

Jose Antonio Cabal-Ugaz

The Status of Peruvian Fisheries

Peru is a nation located in South America, bordered on the north by Ecuador and Colombia, on the south by Chile, and on the east by Brazil. More importantly, it is bordered on the west along the extent of its coastline by the Pacific Ocean, which makes fishing a staple of the Peruvian economy. According to the FAO, exports accounted for more than one billion dollars in 2002 alone. This fishing is little regulated, and thus it is no surprise the fisheries have historically collapsed multiple times. For example, while anchovy catch peaked in the mid-1960s at about 13 million tons, after the fishery's collapse in 1973 that number fell to less than half a million tons. (Loayza, 1992) A plan that promotes the sustainable use of marine resources in Peru is therefore a must and needs to tailor to Peru's interests, both at the individual and governmental levels.

By default, putting limits on what, when, and how much can be fished will be ineffective. For example, IMARPE, the Peruvian Sea Institute, reported in 1998 that 90% of the fish caught was illegally smaller than the size limit. This is due to the lack of an ethical norm among the fishing class. Because of their usual indifference to the government in power, they do as they please, and there is not much in their way to stop them from fishing in a way convenient to them. The fact that the government is having difficulty enforcing current regulations will make new ones useless.

Instead, the quickest and most effective way of increasing the fish population in said waters is to advocate the establishment of intelligently placed marine protected areas, along with new aquaculture programs to bring fish up to sustainable levels. The former is easier to enforce, because it is no longer a question of when, what, and how much but rather a yes or no question.

Currently, approximately 15 percent of Peru's territory is protected under the charge of SINANPE, the protected areas division of INRENA, the National Institute of National Resources. (INRENA, 2007) However, Ing. Jorge Ugaz, the head of this division, has said that there currently exists only one marine reserve—the Paracas National Reserve (Reserva Nacional de Paracas), founded in 1975.

Pronaturaleza, a Peruvian non-governmental conservation agency, has developed two blueprints for the establishment of marine reserves in Peru. One advocates the establishment of the waters off Mancora, a northwestern province, as a marine protected area. The other advocates the setting aside of a series of islands parallel to the coastline as such.

Mancora is located on the northwest edge of Peru, in the department of Piura and the province of Talara, as seen in Figure 1. The waters off its coast are among the richest fishing grounds in the world, something due to the geography of the region.

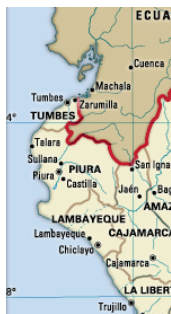


Figure 1

The Humboldt Current (See Figure 2) is a stream of cold water that travels from the south bordering the coast of South America. Along the way, it “pushes” cold water from about 200 meters below the sea towards the surface, resulting in temperatures of about 20 degrees Celsius at the surface, something unusual given Peru’s close proximity to the equator. (*Islas del Punto Guanero*) The Anti-Current pushes down from the north and collides with the Humboldt Current around northern Peru, displacing the latter towards the west where it meets up with the Equatorial Current which pushes on towards Polynesia. (*Islas del Punto Guanero*) The fact that these currents affect how marine wildlife displace themselves essentially means that northern Peru is abounding in them. Whales, marine turtles, tuna, sharks, stingrays, and a myriad of marine birds are only a few of the many species that can be found there.

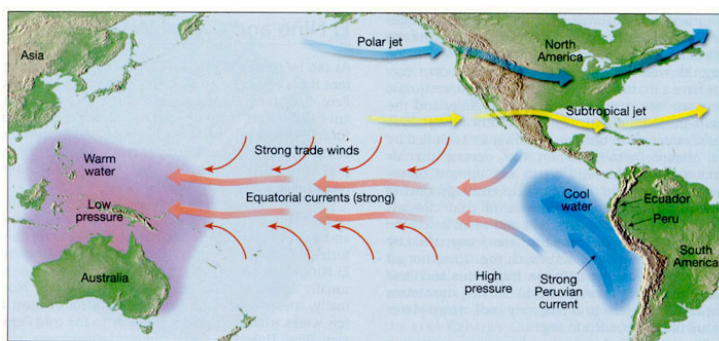


Fig.6 Normally, the trade winds and strong equatorial currents flow toward the west. At the same time, an intense Peruvian current causes upwelling of cold water along the west coast of South America.

Figure 2

Every so often a current of warm water known as “El Niño” pushes up from the South Pacific, disrupting the Humboldt Current and displacing marine wildlife, causing both damage to the ecosystem and the inhabitants of Peru who depend on the sea for a living. (*Islas del Punto Guanero*)

Aside from the problem of “El Niño,” overfishing and petroleum ventures have proven to be devastating to the ecosystem. The latter, due to its very nature, causes damage to the ocean

floor, and minor spills are a common occurrence. (Pronaturaleza, 2004) Pronaturaleza has therefore proposed to close off the area to all not motivated by scientific research by declaring it a marine protected area.

As Pronaturaleza said, “the Peruvian waters, in spite of being one of the most yielding [of fish] on the planet and possessing a high amount of biological diversity, paradoxically has been little studied and the studies and investigations that have been realized are almost none.” In light of this fact, Pronaturaleza has also proposed the creation of a “Marine Scientific Station” (Estación Científica Marina) to conduct research in the area. This research would be focused on the ecosystem rather than the species that inhabit it, because the ecosystem is an essential aspect in the lifecycles of fish and other marine species. This is beneficial so that the implementation of aquaculture programs to restore fish populations can occur intelligently.

Difficulty arises in implementing this solution. Pronaturaleza, as a technologically well-equipped conservation agency, is willing to assume leadership. They have stated that initial funds necessary for the establishment of the proposed marine reserve will trickle in from sources such as the World Conservation Union (IUCN). Pronaturaleza will request the expertise of both the Institute of the Americas and the Scripps Institution of Oceanography for the purposes of research. The Peruvian Sea Institute (IMARPE) and the National Institute of National Resources (INRENA) will be expected to contribute to this project as well. Perhaps the most integral sources of cooperation, although the most difficult to acquire, will be the neighboring countries of Ecuador and Chile, because of their similar use of marine resources.

Pronaturaleza’s other plan is to set a series of islands running parallel to the coast of Peru as a marine protected area (Figure 3), as well as expand the current Paracas National Reserve to include the Ballestas Islands. The latter is part of this series of islands currently under the charge of PROABONOS (Special Project to Take Advantage of Byproducts Provided by Marine Birds), but stands alone because of its place as a popular tourist destination.



Figure 3

Historically, the islands have been used as a source of guano, a world renowned fertilizer. As stated above, these islands are currently under the control of PROABONOS, a government entity established in 1997 to protect the islands through the control of guano extraction. (*Islas del Punto Guanero*) The idea is that control over said areas should be transferred over to SINANPE, the protected areas division of INRENA.

Protecting the islands and surrounding waters should be of top importance precisely because it can serve as a haven for many species. The anchovy, a key species because of its location on the food chain, tends to seek cooler waters upon the impact of “El Niño,” which it can find near the coast or in shallow waters where it is most likely to be fished. (*Islas del Punto Guanero*) A very productive fishing year can then very quickly result in at least a partial collapse of the species. Given that the islands are surrounded by shallow waters, the anchovies will have where to seek refuge, preventing the whole collapse of the fisheries, as happened in the 1970s.

The Ballestas Islands have been for many years the destination of choice for tourists seeking to experience nature in person, as shown in the pictures below. This is something which impacts the economy in a significant way. In fact, research has shown that, when all factors are taken into account, the Ballestas Islands generate three times as much revenue overall as the extraction of guano over the course of a year. (*Islas del Punto Guanero*) The desire is to expand this tourist activity to the other islands in a way that minimizes impact on the environment.



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Original Case Studies:

1. *Planteamiento de la Fundación Pronaturaleza Para la Conservación Marina: El Banco de Mancora, Tumbes/Piura Perú*
2. *Islas y Puntas del Conjunto Guanero al SINANPE*