

THE GAME-CHANGING POTENTIAL OF ALTERNATIVE SEAFOOD IN FOOD SYSTEMS



Aquatic foods, known as "seafood," are an essential component of the global food system, contributing to many aspects of human well-being, including livelihoods, food, and nutrition security⁴.

The Surge in Global Fish Consumption and Its Effects

The Food and Agriculture Organization (FAO) reports that the rate of rise in worldwide fish consumption from the early 2000s to 2021 was an astounding 3.1% per year, which is twice as fast as the yearly rate of population growth during that time (1.6%)¹. Except for poultry, which expanded by 4.7% annually, the average annual growth rate of fish for human consumption was higher than that of all terrestrial meat consumption put together (2.7%).

To put it another way, the number of fish consumed annually per person increased from 9.0 kg in 2000 to 20.3 kg in 2021¹.

The FAO claims that there are several different causes for the occurrence which may be due to technological advancements in processing, the development of the cold chain, improved logistics (for example, in shipping and distribution), and increased consumer knowledge of the advantages of eating fish for health. With seafood consumption by the average consumer doubling over the past 50 years, it's remarkable that the world produces over 200 million tonnes of fish and shellfish annually¹.

The demand for fish and seafood is also anticipated to rise, along with any negative consequences, as the world's population is predicted to reach 8.5 billion people by 2030. Numerous studies have found that this rise in consumption has dangerous effects on both the environment and, indirectly, human health. Beyond fishing, critical issues such as overfishing, illegal practices, plastic pollution, biodiversity loss, and risks to human health further are the challenges we face.⁵.

Top Alternative Seafood Innovations to Watch

Numerous producers are providing a wide range of fish substitutes because of the popularity of plant-based cuisine and growing customer awareness of the negative environmental effects of fishing. These include fishcakes, scampi, and even fish-sticks made from plants. These products are made by using a variety of components like wheat gluten, soy, or jackfruit. To create a fishy flavour, they could also employ synthetic flavourings or organic ingredients like seaweed. Below are some of the innovative dishes that served as 'Seafood Alternative':

- i. Tofu Fish ('Tofish')
- ii. Smoked Carrot Salmon
- iii. Banana Blossom Fish

- iv. Jackfruit Tuna
- v. Mushroom Fish Pies

Plant-based seafood alternatives can provide essential nutrients such as protein and minerals to someone eating a vegan or plant-based diet². Fish can be swapped out for other animal or plant-based protein sources like chicken, tofu, or tempeh in some recipes, including sushi³. To supplement some of the lower-protein items on this list, such carrots, banana blossoms, jackfruit, and mushrooms, a person may wish to serve them alongside with higher-protein items like beans, pulses, or a protein shake².

Alternative seafood, which is emerging as a new source of food with the potential to augment future food supplies, mainly comprises all plant-based, fermentation-derived, and cell-based seafood forms that mimic the taste, texture, appearance and/or nutritional properties of conventional seafood. In collaboration with Beneo, **DPO International** is proud to offer you a variety of ingredients including alternative seafood for your food applications.

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