

BSRS POLICYBRIEF | JUNE 2021

Educating the public on sustainable fish consumption



UNIVERSITY OF BERGEN

▶ ▶ ▶ Group 2 of the Bergen Summer Research School, organized by the University of Bergen, worked towards a policy for sustainable oceans by focusing on Sustainable Development Goal 14.4 – sustainable fishing – and its promotion through education and responsible consumption.

This policy brief focuses on the nexus between the Sustainable Development Goals 14, 12, 3, and 4. The main concern is the conservation of marine resources (SDG 14) which is tightly entangled with an ever-increasing consumption of seafood worldwide (SDG 12). As seafood is a valuable form of nutrition that helps to establish healthy lives (SDG 3), promoting awareness about marine sustainability issues by quality education (SDG 4) is necessary to establish responsible seafood consumption patterns.

3 Key points

- Achieving sustainable fishing is an urgent global concern with over 80% of global fish stocks being overexploited.
- Sustainable fishing is an important contributor to human well-being, as it provides a lot of essential nutrients.
- Education and awareness of consumers worldwide are key contributors to the demand and supply chain and thus necessary for responsible and sustainable seafood production and consumption.

Introduction

Sustainable fishing means leaving enough fish stocks in the sea, so that the stocks are able to reproduce and replenish their numbers. It involves respecting ecological habitats and ensuring that the stakeholders which rely on fishing are able to maintain their livelihoods over time. However, sustainability criteria are not yet met by the fishing industries. Almost 60 % of the fish stocks in the world have reached their maximum exploitation, around 30 % of the fish populations are seriously endangered by overexploitation, leaving them no time to recover between catches.

The **global consumption** of fish has increased at a higher rate than the human population over the last decades. Reasons for this include technological advancements, for example in terms of fishing gear, but also increasing demand of seafood due to its high nutritive value. Apart from being a source of high-quality protein, seafood further contains valuable omega-3 fatty acids, vitamins, and minerals.

Some countries have established long traditions for catching and consuming fish – up to three times more per capita than the global average. But also, countries further away from the ocean, especially in Asia, have caught up in fish consumption due to rising incomes and improved cold chain transport.

To benefit from a healthy ocean, we must rebuild marine life through global partnerships of different sectors aligned around a scientific evidence-based plan, supported by a business and an educational plan. Whilst legislative solutions are necessary to minimize further exploitation of natural resources by the dynamically evolving seafood industries, also **education and rising awareness** about sustainability issues of seafood consumption are urgently needed to achieve responsible seafood production and consumption.

Hence, this policy brief focuses on the nexus between the **Sustainable Development Goals 14, 12, 3, and 4**. The main concern is the conservation of marine resources (SDG 14) which is tightly entangled with an ever-increasing consumption of seafood worldwide (SDG 12). As seafood is a valuable form of nutrition that helps to establish healthy lives (SDG 3), promoting awareness about marine sustainability issues by quality education (SDG 4) is necessary to establish responsible seafood consumption patterns.

Analysis

Education is a key component of every successful strategy aiming at more scientifically informed consumer choices and behaviors. Therefore, it represents a major supporting tool for the implementation of new policies regarding sustainable fishing. Due to education about the nutritional value of fish over the last decades, the **awareness** of the health benefits of eating fish has grown verifiably among the consumers. Increased consumption of fish as food can reduce malnutrition of different types, undernourishment as well as unbalanced nourishment. But how can education unite an increasing consumption of fish with a sustainable fish production?

Important alternatives to wild fisheries are **aquaculture and mariculture**, which are already becoming the world's fastest growing food producers, currently accounting for 17% of the global production of edible meat. They provide food that is not only rich in protein but also contains important bioavailable micronutrients and essential fatty acids that are not easily found in land-based foods. Mariculture has been proposed as a viable option that may provide up to 44% of seafood by 2050, since it is far below its ecological limits. Apart from promoting it through policy reforms and technological advances, educational campaigns are needed to make customers aware of the potential of these alternatives and reduce prejudice.

In some countries like Japan or the Fiji Islands, **fisheries management** led to the implementation of exemplary solutions: Local fishermen and fishing communities have the right to provide licenses, ban fishing, control the total allowable catch, and monitor fish stocks. In other countries, where unregulated and illegal fishing is still a major problem (30 % of fisheries worldwide are not reported to the United Nations), educational programmes and participative initiatives will help to integrate all stakeholders in bottom-up policy-making processes.

Wild fisheries may only expand further if the consumers buy more seafood from **local small-scale fisheries** that focus on subsistence and artisanal fishing, and less from large-scale fisheries that mass harvest fish resources and

thus cause environmental degradation. Also, shifting consumer demands towards more balanced decisions on what fish to eat will support the sustainable management of fish stocks. Overall consumption of a **wider variety of fish products** reduces or distributes the pressure on highly demanded species like tuna, salmon, and cod. Empirical studies suggest that consumers with more awareness and knowledge of this issue eat a wider variety of fish.

Conclusions

With the global population expected to reach 9 billion by 2050, sustainable fishing clearly becomes a priority challenge in terms of sustaining the global food chain as well as marine resources. It also constitutes a key factor for controlling climate change.

Education is a key component of strategies aiming at a change of consumer behaviours regarding seafood. Targeting consumer behaviours without the implementation of relevant educational strategies is unlikely to result in sustainable outcomes, especially with regard to such complex phenomena as eating habits. Furthermore, newly implemented policies will be better supported by an educated public.

Apart from governments and local fisher communities, educational institutions also need to be involved as stakeholders in policy-development processes to improve fisheries management by reducing overcapacity, eliminating flags of convenience, and ensuring traceability.

Recommendations

- Raise awareness among the public for sustainable fish consumption using education campaigns.
- Integrate sustainability issues of marine ecosystems and fish production into school curriculums.
- Educate fisher communities on their marine resources and co-create better management practices.
- Make unbiased information on fish production easily available and accessible for the general public.
- Promote diverse methods of food preparation so that a greater variety of fish can be consumed.



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Relevant SDGs



IMPRINT

SDG Bergen Science Advice in Collaboration with Bergen Summer Research School's 2021 PhD Course holders professor Birgit Kopainsky, Dr. Hiwa Målen, and Dr. Ingunn Johanne Ness.

Relevance to the 2030 Agend

A nexus of four Sustainable Development Goals is encouraging concerted action for the respective areas of critical importance: life below water (SDG 14), responsible consumption and production (SDG 12), good health and well-being (SDG 3), and quality education (SDG 4).

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