

Skipjack Fisheries



Main features

STATUS

Skipjack **not overfished** and **not subject to overfishing** in the Western and Central Pacific Ocean (WCPO) or the Indian Ocean

2001–02: 194 t (A\$0.3 million)
2000–01: 1544 t (A\$2.7 million)

CURRENT CATCH

Highly variable owing to variability in tropical recruitment and market demands. The catches listed below were taken by the purse-seine components of the Eastern Tuna and Billfish Fishery (ETBF) and the Western Tuna and Billfish Fishery (WTBF) before the skipjack fisheries were created in 2003–04

Western Fishery

2004–05: confidential
2003–04: confidential
2002–03: 0 t (A\$0.0 million)
2001–02: 1154 t (A\$1.8 million)
2000–01: 973 t (A\$1.7 million)

Eastern Fishery

2004–05: confidential
2003–04: confidential
2002–03: 0 t (A\$0.0 million)

MANAGEMENT CONSIDERATIONS

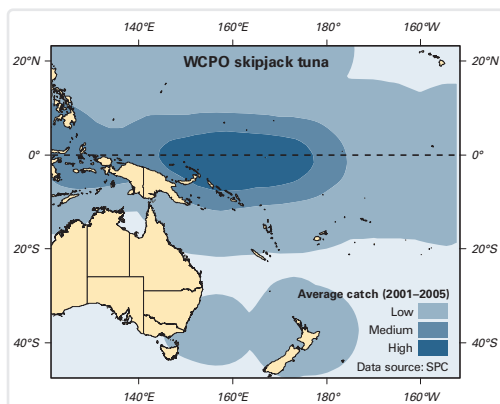
The inconsistency in the availability of skipjack in the south-eastern and south-western Australian Fishing Zone (AFZ), the variable participation levels in the fishery and the low profit margins in skipjack fishing will influence the sustainable management of the resource

Background

History of the fishery

Skipjack tuna (*Katsuwonis pelamus*) is a small, oceanic tuna species that is found in nearly all tropical and sub-tropical waters except the eastern Mediterranean and the Black Sea. It is a highly migratory, schooling species characterised by rapid growth, early maturation and high fecundity. Skipjack tuna is the only target species in the Australian fisheries and is used in the canned tuna market. Landings of other species (mainly yellowfin and bigeye tuna, frigate mackerel and occasionally sharks, mahi mahi, rays and marlins) are believed to be less than 2% of the total landings. The majority of skipjack are caught using purse seine. Pole-and-line methods have also been used to take skipjack or to assist purse-seine operations in taking skipjack. When used to assist purse-seine operations, poling is managed under skipjack fisheries; conversely, when used on its own, it is managed as a minor line component of the ETBF and the WTBF. Skipjack is used in the canned tuna market.

In 2003–04, purse-seine fishery entitlements for skipjack tuna were separated from the ETBF and the former Southern and Western Tuna and Billfish Fishery (SWTBF) to form the Eastern Skipjack Fishery (ESF)



and the Western Skipjack Fishery (WSF) respectively. These fisheries extend throughout the areas of the WTBF and the ETBF, with the exception of Area E (Cairns-Townsville Restricted Area) of the ETBF. They also extend into the high seas areas of the Indian Ocean and the WCPO.

Pacific and Indian Ocean populations of skipjack are assumed to be discrete. Tagging data have not shown any exchange between the two oceans. The most recent stock assessment in the WCPO found that skipjack was exploited at a modest level relative to its biological potential, and concluded that the stock was not overfished and that overfishing was not occurring. There is no quantitative stock assessment available for skipjack tuna in the Indian Ocean. However, in 2006 the Indian Ocean Tuna Commission noted that the range of available stock indicators suggest there is no immediate concern about the status of skipjack tuna in the Indian Ocean.

Global catches of skipjack tuna have been increasing steadily since 1950. In the past decade, skipjack has been the most commonly caught species in the WCPO, accounting for over two-thirds of the total tuna catch. Catches of skipjack in the WCPO were an estimated 1.38 million t in 2004 (the highest on record) and 981 000 t in 2005. Purse-seine is the most common method used, but a significant percentage of skipjack is also caught using pole-and-line and other methods.

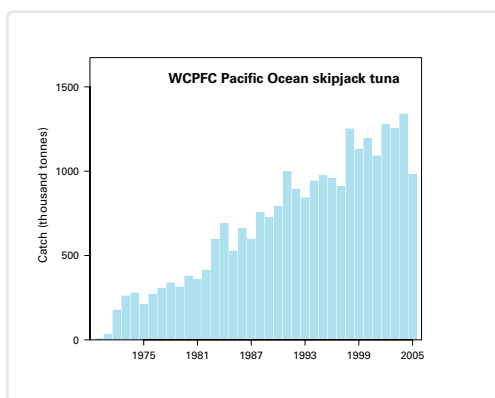
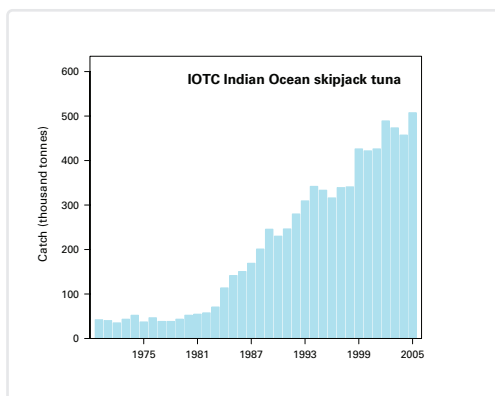
Skipjack has become the most important tuna species in the Indian Ocean with catches fluctuating between 500 000 and 509 000 t per year since 1999. Preliminary data suggest that catches in 2005 (508 700 t) may have been the highest recorded in the history of the fishery. There has been an increase in skipjack catches by purse seiners in recent years owing to the development of fishing methods using fish aggregating devices—80% of current purse seine skipjack catch is taken under them. The proportion of catch

taken by industrial purse seiners and the various artisanal fisheries (baitboat, gillnet etc.) has remained fairly constant.

Although skipjack are widely distributed throughout the AFZ, the main Australian fishing grounds have been historically located off south-eastern Australia and in the Great Australian Bight. In the ESF, skipjack are fished from southern New South Wales to north-eastern Tasmania between November and June each year. Between December and April, some of the southern bluefin tuna (*Thunnus maccoyii*) purse-seine fleet fish for skipjack in the Great Australian Bight. Operators primarily use the ports of Port Lincoln and, to a lesser extent, Eden. The closure of the Eden cannery in 1999 reduced local demand; however, some skipjack is still landed for road transfer to the sole remaining cannery in Port Lincoln.

Australia's skipjack fisheries are small, with relatively low catches compared with Pacific and Indian Ocean fisheries. The Australian fisheries are considered to have little impact on global Pacific and Indian Ocean stocks because they are located at the edge of the species' range. Catches in the south-eastern AFZ are highly variable and dependent on recruitment from lower latitudes. Catches in the south-western AFZ are opportunistic and also highly variable, with several years of zero or near-zero catches over the past five years. Very few vessels have been fishing in these fisheries over the last two years. As a result, catch information cannot be reported owing to confidentiality requirements.

In response to the separation of the purse-seine component from the ETBF and SWTBF, the Australian Fisheries Management Authority (AFMA) established the Skipjack Consultative Committee to advise the AFMA Board on skipjack tuna management. The current management regime consists of limited entry (permit issued annually), restrictions on net size, area restrictions and bycatch limits. Other tuna



species are the main bycatch species encountered in the skipjack fisheries. Regulations limit the yellowfin and bigeye bycatch to less than 50% of the total catch in any trip and less than 2% of each vessel's annual catch. In addition, any blue or black marlin caught must be returned to sea and there is a trip limit of 20 sharks (retained with fins intact). Southern bluefin tuna can only be retained by operators who hold quota for that species. All operators are required to keep logbooks, and only authorised vessels are permitted to tranship at sea.

In 2005, AFMA released the first bycatch action plan for tuna purse-seine fisheries, covering both the skipjack and southern bluefin tuna fisheries. The aim of the plan is to gain an understanding of the range of significant bycatch issues and, if required, develop and implement mitigation measures.

Purse-seine fisheries are considered to be highly selective and result in minimal interactions with non-target species. The main issue currently associated with bycatch in Australia's skipjack fisheries is the absence of verified data on it. Independent data collection by observers will assist in achieving the aims of the plan (there is currently no observer data from vessels targeting skipjack). Ecological risk assessments for the two skipjack fisheries are currently being finalised. The fisheries were declared a Wildlife Trade Operation under the *Environment Protection and Biodiversity Conservation Act 1999* on 30 November 2005. The declaration is valid until 30 November 2008 and allows the export of product from the fishery.

The Ministerial Direction to AFMA in 2005 required that management of skipjack fisheries responds to a range of matters including the development of a harvest strategy and the use of output controls. The harvest strategy for skipjack tuna is currently under development and will take into account the bycatch of other tuna species.

Further reading

AFMA (2006) Response to *Ministerial Direction—Skipjack Tuna Purse Seine Fishery*. AFMA, Canberra.

AFMA (2005) *Australia's Tuna Purse-Seine Fisheries Bycatch Action Plan 2005*. AFMA, Canberra.

Bromhead, D., Foster, J., Attard, R., Findlay, J. and Kalish, J. (2003) *A Review of the Impact of Fish Aggregating Devices (FADs) on Global Tuna Fisheries*. Bureau of Rural Sciences, Canberra.

Department of the Environment and Heritage (2005) *Assessment of the Skipjack Tuna Fishery*. Department of the Environment and Heritage, Canberra.

Indian Ocean Tuna Commission (2006) *Report of the Ninth Session of the IOTC Scientific Committee*. Victoria, Seychelles, 6–10 November 2006, pp. 57–60.

Langley, A., Hampton, J. and Ogura, M. (2005) *Stock Assessment of Skipjack Tuna in the Western and Central Pacific Ocean*. Working Paper SA WP-4 presented at the 1st Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission, 8–19 August 2005, Nouméa.

Williams, K. (1984) Australian skipjack surveys inconclusive. *Australian Fisheries* 43(20): 34–38.