

## **Upholding the gold hoki standard**

Hoki fishery collapses, was the claim from the anti-commercial fishing lobby last week.

That was in response to a voluntary cut in the catch by the deepwater fishing industry in one of the five hoki fishing grounds.

The real story was this was prudent fisheries management by a responsible industry putting long-term sustainability and guardianship ahead of short-term profit.

Hoki is the largest New Zealand fishery and represents around a quarter of all fish caught commercially in New Zealand waters.

The fast growing hoki, mainstay of fish fingers and fast food fillets, are in good numbers inside the 25-mile line on the West Coast, in Cook Strait, on the Chatham Rise and in the sub-Antarctic.

But in the remaining fishery, further off the West Coast, skippers were concerned that catches were well down.

That led the country's deepwater fishing companies to make a collective decision to shelve 20,000 tonnes of quota for the current fishing year, reducing the overall catch to 130,000 tonnes. They also agreed there would be no carryover of any uncaught West Coast quota from the 2017-18 fishing year.

Fisheries do fluctuate according to a wide range of factors. The Tasman Sea is warming at one of the fastest rates on Earth - four times the global average, MetOcean chief scientist Dr Moninya Roughan told the Seafood NZ conference in August. Surface temperatures were as much as 6 degrees C above the norm last summer.

That unusual pattern may well be a factor in what could be a changing pattern of distribution but it is too early to be sure.

What is known is that newly hatched hoki in the first fragile few days of life feed exclusively on tiny drifting organisms, zooplankton named calocalanus.

Such plankton blooms when warm subtropical waters from the north mix with colder sub-Antarctic currents off the West Coast.

If the timing is altered, mortality of hoki juveniles will be high.

While some sections of the media were happy to swallow the “collapsed fishery” beat up, another highly significant development was ignored.

That was the announcement by the Deepwater Group that after a year of intensive, independent assessment of the health and management of the hoki, hake, ling, and southern blue whiting fisheries, the Marine Stewardship Council (MSC) had reaffirmed its certification.

With only 12 percent of global fisheries carrying the MSC gold standard, this is something worth celebrating.

Not only did the fisheries gain recertification, they were approved with no objections and no conditions, which is almost unheard of in the stringent MSC process.

Opponents of New Zealand’s commercial fishing industry choose to ignore, or not believe, that our fisheries are exceptional on the world stage. It is not by chance they hold that place. The rigorous science that supports this third party international accreditation is not only robust, it is wide-ranging.

To become MSC certified is a long, exhaustive, and expensive process.

There are three demands that must be satisfied. The fishery being examined must show its fish stocks are above a sustainable limit. It must be proved that there are no adverse environmental impacts from the fishery, and that other species and habitats within the ecosystems remain healthy. And it must show there is ongoing effective management of the fishery.

It is a transparent process. Any party may make submissions and objections.

And every fishery must go through this same process every five years in order to remain certified.

The industry is committed to long-term sustainability and seeking MSC endorsement, the most recognised of all global eco-certification schemes, is one way of demonstrating that. New Zealand’s fisheries management is recognised internationally as best practise by academic and scientific institutions, the United Nations’ Food and Agriculture Organisation, and other fisheries jurisdictions.

But that is not news.

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## A treasure trove of seabed data

NIWA marine geologist Dr Helen Bostock has created a seabed sediment database from 50 drawers worth of handwritten scientific notes.

Bostock discovered the notes a decade ago while looking through archives for another research project. Her role was to digitise the information.

Realising a digital database would have a number of benefits and applications for the scientific community, Bostock set about creating it.

The idea was to produce a comprehensive map of sediment in New Zealand's Exclusive Economic Zone given that many regional coastal charts were never completed.

NIWA's Wellington site contained stacks of documents on historical sediment samples from as far back as the 1950s. A lot of information came from New Zealand's Oceanographic Institute too, which had seabed samples from the 1960s and 70s.

Over the course of three years, Bostock interpreted over 10,000 data points and manually entered them into the new database.

Overseas research institutes also contributed 20,000 data points collected from international waters, including information from the Challenger expedition.

"It's been an interesting historical exercise seeing how things used to be done, the methods used and the detailed work done on some of the samples. I really hope people take the dataset and use it as opposed to having it in a paper archive that is rarely used," Bostock said.

Named 'nzSEABED', the database provides information on the percentage of mud, sand and gravel contained in seafloor sediment and is used to produce charts that plot their distribution.

A carbonate percentage is also included – indicating how much sediment marine species produce to create their shells compared to the amount of sediment coming from land.

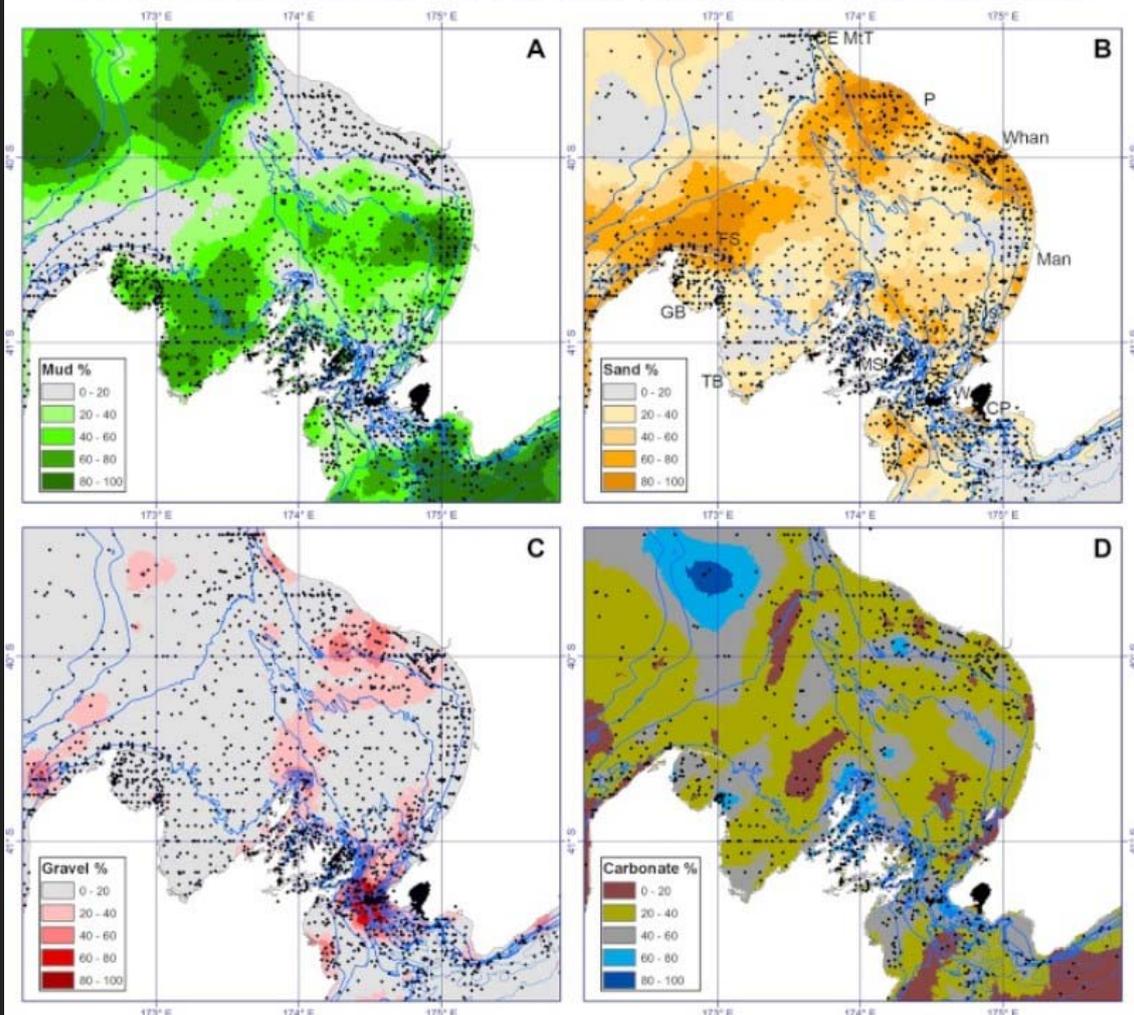
The New Zealand Journal of Geology and Geophysics has recently published the results in two papers.

NIWA is using the information to understand what types of sediment different marine species prefer and hope to use this to predict their location.

Other researchers are using it for "sound modelling" of Maui dolphins to better understand the soundscapes of dolphin habitats which vary in regions of soft and hard seabeds.

"I don't think of this as an endpoint," Bostock said. "It's more of a starting point for a range of new research. We have established a baseline and with that information, we can go out and make comparisons about how the seafloor changes and work out why, whether that is a result of land use changes or climate change."

## Whanganui, Manawatu, Kapiti and Cook Strait, Nelson Bays and Marlborough Sounds



Charts from the database plotting the distribution of mud, sand, gravel and carbonate percentages.

## Safety survey a positive start

Preliminary results for the 'Safe crews fish more' campaign suggests a shift in safety has occurred since the programme's launch in June 2017.

Led by Maritime New Zealand and the NZ Federation of Commercial Fishermen the campaign aims to reduce the rate of accidents on fishing boats.

The survey found that 60 percent of fishing crew who have seen the campaign are now making changes to improve safety.

Maritime NZ director Keith Manch said workers who received health and safety training in the last year reported an increase in knowledge around health and safety matters and a reduction in serious harm and near misses.

Employers reported placing more emphasis on the importance of health and safety and were found to have greater safety policies and practices in place compared to other high-risk sectors such as forestry.

The most common action taken by employers was improving on-board safety by identifying and resolving hazards. Whereas the most common action taken by workers was ensuring colleagues were not under the influence of drugs or alcohol while working.

The relationship between training and improved safety was mixed. While half of workers reported receiving health and safety training in the last year, half did not.

Manch said the commercial fishing industry's commitment to safety is key and should be commended.

"Owners and operators accept their responsibility to their employees, and workers accept they are responsible for their own actions and each other when they are on board," he said.

"It [the industry] is keen to continue working together with Maritime NZ to improve safety."

Compared to baseline data from the 2014 Health and Safety Attitudes and Behaviours survey, the increases seem minor, said Manch. However, considering the improvements since the campaign began, it's a great start to improved safety.

"Good work is being done and we need to do more."



## News

A Māui dolphin found dead on a shore north of Raglan this week has been examined further by Massey University's veterinary clinic, who determined she was pregnant. An initial examination by the Department of Conservation (DOC) found the dolphin had suffered no obvious signs of trauma and that the dolphin looked to have died of natural causes when it washed up in the latest tide. No Māui dolphins have been observed or caught - or forensically assessed to have been caught - in setnets since closures to fisheries in their habitat in 2003. MPI previously estimated there were 63 Māui dolphins remaining.

Fisheries Minister Stuart Nash was met with questions about the government's support and the rate of progress at the Aquaculture New Zealand conference last week. Patrick Smellie of BusinessDesk said Nash quipped his way through 20 minutes of speech that he seemed not to have read before taking the stage, slightly late. "Essentially, he encouraged

the aquaculture industry to produce more high-margin, branded exports while striving to meet high environmental standards," Smellie said. "Reactions from the audience ranged from underwhelmed to livid." New Zealand King Salmon chief executive Grant Rosewarne highlighted Norway's well-executed aquaculture strategy and asked Nash what the Government is doing about creating a cohesive strategy for New Zealand. Nash responded he had not yet had that conversation with Fisheries New Zealand officials.

Seven people have paid the price for poaching from the Te Tapuwae o Rongokako Marine Reserve in Gisborne last year. A total of 39 crayfish and 238 kina were allegedly stolen from 2,400 hectares of protected coastline. One was ordered to pay \$130 in court costs and received a \$2000 fine. Another received a one month prison sentence. The remaining offenders were sentenced to a combined total of approximately 400 hours community service and ordered to pay \$400 in court costs. A further seven people caught poaching from the reserve on a separate occasion are due to appear for sentencing later this year. MPI's chief compliance officer for Poverty Bay, Richard Ratapu hopes the sentencing sends a clear message that poaching will not be tolerated.

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