



**Tech for ocean impact  
and food security**

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We have all heard the saying, “there’s plenty of fish in the sea”, but the truth is, there is only a finite number of fish in the sea – in a world with ever-growing demand. The UN Sustainable Development Goal (SDG) 14 “life below water” calls to “conserve and sustainably use the oceans, seas, and marine resources for sustainable development,” yet when it comes to the

ocean, we continue to take more than we can replenish.

This raises the question, who is responsible to protect and safeguard the future of the world’s 7th largest economy? Governments, fisheries, retailers, hospitality businesses and consumers all have vital roles to play in protecting our

oceans and future food security provided by fish and seafood.

In this first-in-a-series paper, we assess the state of the seafood industry, the vital roles businesses and governments can play in securing seafood food security, and the need for traceability in ensuring the sustainability of this vital industry.

## Our oceans in numbers



70%



of our planet is covered by oceans



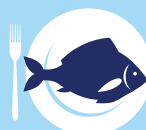
\$2.5  
Trillion

is the estimated annual economic value of ocean-based industries



largest economy when ranked with national GDPs

3 billion+  
people



rely on wild-caught and farmed seafood as their primary source of protein



600 million people

are estimated to depend on fisheries and aquaculture in some way for their lives and livelihoods

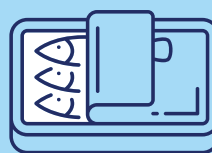


of global fisheries and aquaculture production in 2022

223 million tonnes

\$195 billion

value of international trade of aquatic products in 2022



### Globally, we are eating more seafood

Not only is the global population increasing, so is consumption per capita. Fish and seafood consumption has grown from an average of 9.1 kg/per capita in 1961 to 20.7 kg/per capita in 2022. According to the Food and Agriculture Organization (FAO), seafood consumption is expected to grow by almost 10% by 2030.

This rapid growth in demand is unfortunately leading to overexploitation in fishing. The June 2024 FAO 'The State of World Fisheries and Aquaculture' report<sup>1</sup> revealed that 37.7% of the world's fish stocks were overfished in 2021, while 50.5% were being fished at their maximum sustainable levels. This means that only about 12% of the world's fish stocks are being fished well within sustainable limits today.

Illegal, unreported, and unregulated (IUU) fishing is also a major issue. According to the World Wildlife Fund (WWF), IUU fishing is currently estimated at approximately 11%-19% of global fisheries production. Not only does this pose a huge environmental risk, but consumers are unknowingly contributing to an unregulated part of the sector that generates illicit profits of an estimated US\$10 to US\$23.5 billion per year.

Fishing companies are often blamed for overfishing, as their excessive catches deplete fish populations. But what role does the consumer market play in this issue?

### We all have a role to play

We all need to do more to change our practices and mindset within the seafood industry. We must build trust and foster collaboration among all stakeholders, breaking down the barriers to data sharing and creating strong incentives for greater participation and transparency to safeguard the sustainability of our oceans.

**Governments can:** Regulate, monitor, and enforce policies for traceability in seafood supply chains, encouraging sustainable practices and protecting marine habitats. They can invest in digital fisheries to support coastal communities.

They can promote collaboration among stakeholders to address ocean challenges collectively. And they can lead by example with their own activities, to set a positive precedent for others.

**Producers (fisheries, aquaculture, and processors) can:** Adopt sustainable practices, such as using selective gear and avoiding bycatch, to ensure long-term fish stocks and ecosystem health. They can regularly monitor and report using digital tools to enhance data accuracy and compliance with sustainability standards. They can also invest in technology like SFS Trace to enhance traceability and reduce illegal fishing.



We are not interested in doing it the old way. We are committed to proving that fish can be produced sustainably. Sustainability is not a cost; it's part of our DNA, and we will demonstrate its economic viability.

- The Kingfish Company, a Dutch Yellowtail producer and the world's first BAP-certified land-based farm



Enforcement and compliance with existing and future conservation measures, and the successful elimination of illegal, unregulated, and unreported (IUU) fishing, require the industry to maintain adequate traceability records. Traceability data can be used to identify IUU products.

- A tuna fishing company based in Spain, active since the 1960s



**Food retailers can:** Promote sustainable sourcing by prioritizing suppliers who adhere to responsible practices and traceability standards. They can educate consumers about the importance of sustainable seafood through in-store signage and online content to foster informed purchasing decisions. They can also collaborate with suppliers to ensure compliance with sustainability standards and improve supply chain integrity.



We leverage significant technology starting from our suppliers, many of whom are now obtaining various certifications. We use biodegradable packaging and energy-saving equipment powered by clean energy. We partner with suppliers who use selective fishing methods to reduce bycatch and promote frozen products over ice-packed ones to save water. Most of our stores now use clean energy like wind power.

- A publicly traded Mexican grocery retailer



Collaboration with suppliers to ensure adherence to sustainability standards is crucial. Our process includes sending guidelines to suppliers, conducting regular audits once a year, and local offices educating suppliers. All suppliers must meet IFS, BRC, or EFSA standards.

- One of Europe's leading retail group



**The hospitality sector can:** Champion sustainable menus by featuring traceable, responsibly sourced seafood, driving consumer demand for sustainable options. They can educate diners about the importance of traceability through menu descriptions and awareness programmes to inform patrons about sustainable seafood. They can also support local fisheries to reduce the carbon footprint and ensure fresher, higher-quality seafood.

By working together, governments, fisheries, retailers, and the hospitality sector can transform the seafood industry into a model of sustainability and transparency. Whilst traceability cannot guarantee sustainability, claims of sustainability cannot be guaranteed without traceability.

### A path forward

Traceability in seafood supply chains is crucial for ensuring transparency, visibility, and verification, serving as the precursor to sustainability. With growing interest in addressing environmental and social concerns, demand for traceability and certification is increasing. This series will explore the need for transparent supply chains, how to enhance transparency, and the benefits, aiming for better outcomes for industry players, consumers, and oceans.

Whilst traceability cannot guarantee sustainability, claims of sustainability cannot be guaranteed without traceability

## Reference:

1. The data coverage in the June 2024 FAO 'The State of World Fisheries and Aquaculture' report extends only until 2022.

## Sources:

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