

Treating fish as a public health asset can strengthen food security in lower income countries

5 August 2020, by Valentina Ruiz Leotaud



Fisherman. Credit: NOAA, Public Domain.

The food and nutrient security of billions of people worldwide depend on fish being treated as a domestic public health asset instead of a commodity.

A new paper by researchers with the *Sea Around Us—Indian Ocean* initiative at the University of Western Australia and the *Sea Around Us* global initiative at the University of British Columbia reviews evidence to back the urgent need to develop health- and nutrition-focused fisheries policies that drift away from current export-oriented, profit-maximizing policies.

"Fish constitutes a major component of the diet of more than 3 billion people around the world. In [low-income countries](#), in particular, small-scale fisheries are the main source of nutrients for over a billion people," said Gabriel Vianna, lead author of the study and a research fellow with the *Sea Around Us—Indian Ocean*. "The problem is that many of these countries export their highly-

nutritious [fish](#) and import lower-quality fish and [fish products](#), thus creating a net loss of essential nutrients."

Under-nutrition affects around 13 percent of the population in low-income countries while fish rich in vital nutrients including iron, vitamins and essential fatty acids such as omega-3 are removed from their waters and sent to developed countries or ground into fishmeal to feed those countries' aquaculture industry.

"Because of the growing recognition of the potential benefits of fish consumption for human health, demand from high-income societies has increased, and industrial fishing fleets have expanded their fishing capacity to the waters of low- and [middle-income countries](#)," Vianna said. "This is contributing to local overfishing, causing competition with and displacement of local, small-scale fishers, and increases in prices of local fish, ultimately depriving low-income populations of essential nutrients, thus intensifying malnutrition."

Global fish catches have been experiencing a steady annual decline of around 1 percent since the mid-1990s, mainly due to overfishing. This is equivalent to about 1 million tonnes of fish per year, a trend that is expected to continue if policies to reduce the excessive levels of exploitation by industrial, tax-payer subsidized fleets are not put in place.

"If not addressed, the resultant loss in biomass due to overfishing will translate into a shortage of fatty acids and essential micronutrients, affecting more than 10 percent of the [global population](#), with a disproportionately high impact in tropical low- and middle-income countries," said Dirk Zeller, co-author of the study and director of the *Sea Around Us—Indian Ocean*. "If you combine this with the

increasing impacts of climate change, the challenges faced by the artisanal and subsistence fisheries that feed so many people in these countries are considerable and need to be addressed urgently."

The global implementation of deep structural improvements in effective fisheries management may result in a potential increase in annual catch of 16 million tonnes, which can help address the nutritional shortfalls.

"These improved numbers would be the consequence of not only limiting industrial overcapacity but also of these policies tackling the rebuilding of fish populations by, for example, creating a network of no-take marine protected areas," said Daniel Pauly, co-author of the study and principal investigator of the *Sea Around Us* global. "In turn, nutrition deficiency would be addressed because [local populations](#) would have more access to local fish and more disposable income for expenditures on higher-quality food to complement diets."

The paper "Fisheries and policy implications for human nutrition" was published today in *Current Environmental Health Reports*.

More information: Gabriel M. S. Vianna et al. Fisheries and Policy Implications for Human Nutrition, *Current Environmental Health Reports* (2020). [DOI: 10.1007/s40572-020-00286-1](https://doi.org/10.1007/s40572-020-00286-1)

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