
Fishery Leaflet 227

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FISHING INDUSTRY OF ECUADOR

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Background - The fishing industry of Ecuador is small and unorganized. Nevertheless there is an abundance of many types of fish in its rivers, off the coast, and about the Galapagos Islands. A number of attempts have been made in past years to establish the fish canning industry, but all of them have failed. In about 1925 a Norwegian firm built a lobster canning factory at Academy Bay. This factory failed on account of lack of fresh water supply and lack of properly trained labor. In about 1938 a fish canning factory was established at Playas. This factory failed on account of lack of sufficient supply of fresh water and lack of steady supply of fish.

Location - Fish are obtained from each of the following five general regions comprising the oriente, the sierra, the litoral, the coastal waters and the waters of the Galapagos Islands.

In the oriente region located in the jungles east of the Andes Mountains, fish are caught in the tributaries of the Amazon River. All fishing in this region is for local consumption and does not enter the markets outside of the region. In some areas rotenone poison is employed in catching the fish, although this method is illegal.

In the sierra or plateau region of Ecuador, fishing is of relatively little importance. The rivers have many falls and rapids making it impossible to travel by boat to places where fish are obtainable. No information is available on the number and kinds that are caught but it is believed that the number is almost negligible.

In the litoral or coastal region, fishing is relatively important from the standpoint of subsistence by people in rural localities, although the fish diet is supplemented with pork, beef, poultry and game animals. Most of the rivers of the region rise and fall with the tide, some of them for a distance of 50 kilometers from the mouth. River fish are offered for sale at the public markets in the villages along the streams.

In the coastal waters, nearly all of the off shore fishing is done within a distance so that sail boats can go out with the ebb tide in the morning and return with the flood tide in the afternoon.

Fish from the waters of the Galapagos Islands are not sold to consumers in Ecuador. Concessions are granted generally to companies from foreign countries.

Employment - Probably more than 1000 persons are employed in the industry. Most of them have their own boats and employ members of the family. The wages earned depend upon the amount and value of fish they have to sell after taking out

the amount needed for subsistence. The time of work is generally from the ebb tide on which they go out to the following flood tide on which they return - the time depending upon the velocity of the wind and the distance they went out. The labor for boats larger than the dugout is obtained from local residents many of whom live along the beach, and who consent to go out only when the sea is not too heavy.

The commercial fishermen are distributed about 85 percent along the coast and 15 percent along inland streams.

It is estimated that approximately 10 percent of the fishing population fishes regularly for subsistence only and the remainder of the fishermen sell part of their catch.

Angling for sport is negligible on account of unfavorable climatic conditions and remote distances of good fishing places. Along the coast the temperature is too high from 10 a.m. to 2 p.m. to be conducive to go fishing. The natives fish mostly at night. Office workers who would probably be the type of persons interested in sport fishing could not be out and enjoy sport fishing under existing climatic conditions along the coast. In the mountains where the temperature is lower, sport fishermen would find it difficult to exercise much on account of thin air due to high altitude.

Fishing vessels - Nearly all fishing vessels consist of dugouts propelled by sails on the coast and by paddles on inland rivers. Few have motor propelled launches. It is a common sight, for example, to see about 75 dugouts leaving for the sea at the same time from Manta at high tide. There is only one motor boat adequate to fish in the seas. The name of the boat is "Cecile". It has a 15-ton cold storage capacity and operates out of Guayaquil. It is diesel powered and is utilized principally for shark fishing.

Fishing methods employed - In the oriente, some of the natives employ rotenone fish poison or hook and line. All materials used are primitive and no records of costs are kept or data at all relative to the industry.

In the inland rivers, fish are caught on hook and line or in nets. Sea fishing is done with hook and line for most fish. A few fishermen use gill nets for certain kinds of fish. Along the coast some fishing is done with seines.

Species - The principal species of fish that are caught for sale on the local markets are corvina, Cynocion parvipinnus and C. reticulatus. Other common species are parbo colorado, Micropterus dolomieu; parbo moreno, Perca flavescens; roncador, Acanthopterygiens (subor); robalo, Centropomus undecimalis. Oysters are found along the coast but are small in size and of poor quality. Lobsters, shrimps and other mollusks, hair seals and a few fur seals are also found. Formerly considerable whaling and also pearl fishing was done near the Ecuadoran coast.

Fish taken - No data are available on fish taken in the past. With regard to sharks, only the livers are utilized, the rest is waste.

No statistics on production are available. The amounts of fish caught in the oriente and in the streams of the sierra are unknown. Fish production in the inland waters of the coastal region and in the waters off the coast is estimated to be 150 metric tons monthly of which 100 metric tons are sea fish and 50 metric tons are river fish. Of this amount, approximately 2 percent of the sea fish are salted and transported to the sierra for consumption. The rest is used as fresh

fish. No fish are frozen, canned, pickled, smoked or kippered.

Production of by-products - The only fish by-product in Ecuador is shark livers. Instead of being a by-product, however, the livers are the main product and the rest is wasted. All of the shark livers are exported.

Consumption - The annual consumption of fish is estimated to be approximately 2155 metric tons which originated as follows:

Fresh sea fish	1,175 metric tons
Fresh river fish	600 metric tons
Salted sea fish	25 metric tons
Imported fish	<u>355 metric tons</u>
	2,155 metric tons

The estimated annual consumption of imported fish referred to above is as follows:

Salted or dried fish	26,900 kilos
Canned shrimp and lobster	1,300 "
Canned salmon	5,300 "
Other canned fish	11,500 "
Sardines	307,000 "
Other fish	<u>3,000 "</u>
	355,000 kilos

The salted sea fish are consumed principally in the sierra.

Imports - The imports consist principally of sardines from the United States. The imported salted fish come principally from Peru.

Exports - No fish are exported from Ecuador. The only by-product that enters into international trade is shark livers, which were exported in the following amounts from 1945 to April 21, 1946: in 1945, 37 barrels of 200 kilos each (lard barrels from Argentina were used); from January 1, 1946 to April 21, 1946 the exports were 65 barrels having a total weight of 14,386 kilos. The shark livers contained from 44 percent to 57 percent oil.

Prices - Prices of fish on the market are relatively high, fluctuating with the daily supply. They are generally quoted at a certain amount per fish instead of per pound. In October 1946 a corvina fish weighing approximately 3 1/2 pounds would sell for 14.00 sucres, or approximately \$1.00 U.S. currency. (Official rate: \$1.00 U.S. currency is equivalent to 13.132 sucres).

The prices for one day, October 18, 1946 on the Guayaquil retail market are shown in the following table. The only fish of domestic production on the market are fresh fish. All canned fish are imported.

Fresh fish prices in Guayaquil, October 18, 1946

Origin				Price per fish	
Fresh or Salt Water	Location	Province	Kind of fish	Minimum	Maximum
				Sucres	Sucres
Fresh	Guayas river	Guayas	Robalo	8.00	50.00
"	"	"	Corvina	3.00	50.00
"	"	"	Savalo	5.00	20.00
"	"	"	Bagre	0.60	15.00
"	"	"	Barbudo	1.00	4.00
"	"	"	Ciego	0.80	2.00
"	"	"	Guanchiche	0.60	1.00
"	"	"	Dicas	0.40	1.00
Fresh	Catarama	Los Rios	Bocachico	2.00	6.00
"	"	"	Raton	2.00	6.00
"	"	"	Dama	1.00	5.00
"	"	"	Roncador	0.60	4.00
"	"	"	Vio	0.50	2.00
Salt	Puna	Guayas	Parvo	2.00	9.00
"	"	"	Lisa	0.50	4.00
"	"	"	Vieja	0.80	4.00
"	"	"	Cazon	3.00	6.00
Salt	Salado (inland bays)	"	Lisa	0.60	5.00
"	"	"	Bagre	0.60	6.00
"	"	"	Mojarra	0.50	2.00
"	"	"	Chaparra	0.20	1.00
"	"	"	Leonora	1.00	4.00
Salt Sea	(Salinas, Pocorja, Manglaralto, etc.)	"	Mero	2.40	per pound
"	"	"	Atun	Not in market today	
"	"	"	Bonito	"	"
"	"	"	Cherna	"	"
"	"	"	Picuda	"	"

Fishery regulations - The government has issued no fishing regulations for inland waters nor coastal waters. The only regulations issued are for fishing in the waters of the Galapagos Islands. The basic decree covering fishing regulations is Decree No. 80 dated February 2, 1938, amended by No. 208, March 2, 1938 (registered p. 3062); No. 351, March 7, 1938 (registered p. 3434); and No. 471, dated June 13, 1938 (registered p. 3499).

Internal trade - Fish are brought by boat to the coastal towns by the fishermen who sell them to the operators of fish stalls in the public markets. Some are shipped by truck from Salinas on the coast to Guayaquil. Frequently the fish are brought up the river alive in submerged large baskets trailing behind a canoe or launch. Sometimes days may pass when no fish or only a few fish are on the market. And at other times the supply is plentiful. There are no cold storage plants nor canneries in the country. The amount of fish salted, for consumption in the sierra is comparatively small.

Fishery research - No fishery research is in progress by the government. At the present time individuals are investigating the possibility of establishing a fertilizer plant in the vicinity of Machalilla on the west coast. Only the livers of sharks are exported and an investigation is being made relative to the manufacture of fertilizers from the carcasses.

Outlook - Although fish are plentiful in Ecuadoran waters, the rapid development of the industry in the near future does not appear to be promising; (1) along the coast, sufficient fresh water for operation of a cannery during the dry season is obtainable only at prohibitive costs, (2) there are comparatively few trained fishermen, and (3) labor legislation has a tendency to increase the cost of fish without a corresponding increase in the volume of production per man.

Sources of information

1. Interviews with persons interested in establishing a fish meal plant.
2. Observations on fish market.
3. Observations and interviews with persons in coastal fishing areas.
4. "The Fishing Industry in Ecuador" by Taylor W. Gaunett. American Consulate General Report, Guayaquil, November 29, 1933.
5. "Fishing concession granted by Ecuadoran government and fishing resources of Ecuador" by Frederick L. Royt., American Consulate General Report 376, December 23, 1936.
6. "On the collection of fishes made by P. O. Simons in Ecuador and Peru". Proceedings of the U. S. National Museum 1906. Vol. XXX pages 761-800.
7. "Galapagos fur seal". Zoologica. 1934 Vol. 18. pages 43-45.
8. "The fishes of the west coast of Peru and the Titicaca basin". U. S. National History Museum. Bul. No. 95.
9. "Dispute between French Sardine Co. and Ecuadoran Consul at San Diego, Cal., etc." American Consulate General, Guayaquil. Despatch No. 669. March 23, 1938. (Copy of translation of Decree No. 80. "Ecuadoran fishing regulations", dated February 2, 1938 is attached to this despatch).
10. Custom house reports.

American Consulate General Report No. 97, Guayaquil, Ecuador, November 1, 1946.