CCSBT-ESC/2608/SBT Fisheries-Japan
(ESC Agenda item 4.1)

Review of Japanese Southern Bluefin Tuna Fisheries in 2025

日本のミナミマグロ漁業のレビュー：2025 年

Tomoyuki ITOH[1], Taisuke IWANO[2], Yukiko INOUE[1],
Hiroya MATSUSHITA[1], Hanna Kubota[1], Kei
OKAMOTO[1],Yasuko SEMBA[1], and Daisuke OCHI[1]
伊藤智幸[1]・岩野泰介[2]・井上裕紀子[1]・松下浩也[1]・久
保田畔菜[1]・岡本慶[1]・仙波靖子[1]・越智大介[1]

1: Fisheries Resources Institute, Japan Fisheries Research Agency
水産研究･教育機構 水産資源研究所

2:Fisheries Agency of Japan　水産庁

要約

本文書では、日本はえ縄漁業による 2025 年のミナミマグロの漁獲量、努力量、ノミナル CPUE、体長組成、隻数と操業海域分布を記す。2025 年漁期には 61 隻により 7,458 トン、約 15.2 万尾を漁獲した。科学オブザーバは、21 名を派遣し統計海区 4 海区から 9 海区において釣鈎数で 34.8%を観察した。

Summary

This document describes the Japanese commercial longline fishery for southern bluefin tuna for catch, effort, nominal CPUE, length frequency, number of vessels and geographical distribution of fishing operations in 2025. In the 2025 fishing season, 61 vessels caught 7,458 ton and about 152 thousand individuals of southern bluefin tuna. Twenty one scientific observers were dispatched and observed 34.8% of the hooks used in Area from 4 to 9.

1. 緒言

定められた提出書式に従い、日本によるミナミマグロ *Thunnus maccoyii* 漁業の歴史と 2025 年の状況を概観する。日本のミナミマグロの漁獲は全てはえ縄による。漁獲は 1952 年に本格的に始まった。当初漁獲されていたミナミマグロは、インド洋東部の低緯度水域（CCSBT 統計海区 1 海区及び 2 海区。以下では単に海区と称す）でのメバチやキハダを対象とした操業で混獲された経産卵魚であり、その肉質は悪かった。その後、良質の魚を求めて漁場は高緯度域へと拡大していき、1956 年にニュージーランド北東部海域（5 海区）、1961 年にタスマニア島周辺からオーストラリア南東岸沖（4 海区、7 海区）、1965 年に南インド漁場（8 海区）、1967 年にケープ沖漁場（9 海区）が開発された。1960 年代にミナミマグロを対象としていた操業隻数は約 300 隻であった。さらに、ニュージーランド東部からチリ沖合にかけての海域、ケープの西沖からアルゼンチン沖合にかけての海域でも操業が行われた。これらの海域では、ミナミマグロの漁獲はあったものの、その分布密度が低いと評価されたため、主要な漁場とはならなかった。

1970 年代には、親魚の漁獲量の減少と総漁獲に占める小型魚の増加から資源量の低下が懸念され、1971 年 10 月から産卵場における 12－3 月の操業、ならびに小型魚が多獲される漁場（シドニー沖 5-7 月、オーストラリア大湾 10-3 月、ケープ沖 10-1 月）での操業を禁止する国内規制が導入された。これらの規制ならびに漁業者がより高価な漁獲物を志向するようになったことにより、1・2 海区での操業は激減した。また、1973-1974 年に日本のまぐろはえ縄漁業では深縄を導入し始め、ミナミマグロ狙いからメバチ狙いへ転換していく船も相当数あった。

1980 年代前半にオーストラリアの表層漁業による漁獲が急増したのに対し、日本のはえ縄漁業での漁獲量は低下した。1982 年には日、豪、NZ によるミナミマグロ三国間会議が組織され、1985 年に 3 国の漁獲割当量が設定された。この時点での日本の割当量は 23,150 トンであり、その後 1986 年会議で 19,500 トン、1988 年会議で 8,800 トン、1989 年会議で 6,065 トンへと漸減した。1989 年以降、漁獲枠管理のため、日本は公的に操業海区／時期規制を導入した。1994 年にはミナミマグロ保存条約（CCSBT）が発効した。日本の漁獲割当量は 1997 年まで 6,065 トンが維持され、その後、2003 年の年次会合において 6,065 トンで合意されるまで自主規制枠（6,065 トン）を設定していた。2007 年からは日本の漁獲割当量を 3000 トンに削減したが、さらなる資源状態の悪化を受けて 2010・2011 年の漁獲量の上限をそれぞれ 2,200 トン・2,600 トンとして管理した。資源回復と資源の最適利用を両立させる TAC を算出する MP を 2011 年に導入したことで、CCSBT での TAC 及び日本の配分枠は増加に転じ、2015 年から 2017 年は毎年 4,737 トン、2018 年から 2022 年までは毎年 6,117 トン、2023 年から 2025 年は 6,197 トンとなっている。

割当量に対する日本漁船の漁獲量の管理方策としては、1990 年から 2005 年までは、主要 3 漁場に対し、入漁隻数、操業開始日、漁場別の漁獲割当量を各々設定し、漁獲状況に応じて漁場閉鎖日を設定するオリンピック方式の漁業管理制度を用いていたが、2006 年からは個々の漁船に対する漁獲枠の個別割当制度（IQ 制）へ転換した。また同年より、漁獲したミナミマグロ全個体に識別標識を装着する制度を併せて導入し、漁獲量管理を強化した。IQ 制に移行してからは、ミナミマグロの高い CPUE に対して各漁船は少ない漁獲枠しか持たない状況が続き、少ない操業回数で漁獲枠を消化しミナミマグロ漁場を離脱する場合が多かった。その後、日本の漁獲枠の増加及び操業隻数の減少に伴って個別漁獲枠は増加している。2025 年における日本漁船の操業パターンの詳細は CCSBT-OMMP/2606/05 を参照。

2. 漁獲量と努力量

1965 年から最近年までのミナミマグロの漁獲尾数と努力量（釣鈎数）を CCSBT 統計海区別または月別に示す（Table1-4）。近年の漁獲の多くは 4 海区、7 海区、8 海区、9 海区からのものであり、また 4 月から 9 月のものである。努力量も同様だが、他の海区、月の占める割合が漁獲尾数での割合よりも多い。これはミナミマグロが 1 個体でも漁獲された場合、その年のその 5 度区画の努力量は全て含めるという CCSBT のデータ特性による。

日本はえ縄船によるミナミマグロの製品形態は、鰓、内臓、および尾部を除去した「GG」であり、原魚重量換算する場合は製品重量に係数「1.15」を掛け合わせる。2025 年の日本商業はえ縄漁船による総漁獲重量（暦年）は 60 隻によって 7,375 トン、総漁獲尾数は約 15.1 万尾であった。2025 年 4 月から 2026 年 3 月までの漁期では、61 隻によって 7,458 トン、約 15.2 万尾であった。なお、漁獲統計値は提出された漁獲成績報告書に基づくが、漁獲成績報告書の収集およびデータ処理は漸次行われるため、最近数年間は値が変更されていく。

日本はえ縄船からは個別漁獲枠の有効利用の面から放流が行われている。放流及び投棄の情報は RTMP を通じてミナミマグロを対象とする全てのはえ縄船から報告されている。体重で 3 階級（20 ㎏未満、20 ㎏以上で 40 ㎏未満、40 ㎏以上）、および生死の区分で報告が行われる。2025 年の報告尾数は合計 18,648 尾であった。15,138 個体（81%）は生存放流で、3,510 個体（19%）は死亡投棄であった。

3. ノミナル CPUE

1965 年から最近年までの Nominal CPUE（釣鈎 1000 本当たりのミナミマグロ尾数）を、CCSBT 統計海区別（Table 5）ならびに月別（Table 6）に示す。CPUE は 4 海区、7 海区、8 海区、9 海区で他の海区よりも高く、それらの海区での操業時期である 4 月から 10 月に高い。

4. サイズ組成

1995 年に RTMP が日本のミナミマグロ対象漁船全船に拡大されてから、RTMP で報告する全てのミナミマグロについて、個体別の体長が船上で測定され報告されるようになった。それに伴い、日本はえ縄船のほぼ全てのミナミマグロ漁獲個体について、体長データが得られている。

10 年ごとの合計漁獲尾数から求めた体長組成を Fig.1 に示す。体長モードは 1960-1980 年代には 150cmFL にあったが、1990 年代に 120cmFL へ小型化した。2000 年代は 120cm から 160cm の魚が多く、2010 年代には 120cm から 150cm の魚が多かった。2020 年代には 140 ㎝から 160 ㎝の魚が多く、大型化している。

近年 5 年間の体長組成を Fig.2 に示す。漁獲のほとんど全ては 90 ㎝から 190 ㎝の範囲にある。約 110cmFL と約 140-150cmFL に二つのモードが見られている。なお、日本はえ縄船からの放流魚の多くは小型魚であり、体長組成の小型部分については放流の影響を受けていると思われる。

5. 漁船数と分布

ミナミマグロを漁獲した日本はえ縄船は、2025 年に 60 隻であった。使用鈎数とミナミマグロ

漁獲尾数の地理的分布を、1965 年から最近年までのデータを用いて、5 度区画別に示す（Fig.3）。最近 5 年間について、年別の使用鈎数分布を Fig.4 に、ミナミマグロ漁獲尾数の分布を Fig.5 に示す。5 年間の間で大きな違いは認められない。

6. 帰属漁獲量推定値改善のための調査とモニタリング

はえ縄船から行われている放流と投棄は、RTMP を通じて報告されている。3 体重階級別（20kg 未満, 40kg 未満, 40kg 以上）、生存／死亡別に尾数が報告され、適用可能な詳細さで情報が得られており、さらに改善する必要性は無いと考えられている。2025 年（暦年）の報告尾数は合計 18,648 尾であった。15,138 個体（81%）は生存放流で、3,510 個体（19%）は死亡投棄であった。

日本はえ縄船からのポップアップタグの放流試験の結果から、生存放流魚のうち 91%は生存し、9%は死亡すると想定される（Sakai and Itoh 2013）。その結果、推定生存個体は 15,010 x (1-0.91) =1351 個体、推定死亡個体は 3,445+1,351=4,806 個体となる。各体重階級の平均体重を掛け合わせると、推定死亡個体の総重量は 93.2 トンと計算される。遊漁や小規模漁業による漁獲は無い。

7. 科学オブザーバプログラム

2025 年には 21 隻に科学オブザーバーを派遣した。4 海区から 9 海区でのカバー率は、隻数で 35.0%、使用釣鈎数で 34.8%、ミナミマグロ漁獲尾数で 24.8%であった。科学オブザーバーは硬骨魚類、サメ類、海鳥類を含む鈎に掛かったすべての生物を観察した。魚類の体長測定は合計 70,037 個体に及んだ。

8. 他の関連情報

【標識の回収】

2025 年 7 月以降に日本のはえ縄漁船から報告された再捕は、通常標識が 8 個体であった。CCSBT による標識が 4 個体、他機関による標識が 4 個体であった。CCSBT 標識（#621104）は 2005 年 12 月 13 日に 32S、132E で放流され、20 年後の 2026 年 3 月 16 日に西オーストラリア州の Esperance（34S、122E）の海岸で、ミナミマグロ曳縄調査の乗船スタッフが散歩中に発見した。また、日本が曳縄調査で放流したアーカイバルタグのうち、2 個体が再捕、報告された。

【曳縄加入量調査の実施】

ミナミマグロ 1 歳魚の加入量指数を求めるための曳縄調査を、2026 年 2 月に 21 日間、西オーストラリア州南岸で実施した。ピストンライン調査を 7 回、実施した。調査の詳細並びに加入指数（TRG）については CCSBT-ESC/2608/23 および CCSBT-ESC/2608/25 を参照。この調査で装着放流したアーカイバルタグ 101 本の情報は CCSBT-ESC/2608/26 を参照。

【0 歳魚分布調査の実施】

0 歳魚の分布調査を、2026 年 5 月に 10 日間、西オーストラリア州西岸の Abrolhus 諸島周辺

海域で実施した。同海域では初めての調査であった。ミナミマグロは30㎝から46㎝の0歳魚、91個体を採取した。調査の詳細についてはCCSBT-ESC/2608/24を参照。

【調査死亡枠】

2026年2月に1歳魚曳縄調査を行い、2025年4月から2026年3月までの期間における調査死亡は91個体、167.4kgであった（CCSBT-ESC/2608/29）。2026年5月に実施した0歳魚分調査における死亡は51個体、67.7kgであった。2027年の1歳魚曳縄調査及び2027年4月から5月に実施予定の0歳魚分布調査のために、1.0トンの調査死亡枠を申請する（CCSBT-ESC/2608/29）。

1. Introduction

This document is a review of the historic and current Japanese longline fisheries of southern bluefin tuna *Thunnus maccoyii* (SBT) according to the template for the annual review of national SBT fisheries for the Extended Scientific Committee. Longline is the only method that the Japanese commercial fleet has used to catch SBT. The fisheries started in 1952 in the tropical Eastern Indian Ocean (CCSBT statistical area 1 and 2). Back in those days, post-spawning adult SBT were caught as bycatch of bigeye and yellowfin tuna fishing. The quality of SBT meat in this area was not good, and thus Japanese fishermen extended the fishing ground to the high latitude area. Japanese longline fleets developed SBT fishing grounds in the northeastern region of New Zealand (Area 5) in 1956, around the Tasman Sea (Area 4, 7) in 1961, southeastern Indian Ocean (Area 8) in 1965, and around the off Cape Town (Area 9) in 1967. The number of Japanese vessels that caught SBT in the 1960s was estimated as about 300. Eastern Pacific (Area 12) and off Argentina (Area 10) where some SBT were caught were not established as SBT fishing grounds because of the lower fish density.

In the 1970s, as the increasing catches of small SBT and decreasing catches of adult SBT raised concerns about the stock condition, Japan had adopted voluntary area closures for its domestic longline fisheries since October 1971; The spawning ground was closed between December and March to protect migrating adults, and some fishing grounds were closed seasonally to protect small SBT (off Sydney in May-July; Great Australian Bight in October-March; off Cape Town in October-January). In addition, because Japanese fishermen began to target high-quality SBT, the number of fishing operations in Area 1 and Area 2 dropped drastically. Further, when Japanese vessels began using “deep tuna longline” in 1973-1974, a considerable number of vessels changed their target from SBT to bigeye tuna.

In the early 1980s, SBT catches by Australian surface fisheries increased rapidly and significantly while Japanese longline catches decreased. In 1982, Japan, Australia, and New Zealand organized a voluntary trilateral management framework for SBT, and began to apply quotas to their fisheries in 1985. Japanese national allocation was 23,150 t in 1985, and decreased to 19,500 t, 8,800 t, and 6,065 t at the 1986, 1988, and 1989 trilateral meeting, respectively. After 1989, Japan adopted official area/time-closures to domestic longline fisheries to manage the Japanese SBT quota. In 1994, the Convention for the Conservation of Southern Bluefin Tuna (CCSBT) came into force. Japan applied 6,065 t as its national allocation in 1989-1997, and voluntarily maintained it as self-regulation every year until 2003. The Japanese TAC allocation decreased to 3,000 t for 2007 to 2009, followed by a further decrease to 2,200 t in 2009 and 2600 t in 2010 due to the lower stock status. By implementing the management procedure to compute TAC that balances stock recovery and resource utilization in 2011, CCSBT TAC and Japanese allocation increased and reached 4,737 t in 2015-2017, then increased again to 6,117 tons from 2018 to 2022, and 6,197 tons in 2023-2025.

Area/time-closures in the main fishing ground by the “Olympic system” had been used to manage the Japanese quota during 1990-2005. Under this management system, the Fisheries Agency of Japan set the quota, number of fishing vessels operating, starting date for each of the three main fishing grounds beforehand, monitored the SBT catches of authorized vessels, and closed the fishing grounds before the quota was exhausted. In 2006, Japan adopted an individual quota (IQ) system for SBT fisheries, and abolished the area/time-closures at the same time. In addition, the catch monitoring tag was adopted to further strengthen the domestic management system. Following the transition to the IQ system, individual fishing vessels faced a situation where they held small catch quotas relative to the high CPUE of SBT, consequently, they often exhausted their quotas in a limited number of fishing operations and

departed the SBT fishing grounds. Subsequently, individual catch quotas have increased alongside the rise in Japan's total quota and the reduction in the number of fishing vessels. The details of the operation pattern in 2025 are described in CCSBT-OMMP/2606/05.

2. Catch and Effort

Catches and efforts for Japanese longline vessels by calendar year since 1965 to the most recent year are provided in Table 1 to Table 4 by CCSBT statistical area or month. Most of the catches in recent years are brought from Area 4, Area 7, Area 8, and Area 9 and between April and September. Effort distribution showed a similar trend, but the proportions of other Areas or months were larger than those of catch. This is due to CCSBT definition of effort data that counts all the efforts in the year in any five-degree square grid in which more than one SBT individual is caught.

Since Japanese usual product type is “GG (Gilled and Gutted, tail removed)”, the total SBT catch weight was produced using the conversion factor “1.15” from the processed weight. The total catch weight in the 2025 calendar year by 60 vessels was 7,375 tons, and the total catch number was about 151 thousand. In the fishing year of 2025 from April 2025 to March 2026, the total catch was 7,458 tons of 152 thousand individuals by 61 vessels. Note that the statistic is based on the logbook, but since the collection and data processing of the logbook are progressively made, the values will change over the last few years.

Some Japanese longliners release or discard some of their SBT hooked in order to use their limited IQ effectively. Release and discarding done from all longline vessels targeting SBT have been reported through RTMP. It is reported by three weight classes (< 20kg, < 40kg, >40kg), and by survival / dead category. The number of released or discarded SBT reported was 18,648 in 2025. SBT of 15,138 individuals (81%) was live release, and 3,510 (19%) was dead discard.

3. Nominal CPUE

Nominal CPUE of SBT (catch number per 1000 hooks) by Japanese longline vessels between 1965 and the most recent year is provided in Table 5 and Table 6 by CCSBT statistical area or month. CPUE was higher in Area 4, Area 7, Area 8 and Area 9 than in other areas, in the period between April and October, which is the fishing season of those areas.

4. Size composition

Since 1995 when all of authorized Japanese vessels targeting SBT joined the RTMP, they have measured the fork length of all SBT individuals and reported it immediately. Thus, Japan has been able to provide the size data of most of the SBT catch since 1995.

Catch-at-lengths are provided in Fig. 1 by decade. The length modes were around 150 cmFL in the 1960s to 1980s. It shifted to 120 cmFL in the 1990s. A large part of fish was between 120 cm and 160 cm in the 2000s and between 120 cm and 150 cm in the 2010s. In the 2020s, fish are getting larger, with many fish between 140cm and 160cm.

Catch-at-lengths in the recent five years are provided in Fig. 2 by year. Most fish ranged between 90 cm and 190 cmFL. There were two length modes around 110 cmFL and 140-150cmFL. Note that small-sized

fish in length frequency would be affected by release and discards.

5. Fleet size and distribution

The total number of Japanese vessels that caught SBT was 60 in 2025. Geographical distribution of hooks used and SBT caught are provided in Fig. 3 for all the years since 1965 and in Fig .4 and Fig. 5 for every year in the most recent five years in a resolution of five degrees square. No large difference was observed in the distribution in the recent five years.

6. Research and monitoring to improve estimates of attributable catch

Release and discarding done from longline vessels have been reported through RTMP. It is reported by three weight classes (< 20kg, < 40kg, >40kg), and survival / dead information is obtained with applicable details, and there is no need to further improve it. The number of released or discarded SBT reported was 18,648 in 2025. SBT of 15,138 individuals (81%) was live release, and 3,510 (19%) was dead discard.

Based on the results of pop-up tag release experiments from Japanese longline vessels, it is estimated that 91% of the surviving released fish will survive and 9% will die (Sakai and Itoh 2013). As a result, the estimated number of dead individuals of live release is 1,351 (15,010 x 009), and the estimated number of dead individuals is 4,806 (3,445+1,351). Multiplying by the average weight of each weight class, the total weight of the estimated dead individuals is calculated to be 93.2 tons. There is no catch by recreational fishing or artisanal fishery.

7. Scientific observer program

In 2025, 21 scientific observers were deployed. Coverage rates in Areas 4 to 9 were 35.0% in terms of vessels, 34.8% in terms of hooks used, and 24.8% in terms of SBT caught. Scientific observers observed all organisms caught on the hooks, including teleosts, sharks, and seabirds. A total of 70,037 fish were measured in length.

For details on 2025, see Attachment 1.

8. Other relevant information

[Tag recovery]

Since July 2025, eight conventionally tagged individuals have been reported as recaptured from Japanese longline vessels: four tagged by the CCSBT and four by other organizations. One CCSBT-tagged fish (ID 621104)—originally released on December 13, 2005, at 32°S, 132°E—was discovered on March 16, 2026 (20 years later), on the coast of Esperance (34S, 122E), Western Australia, by a staff member participating in the SBT trolling survey while out for a walk. Additionally, two archival-tagged fish released by Japan during trolling surveys were recaptured and reported.

[Recruitment monitoring trolling survey]

The recruitment monitoring trolling survey to determine the recruitment index for age-1 SBT was carried out in February 2026 for 21 days off the southern coast of Western Australia. The piston line survey was conducted seven times. See CCSBT-ESC/2608/23 for survey details and CCSBT-ESC/2608/25 for the index

calculation (TRG). See CCSBT-ESC/2608/26 for the archival tags implemented and released on total of 101 SBT in the trolling survey.

[Age-0 SBT distribution survey]

A survey on the distribution of age-0 fish was conducted over a 10-day period in May 2026 in the waters surrounding the Houtman Abrolhos Islands off the west coast of Western Australia. This was the first survey of its kind in the area. A total of 91 age-0 Southern Bluefin Tuna, ranging from 30 cm to 46 cm in fork length, were collected. For further details regarding the survey, refer to CCSBT-ESC/2608/24.

[Research mortality allowance]

The trolling survey of age-1 fish was conducted in February 2026, and research mortality from April 2025 to March 2026 was 91 individuals, weighing 167.4 kg (CCSBT-ESC/2608/29). In the survey of age-0 distribution conducted in May 2026, research mortality was 51 individuals, weighing 67.7 kg. A survey mortality allowance of 1.0 ton will be applied for the 2027 age-1 trolling survey and the April-May 2027 age-0 fish distribution survey (CCSBT-ESC/2608/29).

References

Itoh, T. (2026) Change in operation pattern of Japanese southern bluefin tuna longliners in the 2025 fishing season. CCSBT-OMMP/2606/05.

Itoh, T. (2026) Report of the trolling monitoring survey for the age-1 southern bluefin tuna recruitment index in 2026. CCSBT-ESC/2608/23.

Itoh, T. (2026) Report of the age-0 southern bluefin tuna distribution off the west coast of Western Australia in 2026. CCSBT-ESC/2608/24.

Itoh, T. (2026) Trolling indices for age-1 southern bluefin tuna: update of the grid type trolling index in 2026. CCSBT-ESC/2608/25.

Itoh, T. (2026) Summary report of archival tagging from the recruitment surveys in 2026 by Japan. CCSBT-ESC/2608/26.

Japan (2026) Report of the 2025/2026 RMA utilization and application for the 2026/2027 RMA. CCSBT-ESC/2608/29.

Sakai, O. and T. Itoh (2013) Post-releases survival of Southern Bluefin Tuna released from longline vessels. CCSBT-ESC/1309/34.

Table 1. Catch of southern bluefin tuna by Japanese longline by statistical area.

Catch is the number of southern bluefin tuna retained.

Year	Area1	Area2	Area3	Area4	Area5	Area6	Area7	Area8	Area9	Area10	Area11-13	Area 14	Area15	All
1965	24,816	379,069		164,823	81,262	5,878	65,092	97	236	13	556	481	138	722,448
1966	19,836	225,102	560	185,200	59,419	4,867	149,359	31,937	262	0	6,506	620	0	683,668
1967	6,335	210,860	2	101,421	34,033	6,487	96,066	475,851	767	0	882	660	0	933,364
1968	7,196	18,785	31,953	80,776	30,112	18,377	273,389	267,676	95,762	5	1,173	1,800	4,303	831,302
1969	2,361	8,085	24,857	33,777	37,138	68,837	121,373	199,537	347,262	1,127	1,647	603	215	845,692
1970	1,210	10,801	1,121	35,002	15,982	65,921	206,644	105,502	256,058	5,110	5,459	596	464	704,760
1971	468	4,919	1,759	84,292	43,340	102,616	265,439	62,010	132,475	46	419	313	20	698,070
1972	98	256		100,216	70,591	80,343	232,617	47,785	270,377	757	891	27	134	803,335
1973	254	1,221	14	90,142	39,597	30,713	126,254	67,893	295,003	165	365	1	5	651,462
1974	904	3,821	43	70,003	40,634	36,524	164,840	60,570	294,666	94	406	431	229	673,071
1975	571	1,512	2,990	21,845	29,822	47,698	90,827	89,708	156,003		106	18	0	441,100
1976	116	43	5,573	16,155	60,566	96,246	137,257	149,449	168,845		133	3	46	634,432
1977	159	184	4,641	52,404	11,891	27,238	94,704	173,855	170,935		100	2	2	536,115
1978	45	807	11,993	56,932	3	10,275	102,429	44,437	224,521	96	207	0	6	451,655
1979	70	114	1,463	40,618	22,745	49,242	62,158	49,118	294,094	315	345	17	3	519,987
1980	165	3,172	106	51,686	54,541	68,495	112,756	76,635	215,759	2,273	2,307	0	138	585,760
1981	188	494		48,696	36,944	55,574	70,761	39,187	217,184	7,525	7,649	19	0	476,696
1982	231	27		25,249	20,395	28,957	27,972	46,307	177,121	4,368	4,373	2	0	330,634
1983	260	109		21,987	13,955	13,286	55,944	61,428	258,854	448	505	16	16	426,360
1984	934	401		9,408	10,371	16,046	62,621	92,035	172,950	11	89	134	4	364,993
1985	511	370		1,678	9,201	17,245	62,085	95,505	117,637	142	155	18	25	304,430
1986	143	257		5,573	7,693	11,872	19,095	87,950	79,488	354	381	14	80	212,546
1987	158	1,350		2,716	10,420	11,700	37,204	43,864	86,020	5	107	85	46	193,670
1988	86	279		4,244	5,874	5,609	32,299	31,907	84,449	0	95	103	0	164,945
1989	83	106		10,151	2,695	5,301	43,929	40,098	72,711	0	17	44	82	175,217
1990	58	324		10,244	4,977	6,049	43,964	30,847	42,169	77	77	224	46	138,979
1991	2	364		14,262	5,033	6,987	25,830	25,229	75,380	28	34	72	1	153,194
1992	3	503		27,637	2,757	6,243	15,481	18,925	75,952	19	43	104	5	147,653
1993	0	1,158		48,160	582	2,446	20,091	5,842	97,490	0	21	77	7	175,874
1994	0	1,063		30,743	19	1,343	12,438	31,126	55,330	14	44	144	14	132,264
1995	57	2,385	0	17,244	18	1,793	17,417	37,165	47,421	0	241	59	5	123,805
1996	10	1,010		17,483	0		10,906	37,206	53,260		38	195	1	120,109
1997	27	972		14,485	595	469	18,392	21,791	62,521		56	209	21	119,538
1998	17	376		15,164	787	1,113	12,666	35,654	63,556		25	326	0	129,684
1999	197	62		13,832	14	1,135	23,333	17,083	54,856		25	557	14	111,108
2000	388	431		12,673	3	57	20,915	32,799	45,606	0	23	326	0	113,221
2001	51	245		11,969	0	796	30,190	25,351	64,503	0	8	5,970	0	139,083
2002	100	1,682		19,921	0	691	22,879	9,059	64,410	60	66	435	0	119,243
2003	93	1,342		22,585	9	410	12,064	15,133	53,682	0	17	0	0	105,335
2004	0	2,247		15,148	3	376	4,637	24,969	58,284		5	17	0	105,686
2005	0	11,620		15,096	346	0	3,728	31,884	65,327		113	323	224	128,661
2006	0	10,025		7,049	14	1	4,197	12,277	44,229			202	0	77,994
2007	20	2,131		6,848	31		4,366	16,345	25,667		34	192	0	55,634
2008	46	197		3,815	50		6,480	13,089	22,114		13	236	9	46,049
2009	42	90		6,960	0	12	4,495	20,287	19,901	5	10	43	0	51,840
2010	183	1,302		4,507	1	0	9,169	5,740	25,203	13	50	57	0	46,212
2011	23	2,706		2,983	100	0	14,329	6,792	31,410	1	34	699	0	59,076
2012	105	656		1,323	11	0	14,772	6,684	27,727			57	0	51,335
2013	18	284		1,451	57	0	15,300	9,162	22,570	287	297	12	0	49,151
2014	8	1,055		2,933	0	0	17,886	14,079	23,579		1	5	0	59,546
2015	19	1,773		5,167	30	0	20,238	19,595	38,314		1	0	25	85,162
2016	0	709		3,404	15	0	24,303	18,935	32,936		25	0	6	80,333
2017	0	1,281		3,036	103		27,337	14,539	38,629		3	0	44	84,972
2018	0	2,486		8,905	0		29,629	18,272	47,264			0	69	106,625
2019	1	902		10,693	0		33,365	17,543	49,468			0	0	111,972
2020	11	122		4,413	0	1,317	26,580	27,400	35,592			0	38	95,473
2021	0	11	0	7,690	0	1,847	31,991	36,487	31,833		98	0	0	109,957
2022	0	8		6,103	31	770	33,991	33,725	28,583			0	0	103,211
2023	0	12		1,841	0	13,128	32,567	40,036	21,833			0	0	109,417
2024	0	16		8,752	0	483	46,823	37,777	27,626			0	0	121,477
2025	0	0		27,870		159	35,472	39,763	47,727		20	0	0	151,011

Table 2. Catch of southern bluefin tuna by Japanese longline by month.

Catch is the number of southern bluefin tuna retained.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
1965	130,538	90,232	44,267	23,512	10,321	34,308	68,775	49,602	68,667	78,813	65,378	58,035	722,448
1966	70,323	47,696	39,105	33,870	21,581	56,039	104,970	53,021	48,250	66,016	75,713	67,084	683,668
1967	77,756	89,413	55,518	22,943	21,989	78,265	64,197	71,892	116,016	149,574	106,986	78,815	933,364
1968	65,797	56,547	75,917	41,884	56,963	51,256	92,132	97,427	78,868	58,835	76,659	79,017	831,302
1969	45,254	34,598	40,633	45,312	63,402	81,336	115,333	116,290	88,712	85,226	74,105	55,491	845,692
1970	55,761	68,617	56,757	61,958	56,540	61,060	81,478	75,997	46,647	26,136	63,713	50,096	704,760
1971	42,092	29,508	73,570	97,441	64,989	88,004	84,445	65,138	34,963	23,324	54,270	40,326	698,070
1972	37,414	32,184	57,094	78,542	93,319	122,793	122,477	109,614	69,982	23,680	28,350	27,886	803,335
1973	37,578	26,010	64,072	74,193	57,908	100,421	102,880	88,294	41,650	26,132	21,348	10,976	651,462
1974	15,394	24,631	59,810	72,237	66,071	83,947	129,592	91,384	49,592	29,226	28,694	22,493	673,071
1975	13,062	16,474	40,709	50,872	36,752	53,619	59,982	60,505	27,760	32,099	24,666	24,600	441,100
1976	25,714	31,587	56,608	75,969	60,060	83,369	83,611	69,208	43,233	43,089	33,236	28,748	634,432
1977	24,574	44,765	50,863	45,697	55,448	66,406	82,591	63,443	34,367	17,367	27,326	23,268	536,115
1978	17,524	18,317	33,492	67,967	56,034	64,673	66,689	43,840	30,730	15,721	21,609	15,059	451,655
1979	12,757	14,003	60,010	75,848	61,072	64,346	88,263	60,974	27,997	12,253	21,431	21,033	519,987
1980	20,480	14,895	23,924	53,313	68,927	95,609	118,944	66,445	29,474	21,372	33,324	39,053	585,760
1981	11,543	8,921	22,126	76,920	80,299	69,701	96,922	54,946	17,913	11,213	15,131	11,061	476,696
1982	3,519	3,076	9,238	28,798	49,376	57,957	66,314	43,599	25,131	16,035	14,694	12,897	330,634
1983	3,632	2,730	13,782	63,564	71,407	50,511	70,524	55,932	26,947	19,742	28,080	19,509	426,360
1984	8,695	19,507	17,020	43,827	38,354	44,751	61,904	50,301	28,166	17,038	19,913	15,517	364,993
1985	12,869	17,991	24,006	31,080	31,592	31,018	42,429	49,513	20,959	13,055	16,136	13,782	304,430
1986	1,621	268	4,065	17,040	23,618	25,426	35,682	40,409	23,911	14,362	16,562	9,582	212,546
1987	1,179	1,319	8,808	21,099	29,979	28,500	34,215	28,138	16,887	6,915	8,386	8,245	193,670
1988	775	338	3,968	18,369	18,362	27,321	28,833	28,324	17,113	4,127	9,191	8,224	164,945
1989	833	248	5,603	20,138	28,102	29,296	31,849	29,658	13,665	4,796	6,121	4,908	175,217
1990	45	212	612	26,315	33,577	24,143	33,843	19,105	508	195	155	269	138,979
1991	29	47	525	16,896	30,516	34,844	42,054	14,807	9,687	1,230	1,607	952	153,194
1992	6	0	533	13,099	22,893	28,981	53,325	15,241	7,558	3,426	2,230	361	147,653
1993	129	96	220	17,339	46,327	74,688	25,737	7,104	3,382	339	150	363	175,874
1994	188	76	857	1,049	33,486	54,595	9,919	9,511	19,645	2,679	235	24	132,264
1995	511	345	1,222	1,874	38,596	36,925	6,200	7,603	17,111	7,954	3,313	2,151	123,805
1996	374	4	27	35	27,026	28,174	23,562	2,739	14,370	10,311	10,775	2,712	120,109
1997	8	17	15	2,240	32,830	31,611	28,260	768	8,439	7,948	4,566	2,836	119,538
1998	2	8	0	2,735	22,699	31,262	29,913	6,415	13,691	9,650	11,322	1,987	129,684
1999	58	36	4	5,264	33,491	24,127	23,465	4,043	9,083	5,026	6,502	9	111,108
2000	9	2	4	3,498	22,385	23,525	25,553	367	14,548	9,990	7,327	6,013	113,221
2001	48	7	0	5,249	33,417	32,930	34,011	3,307	13,113	10,239	6,739	23	139,083
2002	2	1	115	4,892	40,798	43,737	17,430	1,779	6,551	2,650	1,194	94	119,243
2003	93	0	0	3,345	33,230	31,494	17,029	180	5,008	5,165	6,901	2,890	105,335
2004	109	8	0	1,975	21,489	23,634	29,010	5,355	3,656	4,267	9,829	6,354	105,686
2005	2,529	1,094	1	2,052	22,152	24,176	27,475	13,229	5,848	7,795	8,243	14,067	128,661
2006	5,358	2,486	62	0	8,584	9,213	13,365	20,654	9,293	3,656	2,412	2,911	77,994
2007	1,023	38	582	1,008	4,638	8,254	6,648	14,522	9,200	3,812	5,330	579	55,634
2008	70	113	587	3,613	7,004	7,733	8,648	8,379	4,949	1,719	2,274	960	46,049
2009	42	1	1	4,518	7,367	5,055	9,610	9,969	8,143	2,502	2,646	1,986	51,840
2010	643	293	2,051	12,346	11,916	7,186	4,220	4,932	496	269	1,842	18	46,212
2011	9	0	434	13,523	11,042	12,206	10,131	4,442	4,350	1,173	1,305	461	59,076
2012	26	13	1,829	15,484	8,012	9,164	6,809	7,015	2,493	101	379	10	51,335
2013	0	0	510	9,318	13,903	10,761	4,780	7,049	1,791	499	540	0	49,151
2014	3	0	486	14,851	12,664	9,407	7,146	12,056	1,867	31	678	357	59,546
2015	2	0	338	18,645	20,565	16,487	7,686	15,414	4,770	703	399	153	85,162
2016	0	0	1,339	14,489	21,873	12,890	10,038	13,848	5,502	354	0	0	80,333
2017	0	0	1,178	21,483	27,876	15,351	4,265	10,691	4,068	51	0	9	84,972
2018	0	0	981	21,607	35,870	25,297	4,388	13,900	4,280	302	0	0	106,625
2019	0	0	1,508	28,225	46,908	14,952	3,267	13,959	1,639	0	1,080	434	111,972
2020	71	364	2,957	12,013	31,256	16,503	4,152	18,425	8,379	1,141	212	0	95,473
2021	0	22	2,225	15,099	28,285	23,154	3,440	24,166	12,155	499	704	208	109,957
2022	0	224	3,466	7,754	35,497	16,361	5,641	24,898	7,106	550	1,047	667	103,211
2023	0	497	2,664	12,210	35,174	16,001	2,402	18,700	12,641	5,897	3,231	0	109,417
2024	0	0	461	12,868	42,239	25,485	3,359	14,897	15,050	3,482	3,041	595	121,477
2025	0	0	1,657	20,521	45,912	35,766	10,187	15,277	13,851	7,661	179	0	151,011

Table 3. Effort of Japanese longline for southern bluefin tuna in the number of hooks used by statistical area.

Year	Area1	Area2	Area3	Area4	Area5	Area6	Area7	Area8	Area9	Area10	Area11-13	Area14	Area15	All
1965	7,685	21,381		7,543	3,111	282	2,531	21	740	77	3,002	2,957	4,774	54,104
1966	7,098	14,302	29	9,746	3,804	370	10,375	1,293	1,079	321	15,808	5,975	9,962	80,162
1967	6,240	15,569	5	5,654	3,657	730	6,806	28,132	1,134	71	8,279	7,091	2,305	85,672
1968	10,123	7,411	1,196	4,789	2,475	1,343	23,023	24,243	5,394	47	7,758	6,113	5,692	99,608
1969	3,554	2,521	1,069	4,398	4,662	7,575	14,984	19,863	23,355	912	5,388	6,046	1,096	95,425
1970	4,526	7,973	82	3,813	2,899	9,826	23,473	14,408	21,090	5,850	4,076	2,925	1,041	101,982
1971	2,407	10,109	53	8,096	6,985	15,336	33,963	13,628	14,187	652	1,990	3,065	1,211	111,681
1972	714	1,542		8,938	7,089	12,740	31,507	8,213	24,260	1,515	1,083	683	269	98,552
1973	1,618	3,048	7	10,136	3,266	8,383	26,126	14,535	32,974	448	3,010	956	696	105,203
1974	4,223	5,100	7	9,311	5,307	9,307	23,771	10,142	33,202	18	4,038	1,737	450	106,613
1975	5,513	4,665	322	3,656	3,765	9,200	19,208	18,324	27,491		1,905	966	972	95,986
1976	1,129	1,151	278	3,874	8,274	21,433	23,973	26,997	23,246		1,310	506	185	112,355
1977	698	1,119	160	2,299	2,689	15,031	16,629	30,469	20,010		434	112	78	89,729
1978	2,112	2,182	458	4,278	446	2,732	18,101	12,531	40,918	92	3,751	573	57	88,231
1979	1,109	1,558	64	5,220	4,711	13,446	17,727	13,719	49,196	160	1,555	1,663	203	110,330
1980	2,573	2,034	2	4,276	7,842	18,629	26,963	21,267	43,312	2,312	1,040	1,381	343	131,975
1981	2,716	2,464		6,052	8,235	18,115	18,993	13,197	46,166	6,109	1,574	2,483	246	126,349
1982	2,462	871		6,304	11,181	13,036	8,234	16,186	44,947	3,855	1,269	1,428	878	110,650
1983	3,531	2,232		7,174	8,060	7,702	14,689	23,007	46,399	548	1,381	1,017	543	116,283
1984	9,685	3,236		4,023	5,310	9,286	15,334	28,432	49,476	45	6,783	2,535	1,072	135,217
1985	5,059	5,550		3,461	4,865	7,285	18,585	36,375	41,261	227	1,659	2,681	917	127,924
1986	3,358	2,458		5,178	5,546	7,346	8,706	46,344	37,158	1,135	4,162	1,812	479	123,680
1987	1,938	5,389		5,515	8,603	8,337	17,535	32,240	32,889	72	7,467	1,314	755	122,057
1988	1,371	1,623		8,792	5,489	7,083	15,030	21,618	35,108	4	6,237	2,922	424	105,700
1989	1,343	1,513		9,267	2,823	5,204	13,127	23,593	35,416	18	2,741	2,371	1,587	99,002
1990	1,826	2,699		8,309	3,506	3,416	12,507	5,456	23,312	53		5,595	2,340	69,019
1991	788	10,575		6,301	5,494	6,542	5,530	8,839	26,217	189	3,163	7,832	3,056	84,527
1992	524	5,392		8,610	4,216	3,652	2,974	7,750	28,625	74	7,112	8,736	2,586	80,251
1993	342	14,490		12,514	545	2,109	2,482	1,904	28,305	92	10,499	5,820	2,463	81,565
1994	250	21,258		12,389	66	330	2,221	5,478	22,683	530	11,395	19,484	6,951	103,034
1995	1,862	32,469	0	10,789	95	699	3,059	11,972	21,314	23	41,262	16,736	6,192	146,472
1996	1,823	26,978		14,781	200		2,980	17,136	24,749		16,401	23,661	5,999	134,709
1997	2,286	22,061		13,674	122	164	6,269	15,064	26,686		13,551	23,585	2,753	126,215
1998	1,791	8,428		12,602	326	392	7,564	14,435	25,597		34,070	25,410	3,109	133,723
1999	3,258	8,683		6,665	568	491	10,627	8,109	21,913		18,224	22,072	5,254	105,863
2000	2,395	9,134		5,583	142	61	9,865	16,631	18,686	242	4,661	17,119	2,316	86,837
2001	3,819	18,889		4,826	457	214	11,952	12,473	22,916	118	15,528	15,493	2,970	109,656
2002	2,843	19,878		7,693	55	173	11,417	7,811	15,205	143	11,125	17,702	1,782	95,826
2003	1,395	4,825		10,025	305	245	6,092	8,492	17,811	165	15,715	17,498	4,692	87,258
2004	1,416	4,041		9,852	315	251	3,332	8,980	25,153		4,410	18,439	3,270	79,461
2005	654	6,699		10,612	788	34	3,526	9,774	28,896		10,372	16,970	1,521	89,846
2006	119	5,427		4,761	197	3	1,083	6,238	21,118			20,420	485	59,852
2007	900	4,050		2,570	802		1,631	9,221	9,609		1,779	12,017	473	43,053
2008	3,041	5,709		3,415	723		1,274	7,967	10,732		1,827	9,813	2,700	47,200
2009	3,683	5,539		3,375	715	3	856	8,225	4,697	1,321	2,530	5,626	510	37,080
2010	2,503	6,703		3,810	359	0	1,304	2,442	5,646	799	5,281	6,689	818	36,355
2011	621	4,249		4,077	1,637	0	1,986	2,801	5,624	909	2,033	10,702	517	35,157
2012	356	4,785		3,379	1,490	0	2,452	2,608	5,547			8,935	4,647	34,199
2013	478	4,279		2,680	604	0	3,217	3,600	3,619	160	1,203	6,381	5,598	31,819
2014	749	4,695		2,003	760	0	2,770	6,200	3,940		3,160	6,825	2,321	33,424
2015	857	4,275		1,674	543	0	2,976	6,617	4,845		167	5,267	4,618	31,839
2016	1,677	4,654		1,262	1,299	0	3,894	6,441	5,743		205	5,270	3,747	34,192
2017	473	4,593		921	774		4,865	3,870	5,102		210	4,880	3,880	29,567
2018	457	4,149		1,150	978		4,875	3,170	6,787			5,085	7,466	34,117
2019	962	3,541		821	628		3,939	2,278	5,584			3,821	3,570	25,143
2020	1,361	3,395		568	405	103	2,697	3,542	6,521			3,382	2,644	24,618
2021	1,703	2,754	0	679	374	228	2,755	4,991	4,112		596	2,280	4,215	24,688
2022	1,636	2,571		396	336	30	1,714	5,318	2,599			1,107	3,015	18,721
2023	707	1,215		501	232	649	1,733	6,310	1,925			1,575	2,304	17,152
2024	2,520	798		399	58	43	2,071	6,494	1,946			1,445	3,000	18,775
2025	2,328	690		1,480		21	2,420	5,425	2,320		2	580	1,700	16,965

Unit is 1000 hooks.

Table 4. Effort of Japanese longline for southern bluefin tuna in the number of hooks used by month.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
1965	6,369	4,890	3,272	1,488	2,363	4,835	5,422	3,834	4,820	7,017	5,857	3,936	54,104
1966	4,851	4,146	3,528	3,818	4,615	7,333	10,316	10,079	7,707	7,658	7,844	8,265	80,162
1967	6,765	6,455	5,078	4,003	5,451	6,842	9,427	8,220	9,087	8,856	7,415	8,072	85,672
1968	9,122	7,659	7,166	6,501	8,031	8,037	9,421	10,295	9,362	8,550	7,395	8,071	99,608
1969	6,964	5,424	5,673	5,232	8,322	9,327	11,405	11,552	9,493	8,721	7,216	6,095	95,425
1970	6,293	7,313	8,572	8,860	10,233	10,080	9,679	9,003	8,567	7,652	8,243	7,487	101,982
1971	9,143	8,705	10,260	11,311	11,836	12,441	10,579	9,621	6,720	6,535	7,998	6,532	111,681
1972	6,980	7,267	8,745	9,312	10,554	10,711	10,359	8,943	8,075	5,633	6,246	5,727	98,552
1973	8,903	7,493	9,598	11,317	10,915	11,187	9,813	9,523	8,274	7,644	6,333	4,204	105,203
1974	6,886	6,809	9,948	11,449	11,699	11,286	11,643	9,833	8,823	7,130	5,903	5,203	106,613
1975	5,858	6,473	9,031	9,461	9,078	9,882	8,944	9,539	7,556	7,078	6,242	6,844	95,986
1976	6,543	7,631	10,834	12,307	11,216	11,505	10,679	9,376	9,743	8,317	7,212	6,993	112,355
1977	6,841	6,788	9,402	9,315	8,516	8,879	8,023	8,651	7,443	5,587	5,747	4,539	89,729
1978	4,763	5,621	8,024	9,153	9,370	10,128	10,060	9,617	7,612	4,851	5,101	3,930	88,231
1979	4,699	4,821	10,605	13,129	13,573	13,767	12,991	10,375	8,721	5,800	6,266	5,584	110,330
1980	8,093	6,140	9,792	13,201	14,808	15,853	15,466	10,658	9,256	7,846	9,270	11,591	131,975
1981	5,366	6,566	11,675	15,072	16,749	17,051	16,242	11,447	7,437	6,290	7,067	5,386	126,349
1982	3,654	3,947	7,126	10,338	15,307	15,940	15,944	12,689	8,532	6,039	6,154	4,979	110,650
1983	2,847	3,088	5,264	10,686	15,421	15,172	15,000	14,124	10,794	8,443	8,130	7,314	116,283
1984	5,214	5,557	7,555	13,935	15,952	17,188	19,591	13,816	11,000	9,292	9,237	6,882	135,217
1985	6,189	3,313	6,024	12,040	14,483	16,343	17,211	16,208	10,782	8,229	8,877	8,225	127,924
1986	4,423	2,852	4,267	10,922	14,756	15,466	15,757	14,566	12,327	10,658	9,425	8,259	123,680
1987	4,865	3,185	5,068	9,539	13,743	16,224	15,390	18,752	12,454	9,064	7,925	5,847	122,057
1988	1,861	1,764	3,504	10,333	13,885	17,686	15,240	14,815	10,343	4,774	5,740	5,754	105,700
1989	1,507	766	3,108	9,153	14,448	15,050	15,013	13,122	9,465	5,925	6,861	4,584	99,002
1990	1,444	816	1,893	9,398	12,650	13,716	14,781	9,901	2,395	1,052	430	542	69,019
1991	763	717	2,730	9,065	12,888	13,775	15,668	10,681	7,765	4,499	3,762	2,215	84,527
1992	743	880	3,518	8,744	11,241	14,423	13,449	9,519	5,611	4,228	4,164	3,732	80,251
1993	2,564	841	2,331	9,078	11,737	13,152	11,024	8,980	7,493	6,349	4,066	3,951	81,565
1994	2,474	1,508	6,704	11,066	14,021	14,061	12,116	10,951	9,519	6,647	6,398	7,568	103,034
1995	6,903	6,708	10,951	13,920	18,250	17,267	13,932	14,208	13,368	10,962	10,111	9,891	146,472
1996	4,125	3,995	10,014	14,727	18,819	18,197	15,362	11,632	11,380	9,871	9,769	6,817	134,709
1997	2,913	2,288	6,894	12,228	18,847	17,483	15,857	13,274	12,304	10,447	8,837	4,842	126,215
1998	2,961	4,320	8,574	11,785	17,283	19,106	16,149	9,448	11,921	13,380	11,853	6,943	133,723
1999	3,350	3,590	7,465	11,351	17,060	14,174	12,794	7,163	9,713	8,799	6,852	3,552	105,863
2000	2,092	1,647	3,515	7,505	12,746	11,678	9,956	6,805	9,054	8,336	7,439	6,064	86,837
2001	3,070	3,516	4,888	8,888	15,011	15,007	13,036	12,566	11,449	9,052	8,465	4,710	109,656
2002	3,008	2,170	6,821	9,185	13,535	12,736	9,083	13,332	10,193	7,680	5,231	2,852	95,826
2003	3,054	2,717	5,589	8,916	13,507	13,395	9,932	7,076	6,892	5,359	6,251	4,570	87,258
2004	1,423	1,033	3,336	8,100	11,497	12,572	12,503	7,871	8,346	5,740	3,767	3,275	79,461
2005	2,216	1,688	3,332	8,039	12,988	13,329	13,332	9,888	9,685	7,121	4,527	3,701	89,846
2006	4,423	3,282	2,003	2,917	7,396	8,092	8,525	7,663	4,930	2,915	3,967	3,739	59,852
2007	3,318	2,618	1,430	936	2,811	5,546	5,892	6,574	5,210	3,141	3,591	1,985	43,053
2008	3,126	2,488	1,384	2,126	3,723	6,496	7,218	6,828	4,702	3,369	2,793	2,948	47,200
2009	3,349	2,010	1,333	1,985	3,433	4,471	4,651	6,068	4,856	1,797	1,485	1,642	37,080
2010	2,701	2,183	2,389	3,715	4,968	5,914	4,418	3,286	1,773	1,487	1,852	1,670	36,355
2011	1,972	2,173	2,672	3,339	4,715	4,489	4,331	3,208	2,869	2,134	1,920	1,335	35,157
2012	1,573	1,767	2,294	4,518	4,555	4,519	4,225	4,366	3,219	1,947	590	626	34,199
2013	1,018	1,301	1,953	3,878	5,085	5,043	4,298	4,254	2,644	753	673	918	31,819
2014	1,683	1,253	1,317	4,400	4,877	4,768	4,874	3,563	1,332	1,270	1,993	2,094	33,424
2015	903	884	1,612	4,588	4,437	4,849	4,316	4,934	2,598	1,308	602	807	31,839
2016	1,029	1,069	1,712	4,214	5,426	5,234	5,016	4,811	2,793	1,443	983	464	34,192
2017	589	779	1,446	4,397	6,478	5,120	3,546	3,716	1,730	654	798	316	29,567
2018	749	1,136	1,463	4,492	6,995	5,050	4,640	3,870	2,083	1,776	1,227	636	34,117
2019	1,042	727	836	3,982	5,839	4,050	2,610	3,126	1,666	293	355	618	25,143
2020	1,215	908	1,244	2,759	4,334	3,577	3,274	3,209	2,146	810	546	595	24,618
2021	1,076	964	1,018	2,085	4,121	4,229	3,528	4,145	2,553	570	193	206	24,688
2022	543	354	368	1,192	3,419	2,957	2,587	3,745	1,797	665	481	613	18,721
2023	666	549	551	1,019	2,639	2,441	1,430	3,100	2,609	1,168	738	244	17,152
2024	220	274	394	964	2,642	2,196	2,045	3,125	2,888	1,764	1,283	978	18,775
2025	233	468	341	1,336	2,708	2,707	1,713	2,333	2,201	1,517	844	563	16,965

Unit is 1000 hooks.

Table 5. Nominal CPUE of Japanese longline in number of southern bluefin tuna per 1000 hooks by statistical area.

Year	Area1	Area2	Area3	Area4	Area5	Area6	Area7	Area8	Area9	Area10	Area11-13	Area14	Area15	All
1965	3.23	17.73		21.85	26.12	20.83	25.72	4.52	0.32	0.17	0.18	0.16	0.03	13.35
1966	2.79	15.74	19.06	19.00	15.62	13.15	14.40	24.70	0.24	0.00	0.41	0.10	0.00	8.53
1967	1.02	13.54	0.41	17.94	9.31	8.88	14.12	16.91	0.68	0.00	0.11	0.09	0.00	10.89
1968	0.71	2.53	26.71	16.87	12.17	13.69	11.87	11.04	17.75	0.11	0.15	0.29	0.76	8.35
1969	0.66	3.21	23.26	7.68	7.97	9.09	8.10	10.05	14.87	1.24	0.10	0.10	0.20	8.86
1970	0.27	1.35	13.72	9.18	5.51	6.71	8.80	7.32	12.14	0.87	0.09	0.20	0.45	6.91
1971	0.19	0.49	32.98	10.41	6.20	6.69	7.82	4.55	9.34	0.07	0.19	0.10	0.02	6.25
1972	0.14	0.17		11.21	9.96	6.31	7.38	5.82	11.15	0.50	0.12	0.04	0.50	8.15
1973	0.16	0.40	1.92	8.89	12.12	3.66	4.83	4.67	8.95	0.37	0.07	0.00	0.01	6.19
1974	0.21	0.75	5.75	7.52	7.66	3.92	6.93	5.97	8.88	5.24	0.08	0.25	0.51	6.31
1975	0.10	0.32	9.29	5.97	7.92	5.18	4.73	4.90	5.67		0.06	0.02	0.00	4.60
1976	0.10	0.04	20.06	4.17	7.32	4.49	5.73	5.54	7.26		0.10	0.01	0.25	5.65
1977	0.23	0.16	28.99	22.79	4.42	1.81	5.70	5.71	8.54		0.23	0.02	0.03	5.97
1978	0.02	0.37	26.18	13.31	0.01	3.76	5.66	3.55	5.49	1.04	0.03	0.00	0.10	5.12
1979	0.06	0.07	22.86	7.78	4.83	3.66	3.51	3.58	5.98	1.97	0.02	0.01	0.01	4.71
1980	0.06	1.56	49.30	12.09	6.96	3.68	4.18	3.60	4.98	0.98	0.03	0.00	0.40	4.44
1981	0.07	0.20		8.05	4.49	3.07	3.73	2.97	4.70	1.23	0.08	0.01	0.00	3.77
1982	0.09	0.03		4.00	1.82	2.22	3.40	2.86	3.94	1.13	0.00	0.00	0.00	2.99
1983	0.07	0.05		3.06	1.73	1.72	3.81	2.67	5.58	0.82	0.04	0.02	0.03	3.67
1984	0.10	0.12		2.34	1.95	1.73	4.08	3.24	3.50	0.24	0.01	0.05	0.00	2.70
1985	0.10	0.07		0.48	1.89	2.37	3.34	2.63	2.85	0.62	0.01	0.01	0.03	2.38
1986	0.04	0.10		1.08	1.39	1.62	2.19	1.90	2.14	0.31	0.01	0.01	0.17	1.72
1987	0.08	0.25		0.49	1.21	1.40	2.12	1.36	2.62	0.07	0.01	0.06	0.06	1.59
1988	0.06	0.17		0.48	1.07	0.79	2.15	1.48	2.41	0.00	0.02	0.04	0.00	1.56
1989	0.06	0.07		1.10	0.95	1.02	3.35	1.70	2.05	0.00	0.01	0.02	0.05	1.77
1990	0.03	0.12		1.23	1.42	1.77	3.52	5.65	1.81	1.46		0.04	0.02	2.01
1991	0.00	0.03		2.26	0.92	1.07	4.67	2.85	2.88	0.15	0.00	0.01	0.00	1.81
1992	0.01	0.09		3.21	0.65	1.71	5.20	2.44	2.65	0.26	0.00	0.01	0.00	1.84
1993	0.00	0.08		3.85	1.07	1.16	8.09	3.07	3.44	0.00	0.00	0.01	0.00	2.16
1994	0.00	0.05		2.48	0.29	4.07	5.60	5.68	2.44	0.03	0.00	0.01	0.00	1.28
1995	0.03	0.07		1.60	0.19	2.56	5.69	3.10	2.22	0.00	0.01	0.00	0.00	0.85
1996	0.01	0.04		1.18	0.00		3.66	2.17	2.15		0.00	0.01	0.00	0.89
1997	0.01	0.04		1.06	4.88	2.86	2.93	1.45	2.34		0.00	0.01	0.01	0.95
1998	0.01	0.04		1.20	2.41	2.84	1.67	2.47	2.48		0.00	0.01	0.00	0.97
1999	0.06	0.01		2.08	0.02	2.31	2.20	2.11	2.50		0.00	0.03	0.00	1.05
2000	0.16	0.05		2.27	0.02	0.94	2.12	1.97	2.44	0.00	0.00	0.02	0.00	1.30
2001	0.01	0.01		2.48	0.00	3.71	2.53	2.03	2.81	0.00	0.00	0.39	0.00	1.27
2002	0.04	0.08		2.59	0.00	3.99	2.00	1.16	4.24	0.42	0.00	0.02	0.00	1.24
2003	0.07	0.28		2.25	0.03	1.68	1.98	1.78	3.01	0.00	0.00	0.00	0.00	1.21
2004	0.00	0.56		1.54	0.01	1.50	1.39	2.78	2.32		0.00	0.00	0.00	1.33
2005	0.00	1.73		1.42	0.44	0.00	1.06	3.26	2.26		0.01	0.02	0.15	1.43
2006	0.00	1.85		1.48	0.07	0.30	3.87	1.97	2.09			0.01	0.00	1.30
2007	0.02	0.53		2.66	0.04		2.68	1.77	2.67		0.02	0.02	0.00	1.29
2008	0.02	0.03		1.12	0.07		5.09	1.64	2.06		0.01	0.02	0.00	0.98
2009	0.01	0.02		2.06	0.00	3.55	5.25	2.47	4.24	0.00	0.00	0.01	0.00	1.40
2010	0.07	0.19		1.18	0.00		7.03	2.35	4.46	0.02	0.01	0.01	0.00	1.27
2011	0.04	0.64		0.73	0.06		7.21	2.42	5.58	0.00	0.02	0.07	0.00	1.68
2012	0.30	0.14		0.39	0.01		6.03	2.56	5.00			0.01	0.00	1.50
2013	0.04	0.07		0.54	0.09		4.76	2.54	6.24	1.79	0.01	0.00	0.00	1.54
2014	0.01	0.22		1.46	0.00		6.46	2.27	5.98		0.00	0.00	0.00	1.78
2015	0.02	0.41		3.09	0.06		6.80	2.96	7.91		0.01	0.00	0.01	2.67
2016	0.00	0.15		2.70	0.01		6.24	2.94	5.73		0.12	0.00	0.00	2.35
2017	0.00	0.28		3.30	0.13		5.62	3.76	7.57		0.01	0.00	0.01	2.87
2018	0.00	0.60		7.74	0.00		6.08	5.76	6.96			0.00	0.01	3.13
2019	0.00	0.25		13.02	0.00		8.47	7.70	8.86			0.00	0.00	4.45
2020	0.01	0.04		7.77	0.00	12.75	9.86	7.74	5.46			0.00	0.01	3.88
2021	0.00	0.00		11.32	0.00	8.11	11.61	7.31	7.74		0.16	0.00	0.00	4.45
2022	0.00	0.00		15.42	0.09	25.67	19.83	6.34	11.00			0.00	0.00	5.51
2023	0.00	0.01		3.67	0.00	20.22	18.79	6.34	11.34			0.00	0.00	6.38
2024	0.00	0.02		21.94	0.00	11.18	22.61	5.82	14.19			0.00	0.00	6.47
2025	0.00	0.00		18.83		7.68	14.66	7.33	20.58		10.10	0.00	0.00	8.90

Table 6. Nominal CPUE of Japanese longline in number of southern bluefin tuna per 1000 hooks by month.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
1965	20.49	18.45	13.53	15.80	4.37	7.10	12.68	12.94	14.24	11.23	11.16	14.75	13.35
1966	14.50	11.50	11.08	8.87	4.68	7.64	10.18	5.26	6.26	8.62	9.65	8.12	8.53
1967	11.49	13.85	10.93	5.73	4.03	11.44	6.81	8.75	12.77	16.89	14.43	9.76	10.89
1968	7.21	7.38	10.59	6.44	7.09	6.38	9.78	9.46	8.42	6.88	10.37	9.79	8.35
1969	6.50	6.38	7.16	8.66	7.62	8.72	10.11	10.07	9.34	9.77	10.27	9.10	8.86
1970	8.86	9.38	6.62	6.99	5.53	6.06	8.42	8.44	5.45	3.42	7.73	6.69	6.91
1971	4.60	3.39	7.17	8.61	5.49	7.07	7.98	6.77	5.20	3.57	6.79	6.17	6.25
1972	5.36	4.43	6.53	8.43	8.84	11.46	11.82	12.26	8.67	4.20	4.54	4.87	8.15
1973	4.22	3.47	6.68	6.56	5.31	8.98	10.48	9.27	5.03	3.42	3.37	2.61	6.19
1974	2.24	3.62	6.01	6.31	5.65	7.44	11.13	9.29	5.62	4.10	4.86	4.32	6.31
1975	2.23	2.55	4.51	5.38	4.05	5.43	6.71	6.34	3.67	4.53	3.95	3.59	4.60
1976	3.93	4.14	5.23	6.17	5.35	7.25	7.83	7.38	4.44	5.18	4.61	4.11	5.65
1977	3.59	6.60	5.41	4.91	6.51	7.48	10.29	7.33	4.62	3.11	4.76	5.13	5.97
1978	3.68	3.26	4.17	7.43	5.98	6.39	6.63	4.56	4.04	3.24	4.24	3.83	5.12
1979	2.71	2.90	5.66	5.78	4.50	4.67	6.79	5.88	3.21	2.11	3.42	3.77	4.71
1980	2.53	2.43	2.44	4.04	4.65	6.03	7.69	6.23	3.18	2.72	3.59	3.37	4.44
1981	2.15	1.36	1.90	5.10	4.79	4.09	5.97	4.80	2.41	1.78	2.14	2.05	3.77
1982	0.96	0.78	1.30	2.79	3.23	3.64	4.16	3.44	2.95	2.66	2.39	2.59	2.99
1983	1.28	0.88	2.62	5.95	4.63	3.33	4.70	3.96	2.50	2.34	3.45	2.67	3.67
1984	1.67	3.51	2.25	3.15	2.40	2.60	3.16	3.64	2.56	1.83	2.16	2.25	2.70
1985	2.08	5.43	3.99	2.58	2.18	1.90	2.47	3.05	1.94	1.59	1.82	1.68	2.38
1986	0.37	0.09	0.95	1.56	1.60	1.64	2.26	2.77	1.94	1.35	1.76	1.16	1.72
1987	0.24	0.41	1.74	2.21	2.18	1.76	2.22	1.50	1.36	0.76	1.06	1.41	1.59
1988	0.42	0.19	1.13	1.78	1.32	1.54	1.89	1.91	1.65	0.86	1.60	1.43	1.56
1989	0.55	0.32	1.80	2.20	1.95	1.95	2.12	2.26	1.44	0.81	0.89	1.07	1.77
1990	0.03	0.26	0.32	2.80	2.65	1.76	2.29	1.93	0.21	0.19	0.36	0.50	2.01
1991	0.04	0.07	0.19	1.86	2.37	2.53	2.68	1.39	1.25	0.27	0.43	0.43	1.81
1992	0.01	0.00	0.15	1.50	2.04	2.01	3.97	1.60	1.35	0.81	0.54	0.10	1.84
1993	0.05	0.11	0.09	1.91	3.95	5.68	2.33	0.79	0.45	0.05	0.04	0.09	2.16
1994	0.08	0.05	0.13	0.09	2.39	3.88	0.82	0.87	2.06	0.40	0.04	0.00	1.28
1995	0.07	0.05	0.11	0.13	2.11	2.14	0.45	0.54	1.28	0.73	0.33	0.22	0.85
1996	0.09	0.00	0.00	0.00	1.44	1.55	1.53	0.24	1.26	1.04	1.10	0.40	0.89
1997	0.00	0.01	0.00	0.18	1.74	1.81	1.78	0.06	0.69	0.76	0.52	0.59	0.95
1998	0.00	0.00	0.00	0.23	1.31	1.64	1.85	0.68	1.15	0.72	0.96	0.29	0.97
1999	0.02	0.01	0.00	0.46	1.96	1.70	1.83	0.56	0.94	0.57	0.95	0.00	1.05
2000	0.00	0.00	0.00	0.47	1.76	2.01	2.57	0.05	1.61	1.20	0.98	0.99	1.30
2001	0.02	0.00	0.00	0.59	2.23	2.19	2.61	0.26	1.15	1.13	0.80	0.00	1.27
2002	0.00	0.00	0.02	0.53	3.01	3.43	1.92	0.13	0.64	0.35	0.23	0.03	1.24
2003	0.03	0.00	0.00	0.38	2.46	2.35	1.71	0.03	0.73	0.96	1.10	0.63	1.21
2004	0.08	0.01	0.00	0.24	1.87	1.88	2.32	0.68	0.44	0.74	2.61	1.94	1.33
2005	1.14	0.65	0.00	0.26	1.71	1.81	2.06	1.34	0.60	1.09	1.82	3.80	1.43
2006	1.21	0.76	0.03	0.00	1.16	1.14	1.57	2.70	1.88	1.25	0.61	0.78	1.30
2007	0.31	0.01	0.41	1.08	1.65	1.49	1.13	2.21	1.77	1.21	1.48	0.29	1.29
2008	0.02	0.05	0.42	1.70	1.88	1.19	1.20	1.23	1.05	0.51	0.81	0.33	0.98
2009	0.01	0.00	0.00	2.28	2.15	1.13	2.07	1.64	1.68	1.39	1.78	1.21	1.40
2010	0.24	0.13	0.86	3.32	2.40	1.22	0.96	1.50	0.28	0.18	0.99	0.01	1.27
2011	0.00	0.00	0.16	4.05	2.34	2.72	2.34	1.38	1.52	0.55	0.68	0.35	1.68
2012	0.02	0.01	0.80	3.43	1.76	2.03	1.61	1.61	0.77	0.05	0.64	0.02	1.50
2013	0.00	0.00	0.26	2.40	2.73	2.13	1.11	1.66	0.68	0.66	0.80	0.00	1.54
2014	0.00	0.00	0.37	3.38	2.60	1.97	1.47	3.38	1.40	0.02	0.34	0.17	1.78
2015	0.00	0.00	0.21	4.06	4.64	3.40	1.78	3.12	1.84	0.54	0.66	0.19	2.67
2016	0.00	0.00	0.78	3.44	4.03	2.46	2.00	2.88	1.97	0.25	0.00	0.00	2.35
2017	0.00	0.00	0.81	4.89	4.30	3.00	1.20	2.88	2.35	0.08	0.00	0.03	2.87
2018	0.00	0.00	0.67	4.81	5.13	5.01	0.95	3.59	2.06	0.17	0.00	0.00	3.13
2019	0.00	0.00	1.80	7.09	8.03	3.69	1.25	4.47	0.98	0.00	3.04	0.70	4.45
2020	0.06	0.40	2.38	4.35	7.21	4.61	1.27	5.74	3.90	1.41	0.39	0.00	3.88
2021	0.00	0.02	2.19	7.24	6.86	5.48	0.98	5.83	4.76	0.88	3.66	1.01	4.45
2022	0.00	0.63	9.42	6.50	10.38	5.53	2.18	6.65	3.95	0.83	2.18	1.09	5.51
2023	0.00	0.90	4.84	11.98	13.33	6.56	1.68	6.03	4.85	5.05	4.38	0.00	6.38
2024	0.00	0.00	1.17	13.34	15.98	11.60	1.64	4.77	5.21	1.97	2.37	0.61	6.47
2025	0.00	0.00	4.86	15.36	16.95	13.21	5.95	6.55	6.29	5.05	0.21	0.00	8.90

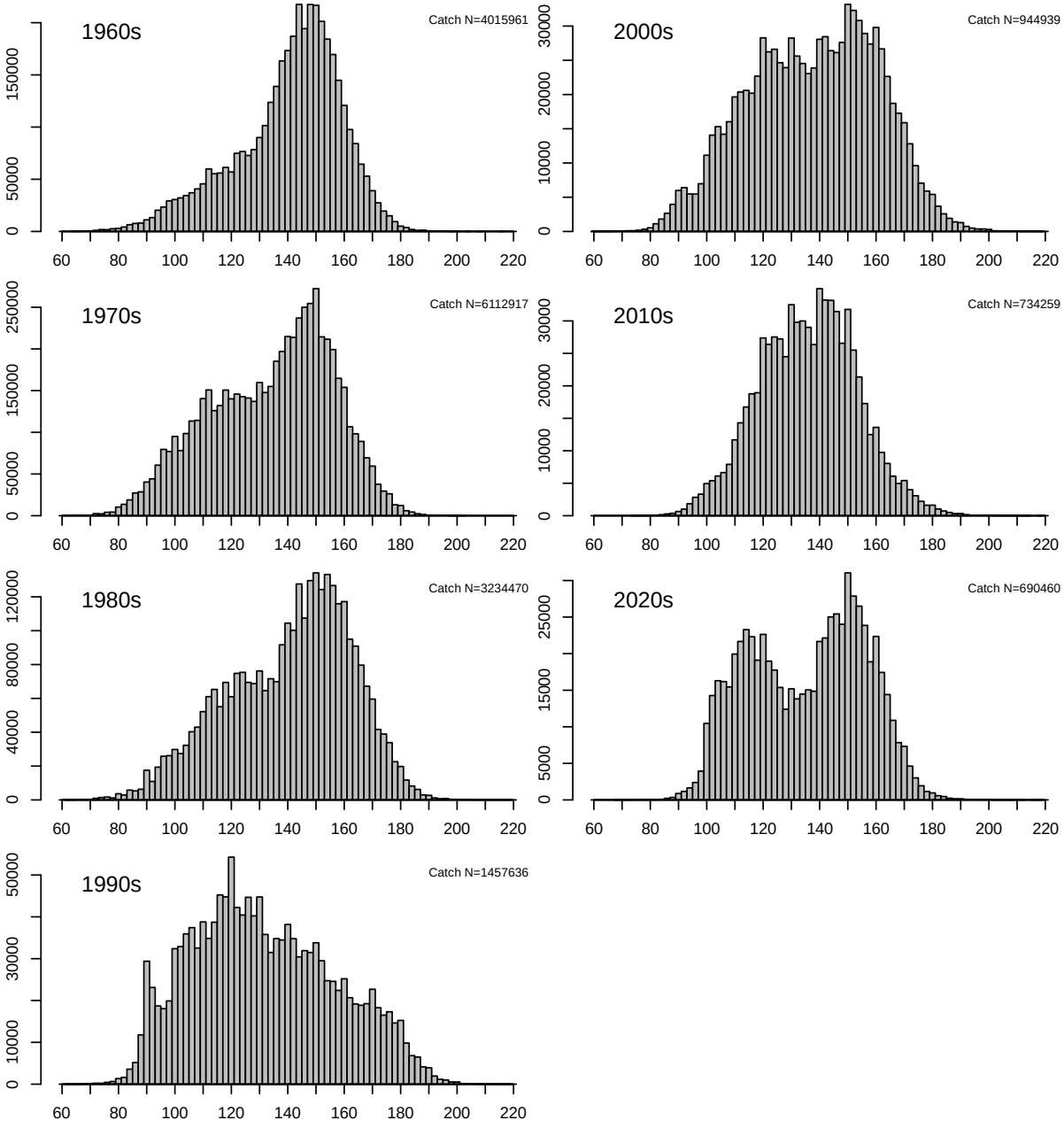


Fig. 1. Length frequency of southern bluefin tuna caught by Japanese longline by decade.

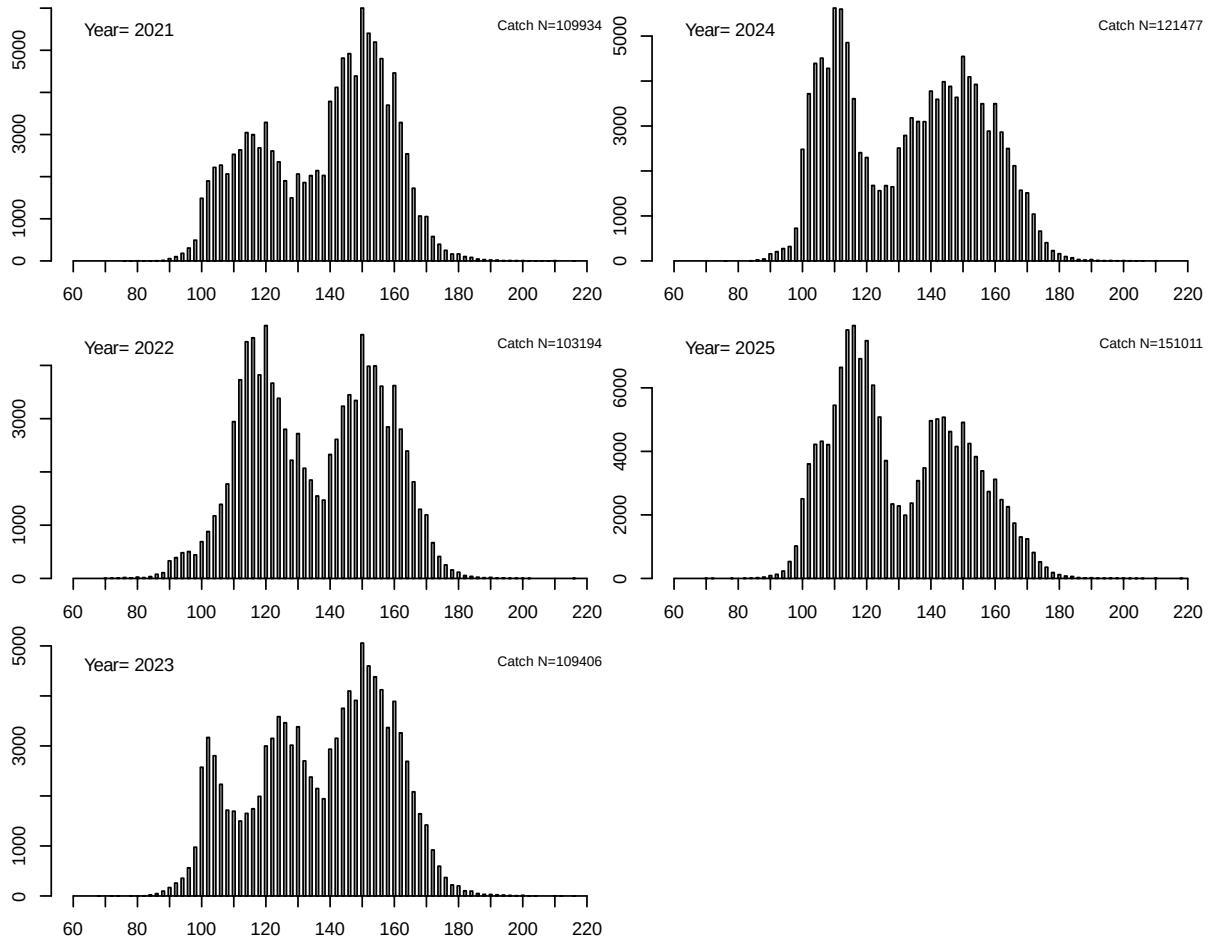


Fig. 2. Length frequency of southern bluefin tuna caught by Japanese longline in each of last five years.

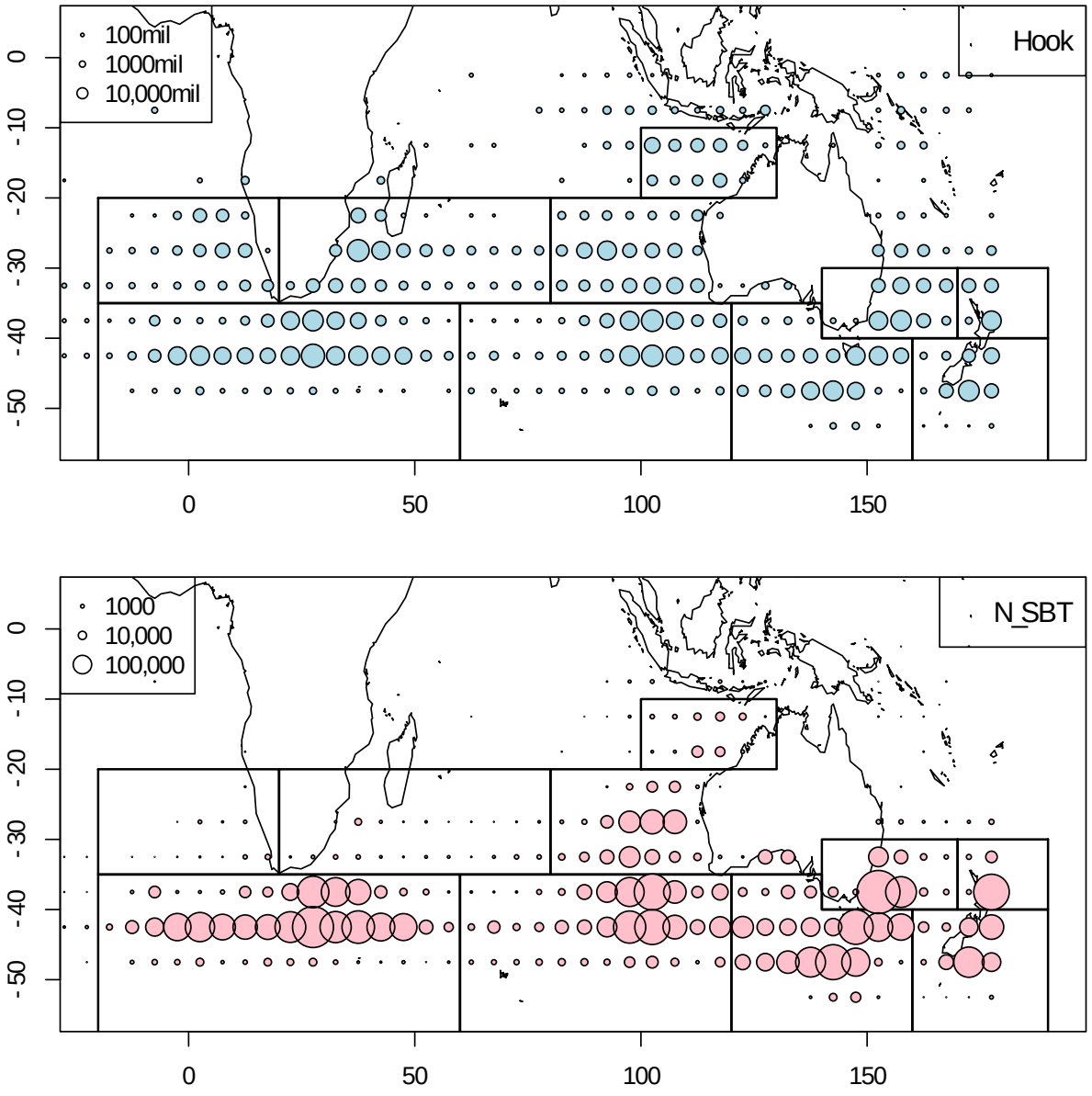


Fig. 3. Distribution of the numbers of hooks used (upper panel) and southern bluefin tuna caught (lower panel) by Japanese longline in all years since 1965.

Lines drawn are boundary of CCSBT statistical area.

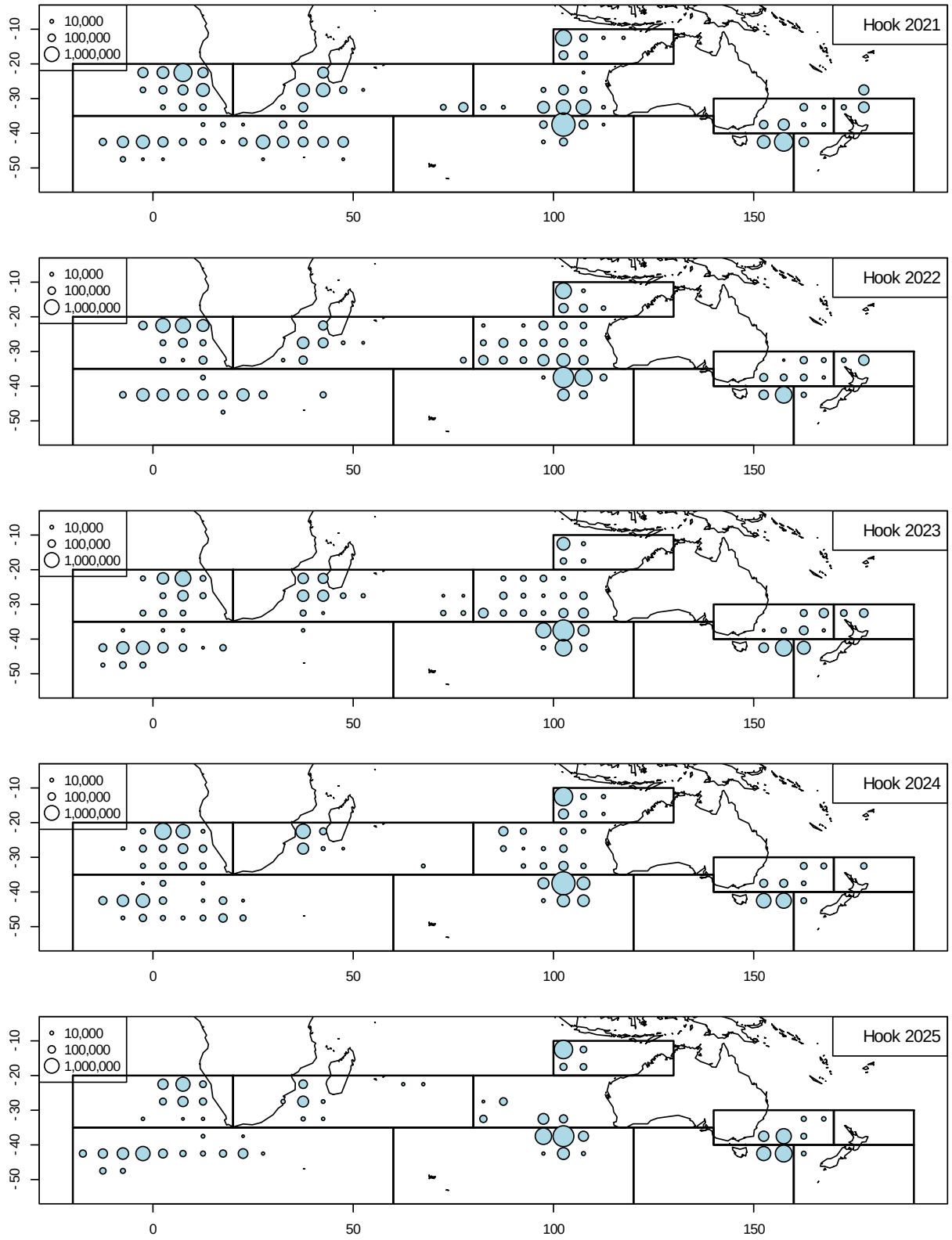


Fig. 4. Distribution of the number of hooks used for southern bluefin tuna by Japanese longline in each of last five years.

Lines drawn are boundary of CCSBT statistical area.

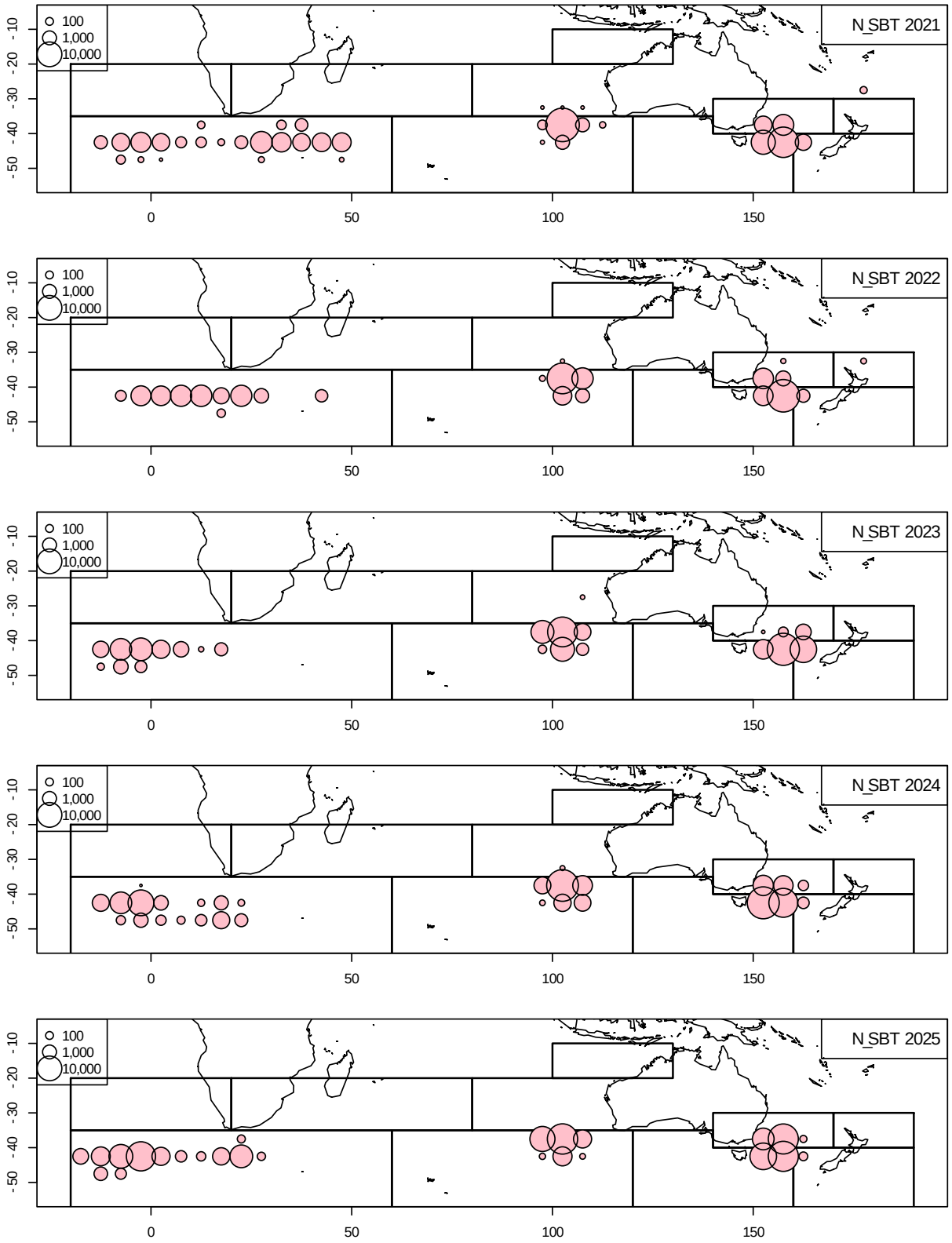


Fig. 5. Distribution of the number of southern bluefin tuna caught by Japanese longline in each of last five years.

Lines drawn are boundary of CCSBT statistical area.

Attachment 1

Report of Japanese scientific observer activities for southern bluefin tuna fishery in 2025

日本のミナミマグロ漁業での科学オブザーバの 2025 年の活動報告

1. 科学オブザーバ活動の概要 Overview of the scientific observer program

みなみまぐろ漁場における日本の科学オブザーバ調査は、1992 年からほぼ同一の調査方法で実施してきた。オブザーバは Table A1 に示すように、ミナミマグロおよび生態関連種の生物調査や、気象・漁具・海鳥混獲回避手段の利用状況等に関する情報を収集する。調査項目には優先順位が付けられており、時間が限られているときには重要な項目だけを調査する。調査項目の優先順位は年により異なる場合がある。オブザーバは、各大洋でミナミマグロを主要な漁獲対象として操業する遠洋延縄漁船からランダムに選定された漁船に派遣される。2006 年以降のミナミマグロ漁業は、漁期規制の撤廃、燃費の高騰、および IQ 制の導入により、各船の操業計画が流動的となっている（CCSBT-ESC/1208/34）。ミナミマグロ漁獲枠を持つ船に一定期間オブザーバを派遣しても、その船の年間を通した操業戦略上の都合により、オブザーバの乗船中にミナミマグロ漁場での操業を行わない場合がある。

オブザーバの派遣人数は、当初は 10～18 名/年であったが、予算上の制約により 2007 年以降のオブザーバ派遣人数は 7 名/年程度に留まってきた。これを改善するため、2010 年以降はインドネシア人調査員を加えてオブザーバを増員した。

Japanese scientific observer program of longline fishery for SBT has been performed systematically in a consistent method since 1992. In this program, scientific observers collect biological data and samples from SBT and ecologically related species during the hauling operations. They also collect information about the fishing operations (e.g., fishing configuration, weather and sea conditions, mitigation measures used to reduce incidental take of seabirds). Table A1 summarizes the research items of the observers. When they are busy and have little time to complete all the research items (because of the severe sea, weather, and/or fishing conditions), observers reduce their research activities in accordance with the established priorities. This priority levels differ depending on the fishing year. Scientific observers were sent to the vessels which were chosen at random from all of authorized Japanese commercial longline vessels targeting SBT in each ocean. Since 2006, annual operational patterns and schedule of Japanese vessels targeting SBT have been possibly affected by introduction of the individual quota (IQ) system, abolishing of the seasonal area closure, and drastic/temporal increase of fuel price (CCSBT-ESC/1208/34). Thus, there are difficulties to deploy the observers for a specific period toward the SBT fishing trips in a timely manner; some vessels with SBT quota do not operate in SBT fishing grounds during the period that observers are on-board because of their fishing strategy.

Japan had regularly deployed 10-18 observers per year in the early period of the program, although the program was forced to reduce the number of observers by budgetary restrictions. In 2007-2009, only seven observers were deployed to the vessel operated in the SBT fishing grounds per year. Since 2010, the number of observers has increased with the employment of Indonesian researchers.

2. 科学オブザーバの訓練 Observer Training

オブザーバは派遣される前に講習会にて訓練を受ける。2025 年にはミナミマグロを含む遠洋延縄操業用の講習会を 4 回開催し、オブザーバ候補者に対し、調査方法、記録方法、および安全確保について講習を行った。講

習では実物の魚を用いて調査方法や生物サンプルの採取方法の実習も行なった。オブザーバは、調査航海終了後に、乗船中の調査活動について報告をした。

Before cruises, scientific observer candidates have to take a training seminar. The training seminars for high sea seas tuna longliners including targeting SBT were held four times in 2025. In the training seminars, the candidates brushed up their knowledge and skills on research methods, recording procedures and safety. It also included practical training using the actual tuna to measure the fish size and to collect the biological samples. After returning from the cruises, observers reported their research activities in the debriefing.

3. 科学オブザーバのデザインとカバー率 Design and coverage

2025 年漁期には 21 航海にオブザーバーを派遣することができた。全てのオブザーバーは過去 5 年間でミナミマグロまたはマグロ類を対象とした延縄操業船での科学オブザーバ活動の実績を有していた。対象調査船における乗船日数は合計 1,747 日であった。旅程を含めた雇用期間は 2,956 日であった。

海域ごと、月ごとの隻数・努力量（釣鈎数）・SBT の漁獲尾数について、全体に占めるカバー率を計算した。比較には、CCSBT へ提出したデータ（隻数、努力量、および漁獲尾数）を用いた。2025 年の 4 海区から 9 海区でのカバー率は、隻数で 35.0%、使用釣鈎数で 34.8%、ミナミマグロ漁獲尾数で 24.8%であった(Table A2)。

オブザーバは、食事の休憩や天候等の要因により操業を観察しない場合がある。2025 年にオブザーバが実際に観察した鈎数の割合は総使用鈎数の 91.5%であった。したがって、オブザーバが実際に観察した延縄努力量に基づくカバー率は、34.8%×91.5%=31.8%と計算された。

We sent observers to 21 cruises for the 2025 fishing season. All of them had experience working as scientific observers on longline fishing vessels targetingSBT or tuna species in the past five years. The total number of days aboard the target research vessels was 1,747. The employment period, including travel, was 2,956 days.

The coverage rate was calculated for the number of vessels, effort (number of hooks), and number of SBT caught by area and month. For comparison, data submitted to the CCSBT (number of vessels, effort, and number of fish caught) were used. The coverage rates in areas 4 to 9 in 2025 were 35.0% for the number of vessels, 34.8% for the number of hooks used, and 24.8% for the number of SBT caught (Table A2).

Observers may not observe fishing operations due to factors such as meal breaks and weather. The proportion of hooks actually observed by observers in 2025 was 91.5% of the total number of hooks used. Therefore, the coverage rate based on the longline effort actually observed was calculated to be 34.8% x 91.5% = 31.8%.

4. 収集データ Observer data collected

4～9 海区において、オブザーバが記録した硬骨魚類、サメ類、海鳥類、その他のリストを Table A3～5 に示す。オブザーバによる生物の種査定の一部については、後日、オブザーバが撮影した写真に基づいて水産資源研究所の専門家が確認している。オブザーバが体長を測定した種別個体数を海域・月別に Table A6 に示す。合計 70,037 個体の魚類の体長を測定し、このうちミナミマグロは 38,811 個体であった。オブザーバは乗船中に、性別を判定した（Table A7）。耳石と筋肉については分析予算の削減、研究グループの規模縮小、過去 20 年以上の分析データが多く蓄積されていることを考慮して採集しなかった。

観察されたミナミマグロの体長組成を海域ごとに Fig. A1 に示す。RTMP による日本延縄船全船によるミナミマグロ全漁獲個体数の体長組成と比較した。オブザーバが観察した体長分布と、全操業船から報告された体長分布とは 4 海区、7 海区、8 海区、9 海区で類似していた。

Tables A3–5 show the lists of teleosts, sharks, seabirds, and other species recorded by observers in Areas 4–9. Some of the species identifications made by observers were later confirmed by experts from the Fisheries Research Institute based on photographs taken by observers. Table A6 shows the number of individuals by species whose body length was measured by observers by area and month. A total of 70,037 fish were measured in length, of which 38,811 were SBT. Observers determined the sex of the fish while on board (Table A7). Otoliths and muscles were not collected due to the reduction in the analytical budget, the downsizing of the research group, and the fact that a large

amount of data had been accumulated over the past 20 years.
The observed length distribution of SBT for each area is shown in Fig. A1. It was compared with the length distribution of all SBT caught by all Japanese longline vessels under the RTMP. The length distribution observed by observers was similar to that reported by all vessels in Area 4, 7, 8 and 9.

5. 標識魚の再捕 Tag return monitoring

2025 年 7 月以降にオブザーバーによる日本のはえ縄漁船からのミナミマグロの標識再捕報告は 7 個体分あった。CCSBT が 3 個体、他機関が 4 個体であった。

Since July 2025, seven conventionally tagged individuals have been reported as recaptured from Japanese longline vessels: three tagged by the CCSBT and four by other organizations.

6. 科学オブザーバ事業の問題点 Problem experienced

日本の延縄漁船はコスト削減のために洋上補給し、ほとんど寄港しないため、一部のオブザーバは対象調査船への配乗時に補給船を利用した洋上転船を行った。しかし、洋上転船には天候次第で大きな危険を伴う等の問題点が指摘されている。

Japanese commercial longline vessels rarely come into ports because of cost-cutting; thus, some observers were forced to transfer from supply vessels to fishing vessels on high seas. Transfer on high seas is risky, and magnitude of risk is depending on the weather conditions.

Reference

Itoh, T. 2012 Change in operation pattern of Japanese SBT longliners in 2011 resulting from the introduction of the individual quota system in 2006. CCSBT-ESC/1208/34

Table A1. Research items of observers in Japanese SBT longline observer program.

Item	Records
Data collection during line setting	– Location (start and end points of line setting) – Time (start and end times of line setting) – Weather and sea condition – Gear configuration – Bait types used – Use of mitigation measures to reduce incidental take of seabirds – Number of seabirds around the vessel
Data and sample collection during line hauling	– Location (start and end points of line hauling) – Time
(for animals caught by longline)	– Body length – Body weight – Life status – Sex – Photographing (especially for seabirds)
(as biological sampling)	– Otolith (for the age estimation of SBT) – Vertebrae (for the age estimation of tagged sharks) – Muscle tissue (for the genetic and isotope research of SBT, other fishes, and the bycatch species including seabirds)
(as tag recapture)	– Tag recovery for SBT, sharks, and others.

Table A2. Observer coverage in Japanese SBT longline observer program in 2025.

Area	Month	Number of vessels			Number of hooks used (x1000)			Number of SBT retained		
		Observed	All vessels	Cover rate	Observed	All vessels	Cover rate	Observed	All vessels	Cover rate
4	3	0	1	0.0%	0	25	0.0%	0	0	0.0%
	4	0	1	0.0%	0	10	0.0%	0	0	0.0%
	5	3	6	50.0%	48	80	59.5%	660	1,435	46.0%
	6	6	18	33.3%	324	1,060	30.5%	4,971	19,466	25.5%
	7	2	8	25.0%	56	285	19.6%	1,176	6,969	16.9%
	8	0	1	0.0%	0	3	0.0%	0	0	0.0%
6	5	0	1	0.0%	0	11	0.0%	0	114	0.0%
	6	0	1	0.0%	0	10	0.0%	0	45	0.0%
7	4	4	11	36.4%	133	327	40.6%	1,312	3,610	36.3%
	5	7	21	33.3%	465	1,506	30.9%	5,849	23,350	25.0%
	6	6	17	35.3%	183	566	32.4%	1,890	8,512	22.2%
8	7	6	18	33.3%	197	584	33.8%	619	2,815	22.0%
	8	9	25	36.0%	714	1,965	36.4%	3,801	15,257	24.9%
	9	9	25	36.0%	790	1,930	40.9%	3,749	13,851	27.1%
	10	8	19	42.1%	509	930	54.7%	2,828	7,661	36.9%
	11	3	3	100.0%	16	16	100.2%	143	179	79.9%
9	2	0	1	0.0%	0	10	0.0%	0	0	0.0%
	3	2	6	33.3%	50	176	28.5%	524	1,657	31.6%
	4	4	13	30.8%	258	901	28.6%	3,367	16,911	19.9%
	5	5	16	31.3%	221	811	27.3%	5,027	21,013	23.9%
	6	2	9	22.2%	78	378	20.6%	1,590	7,743	20.5%
	7	0	2	0.0%	0	44	0.0%	0	403	0.0%
Area 4	Jan-Dec	6	18	33.3%	427	1,464	29.2%	6,807	27,870	24.4%
Area 6	Jan-Dec	0	2	0.0%	0	21	0.0%	0	159	0.0%
Area 7	Jan-Dec	7	21	33.3%	781	2,400	32.6%	9,051	35,472	25.5%
Area 8	Jan-Dec	9	25	36.0%	2,226	5,425	41.0%	11,140	39,763	28.0%
Area 9	Jan-Dec	5	16	31.3%	607	2,320	26.2%	10,508	47,727	22.0%
Area 4-9	Jan-Dec	21	60	35.0%	4,041	11,628	34.8%	37,506	150,991	24.8%

Table A3. Number of teleost fish recorded by the Japanese SBT longline observer program in 2025 in CCSBT statistical area 4-9.

種名	Species	N
ミナミマグロ	*Thunnus maccoyii*	41,690
ビンナガ	*Thunnus alalunga*	12,355
メバチ	*Thunnus obesus*	13
キハダ	*Thunnus albacares*	17
メカジキ	*Xiphias gladius*	344
ガストロ	*Gasterochisma melampus*	4,196
その他魚類	Other teleosts	8,971

Table A4. Number of sharks recorded by the Japanese SBT longline observer program in 2025 in CCSBT statistical area 4-9.

種名	Species	N
ヨシキリザメ	*Prionace glauca*	14,583
アオザメ	*Isurus oxyrinchus*	81
ニシネズミザメ	*Lamna nasus*	2,061
その他	Other elasmobranches	222

Table A5. Number of seabirds and the other animals recorded by the Japanese SBT longline observer program in 2025 in CCSBT statistical area 4-9.

種名	Species	N
大型アホウドリ類	Large albatrosses	10
暗色アホウドリ類	Dark colored albatrosses	19
その他のアホウドリ類	Mollymawks and other albatrosses	129
ミズナギドリ類	Giant petrels	69
鰭脚類	*Pinnipedia*	13
ハクジラ類	*Odontoceti*	1

Table A6. Number of individuals its length measured under the Japanese SBT longline observer program in 2025.

Area	Month	SBT	ALB	BET	YFT	SWO	BUK	other	Sharks	Total
4	5	673	387	2	2	19		193	63	1,339
	6	5,151	2,914	5	13	101	11	816	308	9,319
	7	1,200	381	5	1	18		108	9	1,722
7	4	1,423	2,104			19	10	199	205	3,960
	5	6,100	5,302	1	1	115	23	866	652	13,060
	6	2,016	978			61	14	330	551	3,950
8	7	703	7				360	98	800	1,968
	8	4,416	17			3	938	561	2,355	8,290
	9	4,204	4			1	554	618	834	6,215
	10	3,174					390	253	811	4,628
	11	147					10	1	14	172
9	3	527					109	108	170	914
	4	3,374	6				704	796	618	5,498
	5	5,087	13				718	648	540	7,006
	6	1,616	4				282	27	67	1,996
4		7,024	3,682	12	16	138	11	1,117	380	12,380
7		9,539	8,384	1	1	195	47	1,395	1,408	20,970
8		12,644	28			4	2,252	1,531	4,814	21,273
9		10,604	23				1,813	1,579	1,395	15,414
Total	Total	39,811	12,117	13	17	337	4,123	5,622	7,997	70,037

Species code is shown in Table A7.

Table A7. Number of individuals its biological samples collected and sex identified in the Japanese SBT longline observer program in 2025.

種名	Species code	Species	Otolith	Muscle	Sex
ミナミマグロ	SBT	Southern bluefin tuna			37,677
ビンナガ	ALB	Albacore			203
メバチ	BET	Bigeye tuna			13
キハダ	YFT	Yellowfin tuna			17
メカジキ	SWO	Swordfish			302
ガストロ	BUK	Butterfly kingfish			3,749
その他魚類	other	Other teleosts			1,654
サメ類	Sharks	Elasmobranches			12,146

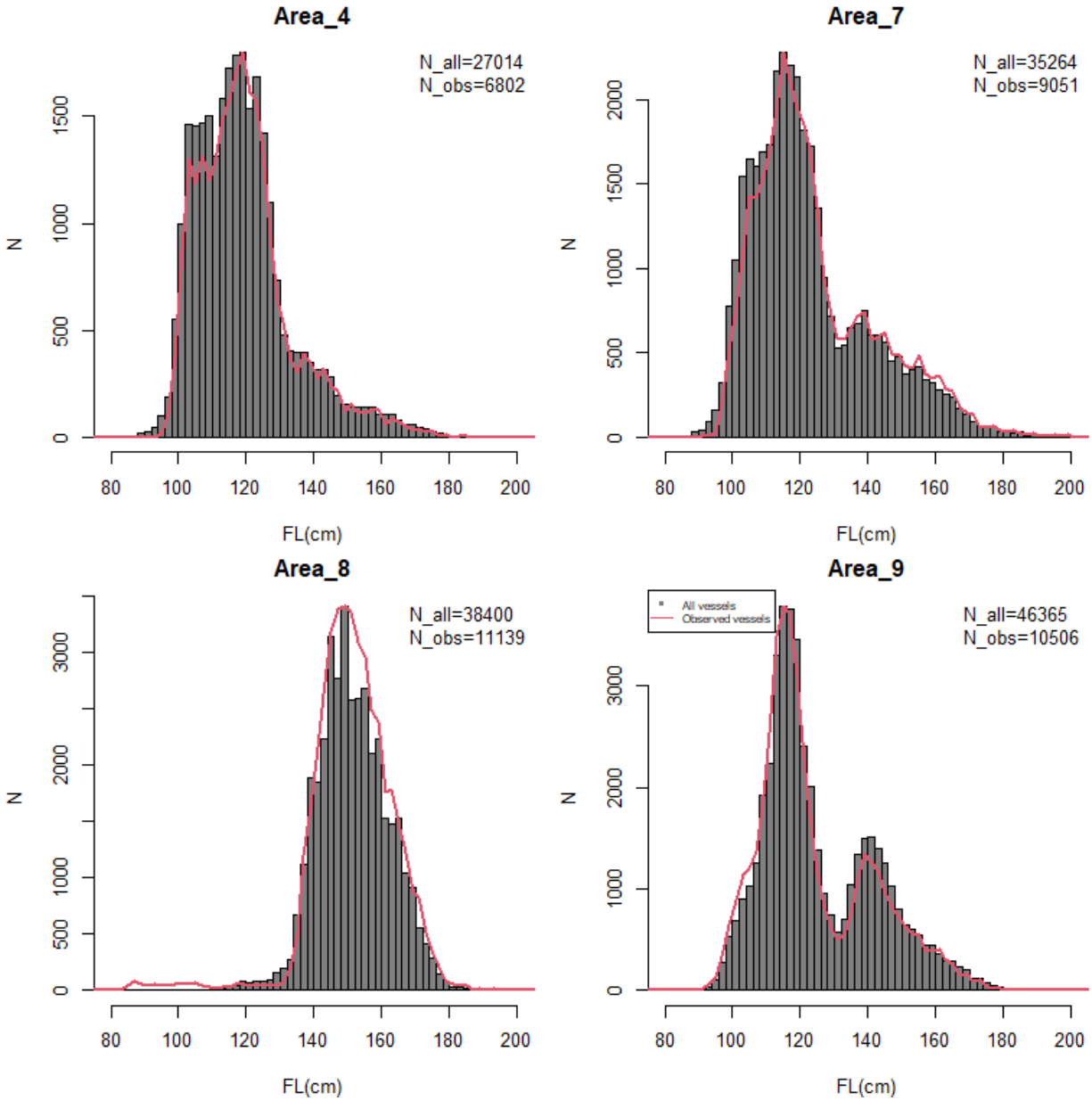


Fig. A1. Length frequency distributions of southern bluefin tuna retained by area in the Japanese SBT longline obtained by the observer program and all vessels in 2025.
Bars are from data in all vessels, red lines are from observed data.