

Peruvian *Anchoveta* Fishery: Industry Structure

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The Peruvian *anchoveta* (*Engraulis ringens*) from the northern-central stock is the largest single fish biomass in the world (SOFIA 2012), and provides more than 90% of the total fish landings in Peru (Sanchez & Gallo 2009). Representing about 2% of the country's GDP, the exports of *anchoveta* products currently generate around US\$2,5 billion annually (PRODUCE 2013). According to its importance, the *anchoveta* fishery is governed by an interesting but complex spectrum of institutions and regulations, with contrasting management systems for the different operating fleets.

Anchoveta Fleets

Two fleets harvest the *anchoveta* northern-central stock: one that lands anchovy for reduction known as the Indirect Human Consumption (IHC) fleet, and one that can only destine its landings for human food and is called the Direct Human Consumption (DHC) fleet. Most of the anchovy harvest (>98% of the total landings) is done by the IHC fleet and goes directly to fishmeal and fish oil processing plants, which are mainly for export (Avadí et al. 2014). DHC landings are processed as canned, frozen, cured and fresh anchovy and go primarily for the domestic market (Arias Schreiber 2011).

The IHC or “industrial” fleet is comprised of two sub-fleets of purse seiner vessels: the steel fleet (434 vessels), and the wooden fleet (662 vessels). Each steel vessel commonly ranges from 100 to 850 cubic meters (m³) of hull capacity, whereas wooden vessels or “vikings” vary between 32 and 110 m³ (Paredes and Gutierrez 2008). Overall, the steel fleet has over three times (140,657 m³) the wooden fleet's capacity (41,320 m³) (PRODUCE 2013). The fleet of steel vessels is predominantly owned by large vertically integrated companies, while the fleet of wooden vessels comprises mostly individual boat owners (Arias Schreiber 2013). The IHC fleet is responsible for employing around 18,000 fishermen (Aranda 2009).

The DHC fleet is composed of small and medium-sized wooden boats, and is divided according to their capacity in artisanal vessels (<10 m³ hull capacity) and low-scale vessels (10-32.5 m³ hull capacity, <15 m length) (PRODUCE 2013). As of 2012, there were 357 low-scale vessels and 556 artisanal vessels fishing for *anchoveta*. Even though these fleets represent only 4% of the total hull capacity of the *anchoveta* fishery, the landings destined for human consumption have increased more than 10-fold during the last decade (PRODUCE 2013). According to a recent census, 2226 artisanal fishermen are currently fishing for *anchoveta*¹.

Institutional framework

The Vice-Ministry of Fisheries (VMP) is the central government authority in charge of managing fisheries in Peru, under the Peruvian Ministry of Production (PRODUCE). PRODUCE, through the VMP, is responsible for regulating, approving, executing and supervising the development of the fisheries sector². According to Peruvian Law³, the central government can also share their management responsibilities with regional governments.

The VMP is divided into five General Directorates (GD), four of which are directly involved in the management of the *anchoveta*: (1) GD of fisheries and processing (DEGPP), (2) GD of artisanal fisheries (DGPA), (3) GD of fisheries environmental issues, and (4) GD of monitoring, control and surveillance (DIGSECOVI). General Directorates are responsible for the central management of the fishery, developing regulations for the fishing and processing of the industrial and artisanal sectors, as well as controlling fishing activities and imposing sanctions (Arias Schreiber 2013). Depending on the end use of the catch, fishmeal or human food, the fishing and processing activities of *anchoveta* are managed by separate agencies: the Under-directorates for DHC and for IHC.

¹ I Census of Marine Artisanal Fishing 2012. [[↗](#)]

² General Fisheries Law (Law No. 26920) [[↗](#)]

³ Organic Law of Regional Governments No. 27867.

Background analysis of the Artisanal Sector of the Peruvian *Anchoveta*

Sustainable Fisheries Group/

Latin American Fisheries Fellowship Program

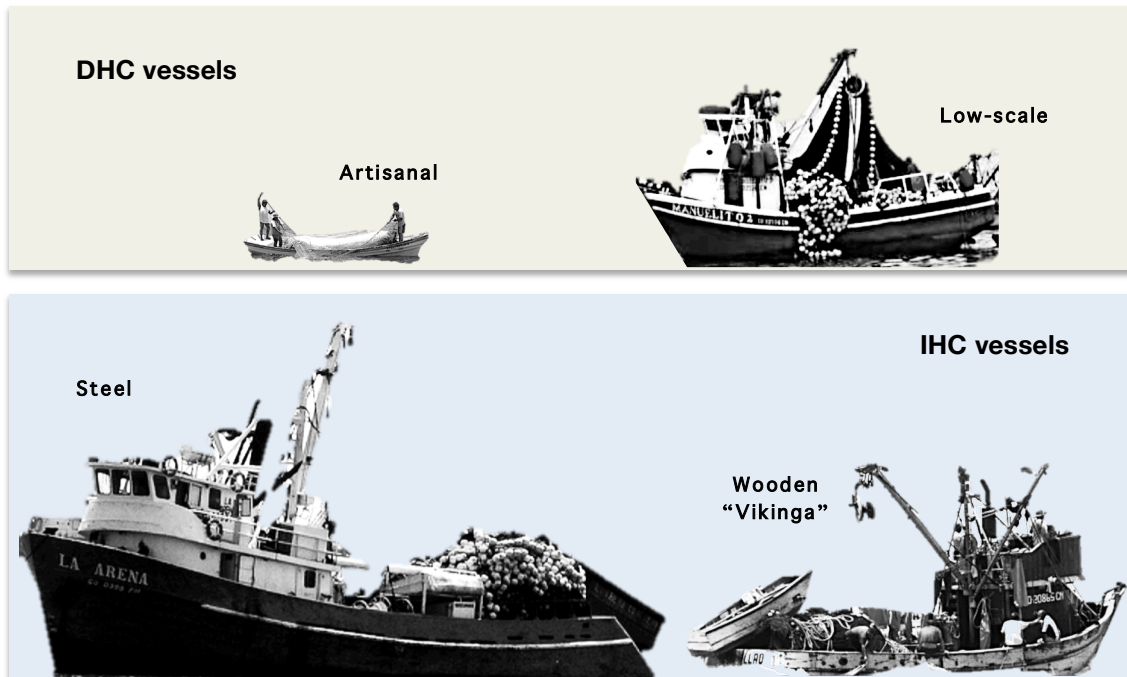


Figure 1. Peruvian *anchoveta* fishing vessels from the industrial and artisanal fleets. Vessel sizes are approximately to the same scale.

The VMP management decisions are guided by two research agencies, which provide scientific and technological support: Instituto del Mar de Peru (IMARPE) and Instituto Tecnológico Pesquero (ITP). IMARPE carries out most of the research necessary for the VMP to develop its fishery management policies. This agency performs annual or semi-annual stock biomass assessments, and sets the Total Maximum Allowable Catch Level (LMTCP) for *anchoveta* every season. Also, IMARPE monitors environmental and climatic conditions at sea (e.g. El Niño Southern Oscillation (ENSO)) to inform government authorities about their effects on the *anchoveta* stocks (Arias Schreiber 2013). On the other hand, ITP's goals are to promote the consumption of hydrobiological resources, and monitoring sanitary and quality standards throughout the production chain (de la Puente et al. 2011). At present, the ITP is carrying out an intensive program for the transfer and promotion of *anchoveta* products with high added value and for human consumption (Arias Schreiber 2013).

PRODUCE and the VMP interact with many other government agencies, including the ones related to the environmental impacts of the anchoveta industry (e.g. Ministry of Environment, MINAM) and with the control and surveillance of fishing activities (e.g. Ministry of Defense, MINDEF). Other government institutions are involved in supporting anchoveta fishermen from the DHC sector, such as the Fisheries Development Fund (FONDEPES), fishermen unions among other organizations.

Regulatory framework

Legally, Peruvian fisheries policy and management come under the umbrella of the 1992 Peruvian General Fisheries Law (GFL) and the various modifications that has experienced over the last two decades⁴. The GFL gives PRODUCE and the VMP the decision-making power – usually after recommendation by IMARPE – to modify fishing seasons, to decree the closure or the opening of the fishing season depending on the ENSO monitoring, and to accept the entrance of new vessels into the fishery (Arias Schreiber 2013). In addition, the VMP can develop new regulations to follow any updates in management goals (Arias Schreiber 2012). Even though both the IHC and DHC fleets target the same stock, separate sets of regulation manage each of the anchoveta fishing sectors.

⁴ For a detailed list of current regulation visit the website of PRODUCE

IHC sector

The anchoveta IHC fleet is currently managed with a Total Allowable Catch (TAC) and, more recently, with an Individual Vessel Quota (IVQ) system (Tveteras et al. 2011). The TAC puts a limit on the harvest for each fishing season, and is set by the VMP taking into account available scientific evidence as well as socioeconomic factors⁵. There are currently two fishing seasons per year, for which IMARPE biannually estimates a TAC over a target escapement biomass of 4-6 million tons of anchoveta (Arias Schreiber 2013). The IVQ system, implemented since 2009, assigns a percentage of the TAC to each of the fishing vessels authorized to operate in the fishery. For the steel fleet, initial quota allocations were assigned according to historical landings and authorized vessel storage capacity, while only historical landings were used to assign quota to the wooden fleet (Tveteras et al. 2011). Even though transferability of quota shares is not allowed between different fleets, quota can be rented between vessel owners of the same fleet or transferred inside the same company (Avadí et al. 2014).

The industrial fishing activity is controlled by three mechanisms: vessel departure control, Satellite Surveillance System (SISESAT) and the Fishing and Landings Surveillance Program (PVCPDAM) (Arias Schreiber 2012). Among other regulations, the IHC fleets are prohibited from fishing within the first ten nautical miles (nm) from the coast, which are reserved for the artisanal and low-scale fleets⁶. The fishery has a closed entry for new fishing vessels, and new ones can only replace old vessels if they possess an equivalent storage capacity. Also, there are seasonal reproductive closures and a 10% limit on the juvenile composition of total landings. The VMP's DIGSECOVI agency is in charge of imposing sanctions to infractors of the regulation in the GFL or in the Regulations for Fishing and Aquaculture Inspections and Sanctions (RISPAC), which depending on gravity can involve economic payments or the loss of fishing rights (Aranda 2009).

DHC sector

DHC fleet vessels are managed under a restricted open-access regime, having to comply with many requirements before obtaining a fishing permit (Arias Schreiber 2012). However, DHC vessels are not subject to neither a TAC nor the IVQ system. The GFL mandates that *anchoveta* landings from the DHC fleet can only supply the human food processing industry, while the IHC fleet is not obligated to destine any of its catch to human food. Also, The artisanal fleet is reserved the first 5 nm from the coast, while the low-scale vessels can fish beyond the 5 nm boundary. Recently, low-scale vessels have also been required to incorporate GPS systems and to be monitored by SISESAT.

A recent regulation enacted by PRODUCE was set to re-organize the artisanal and low-scale fleets, as well as controlling fishing effort⁷. The new law states that regional governments, instead of the central government, will manage the artisanal sector. Also, the artisanal fleet would be required to land their catch in the region from where they received their permits. However, it is not clear the way that all these activities would be supervised or controlled.

Fishing rights

The GFL dictates that fishing vessel owners have to pay for the right to extract publicly owned fishing resources. Currently, all IHC fleet vessel owners have to pay fishing rights at 0.25% of the FOB value of each metric ton (MT) of fishmeal produced, which added up to US\$23 million on 2011 (Galarza and Collado 2013). Of these, the government destines a 25% to finance the operations of the VMP and research institutions. Also, IHC companies have the obligation to pay several additional fees to finance surveillance operations as well as social funds for artisanal fishermen. At present, artisanal fishermen are exempted from paying any fees from fishing *anchoveta* (Galarza and Collado 2013).

⁵ PRODUCE may consider socioeconomic aspects in the establishment of the TAC. However, the mentioned socioeconomic factors have not been expressly defined in the norm.

⁶ Supreme Decree 005-2012-PRODUCE

⁷ Supreme Decree 010-2010-PRODUCE

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