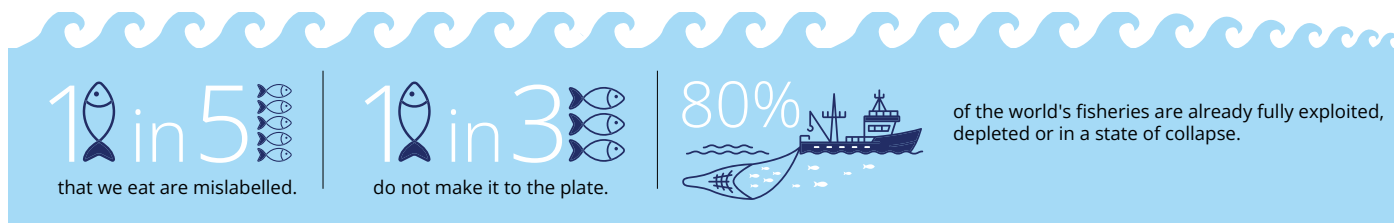




Long-term profitability:

The business case for
seafood traceability

To generate more revenue in the US\$195 billion seafood industry, we do not need to fish more out of our already overexploited oceans, we simply need to **waste less**.



A clear-cut example:

Let's say our revenue goal is US\$30, and each fish sells for US\$10. We catch 3 fish to hit that target. But we know that 1 out of every 3 fish doesn't make it to the consumer; so, we can expect to only generate \$20 in revenue.

To bridge the \$10 gap, the traditional approach would be to catch more fish, which drives up costs and resource use. Instead, implementing digital tools to minimize wastage ensures more fish reach consumers, achieving revenue targets sustainably.

Modern problems require modern solutions

Data and technology are being used to achieve cost savings, improve operational efficiency, and enhance long term profitability across many industries today. Even though it's hard to imagine using these systems for everyday fish, shrimp, crab, and other products, this is exactly what we need to do to support a sustainable ocean economy.

In its journey from bait to plate, seafood products pass through a complex supply chain, making it difficult to verify a product's origin or production history. This opacity in supply chains pose environmental and food safety challenges. However, digitization and traceability solutions like SFS Trace support transparency by eliminating seafood fraud, encouraging responsible choices, and enhancing sustainable practices among producers.

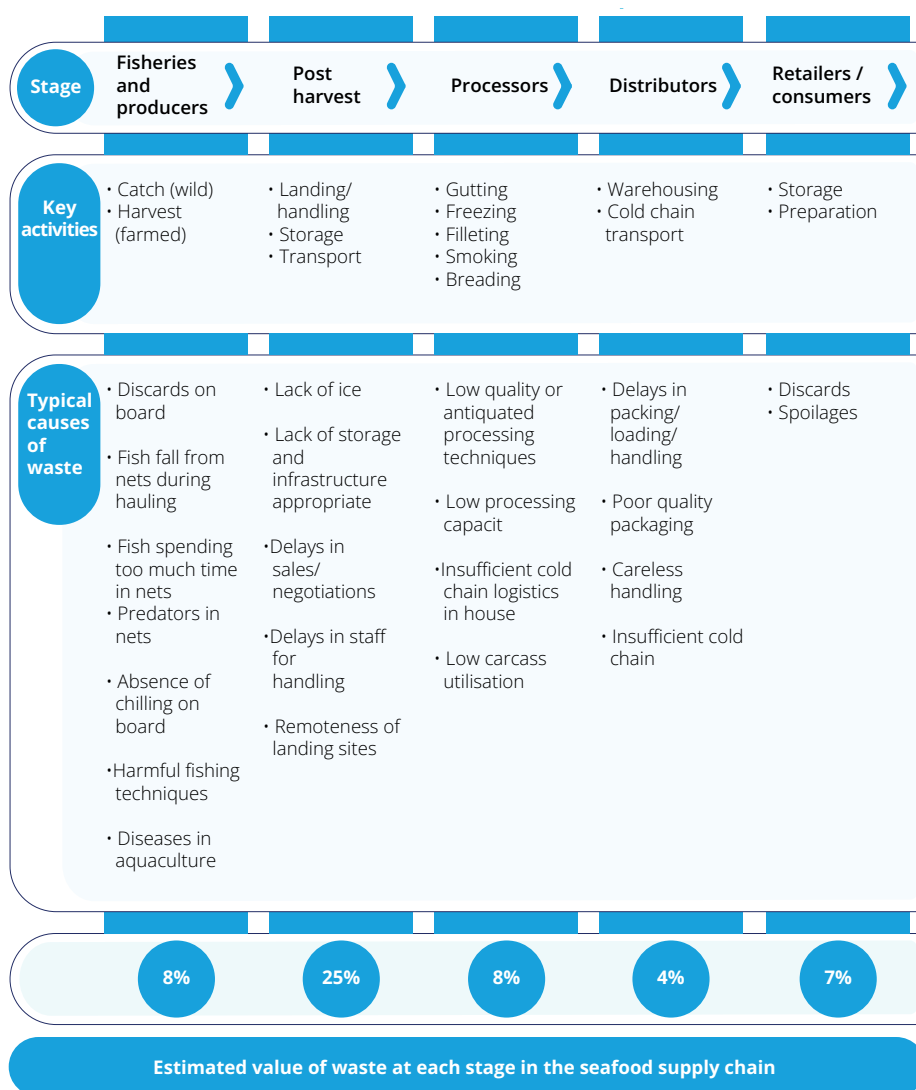


Figure 1: Infographic showing key handlers in the seafood supply chain, the activities at each stage, and the typical causes of waste that occurs and an estimated percentage wasted.

Traceability and profitability

So how does traceability reduce wastage, and how does reducing wastage yield financial returns?

1. Enhanced monitoring and accountability

Traceability systems provide comprehensive tracking from bait to plate, allowing real-time monitoring to identify inefficiencies and reduce waste. By holding stakeholders accountable, traceability fosters responsibility, leading to fewer losses and higher sales, contributing directly to profitability.

2. Assured quality and freshness

Monitoring handling conditions reduces spoilage and extends shelf life. This quality control not only commands higher market

prices but also strengthens customer loyalty, driving long-term revenue growth.

3. Optimized supply chain efficiency

Precise data from traceability systems enable optimized resource allocation and demand forecasting, minimizing overstocking and reducing waste. This efficiency lowers operational costs and boosts profit margins by aligning supply more closely with demand.

4. Tackling illegal, unreported, and unregulated (IUU) fishing

By ensuring only legally sourced seafood enters the market, traceability helps combat IUU fishing. This opens access to premium markets and bolsters brand reputation, attracting eco-conscious consumers.

5. Effective contamination management

Traceability allows for swift identification and isolation of contaminated products, minimizing waste and reducing recall costs. By mitigating the risk of large-scale contamination, companies protect both their financial health and brand integrity.

6. Aligned consumer expectations

As consumers seek transparency, traceability meets this demand by providing clear information on product origin. Traceable products can command premium prices, adding value and enhancing profitability.

Traceability not only addresses immediate operational challenges but also supports long-term profitability and sustainability, making it a critical strategic investment for seafood businesses.

Case Study: transforming Omani tuna quality through traceability

A collaborative initiative by Seafood Souq and the International Pole and Line Foundation (IPNLF) transformed Omani tuna from "can grade" to "sashimi grade", enhancing the quality and enabling Omani handline fishers to become international suppliers of sashimi and sushi-grade tuna. By implementing an efficient and traceable cold chain, this seafood now meets global demand, marking a significant stride in bringing Omani tuna to the world stage.

Unveiling Omani potential:

- **Skill development:** over 10 days, Turley and Nienaber trained 4 Omani fishing crews—one in Salalah and three on Masirah Island—on advanced fish handling and cold storage techniques. This at-sea training during actual fishing operations was crucial in elevating the quality of the tuna and ensuring accurate tracking of the catch.

- **Quality enhancement and verified traceability:** the initiative led to a remarkable improvement in tuna quality, with 14% of the catch achieving Grade-A status and the rest reaching 2+ and 2 grades. Through enhanced traceability, fishers were able to verify and document the species caught, along with precise data on the date, time, and location of the catch, thus showcasing the product's superior quality.

- **Market access and economic gains:** the ability to verify and showcase the product with reliable data, plus an efficient, traceable cold chain, allowed Omani fishers entry into international markets. This has guaranteed a higher-than-market price for their catch, enabling fishers to increase their income by focusing on fewer, higher-quality fish, while also reducing waste and minimizing environmental impact.

Paving the way for greater profitability

With effective traceability, businesses can verify the environmental sustainability and social responsibility of products they purchase. Companies and investors can protect themselves from regulatory and reputational risks; producers and suppliers who maintain sustainable practices can get the recognition they deserve, and governments can better manage their resources.



SFS Trace is a suite of digital tools for fishers, aquaculture producers and buyers of seafood to ensure more efficient, sustainable, transparent, and traceable seafood products. These tools can be deployed across the seafood supply chain to ensure that critical information on wild caught or aquaculture products are transparently shared from bait to plate.

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