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Fisheries and aquaculture in troubled waters

What is the state of world fisheries and aquaculture nowadays and what does their future look like? FAO provides an answer to this question in its recent 2018 release of The State of World Fisheries and Aquaculture.

Production

In 2016, total production of the fisheries and aquaculture sector achieved a record level of 171 million tons, of which 151 million for direct human consumption. Aquaculture, which was quite insignificant 40 years ago, now represents almost half of total production of the sector and it is in continuous growth (around 10% per annum during the '80s and '90s!), while fisheries have practically been stagnating at their 1995 level. China is by large the biggest producer (more than half of aquaculture).

It is estimated that close to 60 million people lived from the primary activities of fishing and aquaculture in 2016, with more than 50 million in Asia. One third of these people was working in aquaculture and the rest in fisheries. A large part of these people was made of poor workers.

Fisheries were conducted by close to 5 million vessels - mainly of a small size - the two-thirds of which were engine-powered.

Consumption

The rapid growth of production has gone in parallel to a sustained growth of consumption, much higher than that observed for meat. Between 1961 and 2015, the average consumption of fisheries and aquaculture products per person has more than doubled, from 9 kg per person to more than 20 kg per person. These products have therefore become an essential source of animal protein and it is expected that their prices will continue to increase as they did in the recent past (+75% between 2002 and 2016).

Trade

Fish and fish-based products are among the most traded food items (around 35% of total production is exchanged internationally). The three largest exporters are China, Norway and Viet Nam. The largest importers are Europe, the US and Japan who, together, consume 47% of total world fish production.

Waste and losses

Waste and losses are estimated at 27% of landed fish. This is within the average of what is observed for food products in general [read].

Resources

The future of fisheries is threatened by overfishing of stocks. It is in the Mediterranean and Black Sea, in the Southeast Pacific and in the Southwest Atlantic that there is the largest share of fish stocks that are being fished at a level that is biologically unsustainable. In 1974, there were only 10% of the fish stocks that were overfished. This proportion reached 33% in 2015. Over the same period (1974-2015), underfished stocks dropped from around 40 to less than 10%. In the Mediterranean and Black Sea, the proportion of overfished stocks was more than 62% in 2015. The future of fisheries is therefore at stake, all the more as programmes aiming at restoring overfished stocks progress less than planned, even though the restoration of stocks can be achieved with a positive social, economic and ecological impact.

In the case of aquaculture, its expansion is likely to be hampered in the future by constraints in availability and quality of water. Moreover, in some regions, the development of aquaculture has been a cause of environmental degradation and loss of biodiversity, in particular in coastal areas such as mangroves.

Quality

In aquaculture, excessive use of antimicrobial substances (in particular antibiotics) in many parts of the world has been recognised as the factor responsible for the emergence and dissemination of antimicrobial resistance [read].

Fisheries and aquaculture products are often at risk of fraud (including intentional mislabelling, species substitution and undeclared use or overuse of water-binding agents to increase the weight of products).

The quality of these products is also increasingly affected by water pollution, particularly by micro-plastic that has become pervasive [read].

Outlook

FAO projections are such that production in oceans should be falling in the future (a decrease of around 6% by 2100), coastal fisheries decreasing more than deep water fisheries. By 2030, aquaculture products should be well above those coming from fisheries. Simulations envisage that the total production of sector would reach 200 million tons (compared to 171 million tons in 2016).

But the achievement of these projections is subject to the impact of climate change and to the evolution of marine pollution and water pollution more generally. It will require the implementation of a series of programmes and policies at global, regional and national level presented in the FAO publication.

Conclusion

World fisheries and aquaculture have seen a remarkable expansion during the last decades and their products are increasingly consumed. But the sector relies on two very different worlds: one of large scale industrial fisheries and aquaculture where financial capital is a key ingredient, and a world of small family and artisan producers where means are limited and poverty is pervasive.

The increase of consumption of fisheries and aquaculture products has contributed to raise considerably prices, illustrating constraints met by supply, particularly in the case of capture fisheries, the production of which has been falling.

Despite efforts made to combat illegal fishing, it remains a very important issue that escapes the control of authorities.

Overfishing of natural stocks, environmental impact, water constraints in terms both of quantity and quality, as well as serious threats on the quality of products offered to consumers (presence of antibiotics and plastic) make it that the future of this sector is uncertain, despite signals provided by FAO's projections that may appear to be overoptimistic.

To know more:

- FAO, The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals, 2018.

Earlier articles on hungerexplained.org related to the topic:

- Pervasive plastic : from food in plastic to plastic in food, 2018
- Seafood and tobacco blamed for being responsible for the high level of metal contamination of pregnant women in France, 2017
- Food, Environment and Health, 2014/2017
- Catastrophic Antibiotic Threat from Food, 2017.