

MEDIA RELEASE

Sustainable small fisheries can help the planet – UP expert

More than three billion people, most of whom are in developing countries, rely on the ocean to make a living. Fisheries and aquaculture provide the main source of animal protein for some 17% of the world's population. In the least-developed countries, fish contributes about 29% of animal protein intake.

The demand for seafood is predicted to rise by around 15% by 2030. Fish production has already doubled in Africa and Asia over the past few decades.

This is according to a commentary article published in *Nature* by Professor Sheryl Hendriks, Head of the Department of Agricultural Economics, Extension and Rural Development at the University of Pretoria (UP).

Despite the challenges of climate change and overfishing, studies suggest that seafood production can be sustainably expanded to meet future food demands. Last year, international efforts promoting this approach included the Blue Food Assessment (a joint initiative of 25 research institutions) and the United Nations Food Systems Summit.

Prof Hendriks explains the invited commentary was published ahead of the United Nations Ocean Conference in Lisbon Portugal. "The conference comes at a critical time where climate change and the neglect of our ocean's resources threaten the future of oceans resources, food supply, food security and the potential for oceans to act as a buffer for climate change," she says. The Conference will discuss much-needed science-based innovative solutions to turn the tide of decline and destruction."

Fish form an essential part of solving world hunger and malnutrition. As one of the most efficient converters of feed to food, fish offer a good source of easily digestible, nutrient-dense food. Fisheries play a significant role among populations in the developing world, contributing directly to livelihoods and employment.

Preserving and protecting environments and stocks is not enough to ensure sustainable fisheries and livelihoods for the future when the total global loss and waste from fisheries is estimated at between 30% and 35% annually.

Losses (before landing) and waste (post-landing of a catch) from the fisheries sector threaten the sector's sustainability and affect environmental and human health. This waste could be generated from a number of factors related to fisheries practices, storage of the catch, market constraints and policy gaps and loopholes, Prof Hendriks explains.

"Fisheries can create environmental hazards due to direct land and water contamination from waste disposal and water runoff from cleaning facilities. Waste in abandoned fishing gear and nets at sea presents ecological challenges," said Prof Hendriks, adding that in production, processing and preserving can, themselves, pollute the air, land, and water, affecting the ocean if not managed.

“The inefficient management of waste from human settlements pollutes rivers that feed into the ocean, carrying litter (including plastics), sewerage and contaminants from landfill sites and waste disposal dumps. Agricultural and industrial runoff and waste also contaminate the ocean via rivers. Carbon emissions are causing ocean warming, acidification, and oxygen loss, affecting fish availability and the spatial distribution of fish. These pollutants threaten the sustainability of fisheries at all scales and the livelihoods and jobs of millions of people, she said.

Moreover, due to the sectorial organisation of most governments, very few take an integrated approach to policy development, implementation and enforcement. The inter-connectedness of agricultural and industrial pollution on fresh and marine systems may well not be deliberated in sectoral development policies. Urban sprawl, especially in fast-growing coastal cities, may not consider the implications of human settlements on the coast and marine systems.

“Due to the significance of the global commons nature of the ocean and the inter-connectedness of marine systems with a wide range of environmental factors, the governance of marine systems is complex,” says Prof Hendriks.

She noted, however, that any change in consumption drives changes across the food system, not only for fisheries. “Change affects multiple other food system components such as the demand for more and distributed storage and processing capacity. This is especially true for highly perishable commodities such as fish, which have a very short shelf life unless processed or preserved. Extending the shelf life of foods requires greater energy for storage (refrigeration), rapid transportation, or processing plants.”

What can consumers do?

Consumers could support small fisheries by supporting local enterprises, increasing income for small fisheries. By supporting artisanal fishing (traditional or subsistence fishing) they can also contribute to improving livelihoods, boosting nutrition, and strengthening food systems, but fishers’ input is needed locally, nationally, and globally.

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Photo captions:

Photo 001:

Women interested in buying fresh fish gather waiting for boats that pull over with fresh products at the shore of the Lake Tanganyika in Kigoma, Tanzania.

Photo credit: © FAO/Luis Tato

Photo 002:

Neldie G. Balladares, 47, weighs a +2kg grouper for a customer in the Bagting Fish Market in Dapitan City, Philippines.

Photo credit: © FAO/David Hogsholt

Photo 003:

Women transporting fresh fish in their iceboxes donated by the project. The iceboxes maintain the quality of the fish that they will sell. In Burkina Faso the production of fish amounts to about 8 000 tons per year, most of which is consumed in the capital, Ougadougou. Women play an important role in the distribution of fresh fish, which is an activity through which they improve their family economy.

Photo credit: © FAO/Antonello Proto

Photo 004:

Socio-economist Arie Pieter Van Duijin, working as an Associate Professional Officer (APO) in the Fisheries Department at the FAO Regional Office in Vietnam, is seen here sitting in on a meeting of local fishermen and their families, in Loc Dien Village, Vietnam.

Photo credit: © FAO/Jim Holmes

Photo 005:

Fishermen catch fresh perch using traditional methods while sailing a fishing boat early in the morning at the Lake Tanganyika near Rukwa, Tanzania.

Photo credit: © FAO/Luis Tato

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About the University of Pretoria

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on the Hatfield Campus, Pretoria. This 114-year-old institution is also the largest producer of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only University in the country with a Faculty of Veterinary Science, which is ranked top in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes.

UP is one of the top five universities in South Africa, according to the 2019-2020 rankings by the Center for World University Rankings. The QS World University Rankings also placed UP among the top 100 universities worldwide in three fields of study (veterinary science, theology and law), and UP is in the top 1% in eight fields of study (agricultural sciences, clinical medicine, engineering, environment/ecology, immunology, microbiology, plant and animal sciences and social sciences), according to the Web of Science Essential Indicators.

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