Why are fish wars heating up all over the world?

The desire for protein – and power – is helping fuel fights for territorial waters around the world. Where are these problems surfacing? And how are warming oceans making them worse?

By James Massola

JULY 12, 2020

The South China Sea is one of the world’s most tense regions. But the entry of four Chinese coast guard vessels and 63 fishing boats into Indonesian waters in December, and again in January, still managed to shock and infuriate Indonesia.

The Chinese vessels were fishing in the Natuna Sea in part of Indonesia’s exclusive economic zone. In response, the Indonesian government sent its own coast guard, navy, private fishing boats and even four F-16 fighter jets to repel them.
It was a reminder that fishing rights are a big part of what’s at stake in the region – not just territorial boundaries and access to oil and gas reserves.

The same pattern is playing out around the world, in waters from Africa to Antarctica. In some places, illegal fishing is happening on an industrial scale. In others, desperate fishermen are chasing species into their neighbours’ patches of sea. In many cases, fishing is a proxy for deeper power plays.

**How much does the world fish?**

An estimated 59 million people worked in fishing or aquaculture industries in 2016, and 85 per cent of those people were in Asia, according to the United Nations Food and Agriculture Organisation (FAO). There were an estimated 4.6 million fishing vessels globally, from huge trawlers to unpowered boats. Again, 75 per cent of those were from Asia.

Global fish production peaked at about 170 million tonnes in 2016, with about 90 million tonnes from caught fish (including from oceans and inland fishing). The caught fish figure has been relatively static since the mid-1980s, even as distant
water fishing – fishing within the maritime zones of other countries – has taken off.

**Catches of the world’s top 10 fish producers**

Estimates of tonnes of catch (actual catch may be much higher)

<table>
<thead>
<tr>
<th>Country</th>
<th>Catches (in tonnes)</th>
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</thead>
<tbody>
<tr>
<td>China</td>
<td>16,000,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>14,000,000</td>
</tr>
<tr>
<td>US</td>
<td>12,000,000</td>
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<tr>
<td>Russia</td>
<td>10,000,000</td>
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<tr>
<td>Peru</td>
<td>8,000,000</td>
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<tr>
<td>India</td>
<td>6,000,000</td>
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<td>Japan</td>
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<td>Vietnam</td>
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<td>Norway</td>
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<tr>
<td>Philippines</td>
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*Source: UN Food and Agriculture Organisation estimates, 2015-16*

People all over the world are eating more fish. Between 1961 and 2015, in per capita terms, consumption grew from 9 kilograms a person to more than 20 kilograms. It now accounts for about 17 per cent of animal protein consumed globally.

A study in the journal *Nature*, by the Sea Around Us initiative, suggested the FAO had underestimated the “peak” global fish catch from the world’s oceans. The figure was actually 130 million tonnes, it contended, not 86 million tonnes (in 1996).

But there has been a decline in ocean and inland fish catches, with a boom in aquaculture – fish farming – accounting for the growth in production. Even as the
percentage of the world’s oceans being fished has risen from 60 to 90 per cent, the actual catch has declined dramatically from 25 tonnes per 1000 kilometres travelled in the 1950s to 7 tonnes per 1000 kilometres, according to another study by the Sea Around Us.

That’s not because fishing fleets or nations have become more ecologically conscious – it’s because there are fewer fish to catch.

**Why are nations arguing over fish?**

There are multiple factors. In the South China Sea, the dispute over boundaries is a major contributor. In parts of Africa, although distant-water fishing fleets – those that operate outside territorial waters, sometimes thousands of kilometres away – may have permission to operate, some of them break the rules on their allotted catch. Local fishermen, too, at times resent the presence of competing foreigners.

**With fewer fish left in the wild, fish farming is on the up**

![Graph showing capture production and aquaculture production from 1950 to 2016](chart)

Excludes aquatic mammals, crocodiles, alligators and caimans and aquatic plants

*Source: UN Food and Agriculture Organisation*

Over-fishing and unregulated fishing, along with climate change, are the main
threats to global fish stocks, says Associate Professor Quentin Hanich at the University of Wollongong.

Ocean acidification, increases in water temperature, the oxygenation of the water and the degradation of habitats (such as in the Great Barrier Reef) are all factors, says Hanich, who leads the Fisheries Governance Research Program at the Australian National Centre for Ocean Resources and Security.

"There has to be a stronger focus on co-operation. Fish don’t care about maritime boundaries," he says.

But the network of 17 Regional Fisheries Management Organisations (RFMOs) around the world, which attempts to manage and conserve fish stocks such as tuna on the high seas, is struggling. Membership is voluntary, enforcement is difficult and targeting illegal or unregulated fishing is problematic.

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**What are the international rules on fishing?**

The UN Convention on the Law of the Sea (1994) is the foundation for many of the rules now governing fishing globally, particularly with respect to how countries manage internal waters, territorial waters and exclusive economic zones.

A country's EEZ stretches about 370 kilometres from shore and grants sole exploitation rights of resources in that area.

Nations can set catch limits and sell the right to others to fish in their own EEZ. Australia did so with Japan until the 1990s. Some smaller states in the Pacific and parts of Africa do so today, as they do not have the resources to fish these areas themselves.

Overlapping claims to an EEZ in the South China Sea are at the heart of a big dispute among several countries.

Beyond countries' EEZs lie the high seas, where regional fisheries management organisations attempt to manage fish stocks in partnership with partner nations and distant water fishing nations.

In practice, the rules these organisations set – such as one managing southern bluefin tuna, founded by Australia, Japan and New Zealand – are binding only on voluntary member states.

The southern bluefin tuna is one of the rarest and most expensive tuna species
and China, for example, is not a member of the commission that manages this fish.

Illegal, unreported and unregulated fishing of southern bluefin is a major threat to this and other species.

How do fish wars play out in the South China Sea?

Who owns what in the South China Sea is disputed among several countries. The disagreements include boundaries on fishing rights, so fishing activity is inherently tied to their geopolitical interests.

Hanich says the dispute is undermining the sustainable management of fishing in the region. "What we are seeing in these areas is over-fishing as claimant states can’t agree on where the lines should be," he says.

The South China Sea accounted for 12 per cent of the global fish catch in 2015, though catch rates have declined by up to 75 per cent in the past 20 years, according to a report by Greg Poling, the director of the Washington-based Asia Maritime Transparency Initiative.

Fisheries in the region, Poling wrote, "teeter on the brink of collapse", while the Chinese government-subsidised fleet in the region serves two purposes: "Most of these vessels serve, at least part time, in China’s maritime militia."

The conflict over fisheries is therefore driven by countries projecting power in their region (and indeed, all over the world in some cases, through distant water fleets) and not just access to food sources.
Either the geopolitics follows the fish, or vice versa, says Evan Laksmana, from Indonesia’s Centre for Strategic and International Studies.

"From Jakarta and Beijing's point of view, the fisheries fight in the Natunas isn’t about the fisheries, it's about broader issues. The fish follow the politics," Laksmana says.

"It's about broader issues. The fish follow the politics."

Evan Laksmana, Centre for Strategic and International Studies, Indonesia

"For Beijing, it's about making a statement. It's a way of signalling to Indonesia and other countries that their rights are there, you can’t rely on international law."

For Indonesia, the recent showdown in the Natunas was shaped by domestic politics, which demands that Indonesia stand up to China.
The dispute won’t be solved through military posturing, sending fishing boats to the region or diplomatic protests, Laksmana says. Co-operative agreements about fishing rights in the South China Sea offer the best way forward.

In such a vacuum of regulation, an RFMO could step in – but there isn’t such an organisation in the South China Sea, and the weakness of these groups has left the door open to conflict in other parts of the world.

"What needs to happen is the development of a co-operative mechanism. All the key states have to engage in the process ... but what we increasingly see are some states use their fishing vessels as a default for claiming rights or engaging in activities."

**How much the major distant water fleets catch**

Proportion of fishing effort for the top 10 countries

*Source: Global Fishing Watch, 2016-17*
What is distant water fishing?

Distant water fishing (DWF) is commercial fishing that takes place outside – sometimes thousands of kilometres – a country's territorial waters. These large ships can stay at sea for months and are equipped with refrigeration and at-sea processing. Some of them participate in illegal fishing.

The UN's Food and Agriculture Organisation estimates that illegal fishing is responsible for the loss of between $10 billion and $23 billion worth of fish every year.

"The challenges that DWF fleets pose to coastal countries' resources and the fishing industry, particularly the expanding Chinese fleet, will persist unless there is a significant global shift towards sustained fisheries management," the Stimson Centre, a Washington think-tank, said in a 2019 report.

China has the largest DWF fleet in the world at around 2500 vessels and about 38 per cent of the global fleet. Taiwan's fleet is second largest, with about 21.5 per cent of the global fleet. Japan, South Korea and Spain round out the top five, accounting for a further 30 per cent.

DWF is often subsidised by governments and sometimes operates without permission in other nations’ exclusive economic zones.

Climate change is drawing some fish species to new waters because of temperature changes so the DWF fleets follow. That places increasing pressure on coastal fishing communities and local fish stocks, which can't compete against industrial-scale fishing operations.

Where are the hotspots?

The South China Sea is by no means the only global hotspot.

Illegal, unreported and unregulated (IUU) fishing in distant waters takes place all over the world, driven by economics, politics and the need for more protein.

According to the Stimson Centre, the top five countries targeted by IUU are Kiribati, the Solomon Islands, Vanuatu, Micronesia and Papua New Guinea.

While distant-water fleets are usually present as a result of deals with local governments, monitoring and enforcement is problematic for these tiny nations...
and it’s likely that some IUU fishing also takes place.

On the west coast of Africa, Mauritania, Sierra Leone, Guinea, Guinea-Bissau, the Congo and Angola are also in the global top 20 nations targeted by distant-water fleets.

Spain is by far the most active of the top five distant-water fishing nations on Africa’s west coast, although China, Taiwan, Japan and South Korea also have a presence. Those four Asian nations are otherwise more active on the east coast of Africa: Seychelles, Mozambique, Madagascar and Mauritius, which are also in the top 20.

As the Stimson report notes, in Mozambique there is a “widespread belief that foreign fleets – including those that operate under traditional access agreements or through charter and joint-venture partnerships – are engaging in some level of IUU fishing”.

In Mozambique, some locals view China’s infrastructure investment as a trade-off for permission to exploit the country’s natural resources.

In Antarctica, the amount of IUU fishing has been on the rise for the past decade. Australia and France are among the countries trying to combat this, while Russia and China have opposed the creation of new marine protected areas.

In Australia, the Department of Agriculture says that some IUU fishing takes place in our northern waters, largely by traditional or small fishing boats from south-east Asia and in the remote sub-Antarctic waters near Heard and McDonald Islands, about 4000 kilometres south-west of Perth.

There are tensions between China and Brazil over fishing rights in the southern Atlantic ocean. And in the Bay of Bengal, tensions between Sri Lanka and India are growing – particularly in the Palk Bay. Overfishing in the region is contributing to a decline in fish stocks and so-called dead zones that have insufficient oxygen for fish to survive, and the Sri Lankan Navy has fired on Indian fishing vessels, according to a 2019 report on environmental security in the region.
What does it mean for Australia, and the world?

Professor Jessica Meeuwig, a marine ecologist from the University of Western Australia’s Oceans Institute, says the contest is “fundamentally about food security”.

"A very large proportion of the world’s population relies on seafood as a major part of their diet. So countries like China, with a very small exclusive economic zone, they look at increasing their access to fish populations,” she says.

If individual countries don’t begin to work together more co-operatively to tackle over-fishing – and climate change – the planet faces an existential threat to one of its major sources of protein.

And that’s bad news for everyone.
Why are fish wars heating up all over the world?

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