



# THE UPDATE

Captain's Blog



## Seafood key to feeding the world

Fisheries have an increasingly important role to play in feeding the world's rapidly burgeoning population, according to the United Nations Food and Agriculture Organisation (FAO).

At a day-long briefing in Rome earlier this month the FAO told a meeting of the International Coalition of Fisheries Associations, people have never consumed as much fish as they do today.

Per capita global fish consumption has doubled since the 1960s.

Fish provides more than 20 percent of the average per capita animal protein intake for three billion people.

Fisheries sustainability is critical for marine ecosystems and to communities dependent on the resource.

The FAO says that while no universal definition exists, there is general consensus that sustainability is about meeting the needs of the present without compromising the ability of future generations to meet their own.

In the New Zealand context, that approach is embodied in the concept of kaitiakitanga, of guardianship.

The needs of all parties include a complex array of objectives, including food provision, employment, income and nutrition, as well as a wide range of social aspects.

When the FAO was founded in 1945 in the ashes of World War II, the fear was the world would not be able to feed its three billion people.

Now our planet is contending with three times that number by mid-century.

That presents the challenge of balancing biodiversity conservation with fisheries objectives.

The FAO is aiming to address that with a new approach to fisheries sustainability in the 21st century in an international symposium in Rome in November that will draw together a wide range of stakeholders.

“It is a very fragmented world, one dominated by fear,” FAO director Manuel Barange told the ICFA delegates.

“We need to free people from fear so that they can get the facts.”

The agenda will include challenges, opportunities and trade-offs for reconciliation of both fisheries and conservation management objectives.

How does future fisheries management balance livelihoods, food security and conservation needs?

And what are the trade-offs that society is prepared to take to balance those objectives?

The FAO ideal is to have all the world's stocks at sufficient biomass to support maximum sustainable yield.

The ICFA countries met for two days at Sant Anselmo in Rome, a Benedictine teaching monastery on the Aventine hill.

Those represented – US, UK, France, Spain, Netherlands, Iceland, Denmark, Canada, Japan, Taiwan, Peru, Australian and New Zealand – shared respective current issues.

ICFA members represent countries harvesting around 85 percent of the annual global catch.

New Zealand highlighted the potential impact the anti-fishing lobby is having on fishers' livelihoods and warned no country was immune to trade threats to both export and domestic markets.

John Connelly, president of America's National Fisheries Institute, summed up their major issue in just two words - “President Trump”.

The current trade war is particularly damaging to US fisheries that process in China, being hit with both import and export tariffs.

The level of illegal, unreported and unregulated (IUU) fishing remains a major concern and there is no accurate assessment of its extent.

The total IUU catch was estimated at 26 million tonnes in 2009 but that was based on 2007 date and “was just a desk exercise”.

The main tool to combat the illegal trade is agreement among countries on port status checks, according to an FAO fisheries director Matthew Camilleri.

“It is becoming more difficult for misbehaving countries to operate,” he said.

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## Greenshell™ mussel research enters phase two

Funding to study the health benefits of New Zealand's Greenshell™ mussel was a welcome announcement at last week's Aquaculture Conference in Nelson.

The High-Value Nutrition (HVN) National Science Challenge has provided a \$1 million investment into phase two of a research programme, "Musselling up 2.0", which will examine the role of Greenshell™ mussels (GSM) in reducing inflammation seen in osteoarthritis and delayed onset muscle soreness.

The programme builds on earlier work which demonstrated the protective power of GSM for knee joint health.

"The end goal of this research is to provide validated Greenshell™ mussel health claims that can add value to exports," research lead Dr Matt Miller said. "In previous studies, we observed the protective effect Greenshell™ mussels can have on animal cartilage, and we hope to see similar results in these human trials.

"We know Greenshell™ mussel products can reduce inflammation and through this research programme, we seek to provide evidence using a systems nutrition approach; identifying novel biomarkers and signatures of inflammation reduction in human plasma."

Trial one will focus on the effect of GSM on inflammation caused by high stress and repetitive exercise and trial two on chronic pain reduction and metabolic health. Plant & Food Research and Massey University will be conducting the trials, and Cawthron and AgResearch scientists will develop analytical techniques to aide in discovering how GSM properties work.

Sanford, New Zealand's largest GSM producer, is backing the research with funding and product supply.

"We want to take a new GSM story to markets around the world," said Sanford general manager of innovation, Andrew Stanley. "Promoting their intrinsic health qualities and using this higher-value proposition to grow our industry for the benefit of our communities.

"Science is the vehicle to get us there."



Cawthron scientist, Matt Miller, will be leading phase two of the research focused on validating the health benefits of Greenshell Mussels . Photo, Cawthron.

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### **Ocean Bounty season three - Mountains to sea**

What happens up river literally has a flow on effect downstream and out into the ocean. This week, Ocean Bounty host Graeme Sinclair takes a unique look at the Waitaki catchment from Aoraki (Mount Cook) through the canals and out on to the ocean, where the crew join lone trawlerman Gordon Mitchell for a day's harvesting.

Tune in this Sunday, 5pm on TV Three.



## News

A study suggesting most fish oil supplements contain less omega-3s than stated has been retracted, *NZ Herald* reported. Published in the *New Zealand Medical Journal*, the study sampled 10 of the most popular products available over New Zealand counters and claimed fewer than half had the same amount of omega-3 fatty acid content (EPA and DHA) that was listed on the packet. The remainder contained between 48 and 89 percent. Trade body Natural Health Products New Zealand (NHPNZ) challenged the findings and the methodology used, stating that the study was flawed because the fish oil products had different capsule sizes, some weighing as little as one gram, others two grams. When calculating the quantity of active ingredients in each capsule, the researchers failed to take into account the fact that the tests results were in one gram units, therefore should have been extrapolated for larger capsule sizes. "When assessing the label claims for products with 1.5 gram capsules, the researchers did not multiply the test results by 1.5 to give an accurate result," NHPNZ stated. "Correctly extrapolating the test results for each capsule size has identified that all but one of the tested products were well within acceptable tolerances related to their label claims." Group chair Lorrain Moser said the paper presented "label claim inaccuracy fiction as fact, needlessly damaging the industry's reputation and needlessly giving consumers cause for concern". University of Canterbury researchers have now requested the paper be retracted, stating that there were errors made in the calculation of the amounts of EPA and DHA in five of the fish oil supplement capsules.

Forest & Bird is proposing a last-ditch plan to reduce the number of sea lions caught in fishing nets, *Stuff* reported. The southern squid fishery operates around the Auckland Islands and overlaps with sea lion foraging grounds. The environmental group wants a temporary ban on trawling in a small area around the islands, until 2022. Forest & Bird marine advocate Katrina Goddard said the plan is vital for protecting adult female sea lions in the rookery. "We are not going to recover them if we don't manage the things we can

manage. Direct fisheries bycatch is one thing we can manage - the species needs all the chance to recover and this is the only way we are going to that. Breeding females are restricted in the area that they forage because they have pups onshore that they must go back to." Goddard said. Fisheries New Zealand is currently developing a new "operational plan" for the squid fishery. Officials are considering making SLEDS mandatory in the fishery and placing a limit on the number of sea lions that can be accidentally caught before the fishery is closed. Forest & Bird don't accept the three options are enough to preserve the population and have devised a fourth - an exclusion zone in 17 percent of the fishery during two breeding seasons.

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