

Historical trends of tuna catches in the world



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Preparation of this document

This paper was prepared to document historical trends of tuna catches at global and regional scales. In the 1990s these trends deviated from those of total world production of all other fish species from capture fisheries, which reversed its long-term upward trend, while the total tuna catch has continued increasing. The development of the world and Atlantic tuna fisheries and their catches were documented by Dr Peter Miyake, while those of the Indian and Pacific fisheries are described by Drs Hideki Nakano and Naozumi Miyabe, respectively. The authors are grateful to Mr Nick Webb for editing the paper for language.

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Abstract

This paper reviews historical trends (mostly 1950–2000) of the catches of the major commercial species of tunas in the world (albacore, bigeye, bluefin, skipjack, and yellowfin). The total world catch of these species has increased continuously and almost tenfold during the last 50 years (from 0.4 to 3.9 million metric tons), but the pattern of increase has varied among species, oceans and fishing gears. The causes of those variations are, in most cases, interpretable, and are analysed as much as possible in this paper.

In world catch data, the Pacific Ocean has been predominant throughout. The rate of increase for the Atlantic catch has been much slower than those of the other oceans, and in fact the catches from of the Indian Ocean have exceeded those of the Atlantic since 1998. Currently the proportions of the total catch are about 15, 20 and 65 percent for the Atlantic, Indian and Pacific Oceans, respectively.

Since the late 1960s, by far the largest quantities taken have been skipjack, followed by yellowfin. The catches of both species show rapid increase, but that of yellowfin seems to have levelled off in the 1990s at 1 to 1.2 million tonnes (over 25 percent of the total), while the skipjack catch is still growing, reaching a record of 2 million tonnes (almost 50 percent of the total) in 1999. Bigeye catches also showed a constant increase, but at a lower level. The catches of albacore, bluefin and southern bluefin tunas have been stable or have decreased in recent years.

The catch of the purse-seine fishery, which targets mostly yellowfin and skipjack, became significant only in the late 1950s, and increased at an accelerated rate until 1990. The baitboat fishery took the greatest proportion of the total catches during the 1950s, but was overtaken by longline catches in the 1960s; however, baitboat catch showed another sharp increase in the 1970s. Longline catches started picking up in the late 1950s, increased gradually until 1990, then showed a relatively sharp increase until 1993 and thereafter declined. Longliners used to target yellowfin and albacore, but most of the large-scale longliners now target bluefin, southern bluefin and, most importantly in terms of quantity, bigeye tuna.

Japanese catches are by far the largest, and the majority of these are from the Pacific. United States catches were quite stable until the late 1960s, started increasing in the early 1970s, and eventually stabilized at about 200 000 tonnes. Longliners from other Asian nations showed good increases in the 1960s and 1970s. In recent years, many new players, including a large number of European countries with purse-seine fisheries, have become very important.

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Acronyms and codes

ATL	Atlantic Ocean
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CWP	Coordinating Working Party on Fishery Statistics
FAD	Fish aggregating device
FOC	Flag of convenience
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IND	Indian Ocean
IOTC	Indian Ocean Tuna Commission
ISC	Interim Scientific Committee on Tunas and Tuna-like Species in the North Pacific
IUU	Illegal, unreported and unregulated
MED	Mediterranean Sea
NEI	Nowhere else included (mostly “flag of convenience”)
PAC	Pacific Ocean
SPC	Secretariat of the Pacific Community
TAC	Total allowable catch

Gear codes

BB	Baitboat (“Baitboat” is used exclusively for “Pole and Line”)
GILL	Gillnet
LL	Longline
OTH	Other gears
PS	Purse seine
SURF	Surface gears
TRAP	Trap
TROL	Troll

Species codes

ALB	Albacore (<i>Thunnus alalunga</i>)
BET	Bigeye tuna (<i>Thunnus obesus</i>)
BFT	Atlantic bluefin tuna (<i>Thunnus thynnus</i>)
PBF	Pacific bluefin tuna (<i>Thunnus orientalis</i>)
SBT	Southern bluefin tuna (<i>Thunnus maccoyii</i>)
SKJ	Skipjack tuna (<i>Katsuwonus pelamis</i>)
SWO	Swordfish (<i>Xiphias gladius</i>)
YFT	Yellowfin tuna (<i>Thunnus albacares</i>)