INDUSTRIAL FLEET vs ARTISANAL FLEET

MYTHS AND REALITIES

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CONTENT

1) PRELIMINARY NOTE.

In the FAO TERM PORTAL[1] we can find three "artisanal fisheries"[2] definitions:

"Traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption. In practice, definition varies between countries, e.g. from gleaning or a one-man canoe in poor developing countries, to more than 20 m. tr awlers, seiners, or long-liners in developed ones. Artisanal fisheries can be subsistence or commercial fisheries, providing for local consumption or export." Definition source: FAO Fisheries and Aquaculture Department, FAO, 2014.

"*A term of Latin origin with a socio-economic foundation. It tends to imply a simple, individual (self-employed) or family type of enterprise (as opposed to an industrial company), most often operated by the owner (even though the vessels may sometimes belong to the fishmonger or some external investor), with the support of the household. The term has no obvious reference to size but tends to have the same connotation of relatively low levels of technology and this may not always be the case*." Definition source: FAO Fisheries and Aquaculture Department, FAO, 2014.

"*The term tends to imply a simple, individual (self-employed) or family type of enterprise (as opposed to an industrial company), most often operated by the owner (even though the vessels may sometimes belong to the fishmonger or some external investor), with the support of the household. The term has no obvious reference to size but tends to have a connotation of relatively low levels of technology but this may not always be the case. In practice the definition varies between countries, from example from gleaning or a one-man canoe in poor developing countries to more than 20m trawlers, seiners or long-liners in developed ones (e.g. in Europe). Artisanal fisheries can be subsistence or commercial fisheries providing for local consumption or export*." Definition source: Garcia, S.M. (Comp.). 2009. Glossary. In Cochrane, K. and S.M. Garcia. (Eds). A fishery managers' handbook. FAO and Wiley-Blackwell:473-505.

Below the aforementioned definitions, there is a remark directing the reader to see the term "small-scale fisheries", which is defined as follows[3]:

"*Small-scale fisheries: A term of English origin with a technological foundation. It tends to imply the use of a relatively small size gear and vessel. The term has sometimes the added connotation of low levels of technology and capital investment per fisher although that may not always be the case. See: artisanal fisheries*." Definition source: FAO Fisheries and Aquaculture Department, FAO, 2014.

[1] FAO TERM PORTAL. http://www.fao.org/faoterm/collection/fisheries/en/
[2] Artisanal fisheries definitions. http://www.fao.org/faoterm/en/?defaultCollId=21
[3] Small-scale definitions. http://www.fao.org/faoterm/es/?defaultCollId=21

And we can also read "artisanal fisheries" like a related term at the end of "small-scale fisheries" definitions.

In Europe, the Regulation (UE) 508/2014[4] defines small-scale coastal fisheries as "*fisheries carried out by fishing vessels of an overall length of less than 12 metres and not using towed fishing gear as listed in Table 3 of Annex I to the Commission Regulation (EC) 26/2004*", and the word "artisanal" is not mentioned anywhere along the document. In contrast, in the Spanish version of this Regulation, this definition appears under the title "artisanal coastal fisheries".

Unfortunately, there is a mix between the two terms and for that reason, each country or region establishes the limits on its own so as a fleet is considered artisanal in one country and industrial in another country though it is supposed that "artisanal fleets" are not mechanised, vessels are operated by the owner or his family, and intended for fishermen or fishermen´s family consumption, or for small scale trade.

In this document and based on the above, both artisanal and small-scale fisheries (family-based, low machining and small size), are called as "artisanal fisheries" as opposed to "industrial fisheries" (corporate companies and large-size). We think this option is the best one to understand what we want to explain in spite of the fact that there are exemptions where corporate companies operate small fishing vessels and family-based companies operate large fishing vessels.

Likewise, in the United Nations Sustainable Development Goals, the goal 14 titled "*Conserve and sustainably use the oceans, seas and marine resources for sustainable development*" includes the 14.b target to "*provide access of small-scale artisanal fishers to marine resources and markets*", and here the two terms are also mixed-up.

[4] Regulation (UE) 508/2014. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0508&from=ES

2) EXECUTIVE SUMMARY.

The support of artisanal fishing to the detriment of industrial fishing is a regular topic in different forums. This document aims to shed light on different important issues to understand that confronting each other have no sense actually. It can be concluded that:

- There is a great confusion in the use of artisanal fleet and small scale fleet because both definitions are mixed-up. This question should be clarified in target 14b of the UN Sustainable Development Goals.
- There is a wide variety of fleets' typology in the world.
- Both the unbalanced distribution of quota and the landing obligation concern both types of fleets.
- Industrial fleet and artisanal fleet complement each other.
- A smaller size or scale of action doesn't imply the sustainability of a fleet or a fishery, which depends rather on a good management of the resources, the improvement in the collection and provision of fisheries data and a strict control of the fishing activity.
- In developed countries there are also areas depending on fisheries, and this issue should be addressed by the FAO.

3) INTRODUCTION.

As explained in section 1 above, we assume by artisanal fishing the fishing activity carried out by small and low level mechanized fishing vessels (if any) owned by family-based companies, which work next to the coast and whose product is mainly aimed to local market supply. The European Union defines this type of fishing which is developed by <12m fishing vessels with certain types of fishing gears. Fishing carried out by vessels with higher length or with fishing gears other than those defined as artisanal by the EU, would be considered under the industrial fishing.

In the case of Spain, there is a wide variety of fleets operating in multiple fisheries, using different fishing gears, and therefore a wide typology of ships running from small fishing boats targeting shellfish to larger vessels that fish in long distance fishing grounds in international waters or third country waters, which are equipped with fish processing machinery and store frozen fish on board. There is a wide variety of sizes and power, and other specifications.

Many of these fleets are considered industrial fleets, even though almost all the fish is processed manually and sold as fresh product in fish markets. In many cases, this fish is competing on fish sale with catches from the so-called "artisanal fleet".

In our country, these fleets, which could be called "semi-industrial fleets", as well as those named "industrial fleets" have the particularity of belonging to family-based companies with a long tradition in fisheries and are located in areas highly dependent on fisheries where most of the inhabitants directly or indirectly depend on this activity.

In most cases, when speaking of industrial fishing, one thinks of the one carried out on a large scale by large vessels, whose catches are mainly used for processing fishmeal and oil[5]. This is not the case for the Spanish fleet, whose catches are almost entirely intended for human consumption

In the discussion forums on fisheries sustainability, all artisanal and industrial fishermen coincide in pointing out the importance of their fleets and focusing the cause of the problems on the enforcement of management and control policies, as well as on market conditions (fall in prices at first sale and high differences in respect to the final consumer price).

It could be concluded that many of the problems face by the artisanal fleet are similar to those of semi-industrial or industrial fishing. The unequal distribution of quota among fishermen and the landing obligation are matters of concern to both fleets alike. It is also important the question of the under-utilization of quota by certain countries or regions, having no possibility of being transferred to other countries whose fishing vessels might uptake them indeed, but are prejudiced because of the distribution system.

4) PERCENTAGE OF ARTISANAL FLEET COMPARED TO INDUSTRIAL FLEET ON A GLOBAL LEVEL AND THEIR IMPORTANCE.

According to a report by the **Fisheries Centre, University of British Columbia, Canada**[6], where the importance of artisanal fisheries worldwide is studied on the basis of different possible scenarios due to the impossibility of finding data from all of the countries developing same, artisanal fisheries represents between 1/4 and 1/3 of the global fish production (other studies for which source data are not identified say it is around 50%)

The SOFIA 2016 report provides data of the fishing fleet worldwide, showing that 90% of the fishing units in the world belong to Asia (75%) and Africa (15%), of which the majority belong to the artisanal fleet (85% of the engine-equipped fishing vessels are less than 12 meters in length).

It is understood from the above that the artisanal fleet represents more than 85% of the global fleet (in terms of number of boats) and provides between 25 and 33% of the global fish catches. It means that the artisanal fleet alone could not meet the global needs of fisheries resources supply.

This leads us to conclude that both fleets are complementary in terms of fish supply to the global population; therefore there is room for both in the market.

[5] Definition of industrial fishing. Oxford dictionary. https://en.oxforddictionaries.com/definition/industrial_fishing

[6] Chuenpagdee, R., Liguori, L., Palomares, M. L. D., & Pauly, D. (2006). Bottom-up, global estimates of small-scale marine fisheries catches. [R].

5) THE SUSTAINABILITY OF ARTISANAL FLEET AGAINST OVER-EXPLOITATION BY INDUSTRIAL FLEET

The report "Small Boats, Big problems"[7] published by WWF, the content of which is in force, talks about the distinction between artisanal fleet (in terms of small-scale), and industrial fleet (in terms of large-scale).

According to this report, when we talk about the "protection" of the artisanal fleet against industrial fleet, it is assumed that:

1. Small vessels are characteristic of fisheries that need public support to be economically viable
2. Small vessels are not major competitors in international trade.
3. Small vessels general carry out "ecological" fishing less likely to deplete fisheries than "big-scale industrial fishery".

WWF´s report claims that these generalities are usually false, because small-scale fishermen may be as profitable as big-scale operators. In fact, many of them are already major competitors in international trade. And, in the same way that industrial fleets, artisanal fleet's activities can lead to the overexploitation of the resources and also cause environmental damage, if they are not adequately managed.

Regarding the question of economic viability, the report indicates that a FAO report[8] found that small-scale fisheries are often less vulnerable to economic dislocation than large-scale fisheries, they can generate significant profits, prove resilient to shocks and crises, and make meaningful contributions to poverty alleviation and to food security.

Another concept made clear in WWF's document is that "small" does not mean "local", because small-scale fleets are a significant and increasing force at a global level, which can have a relevant international footprint in three ways: catch shared stocks (transboundary, straddling or highly migratory), small-scale vessels are increasingly venturing beyond territorial or even EEZ waters, and catches from small-scale fishers can make significant contributions to international fish trade.

And finally, the report says that "small" does not mean "sustainable", because small-scale fisheries are not free of reaching overcapacity, overfishing, or destructive fishing practices. In this sense, a "brief list of examples"[9] is stated:

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[7] Small Boats, Big Problems. WWF (2008). https://www.wto.org/english/forums_e/ngo_e/posp72_www_e.pdf

[8] Increasing the contribution of small-scale fisheries to poverty alleviation and food security, FAO (2005). http://www.fao.org/docrep/009/a0237e/a0237e00.htm

[9] CES 2008, "Seamounts – hotspots of marine life", online at http://www.ices.dk/marineworld/seamounts.asp
J.E. Cinner, et al, "Socioeconomic factors that lead to overfishing in small-scale coral reef fisheries of Papua New Guinea," in Environmental Conservation vol. 33(1): 73–80 (Foundation for Environmental Conservation, 2006).
I. Okamoto, "The Shrimp Export Boom and Small-Scale Fishermen in Myanmar", IDE Discussion Paper No. 135 (Institute Of Developing Economies, 2008) (http://www.ide.go.jp/English/Publish/Dp/pdf/135_okamoto.pdf)

It would follow from the above that sustainability of resources is not incompatible with the size of the fleet exploiting them; rather it depends on the management of these resources. For this reason all fisheries must go hand on hand with a planning based on scientific studies on the state of the resources, and in line with the socioeconomic needs of the population that depends on fishing.

And finally, it worth mentioning the necessary importance of improving fisheries data collection for both fleet, but especially of the artisanal fleet, where gaps in the knowledge of certain fisheries still exists.

6) AREAS HIGHLY DEPENDENT ON FISHERIES

It would be necessary to discuss within the UN and the FAO, what is understood by areas highly dependent on fisheries and what requirements shall be met by the regions to be considered as such.

It is important to highlight that not only developing countries but also every country throughout the world have areas highly dependent on fisheries.

In Europe there is a long fishing tradition associated with a very important culture heritage and there are some regions whose names are devoted to fishing (Pescara in Italy, Fisherrow in Scotland, or Icaria in Greece). Thus, in the developed countries of the European Union there are areas or regions heavily dependent on fishing, as stated in the Common Fisheries Policy (CFP)[10] and the regulation on the European Maritime and Fisheries Fund (EMFF)[11]. That is why we should be especially careful not to underestimate the needs of these regions when talking about dependence on fishing (e.g. Brittany in France, Andalucía, the Basque Country and Galicia in Spain).

In the case of Galicia, for example, the fishing and canning input-output tables[12] show that out of over 81 identified economic activities for Galicia, more than 74 depend directly or indirectly on the complex sea-industry, that is, 91% of economic activities depend on the sector sea-industry.

Peckham, et al, 2007, "Small-Scale Fisheries Bycatch Jeopardizes Endangered Pacific Loggerhead Turtles", PLoS ONE 2(10): e1041 (abstract at http://www.plosone.org/article/info:doi/10.1371/journal.pone.0001041)
K. Juntarashote, "Fishermen Income and Community-Based Fishery Management: Options for Improving Incomes of Fishing Communities in Phang-Nga Bay", in FAO, Community-Based Fisheries Management in Phang-Nga Bay (Proceedings of the National Workshop on Community-based Fisheries Management: Phuket, Thailand, 14-16 February 1996) (FAO 1998).
WWF, "Langoustine Linguine . . . The Issue", web article, http://www.panda.org/about_wwf/what_we_do/marine/help/seafood_lovers/fish_dishes/langoustine_li nguine/issue_norway_lobster/index.cfm
J. Jahncke et al, "Seabird By-Catch in Small-Scale Longline Fisheries in Northern Peru", in Waterbirds: The International Journal of Waterbird Biology, Vol. 24, No. 1 (Apr., 2001), pp. 137-141 (http://www.jstor.org/pss/1522255)
[10] Regulation(EU) Nº 1380/2013 of the European Parliament and the Council of 11 December 2013 on the Common Fisheries Policy.
[11] Regulation (EU) Nº 508/2014 of the European Parliament and the Council of 15 May 2014 in relation to the European Maritime and Fisheries Fund.
[12] Mª do Carme García Negro. Tablas input-output de peca-conserva gallegas 2011. Xunta de Galicia. http://www.arvi.org/zonas-altamente-dependientes-de-la-pesca-en-la-ue/

Therefore, we believe that it should not be forgot that in developed countries there are many areas still depending heavily on primary sectors such as fishing, the disappearance of which would probably impact on social, economic and cultural aspects of great importance for these regions.

7) CONCLUSIONS.

- ✓ There is a great confusion in the use of artisanal fleet and small scale fleet because both definitions are mixed-up as it is stated in above section 1. This question should be clarified in target 14b of the UN Sustainable Development Goals, and we think it would be interesting that terms were unified.

- ✓ There is a large variety of fleet typology in the word, including artisanal and industrial fleets in the strict sense, as well as a wide intermediary range of fleets. In all cases the main final destination of the products is for human consumption and fish processing is still made manual in many cases.

- ✓ The unequal share-out of quotas among fishermen, leading, in many cases, to the underutilization of quotas by certain segments of the fleet while others are forced to stop their activity to avoid surpassing their quota, and the landing obligation as in the case of the European fleets are two questions that concern both fleets equally.

- ✓ Industrial and artisanal fleets complement each other in terms of fish supply to the population worldwide. Both are necessary to supply the current food demand.

- ✓ Neither the smaller size of fishing vessels belonging to a fleet nor the small scale they are operating guaranties the sustainability of the resources. Sustainability depends on the management of the resources, which should go hand in hand with a scheme based on scientific studies on the state of the resources as well as in line with the social and economic needs of the population depending on them. Also, improving fishing data collection is of vital importance for management purpose as well as the strict control of the fishing activity itself.

- ✓ In the developed countries there are many regions still depending to a large extent on primary sectors such as fisheries. Should it disappear, we would probably be speaking about hugely important social, economic and cultural impacts on those regions. It is believed the need for the FAO to analyses the inclusion of these regions within the concept of areas highly dependent on fisheries.

Finally, the importance of fighting against IUU fishing carried out by fleets that do not comply with the rules and are actually to be blamed for the current state of the resources, is underlined.