

Eastern Tropical Pacific tuna fisheries



A modern super seiner.

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The Eastern Tropical Pacific (ETP) is the second largest tuna fishing area in the world, an important source of both yellowfin and skipjack tuna, and the birthplace of today's modern tuna industry.

The ETP area runs down the west coast of the Americas from southern California to northern Chile. It extends west out to the 150° E line, not quite to the Hawaiian Islands in the north and to the Marquesas Islands in the south. There are twelve countries bordering this area in the Americas with most of them having fishing fleets harvesting tuna in the ETP.

The Eastern Pacific has a long and romantic history. Beginning in the

by Peter Trutanich

1930s, with their small, wooden sardine purse seiners with cotton nets, the pioneers of the industry sailed south from California into Mexican waters and later to Ecuador and Peru to join with the pioneer fishermen in those countries in search of new tuna fishing grounds.

This search for more and more tuna was driven by an increasing demand for raw material from canneries like *Starkist*, *Bumble Bee* and *Chicken of the Sea*; all of whom began operations and flourished here in the Eastern Pacific.

The industry took a major step forward in the 1950s when the San Diego fleet of pole and line vessels discovered the association of dolphins and yellowfin tuna. This fleet was converted to purse seiners with the introduction of nylon nets and hydraulic power blocks in the 1960s. Along with the tuna-dolphin association, the fisherman discovered the "log" or flotsam phenomenon - tuna seemed to accumulate under natural floating objects. This discovery led to the creation of FADs, man-made floating objects, in the mid-1990s. FAD fishing now accounts for almost 50% of the fishing methods used in the ETP today.

As the fleets evolved into the



An olden day fishing fleet.



An old bait boat at a cannery.

modern super-seiners, the supply of tuna from the fertile, Eastern Pacific area and the duty-free status of finished products into the European Community spurred the growth of major tuna industries in Mexico, Ecuador, Venezuela and Colombia.

Inter-American Tropical Tuna Commission

Eastern Pacific fishermen and cannery have led the industry over the past 50 years in the discovery of new fishing areas, new fishing techniques, the modernisation of canneries and the marketing of this high-protein, low cost food. The tuna industry in the ETP is also leading the industry in the conservation of its resource and the responsible management of its fishery by implementing the following measures:

- Every purse seine vessel carries a scientific observer on-board during all fishing trips in the ETP.
- Catch totals are monitored on a weekly basis.
- Tuna stocks are monitored.
- Fishing activities are closed during certain months of the year.
- Dolphin mortalities are closely monitored.
- Capacity limits on fishing activities are being discussed.

These are only a few activities of the Inter-American Tropical Tuna Commission (IATTC), which was established

by an international convention in 1950. IATTC is responsible for the conservation and management of fisheries for tunas and other species taken by tuna-fishing vessels in the Eastern Pacific Ocean. There are 13 member countries: Costa Rica, the United States, Panama, Ecuador, Mexico, Japan, France, Nicaragua, Vanuatu, Venezuela, El Salvador, Guatemala and Spain.

The IATTC's responsibilities are met with two programmes: (1) the Tuna-Billfish Programme, which studies the biology of the tunas and recommends conservation measures, and (2) the Tuna-Dolphin Programme, which

monitors the abundance of dolphins and their mortality, studies the causes of mortality during fishing operations and promotes the use of fishing techniques that minimise these mortalities.

Major fleets

During the calendar year 2003, there were about 227 fishing vessels from 14 countries, fishing in the ETP. These fishing vessels have a combined total capacity of about 200 000 m³.

The two largest fleets from Mexico (52 000 m³) and Ecuador (50 000 m³)

Table 1: List of the ETP Tuna Fleets in 2003

Flag	F/vessels	Capacity	%
Mexico	65	51 728	25
Ecuador	77	50 328	24
Venezuela	24	31 116	15
Panama	14	16 151	8
Spain	5	12 177	6
USA	8	8 485	4
Guatemala	4	7 642	4
Vanuatu	6	7 642	4
Bolivia	9	7 424	4
Colombia	7	6 718	3
El Salvador	3	5 377	3
Peru	2	2 018	1
Honduras	2	1 798	1
Belize	1	209	<1
Total	227	208 638	100

account for nearly 50% of the total fishing vessel capacity in the Eastern Pacific.

Venezuela, also, plays an important role in the ETP catch, with a fleet of 24 vessels that have a total capacity of 31 000 m³. The Panama tuna fleet meanwhile has grown to 14 vessels with a total capacity of 16 000 m³.

Fleet changes

The size of the ETP fleet has fluctuated over the years. Explosive growth occurred in the early 1970s, from 50 000 m³ to 200 000 m³, the "gold rush" of the ETP fishery.

The fleet size declined in the 1980s, as many of the US fishing vessels ventured west in search of new fishing areas, and again in the 1990s, when the dolphin-safe issue forced the US fleet to position itself in American Samoa. During these years, the fleet size varied between 125 000 m³ and 150 000 m³.

The mid-1990s saw a rapid growth of the fleets in Central and South America and this, along with the arrival of the Spanish fleet and the return of some US vessels, has increased the total fleet size to its current 200 000 m³ size.

Catch history

The total catch of yellowfin, skipjack, and bigeye tuna in the ETP has increased considerably over the past ten years. From a steady rate of about 350 000 mt per year in the early 1990s, the total catch jumped to an average of over 400 000 mt per year during the second half of this decade. From 1999 to 2002, the total catch jumped again, to almost 600 000 mt per year. A record catch of 680 000 mt was seen in 2003.

The yellowfin catch has historically been maintained at about 250 000 mt per year, as shown throughout the 1990s. However, there was a jump in yellowfin catches during the 2000-2003 record years when yellowfin catch hit 400 000 mt per year.

After a steady catch rate of about 75 000mt per year in the early 1990s, the skipjack fishery fluctuated from a high of 260 000 mt in 1999 to a low of 140 000mt in 2001.

The bigeye catch was steady at 4 000 mt per year until the mid-1990s. Thereafter, it began to fluctuate between 30 000 and 50 000 mt per year.

Catches in 2003

The total catch in the ETP in 2003 was 680 000 mt. From this total, 394 000 mt was yellowfin, 250 000mt was skipjack and 38000 mt was bigeye.

As one would expect, 50% of the fish was caught by the two largest fleets, Mexico and Ecuador.

One of the unique aspects of fishing in the ETP is that there are fleets dedicated to yellowfin fisheries and fleets dedicated to skipjack/bigeye. The top producers of yellowfin are Mexico (162 993 mt) and Venezuela (89 909 mt).

The biggest producer of skipjack is

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Ecuador (125 186 mt), while Mexico only delivered 18 607 mt of skipjack.

Cold storage & processing in the ETP

One indicator of the market size is the cold storage capacity (dedicated to tuna) of each ETP country. Ecuador has a total capacity of 46 000 mt of cold storage space, followed by Mexico with 42 000 mt and Venezuela with 27 000 mt.

The total production/processing capacity of all of the countries within the ETP is over 700 000 mt per year, assuming full production all year long.

Outlook

The ETP has been a healthy industry and an important contributor to the international tuna community. It shares in the major issues of this community and will have its own major issues to deal with. A few of these issues are:

- After five banner fishing years, the ETP is now confronted by a shortage of yellowfin. The yellow-fin catch in 2004 was about 30% less than the previous year.
- The ETP faces an unprecedented, six-week fishing closure beginning in August.
- The debate on the definition of

Table 2: Cold Storage Capacity in the ETP

Country	Cold storage (mt)
Ecuador	46 005
Mexico	41 900
Venezuela	26 600
Colombia	15 200
Costa Rica	6 250
El Salvador	6 000
Guatemala	4 000
Peru	2 000
Total	147 955

Table 3: Processing Capacity of ETP Countries

Country	Annual production
Ecuador	310 800
Mexico	150 000
Colombia	100 800
Venezuela	57 600
Costa Rica	36 000
El Salvador	28 000
Guatemala	28 000
Peru	10 000
Total	721 200

dolphin safe: mortality or just encirclement?

- Defining capacity limits of the total fishing fleet within the ETP.

These are important and serious items to be addressed within the area. The health of fishing businesses and the natural resources are at stake. And as difficult as these times may seem, the most encouraging factor is that these issues are being debated openly to look for solutions.

With the help of the IATTC, government agencies from all of the ETP countries, the individual vessel operators and the processing factories,

these important issues can be resolved to sustain a healthy industry and an abundant natural resource for generations to come. ☺

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