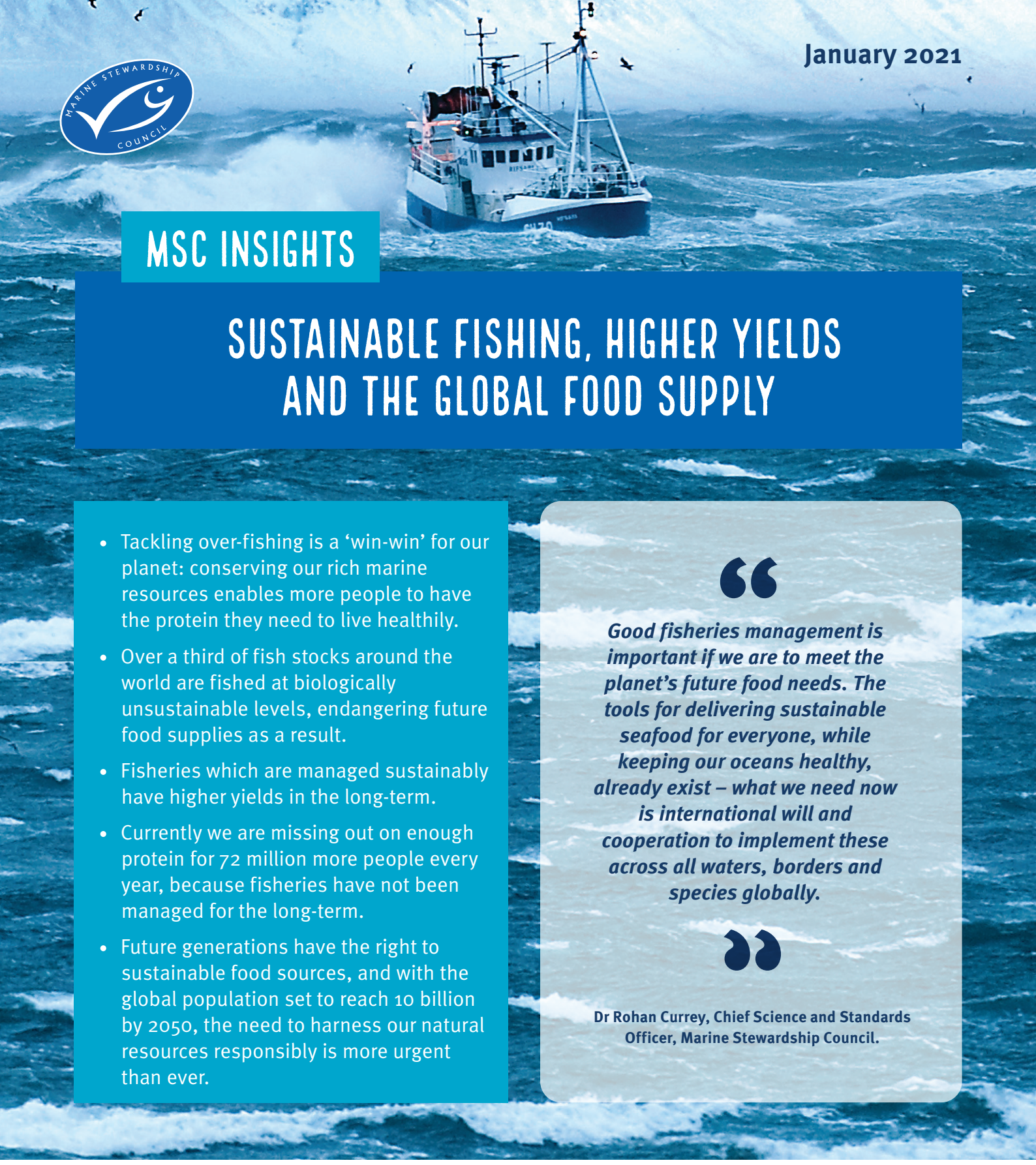


January 2021

MSC INSIGHTS

SUSTAINABLE FISHING, HIGHER YIELDS AND THE GLOBAL FOOD SUPPLY

- Tackling over-fishing is a 'win-win' for our planet: conserving our rich marine resources enables more people to have the protein they need to live healthily.
- Over a third of fish stocks around the world are fished at biologically unsustainable levels, endangering future food supplies as a result.
- Fisheries which are managed sustainably have higher yields in the long-term.
- Currently we are missing out on enough protein for 72 million more people every year, because fisheries have not been managed for the long-term.
- Future generations have the right to sustainable food sources, and with the global population set to reach 10 billion by 2050, the need to harness our natural resources responsibly is more urgent than ever.

> ***Good fisheries management is important if we are to meet the planet's future food needs. The tools for delivering sustainable seafood for everyone, while keeping our oceans healthy, already exist – what we need now is international will and cooperation to implement these across all waters, borders and species globally.***

Dr Rohan Currey, Chief Science and Standards Officer, Marine Stewardship Council.

FEEDING A GROWING POPULATION

The global population is set to reach 10 billion by 2050[1]. How to feed this population is one of the major global challenges of our time. The United Nations Sustainable Development Goals (SDGs)[2] include ending hunger and achieving food security by 2030. To reach these targets, fundamental changes must be made to the way we produce, access and consume food.

At present, the number of people who are chronically undernourished is rising, with one in 9 people around the world suffering severe hunger[3] and a quarter suffering food insecurity[4]. Amongst under-fives, a third have been stunted or wasted by malnutrition[2].

Tackling the food gap has multiple dimensions. We need to ensure the distribution of food is equitable, as the poor struggle to access healthy diets whilst the better-off have more choice than ever before. Similarly, we also need to reduce food loss and waste, as each year approximately one billion metric tonnes of food is never consumed[5].

But crucially we also need to increase the food supply in a way which can be sustainably managed. Whilst the world's population has more than doubled in the last 50 years, food production has increased four-fold[3]. To meet the demands of a 10 billion population, the World Resources Institute estimates that we will need a 50% increase in global food production[6].

Accomplishing this whilst conserving our natural resources is an enormous challenge. But when it comes to seafood, evidence suggests that there does not need to be a trade-off between higher yields and conservation – indeed, just the opposite. If all wild-capture fisheries used sustainable practices, 16 million tonnes *more* in catch could be generated every year, meeting the protein needs for millions around the world[21].

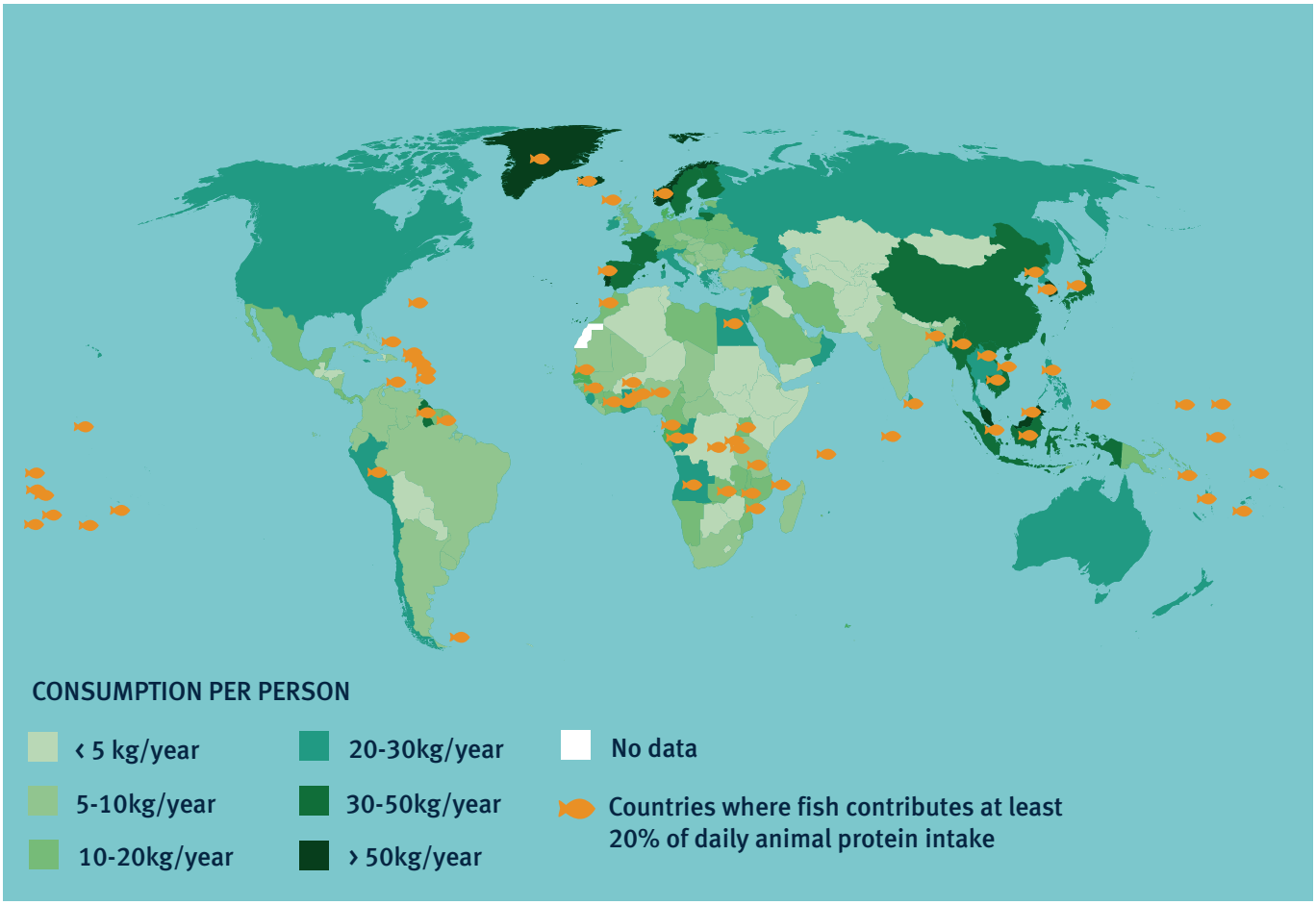
"Action on food security is needed, but food from our ocean continues to lack recognition as a viable solution to global food security planning and healthy eating. As one of the 200 million people who depends on our ocean for my livelihood, I believe it's important that we consider the employment and social potential of strong ocean stewardship."

Tiare Boyes, fisher and marine conservationist, Canada

THE IMPORTANCE OF SEAFOOD TO GLOBAL DIETS

Seafood is a key source of nutrients and protein, playing a vital role in the diets of many people. Protein helps our bodies build muscles and bones, repair cells and make new ones. It is especially important in the growth of children and for the health of pregnant women. Over 3.3 billion people around the world get at least 20% of their daily animal protein intake from fish[7].

FISH CONSUMPTION PER CAPITA AND RELIANCE ON FISH PROTEIN[7]



The consumption of fish worldwide has risen by 122% in the past 30 years[7]. The global appetite for seafood shows no signs of abating, and it continues to be one of the most highly traded commodities in the world[7]. In developing regions, fish consumption has increased from 5.2kg per person in 1961 to 19.4kg in 2017, fuelled by expanding fish production and imports[7].

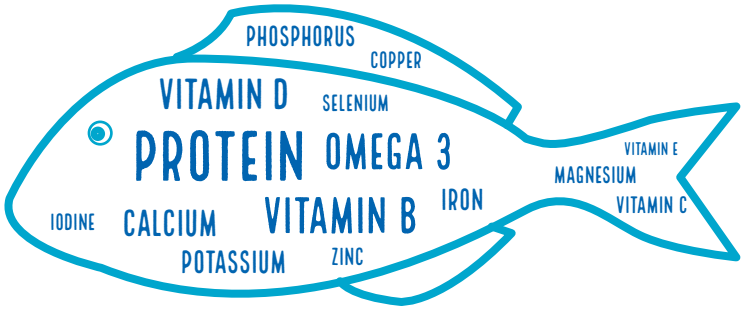
Much of the recent increase in production has come from aquaculture, but this in turn is heavily dependent on wild fisheries as a source of feed. In 2018, production from wild capture fisheries reached the highest level ever recorded, at 96.4 million tonnes, with around 60% of all seafood caught in the Global South[7].

LOW CARBON PROTEIN

As well as being a vital source of nutrition for millions, wild seafood is a low carbon source of animal protein. Catching a kilo of fish emits only about 2% the amount of CO_2 as producing a kilo of red meat[8], and negates the need for land clearance for grazing or feed. In terms of energy use, greenhouse gas emissions and the release of pollutants, small mid-water fisheries (such as sardine and mackerel) and mollusc aquaculture have the lowest environmental impact per unit of protein produced, with beef farming and catfish aquaculture the highest[9].

Sustainable fishing therefore has a vital role to play in ensuring a secure food system while we also address the challenges of climate change[10].

FISH AND SHELLFISH ARE A GOOD SOURCE OF[11]:



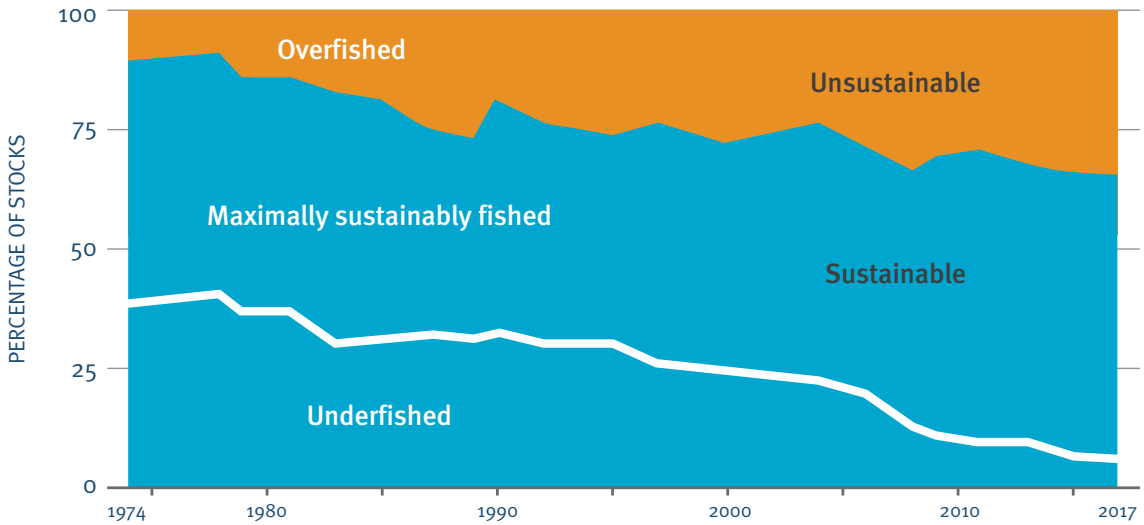
THE CRISIS OF OVER-FISHING

Rising levels of over-fishing continue to threaten this valuable, natural resource. In 1974, 90% of global fish stocks were fished within biologically sustainable levels. Today it is less than two thirds[7].

Growing consumer demand, linked in part to population growth, provides an ever-expanding market for fish that is served by an efficient and truly global supply chain. This, combined with legitimate livelihoods aspirations of fishers, creates huge pressure to catch more seafood than our oceans can sustainably provide.

Although overfishing is an issue for all of the ten most landed fish, global figures hide significant variations between regions and individual stocks, with some faring better than others. According to the UN Food and Agriculture Organisation (FAO), the proportion of stocks that are overfished in different areas of the oceans ranges from 11% to 63%[7].

GLOBAL TRENDS IN THE STATE OF THE WORLD'S MARINE FISH STOCK, 1974-2017.



The scale of the global challenge is daunting. Poor fisheries management, combined with harmful subsidies which drive over-capacity, have left many stocks over-fished. Although many international waters are overseen by Regional Fisheries Management Organisations (RFMOs), only vessels whose countries have signed up as members are bound by their regulations. Lack of effective governance – especially in countries with limited resources – means illegal, unreported and unregulated fishing (IUU) is having a serious impact on marine resources, particularly on small-scale fisheries in developing countries.

LOST LIVELIHOODS AND FOOD SECURITY

Ten percent of the world's population depends on the ocean for a readily accessible source of protein and employment. Some coastal communities depend directly on fish for food security[12], but many more rely on the income from fishing to sustain them and their families, with about 50 million people directly employed in the seafood sector[7].

When overfishing of Canada's Grand Banks led to a complete collapse of the cod fishery at the end of the last century, over 35,000 fishers and plant workers from more than 400 coastal communities lost their jobs[13]. Although cod have now returned to the area, the ecology of the region has fundamentally changed, meaning their numbers are much lower[14].

Illegal, unreported and unregulated (IUU) fishing is estimated to cost the global economy US$10-23 billion each year[15], and is jeopardising the livelihoods of fishing communities around the world[16,17]: it has been estimated that cracking down on illegal fishing would create an extra 300,000 jobs in West Africa alone[18].

Other research has suggested that millions of people in food-deficient countries could have avoided under-nourishment if fisheries were not overexploited and local resources unfairly allocated. For many coastal countries where nutrient intake is inadequate, marine catches could provide more than the dietary requirements for people living within 100 km of the coast, with a fraction of current landings potentially transforming the situation for children – under-fives in particular[19]. Small-scale fisheries have been identified as making direct and indirect contributions to food security, as they make affordable fish available to local communities, as well as being key to sustaining livelihoods[20].

SUSTAINABLE FISHING AND NUTRITIOUS DIETS

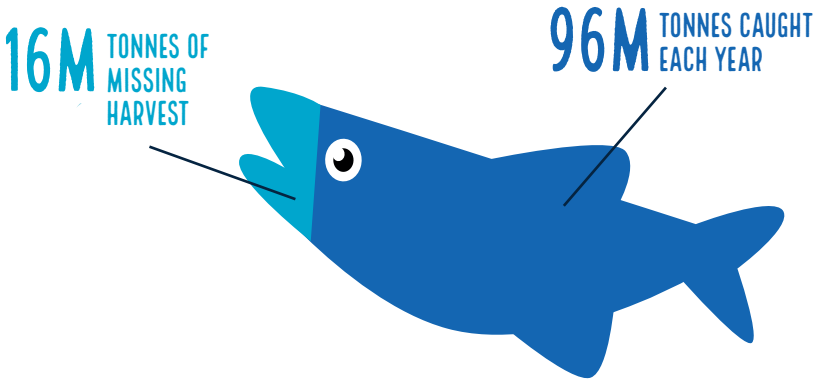
Tackling over-fishing is a 'win-win' for us and the planet. By conserving our rich marine resources, we will enable more people to have the protein they need to live healthily. Fisheries that are managed sustainably are also more productive in the long-term and, by providing a more stable food source, they are ensuring seafood will be available for future generations.

Latest estimates suggest we could be harvesting 16 million more tonnes of seafood each year if global fisheries were better managed[21]. Improving the management of fisheries will allow stocks and ecosystems to recover. This, in turn, increases the amount of fish that can be sustainably harvested in perpetuity.

16 million tonnes of seafood provide over 1.3 million tonnes of edible protein[22,23,24]. The recommended daily intake of protein is 50g per person[25], equivalent to two small salmon fillets or four eggs, seven slices of bread or seven tablespoons of seed and nuts. With 1.3 million tonnes of edible protein then, a total of 26,500,000,000 daily portions of protein are being lost each year.

The lost protein is **enough to meet the needs of over 72 million people each year**[26] – equal to the rural population of the USA and Canada, or the entire population of the UK and Ireland, or the combined population of Côte d'Ivoire, Guinea, Liberia, Mauritania, Senegal and Sierra Leone in West Africa, or the combined population of Cambodia, Malaysia, Maldives, Sri Lanka and Timor-Leste in East Asia.

THE WORLD IS LOSING OUT ON **14%** OF ITS POTENTIAL WILD SEAFOOD



MAKING SUSTAINABLE FISHING A GLOBAL REALITY

In recent years, more fisheries than ever before have been adopting sustainable fishing practises. Effective fisheries management[27] requires fisheries to follow international best practices for gear, for management procedures to have a solid scientific basis (such as robust 'harvest control rules') and for a scientific understanding of how different layers of the ocean food chain interact[28].

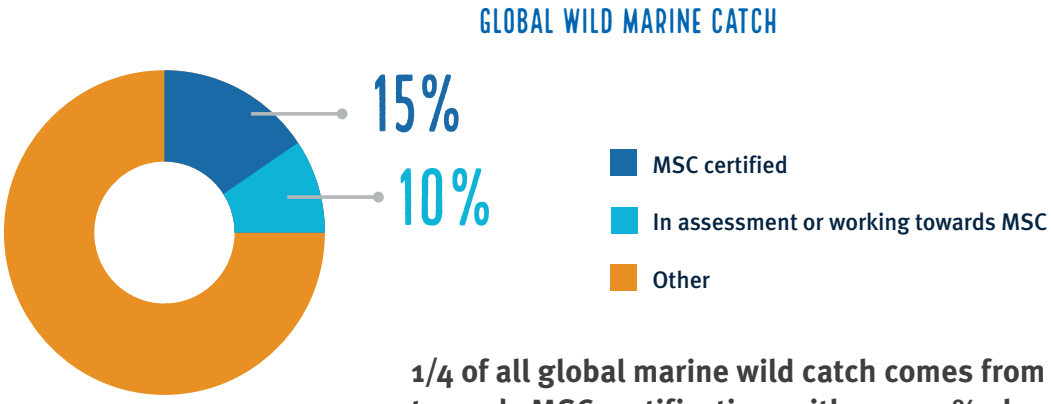
Cooperative fishing brings wage rises and security to the Ben Tre clam fishery

A lack of effective management by central government in Vietnam in the 1980s and 1990s led to overharvesting of clams, threatening the future of these fisheries.

Ben Tre clam fishery is a cooperative set up by fishers in 2009 and became the first of the region's small-scale fisheries to achieve MSC certification. To meet the requirements of the MSC Fisheries Standard, fishers established closed areas where harvesting is prohibited, improved data collection and reporting, and banned the harvesting of small clams.

The fishery now has access to new markets, particularly Europe, where demand for certified sustainable clams has resulted in higher profits for the fishery and higher wages for cooperative members. In one area, the total value of landings increased by 165% despite fishers reducing the time spent harvesting by 22%[29].

The MSC's voluntary ecolabel and certification program recognises sustainable fishing practices, helping create a more sustainable seafood market. In 2020 there were 409 MSC certified fisheries around the world, with another 89 undergoing assessment[30]. These included 62 small scale fisheries supporting the livelihoods of 80,000 people, and 70 fisheries from 26 countries in the Global South[30].



1/4 of all global marine wild catch comes from fisheries working towards MSC certification, with over 15% already certified[30]

MSC certification is awarded by independent assessors. It requires strong evidence of healthy stocks, measures to protect ecosystems and reduce bycatch, and effective management. Many fisheries make significant improvements before entering MSC assessment but are required to make continuous improvements to maintain global best practice as set out in the MSC Fisheries Standard.

This growth in certified sustainable fisheries is driven, in part, by the increasing consumer demand for sustainably sourced food. More and more shoppers want to know that the products they buy are sustainably produced, with European seafood consumers ranking sustainability as more important than price[31].

DELIVERING WIDER CHANGE

MSC-certified fisheries are delivering far reaching changes that contribute to global progress. A recent MSC analysis showed that fisheries meeting the organisation's Fisheries Standard are also delivering on at least 34 different Sustainable Development Goal targets[32], specifically supporting progress towards ending hunger (SDG 2) and securing the health of our oceans (SDG 14).

However, individual fisheries cannot deliver the change needed on their own. They also need the support of governments to ensure that catch limits are in line with scientific advice, that illegal, unregulated and unreported fishing is tackled, and that harmful subsidies which encourage over-fishing around the world are eliminated. Governments need to prioritise the management of our oceans – because our future depends on them.

CONCLUSION

The extra protein gained by ending overfishing and properly managing our fish stocks could supplement the diets of millions of people around the world.

Fisheries across the globe are already demonstrating that fishing sustainably is not only achievable but more productive too, contributing to a food-secure future.

To accelerate this change, industry, retailers, governments and consumers need to prioritise and support sustainably sourced seafood.

Namibia rebuilds its fish stocks for the benefit of local people

Historically exploited by international fleets, annual catches of Namibian hake peaked at around a million tonnes while bringing limited benefits to the local economy and severe consequences for the region's ecosystem.

Following independence, the government worked with business to create a profitable fishing industry, which harnessed foreign investment, to benefit both Namibians and the ocean. Namibia's Marine Resources Act of 2000 was hailed as one of the most progressive and successful fisheries policies in the world. Requirements for the majority of catch to be wet, not frozen, also meant the bulk of fish processing was done locally, creating new jobs.

After ten years of working with the MSC, the Namibian hake fishery became certified in 2020, opening up more access to European markets. The large-scale fishery has implemented a clear management strategy and works closely with the MSC-certified South African hake fishery to ensure stocks are assessed together. The result is that Namibian hake stocks have doubled in size and the hake industry has become a key employer of women.

> ***"As custodians of our natural resources, it's our responsibility to manage Namibia's fisheries in a way that ensures the long-term health and biodiversity of the oceans, and at the same time allows our fishing industry to maximise the value of the resource for this and future generations of Namibian people."***
>
> **Dr A Kawana, Minister of Fisheries and Marine Resources, Government of Namibia**

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