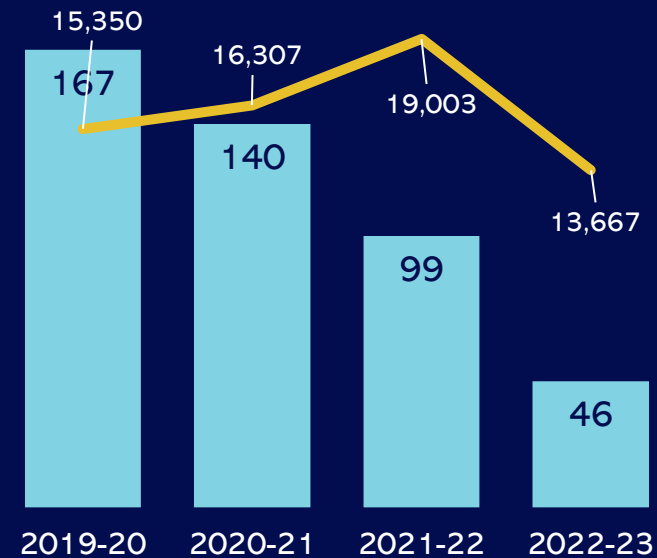
Seabirds

Seabird interaction location as a proportion of total



Net interactions are the biggest seabird issue with the deepwater trawl fleet. Resolving this issue remains a significant challenge.

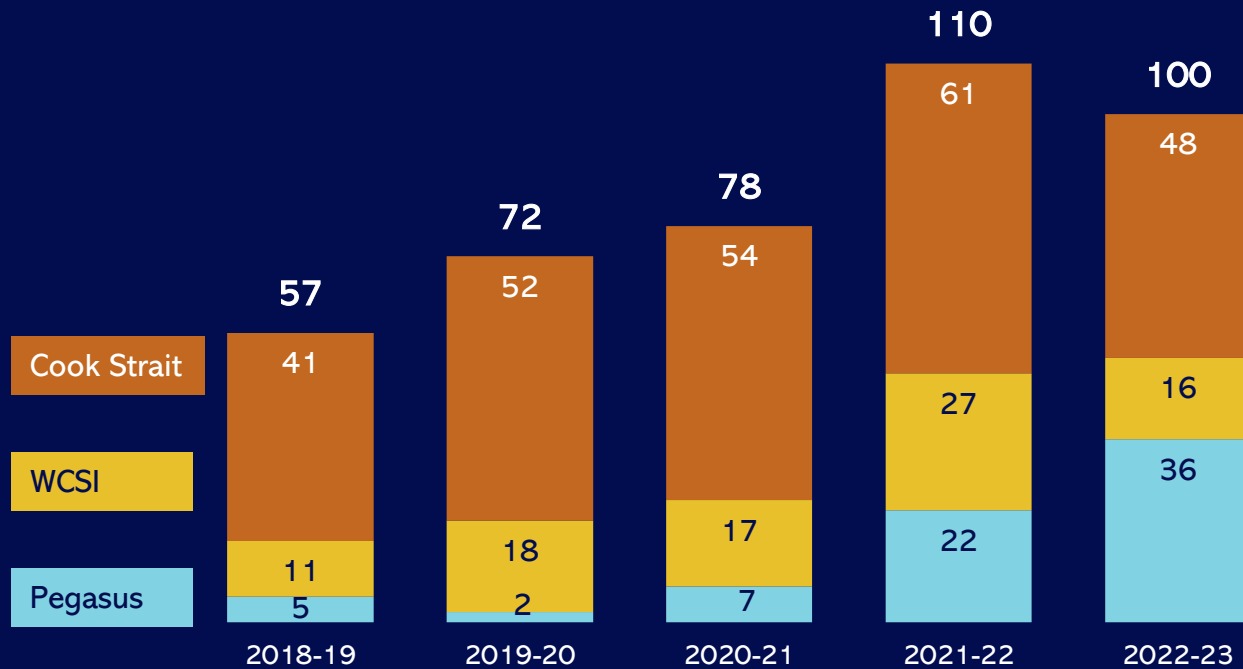
Total seabirds Total hooks ('000 hooks)



Seabird interactions and ling bottom longline effort for >28 metre bottom longline fleet

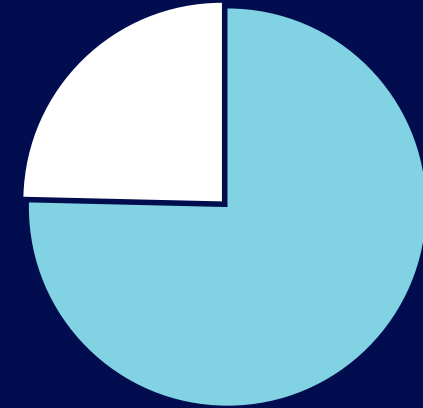
Fur seals

Reported fur seal interactions in hoki fisheries



Number of reported fur seal interactions has steadily increased, mostly driven by interactions in **Pegasus Canyon** and by a **growing NZ fur seal population**.

Fur seal interactions



Of the 134 fur seals interacting with deepwater trawl, **75%** interacted with the **hoki fisheries**.

Work to mitigate interactions is ongoing.

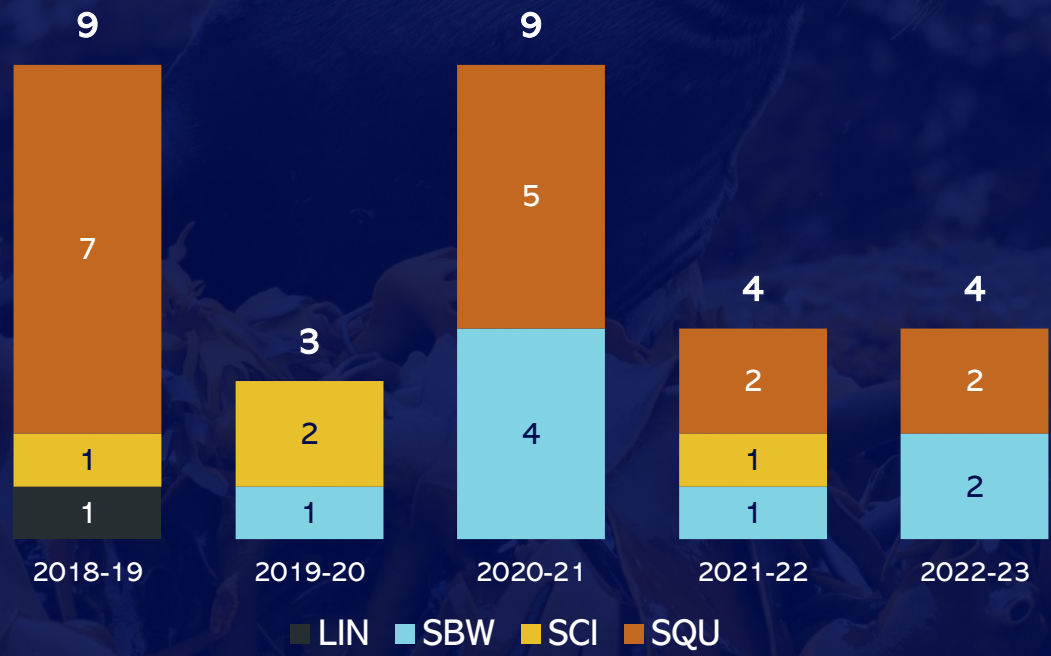
Sea lions

Annual interactions with sea lions have remained **under 10** in recent years.

In 2022-23 **four** sea lions were caught in deepwater fisheries.

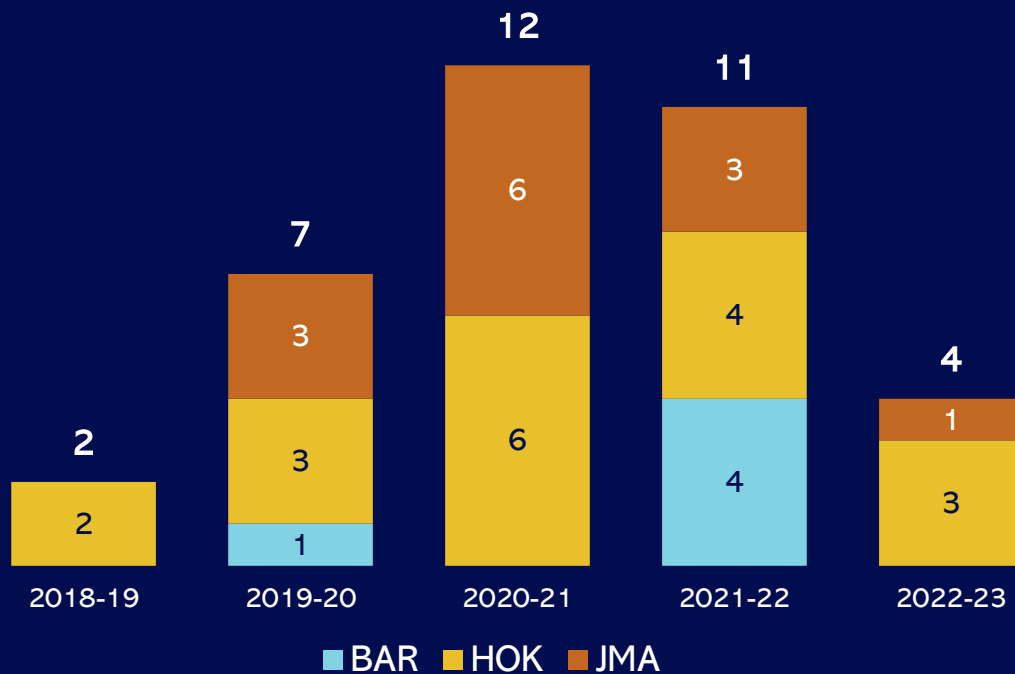
100% adherence to **SQU 6T** and **SBW 6I** Operational Plans in recent years.

Sea lion interactions in the deepwater fleet



Dolphins

Dolphin interactions in the deepwater fleet

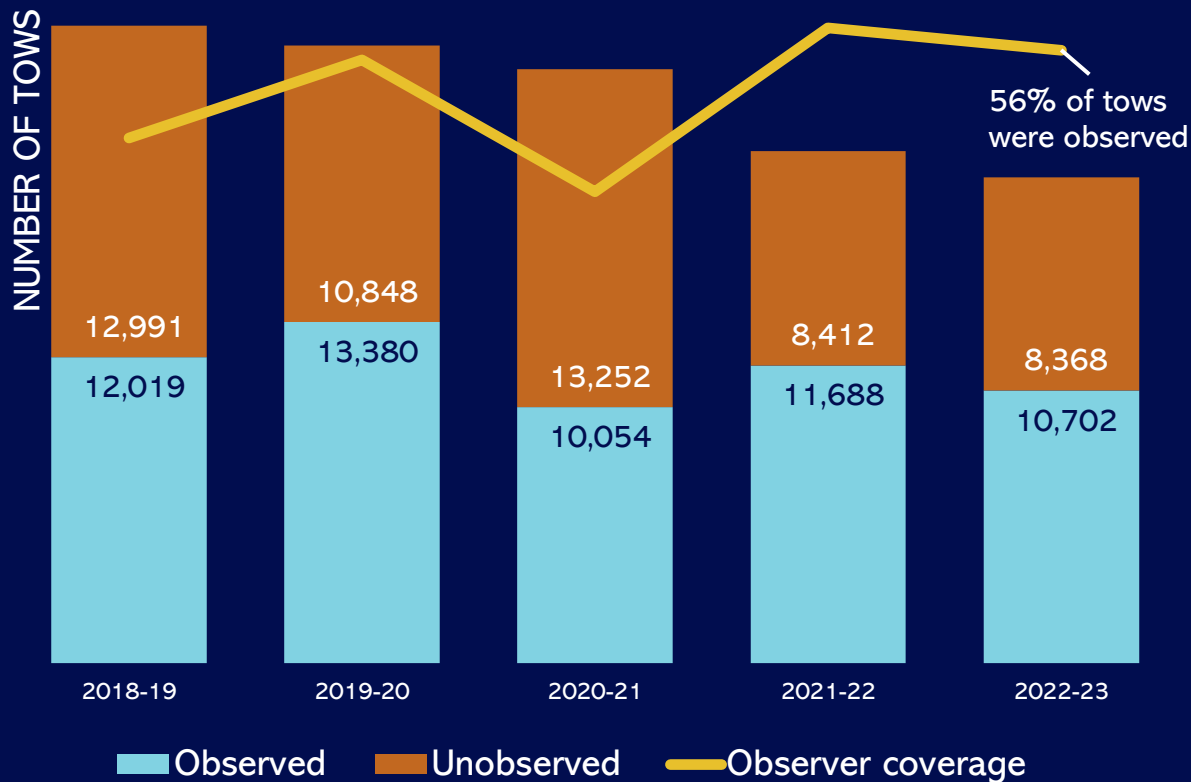


There was a small spike in dolphin interactions between 2019 and 2022.

In 2022-23, dolphin interactions decreased by over 60% from the year prior.

Dusky dolphins have contributed to more interactions than common dolphins in recent years.

Effort and observer coverage for trawlers > 28m



Overall observer coverage in the large vessel trawl fleet is high at 56%, with those fisheries with specifically high risks being highly observed, i.e., SBW 100%, SQU 88%, and JMA 72%.

Deepwater Info Portal

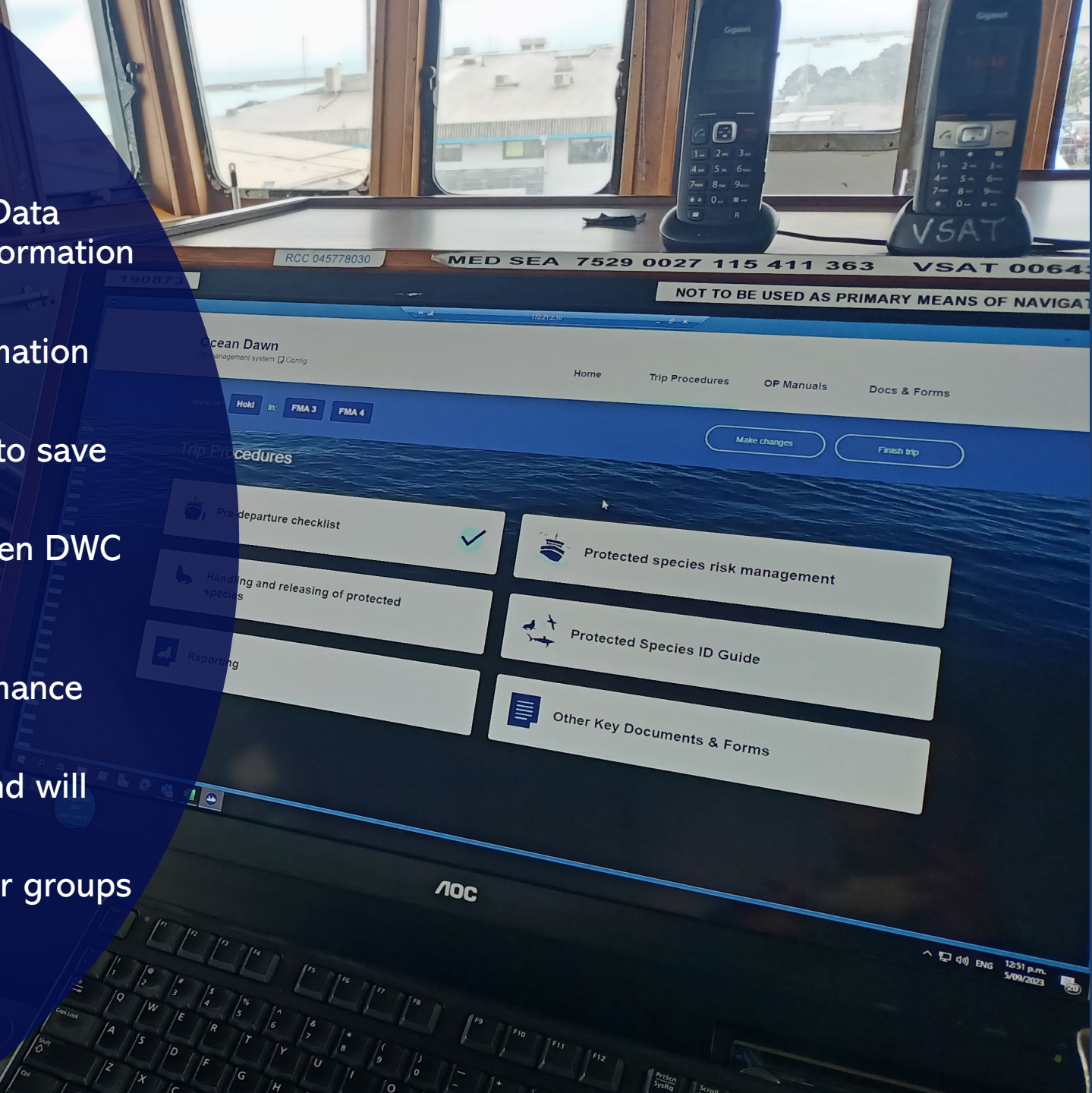
Digital system developed by DWC and Dragonfly Data Science for vessels to access protected species information and other documents, to:

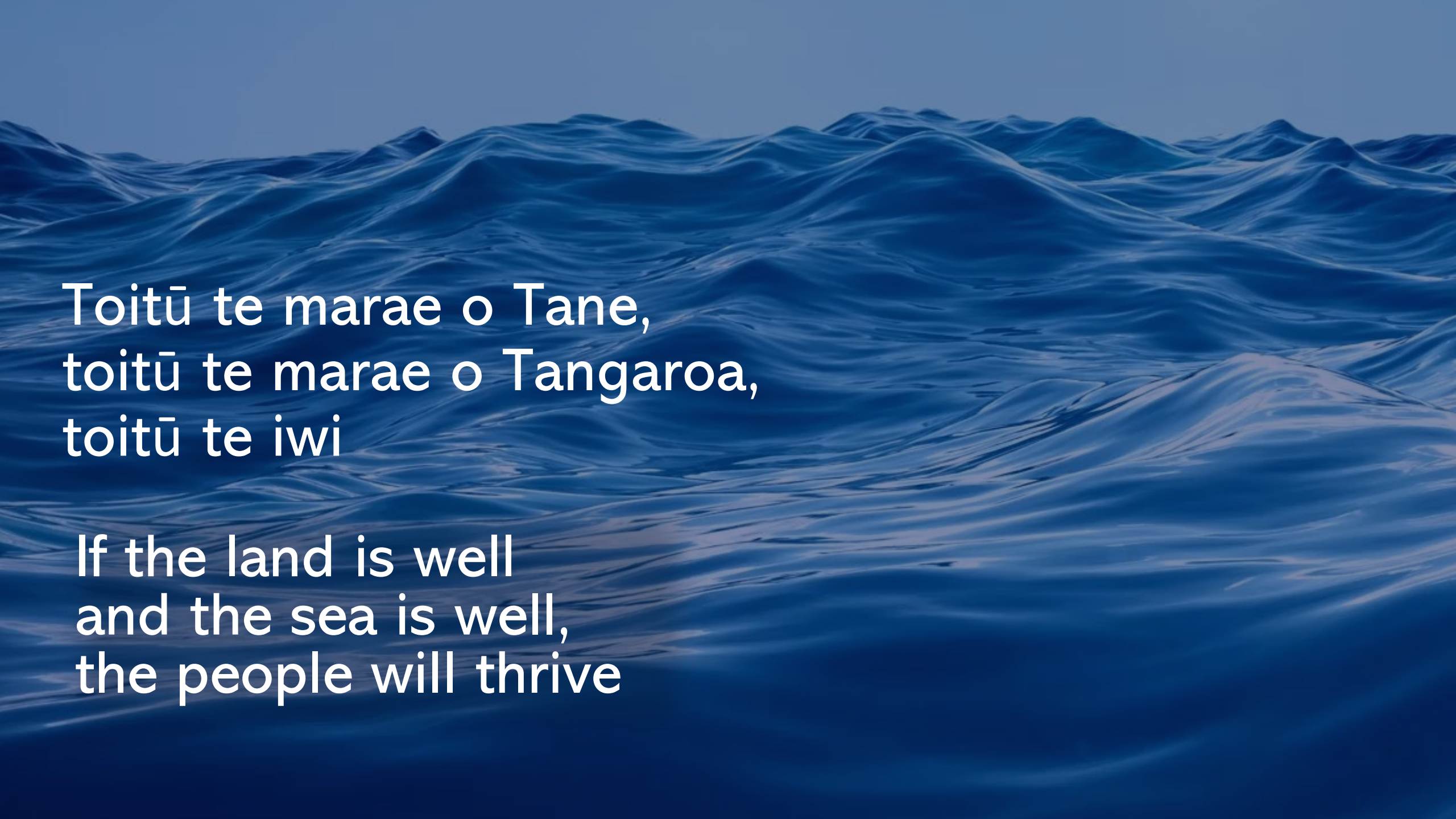
- Provide more relevant and easy-to-access information based on the fishery
- Replace paper-based systems with digital ones to save costs and avoid version issues
- Enhance connectivity and communication between DWC and vessel

The InfoPortal will help skippers, crew and vessel managers to maintain good environmental performance and improve efficiency.

The InfoPortal has been tested on some vessels and will be rolled out to the deepwater trawl fleet soon.

DWC will work with Dragonfly, operators and other groups to plan the next steps for the system in 2023-24.





Toitū te marae o Tane,
toitū te marae o Tangaroa,
toitū te iwi

If the land is well
and the sea is well,
the people will thrive