

Japan's Report on the Assessment of Implementation of National Action Plan to Reduce Incidental Catch of Seabirds in Longline Fisheries

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Introduction

At the 23rd meeting of the Committee on Fisheries of the United Nations Food and Agriculture Organization (FAO COFI) in February 1999, the International Plan of Action to Reduce Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds, hereinafter referred to as "IPOA") was adopted. In response to the IPOA, Japan developed its National Plan of Action (NPOA-Seabirds) after considerations and deliberations at a committee in Japan and discussions in the national government and reported it to the 24th FAO COFI in March 2001. Further, in line with the introduction of conservation and management measures of seabirds at tuna Regional Fisheries Management Organizations (RFMOs), Japan revised its NPOA-Seabirds to comply with those conservation and management measures in 2005, 2009 and 2016.

In addition to fisheries management measures, Japan has been promoting a holistic approach for the conservation of seabirds inhabiting the areas around Japan, including preservation and improvement of the breeding grounds. Under the NPOA-Seabirds, Japan amends its domestic legislations with respect to tuna longline fishing vessels to obligate to comply with management measures, each time a RFMO introduces new management measure regarding mitigation of incidental catch of seabirds. Further, Japan promotes introduction of management measures to reduce incidental catch of seabirds, which are compatible with unique situation in each region and biological characteristics of each species, while minimizing burden on fishers and securing their safety. For this purpose, in the Southern Hemisphere, Japan has been evaluating effectiveness of new mitigation measures to reduce incidental catch of seabirds, improving the mitigation measures, and promoting introduction of the gears.

In the North Pacific, Japan has contributed to establishing a framework at RFMOs that would be compatible with fishing activities and conservation of seabirds.

This document reports to FAO on the progress of the implementation of Japan's NPOA-Seabirds, based on paragraph 21 of IPOA.

1. Current status and management of fisheries subjected to NPOA-Seabirds

(1) Distant-water tuna longline fishery

The distant-water tuna longline fishery operates with a large fishing vessel of 120 gross tons or over. It is managed by the national government on a vessel-to-vessel basis. Its major operation areas are high seas in the Pacific Ocean, the Indian Ocean, and the Atlantic Ocean. The number of the distant-water tuna longline fishing vessels has decreased largely as it is comprised of 187 vessels in 2020 which decreased by 150 from 2010.

(2) Offshore tuna longline fishery

The offshore tuna longline fishery operates with a fishing vessel which size is from 10 gross tons to 120 gross tons, excluding coastal tuna longline fishery described in (3). It is managed by the national government on a vessel-to-vessel basis. It operates in offshore areas in Japan and the Western and Central Pacific Ocean. The number of the offshore longline fishing vessels has been decreasing year by year as it is comprised of 253 vessels in 2020 which is 84 less than 2010.

(3) Coastal tuna longline fishery

The coastal tuna longline fishery operates with a fishing vessel which size is from 10 gross tons to 20 gross tons. It operates in the Exclusive Economic Zone (EEZ) of Japan. It is managed by the national government on a vessel-to-vessel basis. The number of the coastal tuna longline fishing vessels has been slightly decreasing in recent years as it is comprised of 315 vessels in 2020 which is 54 less than 2010.

Since these longline fisheries are managed by the national government, fishing licenses of the distant-water tuna longline fishery, the offshore tuna longline fishery, and the coastal tuna longline fishery shall be obtained from the Minister of Agriculture, Forestry and Fisheries pursuant to the national law. Under the license system, the Minister decides on the total number of licensed fishing vessels, operation conditions, and other conditions taking into account the stock status of the resources and other matters. This process is reviewed every five years. In recent years, the number of licensed longline vessels has not been increased at all due to the large reduction of the number of fishing vessels which complies with FAO's International Plan of Action for the Management of Fishing Capacity and resolutions by RFMOs such as cutbacks in fishing quotas. NPOA-Seabirds does not cover other longline fisheries managed by prefectural governors, which operate with a small vessel in coastal areas since there is little or no incidental catch of seabirds in these fisheries due to their actual fishing conditions.

2. Current status of management measures for the reduction of incidental catch of seabirds

Tuna longline fisheries managed by the national government are ensured to comply with management measures for the reduction of incidental catch of seabirds adopted by RFMOs in each region under the license conditions or limitation based on the Fisheries Act. In addition, the national government informs the management measures and provides guidance to fishers on a regular basis to implement those measures.

(a). The area under jurisdiction of the Western and Central Pacific Fisheries Commission (WCPFC)

(1) In case that a longline vessel, which size is over 24 meters, operates in the area north of 23 degrees North, at least two of the following mitigation measures shall be used, including at least one fishing gear from (i)-(iv) as bycatch mitigation measures. When (i) or (v) is used, or two of (iii) are installed on both sides of the main fishing line, it is deemed that two types of mitigation measures are used.

- (i) Side setting with a bird curtain and weighted branch lines
- (ii) Night setting with minimum deck lighting
- (iii) Tori lines (bird-scaring lines) (long streamer and short streamer)
- (iv) Weighted branch lines
- (v) Hook-shielding devices
- (vi) Blue-dyed bait
- (vii) Deep setting line shooter
- (viii) Management of offal discharge

(2) In case that a small-scale longline vessel, which size is less than 24 meters, operates in the area north of 23 degrees North, at least one of the mitigation measures shall be used from (i)-(v) as a bycatch mitigation measure.

- (i) Side setting with a bird curtain and weighted branch lines
- (ii) Night setting with minimum deck lighting
- (iii) Tori lines
- (iv) Weighted branch lines
- (v) Hook-shielding devices

(3) In case that a longline vessel operates in the area 25 degrees South - 30 degrees South, at least one of the following mitigation measures shall be used from (i)-(iii) as a bycatch mitigation measure.

- (i) Weighted branch lines

- (ii) Tori lines
- (iii) Hook-shielding devices

(4) In case that a longline vessel operates in the area south of 30 degrees South, at least two of the following mitigation measures shall be used as bycatch mitigation measures. When (iv) is used, it is deemed that two types of mitigation measures are used.

- (i) Weighted branch lines
- (ii) Night setting
- (iii) Tori lines
- (iv) Hook-shielding devices

(b). The area under jurisdiction of the Inter-American Tropical Tuna Commission (IATTC)

In case that a longline vessel operates in the area surrounded by the lines linking the following 6 points; a coastal point of 2 degrees North, 2 degrees North - 95 degrees West, 15 degrees South - 95 degrees West, 15 degrees South - 85 degrees West, 30 degrees South - 85 degrees West, and a coastal point of 30 degrees South, in addition to the area north of 23 degrees North (except the area of Mexican EEZ) and south of 30 degrees South, at least two of following mitigation measures from (i) to (viii) and at least one of (i)-(iv) shall be used as bycatch mitigation measures. When (i) is used or two of (iii) are installed on both sides of the main fishingline, it is deemed that two types of mitigation measures are used.

- (i) Side setting with bird curtains and weighted branch lines
- (ii) Night setting with minimum deck lighting
- (iii) Tori lines
- (iv) Weighted branch lines
- (v) Blue-dyed bait
- (vi) Deep-setting line shooter
- (vii) Under-water setting chute
- (viii) Management of offal discharge

(c). The area of Competence of the Indian Ocean Tuna Commission (IOTC)

In case that a longline vessel operates in the area south of 25 degrees South latitude, at least two mitigation measures from among tori lines, line weighting and night setting shall be used.

(d). The area under jurisdiction of the International Commission for the

Conservation of Atlantic Tunas (ICCAT)

In case that a longline vessel operates in the area south of 20 degrees South and the area north of 25 degrees South, tori lines shall be used as a bycatch mitigation measure. In case that a longline vessel operates in the area south of 25 degrees South, two mitigation measures from among tori lines, weighted branch lines and night setting shall be used as bycatch mitigation measures.

(e). Longline fishery targeting southern bluefin tuna (CCSBT)

In case that a longline vessel targeting for southern bluefin tuna operates in an area of competence of WCPFC, IOTC or ICCAT, it is obliged to comply with management measures for the reduction of bycatch seabirds described at (a), (c) and (d) respectively. When fishing outside areas of competence of WCPFC, IOTC and ICCAT, the vessel shall use Tri lines in the area south of 30 degrees South latitude.

3. Implementation of guidance, promotion, and educational activities

(1) Development of educational and promotional materials

Longline fisheries industries distribute educational materials to fishers under the assistance and cooperation from the national government and scientists. The purpose of the development of educational and promotional materials is to disseminate the importance of accurate reporting of incidental catch of seabirds, the methods to avoid incidental catch, and the appropriate handling of individuals that are captured alive.

The materials that were developed and distributed so far are:

- Identification sheets titled "Albatrosses and Giant Petrels observed in the Southern Ocean" and "Large seabirds observed in the North Pacific", which purpose are to identify species that are caught incidentally;
- Guidebook titled "Guide to identifying pelagic species caught by tuna longline fisheries";
- Pamphlet titled "Longline fisheries aimed at coexistence with seabirds", which shows the methods to avoid incidental catch of seabirds and appropriate handling of seabirds that are captured alive;
- Guidebook titled "Practical guides for fisheries friendly to the marine environment (seabirds, sharks, and turtles)", which includes summary on NPOA-Seabirds, sharks, and turtles;
- Cartoons titled "For the future of tuna fisheries and seabirds", which outlined the whole issue in an easy-to-understand way;
- "Easy-to-understand methods for avoiding incidental catch", which illustrates

the conservation and management measures for seabirds in each RFMO in an easily understandable manner.

- “Albatross Species Identification Sheet”, for scientific observers onboard fishing vessels and control officers onboard government vessels.
- “Seabird Bycatch ID Guide”, which helps identification of bycatch species on a global scale. This guidebook was jointly developed by Agreement on the Conservation of Albatrosses and Petrels (ACAP) and the National Research Institute of Far Seas Fisheries.

Some of these materials are used as manuals for surveys by research vessels and scientific observers, which contribute to collecting accurate scientific data.



Fig.1 Educational and promotional materials

(2) Educational activities for fishers

Regional fisheries organizations in Japan have held seminars for fishers both overseas (Cape Town, South Africa) and in Japan (Shimizu, Kesenuma and Kagoshima) in collaboration with the Fisheries Agency of Japan, Global Gaudian Trust, the National Research Institute of Far Seas Fisheries of Japan, and Dr. Ed Melvin (University of Washington). They explain NPOA-Seabirds, provide opportunities for exchange of views with fishers regarding introduction and improvement of the methods to release seabirds and to avoid incidental catch of seabirds, and educate fishers by distributing educational materials described in (1).

(3) Training program for scientific observers

Japan Observer Program educates and trains scientific observers who are onboard Japanese fishing vessels to acquire professional knowledge, techniques, and expertise that are necessary for the implementation of research. At the training program, the contents of the guidance have been extended in accordance with the level required by RFMOs, including seabird bycatch avoidance measures, identification of seabird species, and collection of biological data.

4. Research and development of the management measures for the reduction of incidental catch of seabirds

Many Japanese tuna longline fishers have continued to develop techniques to effectively reduce incidental catch of seabirds through their commercial fishing practices for years. Consequently, tori-line and double weighted branch line were developed by the fishers as bycatch mitigation devices for seabirds. Thus, it is very important to closely communicate with fishers who know actual situations of incidental catch of seabirds. It is also essential to provide scientific evidence that proves the effectiveness of the bycatch mitigation devices developed through collaboration with the fishers. In addition, educational and promotional activities for the fishers are vital. In recent years, Japan has conducted much research on bycatch mitigation techniques in collaboration with foreign experts and related NGOs for the purpose of establishing the universally effective and world standard techniques.

Japan has conducted a series of research and development as described in (1) – (5) below pursuant to NPOA-Seabirds under the following goals:

- 1) Taking actions of further reduction of seabird bycatch and recovery of seabird populations;
- 2) Taking initiatives to promote these actions internationally;
- 3) Establishment of the effective bycatch mitigation measures in each tuna RFMO which fit to characteristics of fisheries operated in various regions and ecosystems.

(1) Tori-line

Tori-line can reduce the bycatch rate of seabirds by one third in average although the effectiveness of bycatch reduction may differ from species, its populations, and/or the types of tori line (Brothers 1991). There are currently four types of tori line applied to tuna longline fishing vessels: long streamer tori-line which mainly applies to distant-water tuna longline fishing vessels, short streamer tori-line which mainly applies to offshore tuna longline fishing vessels, hybrid tori-line

which consists of short and long streamers, and ultra-lightweight tori line without streamer which applies to offshore tuna longline fishing vessels of less than 19 tons or less.

Sato et al. (2012) reveal that long and short streamer of tori-line have the same effect on the albatross bycatch reduction because there is no difference in its bycatch ratio between them in the North Pacific. Furthermore, small fishing vessels cannot use the same sturdy poles as large vessels. To address this issue, an ultra-lightweight tori line without streamers has been developed specifically for small vessels. During test operations in the North Pacific on vessels less than 20 gross tons, this tori line demonstrated sufficient effectiveness in avoiding seabird bycatch without hindering fishing operations (Katsumata et al. 2015; Ochi 2022, 2023).

(2) Weighted branch line

By using weights or lead-core cords to make branch lines heavier, baited hooks sink faster, reducing the opportunity for seabirds to access baited hooks underwater and thus mitigating bycatch. Weighted branch lines have some effectiveness in reducing the bycatch of albatrosses, which have low diving abilities. However, when combined with other mitigation methods, weighted branch lines are expected to be highly effective in reducing the bycatch of seabirds with high diving abilities, such as petrels. A disadvantage is the safety issue for crew members. There have been several reports of crew members being seriously injured by weights violently hitting them when retrieving branch lines after hooks have detached from the catch during hauling. Therefore, the weight specifications must be appropriate, considering both safety and bycatch mitigation performance. Additionally, branch lines with weights attached to both ends of a wire about 1 m long (double-weighted branch lines; Melvin et al. 2014) have been developed and used through a collaboration between Japanese fishermen, researchers, and researchers from the University of Washington to enhance safety. In recent years, weighted branch lines with weights attached to light-emitting devices have been developed. Their effectiveness has been verified on tuna longline fishing vessels, and the results show that they achieve bycatch reduction comparable to conventional weights (Ochi et al. 2017), leading to their increased use.

(3) Night setting

Casting hooks during dark hours at night, which is called “night setting”, is one of the effective methods to reduce seabird bycatch because most of albatross species forage visually during daytime. It works very effectively when fishers keep the

deck lights minimum and do not illuminate the sea surface. Inoue et al. (2017) reveal that the bycatch rate of seabirds is estimated to be adequately low when hooks casted at night before nautical dawn, whereas the bycatch rate is increased from nautical dawn to time several-hours later after sunrise. Inoue et al. (2017) showed that the bycatch reduction effect of the night setting is high even though the time period of high bycatch rate is different from bird species and some of the bycatch rates of species are high even in the nighttime, in particular a full moon night and right before and after the full moon night. However, there are some problems on the night setting. In addition to overwork schedules and dangers of line casting, the effectiveness is reduced by moonlight. It is also said that the deterioration of the quality of fish due to the exposure of the high temperature on the deck since fishers have to haul their lines in the daytime. The night setting may require some adjustments of schedule on longline operations and minimization of risks for crews during settings. Especially when operating in high-latitude areas during the summer, the duration of nighttime becomes extremely short. In such cases, there is a high possibility that the requirements for night setting cannot be met during the course of the operation. Therefore, it is necessary to implement additional bycatch avoidance measures after nautical twilight.

(4) Hook-shielding device

A hook-shielding device is a seabird bycatch mitigation device which prevents seabirds from being hooked and/or drowning during line-setting operations using a polycarbonate capsule that encases the point and barb of baited pelagic longline hooks until a certain depth after casting the hooks. One of the hook-shielding devices is Hookpod, which was developed in a foreign country. Trials of hook-shielding devices including Hookpod have been conducted in some countries such as South Africa, Brazil, and Australia to assess its efficacy (i.e. reducing bycatch rate of seabirds without impacting the catch rate of target fish) and practicality of the devices (Sullivan et al. 2017). In WCPFC, hook-shielding devices have been added to a standalone option as a bycatch mitigation measure since 2018. The use of Hookpods in Japan has not progressed much due to two main factors. First, the Japanese-style fishing method, which involves coiling longer branch lines and stacking them in baskets for storage, does not work as well with Hookpods compared to the Western-style fishing method. Second, the cost of using Hookpods is high (approximately 10 dollars per unit).

(5) Other bycatch mitigation measures

Inoue et al. (2016) reveal that the combination of tori-line and night setting or

tori-line and weighted branch line has a greater positive effect on seabird bycatch reduction than the introduction of a single technique described in (1)-(4).

Kiyota and Yokota (2010) provided a comprehensive review on various bycatch mitigation measures for seabirds such as tori-line, night setting, weighted branch lines, and hook-shielding devices. There are some supplemental techniques, which would contribute a further positive effect on seabird bycatch mitigation measures, such as blue-dyed bait, side setting, underwater setting, and offal management. However, the conditions under which these techniques would be used may depend on vessel size, fishing area, etc.

Frequencies of incidental catch of seabirds depend on fishing areas, oceanic condition, population size, and species. The secondary attack is a major issue in some parts of the southern hemisphere. It occurs when albatrosses forage sunken baits that deep-diving seabirds such as white-chinned petrels raise up to the surface. Combination of bycatch mitigation measures such as tori-line, weighted branch line, and night setting can contribute to the reduction of bycatch effectively, in particular areas where many seabird species inhabit. On the other hand, tori-line itself can reduce seabird bycatch effectively in the areas where tuna longline fisheries operate in Northwest Pacific because there are very few deep-diving seabird species. Consequently, it is necessary to choose appropriate bycatch mitigation measures based on seabird community and fishing conditions in each area since frequencies of incidental catch of seabirds depend on fishing areas, oceanic condition, population size, and species.

5. Improvement of nesting grounds and breeding population of short-tailed albatross

Short-tailed albatross had been forming large colonies and breeding in some western Pacific islands such as Torishima Island of the Izu Islands, the Ogasawara Islands, the Daito Islands, the Senkaku Islands, and islands near Taiwan. Since the middle of the Meiji Period (1868-1912), the albatrosses became a subject to overexploitation for the purpose of collecting down feathers which had high demand outside of Japan. The species was reported to have become extinct in 1949, but the presence of about 10 birds was rediscovered in Torishima Island in 1951.

The national government, Tokyo Metropolitan Government, Dr. Hiroshi Hasegawa (Toho University), and Yamashina Institute for Ornithology have conducted conservation projects such as the improvement of breeding environment and the creation of new breeding grounds in Torishima Island since early 1960s.

Further, in order to avoid the risk of its population reduction due to the volcanic eruption and infectious disease in Torishima Island, from 2008 to 2012, the

Yamashina Institute for Ornithology, the Ministry of the Environment of Japan, and the U.S. Fish and Wildlife Service transplanted a total of 70 short-tailed albatross chicks about 30 days old from Torishima to Mukojima Island of the Mukojima Islands. They were artificially reared until they fledged. (Deguchi et al. 2014).

Returns of 27 birds have been confirmed by 2016. A pair have started to breed from 2012. In 2016, the birth of chick was confirmed for the first time (Deguchi et al. 2017). As of 2022-23 breeding season, nine chicks have fledged from Mukojima Island (Yamashina Institute for Ornithology, unpublished). In 2013 and 2014, a hand-reared individual that paired with a naturally reared individual laid eggs in Nakoudojima Island, 5 km south of Mukojima Island. In 2016, presence of a short-tailed albatross chick was confirmed on Yomejima Island, 20 km south of Mukojima Island. These facts show that the conservation programs have been advancing steadily (Deguchi et al. 2017).

Tokyo Metropolitan Government and Hachijo Town local government exterminated feral goats in Hachijo-kojima from 2001 to 2007 (Natural History Research Association of the Izu Islands 2020). In April 2013, around 30 black-footed albatrosses were observed showing breeding behaviors in Hachijo-kojima where the breeding had never been recorded.

In the breeding season from the autumn of 2013 to the spring of 2014, three pairs laid eggs (one each). In the autumn of 2015, breeding started again and the numbers of breeding pairs, eggs, hatchlings and fledglings increased. In the breeding season from the autumn of 2017 to the spring of 2018, 62 adults, 12 pairs laid eggs, and seven chicks were confirmed. A sign of possible breeding was observed in Aogashima, another island of the Izu Islands (Mori et al. 2019).

A few fishing vessels including offshore and coastal tuna longline fishing vessels operate in the area within 20 nautical miles from the Torishima Island, the main breeding ground of short-tailed albatrosses. At present, the national government ensures the implementation of the incidental catch reduction measures of seabirds in WCPFC through the license conditions and/or its limitations to all fishing vessels managed by the national government.

6. Current status of data collection and monitoring

(1) Monitoring of the incidental catch of seabirds in fisheries

The national government implements the scientific observer program to monitor the incidental catch of seabirds on tuna longline fisheries managed by the national government. The national government also requests other longline fisheries managed by prefectural government to provide information on incidental catch of

seabirds.

(2) Data collection of seabird ecology and population

① Survey on pelagic distribution of albatrosses

At-sea line census surveys on seabirds have been conducted with research vessels to clarify the distribution and temporal changes of albatrosses around Japan. Albatrosses are found in the waters around Japan from late autumn to late spring (Minami et al. 2000). The results of the survey show that many Laysan albatross and black-footed albatross appeared in the area where the Kuroshio and Oyashio currents mix off Tohoku region in the Pacific from late winter to late spring (Nishizawa et al. 2015). The results also show that seamounts where trawling and longline fishing occur are important habitats for seabirds too (Nishizawa et al. 2015). Furthermore, the results reveal that short-tailed albatross is observed frequently in the area around Torishima Island, and in the shelf edge and continental slope area of the Oyashio-Kuroshio transition zone (Kiyota and Minami 2008).

The distribution of albatrosses has also been investigated by satellite transmitters which are directly attached to individual albatross. The result of the satellite tracking of short-tailed albatross shows that this species migrates from the Torishima Island to the Bering Sea and the Gulf of Alaska via the area off Kuril Islands and Aleutian Islands along the Pacific coast of Japan after breeding (Orben et al. 2018). The result also shows that their main feeding areas are the shelf edge areas of the Alaskan waters, and some of albatross' feeding locations are Sea of Okhotsk and off Baja California Peninsula (Orben et al. 2018). Tracking surveys for the black-footed albatrosses that breed on Torishima are also underway, using satellite transmitters attached to the birds.

② Research on feeding ecology

Albatrosses and petrels, which interact with tuna longline fisheries, have two different methods for feeding: scavenging and live capturing. Dependency on each feeding habits differs among species (Croxall and Prince 1994). Knowledge on feeding habits of seabirds helps to estimate the susceptibility of seabird species to fisheries. Thus, stomach content and stable isotope analyses of seabirds which were caught incidentally, together with fish and other marine species, have been conducted to collect information on their trophic levels in the food web and feeding characteristics. The results of the stable isotope analysis show that there are three types of feeding ecology of procellariiforms in the Southern Ocean ecosystem: (1) large and middle-sized albatross feeding on prey species in the higher trophic

levels; (2) petrels feeding on both higher and lower trophic level prey; and (3) albatross and petrels that have extensive feeding ranges and forage prey species distributing over the Antarctic and Sub-Antarctic ecosystems. Generally, seabirds in high trophic have higher possibility to interact with fisheries since they have scavenging feeding habit. In the North Pacific, on the other hand, the results of the examination of the contents in digestive tracts reveal that Laysan albatross and black-footed albatross feed on cephalopods such as histioteuthidae, gonatidae, and *histioteutis hoylei*, and Laysaan albatross feeds on anchovy and lantern fish in addition to cephalopods (Nakatsuka et al. 2021). Furthermore, stable isotope analysis revealed that both the Laysan albatross and the black-footed albatross utilize fishery discards as a food resource to a certain extent. The analysis also showed that the black-footed albatross has a relatively higher dependence on these discards (Inoue et al. 2023).

③ Research on classification of seabirds

Kiyota and Minami (2000) developed a species identification method for albatross species using the color of beaks and external morphology. “Albatross Species Identification Sheet” which was developed based on this method have been distributed to onboard scientific observers and crews in research and training vessels (See 3 (3) above for more details). It has also been distributed to fishers for the purpose of improving the precision of information reported from commercial fishing vessels. Further, ACAP and the National Research Institute of Far Seas Fisheries developed a more detailed species identification guide based on “Albatross Species Identification Sheet”, which fits the revised classification system of albatross species (albatrosses are classified from 14 to 21 species), and species subjected to incidental catch on a global scale (Beck et al. 2013). Furthermore, species identification method by DNA analysis has also been developed (Inoue et al. 2015c).

④ Trends of albatross populations around Japan

Three albatross species are distributed around Japan. The short-tailed albatross was thought to be on the brink of extinction in 1949, but the number of individuals steadily has been recovered because of the conservation and management of nesting sites in Torishima Island of the Izu Islands. 1,574 pairs bred in 2023-24 breeding season, and the population size is estimated to have recovered to more than 8,600 individuals. In the Senkaku Islands, no regular survey has been conducted, but 33 chicks were confirmed in 2002 survey and 60 pairs and a total of 300 to 350 individuals were estimated to be present in 2014 (Ministry of the

Environment 2014). The current numbers of pairs and individuals are unknown.

The estimated number of breeding pairs of black-footed albatross are about 3,500 in Torishima Island and about 1,000 in the Mukojima Islands of the Ogasawara Islands. At least 42 pairs were nesting in 2002 in the Senkaku Islands (Hasegawa, Ogasawara Branch Office of Tokyo Metropolitan Government, unpublished). In addition, breeding has also been confirmed in Hachijo-kojima of the Izu islands since 2014 (Mori et al. 2019, Natural History Research Association of the Izu Islands 2020) .

There are a small breeding population composed of 20-30 pairs of Laysan albatross in Mukojima and its nearby islands of the Ogasawara Islands. The population size has been relatively constant in recent years.

7. Status of promoting international cooperation

(1) Japan's basic position

Japan commits to continue to promote multilateral cooperation among fishing nations in FAO, RFMOs including the WCPFC, CCSBT, ICCAT, and other appropriate fora, with a view to advance the "reduction of incidental catch of seabirds by longline fisheries" which is the goal of FAO IPOA.

(2) Cooperation with FAO

In FAO, Japan had played the central role in the development of IPOA. As soon as IPOA was adopted at the 23rd FAO COFI in 1999, Japan developed NPOA-Seabirds and reported it at the 24th FAO COFI.

For the effective implementation of IPOA, it is crucial, first and foremost, that each country takes concerted steps in developing and implement their own NPOA. To date, however, the majority of nations have not developed their NPOA yet. For this reason, Japan has been calling member nations to develop their NPOA on such occasions of FAO COFI and other fora.

Japan has also cooperated positively in the implementation of IPOA mainly for the supports of establishing NPOA in developing countries through Japanese Trust Fund at FAO and the contribution of human resources.

(3) Cooperation with RFMOs and related fishing countries

Japan, as a responsible fishing nation, is a member country to RFMOs. Japan has been contributing actively both to the management and research on major target species such as tunas and tuna-like species. Japan have also been fulfilling a leading role in the research on ecology and stock assessment of non-target species including seabirds as well as the development of bycatch mitigation techniques.

Japan has been engaging in various types of cooperation on the conservation of seabirds in RFMOs, including the WCPFC Scientific Committee, Ecologically Related Species Working Group (ERSWG) of CCSBT, the Scientific Committee on Research and Statistics (SCRS) of ICCAT, the Working Party on Ecosystems and Bycatch of IOTC, the Bycatch Working Group of IATTC, and the Scientific Committee of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Japan will continue cooperation with these RFMOs and member states. (Documents submitted to these RFMOs in 2018 and 2019 are per Attachment 1.)

(4) Other matters

Operators of illegal, unreported, and unregulated (IUU) fishing may evade various types of resource conservation and management measures, including the conservation and management measures for tunas and tuna-like species. It is therefore assumed that they do not introduce any reduction devices for incidental catch of seabirds. In order to cope with this situation, Japan will continue its effort to combat IUU fishing in collaboration with other countries concerned at FAO and RFMOs.

Japan has been participating actively in appropriate fora on the conservation of seabirds such as the seabird bycatch working group of ACAP, Pacific Seabird Group and World Seabird Conference. Japan has also been reporting the results of the research on the incidental catch of seabirds. Furthermore, researchers from the Fisheries Resources Institute have made recommendations on effective tori line specifications for the review of seabird bycatch mitigation measures in Hawaii, based on the research situation in Japan (Hyrenbach et al. 2017). These Japan's actions have contributed to the enhancement of awareness of other fishing nations on the issue of seabird bycatch and the development of technique for the reduction of bycatch.

Furthermore, Japan has been promoting coordination and cooperation with related fishing countries on various matters, including data collection on distribution, habitat, and ecology of seabirds, and the implementations of monitoring for research and conservation measures, such as the joint monitoring and various types of information exchange based on the Japan-U.S. Treaty on the Protection of Migratory Birds. Japan will continue these efforts in the years to come.

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