



# THE UPDATE

Captain's Blog



## World's fish stocks healthy and abundant, says new study

Global reported fisheries catches are in good shape – the world is not going to run out of fish.

That is the finding of an international project led by the University of Washington to compile and analyse data from fisheries around the world, published this month in the Proceedings of the National Academy of Sciences.

“There is a narrative that fish stocks are declining around the world, that fisheries management is failing and we need new solutions – and it’s totally wrong,” according to lead author Ray Hilborn, a foremost fisheries scientist who is a professor in the University of Washington School of Aquatic and Fishery Sciences.

“Fish stocks are not all declining around the world. They are increasing in many places, and we already know how to solve problems through effective fisheries management.

“Given that most countries are trying to provide long-term sustainable yield of their fisheries, we want to know where we are overfishing, and where there is potential for more yield in places we’re not fully exploiting.”

“With the data we were able to assemble, we could test whether fisheries management allows stocks to recover,” said co-author Christopher Costello, a professor of environmental and resource economics at University of California, Santa Barbara, and a board member of the Environmental Defense Fund.

“We found that, emphatically, the answer is yes.

“This really gives credibility to the fishery managers and governments around the world that are willing to take strong actions.”

The project builds on a decade-long international collaboration to assemble estimates of the status of fish stocks, or distinct populations of fish, around the world.

This information helps scientists and managers know where overfishing is occurring, or where some areas could support even more fishing.

Now the team's database includes information on nearly half of the world's fish catch, up from about 20 percent represented in the last compilation in 2009 (Worm et al).

Fisheries New Zealand principal adviser fisheries science, Dr Pamela Mace, is among the 23 international co-authors of the updated research.

About 880 fish stocks are included in the database.

The researchers paired information about fish stocks with recently published data on fisheries management activities in about 30 countries.

New Zealand fisheries, founded on the Quota Management System, are consistently rated as among the world's best managed.

Almost all landed fish in this country – 95 percent – is from sustainable stocks, according to the 2019 Fisheries NZ assessment.

But while the understanding worldwide of the health and status of fish populations is now at its most comprehensive, there are still big gaps in the data.

Most of the fish stocks in southern Asia do not have scientific estimates of their status.

Fisheries in India, Indonesia and China alone represent 30 to 40 percent of the world's fish catch that is essentially unassessed.

The research is among the most significant published in the last decade, yet has received minimal publicity.

Hilborn conceded it had been a busy time in environmental news reporting with the Australian bushfires a focus and political news was all-distracting "but I also think that perhaps a positive, feel good, progress-is-being-made story doesn't get the clicks that a doom and gloom the-ocean-is-running-out-of-fish story does. We were hoping a paper that offers a global look at fish populations and actually has good news to report would garner a bit more press coverage."

Now there's a challenge for local media.

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## **Shellfish neurotoxin testing method gets international tick**

A method for detecting neurotoxins in seafood has achieved international validation.

Developed by Cawthron in 2015, the method has been used by New Zealand's shellfish industry since its inception and detects naturally occurring shellfish toxins, including Paralytic Shellfish Toxins (PST).

It's now hoped the method will help create a world standard of testing for the global seafood industry.

Cawthron, in partnership with food safety scientists at the Centre for the Environment, Fisheries and Aquaculture Science (Cefas) UK, led the four-year [international study](#) which included 21 participating laboratories from around the world.

Samples were sourced from six continents and included 15 different shellfish species that were grown in areas impacted by known species of PST producing phytoplankton.

Results demonstrated not just excellent performance, but also the ability of laboratories with a wide range of instrument models to successfully run the method for both regulatory testing and research.

It boasts greater efficiency, improved accuracy and gives the user the ability to detect more toxins than any other current, internationally approved testing method.

“Ultimately this testing method allows consumers to have confidence that their seafood products are safe to eat, and ensures faster market access for shellfish industries worldwide,” said Cawthron Institute marine toxin chemist Dr Tim Harwood.

The benefits of the method have already been realised by New Zealand’s seafood industry, Harwood said.

“This was particularly evident during two recent harmful algal bloom events where we were able to respond quickly to our industry partners to provide them with assurance their products were safe for market.”

Ministry for Primary Industries principal advisor Lisa Olsen said the success of the study is a game changer for regulatory testing and managing PST globally.

“It also demonstrates what can be achieved through collaboration between these internationally recognised research organisations,” Olsen said.



Tim Harwood is a marine toxin specialist and co-leader of the Safe New Zealand Seafood research programme. Photo, Cawthron.

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## Mussel bed restoration underway

Marine farmers are leading a three-year research project with input from NIWA and the University of Auckland to restore wild mussel beds in the Marlborough Sounds.

It's backed by nearly \$400,000 worth of funding from MPI's Sustainable Farming Fund and a \$100,000 contribution from the Marine Farming Association (MFA).

MFA general manager Ned Wells said it's a "great, multi-faceted project".

"It's doing good for the environment and if we can restore the spat resource, it's going to be good for industry as well".

Four tonnes of limited local spat have been put into plots underwater.

Scientists will return to monitor the mussel beds every couple of months to check their progress, what condition they are in and if other organisms have moved into the area.

The study will also watch to see how the mussels respond to increased sediment after large rainfall events.

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## News

Rock lobster prices have slumped after the lucrative export trade to China stopped following the outbreak of coronavirus, *NZ Herald* reported. Rock lobster has fallen in price to around \$80/kg, down from their usual market price of around \$130/kg, as previously export-bound product finds its way onto the domestic market. Some meatworks have also had to curtail production. For both industries, the timing could not have been worse. China is by far the biggest market for live New Zealand rock lobster and the Chinese New Year period, which started on Friday, is a time of peak demand. Taine Randall, chief executive of Takitimu Seafoods and a director of New Zealand's largest live lobster exporter, the Fiordland Lobster Company, said fishermen could normally expect to receive \$90 to \$100/kg for lobster and processors would on sell live product for about \$120/kg to \$140/kg. "But what has happened is the Chinese have stopped buying, so the price has fallen to about \$80/kg," he said. Rock lobster can remain alive in tanks for two to three weeks after capture. "The big uncertainty around this is how long the coronavirus has got to run, and how long are they going to remain in lockdown," Randall said. Finance Minister Grant Robertson has asked Treasury to monitor the situation, along with the impact of the outbreak on other specific sectors. It was still too early to assess the broader economic impacts, he said. New Zealand Rock Lobster Industry Council chief executive Mark Edwards said exports of live lobsters from New Zealand had stopped. "For New Zealand exporters, the timing is unfortunate because this is a peak period for demand and good

prices over the Chinese New Year." Lobsters that had been harvested were in facilities designed to keep the crustaceans in top condition prior to export, Edwards said. The rock lobster industry is worth around \$320 million annually. It uses about 250 vessels and employs around 2,500 people directly and indirectly. "There are very significant economic impacts if solutions cannot be found." Edwards said the industry was carefully considering its options. The council is talking with Fisheries New Zealand about steps that could be taken to help mitigate the economic impact of China's absence from the market. "The discussions with government have been constructive, and although the issues are complex, we are hopeful of a good outcome," Edwards said.

Sealord Group Ltd has purchased the remaining 50 percent shareholding of Tasmanian salmon producer, Petuna Aquaculture. Petuna founders, Peter and Una Rockliff, have been icons in the Tasmanian seafood industry for seven decades. They had the vision to establish Petuna Aquaculture in the fledgling aquaculture business for Ocean Trout and Tasmanian Atlantic Salmon in the early 1990s. Sealord's chief executive officer Steve Yung said, "We are delighted to obtain full ownership of Petuna Aquaculture as it's an opportunity to build a strong second platform to complement our core deep sea fishing business and helps fulfil our strategic vision to better manage volatility in primary industry markets." Petuna Aquaculture will become a 100 percent owned subsidiary of Sealord Group Ltd, effective February 3, 2020.

Sanford Limited has announced the appointment of Fiona Mackenzie as the newest member of its board of directors. Mackenzie replaces Paul Norling, whose retirement was effective after last year's annual shareholders meeting. She joins the Sanford board on February 1.



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