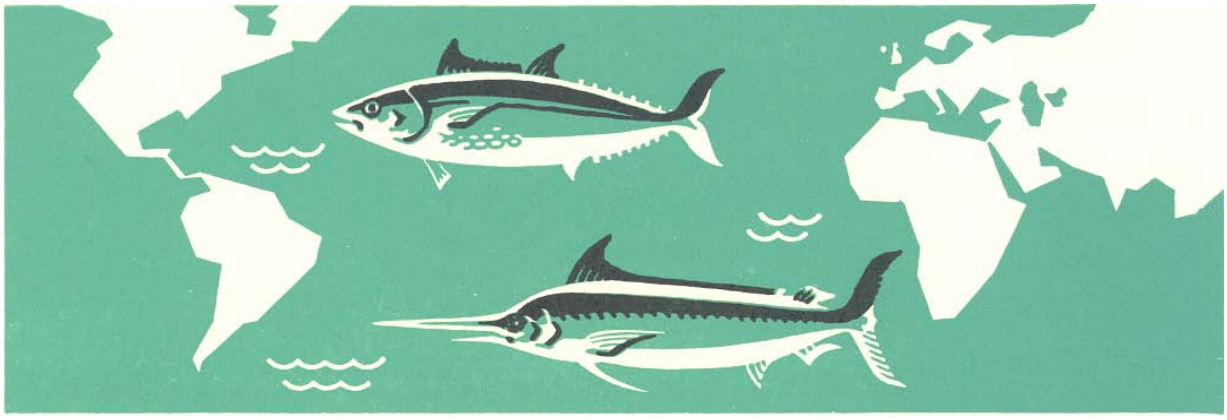
INTERNATIONAL COMMISSION
for the
CONSERVATION of ATLANTIC TUNAS

COMMISSION INTERNATIONALE
pour la CONSERVATION
des THONIDÉS de L'ATLANTIQUE

COMISIÓN INTERNACIONAL
para la
CONSERVACIÓN del ATÚN ATLÁNTICO



R E P O R T
for biennial period, 2010-11
PART II (2011) - Vol. 3
Annual Reports

RAPPORT
de la période biennale, 2010-11
IIe PARTIE (2011) – Vol. 3
Rapports annuels

INFORME
del período bienal, 2010-11
IIª PARTE (2011) – Vol. 3
Informes anuales

MADRID, SPAIN / ESPAGNE / ESPAÑA 2012

FOREWORD

The Chairman of the International Commission for the Conservation of Atlantic Tunas presents his compliments to the Contracting Parties of the International Convention for the Conservation of Atlantic Tunas (signed in Rio de Janeiro, May 14, 1966), as well as to the Delegates and Advisers that represent said Contracting Parties, and has the honor to transmit to them the ***"Report for the Biennial Period, 2010-2011, Part II (2011)"***, which describes the activities of the Commission during the second half of said biennial period.

This issue of the Biennial Report contains the Report of the 22nd Regular Meeting of the Commission (Istanbul, Turkey, November 11-19, 2011) and the reports of all the meetings of the Panels, Standing Committees and Sub-Committees, as well as some of the Working Groups. It also includes a summary of the activities of the Secretariat and the Annual Reports of the Contracting Parties of the Commission and Observers, relative to their activities in tuna and tuna-like fisheries in the Convention area.

The Report is published in four volumes. ***Volume 1*** includes the Proceedings of the Commission Meetings and the reports of all the associated meetings (with the exception of the Report of the Standing Committee on Research and Statistics-SCRS). ***Volume 2*** contains the Report of the Standing Committee on Research and Statistics (SCRS) and its appendices. ***Volume 3*** includes the Annual Reports of the Contracting Parties of the Commission and the Observers. ***Volume 4*** `includes the Secretariat's Report on Statistics and Coordination of Research, the Secretariat's Administrative and Financial Reports, and the Secretariat's Reports to the ICCAT Conservation and Management Measures Compliance Committee (COC), and to the Permanent Working Group for the Improvement of ICCAT Statistics and Conservation Measures (PWG). Volumes 3 and 4 of the Biennial Report are only published in electronic format.

This Report has been prepared, approved and distributed in accordance with Article III, paragraph 9, and Article IV, paragraph 2-d, of the Convention, and Rule 15 of the Rules of Procedure of the Commission. The Report is available in the three official languages of the Commission: English, French and Spanish.

PRÉSENTATION

Le Président de la Commission internationale pour la conservation des thonidés de l'Atlantique présente ses compliments aux Parties contractantes à la Convention internationale pour la conservation des thonidés de l'Atlantique (signée à Rio de Janeiro le 14 mai 1966), ainsi qu'aux délégués et conseillers qui représentent ces Parties contractantes, et a l'honneur de leur faire parvenir le « ***Rapport de la période biennale 2010-2011, Ire Partie (2011) »***, dans lequel sont décrites les activités de la Commission au cours de la deuxième moitié de cette période biennale.

Ce rapport contient le rapport de la 22e réunion ordinaire de la Commission (Istanbul, Turquie, 11-19 novembre 2011) et les rapports de toutes les réunions des Sous-commissions, des Comités permanents et des Sous-comités, ainsi que de divers Groupes de travail. Il comprend également un résumé des activités du Secrétariat et les rapports annuels remis par les Parties contractantes à l'ICCAT et les observateurs concernant leurs activités de pêche de thonidés et d'espèces voisines dans la zone de la Convention.

Le rapport est publié en quatre volumes. Le ***Volume 1*** réunit les comptes rendus des réunions de la Commission et les rapports de toutes les réunions annexes, à l'exception du rapport du Comité permanent pour la recherche et les statistiques (SCRS). Le ***Volume 2*** contient le rapport du Comité permanent pour la recherche et les statistiques (SCRS) et ses appendices. Le ***Volume 3*** contient les rapports annuels des Parties contractantes de la Commission et des observateurs. Le ***Volume 4*** comprend le rapport du Secrétariat sur les statistiques et la coordination de la recherche, les rapports administratifs et financiers du Secrétariat et les rapports du Secrétariat au Comité d'application des mesures de conservation et de gestion de l'ICCAT (COC) et au Groupe de travail permanent sur l'amélioration des statistiques et des mesures de conservation de l'ICCAT (PWG). Les volumes 3 et 4 du rapport biennal ne sont publiés que sous format électronique.

Le présent rapport a été rédigé, approuvé et distribué en application des Articles III-paragraphe 9 et IV paragraphe 2-d de la Convention et de l'Article 15 du Règlement intérieur de la Commission. Il est disponible dans les trois langues officielles de la Commission: anglais, français et espagnol.

PRÉSENTACIÓN

El Presidente de la Comisión Internacional para la Conservación del Atún Atlántico presenta sus respetos a las Partes contratantes del Convenio Internacional para la Conservación del Atún Atlántico (firmado en Río de Janeiro, 14 de mayo de 1966), así como a los delegados y consejeros que representan a las mencionadas Partes contratantes, y tiene el honor de transmitirles el ***"Informe del Período Bienal, 2010-2011, IIª Parte (2011)"***, en el que se describen las actividades de la Comisión durante la segunda mitad de dicho periodo bienal.

El Informe Bienal contiene el informe de la Vigesimosegunda Reunión Ordinaria de la Comisión (Estambul, Turquía, 11-19 de noviembre de 2011), y los informes de todas las reuniones de las Subcomisiones, Comités Permanentes y Subcomités, así como de algunos Grupos de Trabajo. Incluye, además, un resumen de las actividades de la Secretaría y los Informes anuales de las Partes contratantes de la Comisión y de observadores sobre sus actividades en las pesquerías de túnidos y especies afines en la zona del Convenio.

El Informe se publica en cuatro volúmenes. El ***Volumen 1*** incluye las Actas de las Reuniones de la Comisión y los Informes de todas las reuniones relacionadas (con excepción del Informe del Comité Permanente de Investigación y Estadísticas-SCRS). El ***Volumen 2*** el Informe del Comité Permanente de Investigación y Estadísticas (SCRS) y sus apéndices. El ***Volumen 3*** incluye los Informes anuales de las Partes contratantes de la Comisión y de los observadores. El ***Volumen 4*** incluye el informe de la Secretaría sobre estadísticas y coordinación de la investigación, los informes Administrativo y Financiero de la Secretaría y los informes de la Secretaría al Comité de Cumplimiento de las Medidas de conservación y ordenación de ICCAT (COC) y al Grupo de Trabajo Permanente para la mejora de las estadísticas y normas de conservación de ICCAT (GTP). Los volúmenes 3 y 4 del Informe Bienal se publican solo en formato electrónico.

Este Informe ha sido redactado, aprobado y distribuido de acuerdo con el Artículo III, párrafo 9, y el Artículo IV, párrafo 2-d del Convenio, y con el Artículo 15 del Reglamento Interno de la Comisión. El Informe está disponible en las tres lenguas oficiales de la Comisión: inglés, francés y español.

FABIO HAZIN
Commission Chairman / Président de la Commission / Presidente de la Comisión

TABLE OF CONTENTS[1] / TABLE DES MATIÈRES[2] / ÍNDICE[3]

ANNUAL REPORTS OF CONTRACTING PARTIES
RAPPORTS ANNUELS DES PARTIES CONTRACTANTES
INFORMES ANUALES DE PARTES CONTRATANTES

REPORTS OF OBSERVERS FROM COOPERATING NON-CONTRACTING PARTIES, ENTITIES, OR FISHING ENTITIES
RAPPORTS DES OBSERVATEURS DES PARTIES, ENTITÉS OU ENTITÉS DE PÊCHE NON-CONTRACTANTES COOPÉRANTES
INFORMES DE OBSERVADORES DE PARTES, ENTIDADES O ENTIDADES PESQUERAS NO CONTRATANTES COLABORADORAS

[1] Reports received and distributed for the 2011 ICCAT annual meetings. Many Reports submitted to the Commission contain detailed information in the appendices. For reasons of economy, these appendices are not included in this publication, but can be requested from the Secretariat in the original language. In addition, Compliance Reporting Tables have been extracted from the Annual Reports and the information contained therein has been assimilated into the Compliance Tables (Appendix 2 to ANNEX 10 of the 2011 Commission Report).

[2] Rapports reçus et diffusés pour les réunions annuelles de l'ICCAT de 2011. Plusieurs rapports soumis à la Commission joignent des informations détaillées dans les appendices. Aux fins d'économie, ces appendices ne sont pas inclus dans ce volume, mais peuvent être sollicités auprès du Secrétariat dans la langue d'origine. En outre, les tableaux de déclaration d'application ont été extraits de ces Rapports annuels et l'information contenue dans ces tableaux de déclaration a été incorporée aux tableaux d'application (Appendice 2 à l'ANNEXE 10 du Rapport de la Commission de 2011).

[3] Informes recibidos y distribuidos para las reuniones anuales de ICCAT de 2011. Muchos informes presentados a la Comisión incluyen información detallada en apéndices. Por razones de economía, dichos apéndices no se incluyen en esta edición, pero pueden solicitarse a la Secretaría en su idioma original. Además, las tablas de transmisión de información sobre cumplimiento se han eliminado de los informes anuales y la información de dichas tablas se ha incluido en las tablas de cumplimiento (Apéndice 2 al ANEXO 10 del Informe de la Comisión de 2011).

ANNUAL REPORTS OF CONTRACTING PARTIES
RAPPORTS ANNUELS DES PARTIES CONTRACTANTES
INFORMES ANUALES DE PARTES CONTRATANTES

ANNUAL REPORT OF ALGERIA
RAPPORT ANNUEL DE L'ALGÉRIE
INFORME ANUAL DE ALGERIA

SUMMARY

The 2010 fishing campaign in the waters under Algerian jurisdiction was characterised by swordfish and small tuna catches, approximately 2,641 t, carried out by an artisanal fleet comprised of approximately 1,526 vessels. During this year no bluefin tuna catches were carried out by the fifteen (15) tuna vessels registered at ICCAT for the following reasons: They do not control the bluefin tuna fishing technologies and techniques; some have not yet completed their equipment (fishing gear, in particular); the entry into force, in extremis, of the Decree dated April 19, 2010 establishing the bluefin tuna fishing quotas for vessels flying a national flag operating in the waters under national jurisdiction and establishing the modalities of their distribution and their implementation. It should be pointed out that this last regulation was developed taking into account the problems that this fishery experienced in 2009, and its provisions include additional limits to those imposed by ICCAT for the exploitation of this resource by national boat owners. In fact, this fishery is limited to the waters under national jurisdiction and joint fishing operations are prohibited. Moreover, the participation of all other vessels flying a foreign flag in waters under Algerian jurisdiction is prohibited. With this modification in the set up of the Algerian fishery, it should be taken into account that the entire statistical and scientific data, produced by the collection mechanisms onboard foreign vessels that fished in Algeria, stopped working from 2010, seen as Algerian vessels were unable to take over the exploitation. Thus, the Algerian tuna fishery is regulated by the provisions of the abovementioned Decree, dated April 19, 2010, where the provisions transcribe the conservation and management measures, as well as the monitoring and control measures of ICCAT Recommendations 08-05 and 09-06.

RÉSUMÉ

La campagne de pêche en 2010 dans les eaux sous juridiction algérienne a été caractérisée par des captures d'espadons et de thonidés mineurs à hauteur de 2.641 tonnes, réalisées au moyen d'une flottille de pêche artisanale constituée d'environ 1.526 unités. Durant cette année, aucune capture de thon rouge n'a été effectuée par les quinze (15) navires-thoniers enregistrés à l'ICCAT, pour les raisons suivantes : ces armements ne maitrisaient pas, alors, les technologies et les techniques de pêche au thon rouge ; certains n'avaient pas encore complété leurs équipements (engins de pêche notamment) ; l'entrée en vigueur in extremis de l'arrêté du 19 avril 2010 instituant des quotas de pêche au thon rouge pour les navires battant pavillon national exerçant dans les eaux sous juridiction nationale et fixant les modalités de leur répartition et de leur mise en œuvre. Il y a lieu de souligner que ce dernier texte réglementaire a été élaboré en tenant compte des problèmes qu'a connus cette pêcherie en 2009, et ses dispositions introduisent des contraintes supplémentaires à celles imposées par l'ICCAT pour l'exploitation de cette ressource par les armateurs nationaux. En effet, cette pêche est limitée aux eaux sous juridiction nationale et les opérations conjointes sont interdites. En outre, l'intervention de tous types de navires battant pavillon étranger dans les eaux sous juridiction algérienne a été interdite. Avec ce changement de configuration de la pêcherie algérienne, force est de constater que les données statistiques et scientifiques exhaustives qui étaient produites par le dispositif de collecte à bord des navires étrangers qui pêchaient en Algérie se sont taries depuis 2010, vu que les armements algériens n'ont pas pu prendre le relai de l'exploitation. Ainsi la pêcherie thonière algérienne est régie par les dispositions de l'arrêté du 19 avril 2010, sus-évoqué, dont les dispositions transcrivent les règles de conservation et de gestion ainsi que les mesures de contrôle et de suivi des Recommandations 08-05 et 09-06 de l'ICCAT.

RESUMEN

La campaña de pesca en 2010 en aguas bajo jurisdicción argelina se ha caracterizado por capturas de pez espada y de pequeños túnidos de aproximadamente 2641 t, realizadas por medio de una flota de pesca artesanal constituida por alrededor de 1526 unidades. Durante este año, los quince (15) buques atuneros inscritos en ICCAT no han realizado ninguna captura de atún rojo por las siguientes razones: no dominan las tecnologías ni las técnicas de pesca de atún rojo; algunos no habían completado aún sus equipos (principalmente artes de pesca); la entrada en vigor in extremis del decreto del 19 de abril de 2010, que instituía las cuotas de pesca de atún rojo para los buques que enarbolan pabellón nacional y faenan en aguas bajo jurisdicción nacional y que fijaba las modalidades de su reparto y de su implementación. Cabe señalar que este último texto reglamentario ha sido elaborado teniendo en cuenta los problemas que ha sufrido esta pesquería en 2009 y sus disposiciones introducen límites adicionales a los impuestos por ICCAT para la explotación de este recurso por parte de armadores nacionales. De hecho, esta pesca está limitada a las aguas bajo jurisdicción nacional y están prohibidas las operaciones conjuntas. Además, se ha prohibido la intervención de cualquier tipo de buque que enarbole pabellón extranjero en las aguas bajo jurisdicción argelina. Con este cambio de configuración de la pesquería argelina, cabe constatar que los datos estadísticos y científicos exhaustivos que fueron producidos por el dispositivo de recopilación a bordo de buques extranjeros que pescaban en Argelia se han acabado desde 2010, dado que los buques argelinos no han podido tomar el relevo de la explotación. Por ello, la pesquería atunera argelina se rige por las disposiciones del mencionado decreto del 19 de abril de 2010, que transcribe las normas de conservación y ordenación así como las medidas de control y seguimiento de las Recomendaciones 08-05 y 09-06 de ICCAT.

Ière partie (Informations sur les pêcheries, la recherche et les statistiques)

Chapitre 1 : Information annuelle sur les pêcheries

Les captures algériennes totales de thonidés et d'espèces voisines se sont élevées en l'an 2010 à 2.641 tonnes, réparties comme suit :

- espadon : 465 tonnes
- thonidés mineurs : 2.176 tonnes

Au cours de l'année 2010, l'Algérie a enregistré quinze (15) navires thoniers dont trois (3) palangriers et douze (12) senneurs, d'une longueur hors tout supérieure à 25 mètres.

Il y a lieu de signaler qu'aucune capture de thon rouge n'a été effectuée par ces armements durant cette année étant donné qu'ils ne maitrisaient pas, alors, les technologies et les techniques de pêche au thon rouge et que certains n'avaient pas encore complété leurs équipements (engins de pêche notamment).

Quant aux thonidés mineurs (bonite, bacorette, melva, palomette) et à l'espadon, les captures ont été réalisées au moyen d'une flottille de pêche artisanale constituée d'environ 1.526 unités.

Chapitre 2 : Recherche et statistiques

Des informations et des données statistiques sur les captures ainsi que sur l'effort de pêche concernant toutes les pêcheries nationales sont collectées conformément au dispositif mis en place depuis 2004 en vertu du Décret exécutif nº 04-186 du 30 juin 2004 fixant les conditions et les modalités de collecte et de transmission des informations et des données statistiques sur les captures et les moyens mis en œuvre tant en ce qui concerne les flottilles de pêche que les populations de pêcheurs.

Au titre de ce dispositif, la collecte de toutes les données relatives à l'activité de la pêche est assurée par des agents statisticiens désignés par l'administration chargée des pêches territorialement compétente au niveau des lieux de débarquement. Ces données sont ensuite transmises à la Direction centrale qui consolide, traite et analyse les statistiques recueillies.

Par ailleurs, la réglementation algérienne a prévu la tenue d'un journal de pêche à bord de chaque navire. Ainsi, conformément aux dispositions de l'arrêté du 16 avril 2006, le capitaine de chaque navire est tenu de conserver en permanence à bord du navire, un journal de pêche qui doit être renseigné du début à la fin de chaque action de pêche.

Le journal de pêche comporte :

- la durée de l'action de pêche,
- le ou les engins de pêche utilisé(s),
- la ou les zone(s) de pêche,
- le nombre d'équipage et
- le type et la quantité des captures.

Concernant l'exploitation du thon rouge, le dispositif réglementaire prévoit l'embarquement de deux observateurs à bord de chaque thonier participant à la campagne de pêche.

Ces contrôleurs ont pour mission de collecter toutes les informations statistiques se rapportant :

- aux captures réalisées,
- à la durée de l'opération de pêche et
- à l'effort de pêche déployé.

Quant à la recherche scientifique se rapportant aux thonidés et aux espèces voisines, des travaux de recherche notamment sur les paramètres biologiques, la croissance et l'exploitation de ces espèces sont menés par nos scientifiques.

Dans ce sens et dans le cadre de la préparation d'un Master au Centre international CIHEAM, l'étude portant sur la distribution géographique du thon rouge le long des côtes algériennes, l'application du SIG et la comparaison du système de commercialisation est finalisée.

Aussi et dans le cadre d'une thèse de Magister au niveau de l'Université des sciences et des technologies de Houari Boumediene (USTHB), en collaboration avec l'École Nationale des sciences et de l'aménagement du littoral (ex. ISMAL), une étude sur l'écologie, la biologie et l'exploitation du thon rouge est en cours.

IIe partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en œuvre de mesures de conservation et de gestion

Les mesures de conservation et de gestion ainsi que de contrôle et de suivi de la pêche aux thonidés et espadons dans les eaux sous juridiction algérienne sont contenues dans la législation et la réglementation suivantes :

- la Loi nº 01-11 relative à la pêche et à l'aquaculture, promulguée le 3 juillet 2001,
- le Décret exécutif n°03-481, du 13 décembre 2003, fixant les conditions et les modalités d'exercice de la pêche et
- l'Arrêté ministériel du 12 juin 2005 relatif au permis et à l'autorisation de pêche.

Dans ce cadre juridique, il est à souligner qu'un arrêté ministériel définit plus spécifiquement les modalités de répartition des quotas de pêche au thon rouge, leur mise en œuvre ainsi que le suivi et le contrôle de cette pêcherie. Il s'agit de l'arrêté du 19 avril 2010 instituant des quotas de pêche au thon rouge pour les navires battant pavillon national exerçant dans les eaux sous juridiction nationale et fixant les modalités de leur répartition et de leur mise en œuvre.

L'arrêté susmentionné, dont une copie est jointe au présent rapport, est fondé sur les dispositions pertinentes de l'ICCAT, notamment les exigences de la *Recommandation 08-05 amendée par la Recommandation 09-06 de l'ICCAT portant sur un plan de rétablissement de la pêcherie du thon rouge de l'Atlantique Est et de la Méditerranée.*

Il y a lieu de relever que suite aux problèmes qu'a connus cette pêcherie en 2009, les dispositions de cet arrêté introduisent deux contraintes supplémentaires à celles imposées par l'ICCAT pour l'exploitation de cette ressource par les armateurs nationaux. En effet, cette pêche est limitée aux eaux sous juridiction nationale et les opérations conjointes sont interdites.

À ce niveau, il y a lieu de rappeler que l'intervention des armements étrangers en Algérie est devenue interdite à partir de 2010 conformément au paragraphe 17 de la Recommandation 08-05.

L'arrêté du 19 avril 2010, sus-évoqué, réglemente en outre les aspects suivants :

- la gestion et la répartition des quotas,
- la période de fermeture de la pêche au thon rouge, aussi bien pour les senneurs que pour les palangriers de plus de 24 mètres et
- les conditions de transfert du thon rouge vivant de la senne vers la cage remorquée (autorisation au préalable de l'administration chargée des pêches territorialement compétente, contrôle et suivi des opérations par une caméra vidéo-sous marine).

En matière d'enregistrement d'informations, il y est exigé du capitaine du navire de :

- communiquer à l'administration des pêches territorialement compétente et au service national des gardes-côtes, un rapport hebdomadaire de capture,
- communiquer un rapport de capture journalier à l'administration des pêches territorialement compétente comportant les informations se rapportant à la date et à la localisation des captures et
- conserver à bord un carnet de pêche.

En ce qui concerne la pêche à l'espadon, et en application de la *Recommandation 09-04 de l'ICCAT sur l'espadon de la Méditerranée*, un arrêté fixant la période de fermeture de la pêche de l'espadon dans les eaux sous juridiction nationale a été promulgué le 9 août 2010.

Par ailleurs, en matière de commercialisation des prises de thon rouge et d'espadon, l'Algérie a mis en place, dès 2005, le dispositif de document statistique ICCAT puis le document de capture de thon rouge (BCD). Ces documents ne sont délivrés que si les exigences réglementaires, techniques et administratives y afférentes sont satisfaites.

Chapitre 4 : Schémas et activités d'inspection

Au plan du suivi et du contrôle des opérations de pêche, les activités de pêche sont supervisées durant toute la campagne de pêche par deux contrôleurs observateurs (Administration des Pêches et des Gardes-côtes) à bord de chaque thonier.

Par ailleurs et s'agissant des senneurs de plus de 24 mètres, il est exigé, outre, les deux contrôleurs cités ci-dessus, l'embarquement d'un observateur régional de l'ICCAT à bord de chaque navire.

Dans ce sens et en application des dispositions de l'arrêté du 19 avril 2010, une instruction interministérielle fixant les modalités de désignation, d'intervention des contrôleurs observateurs à bord des navires de pêche au thon rouge battant pavillon national exerçant dans les eaux sous juridiction nationale ainsi que leurs missions a été élaborée et promulguée.

Les Directeurs des pêches et des ressources halieutiques des wilayates (l'Administration chargée des pêches territorialement compétente) ont pour mission également de superviser le déroulement de la totalité de la campagne de pêche et notamment de désigner des inspecteurs des pêches et de les dépêcher au niveau des ports retenus pour contrôler les débarquements de thon rouge.

Toujours en matière de contrôle, le dispositif national mis en place prévoit l'obligation de transmission des données VMS. De ce fait, chaque navire thonier doit être équipé d'une balise de détection.

Chapitre 5 : Autres activités

[Pour Mémoire]

Appendices

Mise en œuvre de mesures de conservation et de gestion
opie de l'Arrêté du 19 avril 2010 instituant des quotas de pêche au thon rouge pour les navires battant pavillon national exerçant dans les eaux sous juridiction nationale et fixant les modalités de leur répartition et de leur mise en œuvre.[1]

[1]The Appendices are available at the Secretariat. / Les Annexes sont disponibles auprès du Secrétariat. / Los Anexos están disponibles en la Secretaría.

ANNUAL REPORT OF BARBADOS
RAPPORT ANNUEL DE LA BARBADE
INFORME ANNUAL DE BARBADOS

Christopher Parker[1]

SUMMARY

The Barbados total catch of tuna and tuna-like species under the management purview of ICCAT was estimated at around 232 metric tons (t) for 2010. Of the 35 longline vessels registered in the local fleet, only 26 were active during the year. There are currently no vessels larger than 24 m LOA registered in the Barbados fishing fleet but there are two longline vessels greater than 20 m LOA which remained inactive during the reporting period as they undergo extensive refurbishment. The first phase of an on-going enhanced data collection programme including dockside collection of sample fish length data and information on fishing trips through interviewing respective boat captains and crew was fully operational from the end of 2010. At the time of reporting, legal drafting of a number of new fisheries regulations and amendments to existing fisheries regulations geared toward improving information gathering, monitoring and control of the fisheries for large pelagic species under the purview of ICCAT is at a very advanced stage. The Fisheries Division is also currently exploring options for implementing a VMS programme initially for the island's iceboat and longliner fleets.

RÉSUMÉ

Il a été estimé que la prise totale de la Barbade de thonidés et d'espèces apparentées relevant du mandat de gestion de l'ICCAT avoisine 232 tonnes au titre de 2010. Seuls 26 des 35 palangriers enregistrés de la flottille locale ont été actifs pendant l'année. Actuellement, la flottille de pêche de la Barbade ne compte aucun navire de plus de 24 mètres de longueur hors-tout, mais deux palangriers de plus de 20 mètres de longueur hors-tout n'ont pas opéré pendant la période de déclaration, car ils ont fait l'objet d'une importante remise en état. La première phase d'un programme exhaustif de collecte de données actuellement en place est pleinement opérationnelle depuis la fin de l'année 2010 et comprend la collecte au quai de données d'échantillonnage de longueur et d'informations sur les sorties de pêche par le biais d'entretiens de membres d'équipage et de capitaines. Au moment de rédiger le présent rapport, la rédaction des textes juridiques de nouvelles réglementations sur les pêches et des amendements des réglementations actuelles visant à améliorer la collecte d'informations, le suivi et le contrôle des pêcheries ciblant les espèces pélagiques relevant du mandat de l'ICCAT est à un stade très avancé. Actuellement, la division des pêches étudie également la possibilité de mettre en œuvre un programme VMS consacré dans un premier temps aux flottilles de palangriers et de bateaux glace de l'île.

RESUMEN

La captura total de Barbados de túnidos y especies afines bajo la supervisión de ordenación de ICCAT se estimó en aproximadamente 232 t para 2010. De los 35 palangreros con registro en la flota local sólo 26 estuvieron activos durante el año. Actualmente no hay buques con una eslora total superior a 24 m registrados en la flota pesquera de Barbados, pero hay dos palangreros de más de 20 m de eslora que estuvieron inactivos durante el periodo de comunicación ya que han sido objeto de una importante restauración. La primera fase del programa en curso de mejora de recopilación de datos, lo que incluye la recopilación de datos de muestras de talla a pie de muelle y de información sobre mareas mediante entrevistas con los patrones y las tripulaciones de los buques respectivos estuvo plenamente operativa desde finales de 2010. En el momento de redactar este informe, la redacción legal de varios reglamentos pesqueros nuevos y de enmiendas de los reglamentos pesqueros existentes encaminados a mejorar la recopilación de información, el seguimiento y control de las pesquerías de grandes pelágicos bajo supervisión de ICCAT se halla en una fase muy

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avanzada. El Departamento de Pesca está explorando también opciones para implementar un programa VMS, en un primer momento para las flotas de palangre y barcos con hielo de las islas.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In 2010, the estimated total Barbados catches of large pelagic species under the purview of ICCAT was around 232 t. As usual the longline fleet landed the majority (71%) of the island's catch of the large highly-migratory species group *viz* tunas, billfishes and swordfish, while, the majority (94%) of wahoo (*Acanthocybium solandri*) was taken on single hook lines either handheld or deployed as troll lines by the "iceboat" and "dayboat" fleets during flying fish fishing trips (please refer to Barbados Annual Report 2010 for a detailed description of vessel types comprising the local fishing fleet). The catch of sharks was more evenly distributed among the fleets, with the longliners landing around 54% of the island's total shark catch. It is reiterated that Barbadian fishers do not target sharks as it is not a popular market species locally.

Of the 35 longline vessels currently registered in the local fishing fleet, only 26 were active during the year. There are currently no vessels larger than 24 m LOA registered in the Barbados fishing fleet but there are two longline vessels greater than 20 m LOA which remained inactive throughout the reporting period as they undergo extensive refurbishment. No foreign owned vessels are registered in the Barbados fishing fleet. All Barbadian fishing vessels are home-based and none use purse seine gear. No transhipments of large pelagics were made through Barbados in 2010.

Section 2: Research and Statistics

From November 2010, an enhanced dockside data collection programme was fully implemented. This includes the collection of detailed information on sampled fishing trips *inter alia* fishing effort (e.g. no. of hooks and sets), fishing location and species composition, through interviewing vessel captains at the end of the respective fishing trips. In addition length and weight measurements are taken for samples of the catch.

The continuing problems involved in identifying billfish species (espcially distinguishing between blue and white marlins) from the landed trunks, and the resultant inability to report billfish landings to species level, received a lot of attention during the reporting period. Following discussions with longline vessel owners and captains it was agreed that the boat captains themselves would identify the live fish to the species level as they are landed on the vessels. To faciliate this identification process the fishermen are provided with a species ID booklet produced by the Fisheries Division, which utilises photographs and simple descriptions of the common morphological features used to distinguish the locally-caught species. The dressed trunks would then be tagged using colour coded cable ties to facilitate their identification at the dockside. This exercise will commence from November 2011, which is the start of the 2011 to 2012 pelagic fishing season.

However, while all fishermen will not be involved in this exercise initially, it is hoped that at least near full participation will be achieved by the end of the season. It should be noted that in the interim, an attempt was made to offer some crude level of reporting of the billfish catch to the species-level for 2010 based on subjective catch composition information for the year obtained from boat captains.

In the summer of 2010, an economic valuation study of the longline fishery was completed by researchers of the Centre for Resource Mangement and Environmental Studies (CERMES) and the Univeristy of the West Indies in collaboration with the Fisheries Division, and funded by the Government of Barbados.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Two vessels greater than 20 m overall length are still nominally registered in the fleet but neither is currently active and ICCAT will be duly informed and provided with all relevant updated details when these vessels are about to recommence fishing. Barbados is not engaged in any vessel-chartering arrangements. No transhipments

at sea are permitted within Barbadian waters and no transhipments of large pelagic species from foreign-based vessels through Barbados ports are known to have occurred in 2010. No applications for the issue of Export Certificates for swordfish or big-eye tuna were received by the Fisheries Division in 2010. Barbados does not participate in the blue fin tuna fishery, and trade in this species has not been authorized. There is no targeted fishery for albacore in Barbados. The Fisheries Division did not receive any specific reports of suspected IUU fishing activities or other issues of non-compliance with ICCAT measures during the reporting period.

Barbados supports the Castries (St. Lucia) Declaration on Illegal, Unreported and Unregulated (IUU) Fishing, which was approved by the Ministerial Council of the Caribbean Regional Fisheries mechanism (CRFM) in July 2010. The Declaration enunciates *inter alia* a regional cooperative commitment to prevent, deter and eliminate IUU fishing through enhanced monitoring, control and surveillance at national and regional levels supported by the necessary harmonized, contemporary legislative and regulatory regimes.

During the reporting period, legal drafting and review of a number of proposed amendments and additions to the 1998 Fisheries Regulations aimed at improving the monitoring and management of local fisheries continued, and at the time of writing was at a very advanced stage. Included are a number of regulations that pertain to ICCAT species such as the establishment of a legal minimum landed size for swordfish and the mandatory detailed reporting of fishing activities such as through the use of standardized trip logbooks. Barbados also continues to actively pursue options for implementing a VMS programme for its longline and iceboat fleets.

Section 4: Inspection Schemes and Activities

Catches of large pelagic species under the purview of ICCAT by the local fishing fleet are landed only at monitored landing sites. Efforts made by Barbados during the reporting period to improve the scope and accuracy particularly of the catch and effort and trip information for reporting to ICCAT are detailed in Section 2 of this report.

Written permission must be obtained from the Chief Fisheries Officer prior to any transhipment of fish from foreign-based vessels through Barbados. To this end, the Chief Fisheries Officer must first be provided with detailed descriptive information for each vessel, including the vessel's flag State, its identification markings, a photograph of the vessel and the periods during which the proposed transhipments will occur. The vessel's local agents are further required to report the specific dates and times for each transhipment operation within at least 24 hours of the vessel's arrival. The transhipment operations take place only within the confines of the Bridgetown port under the supervision of officers of the Customs Department, port officials and an official of the Fisheries Division. Copies of the weigh-out sheets and set logs must be forwarded to the Fisheries Division within 30 days of the respective fishing trip following the trans-shipment operation.

Section 5: Other Activities

None to report.

ANNUAL REPORT OF BELIZE
RAPPORT ANNUEL DU BELIZE
INFORME ANUAL DE BELICE

Beverly Wade[1], Valerie Lanza[2]

SUMMARY

As a Member of several major RFMOs, including ICCAT, Belize has continued to maintain a compliant fleet in all the areas where our vessels operate. The majority of Belize's fishing vessels which are licensed to target tuna and tuna like species in the ICCAT area are long liners. We also now have 5 purse seiners actively operating in the area. The total number of tuna long liners operating in the ICCAT Convention area has increased over the past several years, from 11 in 2006 to 12 in 2007, 14 in 2008, 20 in 2009, 22 in 2010 and currently 26 in 2011. Our purse seine fleet was 3 in 2010 and has increased to 7 in 2011. Our total catches of tuna and tuna-like species amounted to 201.52 m/t in 2006, 1676.18 m/t in 2007, 1431.48 in 2008, and 1663.80 in 2009 to 6851.59 Yellowfin has been our dominant catch for the past several years amounting to 71% of the total catch in 2006, 69% in 2007, 81% in 2008 and 59% in 2009. However, in 2010 our dominant catch has been skipjack, amounting to 39% of our overall catches. The average size of our vessels in 2006 and 2007 was 116 gt, 133 gt in 2008, 359 gt in 2009 and 397 gt in 2010. Blue shark and Mako shark continues to be the most common non-tuna species in our long line fishery followed by blue marlin. The compiled data including Task I and Task II for 2010 and the list of authorized vessels was reported to ICCAT on 12th April 2011. Subsequent updates have also been sent to the Secretariat. Belize continues to monitor, control and surveille its high seas fishing fleet to ensure that the activities of these vessels are fully compliant with our national laws and international Regulations, the FAO "Compliance Agreement", the "Fish Stocks Agreement", the "IPOA IUU" as well as the Resolutions and Recommendations adopted by ICCAT and other relevant RFMOs.

RÉSUMÉ

En sa qualité de membre de plusieurs ORGP importantes, dont l'ICCAT, le Belize n'a cessé de maintenir une flottille respectueuse dans toutes les zones où ses navires opèrent. La plupart des navires de pêche du Belize munis d'une licence pour cibler les thonidés et les espèces apparentées dans la zone de la Convention ICCAT sont des palangriers. Actuellement, nous disposons également de cinq senneurs opérant activement dans la région. Le nombre total de palangriers opérant dans la zone de la Convention de l'ICCAT a augmenté au cours de ces dernières années, passant de 11 en 2006 à 12 en 2007, puis de 14 en 2008, à 20 en 2009, à 22 en 2010, pour s'établir à 26 unités en 2011. Notre flottille comptait trois senneurs en 2010 et a augmenté en 2011, passant à sept unités. Nos prises totales de thons et d'espèces apparentées s'élevaient à 201,52 t en 2006, 1.676,18 t en 2007, 1.431,48 t en 2008 et 1.663,8 t en 2009, et 6851,59 t en 2010, l'albacore demeurant la prise dominante au cours des dernières années représentant 71 % de la capture totale en 2006, 69 % en 2007, 81 % en 2008 et 59 % en 2009. Néanmoins, en 2010, notre prise dominante était le listao, représentant 39 % de nos prises globales. La taille moyenne de nos navires en 2006 et 2007 était de 116 TJB, de 133 TJB en 2008, de 359 TJB en 2009 et de 397 TJB en 2010. Le requin peau bleue et le requin-taupe bleu demeurent les espèces non-thonières les plus communes au sein de notre pêcherie palangrière, suivies du makaire bleu. Les données compilées incluant les données de la Tâche I et de la Tâche II au titre de 2010 et la liste des navires autorisés ont été déclarées à l'ICCAT le 12 avril 2011. Des actualisations ultérieures ont également été envoyées au Secrétariat. Le Belize continue de suivre, contrôler et surveiller sa flottille de pêche hauturière afin de garantir que les activités de ces navires respectent rigoureusement ses lois nationales et réglementations internationales : l'Accord d'application de la FAO, l'Accord sur les stocks de poissons, l'IPOA-IUU, ainsi que les Résolutions et Recommandations adoptées par l'ICCAT et d'autres ORGP pertinentes.

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RESUMEN

En su calidad de miembro de varias OROP, incluida ICCAT, Belice ha seguido manteniendo una flota que cumple las normas en todas las zonas en las que operan nuestros buques. La mayoría de los buques pesqueros de Belice con licencia para dirigir su actividad a los túnidos y especies afines en la zona de ICCAT son palangreros. Actualmente, contamos también con cinco cerqueros que operan activamente en la zona. El número total de palangreros atuneros que operan en la zona de ICCAT se ha incrementado en los últimos años pasando de 11 en 2006 a 12 en 2007, 14 in 2008, 20 en 2009, 22 en 2010 y actualmente 26 en 2011. Nuestra flota de cerco contaba con 3 unidades en 2010 y se ha incrementado hasta siete unidades en 2011. Nuestras capturas totales de túnidos y especies afines ascendieron a 201,52 t en 2006, 1.676,18 t en 2007, 1.431,48 t en 2008 y 1.663,80 en 2009 y hasta 6.851,59 t en 2010. El rabil fue la especie predominante en nuestras capturas en los siete últimos años, respondiendo del 71% de la captura total en 2006, del 69% en 2007, del 81% en 2008 y del 59% en 2009. Sin embargo, en 2010 la especie predominante en nuestras capturas ha sido el listado, que respondió del 39% de las capturas totales. El tamaño medio de nuestros buques en 2006 y 2007 fue de 116 TB, de 133 TB, en 2008, de 359 TB en 2009 y de 397 TB en 2010. La tintorera y el marrajo siguen siendo la especie más común, al margen de los túnidos en nuestra pesquería de palangre, seguidos por la aguja azul. Los datos recopilados, lo que incluye la Tarea I y Tarea II para 2010 y la lista de buques autorizados, se comunicaron a ICCAT el 12 de abril de 2011. También se han enviado a la Secretaría actualizaciones posteriores. Belice sigue realizando actividades de seguimiento, control y vigilancia de su flota pesquera de altura para garantizar que las actividades de estos buques cumplen plenamente su legislación nacional, así como las regulaciones internacionales, el Acuerdo de cumplimiento de la FAO, el Acuerdo sobre poblaciones de peces, el PAI-IUU, así como las Resoluciones y Recomendaciones adoptadas por ICCAT y otras OROP pertinentes.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Annual catch by species and gear in the ICCAT Convention area

Table 1 shows the annual catch and effort data by gear and species for our fleet which operated in the area over the past 5 years (Source: fishing logs and fishing vessel voyage reports, discharge data, mate's receipts, invoices, purchase agreements).

Almost all Belize catches remained within the quota levels set for each species in 2006, 2007, 2008 and 2009. In 2010 Belize vessels exceeded the northern albacore quota levels due to increased demand for this species within Belize fisheries.

1.2 Number of vessels by gear, size (fleet structure)

The Belize fleet in 2010 consisted of 22 vessels of > 24 meters in LOA, all of which were licensed to operate exclusively in the ICCAT Area. **Table 2** shows the number of active vessels within in the Convention area by gear and size.

1.3 Fishing patterns (catch by area)

The area of operation of the Belize vessels is given in **Table 3**.

1.4 Estimated total catches of non-target, associated and dependent species

The catches of non-target, associated and dependent species are given in **Table 4**.

1.5 Useful information

The fleet which fishes on the high seas is registered by the International Merchant Marine Registry of Belize (IMMARBE) and is licensed by the Belize Fisheries Department. Matters of policies are determined jointly by the Ministry of Agriculture and Fisheries and the Director General of IMMARBE.

Section 2: Research and Statistics

2.1 Summary of observer and port sampling programmes

For the purpose of compliance, surveillance is conducted on a regular basis or as result of an investigation by: boarding at sea, or at port, plant checks, requesting the assistance of other Government Organizations as necessary. Belize does not currently have and at sea Observer Program. However, as the need arise it hopes to utilize that which is available by the Commission. Belize is currently working with other governments on the implementation of an at-port observer program at one of the major port where Belize vessels discharge.

2.2 Research activities

Belize does not conduct research activities in the Convention area.

2.3 Statistical data collection system in use

Fishing vessels owners/operators are required to submit data on their fishing operations based on the Belize format for such reporting, which includes a details Fishing Log and Fishing Vessel Voyage Report, discharge reports, mate's receipts, invoices, purchase agreements. Belize has also implemented in 2011 a logbook system in which all vessels are required to keep on board manual logbooks to be completed daily.

2.4 Data coverage of catch, effort, and size data for all species

Belize's operational effort level is verified by VMS. The coverage was 100% in 2007, 2008 and 2009 and 2010. The operational catch level for 2007 was verified by mate's receipts and sales invoices and/or purchase contract. This included species and size by weight in 2007 and weight and length in 2008, 2009, 2010. The length measurements are based on a 25% ratio of the daily catches of each species.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

All Belize fishing vessels which are operating in the ICCAT Convention area are compliant with ICCAT's conservation and management measures as well as the Belize national laws and international regulations.

- **Recommendations and Resolutions on closed seasons**

  - With regard to Recommendation 06-06 concerning the western Atlantic bluefin tuna rebuilding program, paragraph 13, Belize is not engaged in this fishery and none of Belize LSTLFVs have been licensed to target bluefin tuna in the Convention area.

  - With regard to Recommendation 09-04 on Mediterranean swordfish, paragraph 1, Belize is not engaged in this fishery and no Belize LSTLFVs have been licensed to target Mediterranean swordfish in the Convention area.

- **Recommendations and Resolutions on data and minimum size**

  - With regard to Recommendation 96-14 on the topic of compliance in the bluefin tuna and North Atlantic swordfish fisheries, paragraph 1, Belize has not licensed any vessels to target bluefin tuna in the Convention area. With respect to North Atlantic swordfish, Belize has registered and licensed 4 vessels to target this specie in 2010 in accordance with the quotas which it has been allocated for this species.

- With regard to Recommendation 97-01 to improve compliance with the minimum size regulation, paragraph 2, during 2007 and prior years, Belize fishing vessels are required to report size by weight. However, in 2008 Belize introduced the requirement for measurement by length for 25% of its vessels' daily catches for each species. Also, in regard to paragraph 2 and 3, no Belize vessels are licensed to fish bluefin tuna in the Convention area.

- With regard to Recommendation 98-14 on the application of three compliance Recommendations, Belize's ICCAT Reporting Table has been submitted to ICCAT.

- With regard to Resolution 01-16 on the deadlines and procedures for data submission and in accordance with paragraph 1, Belize's Task I and Task II as well as its listing of vessels licensed to operate in the Convention area was submitted to the Secretariat on 12 April 2009. Belize's Compliance Table was submitted to the Secretariat on 21 June 2011.

- With regard to Recommendation 03-13 concerning the recording of catch by fishing vessels in the ICCAT Convention area, Belize fishing vessel Owners/Operators are required to submit data on their fishing operations based on Belize's format for such reports, which includes a detailed Fishing Log and Fishing Vessel Voyage Report. Belize has also recently implemented a bonded logbook that all vessels must carry on board at all times.

– **Resolutions and Recommendations on capacity limit**

- With regard to Recommendation 93-04 on supplementary regulatory measures for the management of Atlantic yellowfin tuna, all Belize vessels which are currently licensed to target yellowfin tuna in the Convention area have fished within the catch limits allocated to each vessel and in compliance with this Recommendation.

- With regard to Recommendation 98-03 on the bigeye tuna conservation measures for fishing vessels larger than 24 meter overall, paragraph 1 of this Recommendation does not apply to Belize flagged vessels because in accordance with paragraph 3 Belize's catches are below 2000 metric tons (t) per annum.

- With regard to Recommendation 04-01 on multi-year conservation and management program for bigeye tuna, Belize caught less than 2100 t in 2000 and consequently, in accordance with paragraph 7, paragraphs 2 and 4 of this Recommendation do not apply to Belize.

– **Resolutions and Recommendations on statistical documents**

- With regard to Recommendation 01-21 concerning the ICCAT Bigeye Tuna Statistical Document Program, Belize has not issued any statistical document during 2010 for bigeye tuna caught in the ICCAT Convention area or which have been exported to any of the ICCAT Contracting Parties.

- With regard to Recommendation 01-22 on establishing a Swordfish Statistical Document Program, Belize issued several Swordfish Statistical Documents in 2010 for swordfish caught in the ICCAT Convention area for export to Spain and Japan.

– **Resolutions and Recommendations on other measures relating to individual species**

- With regard to Recommendation 06-09 to further strengthen the plan to rebuild blue marlin and white marlin populations, no Belize vessels target these species as their main target species; however, they are caught in small quantities as by-catch.

- With regard to Resolution 03-10 on the sharks fishery, paragraph 2, Belize minimizes waste and discards from shark catches in accordance with Article 7.2.2(g) of the Code of Conduct for Responsible Tuna Fisheries. Furthermore, Belize only has two vessels targeting shortfin mako and blue shark. Belize has a NPOA-Shark which complies with the standards of the FAO-IPOA.

- With regard to Resolution 03-11 on sea turtles, Belize encourages the release of marine turtles that are incidentally caught alive in its fishing activities generally and have commenced requiring specific data for

the incidental by-catch of sea turtles. Belize has not received any reports in 2010 from any of its fishing vessels of any interaction with sea turtles.

- With regard to Resolution 03-04 relating to Mediterranean swordfish, Belize has not licensed any of its fishing vessels to target Mediterranean swordfish in the Convention area.

- With regard to Recommendation 05-05 concerning the conservation of sharks caught in association with fisheries managed by ICCAT, the quantities of Atlantic shortfin mako caught by Belize vessels are: 70 t in 2006 to 17 t in 2007 and 2 t in 2008, 23 t in 2009, 59 t in 2010 and of South Atlantic blue shark from 423 t in 2006 to 236 t in 2007 and 109 t in 2008,113 t in 2009 and 733 t in 2010.

- With regard to Resolution 05-08 on circle hooks, currently, no Belize vessels licensed to operate in the Convention area utilize circle hooks.

- With regard to Resolution 06-08 on fishing bluefin tuna in the Atlantic Ocean, Belize is not engaged in this fishery.

- With regard to Recommendation 07-06 on the supplemental Recommendation concerning sharks, paragraph 3, Belize does not conduct any scientific research for North Atlantic shortfin mako and porbeagle shark in the Convention area, nor does it catch these species in that area.

- With regard to Recommendation 08-07 on the conservation of bigeye thresher sharks caught in association with fisheries managed by ICCAT, Belize is not engaged in this Fishery, nor does it encourage this type of fishery or by-catch of same.

− **Resolutions and Recommendations concerning trade sanctions**

- ICCAT Recommendations 02-17 and 03-18 regarding Bolivia and Georgia are respected.

- The Recommendation for bigeye tuna trade restrictive measures on Georgia is respected.

− **Resolutions and Recommendations concerning VMS**

- With regard to Recommendations 03-14 / 04-11 concerning minimum standards for the establishment of a vessel monitoring system in the ICCAT Convention area, Belize wishes to re-state that it has successfully implemented and maintained VMS reporting on all fishing vessels which operate on the high seas, irrespective of their length. It is based on Inmarsat, utilizing Inmarsat C, Inmarsat Mini C and Inmarsat D+ equipment. The provider is Polestar Space Applications Ltd. who utilizes an automatic, real time internet based service called Purplefinder Vessel Management Solutions. This reporting system complies with the aforementioned Recommendation.

− **General Recommendations and Resolutions**

- With regard to Recommendation 07-10, paragraph 7, Belize conducts port inspections for the purpose of ensuring compliance, surveillance on a regular basis or as a result of an investigation by: boarding at sea or port, plant checks, observer teams, requesting the assistance of other Governments/Organizations as necessary.

- With regard to Resolution 99-07 on improving recreational fishery statistics, this is practiced in Belize national waters. All fishing boats engaged in such activities are obliged to respect all national fisheries regulations. The catches in any annual tournaments are reported by the organizers to the Fisheries Department. Belize is currently cooperating with OSPESCA in the production of a report on sports fishing. Also, as reported last year, Belize introduced our Yachting Codes which contain guidelines for recreational fishing both in national waters and on the high seas.

- With regard to Resolution 01-18 to further define the scope of IUU fishing, Belize has instructed all its vessel owners and operators and other concerned parties to refrain from engaging in transactions and transshipments of tunas and tuna-like species caught by vessels carrying out illegal, unregulated and unreported fishing activities, which include, *inter alia*, any fishing not in compliance with relevant

ICCAT conservation and management measures in the Convention area or in other areas. Furthermore, this is expressed as a condition in all Belize licenses and authorizations.

- With regard to Recommendation 03-12 concerning the duties of flag States in relation to their vessels fishing in the ICCAT Convention area, Belize is fully compliant with the requirement in this Recommendation.

- With regard to Recommendation 03-16 to adopt additional measures against illegal, unreported and unregulated fishing, these are contained in the Belize ISO 9001-2000 compliant Quality Management System and will be reflected in the Belize National Plan of Action for IUU.

- With regard to Recommendation 06-11 establishing a program for transshipment, Belize does not currently have any LSTLVs or fishing vessels below 24 meters in length overall in the ICCAT Convention area which wish to engage in transshipment at sea or any refrigerated cargo vessels which wish to receive such transshipment. However, Belize has implemented a program to control transshipment at sea from fishing vessels to its refrigerated carrier vessels which may apply for authorization to receive such transshipment. Belize has notified the Commission of its interest to participate in the Regional Observer program for transshipment at sea.

- With regard to Recommendation 06-16 on an electronic Statistical Document Pilot Program, Belize has not yet developed any such programmes.

Table 1. Annual catch and effort statistics.

Year	*Effort (Hooks)*	*N. ALB*	*S. ALB*	*SJK*	*YFT*	*BET*	*N. SWD*	*S. SWD*	*Total*
2006	50061		54.43		143.04	4.05			201.52
2007	267511	21.58	31.94		1164.12	60.15	8.725	119.73	1406.62
2008	218412	26.23	31.11		1160.42	68.97	.976	31.95	1319.66
2009	272834	38.70	213.45		988.35	59.70	112.25	111.36	1523.81
2010	249230	416.10	302.63	2714.36	2058.40	248.60	106.40	120.87	5967.36

Table 2. Fishing vessels authorized to operate in the ICCAT area.

Year	*Base port*	*Operation status*	*LOA class (m)*	*GT class (t)*	*Target species*
2006	TTO/URY	Operational	20-29 (10 vessels) 30< (1 vessel)	50-299 (10 vessels) 300 < (1 vessel)	YFT, ALB, BET, BSH, MAK
2007	TTO/URY	Operational	20-29 (11 vessels) 30 < (1 vessel)	50-299 (11 vessels) 300< (1 vessel)	YFT, ALB, BET, BSH, MAK, SWD
2008	TTO/URY	Operational	20-29 (12 vessels) 30< (2 vessels)	50-299 (12 vessels) 300 < (2 vessel)	YFT, ALB, BET, BSH, MAK, SWD
2009	TTO/URY/ESP	Operational	20-29 (14 vessels) 30< (6 vessels)	50-299 (15 vessels) 300 < (5 vessels)	YFT, ALB, BET, BSH, MAK, SWD
2010	TTO/URY/ESP/CIV	Operational	20-29 (14 vessels) 30< (8 vessels)	50-299 (15 vessels) 300 < (7 vessels)	YFT, ALB, BET, SKJ, BSH, MAK, SWD

Table 3. Area of operation of vessels.

Year	*Quadrant*	*Latitude Positions*	*Longitude Positions*
2006	SW	Between 09S-15S	Between 25W-35W
2007	SW NW	Between 00S-25S Between 00N-25N	Between 15W-65W Between 15W-65W
2008	SW NW	Between 00S-25S Between 00N-25N	Between 20W-65W Between 20W-65W
2009	SW NW	Between 00S-25S Between 00N-25N	Between 20W-65W Between 20W-65W
2010	SW NW	Between 00S-25S Between 00N-25N	Between 20W-65W Between 20W-65W

Table 4. Catches of non-target, associated and dependent species (in t).

Year	*BSH*	*MAK*	*SAI*	*BUM*	*SPF*
2006	421.81	71.22			
2007	236.45	17.44	12.07	3.78	
2008	109.03	1.600			
2009	113.82	23.08			
2010	733.00	59.86	75.82	3.379	11.83

ANNUAL REPORT OF BRAZIL
RAPPORT ANNUEL DU BRÉSIL
INFORME ANUAL DE BRASIL

Fábio Hazin, Paulo Travassos, Bruno Mourato

SUMMARY

In 2010, the Brazilian tuna longline fleet consisted of 96 vessels registered in 5 different ports. The total number of vessels increased by about 10%, from 2009, when 86 vessels were operating. The number of chartered vessels, however, decreased by 33.3% from 2009, when 6 boats operated. The number of bait-boats operating in 2010 was 41, decreasing slightly (4.6%) from 2009. The Brazilian catch of tunas and tuna-like fishes, including billfishes, sharks, and other species of minor importance (e.g. wahoo and dolphin fish), was 33,419.9 t (live weight), in 2010, representing a decrease of 16.6%, from 2009. The majority of the catch was again taken by baitboats (14,475.2 t; 43.0%), with skipjack tuna being the most abundant species (12,725.5 t; 87.9% of the baitboat catches). With a total catch of 627.3 t, yellowfin tuna was the second dominant species in the baitboat fishery. The total catch of the tuna longline fishery (12,349.4 t) was 58.3% higher than 2009, with dolphin fish being the most abundant species (5.114.9 t), accounting for 41.4% of the longline catches. Swordfish and blue shark, accounting for 21.5% (2,656.9 t) and 12.1% (1,500.5 t) of the catches, respectively, were the second and the third most caught species. With a total catch of 1,144.6 t, yellowfin tuna was the fourth most abundant species in the Brazilian longline fishery, accounting for 9.2%. The total catch of white marlin and blue marlin was 35 t and 130 t, , respectively, representing a decreasing trend of 32.7% and 12.7%, from 2009, respectively. Data collected from observers on board, indicated live discards, in percentage of the catch, in numbers, of 17.2% for white marlin, and 36.1% for blue marlin. Part of the Brazilian catches resulted again from the fishing activities of small scale fishing boats based mainly in Itaipava- ES (southeast coast). Although made up of relatively small boats of about 15 m, this fleet is highly mobile, operating throughout most of the Brazilian coast and targeting a variety of species with different gears, including longline, handline, trolling and other surface gears. In 2010, this fleet caught 5,813.0 t of fish, of which dolphin fish contributed with 2,471.4 t (42.5%). Yellowfin and skipjack tuna, accounting for 28.0% (1,628.0t) and 12.5% (727.3 t) of the catches, respectively, were the second and the third most caught species. Besides the catch and effort data regularly collected from Brazilian tuna fisheries, in 2010 a total of 5,268 fishes were measured at sea and while landing. The main fish species measured were: dolphin fish=1,075; blue shark= 865; yellowfin= 723; bigeye= 684; swordfish= 662; sailfish= 199; white marlin= 109; and blue marlin= 100. In 2010, an important research effort on billfishes and sharks, in cooperation with U.S., Venezuela and Uruguayan scientists, continued to be developed, including collection of vertebrae, spines, stomachs and gonads, for age and growth, feeding habits and reproduction studies, as well as habitat utilization, through PSAT tags, and gear selectivity, by the use of circle hooks, hook timers, and TDRs. Another important research program started in 2009 (MADE Project – Mitigating Adverse Ecological Impacts of Open Ocean Fisheries), in cooperation with EU scientists, aims at investigating spatial and technical management measures to reduce the by-catch of pelagic sharks by pelagic longliners, including habitat utilization, through PSAT tags, and gear selectivity, by the use of hook timers and TDRs. Research on tunas (yellowfin, bigeye and albacore) continued to be developed, with the financial support of the Ministry of Fisheries and Aquaculture, including some aspects of the biology of these species, such as age and growth, reproduction and feeding, as well as studies on habitat utilization, through PSAT tags, and gear selectivity, by the use of hook timers and TDRs. Research on the incidental catches of seabirds continued and was aimed mainly at monitoring by-catch and testing mitigation measures, particularly the use of different kinds of torilines. The monitoring of sea turtles by-catch in longline fisheries also continued, by Projeto Tamar, including tests with the use of circle hooks and other mitigation measures to reduce the catch rates of sea turtles. In order to adequately comply with ICCAT recommendations, the Brazilian government has implemented several rules regulating Brazilian tuna fishery. New regulations were introduced in 2011 establishing the mandatory use of mitigation measures to reduce seabird by-catch; the prohibition of retention of Alopias superciliosus; and the national catch limits for swordfish.

RÉSUMÉ

En 2010, la flottille palangrière thonière du Brésil se composait de 96 navires immatriculés dans cinq ports différents. Le nombre total de navires a augmenté d'environ 10% par rapport à 2009, lorsque 86 navires étaient en opération. Le nombre de navires affrétés, toutefois, est descendu d'environ 33,3% par rapport à 2009, lorsque six navires étaient en opération. Le nombre de canneurs qui opéraient en 2010 s'élevait à 41, soit une légère baisse (4,6%) par rapport à 2009. En 2010, la prise brésilienne de thonidés et d'espèces apparentées, y compris les istiophoridés, les requins et d'autres espèces d'importance secondaire (p.ex. thazard bâtard et coryphène commune), s'élevait à 33.419,9 t (poids vif), ce qui représente une baisse de 16,6% par rapport à 2009. Une fois de plus, la majorité des captures a été réalisée par les canneurs (14.475,2 t ; 43,0%), le listao étant l'espèce la plus abondante, représentant 12.725,5 t, soit près de 87,9% des prises des canneurs. Avec une prise totale de 627,3 t, l'albacore était la deuxième espèce dominante dans la pêcherie de canneurs. La prise totale de la pêcherie palangrière de thonidés s'est élevée à 12.349,4 t, ce qui était 58,3% supérieur au chiffre de 2009, la coryphène commune étant l'espèce la plus abondante (5.114,9 t), représentant 41,4% des prises palangrières. L'espadon et le requin peau bleue, représentant respectivement 21,5% (2.656,9 t) et 12,1% (1.500,5 t) des captures, étaient aux deuxième et troisième rangs des espèces les plus capturées. Avec une prise totale de 1.144,6 t, l'albacore était la quatrième espèce plus abondante dans la pêcherie palangrière brésilienne, représentant 9,2%. La capture totale de makaire blanc et de makaire bleu s'élevait à 35 t et 130 t, respectivement, ce qui représente une tendance à la baisse de 32,7% et 12,7%, respectivement, par rapport à 2009. Les données recueillies par les observateurs embarqués ont indiqué des rejets vivants, en pourcentage de la prise, en nombre, représentant 17,2% pour le makaire blanc et 36,1% pour le makaire bleu. Une partie des prises brésiliennes provenait encore des activités de pêche de petits bateaux de pêche basés principalement à Itaipava-ES, sur la côte du Sud-Est. Bien que composée d'embarcations de taille relativement réduite, d'environ 15 m, cette flottille est fort mobile, opérant sur pratiquement toute la côte brésilienne et ciblant diverses espèces avec différents engins, dont la palangre, la ligne à main, la ligne traînante et d'autres engins de surface. En 2010, cette flottille a capturé 5.813,0 t de poissons, dont la coryphène commune qui représentait 2.471,4 t, soit 42,5% de la capture. L'albacore et le listao, représentant respectivement 28,0% (1.628,0 t) et 12,5% (727,3 t) des captures, étaient aux deuxième et troisième rangs des espèces les plus capturées. En plus des données de prise et d'effort régulièrement recueillies auprès des pêcheries thonières brésiliennes, en 2010, environ 5.268 poissons ont été mesurés en mer et pendant le débarquement. Les principales espèces de poissons mesurées étaient les suivantes : coryphène commune =1.075 ; requin peau bleue = 865 ; albacore = 723 ; thon obèse = 684 ; espadon = 662 ; voiliers = 199 ; makaire blanc = 109 ; et makaire bleu = 100. En 2010, un important programme de recherche sur les istiophoridés et les requins, mené en coopération avec des scientifiques américains, vénézuéliens et uruguayens, a continué à être développé, lequel incluait la collecte d'épines, de vertèbres, d'estomacs et de gonades aux fins d'études sur l'âge, la croissance, les habitudes trophiques, la reproduction, ainsi que sur l'utilisation de l'habitat, au moyen de marques PSAT et de la sélectivité des engins, par l'utilisation d'hameçons circulaires, de minuteurs d'hameçons et de capteurs de temps et de profondeur. Un autre important programme de recherche a démarré en 2009 (dénommé MADE - Mitigating Adverse Ecological Impacts of Open Ocean Fisheries : Atténuation des impacts écologiques néfastes des pêcheries hauturières) et est réalisé en coopération avec les scientifiques de l'UE dans le but d'enquêter sur des mesures de gestion spatiales et techniques visant à réduire les prises accessoires de requins pélagiques réalisées par les palangriers pélagiques, y compris par l'utilisation de l'habitat, par le biais des marques PSAT, la sélectivité des engins, le recours aux minuteurs d'hameçons et aux capteurs de temps et de profondeur. La recherche sur les thonidés (albacore, thon obèse et germon) a continué à se développer, avec l'appui financier du Ministère de la Pêche et de l'Aquaculture, incluant certains aspects de la biologie de ces espèces, tels que l'âge et la croissance, la reproduction et l'alimentation, ainsi que les études sur l'utilisation de l'habitat, par le biais de marques PSAT, la sélectivité des engins, l'emploi de minuteurs d'hameçons et de capteurs de temps et de profondeur. La recherche sur les prises accessoires d'oiseaux de mer s'est poursuivie, étant principalement axée sur le suivi des prises accessoires et l'expérimentation de mesures d'atténuation, notamment l'emploi de différents types de lignes tori. Le suivi des prises accessoires de tortues marines dans les pêcheries palangrières s'est également poursuivi grâce au Projet « Tamar », lequel prévoyait des essais

avec des hameçons circulaires et d'autres mesures d'atténuation visant à réduire les taux de capture des tortues marines. Afin de respecter adéquatement les recommandations de l'ICCAT, le Gouvernement brésilien a mis en œuvre plusieurs règlementations qui régissent la pêcherie thonière au Brésil. De nouvelles réglementations ont été introduites en 2011, instaurant l'emploi obligatoire des mesures d'atténuation afin de réduire les prises accessoires d'oiseaux de mer ; l'interdiction de retenir des Alopias superciliosus ; *ainsi que des limites de capture nationales pour l'espadon.*

RESUMEN

En 2010, la flota de palangre brasileña constaba de 96 buques registrados en 5 puertos diferentes. El número total de buques aumentó en aproximadamente un 10% respecto a 2009, año en el que operaron 86 buques. El número de buques fletados descendió sin embargo en aproximadamente un 33,3% respecto a 2009, cuando había 6 buques operando. El número de buques de cebo vivo que operó en 2010 fue de 41, lo que supone un ligero descenso (4,6%) respecto a 2009. La captura brasileña de túnidos y especies afines, incluyendo istiofóridos, tiburones y otras especies de menor importancia (por ejemplo, peto y dorado) fue de 33.419,9 t (peso vivo) en 2010, lo que representa un descenso del 16,6% respecto a 2009. La mayoría de la captura la realizaron de nuevo los buques de cebo vivo (14.475,2 t, 43,0%), siendo el listado la especie más abundante (12.725,5 t, 87,9% de las capturas de cebo vivo). Con una captura total de 627,3 t, el rabil fue la segunda especie dominante en la pesquería de cebo vivo. La captura total de la pesquería atunera de palangre (12.349,4 t) fue un 58,3% más elevada que en 2009, siendo el dorado la especie más abundante (5.114,9 t) ya que respondió del 41,4% de las capturas de palangre. El pez espada (21,5%, 2.656,9 t) y la tintorera (12,1%, 1.500,5 t) fueron la segunda y tercera especie más capturadas, respectivamente. Con una captura total de 1.144,6 t, el rabil fue la cuarta especie más abundante en la pesquería brasileña de palangre, respondiendo del 9,2%. La captura total de aguja blanca y aguja azul fue, respectivamente, de 35 t y 130 t, lo que representa descensos del 32,7% y del 12,7% con respecto a 2009, respectivamente. Los datos recopilados por los observadores a bordo indicaron descartes vivos, en porcentaje de captura, en números, del 17,2% para la aguja blanca y del 36,1% para la aguja azul. Parte de las capturas brasileñas fueron de nuevo realizadas por una flota pesquera pequeña con base principalmente en Itaipava, en la costa sureste. Aunque está compuesta de barcos relativamente pequeños de aproximadamente 15 m, esta flota es muy móvil y opera en casi toda la costa de Brasil dirigiéndose a diversas especies con diversos artes, incluyendo palangre, liña de mano, curricán y otros artes de superficie. En 2010 esta flota capturó 5.813,0 t, de las cuales 2.471,4 t (42,5%) corresponden a dorado. El rabil (28,0%, 1.628,0 t) y el listado (12,5%, 727,3 t) fueron la segunda y tercera especie más capturadas. Además de los datos de captura y esfuerzo, que se recopilan regularmente en las pesquerías brasileñas, en 2010 se midieron en total 5.268 peces en el mar y durante los desembarques. Las principales especies medidas fueron: dorado= 1.075, tintorera= 865, rabil= 723, patudo= 684, pez espada= 662, pez vela= 199, aguja blanca= 109 y aguja azul= 100. En 2010 ha continuado desarrollándose un importante esfuerzo de investigación en régimen de colaboración con científicos estadounidenses, venezolanos y uruguayos centrado en los istiofóridos y tiburones y que incluye la recogida de vértebras, espinas, estómagos y gónadas para estudios de reproducción, hábitos alimentarios, edad y crecimiento, así como de utilización del hábitat, mediante marcas PSAT, y selectividad del arte, mediante el uso de anzuelos circulares, temporizadores de anzuelo y registradores de tiempo y profundidad (TDR). En 2009 se inició otro importante programa de investigación (Proyecto MADE - Mitigación de los impactos ecológicos adversos de las pesquerías oceánicas de mar abierto) en colaboración con científicos de la UE que tiene como objetivo investigar medidas de ordenación técnicas y espaciales para reducir la captura fortuita de tiburones pelágicos por parte de los palangreros pelágicos, lo que incluye la utilización del hábitat, mediante marcas PSAT, y la selectividad del arte, mediante el uso de temporizadores de anzuelo y registradores de tiempo y profundidad (TDR). Ha continuado desarrollándose la investigación sobre túnidos (rabil, patudo y atún blanco) con el apoyo financiero del Ministerio de Pesca y Acuicultura, lo que incluye algunos aspectos relacionados con la biología de estas especies, como la edad, crecimiento, reproducción y alimentación, así como estudios sobre la utilización del hábitat mediante marcas PSAT y sobre la selectividad del arte, mediante el uso de anzuelos circulares, temporizadores de anzuelo y registradores de tiempo y profundidad (TDR). La investigación sobre capturas incidentales de aves marinas ha continuado y se ha centrado sobre todo en el

seguimiento de la captura fortuita y en la prueba de medidas de mitigación, especialmente a través del uso de diferentes tipos de línea espantapájaros. El seguimiento de las capturas fortuitas de tortugas marinas en las pesquerías de palangre ha continuado también a través del Projeto Tamar, incluyendo pruebas con el uso de anzuelos circulares y otras medidas de mitigación para reducir las tasas de captura de las tortugas marinas. Con el fin de cumplir adecuadamente las recomendaciones de ICCAT, el Gobierno de Brasil ha implementado diversas normas que regulan la pesquería de túnidos brasileña. En 2011 se han introducido nuevas reglamentaciones que establecen el uso obligatorio de medidas de mitigación para reducir la captura fortuita de aves marinas, la prohibición de retener Alopias superciliosus *y límites de captura nacionales para el pez espada.*

Part I- Information on Fisheries, Research and Statistics

Section 1: Annual Fisheries Information

In 2010, the Brazilian tuna longline fleet consisted of 96 vessels registered in the following ports: Rio Grande-RS (7), Itajaí-SC (14), Santos-SP (3), Recife-PE (3), and Natal-RN (19), plus about 50 artisanal boats based in Itaipava- ES, which also operated with longlines but with several other gears as well. Of these 96 boats, 92 were national and 4 were foreign chartered vessels. The total number of vessels increased by about 10% from 2009, when 86 vessels were in operation. The number of chartered vessels, however, decreased by 33.3% from 2009, when 6 boats operated. The number of baitboats operating in 2010 was 41, decreasing slightly (4.6%) from 2009. These 41 vessels (100% national) were based in the same ports (Rio de Janeiro-RJ, Itajaí-SC, and Rio Grande-RS). In 2010, the number of purse seine boats decreased from 8 in 2009 to 5.

The Brazilian catch of tunas and tuna-like fishes, including billfishes, sharks, and other species of minor importance (e.g., wahoo and dolphin fish), was 33,419.9t (live weight), in 2010 (**Table 1**), representing a decrease of 16.6%, from 2009 (40,093.2 t). Despite the catch estimates for the bait-boat fishery are still preliminary, in 2010, the majority of the catch again was taken by this fishery (14,475.2 t; 43.0%), with skipjack tuna being the most abundant species (12,725.5 t; 87.9% of the baitboat catches). With a total catch of 627.3 t, yellowfin tuna was the second dominant species in the baitboat fishery.

The total catch of the tuna longline fishery (12,349.4 t) was 58.3% higher than 2009, with dolphin fish being the most abundant species (5.114.9 t), accounting for 41.4% of the longline catches. Swordfish and blue shark, accounting for 21.5% (2,656.9 t) and 12.1% (1,500.5 t) of the catches, respectively, were the second and the third most caught species. With a total catch of 1,144.6 t, yellowfin tuna was the fourth most abundant species in the Brazilian longline fishery, accounting for 9.2%.

The total catch of white marlin and blue marlin was, respectively, 35 t and 130 t, representing a decreasing trend of 32.7% and 12.7%, from 2009, respectively. Data collected from observers on board, indicated live discards, in percentage of the catch, in numbers, of 17.2% for white marlin, and 36.1% for blue marlin.

Part of the Brazilian catches resulted again from the fishing activities of small-scale fishing boats based mainly in Itaipava-ES (southeast coast). Although comprised of relatively small boats of about 15m, this fleet is highly mobile, operating throughout most of the Brazilian coast and targeting a variety of species with different gears, including longline, handline, trolling and other surface gears. In 2010, this fleet caught 5,813.0 t of fish, of which dolphin fish contributed with 2,471.4 t (42.5%). Yellowfin and skipjack tuna, accounting for 28.0% (1,628.0 t) and 12.5% (727.3 t) of the catches, respectively, were the second and the third most caught species.

Section 2: Research and Statistics

Several institutions directly assisted the Ministry of Fisheries and Aquaculture (MPA) in processing and analyzing data from 2010: Universidade Federal Rural de Pernambuco (Federal Rural University of Pernambuco-UFRPE) and Universidade Federal do Rio Grande do Norte-UFRN (Federal University of Rio Grande do Norte), located in the Northeast, Universidade Veiga de Almeida, Universidade Federal do Rio de Janeiro, Instituto de Pesca de São Paulo (São Paulo Fisheries Institute), located in the Southeast, and Universidade do Vale do Itajaí (Itajaí Valley University-UNIVALI); and Fundação Universidade do Rio Grande-FURG (Rio Grande University), located in the South. These institutions, together with the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Institute of the Environment and Renewable Natural

Resources-IBAMA), Projeto TAMAR and Instituto Albatroz, continued to conduct several research and statistics activities on tuna and by-catch species caught by Brazilian boats.

Besides the catch and effort data regularly collected from Brazilian tuna fisheries, in 2010, a total of 5,268 fish were measured at sea and while landing. The main fish species measured were: dolphin fish=1,075; blue shark= 865; yellowfin= 723; bigeye= 684; swordfish= 662; sailfish= 199; white marlin= 109; and blue marlin= 100.

In 2010, an important research effort on billfishes and sharks, in cooperation with U.S., Venezuela and Uruguayan scientists, continued to be developed, including collection of vertebrae, spines, stomachs and gonads, for age and growth, feeding habits and reproduction studies, as well as habitat utilization, through PSAT tags, and gear selectivity, by the use of circle hooks, hook timers, and TDRs.

Another important research program started in 2009 (MADE Project – Mitigating Adverse Ecological Impacts of Open Ocean Fisheries), in cooperation with EU scientists, and aims at investigating spatial and technical management measures to reduce the by-catch of pelagic sharks by pelagic longliners, including habitat utilization, through PSAT tags, and gear selectivity, by the use of hook timers and TDRs.

Research on tunas (yellowfin, bigeye and albacore) continued to be developed, with the financial support of the Ministry of Fisheries and Aquaculture, including some aspects of the biology of these species, such as age and growth, reproduction and feeding, as well as studies on habitat utilization, through PSAT tags, and gear selectivity, by the use of hook timers and TDRs.

Brazilian research efforts continued on the incidental catches of seabirds and were aimed mainly at monitoring bycatch and testing mitigation measures. In nine pelagic longline cruises (93 sets and 99,300 hooks) carried out in 2010 the total seabird capture rate was 0.096 birds/1000 hooks. Torilines were tested in seven fishing trips onboard commercial pelagic longline vessels based in southern Brazil in 2010 (68 sets and 73,230 hooks). Single light toriline reduced seabird capture rates by 74.63%. The seabird capture rate without torilines was 0.176 birds/1000 hooks, while the seabird capture rate using torilines was 0,045 birds/1000 hooks. Experiments on line weighting were also carried out during six of these cruises. The effect of 60 g and 75g swivels positioned at 2.0 and 5.5 m from the hook on the sink rate and bird attack rate was studied. During these trips, 55 longline sets were performed, with toriline having been used in 38 of them. The baited hooks with weights placed at 2 meters from de hooks sank faster than hooks with weight at 5.5 m, for both weights (60 g and 75g swivel).

During 1.420 minutes of direct observation during setting operations, 312 bird attacks on baited hooks were recorded. The mean attack rate during set operations under toriline protection (0.1737 ± 0.2799 attacks/min.) was significantly lower (Mann-Whitnney: $P < 0.05$) than the mean attack rate without toriline (0.4458 ± 0.0.4961 attacks/min.). This difference was much higher within the first 50 m from the vessel stern, with the mean attack rate under toriline protection (0.0085 ± 0.0335 attacks/min.) being 97% lower than the mean attack rate without toriline (0.2583 ± 0.4169 attacks/min.). There were no significant differences between the CPUE of the main target species under both treatments. Brazil adopted the Interministerial Normative Instruction no. 04 of 15th of April of 2011 enforcing the use of torilines and weights of at least 60g placed at 2 meters from the hooks for all pelagic long line vessels fishing south of 20^{o}S.

The monitoring of sea turtles bycatch in longline fisheries is being developed since 1998. The approach in these studies has focused in obtaining reliable rates of capture, instead of unreliable estimation of total catch, and in developing mitigation measures. Records of incidental catches were monitored between 2001-2010, in 15.437 longline sets, done during 714 fishing cruises, with a total effort of 21,388,213 hooks, in which 4,623 sea turtles were caught, pertaining to the following species: 2,461 loggerheads (*Caretta caretta*), 1,012 leatherbacks (*Dermochelys coriacea*), 593 olive ridley (*Lepidochelys olivacea*), 67 green (*Chelonia mydas*) and 490 unidentified. In 2010, 10 cruises were monitored, corresponding to 100,690 hooks monitored. Seventy one sea turtles of two different species were captured: loggerheads (*Caretta caretta*) (n = 60) and leatherbacks (*Dermochelys coriacea*) (n = 11).

The adoption of the circle hooks and some mitigation tools (de-hookers and line-cutters) by the national pelagic longline fleet is being analyzed b Brazilian authorities. This includes harmonization with other mitigating measures and monitoring routines to mitigate those by-catches. Since the capture rates of the sea turtles species are worrying for the region studied, it is important to improve the search for information of other members operating in the SW Atlantic and to promote discussions on the most effective strategies and guidelines for monitoring and mitigation of this problem within ICCAT.

Part II- Management Implementation

Section 3: Implementation of ICCAT Conservation and Management Measures

In order to adequately comply with ICCAT recommendations, the Brazilian government has implemented several rules regulating Brazilian tuna fishery, as indicated below.

- *Interministerial Rule No. 04, of April 15, 2011**,** establishing:*

The mandatory use of mitigation measures to reduce seabird by-catch;

- *Interministerial Rule No. 05, of April 15, 2011**,** establishing:*

  The prohibition of retention of Alopias superciliosus;

- *Interministerial Rule No. 06, of April 15, 2011, establishing*:

  The national catch limits for swordfish;

- *Interministerial Rule No. 01, of September 29, 200**6**, establishing:*

  The National Onboard Fishing Fleet Observer Program (Programa Nacional de Observadores de Bordo da Frota Pesqueira-PROBORDO);

- *Interministerial Rule No. 02, of September 04, 200**6,** establishing:*

  The National Fishing Vessel Monitoring System (Programa de Rastreamento de Embarcações Pesqueiras por Satélite-PREPS).

- *Interministerial Rule No. 26, of July 19, 2005**,** establishing:*

  New procedures for filling-in and submitting fishing logbooks of the Brazilian tuna fisheries;

- *Interministerial Rule No. 12, of July 14, 2005**,** establishing:*

  The mandatory release of all white and blue marlins which are alive by the time of boarding;
  The prohibition of sale of any white and blue marlins caught;

Table 1. Total catch (kg) by species and fishing gear, by Brazilian tuna fishing vessels, in 2010.

Species	*BB*	*HL*	*LL*	*PS*	*UN*	*Total*
ALB	33,636.00		206,778.36		30,355.62	270,769.98
BET	96,559.00		1,049,401.21		5,187.21	1,151,147.42
BFT						
BIL			10,848.98			10,848.98
BLF	8,000.00		561.61			8,561.61
BRS						0.00
BSH			1,500,498.65			1,500,498.65
BTH			22,098.12			22,098.12
BUM			46,964.29		83,086.41	130,050.70
CVX			82,549.77		731,412.44	813,962.21
DOL	74,260.00		5,114,921.39		2,800,353.29	7,989,534.68
FRI	204,477.00					204,477.00
KGM			574.20			574.20
MAK			127,701.23			127,701.23
OCS						0.00
OFH			56,359.25			56,359.25
RSK			126,274.71			126,274.71
SAI			69,727.01		1,270.94	70,997.96
SKJ	12,725,506.00		776.98		824,078.05	13,550,361.02
SPF						0.00
SPN			74,173.32			74,173.32
SWO			2,656,900.64		268,708.44	2,925,609.08
TIG			9,584.56			9,584.56
TUN	705,430.00					705,430.00
WAH			19,331.16			19,331.16
WHM			28,783.71		6,191.87	34,975.59
YFT	627,302.00		1,144,631.57		1,844,643.47	3,616,577.04
TOTAL	14,475,170.00	0.00	12,349,440.72	0.00	6,595,287.74	33,419,898

ANNUAL NATIONAL REPORT OF CANADA
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INFORME ANUAL DE CANADÁ

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SUMMARY

Bluefin tuna are harvested in Canadian waters from July through December over the Scotian Shelf, in the Gulf of St. Lawrence, in the Bay of Fundy, and off Newfoundland. The adjusted Canadian quota for 2010 was 518.6 t. A total of 585 licensed fishermen participated in the directed bluefin fishery using rod and reel, handlines, electric harpoon and trap nets to harvest 440.5 t. An additional 64.9 t was harvested as by-catch the pelagic longline fleet in the swordfish and other tunas fishery, 3.289 t was mortalities in tagging studies and assumed mortalities in the charter boat and catch and release fisheries of 3.196 t. Each fish harvested in the directed fishery or as an incidental by-catch is individually tagged with a unique number and it is mandatory to have every fish weighed out at dockside. The swordfish fishery in Canadian waters takes place from April to December. Canada's adjusted swordfish quota for 2010 was 1477.8 t with landings reaching 1345.6t. The tonnage taken by longline was 1166.3t while 176.1t were taken by harpoon. Of the 77 licensed swordfish longline fishermen, 51 were active in the 2010 with a number of these vessels (14) fishing with harpoon or harpoon and trolling gear only. Only 71of 1203 harpoon licenses reported swordfish landings in 2010. The other tunas (albacore, bigeye and yellowfin) are at the northern edge of their range in Canada and are harvested from May to October. Canadian catches of these species have traditionally been a minor portion of the overall Canadian catch of large pelagic species. In 2010, other tunas accounted for approximately 13% of commercial large pelagic species landed. All commercial vessels fishing pelagic species are required to hail out their intention to fish prior to a trip and hail in harvests from sea. The Canadian Atlantic statistical systems provide real time monitoring of catch and effort for all fishing trips on pelagic species. At the completion of each fishing trip, independent and certified Dockside Monitors must be present for off-loading to weigh out the landing, and log record data must be submitted by each fisherman whether a fish is harvested on a trip or not. Canada continues to support and is active in research that improves the basic inputs and approaches of the Atlantic bluefin and swordfish and shark stock assessments. Canadian scientists have continued their studies on: age determination for bluefin tuna and their study on the origin of bluefin tuna caught in the southern Gulf of St. Lawrence using the otolith microchemistry. Canada has recently increased its long-term funding for large pelagics research, particularly for bluefin tuna. Areas of research have included bluefin tuna movement and migrations through PSAT tagging (particularly in areas not covered by previous investigations), and post-capture survival and natal origin investigations. For swordfish, PSAT tagging studies have been conducted to augment those already completed off Georges Bank, targeting the foraging assemblage off the Grand Banks of Newfoundland. Furthermore, funds are being made available to augment staffing of the Large Pelagics Program, including the recent recruitment of a second research scientist, who started work in early 2010. For sharks, research has focused on PSAT tagging, with identification of the first pupping ground for porbeagles and an overwintering ground for blue sharks.

RÉSUMÉ

Le thon rouge est pêché dans les eaux canadiennes de juillet à décembre sur le plateau néo-écossais, dans le golfe du St Laurent, dans la baie de Fundy et au large de Terre-Neuve. Le quota ajusté du Canada au titre de 2010 s'est élevé à 518,6 t. Au total, 585 pêcheurs titulaires de licences ont participé à la pêcherie dirigée sur le thon rouge en utilisant la canne et le

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moulinet, la ligne à main, le harpon électrique et les filets de madrague, avec une capture de 440,5 t. Un volume supplémentaire de 64,9 t a été capturé accidentellement par la flottille palangrière pélagique au sein de la pêcherie d'espadon et d'autres thonidés ; 3,289 t représentaient des mortalités dans le cadre d'études de marquage et 3,196 t correspondaient à des mortalités postulées des pêcheries de remise à l'eau de navires affrétés. Chaque poisson, pêché dans la pêcherie dirigée ou comme prise accessoire, est marqué individuellement avec un numéro unique et chaque poisson est obligatoirement pesé sur le quai. La pêche d'espadon a lieu à partir du mois d'avril jusqu'à décembre dans les eaux canadiennes. Le quota ajusté d'espadon du Canada était de 1.477,8 t au titre de 2010, avec des débarquements atteignant 1.345,6 t. Le tonnage capturé à la palangre se chiffrait à 1.166,3 t, tandis qu'un volume de 176,1 t était capturé au harpon. Sur les 77 pêcheurs titulaires de permis de pêche d'espadon à la palangre, 51 étaient actifs en 2010 et 14 de ces navires opéraient avec des harpons ou des harpons et des lignes traînantes. Seuls 71 des 1203 pêcheurs titulaires de permis de pêche au harpon ont déclaré des débarquements d'espadon en 2010. Les autres thonidés (germon, thon obèse et albacore) se trouvent à la limite septentrionale de leur aire de répartition au Canada et sont capturés de mai à octobre. Les prises canadiennes de ces espèces ont traditionnellement représenté une faible proportion de la prise globale canadienne de grands pélagiques. En 2010, les autres thonidés constituaient près de 13 % des débarquements commerciaux de grands pélagiques. Tous les navires commerciaux pêchant des espèces pélagiques sont tenus d'annoncer leur intention de pêcher avant une sortie et de communiquer les captures réalisées en mer. Les systèmes statistiques atlantiques du Canada fournissent un suivi en temps réel des données de prise et d'effort pour toutes les sorties de pêche visant les espèces pélagiques. À la fin de chaque sortie de pêche, des observateurs de quai indépendants et agréés doivent être présents lors du déchargement afin de peser le poisson débarqué, et chaque pêcheur doit soumettre les données des carnets de bord, qu'un poisson ait été ou non capturé lors d'une sortie. Le Canada continue à soutenir la recherche qui améliore les données de base et les stratégies d'évaluation des stocks de thon rouge, d'espadon et de requins de l'Atlantique. Les scientifiques canadiens ont poursuivi leurs études sur la détermination de l'âge du thon rouge et sur l'origine du thon rouge capturé au sud du golfe du St Laurent à l'aide de la microchimie des otolithes. Le Canada a récemment accru son financement à long terme en faveur de la recherche sur les grands pélagiques, notamment sur le thon rouge. Les domaines de recherche se sont portés sur les déplacements et les migrations du thon rouge par le biais du marquage avec des marques-archives pop-up reliées par satellite (PSAT) (surtout dans les zones n'ayant pas fait l'objet de recherches antérieures), et sur la survie suivant la capture et l'origine natale. Pour l'espadon, les études de marquage PSAT ont été réalisées en complément de celles déjà finalisées au large de Georges Bank, en ciblant les concentrations de poissons à la recherche de nourriture au large des grands bancs de Newfoundland. En outre, des fonds vont être débloqués en vue d'accroître les effectifs du Programme de grands pélagiques, un deuxième chercheur ayant récemment été recruté et a pris ses fonctions au début de 2010. En ce qui concerne les requins, la recherche s'est concentrée sur le marquage PSAT, et l'identification de premières zones de mise bas des requins-taupes communs et d'une zone d'hivernage des requins peau bleue.

RESUMEN

El atún rojo se captura en Canadá desde julio hasta diciembre en la plataforma Scotian, en el Golfo de San Lorenzo, en la Bahía de Fundy y en aguas de Terranova. La cuota ajustada de Canadá para 2010 ascendió a 518,6 t. Un total de 585 pescadores con licencia participaron en la pesquería dirigida con caña y carrete, liña de mano, arpón eléctrico y almadrabas y capturaron 440,5 t. Además, la flota de palangre pelágico capturó 64,9 t adicionales de forma fortuita en la pesquería de pez espada y otros túnidos, con 3,289 t debidas a mortalidades en estudios de marcado y 3,196 t debidas a mortalidades asumidas en los buques fletados y en las pesquerías de captura y liberación. Cada pez capturado en la pesquería dirigida o de forma incidental se marca individualmente con un número único y se tiene que pesar cada ejemplar a pie de muelle. La pesquería de pez espada en aguas canadienses tiene lugar de abril a diciembre. La cuota ajustada de pez espada canadiense para 2010 fue de 1.477,8 t y los desembarques ascendieron a 1.345,6 t. Se capturaron 1.166,3 t con palangre y 176,1 t con arpón. De los 77 pescadores con licencia para pescar pez espada con palangre, 51 estuvieron activos en 2010, y parte de estos buques (14) pescaron con arpón o arpón y curricán

únicamente. Sólo 71 de las 1.203 licencias de arpón comunicaron desembarques de pez espada en 2010. El resto de túnidos (atún blanco, patudo y rabil) se encuentran en el límite septentrional de su rango de distribución en Canadá y se capturan de mayo a octubre. Las capturas canadienses de estas especies han sido tradicionalmente una parte menor de la captura total canadiense de grandes pelágicos. En 2010, los otros túnidos respondieron de aproximadamente el 13% de los desembarques de grandes pelágicos comerciales. Todos los buques comerciales que pescan especies pelágicas deben notificar su intención de pescar antes de una marea y notificar cualquier captura desde el mar. Los sistemas estadísticos del Atlántico de Canadá proporcionan seguimiento en tiempo real de la captura y esfuerzo de todas las mareas de pesca dirigidas a las especies pelágicas. Al final de cada marea, durante el desembarque, deben estar presentes los controladores a pie de muelle, independientes y certificados, para pesar los desembarques. Cada pescador debe presentar los datos consignados en sus cuadernos de pesca, con independencia de que se haya producido o no captura durante la marea. Canadá continúa respaldando y participa activamente en las investigaciones para mejorar las contribuciones básicas y los enfoques de las evaluaciones de los stocks de atún rojo, pez espada y tiburones del Atlántico. Los científicos canadienses han continuado con sus estudios sobre determinación de la edad del atún rojo y sus estudios sobre el origen del atún rojo capturado en la parte meridional del Golfo de San Lorenzo, utilizando microquímica de otolitos. Canadá ha incrementado recientemente su financiación a largo plazo destinada a la investigación sobre grandes pelágicos, especialmente para el atún rojo. Los campos de investigación incluyen las migraciones y el movimiento del atún rojo mediante campañas de marcado PSAT (sobre todo en zonas no cubiertas por investigaciones anteriores) y la supervivencia tras la captura y origen natal. Para el pez espada, se han realizado estudios de marcado PSAT para complementar los que ya han finalizado en las aguas del Georges Bank, centrados en la agrupación trófica de las aguas de los Grandes Bancos de Terranova. Además, se han asignado fondos para incrementar los recursos de personal del programa de grandes pelágicos, lo que incluye la reciente contratación de un segundo científico de investigación, que comenzó a trabajar a comienzos de 2010. Para los tiburones, la investigación se ha centrado en el marcado PSAT, e incluye la identificación de la primera zona de cría de marrajo sardinero y de una zona de ivernada para la tintorera.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Bluefin tuna

Directed bluefin tuna fisheries take place in Canadian waters from July through December over the Scotian Shelf, in the Gulf of St. Lawrence, in the Bay of Fundy, and traditionally off Newfoundland. The adjusted Canadian quota for the 2010 calendar year was 518.6t. The Canadian nominal landings (directed and by-catch) of Atlantic bluefin tuna in 2010 were 505.363 (**Table 1**) made up of 440.5 t in the directed fishery, 64.9 t was an incidental by-catch by the pelagic longline fleet in the swordfish and other tunas fishery , 3.289 t as mortalities in tagging studies. There were also assumed mortalities of 3.196 t. The 6.8t shortfall from the 2010 fishery will be carried over in deriving the 2011 Canadian quota.

All traditional bluefin tuna fishing areas produced catches of tuna in 2010 (**Table 2**). The tended line fishery in the area between Georges and Browns Bank off southwest Nova Scotia known as the Hell Hole continued to be an important fishing area. The Gulf of St. Lawrence rod and reel fishery produced the largest fraction of the total Canadian landings in 2010 (263 t, or 50% of total quota caught). In 2010, the average size of bluefin in the Gulf of St. Lawrence fish weighed about 336 kg and in the southwest Nova Scotia fishery 217 kg. Additional catch breakdown is shown in **Table 2**.

In 2010, 585 licensed fishermen participated in the directed bluefin fishery with rod and reel or tended line, and five fish-trap licence holders in St. Margaret's Bay used 9 bluefin tuna trapnets One offshore longline licence was authorized to direct for other tuna with a small bluefin by-catch provision (**Table 3**). Since 2006, the pelagic

longline fleet has been permitted to retain bluefin tuna incidentally harvested in their swordfish and other tunas fishery resulting in significant reductions in dead discards to nearly zero in most years.

A new management approach was implemented beginning in the 2004 fishery season, which provides each of the seven inshore fleet sectors with a specific share of the Canadian quota based on catch history. This has allowed fleets to operate independently of each other, adopting strategies to address when and how to harvest the resource. Some inshore bluefin tuna fleets have incorporated charter boat catch and release fisheries into their annual management plan. Assumed mortalities from the charter boat fishery are accounted for against the fleet's commercial quota.

1.2 Swordfish

Swordfish occur in Canadian waters from April to December, primarily on the edge of Georges Bank, the Scotian Shelf and the Grand Banks of Newfoundland. The Canadian ICCAT initial allocation for swordfish for 2010 was 1348 t. Canada's adjusted quota for 2010 was 1477.8 t which includes the annual transfer of 25 t from the USA to Canada to replace the 25 t reduction in the Canadian quota as a result of an allocation to accommodate Morocco into the fishery and a 100 t transfer from Senegal. As a result of market conditions, Canadian nominal landings in 2010 were 1345.6 t (**Table 1**), resulting in an underage of 122.9 t. The 2010 dead discard was 15.2 t which will be deducted from the initial catch limit in 2012.

The Canadian tonnage taken by longline was 1166.3 t (or 87% of the catch), while 176.1 t were taken by harpoon (**Table 4**). The mean round weight of fish caught by longline and harpoon was 78 kg and 98 kg, respectively (**Table 4**). Only 51 of the 77 licensed swordfish longline fishermen were active in the 2010 fishery (**Table 4**) with a number of these vessels (14) fishing with harpoon or harpoon and trolling gear only. This number is lower than the mid-1990's when all, or nearly all, of the swordfish longline licenses were active (**Table 4**). Although a total of 1,203 fishermen are eligible for harpoon licences, only 184 are eligible to direct for swordfish (Harpoon Group A), based on their historic participation in this fishery in the 1990's and early 2000's, The remaining licence holders (Harpoon Group B) are limited to fishing opportunistically during other fisheries. This restriction on Group B is in place to limit effort in the fishery. In 2010, 74 licence holders, primarily Harpoon A licences, had reported landings of harpooned swordfish.

1.3 Other tunas

The other tunas (albacore, bigeye and yellowfin) are at the northern edge of their range in Canada, and they are harvested along the edge of the Gulf Stream and Georges Bank, the Scotian Shelf and the Grand Banks (and beyond) from May through October. Canadian catches of these species have traditionally been a minor portion of the overall Canadian catch of large pelagic species. In 2010, other tunas accounted for approximately 13% of commercial large pelagic species landed. Yellowfin (166.0 t) was the most important other tuna species landed, followed by Bigeye tuna (102.8 t) and albacore (14.3 t). The mean round weight of albacore, bigeye and yellowfin tunas was 16.6 kg, 40.7 kg and 27.6 kg, respectively. Approximately 44 of 78 licensed other tuna fishermen were active in 2010.

One Canadian offshore longline vessel is authorized to direct for other tuna species with a bluefin tuna by-catch. The 77-vessel swordfish/other tunas longline fleet is also permitted to direct for other tunas and retain bluefin tuna by-catch under certain conditions in order to reduce dead discards. In addition, bluefin tuna vessels are authorized to catch and retain an incidental by-catch of other tuna while fishing for bluefin.

1.4 Sharks

Porbeagle is the only shark species for which there is a directed longline fishery. Historically, blue shark and shortfin mako have been a by-catch of the Canadian swordfish and groundfish longline fisheries although small amounts are also landed from other fisheries. The by-catch of blue shark is much larger than reported due to the live release of most incidental harvests and some unreported dead discards. A Management Plan for all shark species was first implemented in 1995. The current management plan for porbeagle sharks has resulted in a significant allowable catch reduction for porbeagle (to 185t) and the closure of the porbeagle mating grounds in order to facilitate stock rebuilding. Total reported landings of porbeagle sharks in the directed fishery and as a by-catch were down significantly over the previous year to a level of 83.4 t in 2010. Blue shark and shortfin mako landings in 2010, were 0.32 t and 40.97 t, respectively (**Table 1**) mainly as a by-catch in other directed pelagic fisheries.

In 2010, 19 (excluding the 2 inactive blue shark-only licences in the Maritimes Region) exploratory shark fishing licences were authorized to fish porbeagle and/or blue shark, with all other sharks, including shortfin mako restricted to a by-catch (**Table 3**). White sharks can no longer be retaind as by-catch by Canadian fishermen due to their listing under the Canadian *Species at Rick Act*.. The swordfish fleet has adopted the practice of retaining only dead shortfin mako sharks, which has reduced landings in recent years. A reduction of porbeagle shark licences from a high of 55 licences in 2001 to less than 20 has been achieved mainly through the attrition of inactive licences. In addition, approximately 751 recreational shark licences were authorized in 2010 (**Table 3**). The fishery is primarily catch-and-release; retention is only authorized where fishing takes place in the context of a federal government-authorized shark derby, which, has research-related protocols.

Section 2: Research and Statistics

As the foundation for reliable research and stock assessments, the Canadian Atlantic statistical systems provide real time monitoring of catch and effort for all fishing trips. In 1994, an industry-funded Dockside Monitoring Program (DMP) was established in Atlantic Canada, according to Department of Fisheries and Oceans (DFO) standards, for the swordfish longline fleet and the majority of bluefin landings. Since 1996, this system has applied to all fleets (including sharks), and included monitoring of all trips even when no fish were caught. At the completion of each fishing trip, independent and certified Dockside Monitors must be present for off-loading, and log record data must be submitted by each fisherman to the Monitoring Company that inputs the data into a central computer system. Log records contain information on catch, effort, environmental conditions (e.g., water temperature) and by-catch. Log records from trips with catch must be received from fishermen before they can proceed with their next fishing trip (log records from zero catch trips can be mailed in at a later time). Ideally, this ensures 100% coverage of properly completed log records and individual fish weights. Prior to the implementation of the Dockside Monitoring Program, even though the submission of logbooks was compulsory, less than 50% of trips were represented by useable log records and information on individual sizes of fish (see **Table 4** for swordfish). The effectiveness of this system was thoroughly reviewed in 1998 and 1999, and appropriate changes implemented, as necessary. Problems are assessed through Observer Programs and at-sea surveillance on the domestic fleet. License holders who fail to comply with the domestic regulations and conditions of license are liable to prosecution that may include fines, and suspension of license privileges.

Canada has recently increased its long-term funding for large pelagics research, particularly for bluefin tuna and sharks areas of research have included bluefin tuna movement and migrations through PSAT tagging particularly in areas not covered by previous investigations), and post-capture survival and natal origin investigations. For swordfish, PSAT tagging studies have been conducted to augment those already completed off Georges Bank, targeting the foraging assemblage off the Grand Banks of Newfoundland. Furthermore, funds are being made available to augment staffing of the Large Pelagics Program, including the recent recruitment of a second research scientist, who will start work in early 2010. For sharks, research has focused on PSAT tagging, with identification of the first pupping ground for porbeagles and an overwintering ground for blue sharks.

Canada's Sustainable Fisheries Framework forms a foundation for implementing an Ecosystem Based Management approach in the management of its fisheries. Of particular note for the ICCAT managed fisheries is the advancement of ecosystem objectives and policies related to biodiversity through a By-catch Management Project, and a workplan specifically aimed at addressing by-catch and discarding in Canadian large pelagic fisheries. The workplan includes projects aimed to both manage discards as well as control incidental mortality in large pelagics fisheries. As part of this workplan, Canada increased observer coverage on the swordfish/other tunas longline fleet in 2010 to gather additional information on incidentally caught species.

In February 2010, Fisheries and Oceans Canada held a loggerhead turtle Resource Potential Assessment, a multi-stakeholder review, to look at the status of loggerhead turtles in Canadian waters, threats to this species, possible mitigation measures and, recovery goals. A loggerhead conservation plan was also completed in 2010.

2.1 Bluefin tuna research

Highlights of the 2010 scientific research program at the Biological Station (St. Andrews) included the following activities:

1. A study of post-release mortality in a experimental recreational catch and release fishery for giant Atlantic bluefin tuna was completed in the southern Gulf of St. Lawrence. As indicated by pop-up satellite archival tags, two of 59 bluefin tuna died after catch-and-release yielding a mortality rate of 3.4% (95% C.I. =

0.8% < *u* < 12.6%). Four tags failed to report. Alternate estimates of the rate or mortality that included an incidental mortality (5.1%; 95% C.I. = 1.6% < *u* < 14.4%) and removal of the four tags that did not report from the sample (5.6%; 95% C.I. = 1.8% < *u* < 15.6%) were calculated. The results have been accepted for publication in the journal *Biological Conservation* (Stokesbury et al. 2011).

2. In 2010, there was considerable activity by groups deploying satellite archival tags on bluefin tuna. Dr. Barbara Block and collaborators released 38 tags in the southern Gulf of St. Lawrence. In addition, 9 tags were released by the Lutcavage group, and 59 by Drs. Stokesbury and Neilson, as noted above. In total, 106 tags were applied in the southern Gulf of St. Lawrence in 2010. Off southwestern Nova Scotia, Dr. Lutcavage's group applied PSATs to 18 fish. Finally, off the southern Grand Banks, Fisheries and Oceans Canada applied PSATs to 9 bluefin tuna. Partner organizations include the FFAW/Newfoundland and Labrador Bluefin Tuna Fleet, the Gulf Nova Scotia Fishermen's Association, and the Southwest Nova Tuna Fishermen's Association, and the University of Massachusetts and Stanford University.

3. Canadian and USA scientists published results of previous bluefin tagging deployments made off southwest Nova Scotia (Galuardi et al. 2010). Among the main conclusions, it was noted that large, mature bluefin tuna of similar size tracked from the same foraging area off the southwest coast of Nova Scotia exhibited diverse dispersal patterns and occupied different ocean regions.

4. Research conducted by Fisheries and Oceans Canada indicates that the presence of the Cold Intermediate Layer (CIL) is affecting the catch rates in the southern Gulf of St. Lawrence fishery, and the percentage of the water column that the CIL occupies vertically affects the probability of catching a bluefin tuna (Vanderlaan et al. 2011). These environmental influences are being explored further and may be proposed to the SCRS for inclusion in the catch rate standardization in 2012.

5. As a contribution towards the Grande Bluefin Year Program, Canada has initiated a program of biological sampling of the catch. The target is to obtain samples from 400-500 fish in the 2011 fishery.

6. In collaboration with U.S. colleagues, Canada has located archived samples of bluefin tuna of sizes corresponding with the exceptionally strong year-classes formed in the early 1970s. These samples have been sent for analyses of otolith microchemistry. Knowledge of whether these fish were of eastern or western origin is of interest when considering the evidence supporting alternative models of stock and recruitment.

7. Canada continues to collaborate on bluefin tuna age and growth research, working closely with colleagues from EC-Spain and the USA.

2.2 Swordfish research

1. Canada continued to conduct swordfish satellite tagging off Newfoundland (the third year of a 3 year long program). In 2010, seven swordfish were tagged using PSATs.

2. In collaboration with colleagues from NMFS (Miami) and the South Carolina Department of Natural Resources, Canada is participating in a study of swordfish migrations that pools PSAT data from those three sources. The analyses of the data are being undertaken by CLS - Argos.

3. Canada undertook an examination of loggerhead turtle (*Caretta caretta*) encounters in its swordfish and tuna longline fishery (Paul et al. 2010).

4. Canada, along with swordfish scientists from a number of other countries, is preparing a paper describing the recovery of Atlantic swordfish stocks. This is in an invited review paper, intended for the journal *Fish and Fisheries.*

5. A Ph.D. student at Memorial University of Newfoundland and Labrador is in the final year of her program, examining patterns of by-catch in the Canadian pelagic longline fishery. A recent paper explored options for reducing incidental catch in the Canadian pelagic longline fishery (Carruthers et al. 2010).

6. Canada provides estimates of dead swordfish and bluefin discards based on Observer coverage of the domestic large pelagic longline fleet.

2.3 Sharks

An active research and stock assessment program on large pelagic sharks is underway at the Bedford Institute of Oceanography. The following projects were undertaken in 2010:

1. Blue shark seasonal movements were studied using 23 archival satellite pop-up tags applied off of eastern Canada. All of the tagged sharks migrated to the west during the fall and overwintered in or just west of the Gulf Stream, where there appeared to be active feeding during the winter. All of the blue sharks exhibited strong diel vertical migrations (to a depth of 1 km) in the Gulf Stream, but not further east. Thermoregulatory calculations imply a ~2.5 fold advantage to spending the daytime period in deeper cooler waters despite a presumed decrease in foraging success at depth (Campana et al. 2010a).

2. Research to improve discard mortality estimates for sharks was continued, including estimates from both large pelagic and groundfish fisheries.

3. Pop-up archival satellite tags applied to porbeagle sharks (n=21) demonstrated that all of the mature females that were tagged swam distances of about 2000 km from eastern Canada to the Sargasso Sea during the winter to give birth to their pups (Campana et al. 2010b).

4. A Canadian shark tagging program was extended to further involve recreational shark derby participants in shark research and conservation. Tag recaptures will be used to estimate derby exploitation rates on an annual basis. Ongoing monitoring of shark derby catch rates will be used as an index of blue shark availability in Canadian waters, although it does not appear to be valid as an indicator of overall population abundance. Catch rate, size composition, sexual maturity, and stomach contents were also monitored at the derbies.

5. Behavioural effects due to satellite tagging were analysed in several species of large pelagic fish, including sharks, swordfish and tuna (n=183). The evidence supports the hypothesis that large pelagic fish undergo significant behavioural changes lasting several days from catching, handling, or carrying satellite tags (Houlihan, et al. 2010)

2.4 Precautionary Approach

Canada continues to strongly support the Precautionary Approach and assigns a high priority to its implementation in fisheries management domestically as well as in the context of ICCAT. Recognizing that ICCAT stocks are currently not information rich, Canada fully supports all new or enhanced research aimed at improving stock assessments. Furthermore, as we work to define the precautionary approach in a fisheries context, Canada continues to strongly promote the use of appropriate fisheries management and compliance measures to ensure the rebuilding and safeguarding of the resource. Canada is also a member of ICCAT Ad Hoc Working Group on Precautionary Approaches.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

For bluefin, swordfish, sharks, and the other tunas (bigeye, yellowfin, and albacore) Canada undertakes annual stakeholder consultation and announces management measures prior to the opening of the respective fishing seasons. In most cases, details of management measures and their enforcement are provided on the Departmental website (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/index-eng.htm). These plans are prepared in consultation with the fishing industry and incorporate all relevant ICCAT regulatory recommendations. They are implemented under the *Fisheries Act of Canada*. The necessary ICCAT regulatory recommendations are either specified in the *Atlantic Fishery Regulations* (1985) (made pursuant to the *Fisheries Act*) or are handled as written in fish harvester's Conditions of Licence (issued pursuant to the Fishery (General) Regulations), both of which are legally binding on fishermen.

3.1 Catch limits and minimum sizes

3.1.1 Bluefin tuna

Canada has implemented the ICCAT regulatory recommendations that apply to bluefin tuna in the Canadian Atlantic Integrated Bluefin Management Plan. The 2010 quota was set at 518.6 (see 1.1 above), and no person shall have in their possession any bluefin weighing less than 30 kg. In addition, Canada has limited entry into the fishery; and restrictions on the amount and type of gear used, vessel replacement, management fishing areas, and licence transfer requirements. A multi-year management plan for bluefin tuna was last published in 2007 and continues to be in force.

A new Integrated Fisheries Management Plan is currently being written with a more integrated approach for the 2012 season

3.1.2 Swordfish

Canada has implemented the ICCAT regulatory recommendations that apply to swordfish in the Canadian Atlantic Integrated Swordfish Management Plan. The 2010 adjusted quota was set at 1477.8 t (see 1.2 above), and there continued to be a prohibition on the taking and landing of swordfish less than 25 kg in round weight, and/or less than 125 cm LJFL (with 15% tolerance). In 2002, a restructuring of the fleet, through the implementation of individual transferable quotas gave more control in managing the quota. From 1998 - 2009, landings of fish <119 cm LJFL were reduced to as close to zero as possible. The new IFMP is in the final stages of approval.

3.1.3 Other tunas

In 1998-1999, the first Canadian Atlantic Integrated Fishery Management Plan was issued for bigeye, yellowfin and albacore. Measures adopted in that plan remained in effect through 2010. A multi-year management plan for both swordfish and other tunas will be released in 2011. Fishing effort is restricted by limiting entry into the directed fishery to vessels having a swordfish/other tunas longline licence and to one offshore vessel with an other tuna longline licence. No person shall have in their possession any bigeye or yellowfin weighing less than 3.2 kg.

3.2 Closed seasons

*Swordfish***.** In addition to the ICCAT regulatory recommendations, Canada has limited entry into the fishery, strict by-catch provisions, time-area closures to minimize by-catch, and gear restrictions. In an effort to protect large (spawning stock) swordfish, the industry initiated a closure of a substantial portion of the Scotian Shelf to harpoon gear, for the past several years from early autumn to the end of the season.

3.3 Observer programs

Canada has had an excellent independent Observer Program in place since 1977. Observers collect biological data, and monitor compliance with fishing regulations. In 2010, as part of the Bycatch Management Project the observer coverage level was increased by 5% to approximately 10% (by sea days fished) on the pelagic longline fleet fishing for swordfish and other tunas. Data from the Observer Program are used to estimate dead discards, and document incidental catch of non-target species.

3.4 Vessel monitoring

Canada can have a maximum of 8 licences for large pelagic vessels over 24 meters in length. Currently the fishery is maily prosecuted by vessels less than 20 metres. Most fishing is conducted within the 200 mile zone. In line with the recommendation adopted by ICCAT, all vessels greater than 20 metres are equipped with VMS systems All vessels are equipped with a VMS system as per the recommendation adopted by ICCAT. Canadian licensing measures permit these licenses to be used on smaller vessels and in most years less than 8 vessels over 24 meters in length may have actually operated in the fishery. All Canadian longline vessels, regardless of length, are also required by condition of licence to use a vessel monitoring system.

3.5 Inspection schemes and activities

Canada has a Port Inspection Scheme that is consistent with the ICCAT Regulatory Recommendation that entered into force on 13 June 1998 (see section 4).

3.6 Measures to ensure effectiveness of ICCAT conservation and management measures and to prohibit illegal, unreported and unregulated fisheries

Canada participates in the Statistical and Catch Document Programs for bluefin tuna, swordfish and bigeye. Programs for swordfish and bigeye tuna were introduced in 2003 for all exports. In 2008, Canada introduced the new *Bluefin Tuna Catch Documentation Program* in accordance with ICCAT Rec. 07-10.

3.7 Other Recommendations

Prior to the implementation of the ICCAT Bluefin Tuna Statistical Document Program, Canada developed a system of uniquely numbered tags to be attached to all bluefin tuna landed in Canada so that the origin of all Canadian harvested bluefin can be tracked right to the marketplace. Since 1995, it has tracked the utilization of these tags through a computerized system and can cross reference data from this system with the information on the Bluefin Tuna Catch Documents.

Statistical Document Programs for swordfish and bigeye use government accredited organizations to validate export documents.

Section 4: Inspection Schemes and Activities

As noted above, Canada has a Port Inspection Scheme consistent with the ICCAT Regulatory Recommendation. Canada uses a comprehensive enforcement protocol that involves a combination of the Dockside Monitoring Program (see section 2), and shore and sea-based patrols of Department of Fisheries and Oceans Fisheries Officers to ensure compliance with domestic regulations (which include ICCAT regulatory recommendations; see section 3).

In addition to the Dockside Monitoring Program to ensure complete coverage of the catch and effort of the Canadian fleet (see section 2. above), aerial and vessel surveillance are also used to monitor the fleet's at-sea. Shore-based patrols monitor routine landings, watch for illegal landings and conduct airport and border surveillance. There were no significant compliance issues in any of the Canadian fisheries covered by ICCAT in 2010. Observer coverage is used periodically to monitor specific important management questions in the commercial fishery. Test fisheries are also used to define areas and times to minimize the catch/by-catch of restricted species or undersized targeted species.

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Table 1. Canadian landings (tonnes round weight) of large pelagic fish species, 2001-2010.

Species	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Swordfish	967.8	1078.9	959.3	1284.9	1203.3	1557.9	1403.6	1334.0	1299.7	1345.6
Bluefin tuna	549.1	523.7	603.7	556.6	536.9	599.7	732.9	574.8	530.2	505.4
Albacore tuna	121.7	51.0	112.7	55.7	27.1	52.1	27.3	33.4	10.7	14.3
Bigeye tuna	327.0	241.2	279.3	181.6	143.1	186.6	196.1	130.2	111.0	102.8
Yellowfin tuna	105.2	125.3	70.4	72.7	303.5	239.5	292.9	167.9	53.4	166.0
Unspec. tuna	0.5	0	.1	0.4	0.2	1.3	0.0	0.1	0.0	0.01
Blue shark	18.4	0.4	5.1	6.0	0.3	11.4	4.4	0.2	0.1	0.3
Shortfin mako	77.8	69.3	78.2	73.3	79.5	90.9	71.4	42.8	53.2	41.0
Porbeagle	902.3	498.6	236.6	142.4	231.5	202.2	192.2	123.9	62.4	83.4
Unspec. sharks	10.7	19.7	21.1	13.4	11.3	14.7	8.3	5.8	4.6	8.4
Marlin	5.3	3.2	2.1	1.4	1.7	4.7	3.1	2.6	0.6	1.9

Table 2. Canadian bluefin tuna landings and discards (tonnes round weight) by fishing area, 2000-2010.

Bluefin fishing area (west to east)	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Southwest Nova Scotia	221	290	280	310	281	272	351	174	231	234	240
Northeast Nova Scotia[1]	7	25	35	7	11	21	45	60	65	13	17
Gulf of St. Lawrence	236	149	205	192	239	251	312	226	263	263	211
Newfoundland	71	51	68	33	5	26	11	14	0	9	35
Offshore	13	7	16	14	0.5	30	14	17	16	11	2
Year-end adj	1	<1	<1	<1	-	<1	<1	<1	-	-	-
Total Landings	**549.1**	**524**	**603.6**	**557**	**536.9**	**599.7**	**732.9**	**491.0**	**574.8**	**530.2**	**505.4**
Scientific tagging[2]	-	-	-	-	-	-	-	-	-	-	3.289
Dead discards[3]	46.0	13.2	36.9	14.0	14.6	0	2.0	0.72	1.2	2.9	3.196
Canadian quota	*569.5*	*553.*	*594.7*	*580.*	*645.9*	*731.8*	*755.1*	*571.4*	*626.2*	*553.8*	*518.6*

[1] Fish caught in NAFO areas 4V and 4Wd.
[2] Mortality from sceintific tagging study.
[3] 2009 and 2010 also includes estimated mortality from catch and release charter boat fisheries.

Table 3. Distribution of tuna, swordfish longline and shark fishing licences by region and species[1] in 2010.

Region	*Number of licences*[1]							
	Bluefin		*Swordfish (LL)*		*Other tuna (LL)*[4]		*Sharks*	
	Total	*Active*	*Total*	*Active*	*Total*	*Active*	*Explor.*	*Rec.*
Gulf	602	496	-	-	-	-	4	55
Newfoundland	55[3]	15	2	1	2	1	-	62
Scotia-Fundy	42	36	75	50	75	42	21	634
St. Margaret's Bay[2]	24	4	-	-	-	-	-	-
Offshore	-	-	-	-	1	1	-	-
Quebec	54	34	-	-	-	-	2	-
Total	777	585	77	51	78	44	27	751

[1] Bluefin tuna, swordfish, other tunas, and sharks (exploratory longline licences) are regulated by limited entry. Recreational shark licences are restricted to hook and release only, and the number varies from year-to-year, depending on demand.
[2] Three fish trap licence holders with 6 bluefin trapnet licences each. 1 licence holder with five trapnet licences and 1 licence holder with one trapnet licence.
[3] 38 of these licences are subject to a reduced level of fishing activity and restricted to NAFO Divisions 3LNO.
[4] Restricted to tunas other than bluefin (albacore, bigeye, yellowfin).

Note: Active fishermen are those that picked up their licences, licence conditions and tags, and submitted log records. Most logs not returned for sharks so active licences are identified as those who requested conditions.

Table 4. Summary of 2000-2010 swordfish vessels landing fish, landings (tonnes round weight), discards[1], average weight of fish (kg round) by gear, percentage of small fish by number[2], and percentage of catch sampled for size.

	2000	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
No. of vessels landing fish											
Longline	61	63	46	44	45	48	51	55	53	52	47
Harpoon	92	84	71	89	86	86	78	76	75	74	74
Landings (t)											
Longline	873	957.6	922	11383	1116	1365	1200.3	998.8	1076.1	1051.8	1166.0
Harpoon[1]	95	121.3	38	147	87	192.9	203.3	267.4	257.9	247.7	176.1
Total	968	1078.9	959	1285	1203	1557.9	1403.6	1266.2	1334	1299.7	1342.5
Discards (t)[2]	49.9	26.4	32.7	78.6	44.8	106.3	38	60.8	38.7	9.3	15.2
Ave. weight (kg)											
Longline	58	69	72	63	70	69	74	75	73	76	78
(# sampled)	(12991)	(13611)	(12859)	(17298)	(15368)	(20333)	(15541)	(14246)	(11648)	(12473)	(12899)
Harpoon	111	102	117	108	121	117	108	102	106	100	98
(# sampled)	(830)	(1287)	(413)	(1364)	(658)	(1646)	(2275)	(2327)	(2757)	(2074)	(1778)
% small fish by number landed[3]											
<125 cm	3	2	<1	2	<<1	<<1	<<1	<<1	<<1	<<1	<<1
<119 cm	<<1	<1	<<1	<1	<<1	<<1	<<1	<<1	<<1	<<1	<<1
% of catch sampled	100	100	100	100	100	100	100	96	86	89	88

[1] Harpoon landings include landings by the Pelagic longline licence holders using harpoon gear.
[2] Discarded dead from swordfish longline fishery: no estimates prior to 1997; 1997 actual tonnage observed by at-sea Observers; 1998-2010 estimate for entire fishery based on observer coverage (see Porter et al. 2000).
[3] Minimum size under regulation in bold: <25 kg round weight or <125 cm LJFL with 15% tolerance (by number) from 1991-1995, and again in 2006. Regulation changed to <119 cm LJFL with no tolerance from 1996-2003.

ANNUAL REPORT OF CAPE VERDE[1]
RAPPORT ANNUEL DU CAP-VERT
INFORME ANUAL DE CABO VERDE

Vanda Marques da Silva Monteiro

I ère partie (Information sur les pêcheries, la recherche et les statistiques)

Le Cap Vert est un archipel d'origine volcanique, constitué de dix îles, avec une ligne de côte de 1.020 km et une vaste zone économique exclusive – ZEE (734.265 km^2), ce qui est favorable au développement de la pêche.

La pêche aux thonidés est l'une des plus anciennes au Cap-Vert, avec une grande importance socio-économique.

La capture totale en 2010 a été de 13.304 tonnes, péchées principalement à la senne dans la pêche industrielle ou semi-industrielle et à la ligne à main dans la pêche artisanale.

Depuis 2007, au Cap-Vert, au niveau national, il n'y a pas d'embarcation de pêche industrielle ciblant les requins dont les captures sont accidentelles. En raison de la fragilité de notre surveillance, les requins font souvent partie des prises accessoires de la pêche à la palangre de la flotte étrangère qui opère dans notre ZEE.

La pêche sportive, au fil du temps, a été une activité d'une grande importance pour le développement économique, social, culturel et politique, mais malheureusement il n'existe pas encore de suivi de cette pêcherie.

Un Bulletin statistique des pêches est publié tous les ans et présente les données de l'année précédente.

Chapitre 1 : Information annuelle sur les pêcheries

La pêche au thon est dirigée principalement sur l'albacore *(Thunnus albacares)*, le listao *(Katsuwonus pelamis)*, le thon obèse *(Thunnus obesus)*, la thonine commune *(Euthynnus alleteratus)*, l'auxide *(Auxis sp)* et le thazard bâtard *(Acanthocybium solandri)*.

Ces ressources sont exploitées par la flotte industrielle ou semi-industrielle et par la flotte artisanale. Au Cap-Vert, les principales zones de pêche sont les monts sous-marins et les pentes sous-marines autour des îles.

1.1 Captures

Les données de capture de thon et d'espèces apparentées en 2010 sont provisoires et estimées à 13.304 tonnes (**Figure 1**).

Les istiophoridés sont capturés dans les eaux du Cap-Vert, principalement par des navires de l'UE et dans le cadre de la pêche sportive. Les requins sont toujours présents dans les déclarations de la flotte étrangère, qui continuent à pêcher une quantité raisonnable de requin comme prise accessoire.

Au-delà du marché national, le produit de la pêche des thonidés est dirigé vers l'exportation à état frais, congelé et en conserve.

En ce que concerne la fréquence des tailles, il y a une tendance stable au cours des années précédentes.

1.2 Flotte et engins

La flotte du Cap-Vert, selon les données provisoires de 2011, est composée de :

- 832 barques avec des moteurs hors-bord
- 300 barques sans moteur
- Une moyenne de trois pêcheurs par bateau
- Environ 101 embarcations plus grandes avec un moteur intérieur et une moyenne de 12 pêcheurs/unité (2010).

Les ressources sont exploitées par la flotte artisanale, des barques et la flotte industrielle et semi-industrielle, des plus grandes embarcations.

Les engins de pêche les plus utilisés sont la seine, la ligne à main, l'hameçon, la canne et la palangre.

[1] No summary provided / Aucun résumé soumis / No se ha facilitado el resumen.

Le nombre de pêcheurs a tendance à augmenter et en 2010 près de 4.600 pêcheurs ont été enregistrés.

1.3 Flotte étrangère

La flotte étrangère autorisée opère dans la ZEE du Cap-Vert, sur la base d'accords ou de contrats de pêche. Les navires appartiennent surtout aux pays de l'Union européenne et aux pays asiatiques.

Les demandes de licence des navires étrangers indiquent généralement comme espèces cibles, les thons, mais les principales espèces pêchées restent less requins, le thon obèse, l'espadon et l'albacore. Les palangriers asiatiques pêchent essentiellement l'albacore et le thon obèse.

Seules quelques embarcations de l'Union européenne déclarent les captures effectuées.

Chapitre 2 : Recherche et statistiques

L'objectif de la recherche est de faire des recommandations en vue de l'exploitation optimale et durable des ressources aquatiques vivantes, afin d'atteindre les objectifs économiques et sociaux établis dans la politique de développement, sans pour autant négliger la protection de l'environnement, la conservation des ressources et la préservation de la nature, notamment en matière de marins du patrimoine biologique. La recherche halieutique et de l'environnement et les études socio-économiques sont donc des instruments de grande importance pour le développement de la pêche.

La responsabilité de toutes les questions relatives aux espèces de grands migrateurs au Cap-Vert est partagée entre la Direction générale de pêche et l'Institut national de développement des pêches, les deux appartenant au ministère des infrastructures et de l'économie maritime (MIEM). La collecte des données statistiques est faite dans les ports de débarquement et sur les marchés par les enquêteurs de l'INDP, suivi de la digitalisation, du traitement et de l'analyse. Les prélèvements sont réalisés à la taille, pour toutes les espèces de thonidés et autres, péchés au Cap-Vert.

Les données compilées, y compris les données de Tâche I et de Tâche II, ainsi que le nombre de navires de pêche, ont été régulièrement soumises au Secrétariat de l'ICCAT, contribuant ainsi à la mise à jour des statistiques et des évaluations des stocks de l'ICCAT.

La délivrance d'un Bulletin statistique est une activité annuelle.

IIe partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en œuvre des mesures de gestion et de conservation de l'ICCAT

En ce qui concerne la mise en œuvre des mesures de conservation et de gestion pertinentes de l'ICCAT, le gouvernement du Cap-Vert, à travers le Plan de gestion des pêches, actualisé en 2009, a maintenu l'exclusivité de la zone à l'intérieur des 3 milles nautiques pour l'activité de pêche artisanale et l'interdiction à la flotte étrangère de toute activité de pêche à l'intérieur des 12 milles nautiques.

Pour les requins, il est interdit, dans la ZEE du Cap-Vert, de pratiquer leur pêche à des fins exclusivement de commercialisation des nageoires. Toute cette réglementation est apparue dans la Résolution 3/2005 du 21 février.

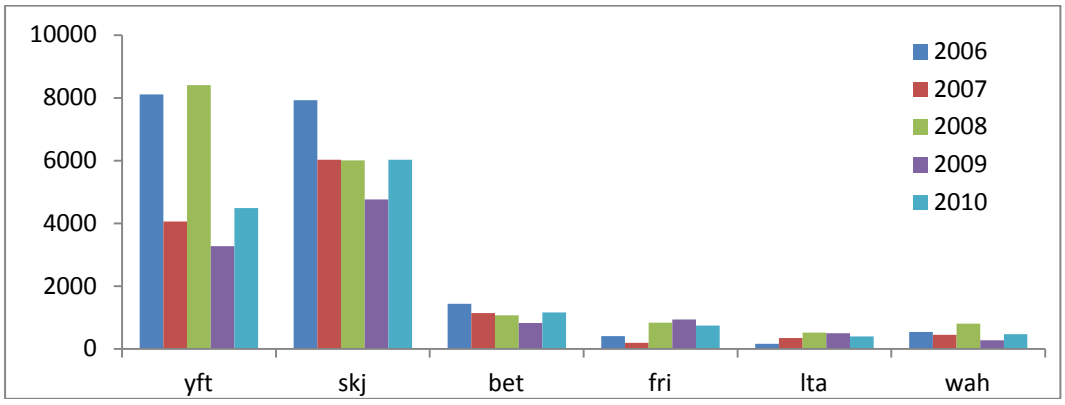

Figure 1. Données de capture provisoires 2006-2010 (Source : INDP et Calvo Pesca).

ANNUAL REPORT OF CHINA
RAPPORT ANNUEL DE LA CHINE
INFORME ANUAL DE CHINA

Song Liming, Li Yunkai, Zhang Xinfeng[1]

SUMMARY

Longline is the only fishing gear used by the Chinese fishing fleet to fish tunas in the Atlantic Ocean. Thirty (30) Chinese tuna longliners operated in 2010, with a total catch of 6873 t including tuna, tuna-like species and sharks (in round weight), 515.5 t more than that of 2009 (6357.5 t). The target species were bigeye tuna and bluefin tuna, of which catches amounted to 5489 t and 38.22 t, in 2010, respectively. Bigeye tuna was the major target species in the Chinese catch, accounting for 79.9% of the total; however, it was 516 t more than that of 2009 (4973 t). Yellowfin tuna, swordfish and albacore were taken as by-catch. The catch of yellowfin tuna decreased from 462 t in 2009 to 426.9 t in 2010. The catch of swordfish was 369.1 t, with a minor decrease from the previous year (383 t in 2009). The catch of albacore was 239.6 t, which represented a 106.6% increase from the previous year. The data compiled, including Task I and Task II as well as the number of fishing vessels, have been routinely reported to the ICCAT Secretariat by the Bureau of Fisheries (BOF), Ministry of Agriculture of the People's Republic of China (PRC). The PRC has carried out a national scientific observer program for the tuna fishery in ICCAT waters since 2001. Two observers have been dispatched on board two Chinese Atlantic tuna longline fishing vessels covering the area of N3°53'~N14°15', W30°07'~W40°20', S4°21'~N10°32', W22°57'~W35°58' (targeting bigeye tuna), N48°49'~N52°42', W16°00'~W33°20' and N47°51'~N52°35', W16°48' ~W34°40' (targeting bluefin tuna) since September 2010. Data on target species and non-target species (sharks, sea turtles, especially) were collected during the observation. In terms of implementation of the relevant ICCAT conservation and management measures, the BOF requires all fishing companies operating in the Atlantic Ocean to report their fisheries data on a monthly basis to the Branch of Distant Water Fisheries of China Fisheries Association and the Tuna Technical Working Group in order to comply with the catch limits. The BOF has established a fishing vessel management system, including the issuance of licenses to all the approved Chinese fishing vessels operating on the high seas of world oceans. The Chinese high seas tuna fishing fleet has been required to be equipped with a VMS system since October 1, 2006. The BOF has strictly followed the National Observer Program and the ICCAT Regional Observer Program for transshipment at sea.

RÉSUMÉ

La palangre est le seul engin de pêche de la flottille chinoise ciblant les thonidés dans l'océan Atlantique. Trente palangriers thoniers chinois opéraient en 2010, avec une prise totale de 6.873 t comprenant des thonidés, des espèces apparentées et des requins (en poids vif), soit 515,5 t de plus qu'en 2009 (6.357,5 t). Le thon obèse et le thon rouge sont les espèces cibles, leurs prises ayant atteint respectivement 5.489 t et 38,22 t en 2010. Le thon obèse était la principale espèce cible dans la prise chinoise, représentant 79,9 % du total ; or, ce chiffre était supérieur de 516 t à celui de 2009 (4.973 t). L'albacore, l'espadon et le germon ont été capturés en tant que prise accessoire. La prise d'albacore a diminué, étant ramenée de 462 t en 2009 à 426,9 t en 2010. La prise d'espadon s'est située à 369,1 t, soit une légère diminution par rapport à l'année précédente (383 t en 2009). La prise de germon s'est élevée à 239,6 t, soit une augmentation de 106,6 % par rapport à l'année précédente. Les données compilées, y compris les données de Tâche I et de Tâche II, ainsi que le nombre de navires de pêche, ont été régulièrement soumises au Secrétariat de l'ICCAT par le Bureau des pêches (Bureau of Fisheries, BOF), du ministère de l'Agriculture de la République populaire de Chine. La République populaire de Chine mène un programme national d'observateurs scientifiques pour

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la pêcherie de thonidés dans les eaux relevant de l'ICCAT depuis 2001. Deux observateurs ont été déployés à bord de deux palangriers thoniers chinois opérant dans l'Atlantique dans une zone couvrant N3°53'~N14°15', W30°07'~W40°20', S4°21'~N10°32', W22°57'~W35°58' (ciblant le thon obèse), N48°49'~N52°42', W16°00'~W33°20' et N47°51'~N52°35', W16°48' ~W34°40' (ciblant le thon rouge) depuis septembre 2010. L'observateur a collecté des données sur les espèces cibles et les espèces non ciblées (notamment les requins et les tortues marines). En ce qui concerne la mise en œuvre des mesures de conservation et de gestion pertinentes de l'ICCAT, le BOF demande à toutes les entreprises de pêche opérant dans l'océan Atlantique de déclarer leurs données sur les pêches, chaque mois, au Département des pêcheries en eaux lointaines de l'Association des pêches de la Chine et au Groupe de travail technique sur les thonidés, aux fins de l'application des limites de capture. Le BOF a établi un système de gestion des navires de pêche incluant l'émission de licences à tous les navires de pêche chinois approuvés, opérant en haute mer dans les océans du monde. La flottille de pêche chinoise ciblant les thonidés en haute mer est tenue d'être équipée d'un système VMS depuis le 1er octobre 2006. Le BOF effectue un suivi rigoureux du Programme national d'observateurs et du Programme régional d'observateurs ICCAT pour les transbordements en mer.

RESUMEN

El palangre es el único arte de pesca utilizado por la flota pesquera china para pescar túnidos en el océano Atlántico. En 2010 operaron treinta (30) palangreros atuneros chinos, con una captura total de 6.873 t, lo que incluye túnidos y especies afines y tiburones (en peso vivo), 515,5 t más que en 2009 (6.357,5 t). Las especies objetivo fueron patudo y atún rojo, cuyas capturas ascendieron a 5.489 t y 38,22 t, en 2010, respectivamente. El patudo fue la especie objetivo principal en la captura china, y respondió del 79,9% del total, se capturaron 516 t más que en 2009 (4.973 t). El rabil, pez espada y atún blanco se capturaron de forma fortuita. La captura de rabil descendió pasando de 462 t en 2009 a 426,9 ten 2010. La captura de pez espada se situó en 369,1 t, lo que supone un pequeño descenso con respecto al año anterior (383 t en 2009). La captura de atún blanco se situó en 239,6 t, lo que supone un aumento del 106,6% con respecto al año anterior. Los datos recopilados, lo que incluye los datos de Tarea I y Tarea II, así como el número de buques pesqueros, han sido comunicados a la Secretaría de ICCAT de forma regular por el Departamento de Pesca (Bureau of Fisheries-BOF), Ministerio de Agricultura de la República Popular China. China ha desarrollado un programa de observadores científicos nacionales para las pesquerías de túnidos en las aguas de ICCAT desde 2001 Se embarcaron dos observadores a bordo de dos palangreros chinos de pesca de atún en el Atlántico que cubrieron la zona entre 3°53' N~14°15' N, 30°07' W~40°20' W, 4°21' S-10°32' N, 22°57' W~35°58' W (que se dirigían al patudo), 48°49' N~52°42' N, 16°00' W~33°20' W y 47°51' N~52°35' N, 16°48' W~34°40' W (que se dirigían al atún rojo) desde septiembre de 2010. Durante la observación se recopilaron datos de especies objetivo y no objetivo (sobre todo tiburones y tortugas marinas). En términos de implementación de las medidas pertinentes de conservación y ordenación de ICCAT, el BOF requiere que todas las empresas pesqueras que operan en el océano Atlántico comuniquen sus datos pesqueros mensualmente a la Sección de Pesquerías en Aguas distantes de la Asociación de Pesquerías de China y al Grupo de trabajo técnico sobre túnidos con el fin de que se cumplan los límites de captura. El BOF ha establecido un sistema de ordenación de buques pesqueros, que incluye la expedición de licencias de pesca a todos los buques pesqueros chinos aprobados que operan en alta mar en los océanos del mundo. Desde el 1 de octubre de 2006. la flota china de pesca de túnidos en aguas distantes tiene que estar equipada con VMS. El BOF ha cumplido estrictamente el programa nacional de observadores y el programa regional de observadores de ICCAT para el transbordo en el mar.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 General overview

Longline is the only fishing gear used by the Chinese fishing fleet to fish tunas in the Atlantic Ocean. Thirty tuna (39) longliners made the catch of 6,873 t of tunas and tuna-like species in 2010, i.e., 515.5 t more than that of the previous year, which was mainly due to the increase in landings of bigeye tuna and albacore. Bigeye tuna and bluefin tuna were still considered to be the target species with yellow tuna and swordfish as the by-catch species. Surprisingly, the landing of albacore increased significantly (106.6%). There was a minor change in mean fishing effort from that of the previous year, while the CPUE of both bigeye tuna and yellowfin tuna increased from the previous year. In 2010, the highest CPUE of the two species occurred in the first quarter. The lowest CPUE of bigeye tuna and yellowfin tuna was found in the fourth quarter (**Figures 1, 3**). It is noted that the CPUEs of bigeye tuna of this year were the highest in the last five years (**Figure 1**). The fishing effort of the third quarter was found to be the lowest in this year. The fishing gear used was deep water longline, with 17-19 hooks per basket. The branch line was 49-53 m long. The length of the main line between the two branch lines was 46-51 m. **Table 1** shows the species composition of the catch in total Atlantic since 2002.

1.2 Albacore

Albacore were caught as by-catch by the Chinese fleet in the Atlantic Ocean. The total albacore catch in 2010 was estimated to be around 239.6 t, a 106.6% increase from the previous year (116 t). Landing of North Atlantic albacore amounted to 142.4 t in 2010. The remainder of the landings was comprised of South Atlantic albacore, with a landing of 97.2 t.

1.3 Bluefin tuna

The total catch of bluefin tuna by the Chinese longline fleet was 38.22 t in the East Atlantic Ocean in 2010, with a decrease from the previous year (42 t in 2009).

1.4 Tropical tunas

Tropical tuna in the statistics included bigeye tuna and yellowfin tuna in the Atlantic Ocean. The total catch of bigeye tuna in 2010 amounted to 5489.3 t, which was 10.4% more than that of 2009 (4,973 t), while the catch of yellowfin tuna was 426.9 t, lower than that of 2009 (462 t) by 7.6 %.

1.5 Swordfish

The total catch of swordfish in 2010 was 369.1 t with a decrease of 3.6% from the previous year (383 t in 2009). Of this amount, 73.2 t were caught in the North Atlantic Ocean and 295.9 t were caught in the South Atlantic Ocean.

1.6 Sharks

The total catch of blue shark and shortfin mako in 2010 amounted to 94.5 t and 59.0 t, respectively. The data were submitted to ICCAT for the third time in compliance with ICCAT Resolution.

Section 2: Research and Statistics

The Tuna Technical Working Group (TTWG) in Shanghai Ocean University is authorized by the Bureau of Fisheries (BOF), Ministry of Agriculture in charge of the data collection and compilation of Atlantic tuna fishery statistics. The compiled data, including Task I and Task II as well as the number of fishing vessels, have been routinely reported to the ICCAT Secretariat. Size frequency data of the main tuna species were scheduled to be submitted to the ICCAT Secretariat.

The BOF required that all the fishing companies operating in the Atlantic Ocean report their fisheries data on a monthly basis to the Distant Water Fisheries Branch of China Fisheries Association (DWFB-CFA) and the

TTWG in Shanghai Ocean University in order to comply with the catch limits. The BOF also required fishing companies to report incidental catches of sea turtles and sea birds if their fishing boats happened to catch them and encouraged scientists to conduct research on mitigation methods to reduce the incidental catch of sea turtles, sea birds and sharks. A pilot logbook data submission system was initiated in IOTC waters four years ago. Detailed information of the catch and fishing effort has been collected. In 2010, BOF required that all fishing boats should fill in the logbook and take the implementation of a logbook system by the fishing vessels or company into consideration as one of the main conditions for renewing the fishing permits and licenses.

The BOF emphasized the improvement of the data report system, and the submission of fisheries statistics to regional tuna fisheries management organizations as required. During the east bluefin tuna fishing season in 2011, the vessels will directly report their position to the ICCAT Secretariat via VMS. The vessels will also report the catch data, and the tag recorded information of the east bluefin tuna to the ICCAT secretariat on a weekly basis.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Catch quota and minimum size limit

In order to comply with the catch limits on bigeye tuna, eastern bluefin tuna, northern and southern swordfish, blue marlin and white marlin, adopted by ICCAT, the catch limits were allocated to the relevant fishing companies as well as the fishing vessels by DWFB-CFA at the beginning of the year. The BOF required that all the Chinese fishing companies operating in the Atlantic Ocean report their catch data monthly to the DWFB-CFA and the TTWG in Shanghai Ocean University. If the catch was over the catch limit allocated to this company based on their monthly catch report, The BOF would not issue the “Statistical Document” to this company unless this company submitted the amortization plan.

According to the statistics, the catch of Chinese tuna fleet in 2010 did not exceed the quota adopted by ICCAT. The Chinese tuna fleet had strictly followed the minimum size criteria established by ICCAT for the conservation and protection of juvenile tunas.

3.2 Tuna Statistical Document Program

Since July 2002, all exported bluefin tuna and bigeye tuna caught by Chinese tuna fleet had been accompanied by a Bluefin Tuna Catch Document and a Bigeye Tuna Statistical Document, respectively. Tuna Statistical/Catch Documents were issued by the responsible officer of BOF as required by the Resolution and Recommendation adopted by ICCAT.

3.3 Fishing vessel management

The BOF began implementing the license system of the distant water fishery in 2003. Chinese fishing vessels intending to operate on the high seas must apply for a fishing license according to a fishing license permit regulation since June 2003. As a responsible fisheries nation, China continually inputs more effort towards strengthening tuna fisheries management.

The main measures taken include:

1) Implementation of a fishing license system

   The BOF has issued a “High Seas Fishing Permit” to all the legal fishing boats operating on the high seas of the world oceans. The “fishing permit” explicitly specifies the fishing area, main target species and quota as well as the fishing time permitted. The harbor nations can easily check these when the boats entered their harbor.

2) Implementation of the VMS program

   The BOF has implemented a VMS program and requires that all the large scale tuna longliners install the VMS equipments since October1, 2006.

3.4 National observer program and regional observer program

In accordance with the Commission's Resolution on the bigeye tuna national observer program adopted in 1997, China has carried out a national tuna observer program in ICCAT waters since 2001 and began implementing the national tuna observer program in the Pacific, Atlantic and Indian Oceans soon after. The national observer program has been funded by the Chinese government.

The TTWG in Shanghai Ocean University has been in charge of the national tuna scientific observer program in the Pacific, Atlantic, and Indian Oceans, which was authorized by the BOF. A national scientific observer program has been carried out normally. So far, scientists and the graduate and post graduate students of SHOU majoring in marine fisheries science and technology, and marine fisheries resources have been chosen as the candidates for the tuna scientific observers.

Two national scientific observers have been dispatched on board two Chinese Atlantic tuna longline fishing vessels since September 2010. The area covered was N3°53'~N14°15', W30°07'~W40°20', S4°21'~N10°32', W22°57'~W35°58' (targeting bigeye tuna), N48°49'~N52°42', W16°00'~W33°20' and N47°51'~N52°35', W16°48' ~W34°40' (targeting bluefin tuna). There is 100% observer coverage of fishing effort for the Chinese tuna longline fishery targeting bluefin tuna and 7% observer coverage for tropical areas. The data on target species and non-target species (sharks, sea turtles, especially) were collected during the observation.

In accordance with the 2006 ICCAT Recommendation establishing a program for transshipment at sea, Chinese LSTLVs operating in ICCAT waters financed the respective cost of implementing this ICCAT observer program based on their quota allocated by DWFB-CFA. The BOF has strictly followed the ICCAT observer program. The BOF has also ensured that the transshipped quantities were consistent with the reported catch in the ICCAT transshipment declaration and validated the Statistical Documents for the transshipped fish. After confirming, the transshipment was conducted in accordance with the Recommendation. This confirmation was based on the information obtained by the ICCAT Observer Program.

Section 4: Inspection Schemes and Activities

The entire Chinese longline fleet operated on the high seas of ICCAT and was based at overseas ports. The Chinese Fishery Administration required all the fishing companies to abide by the domestic laws and regulations. Priorities should be given to logbook filling, minimum size limit etc.

4.1 Import and export trade monitoring

Since July 1, 2010, the General Administration of Customs of the People's Republic of China and the Ministry of Agriculture jointly monitor the imported and exported catch of bigeye tuna, bluefin tuna and swordfish, which is an important trade measure for conservation and management of global tuna.

Section 5: Other Activities

5.1 Sea turtles and sea birds mortality monitoring and mitigation measures

Scientific observers are in charge of collecting data on the incidental catch of sea turtles and sea birds. The government requests all fishing companies to report information on the incidental catch of sea turtles and sea birds mortality, if any, to Shanghai Ocean University.

Government, and Distant Water Fisheries Branch of China Fisheries Association has also required fishing companies implement bycatch mitigation measures such as application of the circle hook and tori line in the longline fishing gear. Shanghai Ocean University continues to conduct some mitigation measures, including avoiding marine mammal predation, circle hook efficiency etc.

With the assistance of Distant Water Fisheries Branch of China Fisheries Association, all the longliners have been equipped with de-hooker device to mitigate sea-turtle mortality since 2009.

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Table 1. Catch of tunas and tuna-like species (in round weight, t), 2003-2010.

Species	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Bluefin tuna	19.3	41.0	23.7	42	72	119	41.7	38.22
Yellowfin tuna	1,049.7	1,305.2	1,185.5	1,085	1,124	649	462	426.9
Bigeye tuna	7,889.7	6,555.3	6,200.2	7,200	7,399	5,686	4973	5489
Swordfish	669.1	333.6	199.2	372	558	562	383	369.1
Albacore	181.6	144.3	206.5	302	94	49	116	239.6
Blue Shark	----	----	----	----	943	149	197	93.4
Short mako	----	----	----	----	157.3	21	43	61.1
Blue marlin	88.5	58.4	96.3	99	65	12.7	77	100.5
White marlin	7.6	6.5	8.6	5.6	9.9	4.5	8.5	8.1
Sailfish	4.7	4.5	7.8	16	8.1	1.5	6.3	5.6
Other	137.4	173.1	1040.9	785	406	42.6	50	41.7
Total	10,048	8,621.7	8,968.7	9,906.6	10,836.3	7,296.3	6,357.5	6,873

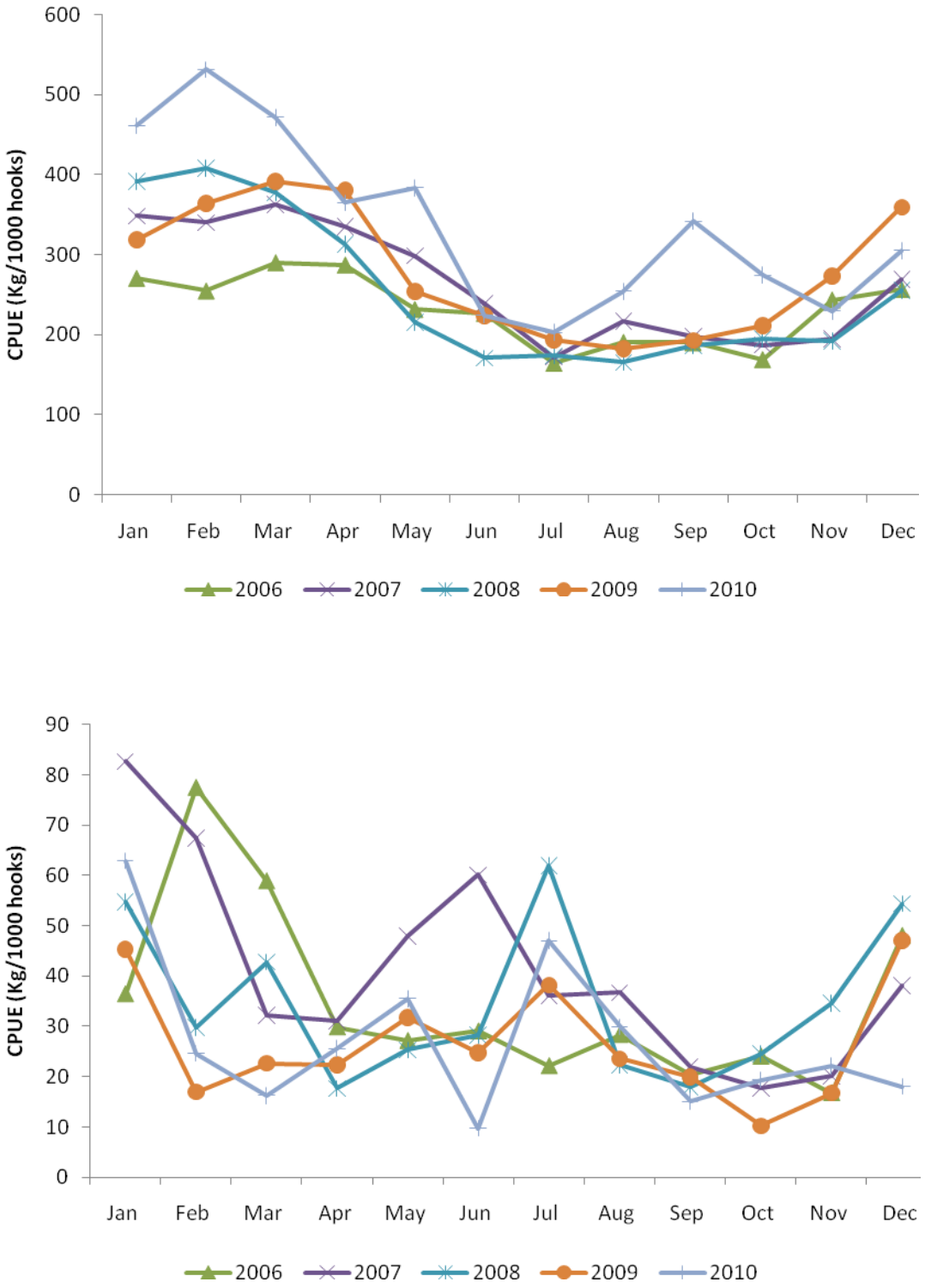

Figure 1. The monthly CPUE (kg /1000 hooks) distribution of bigeye tuna (upper panel) and yellowfin tuna (lower panel) caught by the Chinese tuna longline fleet in the ICCAT waters in recent five years.

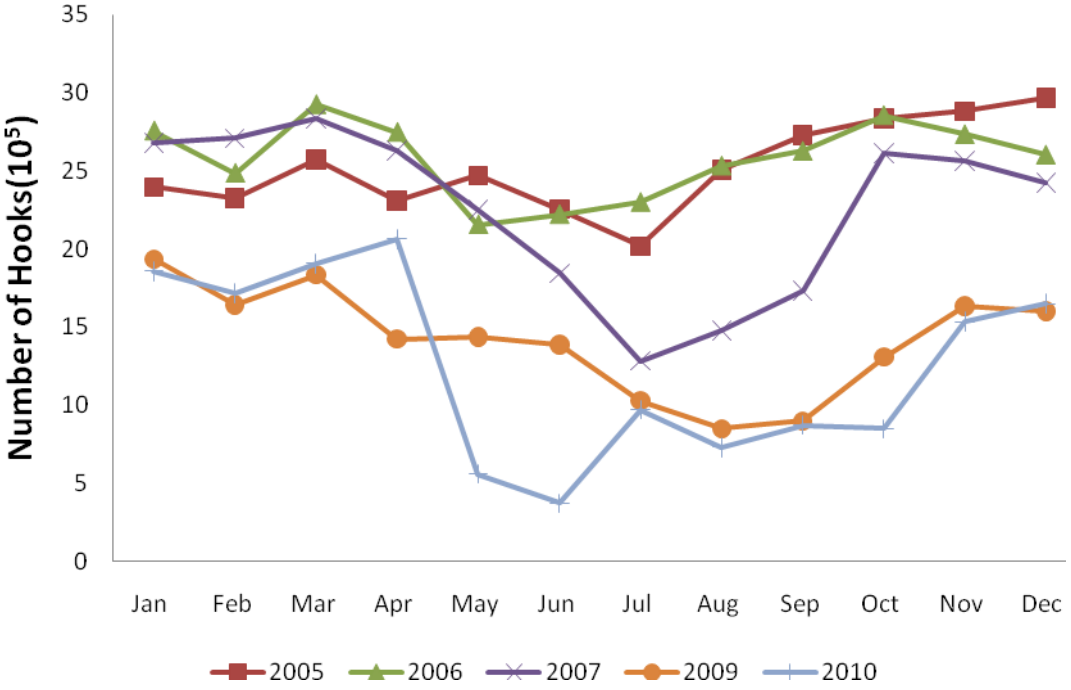

Figure 2. The monthly fishing effort (hooks 10^5) of the Chinese tuna longline fleet in the ICCAT waters in recent five years.

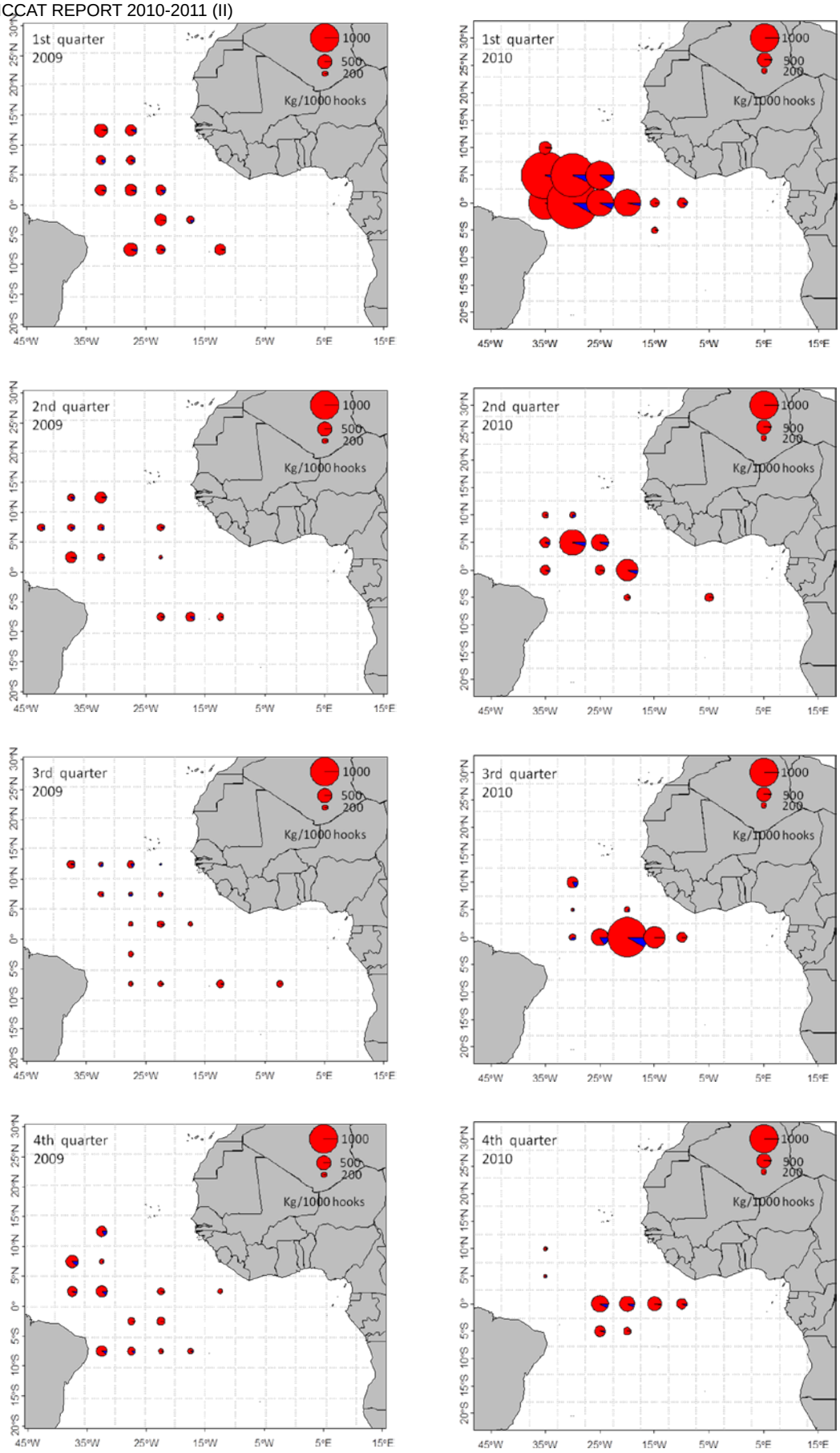

Figure 3. The CPUE distribution of bigeye tuna (in red) and yellowfin tuna (in blue) by $5^{o} \times 5^{o}$ and quarter in 2009 (left) and 2010 (right).

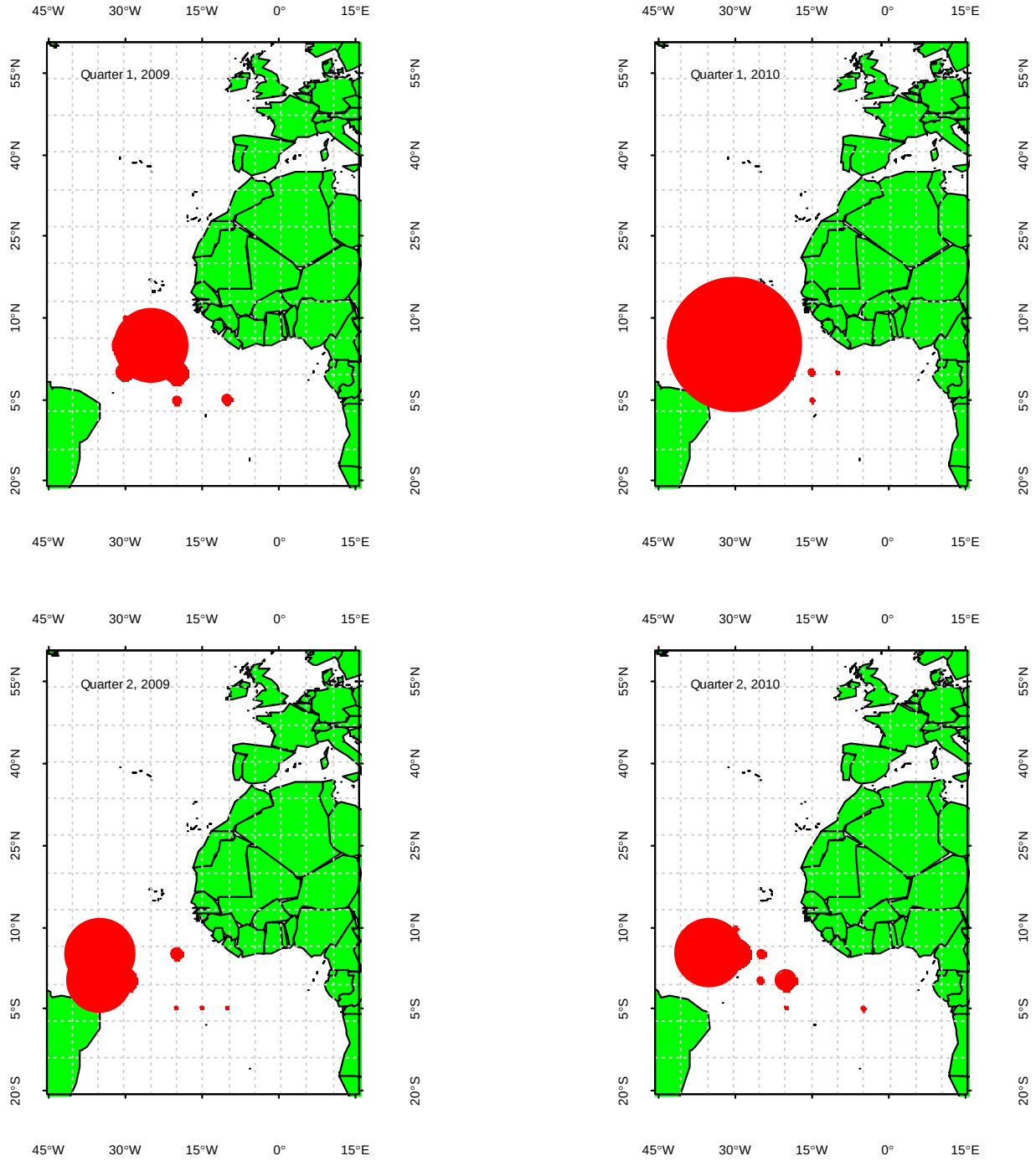

Figure 4. Fishing effort distribution by $5^{o} \times 5^{o}$ and quarter in 2009 (left) and 2010 (right).

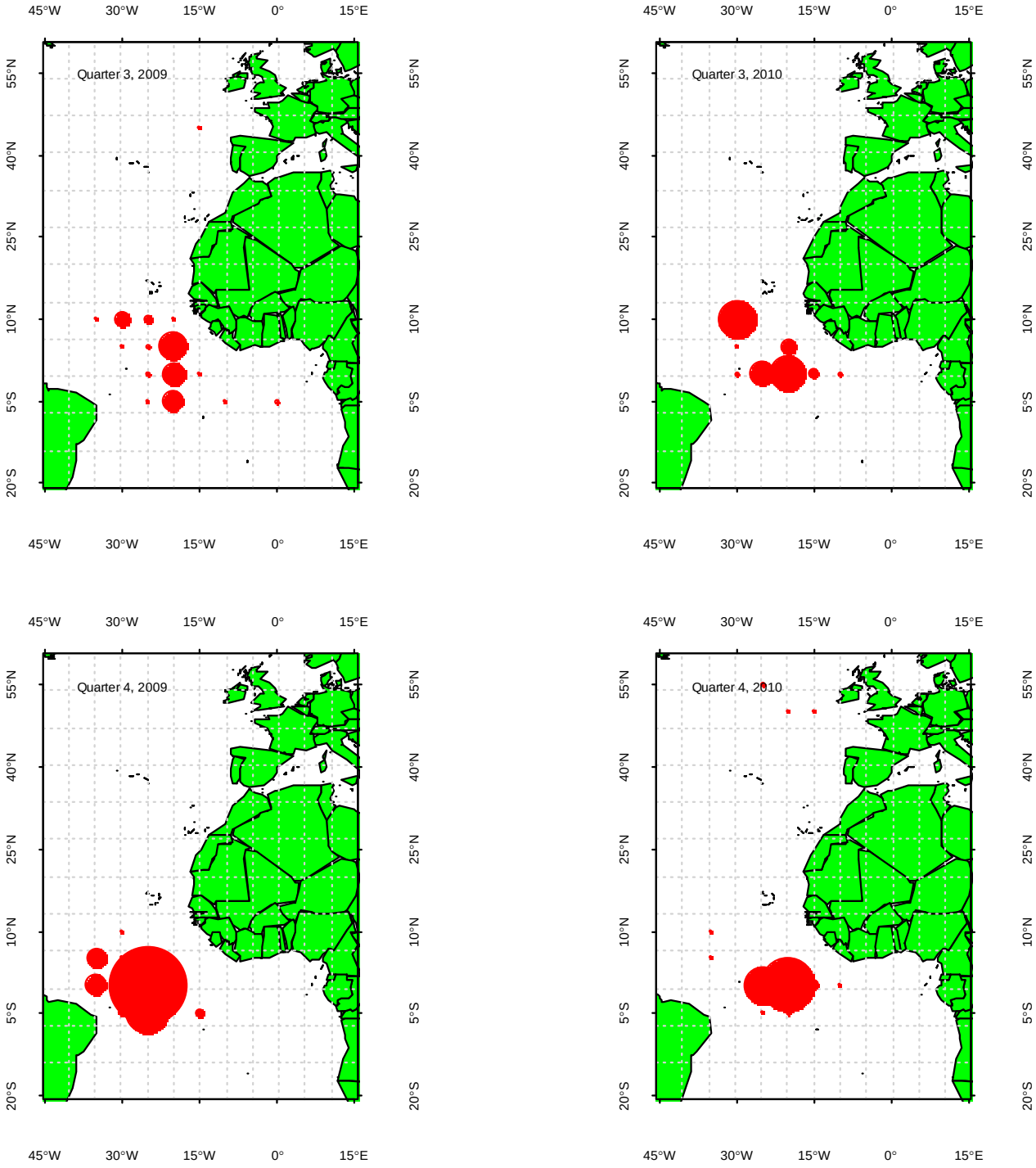

Figure 4 (Continued).

ANNUAL REPORT OF CÔTE D'IVOIRE
RAPPORT ANNUEL DE LA CÔTE D'IVOIRE
INFORME ANUAL DE CÔTE D'IVOIRE

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SUMMARY

Côte d'Ivoire does not have an industrial tuna fleet. However, it has chartering arrangements. The first agreement which was made in 2009 and concerned three Korean vessels, finalized on December 31, 2010. The second agreement was made in 2010 for a Korean vessel and was renewed in 2011. These four Korean purse seine vessels targeted major tuna and tuna-like species. These vessels caught 575.704 t of Thunnus obesus *and 130 t of* Thunnus albacares *in 2010. The swordfish catches by these vessels amounted to 113.77 t for the South stock and 29.94 t for the north swordfish stock. The tuna resources in Côte d'Ivoire are mainly exploited by the artisanal canoe fishery. In 2010, the Fisheries Directorate, in collaboration with the artisanal fishery cooperatives, recorded 3,186 trips, of which 2,950 were effectively monitored. This very active artisanal fishery mainly targets major tuna and tuna-like species. According to the Oceanographic Research Centre, in 2010 these catches amounted to 113.27 t of billfish (South swordfish, marlin and sailfish), 3,328.1 t of tunas (Atlantic black skipjack, frigate tuna, bigeye, skipjack, yellowfin) and 45.97 t of sharks.*

RÉSUMÉ

La Côte d'Ivoire ne dispose pas de flottille industrielle thonière. Cependant, elle dispose de deux accords d'affrètement. Le premier accord a eu lieu depuis 2009 et concerne trois navires coréens et a pris fin le 31 décembre 2010. Le second a lieu en 2010 pour un navire coréen et renouvelé en 2011. Ces quatre senneurs coréens ciblent les thons majeurs et espèces apparentées. En 2010, ils ont capturé 575,704 tonnes de Thunnus obesus *et 130 tonnes de* Thunnus albacares*. Les captures d'espadon pour ces navires s'élèvent à 113,77 tonnes pour le stock du Sud contre 29,94 tonnes pour l'espadon du Nord. En Côte d'Ivoire, les ressources thonières sont principalement exploitées par les pirogues de la pêche artisanale. En 2010, la Direction des pêches a enregistré en collaboration avec les coopératives de pêche artisanale 3.186 sorties dont 2.950 ont fait l'objet d'enquêtes effectives. Cette pêcherie artisanale, très active, est dirigée sur les thonidés majeurs, mineurs et espèces apparentées. Ses captures en 2010, selon le Centre de recherches océanologiques, s'élèvent à 113,27 tonnes d'istiophoridés (espadon du Sud, marlin et voilier), à 3.328,1 tonnes de thonidés (thonine, auxides, patudo, listao, albacore) et à 45,97 tonnes de requins.*

RESUMEN

Côte d'Ivoire no dispone de una flota atunera industrial. No obstante cuenta con acuerdos de fletamento. El primer acuerdo se produjo en 2009 para tres buques coreanos y finalizó el 31 de diciembre de 2010. El segundo tuvo lugar en 2010 para un buque coreano y fue renovado en 2011. Estos cuatro cerqueros coreanos se dirigen a los grandes túnidos y especies afines. En 2010 capturaron 575,704 t de Thunnus obesus *y 130 t de* Thunnus albacares*. Las capturas de pez espada realizadas por estos buques ascienden a 113,77 t para el stock del Sur y a 29,94 t para el stock del Norte. En Côte d'Ivoire los recursos atuneros son explotados principalmente por la pesca artesanal. En 2010, la Dirección de pesca, en colaboración con las cooperativas de pesca artesanal ha consignado 3.186 salidas de las cuales 2.950 han sido objeto de seguimiento de forma efectiva. Esta pesquería artesanal, muy activa, se dirige principalmente a*

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los grandes túnidos, los pequeños túnidos y especies afines. En 2010, sus capturas, de acuerdo con el Centro de Investigación Oceanográfica, ascendieron a 113,27 t de istiofóridos (pez espada del Sur, marlines y pez vela), a 3.328,1 t de túnidos (bacoreta, melva, patudo, listado y rabil) y a 45,97 t de tiburones.

Introduction

La Côte d'Ivoire est un État de l'Afrique occidentale d'une superficie de 322.000 km², délimitée par les latitudes 4° et 6° nord et les longitudes 3° et 8° ouest et ayant littoral d'une longueur de 550 km.

Avec un plateau continental d'environ 12 000 km², la Côte d'Ivoire se trouve dans la zone de golfe de Guinée la plus pauvre en ressources halieutiques. Malgré cette situation, le secteur de la pêche produit annuellement entre 70.000 et 100.000 tonnes de produits halieutiques, dont 60 % proviennent de la pêche artisanale. Bien qu'elle ne représente que 0,8 % du PIB agricole, la pêche est un secteur vital pour les emplois et les revenus de plus de 400.000 personnes (dont environ 75 % issus de la pêche artisanale).

L'industrie thonière de la Côte d'Ivoire, avec trois conserveries, occupe une place importance dans l'économie nationale. Ainsi, en tant que membre de l'ICCAT, les autorités ivoiriennes en charge de la pêche adhèrent pleinement aux recommandations de cette organisation en vue d'une gestion rationnelle des ressources thonières. Le présent rapport expose les actions menées au cours de l'année 2010 par la Côte d'Ivoire dans le cadre de la mise en œuvre des recommandations de l'ICCAT.

I^{ère} partie (Information sur les pêcheries, la recherche et les statistiques)

Chapitre 1 : Information annuelle sur les pêcheries

1.1 Espèces exploitées

Les principales espèces de thonidés et espèces apparentées exploitées par les pêcheries ivoiriennes sont :

a) thonidés majeurs

- le listao,
- l'albacore et
- le patudo (thon obèse).

b) thonidés mineurs

- la thonine,
- l'auxide,
- la bonite,
- le thazard- bâtard et le thazard blanc et
- le maquereau.

c) espèces associées

- l'espadon,
- les marlins (bleu, blanc) et
- les requins (soyeux, tisserand, marteaux, bleu, mako).

1.2 Flotte ivoirienne et flotte affrétée

Les espèces gérées par l'ICCAT sont exploitées en Côte d'Ivoire par un armement diversifié, constitué de navires affrétés et d'embarcations de pêche artisanale.

La Côte d'Ivoire, n'ayant pas de navires-thoniers propres, a conclu deux contrats d'affrètement avec deux armements coréens ayant quatre navires par l'intermédiaire de deux sociétés ivoiriennes MABICO SARL et Goshen Investment en 2010. Quatre licences de pêche ont été délivrées à ces sociétés autorisant les navires affrétés à pêcher l'espadon, le thon obèse, l'albacore, le germon et le marlin.

1.3 Caractéristiques des navires

Les caractéristiques des navires sont fournies au **Tableau 1**.

Le contrat des trois premiers navires a pris fin à partir du 31 décembre 2010 et l'ICCAT et la République de Corée ont été officiellement informées.

Cependant, le contrat du navire *Premier* a été renouvelé pour l'année 2011.

Au cours de la même période, 380 embarcations artisanales ont exploité les espèces mentionnées plus haut au moyen de lignes et de filets (dormants et tournants).

1.4 Captures

Veuillez vous reporter au **Tableau 2**.

− *Espadon du Nord*

Le quota ajusté attribué à la Côte d'Ivoire au titre de l'année 2010 est de 75 tonnes d'espadon sur le stock du Nord. Cette espèce a été exclusivement exploitée par les navires affrétés.

Les prises par ces navires affrétés au titre de l'année 2010, concernant cette espèce, se sont élevées à 29,94 tonnes.

− *Espadon du Sud*

Le quota ajusté attribué à la Côte d'Ivoire au titre de l'année 2010 est de 187,5 tonnes d'espadon sur le stock du Sud.

Les prises par les navires affrétés et les embarcations de pêche artisanale au titre de l'année 2010 se sont élevées à 163,71 tonnes.

− *Thon obèse*

Le quota annuel de la Côte d'Ivoire en 2010 ne doit pas dépasser 2.100 tonnes. Cette espèce a été essentiellement exploitée par les navires affrétés. Les captures totales y compris celles de la pêche artisanale s'élèvent à 659,704 tonnes.

− *Autres espèces*

Les autres espèces généralement capturées sont consignées dans le **Tableau 3**.

1.5 Flotte étrangère

La Côte d'Ivoire dispose de trois conserveries auxquelles sont destinés les débarquements de navires canneurs, senneurs et palangriers battant pavillon européen (15 espagnols et 10 français*).* Ces navires opèrent dans le cadre d'un accord de partenariat de pêche entre la Côte d'Ivoire et l'Union européenne.

En plus de ces thoniers européens, quatorze (14) cargos battant divers pavillons débarquent des produits thoniers au port de pêche d'Abidjan.

NB : ces thoniers dans leur ensemble alimentent le marché local de fortes quantités de faux poissons connus sous l'appellation ivoirienne de « faux thons ». Les quantités de « faux thons » débarqués au titre de l'année 2010 sont énumérées comme suit :

- Bateaux espagnols : 10.295,51 tonnes
- Bateaux français : 2.788,98 tonnes
- Autres cargos : 20.468,973 tonnes

1.6 Pêche sportive

Cette pêche a connu un ralentissement voire une suspension de ses activités à l'issue de la crise socio-politique de 2002. Aujourd'hui, ces activités connaissent une reprise timide et les dispositions administratives sont en cours pour un suivi efficient.

Chapitre 2 : Recherche et statistiques

La recherche ivoirienne sur les thonidés et espèces apparentées est assurée par le CRO (centre de recherches océanographiques). Ce centre est basé à Abidjan, mais se charge du suivi halieutique des pêcheries de thonidés le long du littoral ivoirien.

Au niveau de la pêche artisanale, un programme de collecte participative de données a été initié en 2009 avec une forte implication des coopératives de pêcheurs artisans à Abidjan. Cet effort de collaboration entre l'administration des pêches et les pêcheurs artisans s'est poursuivi en 2010 avec une extension vers d'autres localités notamment San Pedro, Sassandra, Grand-Béréby et Tabou. Des formations des opérateurs à l'identification des espèces de l'ICCAT initiées en 2009 ont permis d'améliorer les données de 2010.

À Abidjan, les enquêteurs rémunérés par les coopératives sont présents sur les sites de débarquement quatre jours dans la semaine. Ces jours sont mardi, mercredi, jeudi et vendredi.

Des agents des administrations des pêches appuient les enquêteurs des coopératives.

Sur un nombre total de 3.186 sorties, 2.950 ont été enquêtées soit un taux de couverture de plus de 92 %. Les données de production obtenues sont consignées dans les **Tableaux 4, 5** et **6**.

2.1 Production de la pêche artisanale en tonnes

Veuillez vous reporter aux **Tableaux 4, 5** et **6**.

2.2 Données de taille de la Tâche II

Concernant les données de taille de la Tâche 2, les pourcentages de la prise totale inférieure à la taille minimale sont de 11,71 % pour l'espadon du Nord et de 0,0 % pour l'espadon du Sud.

II^{ème} partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en œuvre des mesures de conservation et de gestion de l'ICCAT

L'arrêté n°141 du 2 mars 1970 portant réglementation de la pêche au thon interdit la capture des poissons sous-taille et d'autres dispositions législatives et réglementaires sont en cours pour renforcer cet arrêté.

Conformément à la Recommandation 02-21, des observateurs ont été embarqués à bord des navires affrétés.

Un plan annuel de gestion de l'espadon ainsi qu'un plan d'amélioration des données ont été élaborés et connaissent un début de mise en œuvre.

Un atelier ayant pour objectif d'informer, de sensibiliser et de former les opérateurs du secteur sur les recommandations de l'ICCAT a été organisé en 2010. Il a permis de : (i) sensibiliser les principales parties prenantes devant intervenir dans la mise en œuvre des mesures de l'ICCAT, (ii) définir la stratégie nationale d'utilisation et de gestion des quotas d'espadon et de thon obèse, (iii) valider les mesures de collecte des données statistiques des thonidés et des espèces associées pêchées, débarquées ou transbordées en Côte d'Ivoire et (iv) identifier les obligations des principales parties prenantes dans le cadre des données des Tâches I et II.

Chapitre 4 : Schémas et activités d'inspection

Plusieurs administrations ivoiriennes interviennent dans le contrôle des activités de pêche. Il s'agit de la Direction des productions halieutiques, du Service de contrôle et d'inspection vétérinaire en frontière, des Affaires maritimes et portuaires et de la Marine nationale.

Ces structures effectuent, chacune en fonction de ses prérogatives, des contrôles des activités de pêche. Des dispositions sont en cours en vue d'harmoniser les inspections.

Tableau 1. Caractéristiques des navires.

Numéros ICCAT	*Partie affréteuse*	*Nom des navires*	*Type de navire*	*Longueur (m)*	*Adresse armateur*
AT000KOR00206	Côte d'Ivoire	DAE Young n°201	Palangrier	44,01	FL10 Dong Bang Buildings, 25-4,4-Ka, Busan, Korea
AT000KOR00207	Côte d'Ivoire	DAE Yang n°601	Palangrier	46,91	FL10 Dong Bang Buildings, 25-4,4-Ka, Busan, Korea
AT000KOR00205	Côte d'Ivoire	DAE Sung n°216	Palangrier	49 ,97	FL10 Dong Bang Buildings, 25-4,4-Ka, Busan, Korea
AT000KOR00221	Côte d'Ivoire	Premier	Senneur	70,66	275 YANG JAE-DONG, SEOCHO-GU, SEOUL, Korea

Tableau 2. Quotas attribués aux navires coréens affrétés et leurs productions.

Espèces	*Goshen Investment S.A.R.L. (No.216 Dae Sung, No 201 Dae Young, No.601 Dae Yang)*		*Mabico Sarl (Premier)*		*Total*	
	Quota (t)	*Production (t)*	*Quota (t)*	*Production (t)*	*Quota (t)*	*Production (t)*
BET	750	570,704	300	5	1050	575,704
SWO- nord	60	29,94	0	0	60	29,94
SWO-sud	90	113,77	0	0	90	113,77

Tableau 3. Production des autres espèces.

Espèces	*Poids (tonnes)*
Albacore (YFT)	130
Bonite	755
Germon du Nord (ALB- nord)	53,4
Germon du Sud (ALB- sud)	43,402
Makaire (MAK)	49,839
Moro Shark	7
TOTAL	

Tableau 4. Production des istiophoridés.

Espèces	*Espadon Sud*	*Marlin bleu*	*Marlin blanc*	*Voilier*
Poids (t)	49,94	42,67	7,169	13,49

Tableau 5. Production des thonidés.

Espèces	*Thonine*	*Auxides*	*Patudo*	*Listao*	*Albacore*
Poids (t)	697,9	530,0	84,0	1.469,1	547,1

Tableau 6. Production des requins.

Espèces	*Soyeux*	*Tisserand*	*Marteau commun*	*Marteau halicorne*	*Taupe bleue*	*Prionace glauca*
Poids (t)	1,66	0,07	15,49	2,14	12,71	13,90

ANNUAL REPORT OF CROATIA
RAPPORT ANNUEL DE LA CROATIE
INFORME ANNUAL DE CROACIA

Fisheries Directorate, Ministry of Agriculture,
Fisheries and Rural Development of Croatia [1]

SUMMARY

The total Croatian catch of bluefin tuna in 2010 was 385,69 metric tons (t). Bluefin tuna was predominantly transferred into farming cages (353,764 t; 91,7%), and 16,14 t (4,19%) were landed. Bluefin tuna catches were mostly realized by purse seiners, 369,54 t (95,81%), while the remaining was caught using hook and line gears. The difference of 15,77 tons (4,1%) has been registered between purse seine catch (369,54 t) and caging (353,764 t). The total Croatian catch of Mediterranean (Adriatic) swordfish in 2010 amounted to 5.740 kg. Research was continued on the growth and reproductive biology of bluefin tuna. A national sampling program targeting bluefin tuna harvested from aquaculture facilities has been carried out. Research activities are under way aimed at estimating the impact of the increased abundance of small bluefin tuna in the Adriatic small pelagic fishery. Preliminary research on the use of a stereoscopic camera for bluefin tuna sizing and counting has been carried out. Croatia has adopted the Regulation on catch, farming and trade of bluefin tuna that includes all provisions of the relevant ICCAT Recommendations and transposes them into national legislation in full. Croatia has implemented the ROP Programme in full accordance with the provisions of the relevant ICCAT Recommendations.

RÉSUMÉ

La prise totale croate de thon rouge s'est élevée en 2010 à 385,69 t. Presque tout le thon rouge a été transféré dans des cages aux fins d'engraissement (353,764 t, 91,7 %), et 16,14 t (4,19 %) ont été débarquées. L'essentiel des prises de thon rouge a été effectué par des senneurs (369,54 t ; 95,81 %), le reste étant capturé à la ligne et à l'hameçon. Une différence de 15,77 t (4,1 %) a été enregistrée entre la prise des senneurs (369,54 t) et la mise en cages (353,764 t). En 2010, la capture totale croate d'espadon de la Méditerranée (Adriatique) s'est élevée à 5.740 kg. Les travaux de recherche sur la croissance et la biologie reproductive du thon rouge se sont poursuivis. Un programme d'échantillonnage national visant le thon rouge mis à mort dans les établissements d'aquaculture a été réalisé. Les activités de recherche sont en cours en vue d'estimer l'impact de l'abondance accrue des petits thons rouges dans l'Adriatique sur la pêcherie de petits pélagiques. Des recherches préliminaires ont été réalisées sur l'emploi de caméras stéréoscopiques pour déterminer la taille des thons rouges et en comptabiliser le nombre. La Croatie a adopté un Règlement portant sur la prise, l'engraissement et le commerce de thon rouge qui incorpore toutes les Recommandations pertinentes de l'ICCAT et qui les transpose intégralement dans la législation nationale. La Croatie a mis en œuvre le programme ROP conformément aux dispositions des recommandations pertinentes de l'ICCAT.

RESUMEN

En 2010, la captura total de atún rojo de Croacia ascendió a 385,69 t. El atún rojo se transfirió sobre todo a jaulas en instalaciones de engorde (353.764 t, 91,7%) y se desembarcaron 16,14 t (4,19 %). Las capturas de atún rojo fueron realizadas en su mayoría por cerqueros, 369,54 t (95,81%), mientras que el resto fue capturado con artes de anzuelo y liña. Se ha registrado una diferencia de 15,77 t (4,1%) entre la captura de cerco (369,54 t) y el volumen introducido en jaulas (353,764 t). En 2010, la captura total de pez espada del Mediterráneo (Adriático)

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ascendió a 5.740 kg. Se ha proseguido con la investigación sobre crecimiento y biología reproductiva del atún rojo. Se ha desarrollado un programa nacional de muestreo dirigido al atún rojo sacrificado en instalaciones de acuicultura. Se están llevando a cabo actividades de investigación con el objetivo de estimar el impacto del incremento de la abundancia de atún rojo pequeño en el Adriático en la pesquería de pequeños pelágicos. Se han realizado trabajos preliminares de investigación sobre el uso de cámaras estereoscópicas para realizar recuentos y medir las tallas del atún rojo. Croacia ha adoptado un Reglamento sobre captura, engorde y comercio de atún rojo que incluye disposiciones de las Recomendaciones pertinentes de ICCAT y las transpone a la legislación nacional en su totalidad. Croacia ha implementado el programa ROP, de conformidad con las disposiciones de las Recomendaciones pertinentes de ICCAT.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The total Croatian catch of bluefin tuna in 2010 was 385,69 metric tons (t). Of this amount, 95,81% was caught using purse seines (PS), amounting to 369,54 t. The remainder was caught using coastal artisanal long lines (LL, 0,072 t or 0,02%) and hand lines (Hand, 16,07 t or 4,17%). Of the total catch, 91,7% was caged (353,764 t) and only 4,19% landed (16,14 t). The difference of 15,77 t (4,1%) has been registered between purse seine catch (369,54 t) and caging (353,764 t).

The total number of vessel licensed for participation in the bluefin tuna fishery in 2010 was 55, out of which 39 were purse seiners, and 16 were hook and line vessels.

All hook and line vessels had 384 days at sea in total.

Of the 39 licensed purse seine vessels, 16 were active in fishing, with a total number of days at sea amounting to 445. Their catch was 369,54 t, with an average of 28 days at sea for each vessel. If the average catch per vessel was calculated, the figure would amount to 23,01 t per vessel, averaging to 0,82 tons per day per vessel or 13,2 t per day for the operational fleet.

Weight frequencies indicate that the majority of fish caught fall in the category of 8 to 10 kg (69,54%).

In 2010 fishermen targeting small pelagic fish reported a higher abundance of both juvenile and adult bluefin tuna in the Adriatic Sea than in the previous years, and its adverse effect on small pelagic fishery as well.

Catches of Mediterranean (Adriatic) swordfish amounted to 5740 kg in 2010.

Section 2: Research and Statistics

A national sampling program targeting bluefin tuna harvested from aquaculture facilities has been carried out in accordance with Rec 06-07. Within the framework of this sampling program, the collection of Task II data has been done.

Croatia continues to support research activities related to tuna stock management. In 2010 Croatia continued with research efforts on studies of the reproductive biology of bluefin tuna in captivity. The project aimed at evaluating the possibility of bluefin tuna spawning in farming cages is under way. Within the framework of this project, the hormonally induced maturation of gonads in small bluefin tuna has been studied and 32 undersized specimens (i.e., RWT<30 kg) were sacrificed for research purposes in 2010.

Effective measures aimed at protecting juvenile bluefin tuna taken by the Commission resulted in increased abundance of small bluefin tuna in the Adriatic Sea. However, at the same time this caused troubles to the fishermen targeting small pelagic fish (sardine, anchovy). Research activities are under way aimed at estimating the impact of tuna predation on the small pelagic fishery.

Research on the use of a stereoscopic camera for bluefin tuna sizing and counting has been started, using AM100 analysis software. The next step is to test the accuracy of the measurement related to the ecological conditions,

movement situations, and size and density of monitored fish. The exchange of experience and achievement in applying sizing and counting technology with other CPs is welcome.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Croatia has adopted the Regulation on Catch, Farming and Trade of Bluefin Tuna (OG 60/10) in May 2010. This Regulation includes the provisions of the ICCAT Recommendations 06-07, 08-12 and 09-06 and transposes them into national legislation in full. The aforementioned Regulation replaced the Regulation on catch, farming and trade of bluefin tuna adopted in 2009. Following the adoption of the new Marine Fisheries Law (NN 56/10), an integral version of the Regulation was published (NN 60/10), containing all the relevant provisions. In order to implement a more stringent regime, and fully comply with the relevant provisions of the Multi-annual Bluefin Tuna Recovery Plan, Croatia has continued to implement all adopted measures during 2010. In 2011, Croatia adopted the new and revised Regulation (Regulation on Catch, Farming and Sales of Bluefin Tuna (*Thunnus thynnus*) OG 26/11,029/11,031/11, 53/11), including all relevant elements from the Recs. 10-04, 09-11 and 06-07. Info on the implementation of this ICCAT Recommendation has been provided in accordance with the requirements.

Croatia has limited its farming capacity and, in September 2009, adopted the Ministerial Decree on allocation criteria for setting up the limit of input of wild caught bluefin tuna into farms for 2010, which then was replaced by the similar Decree regulating the same issues in 2011. The Decree also contains the criteria and the allocation of individual maximum inputs for Croatian farms. Maximum inputs into farms were not exceeded in 2010 or in 2011, thus complying with the adopted measures.

In 2010 Croatia participated in the ROP programme on farms and on purse seine vessels, in full compliance with the ICCAT Recommendation 08-06. The placing of the observers was regulated by a specific Decree allocating observers to different vessels. The same obligation was respected in 2011. Croatia implemented the national observer program in 2010 in accordance with Rec 09-06, and in 2011 in accordance with 10-04.

Croatia has limited the number of purse seiners authorized to fish in the Adriatic to the number engaged in the fishery in 2008. The total number of vessels licensed for participation in the bluefin tuna fishery in 2010 was 55, of which 39 were purse seiners and 16 were hook and line vessels. All hook and line vessels had 384 days at sea in total. Of the 39 licensed purse seine vessels, 16 were active in fishing, with the total number of days at sea amounting to 445. In 2010 Croatia implemented the measures as agreed and adopted by ICCAT in 2009, including the provisions on reduction of overcapacity and discontinuation of the bad weather clause. The purse seine season was limited to the period from 15 May to 15 June, and a total of 16 purse seine vessels participated in the fishery. Twelve (12) vessels were over 24 meters and participated in the ROP programme. Four vessels were smaller and were covered by national observers and by inspection. A quota was allocated individually per vessel and an ITQ system was implemented (quotas were transferrable between vessels). The list of vessels and their individual quotas were communicated to the Secretariat. Furthermore, Croatia has reduced its bluefin tuna fishing capacity more than 25% (a total of 39.4%). All Croatian bluefin tuna purse seine vessels are multi-purpose, and operate in other fisheries as well, so the capacity reduction in the bluefin tuna fishery meant withdrawal from this fishery and transfer to other activities.

The Regulation on catch, farming and trade of bluefin tuna stipulates that it is forbidden to trade with bluefin tuna caught by vessels flying the Croatian flag which is not followed by the ICCAT Bluefin Tuna Catch Document (BCD) validated by the Ministry of Agriculture, Fisheries and Rural Development (MAFRD). In order to validate the BCD, a copy of logbook must be submitted. Implementation of the BCD scheme required changes in internal organization. All BCDs are validated by civil servants employed within the Directorate of Fisheries, and their names and signatures have been reported to the Secretariat.

Croatian authorities have established a web-based application containing data on vessels licensed for bluefin tuna fisheries, indicating the vessels authorized to fish in the 2010 fishing season (the same application was used in 2011) and their individual quotas in order to secure cross-checks of verification, validation and inspection reports with the catch and transfer data. In order to be authorized to participate in the fishing season, all vessels had to be registered in the ICCAT register and had to have a functional VMS and electronic logbook in 2010. VMS data were constantly monitored and cross-checked with the positions of the catches as listed in the logbooks and electronic logbooks. In 2010, the option to use both paper and electronic logbook was allowed.

When the catch was made by a vessel, the logbook had to be filled out and submitted. These data were entered into the database and deducted from the individual quota. The vessel then had to apply for a transfer authorization. The authorization was done for the catches reported by vessels authorized and equipped with VMS. The transfer had to be filmed. The tug transported the fish to the farm site, and before the transfer from the tug to farm, the tug had to obtain an authorization. In order to obtain the authorization, the tug had to provide information on all relevant steps. Previous authorization to transfer the fish to the tug cage was available to the person in charge of authorization. Authorization for transfer of fish from tug to farm was undertaken by personnel from Aquaculture Unit. During the transfer to the farm, 100% inspection and observer coverage was secured. Underwater cameras and filming was obligatory. Caging declarations had to be produced upon the operation as well. When fish are taken out of the cages, observer and inspection coverage is also secured, and the fish have to be traced by cage and by origin.

The Ordinance on closure of fishery on swordfish (NN 118/2009 and 114/2010) stipulates the closure of the fishery on swordfish in the period from 1 October to 30 November, thus transposing the relevant provisions of the ICCAT Recommendations. Other elements of relevant provisions were applied in the 2010 fishing season.

In the 2011 fishing season, the number of vessels participating in the fishery was further reduced, and Croatia implemented all provisions of Rec. 10-04. Particular importance was placed on stereoscopic camera implementation in order to assess the size of fish caught live for farming purposes. Mortalities recorded during the operations were also used for sampling purposes, in order to best address all requirements of international obligations.

Section 4: Inspection Schemes and Activities

Memorandums of Understanding have been signed by all services authorized for inspection, as pursuant to the Marine Fisheries Act adopted in 2010 several services are involved in inspection and control activities. Croatia has developed a web-based password-protected system that enables reporting and cross-checking and verification. Infringements have been uniformly classified in 3 categories (serious, significant and mild). In the case of the bluefin tuna fishery, serious infringements include lack or non-functioning of VMS, exceeding quota, continuation of fishing activities after closure, failure to take the observers on board or failure to request authorization for transfer and arrival of observers as well as landings of undersized fish. The minimum landing size in Croatia is 30 kg. Fish of 8 kg and more may be caught for farming purposes only.

In 2010 only vessels flying Croatian flag landed fish in Croatian ports. Additionally, no import of live fish took place in 2010, meaning that tugs flying flags of other CPCs did not enter Croatian waters or ports in 2010. The same situation was observed in 2011. In cases of possible infringements, submissions are made to court and procedures may be initiated.

Section 5: Other Activities

Croatia has nothing to report at this time.

ANNUAL REPORT OF THE EUROPEAN UNION
RAPPORT ANNUEL DE L'UNION EUROPÉENNE
INFORME ANUAL DE LA UNIÓN EUROPEA

SUMMARY

*The various fleets of the European Union fish all the principal species which are regulated by ICCAT in the Atlantic Ocean and the Mediterranean Sea. The total catch of tunas and related species carried out by these various fleets in 2010 was around 225.000 tonnes (**Annex 1**).*[1]

Research and statistics: *All Member States of the European Union have national research Institutes or regional research laboratories. Several studies and research programme are implemented at the EUand/or national. The European Union has a Regulation, which aims to fulfil the tasks I and II requirements and which is binding for its Member States, applicable to all tuna and tuna like fleets and areas. The European Union also implemented a framework programme of data collection (in order to ensure the systematic gathering of the basic data being used for the scientific advice and stock assessment.*

Implementation: *After each plenary session of ICCAT, the European Union transposes conservation measures adopted by ICCAT into its legislation so that they are binding on its Member States and nationals. All the technical conservation measures in force for the highly migratory species are consolidated in the Council Regulation (EC) No. 520/2007 laying down technical conservation measures for certain highly migratory fish stocks. The control measures adopted by ICCAT are also transposed into the European Union law by Council Regulation (EC) No. 1936/01 establishing certain control measures applicable to the fishing activities for certain highly migratory fish stocks (OJ L 236/1 of 03.10.2001), and modified by Council Regulation (EC) No. 869/2004 of 26 April 2004. The measures adopted at the 2010 ICCAT Annual Meeting as well as the catch limits for bluefin tuna, southern and northern swordfish, southern and northern albacore, bigeye tuna, and white and blue marlin were transposed into EU legislation by the Council Regulation Council Regulation (EU) No 57/2011. The Bluefin tuna Recovery Plan was transposed in European Union law by the Council Regulation (EC) No. 302/2009 of 6 April 2009 concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean, amending Regulation (EC) No. 43/2009 and repealing Regulation (EC) No. 1559/2007. This Regulation will be modified to introduce the modifications adopted at the 2010 Annual Meeting. The draft Regulation is discussed at the EU Institutions.*

Control and onspection: *Controls undertaken by the Member States are generally carried out in the landing port and/or at the time of sale, when this is at auction. They can also intervene at any time during the transport or at the central markets. Vessels are also permanently monitored via their flag Member State FMC. These controls primarily cover the quantities landed and marketed, the sizes, the age and weight of the fish, and the respect of closed fishing periods. Member States of the EU have established an information network between the various landing ports to improve the monitoring of vessel movements. Vessels are submitted to report catch through electronic logbooks. Routine inspections are also carried out by third country inspectors and scientific institute observers at the time of landing of tropical tuna by Community vessels in ports outside EU. The same controls that are applied to port inspections are carried out on transshipments of tunas, including for foreign vessels, whether Contracting Party or non Contracting Party to ICCAT. Human, naval, and aerial resources were deployed by Member States and administrative penalties and fines were applied when infractions were detected. The special rules applying to the bluefin tuna fishery are reflected in an independent and separated annual report.*

[1] The Annexes are available at the Secretariat. / Les Annexes sont disponibles auprès du Secrétariat. / Los Anexos están disponibles en la Secretaría.

RÉSUMÉ

Les diverses flottilles de l'Union européenne pêchent toutes les principales espèces réglementées par l'ICCAT dans l'Atlantique et la Méditerranée. Les captures totales de thonidés et d'espèces apparentées effectuées par ces diverses flottilles en 2010 se sont élevées à environ 225.000 t.

Recherche et statistiques *Tous les Etats membres de l'Union européenne disposent d'instituts de recherche nationaux ou de laboratoires de recherche régionaux. Plusieurs études et programmes de recherche sont mis en œuvre au niveau national ou de l'Union européenne. L'Union européenne dispose d'un règlement qui vise à répondre aux exigences de la Tâche I et de la Tâche II et dont les dispositions sont contraignantes pour les Etats membres et applicables à toutes les flottilles de pêche des thonidés et espèces apparentées et à toutes les zones. L'Union européenne a également mis en œuvre un programme cadre pour la collecte des données afin de garantir la collecte systématique des données de base utilisées pour l'avis scientifique et l'évaluation des stocks.*

Mise en œuvre *Après chaque session plénière de l'ICCAT, l'Union européenne transpose dans sa réglementation les mesures de conservation adoptées par l'ICCAT afin de les rendre contraignantes pour ses Etats membres et ses ressortissants. Toutes les mesures techniques de conservation en vigueur pour les grands migrateurs ont été rassemblées dans le Règlement (CE) nº 520/2007 du Conseil prévoyant des mesures techniques de conservation pour certains stocks de grands migrateurs. Les mesures de contrôle adoptées par l'ICCAT ont également été transposées dans le droit communautaire par le Règlement (CE) nº 1936/01 du Conseil établissant certaines mesures de contrôle applicables aux activités de pêche visant certains stocks de poissons grands migrateurs (JO L 236/1 du 03.10.2001), et modifiées par le Règlement (CE) nº 869/2004 du Conseil du 26 avril 2004. Les mesures adoptées à la réunion annuelle de l'ICCAT, en 2010, ainsi que les limites de capture pour le thon rouge, l'espadon du Sud et du Nord, le germon du Sud et du Nord, le thon obèse, le makaire bleu et le makaire blanc ont été transposées dans le droit communautaire par le Règlement (UE) Nº 57/2011. Le programme de rétablissement du thon rouge a été transposé dans le droit communautaire par le Règlement (CE) nº 302/2009 du Conseil du 6 avril 2009 relatif à un plan pluriannuel de reconstitution des stocks de thon rouge dans l'Atlantique Est et la Méditerranée, modifiant le règlement (CE) no 43/2009 et abrogeant le règlement (CE) no 1559/2007. Ce règlement sera modifié afin d'y introduire les modifications adoptées à la réunion annuelle de 2010. Le projet de règlement est en cours de discussion au sein des institutions de l'UE.*

Contrôle et inspection *Les contrôles menés par les Etats membres sont généralement effectués au port de débarquement et/ou au moment de la vente, lorsqu'elle est faite à la criée. Ils peuvent également intervenir lors du transport ou au niveau des marchés centraux. Les navires font également l'objet d'un suivi permanent au moyen des centres de contrôle des pêches (FMC) de leurs Etats de pavillon. Ces contrôles portent essentiellement sur les quantités débarquées et commercialisées, les tailles, l'âge et le poids des poissons, et le respect des périodes d'arrêt de pêche. Des Etats membres de l'UE ont établi un réseau d'information entre les différents ports de débarquement, afin de mieux superviser les mouvements des navires. Les navires sont tenus de déclarer leurs captures par le biais de livres de bord électroniques.Des contrôles systématiques sont également menés par des inspecteurs de pays tiers et par des observateurs rattachés à des instituts scientifiques, lors des débarquements de thon tropical par les navires communautaires dans des ports situés en dehors de l'UE. Les mêmes contrôles qui s'appliquent aux inspections dans les ports sont effectués en cas de transbordement des thonidés, y compris pour les navires étrangers, des Parties contractantes et non contractantes à l'ICCAT. Des moyens humains, navals et aériens sont déployés par les Etats membres et des sanctions administratives et des amendes sont appliquées au cas où une infraction est détectée. Les normes spéciales qui s'appliquent à la pêcherie de thon rouge font l'objet d'un rapport annuel indépendant et distinct.*

RESUMEN

Las diversas flotas de la Unión Europea pescan todas las especies principales reguladas por ICCAT en el océano Atlántico y mar Mediterráneo. La captura total de túnidos y especies afines realizadas por varias flotas en 2010 se situó en 225.000 t.

Investigación y estadísticas *Todos los Estados miembros de la Unión Europea cuentan con Institutos de investigación nacionales o con laboratorios regionales de investigación. Se han desarrollados varios estudios y programas de investigación a nivel de la UE o a nivel nacional. La Unión Europea cuenta con un reglamento cuyo objetivo es cumplir los requisitos de la Tarea I y la Tarea II, vinculante para sus Estados miembros, y aplicable a todas las flotas y áreas de túnidos y especies afines. La Unión Europea ha implementado también un programa marco de recopilación de datos con el fin de garantizar la recopilación sistemática de los datos básicos que se utilizan para el asesoramiento científico y las evaluaciones de stock.*

Implementación *Después de cada sesión plenaria de ICCAT, la Unión Europea transpone las medidas de conservación adoptadas por ICCAT a su legislación, por lo que son vinculantes para sus Estados miembros y sus ciudadanos. Todas las medidas de conservación técnicas en vigor para las especies altamente migratorias están consolidadas en el Reglamento del Consejo (CE) nº 520/2007 que establece medidas técnicas de conservación para ciertos stocks de peces altamente migratorios. Las medidas de control adoptadas por ICCAT también se han incorporado al derecho de la UE en el Reglamento (CE) nº 1936/2001 del Consejo, por el que se establecen ciertas medidas de control aplicables a las actividades de pesca de determinadas poblaciones de peces altamente migratorias (D.O. L236/1 de 03.10.2001), que fue modificado por el Reglamento (CE) nº 869/2004 del Consejo del 26 de abril de 2004. Las medidas adoptadas en la reunión anual de ICCAT de 2010, así como los límites de captura de atún rojo, pez espada del Sur y del Norte, atún blanco del Sur y del Norte, patudo, aguja blanca y aguja azul se han incorporado en la legislación de la UE mediante el Reglamento (CE) nº 57/2011 del Consejo. El Plan de recuperación del atún rojo se incorporó en la legislación de la Unión Europea mediante el Reglamento (CE) del Consejo nº 302/2009 del 6 de abril de 2009 sobre un plan de recuperación plurianual para el atún rojo en el Atlántico este y Mediterráneo que enmienda el Reglamento (CE) nº 43/2009 y sustituye al Reglamento (CE) nº 1559/2007. Este Reglamento se enmendará para introducir las modificaciones adoptadas en la reunión anual de 2010. Este proyecto de Reglamento se debate en las instituciones de la UE.*

Control e inspección *Los controles que llevan a cabo los Estados miembros se realizan generalmente en el puerto de desembarque y/o en el momento de la venta, cuando es una subasta. También pueden intervenir en cualquier momento durante el transporte o en los mercados centrales. Los buques son también objeto de un seguimiento permanente a través del FMC del Estado miembro del pabellón. Estos controles cubren principalmente las cantidades desembarcadas y comercializadas, las tallas, la edad y el peso de los peces, así como el respeto de los periodos de vedas de pesca. Los Estados miembros de la UE han establecido una red de información entre los diversos puertos de desembarque para mejorar el seguimiento de los movimientos de los buques. Los buques tienen que comunicar la captura mediante cuadernos de pesca electrónicos. También se llevan a cabo inspecciones rutinarias por parte de inspectores por parte de inspectores de terceros países y de observadores de institutos científicos en el momento en que los buques comunitarios desembarcan túnidos tropicales en puertos fuera de la UE. Los mismos controles que se aplican a las inspecciones en puerto se llevan a cabo en los transbordos de túnidos, también en los buques extranjeros, independientemente de si son Parte contratante o no contratante de ICCAT. Los Estados miembros desplegaron sus recursos humanos, navales y aéreos y se aplicaron sanciones administrativas y multas cuando se detectaron infracciones. Las normas especiales que se aplican a la pesquería de atún rojo se reflejan en un informe anual independiente que se presenta en otro documento.*

Part I (Information on Fisheries, Research and Statistics)

Section 1: Information on the Fisheries

The various fleets of the European Union fish all the principal species which are regulated by ICCAT in the Atlantic Ocean and the Mediterranean Sea.

The total catch of tunas and related species carried out by these various fleets in 2010 was around 225.000 tonnes (t).

Chapter 1 of the European Union Annual Report including reports of the various Member States of the European Union providing the details and technical information pertaining to the various fisheries, both by species and by fishing gear, as well as Chapter 2 concerning Research and Statistics were previously transmitted to ICCAT for analysis by the Scientific Committee.

Part II (Management Implementation)

Section 2: Implementation of ICCAT Conservation and Management Measures

− *At regulatory level*

After each plenary session of ICCAT, the European Union transposes conservation measures adopted by ICCAT into its legislation so that they are binding on its Member States and nationals.

All the technical conservation measures in force for the highly migratory species are consolidated in the Council Regulation (EC) No. 520/2007 laying down technical conservation measures for certain highly migratory fish stocks.

The control measures adopted by ICCAT are also transposed into European Union law by Council Regulation (EC) No. 1936/01 establishing certain control measures applicable to the fishing activities for certain highly migratory fish stocks (OJ L 236/1 of 03.10.2001), and modified by Council Regulation (EC) No. 869/2004 of 26 April 2004.

The measures adopted at the 2010 ICCAT annual meeting as well as the catch limits for bluefin tuna, southern and northern swordfish, southern and northern albacore, bigeye tuna, and white and blue marlin were transposed into European Union legislation by the Council Regulation (EU) No 57/2011 of 18 January 2011 fixing for 2011 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in EU waters and, for EU vessels, in certain non-EU waters (OJ L 24, 27.1.2011).

The Bluefin Tuna Recovery Plan was transposed in European Union law by the Council Regulation (EC) No 302/2009 of 6 April 2009 concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean, amending Regulation (EC) No. 43/2009 and repealing Regulation (EC) No. 1559/2007.

The ICCAT Recommendation on a Bluefin Tuna Catch Documentation Programme was transposed in Regulation (EU) No. 640/2010 of the European Parliament and of the Council of 7 July 2010 establishing a catch documentation programme for bluefin tuna Thunnus thynnus and amending Council Regulation (EC) No. 1984/2003.

− *Compliance*

Catch limits:

In 2010, the European Union has in general respected all the catch limits adopted by ICCAT.

The European Union has not fully utilized the 2010 quotas of northern albacore, North and South swordfish and bigeye tuna. It wishes to carry-over the following underages:

Northern albacore: 5387,8 t, corresponding to 25% of its initial quota as the current underage of 12079 is over the 25% limit established by Recommendation 07-02.

Northern swordfish: 3447,9 t

Southern swordfish: 555,1 t

Bigeye tuna: 7200 t, corresponding to 30% of its initial quota as the current underage of 11189,4 is over 30%.

Minimum size:

The European Union overall respects the minimum size measures. With regard to swordfish, the European Union is currently financing studies on gear selectivity (hooks) in order to reduce juvenile catches.

Vessel lists:

The European Union transmitted, in due time, the vessels lists and up-dates respecting the formats required by ICCAT. As regards northern albacore, the list of vessels has also been sent to ICCAT. There are currently 1159 EU vessels authorised to fish for northern albacore.

Large-scale longline vessels:

The European Union took the necessary measures to control the activities of its large scale long line vessels (**Annex 2**) and to ensure that Tuna vessels on the ICCAT Record of vessels over 24 meters are fishing in accordance with ICCAT management and conservation measures (**Annex 3**).

Area/season closure for bigeye tuna:

In 2010, the European Union respected points 8 to 12 of Recommendation 04-01 establishing a multi-year conservation and management programme for bigeye tuna. The report on the implementation of internal sanctions required under point 11 is included in **Annex 5**.

Chartering arrangements:

Chartering arrangements have been regularly communicated to ICCAT. A Vessel chartering summary report of Community vessels chartered in 2010 to other Contracting Parties is included in **Annex 4**. The European Union has not chartered any vessels from other Contracting Parties.

Bluefin tuna report:

In 2010, the European Union implemented the ICCAT Recommendations on bluefin tuna. The European Union report and forms related to bluefin tuna Recommendations were transmitted to ICCAT.

− *At the Member State level*

Member States, at the national level, strive to comply with ICCAT recommendation and resolutions, in terms of fishing effort limitation (capacity/number of ships), catch limits (management of the quotas), and landing controls from third countries vessels and, in particular, those from flag of convenience vessels.

− *Complementary conservation and management measures*

In 2009 the European Union adopted the Council Regulation (EC) No. 1224/2009, of 20 November 2009, establishing a Community control system for ensuring compliance with the rules of the common fisheries policy.

That Regulation introduced for all EU vessels, including vessels fishing for ICCAT species on commercial and recreational fisheries, a new approach to control that includes comprehensive monitoring and surveillance of

fleets, catches and fishing activities, including transhipments, and enforcement measures against the Member States to ensure compliance.

In addition to these obligatory provisions, Member States must adopt more restrictive provisions for certain species than those imposed at the European Union level or by ICCAT. These provisions, adapted to national requirements, target rational management and more accurate monitoring of the fisheries, up to the retail point of the catch. Depending on the Member States and the fisheries concerned, the following elements, in particular, are to be noted: annual fishing plans, an obligatory specific license to be issued annually (special fishing permit), limit to the number of licenses issued, withdrawal of the license in the event of infringement, detailed record of fishing activities, on-board scientific observers, notification by vessels of entry and departure from port and fishing areas, by-catch limits, vessel catch quotas, seasonal closures, and, minimum sizes.

These measures should in particular strengthen the sector's supervision and monitoring of the fish from catch to retail. The European Union has also:

- Obligatory monthly transmission of catch data for all species subject to TAC and quotas and quarterly transmission for other species;

- Obligatory satellite tracking (VMS) for vessels greater than 15 meters;

- Adopted Council Regulation (EC) No. 1966/2006 on electronic recording of fishing activities and on means of remote sensing (electronic logbook), (obligation to transmit information on fishing activities electronically, including landings, transhipments and sales notes as well as on the obligation on authorities to put in place means of remote sensing);

- Adopted a Council Regulation on 29 September 2008 concerning authorisations for fishing activities of Community fishing vessels outside Community waters and the access of third country vessels to Community waters;

- Adopted a Council Regulation 1005/2008 on 29 September 2008 to prevent, deter and eliminate IUU fishing.

- *Inspection schemes*

Member States

At-shore inspections:

Controls undertaken by the Member States are generally carried out in the landing port and/or at the time of sale, when this is at auction. They can also intervene at any time during the transport or at the central markets. Vessels are also permanently monitored via their flag Member State FMC. These controls primarily cover the quantities landed and marketed, the sizes, the age and weight of the fish, and the respect of closed fishing periods.

Member States of the EU have established an information network between the various landing ports to improve the monitoring of vessel movements. Vessels are submitted to report catch through electronic logbooks.

Routine inspections are also carried out, by third country inspectors and scientific institute observers at the time of landing of tropical tuna by European Union vessels outside EU.

The same controls that are applied to port inspections are carried out on transshipments of tunas, including foreign vessels, whether Contracting Party or non Contracting Party to ICCAT.

Air and sea inspections:

In addition to the terrestrial methods, Member States have maritime and aerial means to monitor fishing activities and the respect by European Union vessels of the technical and administrative requirements imposed on each fishery. Air and sea control exercises, whether routine or specific, are organised throughout the fishing seasons.

This mechanism does not ignore, however, the great practical difficulties faced by the competent Administrations of some Member States in achieving the same level of effectiveness when dealing with a very high number of landing points located on their territory.

The mandatory satellite tracking of vessels greater than 15 meters has improved the monitoring at sea.

Implementation and results (2010)

− **Spain**

The objectives of the inspection activities are:

- To monitor and control, by maritime, aerial and land based means, the activities of longline and purse-seine vessels;
- To monitor and control cargo vessels which transport or tranship ICCAT managed species;
- To monitor and control vessels flying the flag of third countries and "flags of convenience";
- To monitor and control technical measures;
- To monitor and control minimum sizes, in particular of bluefin tuna and swordfish in the framework of the ICCAT measures to reduce catches of juvenile tunas;
- To monitor compliance with EU Regulations transposing the Bluefin tuna Recovery Plan;
- Participation in the ICCAT scheme of Joint International Inspection;
- The constant monitoring and control of fishing activities in waters falling under the jurisdiction of Spain;
- Control of foreign vessels activities;
- Control of gears and all obligatory documentation.

There was a decrease of inspections to a total of 1122 (in-port, at-sea and aerial) due to the important decrease of landings at port, notably of bluefin tuna. In 2010 48 presumed infringements were detected.

The bluefin tuna in the Mediterranean Sea and in the North Atlantic Ocean was a priority of the inspection activities in 2010. A total of three patrol vessels were operating and two of them engaged in the Joint Deployment Programme for bluefin tuna. Three planes and four helicopters participate in the aerial surveillance. Additionally, Spain has also concentrated on the control of other tuna species, swordfish and sharks, notably as regards shark fining and has prohibited the landing/importation of tuna from vessels which have not respected ICCAT recommendations.

− **France**

Maritime and aerial control means in the Atlantic and Mediterranean in particular for the bluefin tuna fishery. France implemented a National Plan to monitor the bluefin tuna fishery with the main objective of monitoring the quota, the reporting obligations and to reinforce at port and at sea activities. France has participated in the Joint Deployment Programme for bluefin tuna.

There were a total of 119 in Atlantic (104 at port and 15 at sea) and 830 in Mediterranean (792 at port and 38 at sea). 46 presumed infringements were detected.

France implemented the Regional Observers programme and a national observer's programme on vessels over 15 m fishing for bluefin (130 days of observation on 20% of vessels over 15 m).

Statistical documents and BCDs were controlled.

To ensure the respect of the moratorium in the Gulf of Guinea during the period 1 to 30 November 2010 was monitored by VMS.

− **Italy**

Within the framework of the implementation of the Community control regulation including for ICCAT control measures and the Bluefin tuna Recovery Plan, Italy deployed human, naval and aerial resources. During 2010, 86 ports were designated for landing bluefin tuna which were covered by an ICCAT inspector present for all landings. Italy also took part Joint Deployment Programme for bluefin tuna during de fishing season.

− **Portugal**

Human, naval, and aerial resources were deployed (7.488 missions). In the continental area there were multiple missions to monitor the longliners and 17 inspections at port. Two vessels were verbalized for not respecting minimum size measures and for not having correctly fulfilled logbooks.

In the Azores and Madeira there were also multiple missions to monitor the longliners (513 missions). These missions concerned Portuguese vessels (757) other Member States' vessels (44) and third countries' vessels (4).

− **Greece**

The control of fishing and trade of tunas is carried out by Port Authorities and particularly 72 inspection vessels were engaged in the controlling of fishing activities among other tasks. Two Greek patrol vessels took part Joint Deployment Programme for bluefin tuna during de fishing season. In 2010, numerous inspections of fishing vessels took place by port authorities and as a result administrative penalties (14 cases) and fines as well as suspension (11 cases) of fishing activities were applied to Greek vessels. The tuna farming is inspected and monitored by local and central services. The BCDs were controlled.

− **United Kingdom**

Monitoring and enforcement is undertaken by inspectors based in the relevant fishing ports in the West of England in the northern albacore troll line fishery. This includes vessel inspections on landing, market inspections and documentary checks of logbooks, landing declarations and sales notes. All vessels over 10 m are required to fully complete a logbook. The UK undertook an extensive examination of satellite tracking system and log sheets to validate the region and zone information.

− **Ireland**

Sea Fishery Officers inspected all vessels fishing for albacore before they engaged in the fishery to ensure they held an authorization and to ensure compliance with all relevant requirements. All landings were inspected in port to ensure the vessels respect the regulations. The Irish Air Corps CASA maritime patrol aircraft and the patrols of the Irish Naval Service also carried out missions to monitor the activity of the albacore fleet. No infringements were detected. No Irish vessels were involved in Tuna transhipment operations

− **Malta**

Malta has a team of Fisheries Protection officers that carry out inspection on the activities of large pelagic species activities thus aiding the conservation of highly migratory species. These inspectors assure that fishing for bluefin tuna is only carried out following the Recommendations and Resolutions of ICCAT. A VMS system has been installed on all vessels over 12 m. The tuna farming activity was also closely followed.

During 2010, four ports were designated for landing bluefin tuna covered by a landing officer who was present for all landings and all tuna that was landed were tagged by the landing officer for internal traceability.

During 2010, Malta took part in a Joint Deployment Plan for bluefin tuna and several joint inspections were carried out on local and foreign vessels, in ports and farms during caging and harvesting. Several air patrols were also conducted under the Joint Deployment Plan.

− **Cyprus**

The monitoring and control of the fishing activities of all Cyprus flag fishing vessels is carried out by the DFMR. Within the framework of Joint Deployment Plan for bluefin tuna, Cyprus patrolled its coastline, ports

and fleet (both at sea & when moored) according to the season, the fleet landings and the frequency of infringements, in order to achieve adequate control of the Cypriot bluefin tuna fishery.

In 2010, Cyprus (DFMR) deployed the following resources for monitoring and controlling fishing activities:

- Human resources: The Fisheries Inspectorate Service (4 Fisheries officers), (22 Fisheries Inspectors), the Naval Service (11 persons) and a specialized personnel (2 persons) operating the VMS. It is noted that the personnel involved with monitoring and control is engaged with other tasks as well.

- 7 patrol vessels.

During 2010, DFMR Inspectors made 1107 patrols along the coast, in harbors and fishing shelters, 91 patrols at sea, and 44 patrols at fish markets. The total number of marine patrols conducted during 2010 was 1242, 1036 were performed during regular working hours while 206 after regular working hours.

Within the framework of the Joint Deployment Plan for the conservation of bluefin tuna fisheries, DFMR Cypriot Inspectors participated in three joint operations abroad with community patrol vessels. In addition, during the JDP program, Cyprus performed 30 inspections in polyvalent vessels that fished with drifting longlines. Furthermore, during the closed season of swordfish (October-November), 7 inspections were carried out in polyvalent vessels. Concerning the tuna farms in Cyprus and since they were not active during the 2010 season, controls were limited to verifications that the farms had no fish.

During 2010 DFMR carried out 615 inspections on professional vessels without including the inspections on recreational anglers. 388 inspections were focused on the small scale inshore fishery, 51 inspections were focused on the trawlers that are fishing within the territorial waters of Cyprus, 48 inspections were conducted on polyvalent vessels and 128 inspections were conducted in fish-markets.

− **Other Member States**

Other Member States also carry out controls in accordance with European Union legislation to ensure the respect of the ICCAT conservation measures.

− **The European Commission**

In addition to the Member States, the European Commission has fisheries inspectors whose function is to supervise the inspection and control activities undertaken by the national services of the Member States. During 2010 they have carried out missions directly concerned with the fishing activities of highly migratory species, with the priority being placed on the bluefin tuna fisheries.

The main goals of the missions were:

- The verification of the respect of the European Union regulation regarding driftnet fishing in the Mediterranean;
- The verification that Member States have taken the necessary measures to ensure the respect of the technical measures concerning bluefin tuna, and in particular the ICCAT recommendations;
- The verification of the compliance with European Union legislation on catch and landing declarations;
- To assess the control measures implemented by the Member States.

The work of the European Commission inspectors involves the inspectors accompanying the national inspectors in all aspects of their activities, both at sea and land based notably the farming activity, to evaluate the compliance with the binding provisions of European Union legislation, which includes, in particular, the ICCAT recommendations.

In2010, the bluefin tuna was again a top priority. The control of the bluefin tuna activity is reported in the bluefin tuna recovery plan annual report.

The data concerning the tropical tuna is supervised by scientific institutes in the European Union pursuant to the provisions of the fishing agreements concluded by the European Union with the third countries concerned.

ANNUAL REPORT OF FRANCE (ST. PIERRE & MIQUELON)
RAPPORT ANNUEL DE LA FRANCE (SAINT-PIERRE ET MIQUELON)
INFORME ANUAL DE FRANCIA (SAN PEDRO Y MIQUELÓN)

SUMMARY

The total amount of catches made under the ICCAT quotas allocated to France (on behalf of St. Pierre and Miquelon) amounted to 100.5 t of tuna and tuna-like species in 2010. The quotas allocated to the islands did not permit a local boat owner to operate a vessel. The French catches of tuna and tuna-like species are made by a Canadian chartered fishing vessel (a 28 m longliner). This vessel, purchased by a boat owner from Saint Pierre, should sail under French flag, from March 9, 2011 to exploit the French quotas of North swordfish, albacore and bigeye. This vessel may also catch western bluefin tuna as by-catch. Tuna fishing is regulated by means of fishing licences issued by the Prefect, the representative of France in the islands. For the island's artisanal vessels (less than 12 m), only one license mentions the possibility of catching tunas, to prevent excessive by-catch. No catches were recorded in 2010 for the species managed by ICCAT in the exclusive economic zone of St. Pierre and Miquelon. Vessels are required to report their catches and occasionally have on board observers. All the landings are monitored, as are all the products exported. France has control measures through several administrations (maritime affairs, police, national navy, etc.). Fishing control campaigns, both at sea and on land, are carried out regularly. Special attention is given to the landing of tunas at the port of St. Pierre. Any legal actions that may be taken during these controls are later transmitted to the judicial administration.

RÉSUMÉ

Le montant total des captures réalisées sur les quotas de l'ICCAT attribués à la France (au nom de Saint-Pierre-et-Miquelon) s'élève à 100,5 tonnes de thonidés et d'espèces apparentées pour l'année 2010. Les quotas attribués à l'archipel ne permettant à un armement local d'exploiter qu'une unité, les captures françaises de thonidés et espèces apparentées sont réalisées par un navire de pêche canadien affrété (palangrier de 28 mètres). Ce navire, acquis par un armement de Saint-Pierre, navigue sous pavillon français depuis le 9 mars 2011 pour exploiter les quotas français d'espadon du Nord, de germon et de patudo. Il est susceptible de pêcher également, de manière accessoire, du thon rouge de l'Ouest. La pêche des thonidés est règlementée par le biais de l'attribution de licences par le représentant de l'État sur l'archipel. Parmi les navires artisanaux de l'archipel (moins de 12 m), un seul mentionnait la possibilité de captures de thonidés, afin de prévenir une exceptionnelle prise accessoire. Aucune capture n'a été enregistrée en 2010 sur les espèces gérées par l'ICCAT dans la zone exclusive économique de Saint-Pierre et Miquelon. Les navires sont soumis à obligation de déclaration des captures et embarquent également ponctuellement des observateurs. Tous les débarquements font l'objet d'un contrôle, de même que la totalité des produits exportés. La France dispose de moyens de contrôle de plusieurs administrations (affaires maritimes, gendarmerie, marine nationale, etc.). Des campagnes de contrôle des pêches, tant en mer qu'à terre, sont régulièrement effectuées. Un accent est particulièrement mis sur le débarquement des thonidés au port de Saint-Pierre. Les procès-verbaux éventuellement établis à cette occasion sont transmis à l'administration judiciaire.

RESUMEN

El total de capturas realizadas para el año 2010 sobre las cuotas de ICCAT atribuidas a Francia (San Pedro y Miquelón) asciende a 100,5 t de túnidos y especies afines. Las cuotas atribuidas al archipiélago no permiten a un armador local más que una unidad para la explotación; las capturas francesas de túnidos y especies afines las realiza un buque de pesca canadiense fletado (un palangrero de 28 metros). Este buque, adquirido por un armador de San Pedro, navega bajo pabellón francés desde el 09 de marzo de 2011 para explotar las cuotas francesas de pez espada del Norte, atún blanco y patudo. También podría pescar atún rojo del Oeste de forma fortuita. La pesca de túnidos está reglamentada por medio de la concesión de licencias por parte del representante del Estado en el archipiélago. En lo que concierne a los buques artesanales del archipiélago (menos de 12 m), sólo para uno de ellos se menciona la

posibilidad de captura de túnidos para prevenir una captura fortuita excepcional. En 2010, no se ha registrado ninguna captura de las especies de ICCAT en la zona económica exclusiva de San Pedro y Miquelón. Los buques están obligados a declarar las capturas y embarcan puntualmente observadores. Todos los desembarques son objeto de control, y lo mismo ocurre con todos los productos exportados. Francia dispone de medios de control en varias administraciones (asuntos marítimos, gendarmería, marina nacional...). Las campañas de control de la pesca, tanto en mar como en tierra, se realizan de forma regular. Se presta especial atención al desembarque de túnidos en el puerto de San Pedro. Los atestados que puedan levantarse durante dichos controles se transmiten posteriormente a la administración judicial.

Ière partie (Information sur les pêcheries nationales, la recherche et les statistiques)

Chapitre 1 : Information annuelle sur les pêcheries

Les captures d'espèces gérées par la CICTA ont été de 100,5 tonnes pour la campagne 2010**.** En 2009 les captures totales de thonidés et d'espèces apparentées dans l'océan Atlantique relevant de quotas alloués à la France (au nom de Saint-Pierre-et-Miquelon) avaient été de 23,5 tonnes (110,8 tonnes en 2007, 64 tonnes en 2005 et 87 tonnes en 2004, aucune activité en 2006).

Les quotas attribués à l'archipel ne permettant pas à un armement local d'exploiter une unité exclusivement dédiée à l'exploitation des thonidés, la voie de l'affrètement de navires étrangers a jusqu'à présent été retenue.

Toutefois, en 2009 une société de l'archipel a acquis un palangrier (temporairement sous pavillon canadien) en vue d'exploiter les quotas de thonidés de la France (au nom de Saint-Pierre-et-Miquelon), mais aussi différents autres stocks de la zone économique française ne relevant pas de la CICTA (flétan blanc notamment).

Ce navire, l'*Atlantic Odyssey*, passé sous pavillon français le 9 mars 2011, s'est vu attribuer en 2010 la totalité des quotas de la France (au nom de Saint-Pierre-et-Miquelon) (thon rouge : 17,9 t, espadon : 120,7 t, germon : 250 t).

Un seul navire artisanal de la flottille mentionnait la possibilité de prises de thon rouge (à imputer sur le quota disponible de la France au nom de Saint-Pierre-et-Miquelon), mais uniquement pour couvrir de très éventuelles captures accidentelles.

En pratique, en 2010 comme en 2009, les navires artisanaux de moins de 12 mètres n'ont pêché aucun poisson relevant des stocks gérés dans le cadre de la CICTA.

1.1 Thon rouge (stock de l'océan Atlantique Ouest)

La France, au titre de Saint-Pierre et Miquelon, disposait pour l'année 2010 d'un quota global de 17,9 tonnes de thon rouge (*Thunnus thynnus thynnus* – « Bluefin tuna », BFT) sur le stock ouest, niveau de quota issu du transfert depuis les années précédentes de droits non consommés, en raison des reports *glissants* (pour un quota initial de 4 tonnes par an sur cette espèce). Les prises par le navire affrété ont été de 8,08 tonnes en 2010**.**

1.2 Germon (stock de l'océan Atlantique Nord)

Le quota ajusté français 2010 était de 250 tonnes. Ces captures constituent en fait des prises accessoires pour l'unique navire affrété sur la pêcherie de thonidés de l'archipel. Les captures sont généralement faibles. Elles ont été de 27 kg en 2010, nulles en 2009 (0,2 tonnes en 2008, 3,2 tonnes en 2007, nulles en 2006, 2,12 tonnes en 2005, 7,06 tonnes en 2004).

1.3 Espadon de l'océan Atlantique Nord

Le quota nominal octroyé à la France en 2010 était de 40 tonnes, ajusté à 120,7 tonnes. L'espadon est l'espèce cible recherchée dans cette partie de l'Atlantique Nord Ouest. Les captures 2010 se sont élevées à 89,8 tonnes (20,12 t en 2009 47,6 t en 2008, 82 t en 2007, 48,4 t en 2005 et 35,65 t en 2004).

1.4 Autres espèces

Les autres espèces généralement capturées à la palangre sont le thon obèse, 2,5 tonnes en 2010 (0 t en 2009, 2,6 t en 2008, 2,2 t en 2007, 5,8 t en 2005, 28,3 t en 2004) et les requins 3,8 tonnes en 2010 (1 t en 2009, 0,9 t en 2008, 2,6 t en 2005, 7,01 t en 2004). Conformément à la mesure de gestion en vigueur [Rec. 04-01], la France (Saint-Pierre et Miquelon) n'a pas reçu de limitation spécifique de capture pour le patudo. 223 kg de thon albacore ont également été pêchés.

Chapitre 2 : Recherche et statistiques

La recherche française sur les thonidés et les espèces apparentées est assurée par l'Ifremer (Institut français de recherche pour l'exploitation de la mer). Cet institut est présent sur l'archipel de Saint-Pierre-et-Miquelon, mais le laboratoire concerné ne pratique pas de recherche sur les thonidés : celle-ci est assurée par divers centres situés en métropole.

IIe partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en place des mesures de conservation et de gestion de la CICTA

3.1 Mise en œuvre des recommandations de la CICTA

Il convient d'évoquer ici que l'activité de pêche des thonidés sur les droits ouverts à l'archipel dans les eaux internationales est réalisée par le biais de l'affrètement d'un navire de pêche canadien spécialisé sur ce métier, dans des conditions similaires à celles des années précédentes.

Cette activité a été initiée à nouveau pour l'année 2010 après la signature d'une convention d'affrètement entre PROPECHE SARL et la société canadienne PROPECHE CANADA, convention conclue le 29 avril 2010 et expirant à la fin de l'année de pêche. Les autorités françaises (Préfecture de Saint-Pierre et Miquelon) ont émis le 30 avril une licence de pêche jusqu'au 30 décembre de la même année, autorisant le navire à effectuer des captures d'espadon, de thon rouge, de germon, ainsi que de patudo (en tant que capture accessoire).

Cette émission de licence est conforme aux règlementations en vigueur : livre 9 du code rural et maritime sur l'exercice de la pêche maritime, loi 76-655 du 16 juillet 1976 relative aux zones économiques exclusives au large des côtes de la République, décret 72-692 du 22 juillet 1972 portant publication de l'accord relatif aux relations réciproques entre la France et le Canada en matière de pêche signé le 27 mars 1972, décret 87-182 du 19 mars 1987 modifié et de l'arrêté du 20 mars 1987 modifié fixant les mesures de gestion et de conservation des ressources halieutiques dans les eaux territoriales et la zone économique exclusive au large des côtes de Saint-Pierre et Miquelon.

Conformément à la Recommandation 02-21 de la CICTA, la notification de cet affrètement a été transmise au secrétariat exécutif de la CICTA par la Direction des pêches maritimes et de l'aquaculture. Une licence a été délivrée par les Canadiens le 4 mai 2010.

Un navire unique, sous pavillon canadien, a été affrété pour exploiter des quotas de thonidés alloués à la France (au nom de Saint-Pierre-et-Miquelon). Ce navire a été francisé le 9 mars 2011.

Ce montage, qui implique pour la société PROPECHE SARL de déclarer les prises réalisées comme prises françaises et qui nécessite de se conformer à l'obligation de renseigner les documents statistiques, ainsi que de procéder au marquage des produits, devait permettre de recueillir les résultats de captures du navire.

Les captures ont été débarquées à Saint-Pierre et Miquelon et au Canada en 2010.

3.2 Mesures nationales

Des licences sont attribuées par le représentant de l'État sur l'archipel (préfet) aux navires de pêches qui en font la demande. La licence délivrée mentionne la possibilité de capture de thonidés uniquement pour prévenir une exceptionnelle prise accessoire. En effet, les unités locales ont un rayon d'action limitée et pratiquent leur activité aux alentours de l'archipel. L'essentiel de l'activité est généré, au moyen d'arts dormants, sur les crustacés et la morue présente sur les grands bancs de Terre-Neuve.

Les navires sont soumis à obligations de déclaration de captures et embarquent également ponctuellement des observateurs à leur bord. Compte tenu de l'exiguïté de l'archipel, tous les débarquements font l'objet d'un contrôle, de même que la totalité des produits exportés.

Chapitre 4 : Schémas et activité d'inspection

La France dispose de moyens de contrôle relevant de plusieurs administrations dont certaines sont présentes sur l'archipel de Saint-Pierre-et-Miquelon (affaires maritimes, gendarmerie nationale et marine nationale). Ces moyens effectuent régulièrement des opérations de contrôle des pêches, tant en mer qu'à terre. Un accent est particulièrement mis sur le débarquement des thonidés sur le port de Saint-Pierre. Les procès-verbaux éventuellement établis à cette occasion sont transmis à l'administration judiciaire.

Bilan des contrôles effectués en 2010 :

Deux opérations de débarquement de thonidés ont été enregistrées à Saint-Pierre et Miquelon en 2010. Elles ont été réalisées sous le contrôle des affaires maritimes.

ANNUAL REPORT GHANA
RAPPORT ANNUEL DU GHANA
INFORME ANNUAL DE GHANA

Paul Bannerman[1]

SUMMARY

*The tuna industry in Ghana comprises skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*) and bigeye tuna (*Thunnus obesus*). Twenty-two (22) baitboats and 15 purse seiners are currently fishing within the EEZ of Ghanaian coastal waters and beyond and exploit these tuna species amongst other minor tuna-like species such as the black skipjack (*Euthynnus alletteratus*). During the year under review, skipjack catches were the highest (69%) followed by yellowfin (16%) and bigeye (9%), respectively. Both fleets employ Fish Aggregating Devices (FADs) in fishing and collaborate extensively sharing their catch during fishing operations. Over 80% of catches are conducted off FADs. Catches for 2010 rose slightly to 77876 metric tons (t) from 66470 t in 2009. All data for 2010 were submitted via the AVDTH format during the inter-sessional meeting on Ghana's statistics in May 2011. Recent improvements in sampling, coupled with the provision of more logbook information from the fisher, have contributed to a better understanding of the spatiotemporal distribution of the species. It is envisaged that further synthesis of the database on Ghana since 1980-2010 which is ongoing will give a clear sampling strategy to improve the catch and species composition of the entire catch in relation to innovations observed in the fishery. An observer programme was organized in March-May 2010 on board four purse seine vessels with the aim of training officers on proper methods of estimating catches and filling out of information in logbooks. Further in early 2011, four observers sponsored by the JDMIP project were deployed on purse seiners. Reports have been duly sent to the ICCAT Secretariat. Increased port sampling was also carried out during the months of May-July 2011 also sponsored by the JDMIP. Beach sampling of billfishes under the ICCAT Enhanced Research Programme for Billfish continued off the western coast of Ghana from artisanal drift gill operators with slight declines in catches.*

RÉSUMÉ

*L'industrie thonière au Ghana concerne le listao (*Katsuwonus pelamis*), l'albacore (*Thunnus albacares*) et le thon obèse (*Thunnus obesus*). Vingt-deux canneurs et quinze senneurs opèrent actuellement dans la ZEE des eaux côtières ghanéennes et au-delà et exploitent ces espèces thonières, parmi d'autres espèces apparentées mineures, comme la thonine commune (*Euthynnus alletteratus*). Au cours de l'année à l'étude, les captures de listao étaient les plus importantes (69 %), suivies de celles de l'albacore (16 %) et du thon obèse (9 %), respectivement. Les deux flottilles utilisent des dispositifs de concentration du poisson (DCP) pour pêcher et collaborent considérablement en mettant en commun leurs prises pendant les opérations de pêche. Plus de 80 % des prises sont réalisées sous DCP. En 2010, les captures ont légèrement augmenté, passant de 66.470 t en 2009 à 77.876 t en 2010. Toutes les données de 2010 ont été soumises dans le format AVDTH à la réunion intersession du groupe d'espèces des thonidés tropicaux sur l'analyse des statistiques ghanéennes (Phase II) tenue en mai 2011. Les récentes améliorations de l'échantillonnage, conjuguées à la transmission de davantage d'informations issues des livres de bord de la pêcherie, ont contribué à améliorer la compréhension de la distribution spatio-temporelle des espèces. Il est envisagé qu'une synthèse plus approfondie de la base de données sur les statistiques ghanéennes couvrant la période 1980-2010, laquelle est en cours, donnera lieu à une stratégie d'échantillonnage plus claire visant à améliorer la composition spécifique de l'ensemble de la capture par rapport aux innovations observées dans la pêcherie. Un programme d'observateurs a été mis en œuvre entre les mois de mars et mai 2010 à bord de quatre senneurs dans le but de former les observateurs sur les méthodes adéquates d'estimation des captures et de transcription des informations dans les livres de bord. Par ailleurs, au début de 2011, quatre observateurs,*

[1] Ministry of Food and Agriculture (MOFA) (Fisheries Commission-Ghana).

parrainés par le projet JDMIP, ont été déployés sur des senneurs. Les rapports ont été dûment envoyés au Secrétariat de l'ICCAT. Un échantillonnage accru au port a également été accompli pendant les mois de mai à juillet 2011, une fois de plus sous le parrainage du JDMIP. L'échantillonnage des istiophoridés sur la plage dans le cadre du Programme ICCAT de recherche intensive sur les istiophoridés s'est poursuivi sur le littoral occidental du Ghana auprès d'opérateurs artisanaux opérant au filet dérivant, et les captures ont accusé un léger recul.

RESUMEN

*La industria atunera en Ghana se compone de listado (*Katsuwonus pelamis*), rabil (*Thunnus albacares*) y patudo (*Thunnus obesus*). Veintidós (22) barcos de cebo vivo y quince (15) cerqueros pescan actualmente en la ZEE de las aguas costeras de Ghana y más allá, y explotan estas especies de túnidos junto con otras especies de pequeños túnidos como la bacoreta (*Euthynnus alletteratus*). Durante el año objeto de revisión, las capturas de listado fueron las más elevadas (69%), seguidas del rabil (16%) y del patudo (9%). Ambas flotas emplean dispositivos de concentración de peces (DCP) en la pesca y colaboran ampliamente compartiendo sus capturas durante las operaciones de pesca. Más del 80% de las capturas se realiza con DCP. Las capturas de 2010 se incrementaron ligeramente con respecto a las 66.470 t de 2009, y ascendieron a 77.876 t. Todos los datos para 2010 fueron presentados vía formato AVDTH durante la reunión intersesiones del Grupo de especies tropicales sobre la revisión de las estadísticas de Ghana de mayo de 2011. Las recientes mejoras en el muestreo, junto con la disposición sobre más información de los cuadernos de pesca de la pesquería, han contribuido a la adquisición de un mejor conocimiento de la distribución espaciotemporal de las especies. Se prevé que una síntesis adicional de la base de datos de Ghana para el periodo 1980-2010, que está en proceso, proporcionará una estrategia clara de muestreo para mejorar la información sobre captura y composición por especies de toda la captura en relación con las innovaciones observadas en la pesquería. En marzo-mayo de 2010 se organizó un programa de observadores embarcados en cuatro cerqueros con el objetivo de formar a los oficiales en los métodos adecuados para estimar las capturas y cumplimentar la información de los cuadernos de pesca. Además, a comienzos de 2011, cuatro observadores auspiciados por el JDMIP se embarcaron en cerqueros. Los informes fueron debidamente enviados a la Secretaría de ICCAT. Durante los meses de mayo y julio de 2011 también se incrementó la actividad de muestreo en puerto auspiciada por el JDMIP. Continuó el muestreo en playa de marlines en el marco del Programa de investigación intensiva sobre marlines en las aguas frente a la costa occidental de Ghana de los pescadores de redes artesanales de enmalle a la deriva, y se observó un ligero descenso en las capturas.*

PART I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The tuna industry in Ghana comprises the skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*) and bigeye tuna (*Thunnus obesus*). Twenty-two (22) baitboats, and 15 purse seiners currently fishing within the EEZ of Ghanaian coastal waters and beyond exploit these tuna species among other tuna-like species such as black skipjack (*Euthynnus alletteratus*). The Marine Fisheries Research Division (MFRD) of the Ministry of Food and Agriculture based in Tema is the government agency responsible for tuna research and statistics in Ghana.

Section 2: Research and Statistics

During the year under review, skipjack catches (69%) were the most abundant followed by yellowfin (16%), bigeye (9%) and other tuna-like species 6% respectively. A total catch of 77,875.50 metric tons (t) were landed in 2010 an increment of 17% over the year 2009 (**Table 1**). Tuna baitboats use mainly the anchovy (*Engraulis encrasicolus*) as bait for their operations and seldomly young sardinellas. Both fleets also employ over 1,500 fish aggregating devices (FADs) in capturing the resources and collaborate extensively with each other sharing their catch during fishing operations. This sharing act (collaborative fishing) has been a typical pattern in the industry

with over 80% of catches on FADs. Port sampling of the three major species of tuna were carried out from Tema to determine among others, length frequency distribution to be used for stock assessment purposes. The percentages of fish greater that 65cm were noted to be approximately 30-35% of the entire catch landed in Tema (**Table** 2) and this can be ascribed to majority of fishing occurring within the major spawning grounds off the Gulf of Guinea.

Data (Task I, II and III) (i.e., catch effort) for the year 2010 were duly forwarded to ICCAT via the AVDTH3.2 software programme adopted from the French purse seine fleet during the inter-sessional meeting on Ghanaian Statistics held in May 2011.

In conformity with the objectives of the ICCAT Data Fund, Ghanaian statistics for the principal tunas most especially the bigeye has been monitored since its revision during the bigeye stock assessment meeting held in June 2006. In relation to the above, and for quality assurance [Res. 03-21], statistics from Ghana continue to be evaluated based on improved sampling, provision of logbook data (Task II) spanning the past 15 years, and observer data (2006-2009). Further synthesis of the database on Ghana since 1980-2010 was carried out to get a clear picture on the catch and species composition of the entire catch in relation to the collaborative fishing strategies and innovations and factors influencing catchability of the species. Potential biases in the sampling schemes with possible substitution criteria were raised at the recent ICCAT meeting held on Ghanaian statistics. The recovery of more logbook data aimed at improving Task II was evaluated to help improve the overall quality of information on the spatio-temporal distribution of tunas. For the years 2008-2010, logbook recovery rates have been over 75% and incorporated into the AVDTH database. These have also been forwarded to the ICCAT Secretariat and preliminary analysis carried out.

Beach sampling of the billfishes continued off the western coastline of Ghana. Catch and effort data for the year 2010 were submitted accordingly (**Table 3**). Swordfish landings dropped slightly by approximately 16 t in the year 2010 from 132 t in 2009. Catches for the sailfish remained relatively stable for the years 2009 and 2010 whilst slight reductions were observed in 2010 for the blue marlin. Virtually no landings of the white marlin were observed in 2010. Overall there was noticed a reduction in effort from approximately half (i.e., 900,000 trips in 2009 to 500,000 trips in 2011. High catches for all billfishes were noted to occur in the fourth quarters of each year.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The ICCAT list of vessels over 24 m has not changed in the year 2010 with 15 purse seiners, 22 baitboats and 2 carriers. An update of fleet characteristics such as IMO, IRCS, year of construction, etc., where applicable, have been added. These were submitted to the ICCAT Secretariat on the 14 September 2011. The Monitoring, Surveillance and Control Division (MCSD) of the Commission regularly inspect vessels before they embark on fishing expeditions ensuring that their licences, equipment etc. are in conformity to national and international laws.

An action plan in relation the Recommendation by ICCAT on the Multi-Year Conservation and Management Programme for Bigeye Tuna was submitted to ICCAT in March 2010. This plan aims to strengthen the collection of statistical data and control measures to ensure the full implementation of conservation and management measures.

Section 4: Inspection Schemes and Activities

4.1 Internal arrangements to monitor bigeye and swordfish catches [Recs. 04-01, 02-22]

Internal arrangements to monitor bigeye and swordfish catches in relation to ICCAT Recommendations 04-01 and 02-22, respectively, by regular visits to port and especially the canneries to crosscheck tonnages continued in 2010. Catch certifications in accordance with EU regulations have been carried out during the year under review for exports of the bigeye and swordfish catches and submitted to the Secretariat.

4.2 National observer programmes [Recs. 08-05/10-04]

An observer programme was organized in April-June 2011 sponsored by ICCAT JDIP. The main objective of the programme was to refresh officers on board in methodologies used to attain proper estimates of the catches and species composition of each set. Secondly, the proper filling of records into logbooks was also taught. The training has enabled these officers appreciate the need for accurate reliable datasets to be used for stock assessment purposes. Five purse seine vessels were covered in the programme. In the recommendation, among others, it was mentioned that due to the massive use of FADs and its attendant effect on juvenile mortality precautionary steps should be carried out to safeguard the fishery. The Ghana Fisheries Act 625 provides for co-operation by operators in ensuring that fishing is done in conformity with laid down rules and regulations and any breach of the law would lead to cancellation or suspension of fishing licenses. During the year 2010 observers were deployed on 4 purse seiners to monitor their activities. Further deployment of 6 observers will be carried from September 2011. Insurance covers for observers are been worked out. Observer reports for 2011 have been duly reported under the MFRD/ICCAT/JDIP protocol.

4.3 History of SWO fishery and development/management plan [Rec. 10-02]

The artisanal drift gill net fishery in Ghana started in the mid-1970s targeting large pelagics including the swordfish, sailfish, and marlins, among others. This fishery operates from dugout canoes employs between 10-12 people using small drift nets with meshes between 45-60 mm. Catch and effort data from sampling and catch assessment surveys after Banerji S. 1972 and following the FAO ARTFISH software are reported. As part of the ICCAT Enhanced Research Programme on Billfish, size sampling among other statistical and biological parameters off the 4 major landing sites, namely Apam, Shama, Dixcove and Axim are obtained on a monthly basis. The fishery has developed from a daily fishing trip in the 1970s without ice onboard to a trip lasting approximately 3 days with insulated containers for icing. CPUE trends have generally declined over the past decade due to varying factors including changes in climatic regimes. Management plans in conformity to ICCAT regulations prohibit landing of juvenile fishes less than 115 cm LJFL. The community based fisheries management units in collaboration with field recorders monitor landings from these operators and report and advice on best fishing practices and seasons.

4.4 Internal action report [Rec. 09-08]

Document cp10-intac20 has been duly filled and was submitted on 14 September 2011 Regular general meetings with members of the Ghana Tuna Association (GTA) and the Ministry of Food and Agriculture (Fisheries Directorate) have been helpful in creating more awareness on the need for more responsible fishing practices, harmonizing tuna prices in Tema, easing port (berthing) facilities including bunkering and also ensuring that policies of the Government in relation to fisheries are fully understood and implemented. Six such meetings have been held between the GTA and the fisheries Commission this year 2011.

4.5 Alternative scientific monitoring approach [Rec. 10-10]

The Fisheries Commission through its Research Division has been collaborating with her colleagues in Côte d'Ivoire in obtaining needed information and missing gaps especially with Ghanaian vessels landing there. Under a protocol supported by ICCAT financially, logbook records are obtained from captains and forwarded to MFRD where not officially submitted Sampling of our vessels and data is submitted for verification as in some cases there may be double counting since vessels land and discharge part of their catch in Ghana then in Abidjan. During the recent CECAF scientific meeting held in Accra from the 7-9 September 2011, further internal discussions (non-formal) with colleagues from the sub-region especially Liberia and Sierra-Leone were conducted as to the possibility of the formation of a subregional observer programme for tuna purse seine fishing. This initiative will be taken up by respective Directors of Fisheries and possible funding and training sought to make it a reality. It was suggested that NOAA should be contacted for assistance where applicable.

4.6 ICCAT Statistical Documents [Recs. 01-21 / 01-22]

Data from the Swordfish and Bigeye Tuna Statistical Documents were transmitted to the Secretariat on 14 September 2011,

4.7 Fishing, Inspection and Capacity Reduction Plan For 2012

Ghana has submitted an action plan in 2010 which was accepted by the Commission. In furtherance to this, Ghana will continue to ensure constant inspection of her fleet by the relevant authorities to ensure that fishing in

done in conformity with laid down rule and regulations. Capacity reduction plans for 2012 will be cautiously looked at to improve the overall synthesis of tuna stocks in the Atlantic Ocean.

4.8 Internal Procedures for Compliance with Closed Area/Season in the Gulf of Guinea [Rec. 04-01]

Ghana is willing to abide by the recommendation and would place observers on all vessels to monitor their activities.

Table 1. Landings (tt) of the principal tunas for the year 2009 and 2010.

Vessel / species	*Yellowfin 2010*	*Yellowfin 2009*	*Skipjack 2010*	*Skipjack 2009*	*Bigeye 2010*	*Bigeye 2009*
Baitboats	4855	8326	12534	18155	2121	4465
Purse seine	7657	10029	41279	17909	4648	6089

Table 2. Size (cm) ranges of tunas, 2010.

Gear	*Skipjack*	*Yellowfin*	*Bigeye*
Baitboats	32-66 cm	33-68 cm	36-85 cm
Purse seine	35-65 cm	35-114 cm	36-121 cm

Table 3. Catch (t) and effort (trips) for billfishes in 2010 and 2009.

Year	*Species*	*JAN*	*FEB*	*MAR*	*APR*	*MAY*	*JUN*	*JUL*	*AUG*	*SEP*	*OCT*	*NOV*	*DEC*	*TOTAL*
2009	SWO	14.96	0.81	6.76	7.51	12.24	20.75	21.70	2.03	2.01	20.74	10.76	11.98	132.24
2010	SWO	4.59	2.78	19.95	27.30	19.16	29.63	1.06	1.99	0.00	0.76	1.02	7.78	116.01
2009	SAI	12.41	34.924	8.137	45.2	6.06	17.089	65.818	25.34	19.337	18.6	85.791	19.259	357.97
2010	SAI	46.67	56.10	35.38	3.03	61.75	48.98	1.03	32.75	0.49	7.33	10.25	112.92	416.67
2009	BUM	1.68	2.05	39.69	7.93	52.90	5.85	2.26	8.87	6.43	8.15	0.95	3.72	140.48
2010	BUM	1.50	15.23	15.92	8.85	12.84	12.41	0.95	26.78	3.02	1.19	1.62	15.34	115.65
E09	SAI	8931	1035	5165	5044	5238	11473	10486	12938	10995	12144	3349	4973	91771
E10	SAI	5788	5205	4913	290	5162	4680	3929	3881	3723	3968	4098	4907	50544

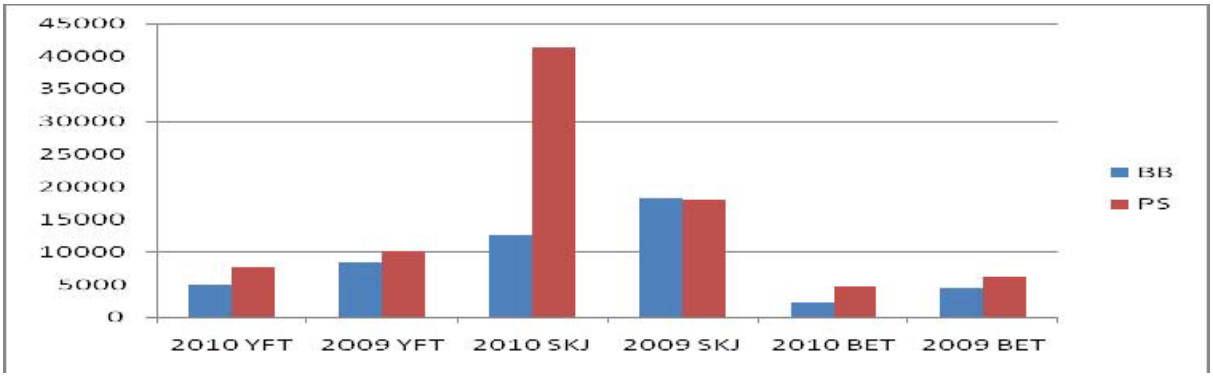

Figure 1. Comparison of landings of the tuna species caught in 2009 and 2010.

ANNUAL REPORT OF GUATEMALA*
RAPPORT ANNUEL DU GUATEMALA
INFORME ANUAL DE GUATEMALA

Parte I (Información sobre pesquerías, investigación y estadísticas)

Sección 1: Información anual sobre pesquerías

1.1 Pesquerías nacionales

Las pesquerías en EL área de la CICAA están dirigidas únicamente a túnidos, estando registradas dos embarcaciones ante la CICAA. Las principales especies objetivo son rabil (*Thunnus albacares*) y listado: (*Katsuwonus pelamis*), y capturas incidentales de patudo (*Thunnus obesus*) dentro de los rangos aceptados como aparece en la **Tabla 1**.

La actividad pesquera en la zona costera de Guatemala en el Atlántico está delimitada en el área del Caribe, y es realizada principalmente por embarcaciones menores con eslora promedio menor de diez metros.

Sección 2: Investigación y estadísticas

La recopilación de datos estadísticos se hace en cooperación con el centro oceanográfico de canarias. Para mejorar los registros de recopilación se ha procedido a revisar la bitácora de pesca de la embarcación al finalizar cada viaje de pesca.

Parte II (Implementación de la ordenación)

Sección 3: Implementación de medidas de conservación y ordenación de ICCAT

Según lo estipulado en las normas nacionales vigentes, la Ley General de Pesca y Acuicultura, Decreto Número 80-2.002 del Congreso de la República, y su Reglamento Acuerdo Gubernativo Número 223-2.005, las medidas de ordenación adoptadas por las organizaciones regionales de ordenación pesquera de las cuales sea Parte contratante la República de Guatemala se consideran aplicables al ordenamiento jurídico vigente en la materia.

Respecto a otras pesquerías como atún rojo y pez espada, Guatemala no tiene flota que regular ni tampoco pesca dentro de zonas específicas como el Mediterráneo.

3.1 Otras medidas relacionadas con especies individuales

En las pesquerías nacionales en el área del Caribe se implementaron vedas con diferentes duración y distribución en todo el año definidas para determinadas especies de crustáceos, moluscos, peces, entre otros; con el objetivo de lograr un ordenamiento de la actividad pesquera y permitir también la recuperación de las poblaciones sujetas a la pesca.

3.2 Seguimiento satelital de embarcaciones pesqueras

Guatemala ha tomado la decisión formal de implementar el sistema de seguimiento satelital (SSS) en todas las embarcaciones pesqueras nacionales, con apoyo de la cooperación internacional y en trabajo conjunto en la región centroamericana; se logró el proyecto de implementación gradual del monitoreo satelital de embarcaciones pesqueras. En junio de 2010, se habilitó el Centro de Seguimiento y Control Satelital (CSCS) para embarcaciones pesqueras nacionales instalado en las oficinas centrales de la Autoridad Pesquera, logrando con ello fortalecer las actividades de control y vigilancia sobre las embarcaciones de bandera nacional que pescan dentro y fuera de la zona económica exclusiva de Guatemala. Así también se inició una revisión a la legislación nacional en materia de seguimiento satelital para fortalecer la norma la vigente.

* No summary provided. / Aucun résumé soumis. / No se ha facilitado el resumen.

3.3 General

Guatemala no tiene puertos en el Atlántico que reciban desembarques o donde se hagan transbordos de especies bajo el manejo de CICAA. Hasta la fecha, no se han hecho arreglos con otros Estados en cuyos puertos descarguen buques guatemaltecos para enviar inspectores de pesca nacionales.

Los buques de bandera de Guatemala que pescan en la zona del Convenio CICAA están autorizados a efectuar la actividad y tienen sus documentos que así lo demuestran a bordo. No se tiene noticia de posibles infracciones cometidas por esos buques ni de que pesquen sin autorización en aguas bajo soberanía o jurisdicción de otros Estados costeros pero, de haberlas, se investigarían y sancionarían, de ser el caso, conforme a la Ley General de Pesca y Acuicultura y su Reglamento vigente. Guatemala controla su flota mediante el SSS. Guatemala mantiene un registro de barcos nacionales autorizados para pescar en el Atlántico.

No se tiene noticia de actividades de pesca IUU realizadas por buques de bandera guatemalteca ni por barcos de bandera extranjera que faenen, descarguen, coloquen en jaulas o transborden en puerto nacional.

Sección 4: Actividades y esquemas de inspección

Tal inspección fue realizada por la autoridad marítima que reside en el Ministerio de la Defensa Nacional, Departamento Marítimo, por un Inspector calificado de la Comandancia y Capitanía de Puerto Quetzal, puerto de registro de esos buques, en coordinación con el Ministerio de Agricultura, Ganadería y Alimentación.

Sección 5: Otras actividades

Implementación de mecanismos para fortalecer la información relativa a desembarques a través de la comunicación con los concesionarios de pesca. Así también, la emisión de certificados de captura a buques de pabellón guatemalteco para desalentar la pesca ilegal, no declarada y no reglamentada.

Se realizaron talleres de divulgación con los concesionarios de pesca sobre la instalación del CSCS en las oficinas de la Autoridad de Pesca y el acercamiento con proveedores del servicio de SSS a embarcaciones pesqueras.

Tabla 1. Comparación de capturas de túnidos tropicales en el área de CICAA por la embarcación "*Sant Yago Uno"*, valores expresados en toneladas métricas (t)

Especie	*Captura (t)*	
	2009	*2010*
YFT	2,166.0	3,124.0
SKJ	4,768.0	2,951.0
BET	9,87.0	1,011.0

Tabla 2. Códigos de especies utilizadas.

YFT	*Thunnus albacares*
SKJ	*Katsuwonus pelamis*
BET	*Thunnus obesus*

ANNUAL REPORT OF ICELAND
RAPPORT ANNUEL DE L'ISLANDE
INFORME ANUAL DE ISLANDIA

Brynhildur Benediktsdottir[1]

SUMMARY

The Ministry of Fisheries in Iceland allocates its bluefin tuna quota for one year at a time. In 2010 and 2011 the allowed fishing method has been longline in the area south of Iceland and the fishing season starting 1 August. There were no catches of bluefin tuna by Icelandic vessels in 2010. Iceland issued IQ for two longline vessels in 2010, neither of them fished, and there were no incidental by-catches. There were no other reported catches of ICCAT species by Icelandic vessels. In 2011 the Icelandic quota was in total 78.82 tonnes (t), including the 49 t transferred from a voluntary reduction from 2009. One longline vessel was allocated 78 t of IQ and 0.82 t reserved for bycatch of bluefin tuna. The vessel will be commencing fishing in October 2011. Two Icelandic vessels, fishing for small pelagics, have reported by-catches of tuna. The Ministry will adjust the quota allocated to account for bycatches. There are no direct fisheries for any other fish species under ICCAT management, but porbeagle, spotted dogfish and Greenland shark are by-catches within the Icelandic EEZ in other commercial fisheries and are reported to the ICCAT SCRS. As discarding of fish is prohibited by law by Icelandic vessels, ICCAT reccomendations banning retention, storing, landing and selling of shark species were implemented by Iceland requiring vessels to release alive these species or if not possible storing them seperately and submitting them to the Marine Research Institute in Iceland for scientific purposes. All sale of these species is forbidden.

RÉSUMÉ

Le ministère des Pêches islandais alloue son quota de thon rouge chaque année. En 2010 et 2011, la méthode de pêche autorisée était la palangre dans la zone du Sud de l'Islande et la saison de pêche a commencé le 1er août. En 2010, les navires islandais n'ont réalisé aucune prise de thon rouge. En 2010, l'Islande a octroyé un quota individuel à deux palangriers, aucun d'entre eux n'a pêché et il n'y a eu aucune prise accessoire. Les navires islandais n'ont déclaré aucune autre prise d'espèces relevant de l'ICCAT. En 2011, le quota islandais s'élevait à un total de 78,82 tonnes, comprenant les 49 tonnes transférées d'une réduction volontaire de quota de 2009. Un quota individuel de 78 tonnes a été alloué à un palangrier et 0,82 tonne a été réservée pour la prise accessoire de thon rouge. Le navire commencera à pêcher en octobre 2011. Deux navires islandais pêchant de petits pélagiques ont déclaré des prises accessoires de thonidés. Le ministère ajustera le quota alloué afin de tenir compte des prises accessoires. Il n'existe pas d'autres pêcheries ciblant directement toute autre espèce de poisson relevant de la gestion de l'ICCAT, mais le requin-taupe commun, la grande roussette et la laimargue sont capturés accessoirement dans la ZEE islandaise au sein d'autres pêcheries commerciales et sont déclarés au SCRS de l'ICCAT. Étant donné que la loi interdit aux navires islandais de rejeter des poissons, l'Islande a mis en œuvre les recommandations de l'ICCAT interdisant de retenir à bord, de stocker, de débarquer et de vendre des espèces de requins, imposant aux navires de remettre ces espèces à l'eau à l'état vivant, ou si cela n'est pas possible, de les stocker séparément et de les soumettre à l'Institut de recherche marine d'Islande à des fins scientifiques. La vente de ces espèces est interdite.

RESUMEN

El Ministerio de Pesca en Islandia asigna su cuota de atún rojo para un año cada vez. En 2010 y 2011 el método de pesca permitido ha sido el palangre en la zona al Sur de Islandia y la temporada de pesca comenzó el 1 de agosto. Los buques islandeses no capturaron atún rojo en 2010. Islandia asignó cuotas individuales a dos palangreros en 2010, ninguno de ellos pescó y

[1] Ministry of Fisheries.

no hubo capturas incidentales. Los buques islandeses no comunicaron otras capturas de especies de ICCAT. En 2011, la cuota islandesa ascendió a un total de 78,82 t, lo que incluye las 49 t transferidas de una reducción voluntaria de 2009. Se asignó una cuota individual de 78 t a un palangrero y se reservaron 0,82 t de captura fortuita de atún rojo. El buque comenzará a pescar en octubre de 2011. Dos buques islandeses, que pescan pequeños pelágicos, han comunicado capturas fortuitas de atún. El Ministerio ajustará la cuota asignada para tener en cuenta estas capturas fortuitas. No hay ninguna pesquería dirigida a otras especies gestionadas por ICCAT, pero el marrajo sardinero, la pintarroja y el tollo de Groenlandia son capturas fortuitas en la ZEE de Islandia en otras pesquerías comerciales y se comunican al SCRS de ICCAT. Dado que la legislación prohíbe el descarte de peces a los buques islandeses, las Recomendaciones de ICCAT que prohíben la retención, almacenaje, desembarque y venta de tiburones fueron implementadas por Islandia que ha requerido a los buques que liberen vivas estas especies y que, cuando esto no sea posible, las almacenen en un lugar separado, y los presenten al Instituto de Investigaciones Marinas de Islandia para fines científicos. Está prohibida la venta de estas especies.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fishing Information

In 2010 there were no direct fisheries for bluefin tuna or tuna like species by Icelandic vessels. In 2010 the Icelandic quota of bluefin tuna in the ICCAT area was 31.2 tonnes (t). The Ministry of Fisheries and Agriculture in Iceland allocated an IQ of 15 t (each) to two longline vessels. Neither of these vessels participated in directed fisheries for bluefin, and there were no reports of incidental by-catches. Therefore, there are no bluefin tuna catches by Icelandic vessels in 2010.

In 2011 the Icelandic quota was 29.82 t. In addition, Iceland transferred 49 t to 2011 as voluntary reduction from 2009. The total quota of Iceland in 2011 is therefore 78.82 t. The fishing season started 1 August 2011.Fishing is only allowed in the area South of Iceland, by longline. One Icelandic vessel was issued a quota of 78 t, the remaining 0.82 t is reserved for incidental by-catches. The vessel has announced its intention to start fishing in October 2011.

By-catches have been reported in 2011 by Icelandic vessels in Icelandic waters. One bluefin tuna was landed in August and one Icelandic pelagic trawling vessel caught 12 bluefin tuna in September. The Ministry of Fisheries will adjust the IQ vessel allocation to account for the by-catches.

There are no direct fisheries for any other fish species under ICCAT management, but porbeagle, spotted dogfish and Greenland shark are by-catches within the Icelandic EEZ in other commercial fisheries and are reported to the ICCAT SCRS.

Section 2: Research and Statistics

The Marine Research Institute in Iceland will get statistic on location, size and weight of the incidental by-catches of bluefin tuna in the Icelandic EEZ.

All landings are registered and weighed at landing in Iceland and compiled in a centralized database by the Directorate of Iceland. Icelandic vessels also have to submit copies of logbooks to the Directorate, and many of the larger vessels electronic logbooks. The bluefin tuna longline vessel is obliged to report through an electronic logbook.

Discards are banned on the Icelandic fleet; by-catch is to be landed and registered. Icelandic authorities have submitted data to the scientific committee of ICCAT on by-catches of three shark and shark-like species by Icelandic vessels, Greenland shark, porbeagle and picked dogfish, all catches within the Icelandic EEZ. Since there are no direct fisheries for these species, detailed information on fishing area and effort are not available.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

For bluefin tuna fisheries the Icelandic Fisheries Act, as well as regulations governing fishing by Icelandic vessels in international waters beyond national jurisdictions, are supplemented with regulations that are review each year as needed. A new regulation was issued in 2011.

Licenses to fish bluefin tuna are issued by the Directorate of Fisheries each year and for a determined quota for each vessel (IQ). The licenses are only valid for one year. In the license it is also stipulated that the holder of the license is bound by the relevant ICCAT recommendations which are attached to the license. When the individual quota of the vessels is fished, the license expires.

The Ministry can adjust the IQ of vessel/s to account for incidental by-catches.

Violations against fisheries laws and regulations in Iceland are punishable and can result in fines or in cases of serious or repeated deliberate violation imprisonment.

Relevant authorities have been notified of the bluefin tuna documentation scheme. Up to date there have been no imports or re-exports of bluefin tuna in Iceland.

ICCAT recommendations on several shark species that stipulated that retention, landing, storing and selling of these species are prohibited were implemented by Iceland in 2011 in the following manner. Since the Icelandic Fisheries Act forbids discards, all catches of these species are to be released if alive. If this is not possible the catches are to be kept separate, and delivered to the Icelandic Marine Research Institute for scientific purposes. All other landing and storing is prohibited. All sales are prohibited.

Section 4: Inspection Schemes and Activities

All landings of Icelandic vessels are registered and weighed at landing in Iceland and compiled in a centralized database by the Directorate of Iceland. The Directorate also monitors landings by foreign vessels in Icelandic ports.

The Icelandic bluefin tuna vessel will carry an observer onboard at least 20% of the fishing operation. Landings will be monitored by the Directorate of Fisheries. The Marine Research institute will be monitoring information on bluefin tuna fisheries and by-catches.

ANNUAL REPORT OF JAPAN[1]
RAPPORT ANNUEL DU JAPON
INFORME ANUAL DE JAPÓN

SUMMARY

Longline is the only tuna-fishing gear deployed by Japan at present in the Atlantic Ocean. The final logbook coverage from the Japanese longline fleet has been 90-95% before 2009. The current coverage for 2010 is estimated to be about 90%. In 2010, the number of fishing days was about 22,000 days, which was about 80% of the average value in the recent ten year period. The catch of tunas and tuna-like fishes (excluding sharks) is estimated to be about 30,000 t, which is about 90% of the past ten years' average catch. The most important species was bigeye representing 55% of the total tuna and tuna-like fish catch in 2010. The next dominant species was yellowfin tuna, with 17% in weight, and third species was swordfish (9%). Observer trips on longline boats in the Atlantic were conducted and a total of about 600 fishing days were monitored. In addition to the logbook submission mentioned above, the Fisheries Agency of Japan (FAJ) has set catch quotas for western and eastern Atlantic bluefin as well as for northern, southern Atlantic swordfish, blue marlin, white marlin and bigeye tuna, and has required all tuna vessels operating in the Atlantic Ocean to submit catch information, by radio or facsimile, every day (bluefin tuna) and a ten-day period (for other tunas). All Japanese longline vessels operating in the Convention area have been equipped with satellite tracking devices (VMS) onboard. In accordance with ICCAT recommendations, the FAJ has taken the necessary measures to comply with its minimum size regulations, time area closures and so on by Ministerial Order. Each species statistical or catch document program has been conducted. Records of fishing vessels larger than 24 meters in length overall (LSTLVs) have been established. The FAJ has dispatched patrol vessels to the North Atlantic to monitor and inspect Japanese tuna vessels and also to observe fishing activities of other nations' fishing vessels, and inspected landings at Japanese ports to enforce the catch quotas and minimum size limit. A prior permission from the FAJ is required in the case that Japanese tuna longline vessels transship tuna or tuna products to reefers at foreign ports or at sea.

RÉSUMÉ

La palangre est le seul engin déployé actuellement par le Japon pour cibler les thonidés dans l'océan Atlantique. La couverture finale par les livres de bord de la flottille palangrière japonaise était de 90-95 % avant 2009. La couverture actuelle pour 2010 est estimée à près de 90 %. En 2010, il y a eu environ 22.000 jours de pêche, ce qui représentait environ 80 % de la valeur moyenne de ces dix dernières années. La prise de thonidés et d'espèces apparentées (à l'exclusion des requins) est estimée s'élever à 30.000 t, soit environ 90 % de la prise moyenne de ces dix dernières années. L'espèce la plus importante était le thon obèse qui représentait 55 % du total de la prise de thonidés et d'espèces apparentées en 2010. L'espèce dominante suivante était l'albacore, qui représentait 17 % en poids, et la troisième espèce était l'espadon (9 %). Les observateurs embarqués à bord de palangriers ont réalisé des sorties dans l'Atlantique et près de 600 jours de pêche ont fait l'objet d'un suivi. Outre la soumission des carnets de pêche susmentionnée, l'Agence des pêches du Japon (Fisheries Agency of Japan, FAJ) a établi des quotas de capture pour le thon rouge de l'Atlantique Ouest et Est, ainsi que pour l'espadon de l'Atlantique Nord et de l'Atlantique Sud, le makaire bleu, le makaire blanc et le thon obèse, et a demandé à tous les thoniers opérant dans l'océan Atlantique de soumettre des informations tous les jours sur les prises de thon rouge, ainsi que des informations sur les prises d'autres thonidés, tous les dix jours, par radio ou fax. Tous les palangriers japonais opérant dans la zone de la Convention sont pourvus à bord de systèmes de surveillance des navires par satellite (VMS). Conformément aux recommandations de l'ICCAT, la FAJ a pris les mesures nécessaires, par arrêté ministériel, en vue du respect de ses réglementations de taille minimale, des fermetures spatio-temporelles, etc. Les Programmes de documents statistiques ou de capture sont réalisés pour chaque espèce. Des registres de navires de pêche de plus de 24 m

[1] National Research Institute of Far Seas Fisheries, 5-7-1, Orido, Shimizu-ku, Shizuoka, Shizuoka-Pref., 424-8633, Japan.

de longueur hors tout (LSTLV) ont été établis. La FAJ a détaché des patrouilleurs dans l'Atlantique Nord afin de suivre et d'inspecter les thoniers japonais et d'observer les activités de pêche de navires de pêche d'autres nations et a procédé à des inspections des débarquements dans les ports japonais afin d'appliquer les quotas de capture et la limite de taille minimale. La permission préalable de la FAJ a été requise pour tout palangrier thonier japonais qui vise à transborder des thonidés ou des produits de thonidés sur des cargos frigorifiques dans des ports étrangers ou en mer.

RESUMEN

El palangre es el único arte pesquero que utiliza Japón actualmente en el océano Atlántico para pescar túnidos. La cobertura final de los cuadernos de pesca de la flota palangrera japonesa fue del 90-95 % antes de 2009. La cobertura actual para 2010 se estima en aproximadamente el 90%. En 2010 hubo 22.000 días de pesca, lo que se sitúa en aproximadamente el 80% del valor medio de los últimos diez años. La captura de túnidos y especies afines (excluyendo tiburones) se estima en aproximadamente 30.000 t, lo que supone en torno al 90 % de la captura media del periodo de los últimos diez años. La especie más importante fue el patudo, que respondió de aproximadamente el 55% de la captura total de túnidos y especies afines en 2010. La segunda especie predominante fue el rabil, que respondió del 17% en peso, seguida por el pez espada que ocupa el tercer lugar con un 9%. Se llevaron a cabo mareas con observadores en palangreros en el Atlántico y se hizo el seguimiento de en torno a 600 días de pesca. Además de la presentación de los cuadernos de pesca mencionada antes, la Agencia de Pesca de Japón (FAJ) ha establecido cuotas de captura para el atún rojo del Atlántico oriental y occidental, para el pez espada del Atlántico norte y sur, para la aguja azul, la aguja blanca y el patudo, y requiere que todos los buques atuneros que operan en el océano Atlántico presenten información sobre capturas cada día (atún rojo) y para periodos de diez días (otros túnidos) por radio o fax. Todos los palangreros japoneses que operan en la zona del Convenio están equipados con dispositivos de seguimiento por satélite a bordo (VMS). De conformidad con las recomendaciones de ICCAT, la FAJ ha tomado medidas para que se cumplan los reglamentos sobre tallas mínimas, para establecer las vedas espaciotemporales, etc., mediante una orden ministerial. Se ha llevado a cabo el programa de documento estadístico o de documentación de capturas de cada especie. Se han establecido registros de los buques pesqueros de más de 24 m de eslora total (grandes palangreros atuneros). La FAJ ha enviado buques patrulla al Atlántico norte para inspeccionar y hacer un seguimiento de los atuneros japoneses, así como para observar las actividades pesqueras de los buques pesqueros de otras naciones.También se procedió a la inspección de los desembarques en los puertos japoneses para verificar el cumplimiento de las cuotas de captura y del límite de talla mínima. Es necesario el permiso previo de la FAJ para que cualquier palangrero atunero japonés pueda transbordar túnidos o productos de túnidos a buques frigoríficos en puertos extranjeros o en el mar.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Type of fisheries

Longline is the only tuna-fishing gear deployed by Japan at present in the Atlantic Ocean. Two other types of fisheries, baitboat and purse seine, stopped fishing in the Atlantic in 1984 and 1992, respectively. Therefore, the longline fishery is discussed further.

1.2 Statistical coverage

The National Research Institute of Far Seas Fisheries (NRIFSF) has been in charge of compiling fishery statistics from logbooks submitted by commercial tuna fishermen as well as biological data. The final coverage of the logbook from the Japanese longline fleet operating in the Atlantic has been very good (90-95%) before 2009. The current coverage for 2010 is estimated to be about 90%.

With regard to the implementation of conservation measures on North Atlantic swordfish, the Fisheries Agency of Japan (FAJ) instructed its fishermen to submit the information of released alive swordfish as well as blue marlin, white marlin and other marlins in a designated format.

1.3 Trend of fishing effort

The number and fishing days of the Japanese longliners, which operated in the Atlantic in the 2009 calendar year, was estimated to be about 110 and about 22,000 days (**Table 1** and **Figure 1**). Fishing effort showed a decreasing trend in the entire Atlantic. However, in the tropical Atlantic (20N-equatorial-20S), the fishing effort demonstrated an upward trend since 2002 with some fluctuation, and in the north area effort showed a decreasing trend in the recent six years.

The annual geographic distribution of longline fishing effort in 2009 and 2010 (**Figure 2**) showed that fishing effort was exerted in a wide area of the North Atlantic from the south of Iceland to the central tropical waters between Africa and South America as well as in the waters along the African coast in the South Atlantic. There was also a tendency of higher concentration of fishing effort in the temperate North Atlantic between 25°N and 35°N. In 2010, fishing effort was observed in the waters off Uruguay. Seasonal distribution (**Figure 3**) clearly indicated a high concentration of fishing effort in areas such as the south of Iceland, off the east coast of North America as well as the inter-subtropical areas between 20°N and 20°S. In the previous two areas, fishing takes place from the 4th quarter to the 1st quarter, while the tropical fishing grounds are fished for all year round.

1.4 Catch trend

The 2010 calendar year catches of tunas and tuna-like fishes (excluding sharks) in the Atlantic Ocean and the Mediterranean Sea by the Japanese fishery are estimated to be about 30,000 t (**Table 2**). Although the total amount of fishing effort in 2010 was about 80% of the past average for the last ten years (2000-2009) (**Table 1**), the total catches excluding discards and sharks in 2010 were about 91% of the average catch for the same years (**Table 2**). The most important species was bigeye tuna, representing 55% of the total tuna and tuna-like fish catch in 2010. The next dominant species was yellowfin tuna, which occupied 17% in weight, and the third species was swordfish (9%). The catches of bigeye and yellowfin in 2010 represented 86% and 99% of the average catch of the recent ten years, respectively. The remaining species were mainly composed of swordfish, blue marlin, albacore and southern bluefin tuna. The total catch remained stable since 2001 with some yearly fluctuation. The swordfish catch did not occur in the North Atlantic between February 2000 and 2003 as all catches of this species were discarded. The stock or management unit area breakdown of catch by species is shown in **Table 3** for the recent two years (2009-2010).

The geographic distributions of catch by species are shown in **Figure 4** (bluefin tuna), **Figure 5** (bigeye tuna), **Figure 6** (yellowfin tuna), **Figure 7** (swordfish) and **Figure 8** (blue marlin). In general, the distributions for bigeye tuna coincide with the geographic pattern of fishing effort between 40°N and 40°S. In contrast, the catches of bluefin tuna and blue marlin were limited to north of 40°N and the inter-tropical area between 30°N and 20°S, respectively. Large catches of yellowfin tuna and swordfish were recorded in tropical waters. These patterns of geographical distribution of catch composition by species are clearly shown in **Figure 9**.

1.5 New developments or shifts in the fishery

No new development or drastic change in trend was observed in recent years. The declining trend in the number of boats has been observed since 1995. However, total amount of fishing effort (hooks) has been relatively stable in the Atlantic since 2002 (**Figure 1**).

Section 2: Research and Statistics

The NRIFSF has been in charge of data collection and compilation of Atlantic tuna fishery necessary for the scientific research on Atlantic tuna and billfish stocks. The required statistical data have been routinely reported to the ICCAT Secretariat and results of scientific research have also been presented at the regular meetings and inter-sessional meetings of the Standing Committee on Research and Statistics (SCRS).

2.1 Fishery data

The NRIFSF provided near final from 2008 to 2010 catch and effort and size frequency data (Task I, II and biological sampling) of the longline fishery to the ICCAT Secretariat. In accordance with the relevant ICCAT

Recommendations on bluefin tuna, bigeye tuna and swordfish stocks, twelve observer trips on longline boats in the Atlantic were conducted between September 2009 and June 2010. A total of about 600 fishing days were monitored. This year's activities, that have already started, will be conducted in 12 trips between August 2010 and March 2011.

2.2 Tuna biology and stock assessment

The biological and stock assessment studies carried out by the NRIFSF on Atlantic tunas and billfishes have been continued.

This year, the NRIFSF and other affiliated scientists participated the following ICCAT related meetings in addition to the regular SCRS meetings; 2011 Blue Marlin Stock Assessment and White Marlin data Preparatory meeting (Madrid, Spain, April 25 to 29, 2011), the Meeting of the Sub-Committee on Ecosystems (Miami, Florida, United States, May 9 to 13, 2011), ICCAT-GBYP Symposium on Trap Fisheries for Bluefin Tuna (Tangiers, Morocco, May 23 to 25, 2011), the Joint Meeting of the ICCAT Working Group on Stock Assessment Methods and Bluefin Tuna Species Group to Analyze Assessment Methods Developed under the GPYP and Electronic Tagging (Madrid, Spain, June 27 to July 1, 2011), 2011 Yellowfin Tuna Stock Assessment Session (Pasaia, Spain, September 5 to 12, 2011).

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Catch quota and management system on the number of Bigeye tuna and Bluefin tuna vessels

3.1.1 Catch reporting by radio

The FAJ requires all tuna vessels operating in the Atlantic Ocean to submit the logbook information every ten-day period (early-, middle- and late-period of a month) by radio or facsimile to FAJ. In addition, all tuna vessels to fish for Atlantic bluefin tuna are required to report catch weight of bluefin tuna for individual fish with its tag number (Ministerial Order on April 2, 1975 and amended on July 25, 2008), the name of vessel and location of catch every day:

3.1.2 Implementation of the Vessel Monitoring System (VMS)

All Japanese longline vessels operating in the Convention Area have to be equipped with satellite tracking devices (VMS) onboard since 1992. The vessels are required to report their positions through VMS in accordance with relevant ICCAT Recommendation.

3.1.3 Catch quotas management

i) Catch quotas

The FAJ has set catch quotas for western and eastern Atlantic bluefin tuna as well as for northern, southern Atlantic swordfish, blue marlin, white marlin and bigeye tuna, respectively by a Ministerial Order in accordance with the relevant ICCAT recommendations. For Atlantic bluefin tuna, the quota has been allocated individually to a limited number of vessels authorized to fish for bluefin tuna, and all catches are required to be tagged with the designated plastic band distributed to the vessels. These vessels are also required to prepare ICCAT bluefin tuna catch documents (BCDs) provided by the FAJ for landing and transshipping in the designated ports.

ii) Fishing year

The FAJ has set the "Fishing Year (August to July)" for the of proper quota management of bluefin tuna, swordfish, blue marlin, white marlin and bigeye tuna. The 2011 quotas for these tunas are applied to the 2010 Fishing Year which starts on August 1, 2011 and ends on July 31, 2012.

3.1.4 The number of fishing vessels

The FAJ has submitted the list of all the tuna fishing vessels which have been licensed to fish under the ICCAT Convention according to its relevant recommendations.

Since 1998, the FAJ has limited the number of vessels actually fishing for bigeye tuna in the Convention area to 245, by means of the mandatory check in/out reporting system via radio as well as the VMS based on the 2004 recommendation on the bigeye tuna conservation measures for fishing vessels larger than 24 meters length overall. Since 2005, the limit of the number of vessels has been reduced to 235 in accordance with Resolution 05-03.

Furthermore, since the TAC and allocations for eastern Atlantic bluefin tuna have been reduced in accordance with Recommendations 08-05 and 09-06, the government of Japan appropriated 4.2 million dollars for further reduction of the capacity of its longline fishing vessels authorized to fish for eastern Atlantic bluefin tuna. As a result, the number and the GRT of authorized vessels in 2010 fishing year have been reduced to 22 and 9,476 respectively.

3.2 Minimum size limits

In accordance with ICCAT Recommendations, the FAJ has prohibited the catch of undersized fish with an exemption of a certain percentage of tolerance, by Ministerial Order. The catch prohibition of undersized bluefin tuna was established by a Ministerial Order on April 2, 1975 and the FAJ amended this Ministerial Order several times to implement the ICCAT Recommendations such as the size limits for bigeye, swordfish, etc. The latest amendment of this order was in August of 2011 to implement the 2010 Recommendations on bluefin size limits.

3.3 Time and area closure

The FAJ has prohibited Japanese longline vessels from operating in the Mediterranean from June 1 to December 31 by the Ministerial Order in accordance with the ICCAT Recommendation. This closure for bluefin tuna fishery has been extended to the east Atlantic Ocean with the exception of the area delimited by west of 10°W and north of 42°N, where such fishing has been prohibited from 1 Februa ry to 31 July, in accordance with ICCAT Recommendations 06-05 and 08-05.

3.4 National Observer Program

Based on the relevant ICCAT Recommendations, the FAJ implemented a national observer program of vessels operating in the North Atlantic. For 2010, the national observer program covered 45.5% of the total number of fishing vessels fishing for bluefin tuna in the North Atlantic Ocean in accordance with the 2006 East Atlantic and Mediterranean bluefin tuna Recommendation. Similarly, the program covered about10.8% of the total number of fishing vessels operating in the entire Atlantic Ocean in accordance with the 2004 Recommendation on a multi-year conservation and management program for bigeye tuna.

3.5 Prohibition of import of Atlantic bluefin tuna, swordfish and bigeye tuna

Japan has prohibited the import of Atlantic bigeye tuna and its products in any form from Bolivia and Georgia since July 10, 2003 and July 28, 2004, respectively, in accordance with the relevant ICCAT Recommendations.

Japan has conducted random DNA examination in order to prevent false tuna importation.

3.6 Implementation of the ICCAT Bluefin Tuna Statistical Document (BTSD) Program and Catch Document Scheme (CDS)

From September 1, 1993, the Japanese government started collecting BTSDs for frozen product in accordance with the 1992 Recommendation. In addition, from June 1, 1994, the Japanese government started collecting BTSDs for fresh product in accordance with the 1993 Recommendation.

From July 28, 2004, the Japanese government started collecting information on farmed bluefin tuna product in accordance with the 2003 Recommendation.

From June 4, 2008, the Japanese government started collecting Bluefin Tuna Catch Documents (BCDs) for all bluefin tuna products in accordance with the 2007 Recommendation.

The FAJ has annually reported the data collected under the program to the ICCAT Secretariat.

3.7 Implementation of the ICCAT Bigeye Tuna Statistical Document (BETSD) Program

From July 1, 2002, the Japanese government started collecting BETSDs for frozen product in accordance with the 2001 Recommendation.

The FAJ has annually reported the data collected under the program to the ICCAT Secretariat.

3.8 Implementation of the ICCAT Swordfish Statistical Document (SWOSD) Program

From January 1, 2003, the Japanese government started collecting SWOSDs for fresh and frozen product in accordance with the 2001 Recommendation.

The FAJ has reported the data collected by the program to the Executive Secretary on a biannual basis.

3.9 Implementation of the Positive Listing Measure

Based on the 2002 Recommendation to establish an ICCAT record of fishing vessels larger than 24 meters in length overall (LSFVs) authorized to operate in the Convention area, the Japanese government started the Positive Listing Measure from November 14, 2003. Based on the 2009 Recommendation, the list was amended to cover vessels larger than 20 m from June 1, 2010. The species and product type currently covered by the measure are frozen bluefin tuna, frozen bigeye tuna and frozen swordfish. If there were tunas caught by LSFVs not entered into the record, the import is not permitted by the Japanese government.

The Japanese government has implemented the Positive Listing Measures on Farming Facilities based on the 2003 Recommendation since November 22, 2004. For East Atlantic and Mediterranean bluefin tuna, the Japanese government has submitted a list of vessels authorized to fish for bluefin tuna based on the 2006 Recommendation.

Section 4: Inspection Schemes and Actives

4.1 Assignment of patrol vessels

Since 1976, Japan has dispatched patrol vessels to the North Atlantic and/or the Mediterranean every year for a certain period of time to monitor and inspect tuna fishing vessels.

4.2 Inspection of landing at Japanese ports

All Japanese tuna fishing vessels which land their catch at any Japanese port must report their landing plans in advance. The FAJ randomly inspects landings of those Japanese longline vessels to enforce the catch quotas and minimum size limit. For Atlantic bluefin tuna, 100% inspection of landings is implemented.

4.3 Management of transshipment

A prior permission from the AJ is required for Japanese tuna longline vessels to transship tuna or tuna products to reefers at foreign ports and at sea. Transshipment at sea is allowed only to the carriers with an observer placed on board by the Regional Observer Programs. Transshipment at sea of Atlantic bluefin tuna has been prohibited by Ministerial order, upon entry into force of Resolution 08-05 on June 17, 2009. The FAJ monitors the weight by species, the time and place of transshipments, and conducts random inspection of landing at Japanese ports when longline vessels or reefers return to Japanese ports.

Section 5: Other Actives

5.1 Annual catch statistics

Each longline vessel flying the Japanese flag and licensed to engage in tuna fisheries by the Minister for Agriculture, Forestry and Fisheries is legally required to submit a catch report to the Minister every ten-day period by facsimile to the FAJ. Submission of this report is established by a Ministerial Order of January 22, 1963 and as amended on July 25, 2008. The above-mentioned catch report includes the daily information of the vessel's noon position, the number and weight of the catch by species, the quantities of gear used, surface water temperature, etc. The information on the catch report submitted is examined and compiled into the database by NRIFSF.

5.2 Collection of biological data collected on board longline vessels

The information necessary for stock analyses, such as length, weight and sex of fish caught, is collected by fishermen as a voluntary measure.

5.3 Measures to reduce incidental catch of sea turtle, seabirds and sharks

The FAJ issued an administrative guidance and conducted educational programs for fishermen to use fishing gears and other tools to reduce incidental catch of sea turtle, seabirds and sharks.

For sea turtles, the FAJ is conducting a pilot program to use circle hooks to reduce the incidental catch of sea turtles by Japanese longline vessels. When Japanese longline fishing vessels are operating in the high latitudes of the southern hemisphere where interactions between seabirds often occur, it is required to use a tori-pole and other devices to avoid seabirds from approaching the hooks and bait in accordance with the relevant measures adopted by regional tuna fisheries management organizations. In other areas, fishermen are also encouraged to use the device. In 2001, Japan established the National Plan of Action (NPOA) for the Conservation and Management of Sharks and for Reducing Incidental Catch of Seabirds in Longline Fisheries.

5.4 Collection of the trade data

The Ministry of Finance collects trade data, such as quantity, value and export country, etc. of imported tuna products. Such tuna trade data is collected by 31 items including species, fresh/frozen and type of product.

5.5 Effort limitation

The number of Japanese tuna longline vessels authorized to fish for bluefin tuna in the western Atlantic and in the eastern Atlantic including the Mediterranean has been limited to 6 and 22 vessels, respectively, in the 2010 fishing year and 5 and 22 vessels, respectively, in the 2011 fishing year. Furthermore, the FAJ requires all the longline vessels operating in the northern part of the East Atlantic Ocean to submit to FAJ an advance notice of their planned operations, which enables the FAJ to instruct the relevant fishing vessels to shift fishing ground, if necessary. The number of longline vessels fishing for bigeye tuna has been limited 235 in 2007 in accordance with the Recommendation on a multi- year conservation and management program for bigeye tuna.

5.6 Restriction of re-flagging of vessels

No Japanese large-scale tuna longline vessel has been authorized to operate on the high seas unless the government of Japan issues a license. No Japanese vessel can escape from the FAJ’s control even when a vessel is conducting fishing operation in waters far distant from Japan, since a Japanese port is designated as its operational base and all the products are brought into Japan. The export and lease of Japanese longliners and purse seiners are strictly and closely controlled by the FAJ to avoid their use for operations which may diminish the effectiveness of international conservation measures.

5.7 Legislation for the enhancement of the conservation and management of tuna stocks

A new law was enacted in June 1996 with the objective of implementing measures necessary to enhance the conservation and management of tuna stocks and to develop international cooperation for the conservation and management of tuna stocks. This law establishes that the government of Japan may restrict the imports of tuna and tuna products from the foreign country that is recognized by the relevant international organization not to rectify its fishermen's activity and thus is diminishing the effectiveness of the conservation and management measures adopted by the international organizations.

The objective of this law is to support and reinforce ICCAT activities, ensuring the strength of tuna resource conservation and the stability of tuna supply.

Since November 1999, the FAJ has implemented a mandatory reporting system, based on this law, to obtain more information on activities of IUU vessels whose products enter the Japanese market. All importers and persons in charge of carrier vessels are required to report detailed information on the fishing vessels that caught and transport their tuna.

5.8 Scrapping of IUU vessels

Implementing the Japan-Chinese Taipei Action Programs to eliminate the IUU fishing vessels, the Japanese government budgeted for scrapping the IUU tuna longline vessels of Japanese origin during 2001-2003. The total amount of the budget for this three-year program was about US$ 28 million (3.3 billion Japanese yen). Forty-three (43) IUU vessels were scrapped by the end of 2003.

5.9 Legalization of IUU vessels

In accordance with the 2002 ICCAT Resolution concerning cooperative actions to eliminate illegal, unreported and unregulated fishing activities by large-scale tuna longline vessels (LSTLVs), Japan consulted with Vanuatu and Seychelles, as well as Chinese Taipei and established the following new measures in order to dispose the remaining IUU tuna longline fishing vessels, and 69 IUU LSTLVs have been committed to comply with the following cooperative management schemes:

- Cooperative management schemes to legalize these vessels have been concluded between the fisheries authorities of the flag States (Seychelles and Vanuatu) and Japan, and the vessels participating in the scheme were placed under proper management.

- Measures to have the fishing vessels in question obtain Japan's licenses for large-scale longline vessels and freeze those licenses, was taken for the purpose of reinforcing and complementing the cooperative management scheme mentioned above as well as preventing the increase of overall fishing capacity.

Those 69 vessels no longer operate in the Atlantic.

5.10 Establishment of OPRT

The Organization for Promotion of Responsible Tuna Fisheries (OPRT) was established in December 2000 in Tokyo, Japan. The organization consists of the representatives from fishermen, importers, distributors, processors and consumers. One of the main tasks of OPRT is to compile and analyzes the import data of tunas and provide them to OPRT member flag states as feedback for their verification of the reported catch data. The OPRT's other task is to inform Japanese retailers and consumers of the products caught by IUU fishing vessels. The representatives from the fishermen of Japan and Chinese Taipei are the founding members of OPRT. Fishermen of Korea, Philippines, Indonesia, China, Ecuador, Seychelles, Fiji, Micronesia Malaysia, Tuvalu, Kiribati and Marshall Islands have joined the OPRT.

Table 1. Annual number of Japanese tuna boats operated in the Atlantic and Mediterranean, 1981-2010.

	Longline			*Purse seine*	*Pole and line*
Year	*No. of boats*	*Fishing days (sets in 100)*	*Fishing days per boat*	*No. of boats*	*No. of boats*
1981	320	297	93	--	10
1982	269	307	114	1	7
1983	182	175	96	1	4
1984	212	252	119	1	2
1985	205	279	136	2	--
1986	190	208	109	2	--
1987	146	172	118	2	--
1988	183	260	142	2	--
1989	239	345	144	1	--
1990	235	359	153	1	--
1991	242	339	140	2	--
1992	248	292	118	2	--
1993	307	399	130	--	--
1994	232	380	164	--	--
1995	253	385	152	--	--
1996	291	471	162	--	--
1997	276	414	150	--	--
1998	250	403	161	--	--
1999	229	339	148	--	--
2000	208	355	171	--	--
2001	199	276	139	--	--
2002	185	243	131	--	--
2003	198	319	161	--	--
2004	199	323	163	--	--
2005	193	290	150	--	--
2006	173	252	145	--	--
2007	127	254	200	--	--
2008	152	283	186	--	--
2009	123	222	180	--	--
2010*	111	221	199	--	--
Avg. (2000-2009)	176	282	163		
Avg. 20190	63%	78%	122%		

* 2010 values are preliminary.

Table 2. Catches (t) of tuna and tuna-like fishes taken by the Japanese longline fishery, 1981-2010. Grand total includes sharks but excludes discards.

Year	Bluefin	Southern bluefin	Albacore	Bigeye	Yellowfin	Swordfish	White marlin	Blue marlin *1	Black marlin	Sailfish *2	Spearfish	Others	Sub-total	Sharks	Bluefin discards	Swordfish discards	Grand Total (including sharks but excluding discards)
1981	4,386	2,506	2,298	21,044	4,145	2,233	143	468		94		319	37,636				
1982	3,826	1,135	1,350	32,867	6,062	3,728	111	1,132		173		410	50,794				
1983	3,997	505	1,318	15,141	2,069	1,899	44	440		69		114	25,596				
1984	3,246	1,636	800	24,310	3,967	3,789	76	833		97		342	39,096				
1985	2,523	1,468	1,467	31,602	5,308	4,323	126	1,090		122		468	48,497				
1986	1,664	389	1,209	22,801	3,404	2,660	129	508		99		378	33,241				
1987	2,140	1,120	851	18,575	3,364	2,294	134	438		43		341	29,300				
1988	2,536	548	1,128	31,664	5,982	4,055	144	823		79		366	47,325				
1989	2,523	625	1,214	39,419	6,971	5,593	146	1,555		78		390	58,514				
1990	2,186	1,202	1,324	35,024	5,919	7,307	126	1,216		88		538	54,930				
1991	3,754	1,331	1,346	29,489	4,718	4,688	121	905		88		443	46,883				
1992	3,985	525	1,048	34,128	3,715	3,541	248	1,017		43		265	48,515				
1993	3,858	1,688	951	35,053	3,096	6,386	82	928		60		815	52,917				
1994	3,038	595	1,157	38,502	4,782	4,763	92	1,524	6	53	38	513	55,063	3,221			58,284
1995	5,171	1,409	758	34,223	5,046	3,563	55	1,366	1	52	28	826	52,498	2,149			54,647
1996	4,542	1,219	901	33,171	5,251	3,795	112	1,679	2	50	29	783	51,534	1,364			52,898
1997	3,498	301	838	26,489	3,538	2,765	58	1,349	1	36	31	415	39,319	1,304	8		40,631
1998	4,276	926	884	25,601	5,413	2,518	50	1,067	2	50	40	801	41,628	1,524	-	-	43,152
1999	3,436	946	1,027	21,833	3,405	1,869	40	790	0	26	44	685	34,101	1,001	-	-	35,102
2000	3,523	1,205	1,241	24,605	4,061	954	83	883	2	39	40	734	37,370	696	-	598	38,066
2001	3,083	376	1,467	18,087	2,692	686	56	335	1	9	23	313	27,128	675	-	567	27,803
2002	3,501	1,152	942	15,306	2,105	833	16	267	2	23	28	825	25,000	898	-	319	25,897
2003	3,068	1,952	1,002	20,528	3,049	956	33	459	1	32	65	794	31,938	1,089	-	263	33,027
2004	3,123	92	1,402	18,509	6,260	1,263	36	539	2	75	77	415	31,794	1,464	-	0	33,258
2005	3,241	354	1,648	14,026	4,247	1,189	34	442	1	72	98	801	26,153	1,692	-	0	27,845
2006	2,828	303	1,097	15,735	4,643	1,746	39	490	2	67	74	685	27,708	2,166	-	0	29,875
2007	2,355	25	527	17,993	9,037	3,046	21	920	3	145	61	735	34,867	3,093	-	0	37,961
2008	2,922	915	1,772	16,782	6,276	2,545	34	1,028	1	232	99	312	32,916	4,757	-	0	37,674
2009	2,085	228	1,210	16,395	4,994	2,118	43	822	3	137	85	531	28,649	3,312	-	0	31,962
2010*3	1,508	126	1,522	15,220	4,705	2,452	44	780	2	176	117	958	27,610	3,264		0	30,874
average (2000 - 2009)	2,973	660	1,231	17,797	4,736	1,534	39	619	2	83	65	615	30,352	1,984	-	-	32,337
2010*3 / average	51%	19%	124%	86%	99%	160%	112%	126%	98%	212%	180%	156%	91%	165%			95%

*1 Blue marlin and black marlin were not separated until 1993.

*2 Sailfish and spearfish were not separeted until 1993.

*3 2010 values are preliminaly.

Table 3. Stock or management unit area breakdown of Task I catches (t) taken by the Japanese longline fishery for 2009 and 2010.

2009

SPECIES	WEST	EAST	NORT	SOUTH	NE	NW	SE	SW	MEDI	ALL	TOTAL
bluefin	162	1,904							18		2,085
southern bluefin					0	0	227	1	0		228
albacore			288	921					0		1,210
bigeye									0	16,395	16,395
yellowfin	1,431	3,563							0		4,994
swordfish *1			778	1,340					1		2,118
blue marlin			27	16					0		43
back marlin			477	345					0		822
white marlin					1	0	2	0	0		3
sailfish	43	94							0		137
spearfish	26	59							0		85
skipjack	0	1							0		1
porbeagle					3	10	25	10	0		47
blue shark					1,734	272	806	175	0		2,988
shortfin mako					70	29	72	36	0		207

1 Discards were not included.

2010 ˂

SPECIES	WEST	EAST	NORT	SOUTH	NE	NW	SE	SW	MEDI	ALL	TOTAL
bluefin	353	1,155									1,508
southern bluefin					0	0	126	1			126
albacore			515	1,007							1,522
bigeye										15,220	15,220
yellowfin	1,668	3,037									4,705
swordfish *1			1,047	1,405							2,452
blue marlin			34	10							44
back marlin			490	289							780
white marlin					0	0	1	0			2
sailfish	40	136									176
spearfish	65	51									117
skipjack	0	1									1
porbeagle					2	12	6	2			21
blue shark					1,519	274	917	206			2,915
shortfin mako					74	44	91	16			224

1 Discards were not included.

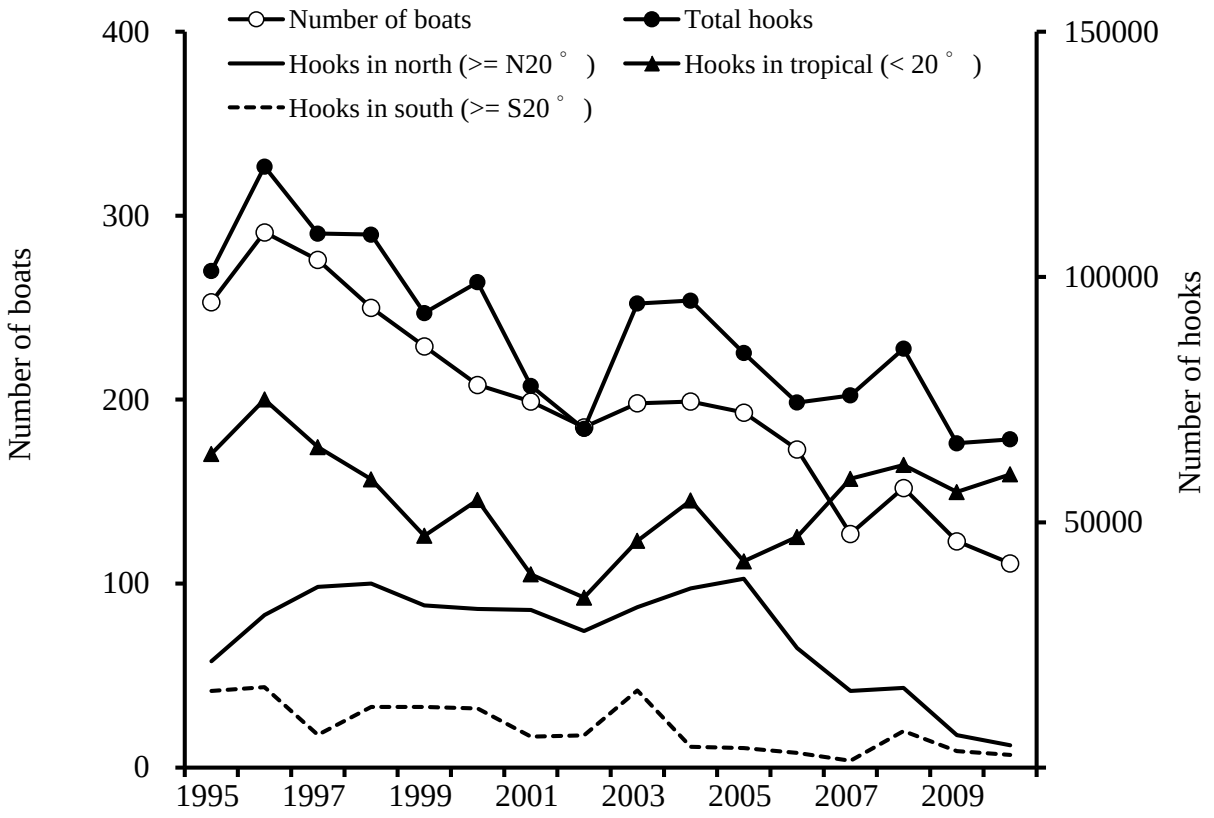

Figure 1. Trends in fishing effort (number of boats operated and number of hooks used) exerted by the Japanese longline fishery, 1995-2010. Number of hooks are also presented by area (north (>=20N), tropical (20N- equatorial - 20S) and south (>=20 S).

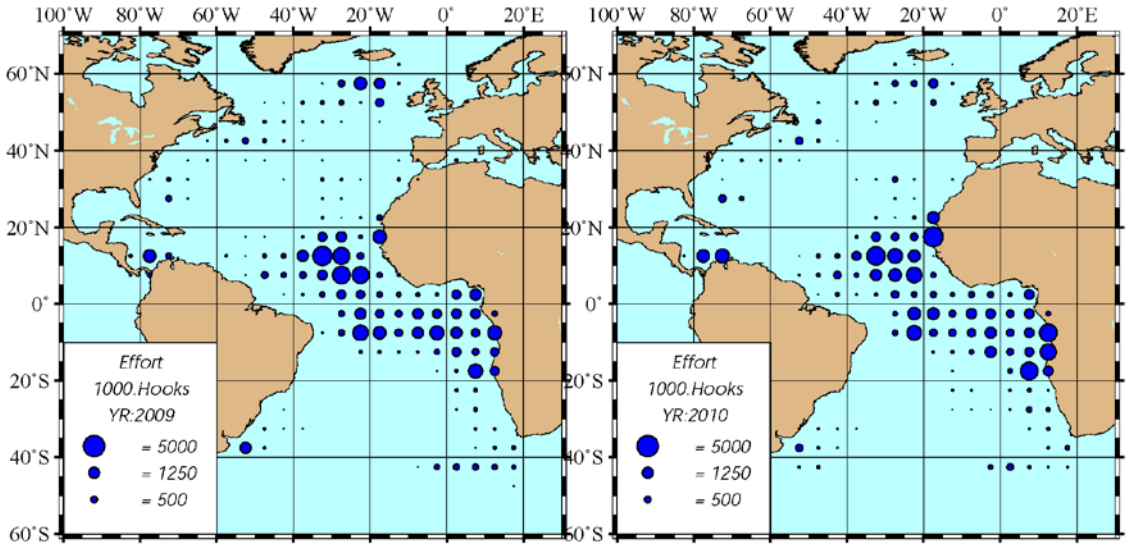

Figure 2. Geographic distribution of the Japanese longline effort (number of hooks) in the Atlantic, for 2009 (left) and 2010 (right).

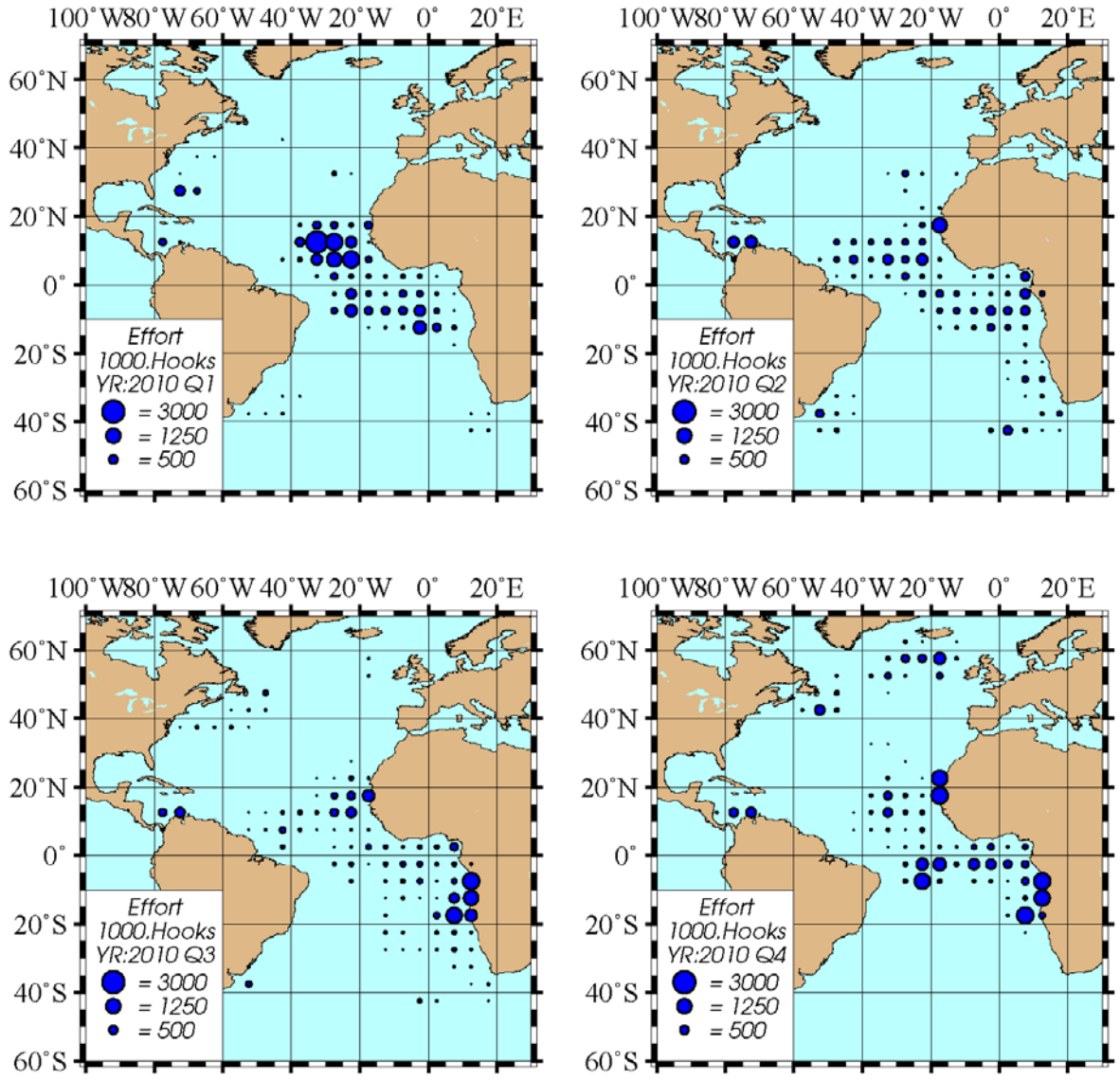

Figure 3. Quarterly distribution of the Japanese longline effort (number of hooks) in the Atlantic for 2010.

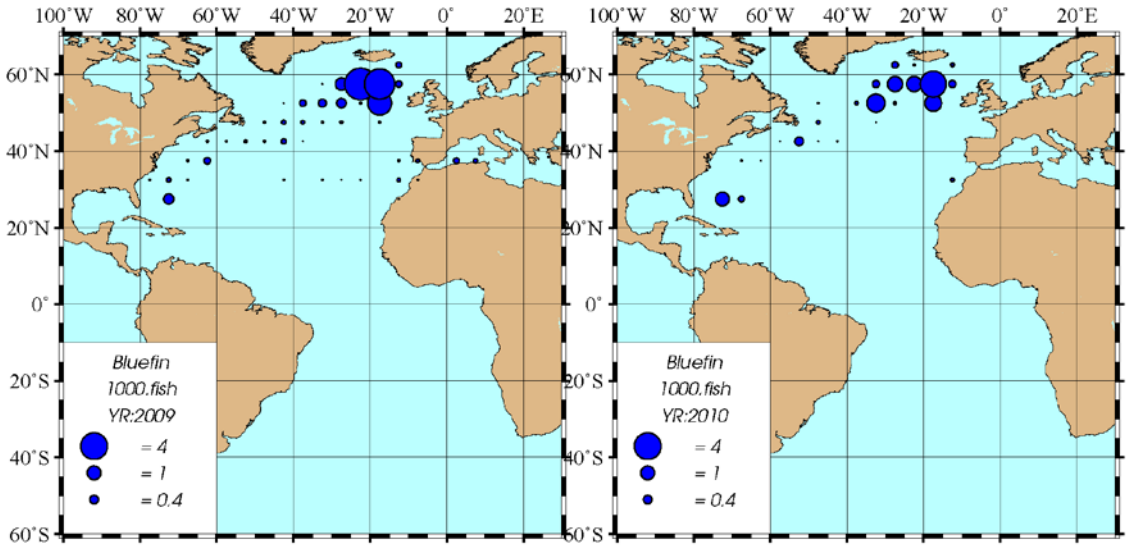

Figure 4. Geographic distribution of bluefin catch (number) in the Atlantic for 2009 (left) and 2010 (right).

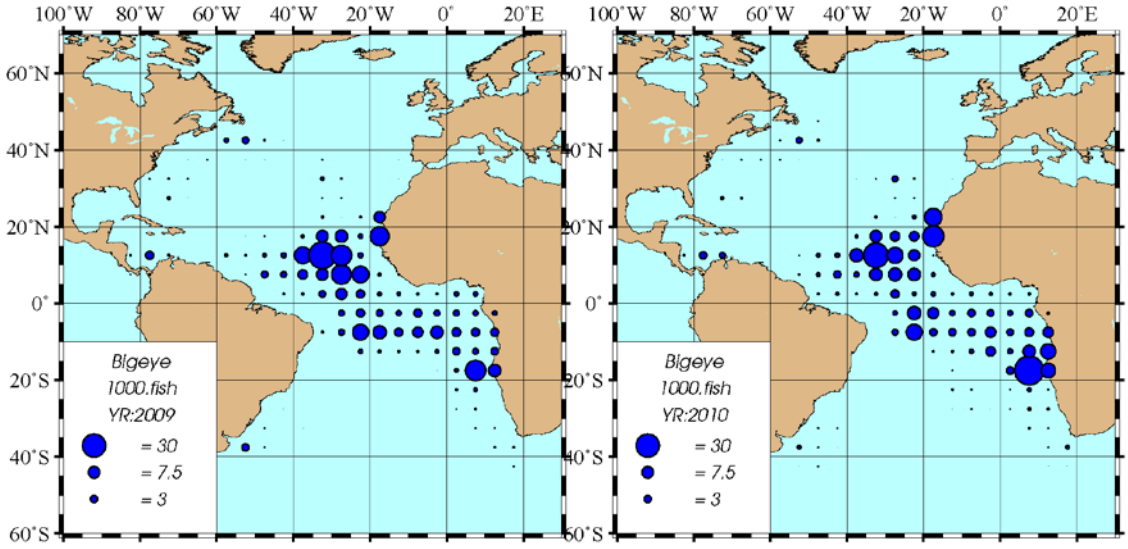

Figure 5. Geographic distribution of bigeye catch in number in the Atlantic for 2009 (left) and 2010 (right).

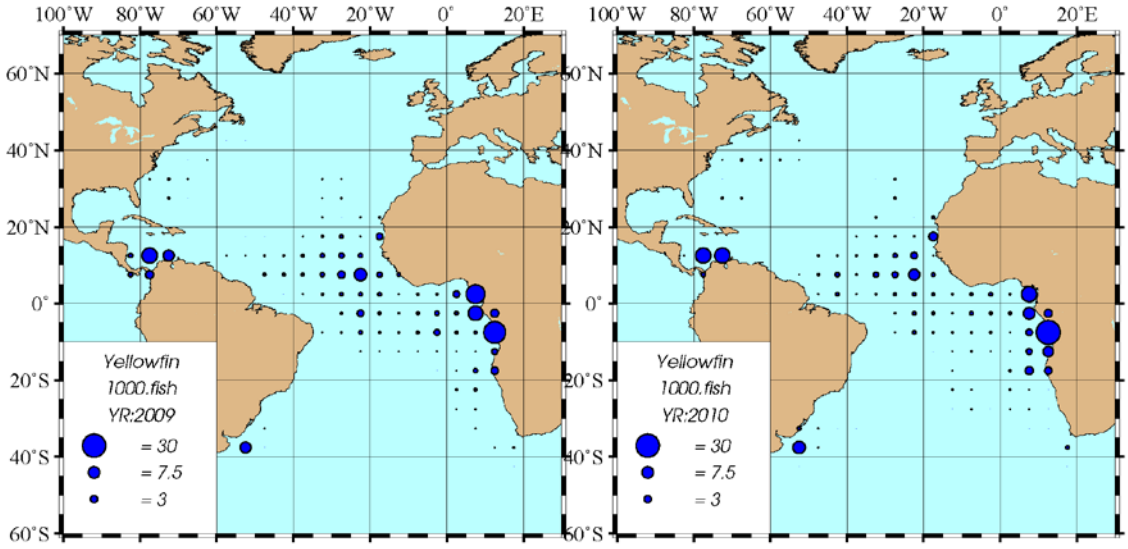

Figure 6. Geographic distribution of yellowfin tuna catch (number) in the Atlantic for 2009 (left) and 2010 (right).

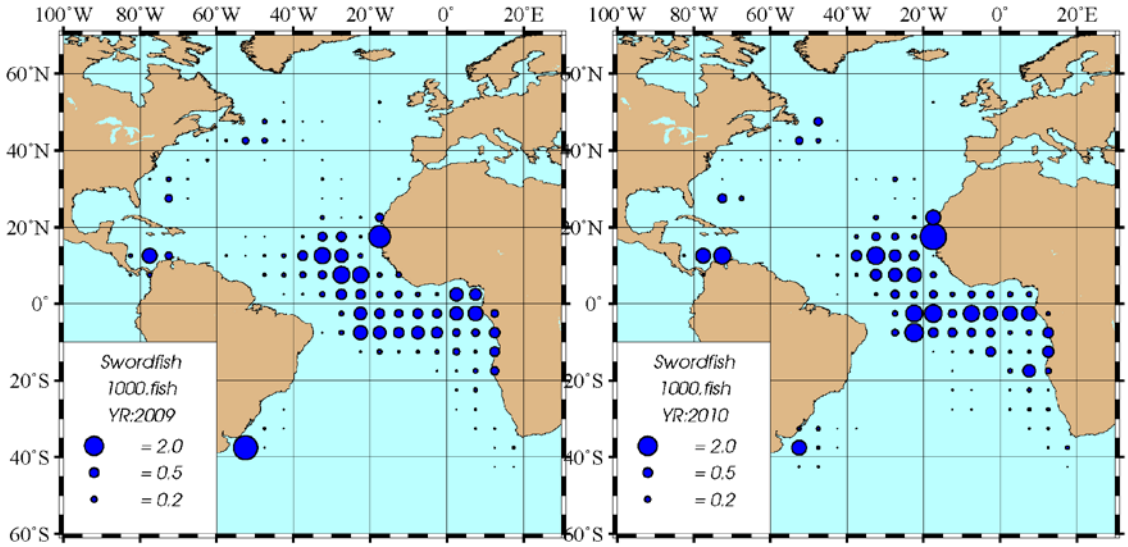

Figure 7. Geographic distribution of swordfish catch (number) in the Atlantic for 2009 (left) and 2010 (right).

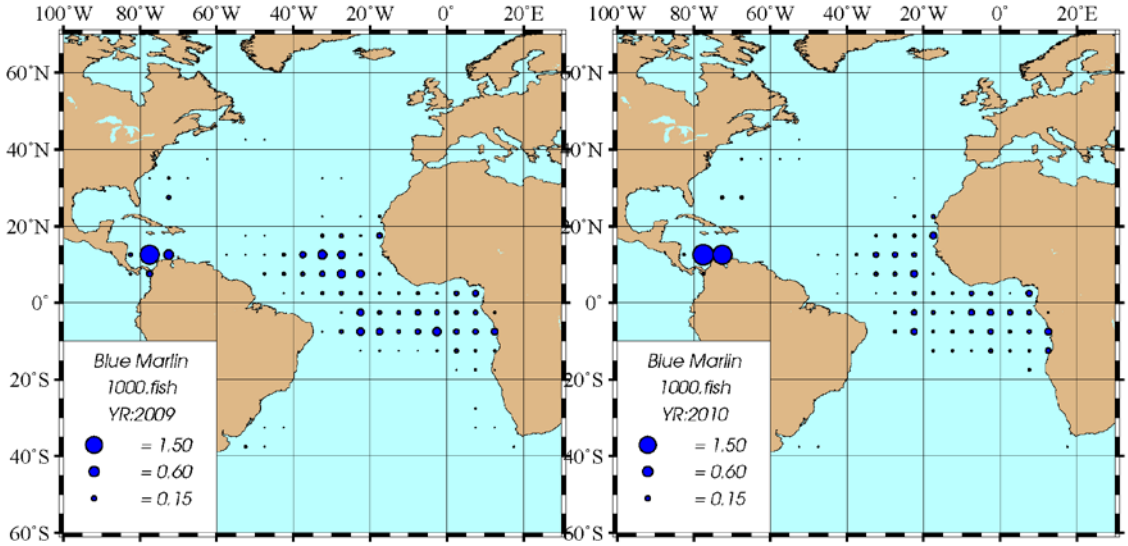

Figure 8. Geographic distribution of blue marlin catch (number) in the Atlantic for 2009 (left) and 2010 (right).

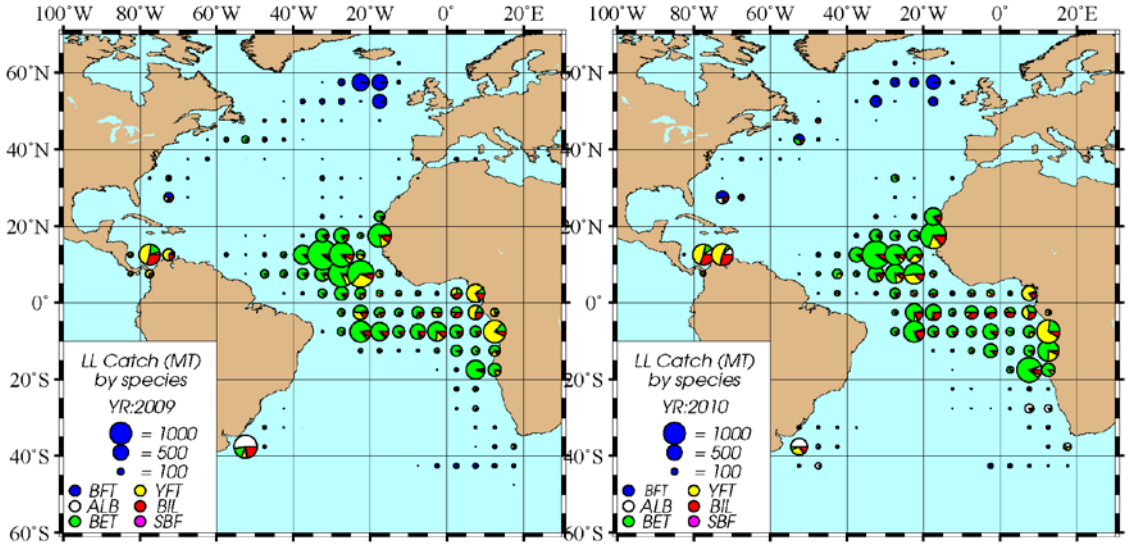

Figure 9. Species composition in the Japanese longline catch in weight for 2009 (left) and 2010 (right). Species are categorized into five groups: BFT (bluefin), ALB (albacore), BET (bigeye), YFT (yellowfin), BIL (swordfish and all billfishes) and SBF (southern bluefin).

ANNUAL REPORT OF KOREA
RAPPORT ANNUEL DE LA CORÉE
INFORME ANNUAL DE COREA

Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF)

SUMMARY

The annual catch of tuna and tuna-like species by Korean large-scale tuna longline vessels and its one purse seiner in the ICCAT area has increased and ranged from 2,770 to 4,673 metric tons (t) with an average of 3,611t from 2006 to 2010. The major species are bigeye tuna (64.1%), yellowfin tuna (14.4%), albacore (4.6%) and bluefin tuna (4.4%) during the recent five years. From 2007 to the current year, the number of the Korean LSLTVs has increased in the Atlantic Ocean and thus the catch limits for bigeye tuna, swordfish, albacore and other marlins are very small taking into account the scale of fishing vessels. In 2010, 13 Korean longliners and one purse seiner (home based in Malta) operated in the ICCAT area and caught a total of 3,424 t, which decreased compared to the catch of the previous year. Three of the Korean longline vessels and one purse seine vessel had operated under the chartering arrangement in 2010. Usually a fishing trip of longline vessels last more than 20 months so that the catch statistical data would be completed than we had expected. Therefore, the reported Korean catch data for 2009 and 2010 is somewhat provisional. However, since 2010 the logsheet containing much information has been reported by electronic format submission partially as soon as fishing operation ended. Also information on bycatch in detail such as each shark species since 2010 would be submitted because the Korean government reinforced the data collection system through training and education on distant sea fishermen and national scientific observers. With regard to the management implementation on conservation and management measures adopted by the ICCAT, the Korean government had initiated a set of quota management mechanism on 9 March 2009 and 9 December 2009. In particular, all Korean longline vessels operating in the ICCAT areas have been prohibited from retention on board of swordfish regardless of dead or alive before the starting of the 2010 fishing season. In case of bigeye tuna, Korean government has allocated bigeye tuna to each fishing company not to exceed its catch limit. When it comes to the conservation and management measures for the southern and northern swordfish, the Korean government has taken measures that the fishing vessels shall not land the southern swordfish on board until 2013 in order to pay back the overharvest for a few past years. Like the southern swordfish, the fishing vessels shall not land the northern swordfish on board on the voluntary basis until this year. In order to complement a set of those measures and make them more effective, over 10 branches of the Animal, Plant and Fisheries Quarantine and Inspection Agency (QIA), the former National Fisheries Products Quality Inspection Service (NFIS), are monitoring the amount of catches and flow of trade on those species. Furthermore, it was decided not to issue statistical documents to export swordfish since 2010. Those measures can eliminate the incentive for fishing vessels to catch swordfish and overharvest other relevant tuna and tuna-like species set out in ICCAT Recommendations.

RÉSUMÉ

Les prises annuelles de thonidés et d'espèces apparentées des grands palangriers thoniers et du senneur sous pavillon coréen dans la zone relevant de l'ICCAT ont augmenté, passant de 2.770 à 4.673 t (avec une moyenne de 3.611 t) de 2006 à 2010. Au cours des cinq dernières années, les principales espèces capturées étaient le thon obèse (64,1 %), l'albacore (14,4 %), le germon et le thon rouge (4,4 %). De 2007 jusqu'à l'année en cours, la présence de grands palangriers coréens a augmenté dans l'océan Atlantique et par conséquent les limites de capture de thon obèse, d'espadon, de germon et d'autres makaires étaient très réduites en prenant en considération l'échelle des navires de pêche. En 2010, 13 palangriers et un senneur sous pavillon coréen (basé à Malte) opéraient dans la zone ICCAT, capturant un total de 3.424 t, soit un volume inférieur aux prises de l'année antérieure. Trois palangriers de la flottille coréenne et un senneur ont opéré dans le cadre d'accord d'affrètement en 2010. De manière générale, la sortie de pêche des palangriers dure plus de 20 mois, de sorte que d'autres

données statistiques de prise devraient être complétées avec celles que nous escomptions. Les données de la prise déclarée coréenne au titre de 2009 et de 2010 revêtent dès lors un caractère provisoire. Toutefois, depuis 2010, les carnets de pêche contenant un grand nombre d'informations ont été présentés partiellement en format électronique dès la fin de l'opération de pêche. De même, des informations détaillées sur les prises accessoires, dont celles sur chaque espèce de requin depuis 2010, devraient être soumises étant donné que le gouvernement coréen a renforcé le système de collecte de données par le biais de formations et de cours dispensés aux pêcheurs hauturiers et aux observateurs nationaux scientifiques. En ce qui concerne la mise en œuvre de la gestion des mesures de conservation et de gestion adoptées par l'ICCAT, le gouvernement coréen a lancé un ensemble de mécanismes de gestion des quotas le 9 mars 2009 et le 9 décembre 2009. Il a notamment été interdit à tous les palangriers coréens opérant dans les zones relevant de l'ICCAT de retenir à bord de l'espadon, qu'il soit mort ou vivant, avant le début de la saison de pêche 2010. En ce qui concerne le thon obèse, le gouvernement coréen a alloué des quotas de pêche de cette espèce à chaque société de pêche ne pouvant pas dépasser leur limite de capture. En ce qui concerne les mesures de conservation et de gestion s'appliquant à l'espadon du Nord et du Sud, le gouvernement coréen a adopté des mesures interdisant aux navires de pêche de débarquer de l'espadon du Sud à bord jusqu'en 2013 dans le but de rembourser la surconsommation de quelques années antérieures. À l'instar de l'espadon du Sud, les navires de pêche ne pourront pas débarquer volontairement de l'espadon du Nord à bord jusqu'à cette année. Dans le but de compléter ces mesures et afin de faire en sorte qu'elles soient plus efficaces, 10 divisions de l'Agence pour l'inspection et la quarantaine de la faune, de la flore et des pêches (QIA), l'ancien Service de contrôle de qualité des produits halieutiques (NFIS), procèdent au suivi du montant des prises et des échanges commerciaux de ces espèces. De plus, il a été décidé de ne pas émettre de document statistique pour exporter de l'espadon depuis 2010. Ces mesures peuvent décourager les navires de pêche de capturer de l'espadon et de surpêcher d'autres thonidés et espèces apparentées faisant l'objet de recommandations de l'ICCAT.

RESUMEN

La captura anual de túnidos y especies afines de los grandes palangreros coreanos y de su único cerquero en la zona ICCAT se ha incrementado y osciló entre 2.770 y 4.673 t, con un promedio de 3.611 t desde 2006 hasta 2010. Durante los cinco últimos años las especies principales han sido patudo (64,1%), rabil (14,4%), atún blanco (4,6%) y atún rojo (4,4%). Desde 2007 hasta la actualidad, el número de grandes palangreros coreanos en el Atlántico se ha incrementado y, por tanto, los límites de captura para el patudo, pez espada, atún blanco y otros istiofóridos resultan muy pequeños si se tiene en cuenta el tamaño de los buques pesqueros. En 2010, 13 palangreros y un cerquero (con base en Malta) coreanos operaron en la zona de ICCAT y capturaron un total de 3.424 t, lo que supone un descenso en comparación con la captura del año anterior. Un cerquero y tres de los buques palangreros coreanos operaron en el marco de un acuerdo de fletamento en 2010. Generalmente, una marea de los palangreros dura más de 20 meses, de tal modo que los datos estadísticos de captura se completarán más tarde de lo que habíamos previsto. Por tanto, los datos de captura comunicados de Corea para 2009 y 2010 son provisionales. Sin embargo, desde 2010, las hojas de los cuadernos de pesca que contienen mucha información se comunican parcialmente en formato electrónico nada más terminar las operaciones de pesca. Además, a partir de 2010 se presentará información detallada sobre captura fortuita, como por ejemplo para cada especie de tiburón, ya que el Gobierno coreano ha reforzado el sistema de recopilación de datos mediante la formación y capacitación de los pescadores en aguas distantes y de los observadores científicos nacionales. En lo que concierne a la implementación de las medidas de conservación y ordenación adoptadas por ICCAT, el Gobierno de Corea implementó una serie de mecanismos de gestión de la cuota el 9 de marzo de 2009 y el 9 de diciembre de 2009. En particular, se ha prohibido a todos los palangreros coreanos que operan en las zonas de ICCAT que retengan a bordo peces espada, vivos o muertos, antes del comienzo de la temporada de pesca de 2010. En el caso del patudo, el Gobierno de Corea ha asignado una cuota de patudo a cada empresa pesquera con el fin de no superar su límite de captura. En lo que concierne a las medidas de conservación y ordenación para el pez espada del Norte y del Sur, el Gobierno de Corea ha emprendido medidas para que los buques pesqueros no desembarquen pez espada del Sur hasta 2013 para devolver el exceso de captura de los últimos

años. Al igual que sucede con el pez espada del Sur, los buques pesqueros no desembarcarán de forma voluntaria pez espada del Norte hasta dicho año. Para complementar estas medidas e incrementar su eficacia, 10 secciones de la agencia de Inspección y Cuarentena de Pesquerías, Plantas y Animales (QIA), anterior Servicio nacional de Inspección de la calidad de los Productos Pesqueros (NFIS) están realizando un seguimiento del volumen de capturas y del flujo comercial de dichas especies. Además, se decidió no expedir documentos estadísticos a las exportaciones de pez espada desde 2010. Estas medidas pueden eliminar el incentivo que puedan tener los buques pesqueros para capturar pez espada o realizar excesos de capturas de otros túnidos y especies afines pertinentes, tal y como se establece en las Recomendaciones de ICCAT.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Since the commencement of Korean tuna longline fishery in 1957 in the Indian Ocean, the tuna fishery has become the most important distant-water fisheries in Korea. While Korean tuna fisheries mainly occur in the Pacific and Indian Ocean, it is relatively small in the Atlantic. The trend of Korean tuna fisheries in the Atlantic has gradually declined year by year since the mid-1980s. Accordingly, the average number of Korean tuna longliners active in the Atlantic was less than 10 vessels during the 1990s, with an average annual catch of 1,700 metric tons (t). From mid-1990s, even though 54 longliners were registered in the IOTC area, many of them have migrated between the Indian and Atlantic Ocean, depending on the fishing conditions in the oceans. This kind of fishing pattern came out of the gear-type-based license system of Korea which does not limit a specific fishing ground.

In recent years, annual catch of tuna and tuna-like species by the Korean tuna longliners and purse seiners in ICCAT areas has increased and ranges from 2,770 to 4,673 t with an average of 3,611 t from 2006 to 2010. The major species were bigeye tuna (64.1%), yellowfin tuna (14.4%), albacore (4.6%) and bluefin tuna (4.4%) during the recent five years, of which bigeye tuna and yellowfin tuna were the most important species in terms of catch and commercial value in sashimi market**s**.

1.1 Annual trend of catches and number of vessels

Total annual catch of tuna and tuna-like species in the Atlantic Ocean is listed in **Table 1**. The recent change in catch trend was mainly due to the re-entry of some of Korean tuna longliners and participation of one purse seiner since 2004 in the Atlantic Ocean. In 2010, a total of 16 Korean longliners and two purse seiners were operated in the ICCAT area, of which three longliners and one purse seiner were operated under the chartering arrangement with Côte d'Ivoire, and caught a total of 3,424 t (excluding catch made by chartering arrangement), which was a decrease by 8% compared to the previous year. Almost 95.7% of the total catch were from three major species, of which bigeye tuna catch was 2,646 t (77.3%), yellowfin tuna 380 t (11.1%) and albacore 240 t (7.0% of the total). It was notable that no bluefin tuna catch was made in 2010 although one purse seiner was operated in the Mediterranean.

1.2 Distribution of fishing grounds

Korean longline vessels have mainly operated in the tropical area of the Atlantic Ocean and targeted bigeye tuna and yellowfin tuna. Fishing season was throughout the year from January to December in 2010 in the central Atlantic Ocean (15°N ~15°S, 10°E~50°W). Compared to the previous year, fishing area of the longline vessels was slightly extended further south and eastward. However, the fishing grounds have fluctuated every year depending on the fishing and oceanographic condition**s** for target species, with main fishing grounds lay in statistical area 34 of the Atlantic Ocean (**Figure 1**).

Section 2: Research and Statistics

2.1 Statistical data collection

The National Fisheries Research and Development Institute (NFRDI) has carried out routine scientific monitoring work over the past years. The monitoring was for the collection of catch and fishing effort statistics

from the Korean tuna longliners operated in the Atlantic Ocean. The requested Task I and II data were already provided to the ICCAT secretariat. The data coverage for longline fishery was 65.1% of total catch in 2010. There are two sources of statistical data collection. Korea Overseas Fisheries Association (KOFA) collects total catches by gear from Korean tuna industries, which are used as the official total catch as shown in **Table 1** that covers all tunas and tuna-like species. The National Fisheries Research and Development Institute (NFRDI) collects logsheet sampling data from fishing vessels. The logsheet contains operation location, catches by species, number of hooks and sets, etc. The estimates of annual catch for the ICCAT area presented in this report are made by cross-checking the logsheet data and the official total catch. In accordance with the Distant Sea Fisheries Act, fishing vessels are obliged to report the logsheet and biological measurement to NFRDI when they return to home-based port. Usually, a fishing trip of longline vessels lasts more than 20 months so that the catch statistical data would be completed that much later. Accordingly, the reported Korean catch data for the previous a couple of years are considered to be provisional. In 2010, the logsheet has been reported by electronic format submission partially as soon as fishing operation ended.

2.2 Observer program

Korea began to develop its observer program for distant-water fisheries including tuna fisheries in 2002. The purpose of this program is to meet the requirements of relevant regional fisheries management organizations or bodies. Therefore the mission of trained observers is similar to those set out in the convention of the fisheries management organizations or bodies. Before the official observer program was launched, Korea had, if necessary, dispatched NFRDI scientists commercial tuna vessels on board to monitor fishing activities and collect a dedicated catch data including biological samples.

In 2010, the NFRDI's observer program deployed 13 trained observers who carried out 16 trips on Korean distant-water fishing vessels in the major oceans including the Antarctic Ocean. For tuna fisheries in the Atlantic, national one observer was deployed on the Korean tuna longline vessel operated in the central Atlantic. To help with the identification of the species of seabird**s,** sea turtles and sharks incidentally caught by tuna longline and purse seine fishing, the guide books and posters summarizing information of these species have been distributed to fishing vessels along with the bycatch logbook sheet since 2008.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The Korean government established its domestic legislation called "Distant Sea Fisheries Act"(DSFA) in March 2008 to implement all compulsory recommendations and resolutions adopted by International Fisheries Management Organizations such as ICCAT, IOTC, CCSBT, etc. This Act consists of five Sections and 36 Articles which stipulate provisions all Korean distant fishing vessels shall comply with such as Authorization to Fish, Port Inspection, and Installation of VMS etc. This Act came from the environment where many regional fisheries management organizations and international fisheries organizations have been adopting a wide range of conservation and management measures each year. However, if new and urgent measures such as Statistical Document Programs are adopted, the Korean government shall establish a separate Notice of the Ministry for Food, Agriculture, Forestry and Fisheries even though the DSFA contains some relevant provisions. Especially, Article 13 (Observation of Distant Sea Fishermen) of the Act states that distant sea fishermen shall conduct their fishing activities with their legitimate fishing licenses and comply with conservation and management measures and other obligatory regulations adopted by international fisheries organizations. In addition, in accordance with Article 11 (Cancellation of Fishing License) and Article 36 (Fine) of the Act, in case of its failure of compliance with those measures and regulations, their fishing licenses could be suspended with maximum six months or cancelled, or the fishermen should be fined approximately US$4,500 depending on the degree of noncompliance. Furthermore, the DSFA are being reviewed for its revision and complement to strengthen the Act in order to reflect the procedures for the Port State Inspection adopted by FAO, and develop how to allocate national quota to each vessel or fishing company.

Regarding steps taken to implement Recommendation 10-01, we made our domestic measures effective to comply with this measure. One of the domestic measures is to limit the number of large scale tuna longline vessel to 16 and allocate the Korean quota of bigeye tuna to each fishing company which engages in this fishery to keep its catch limit. In particular, the fishing company shall be given severe penalty under the DSFA if they repeat any violations of overcatch of bigeye tuna since the year of 2010.

When it comes to the conservation and management measures for the southern and northern swordfish, the Korean government has taken measures that the fishing vessels shall not land the southern swordfish on board until 2013 in order to pay back the overharvest for a few past years. Like the southern swordfish, the fishing vessels shall not land the northern swordfish on board on the voluntary basis until this year.

Animal, Plant and Fisheries Quarantine and Inspection Agency (QIA), the former National Fisheries Products Quality Inspection Service (NFIS), has never issued statistical documents for export for swordfish because of the domestic measures taken. The new QIA, which was established in the middle of June this year, shall inspect and validate all documents such as import, export and re-export certificates, and report all to our Ministry on the basis of six months. When this Agency identifies any insufficient information on those certificates, it shall report back to our Ministry and then review and resolve through consultation with the other Party concerned. In addition, QIA shall take charge of the issuances and validation of BCD for the Korean purse seine vessel targeting bluefin tuna in the Mediterranean. However, this vessel could not catch bluefin tuna since 2010.

The Korean government has been developing a mechanism to collect more accurate data on amount of catches for tuna and tuna-like species and classify shark species in detail through introduction of newly formatted logbook sheets and guideline for fishermen to distinguish shark species and marline species since 2010. Through several workshops with government officers, scientists, fishermen and fishing companies, and with review of the catch data for recent years, we have realized that most of fishermen had confusion to distinguish blue marlin, white marlin as well as black marlin, and then filled the data on species in logsheets wrong for the past few years. This has made the reported quantity of catch for white marlin overharvest from 2007 to 2009. In this respect, the Korean government has reported the correct catch data on white marlin and blue marlin accordingly.

Section 4: Inspection Schemes and Activities

In the event of fish products imported to Korea and landed at its port, the person willing to import those products shall declare it with relevant certificate to the branch of QIA. The inspector shall review all available information in the documents concerned and then decide whether those products are allowed to be landed or not. However, when the documents concerned have some missing or false information, inspectors should instantly report to our Ministry as well as to ICCAT Secretariat in order to resolve it and prevent any flow of illegal fish products. The Korean government also reviews their in-port transshipment and at-sea transshipment amount and activities by our large scale tuna vessels and reports to the ICCAT Secretariat the details on the transshipments annually. In addition, QIA has been instructed to check very strictly swordfish, bigeye tuna especially northern bluefin tuna to be imported or re-exported to Korea through a proper identification on whether it is the legitimate quota for those species any CPCs has from ICCAT and other RFMOs.

Section 5: Other Activities

The Korean government has recently reinforced its domestic regulations concerning how to confirm or validate all data as well as documents in order to prevent any illegal fish products to be exported to other countries.

First, when an exporter from a fishing company wants to sell his fish products (i.e., bigeye tuna), it is required to submit its Catch Verification Document (CVD) issued by its master of the vessel to QIA as well as necessary information. CVD includes vessel name, fishing period, fishing ocean and fishing position as well as species. Second, inspectors confirm on whether the fishing vessel has its fishing license and the vessel has been registered in a RFMO concerned. If there is no problem, inspectors validate relevant documents (BCD or statistical document) with its seal. Especially, considering its importance, with regard to the bluefin tuna catch document, he asks our Ministry once again whether the vessel has a right to catch and export within its quota. Documents with its seal and signature mean we guarantee that all data have been verified.

Table 1. Nominal catch (metric tons) of tuna and tuna-like species by Korean longline and purse seine fisheries in the Atlantic Ocean, 1985-2010.

Year	*No. of vessels*	*BFT*	*YFT*	*ALB*	*BET*	*SBT*	*SKJ*	*SWO*	*BUM*	*WHM*	*SAI*	*Others*	*Total*
1985	45	77	3,239	901	10,691	-	20	344	416	372	101	1,293	17,454
1986	28	156	1,818	694	6,084	-	11	82	96	71	16	1,093	9,965
1987	29	1	1,457	401	4,438	-	6	75	152	27	21	1,048	7,625
1988	29	12	1,368	197	4,919	-	3	123	375	19	15	782	7,801
1989	33	45	2,535	107	7,896	-	6	162	689	135	33	944	12,507
1990	17	20	808	53	2,690	-	-	101	324	81	41	240	4,338
1991	9	229	260	32	801	-	-	150	537	57	30	267	2,134
1992	8	101	219	-	866	-	-	17	38	1	1	321	1,463
1993	4	573	180	-	377	-	-	-	19	2	1	308	887
1994	4	684	436	-	386	-	-	-	-	91	1	27	1,625
1995	4	663	453	-	423	-	-	-	61	1	-	114	1,715
1996	16	683	381	-	1,250	-	-	26	199	37	6	156	2,738
1997	12	613	257	5	796	10	-	33	70	24	1	115	1,924
1998	5	-	65	-	163	-	-	-	-	-	-	62	290
1999	9	-	94	-	124	28	-	-	-	-	-	31	277
2000	9	-	143	-	70	62	7	-	-	-	-	10	292
2001	5	0.5	3.4	1.4	1.3	157.7	-	0.1	0.5	-	-	27.4	192
2002		-	7.8	-	87.3	-	-	1.5	-	-	-	-	97
2003	3	-	209	5	143	-	-	24	-	11	-	10	402
2004	13	700	984	37	629	-	-	70	-	40	-	147	2,607
2005	13	1,146	675	101	770	-	-	87	-	7	-	109	2,895
2006	8	79	283	111	2,067	-	-	159	-	-	-	71	2,770
2007	21	276	507	68	2,136	42	-	289	94	8	-	50	3,470
2008	25	335	993	147	2,599	229	-	237	78	18	-	37	4,673
2009	25	102	433	271	2,134	277	-	14	57	8	-	424	3,720
2010	18*	0	380	240	2,646	1	-	-	55	-	73	29	3,424

* Four of the vessels had operated under a chartering arrangement in 2010. (Data source: Korea Overseas Fisheries Association (KOFA, 2011).

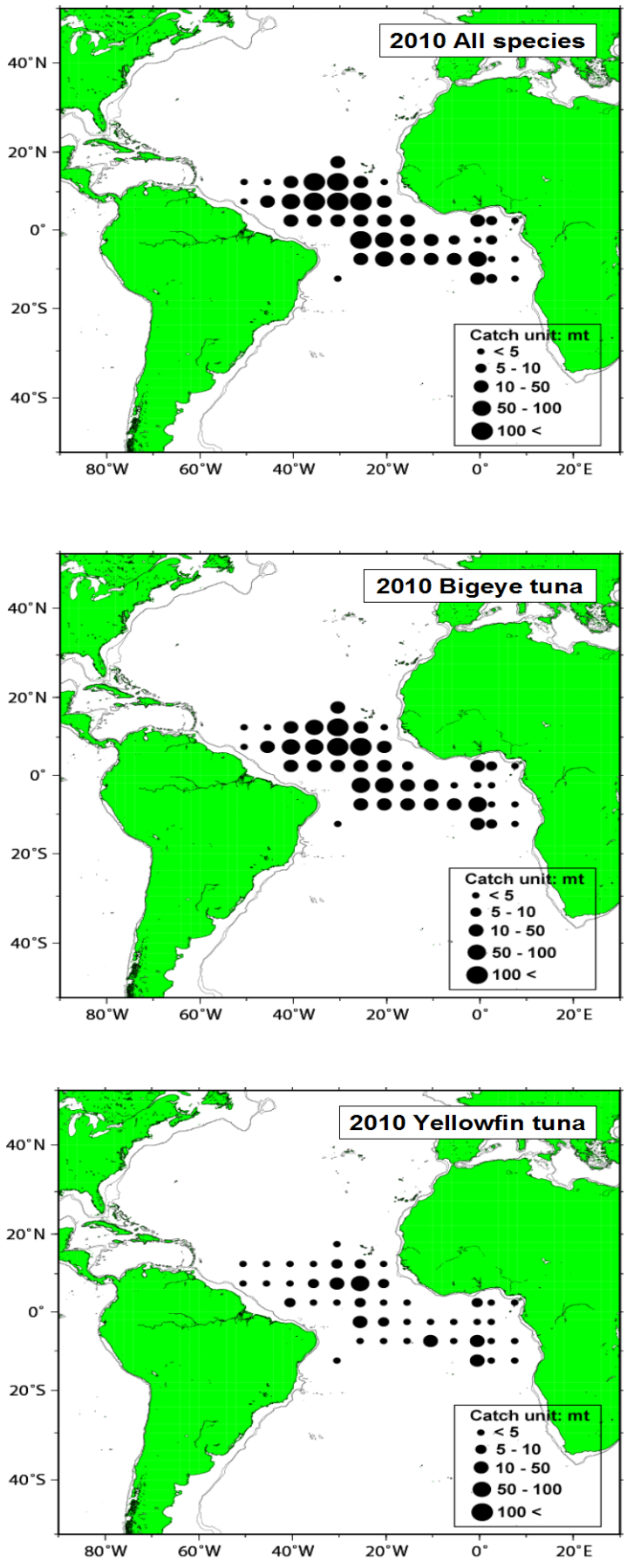

Figure 1. Distribution of catches by Korean tuna longline vessels in 2010.

ANNUAL REPORT OF LIBYA
RAPPORT ANNUEL DE LA LIBYE
INFORME ANUAL DE LIBIA

SUMMARY

In the 2010 fishing season, bluefin tuna was targeted by the Libyan fishing fleet in the Mediterranean Sea using only one type of fishing gear, purse seine. The total number of vessels engaged in the operation was 16 purse seiners, while the total number of vessels that operated in the 2009 season was 27 (2 LL, 25 PS). No traps or fattening farms operated and no other tuna species were targeted by the Libyan fishing fleet in 2010. The total catch of bluefin tuna was 645.303 tons. The fishing operations for bluefin tuna took place in Libyan waters. ICCAT conservation measures were respected and VMS data were transmitted to ICCAT. National observers and ROPs were appointed on board each licensed fishing vessel to monitor and control the fishing activity.

RÉSUMÉ

Au cours de la saison de pêche de 2010, le thon rouge était ciblé par la flottille de pêche libyenne en Méditerranée utilisant un seul type d'engin, à savoir la senne. Le nombre total de navires prenant part aux opérations s'élevait à 16 senneurs, alors que le nombre total de navires qui a opéré au cours de la saison de 2009 s'élevait à 27 (2 palangriers et 25 senneurs). En 2010, aucune madrague et aucun établissement d'engraissement n'était en opération et la flottille de pêche libyenne n'a ciblé aucune autre espèce thonière. La prise totale de thon rouge s'est chiffrée à 645,303 t. Les opérations de pêche ciblant le thon rouge ont eu lieu dans les eaux libyennes. Les mesures de conservation de l'ICCAT ont été respectées et les données VMS ont été transmises à l'ICCAT. Des observateurs nationaux et du ROP ont été embarqués à bord de chaque navire de pêche muni d'une licence afin d'effectuer un suivi et un contrôle des activités de pêche.

RESUMEN

En la temporada de pesca de 2010, el atún rojo fue objetivo de la flota pesquera libia en el Mediterráneo utilizando únicamente un tipo de arte, el cerco. El número total de buques que participó en las operaciones se situó en 16 cerqueros, mientras que el número de buques que operó en la temporada de 2009 fue de 27 (2 LL y 25 PS). En 2010, no hubo almadrabas o instalaciones de engorde operativas y la flota pesquera libia no se dirigió a otras especies de túnidos. La captura total de atún rojo ascendió a 645,303 t. Las operaciones de pesca de atún rojo tuvieron lugar en aguas libias. Se cumplieron las medidas de conservación de ICCAT y se transmitieron los datos de VMS a ICCAT. Se asignaron observadores nacionales y regionales a bordo de cada buque pesquero con licencia para que realizaran un seguimiento y control de la actividad pesquera.

Part I (Information on Fisheries, Reserch and Statistics)

Section 1: Annual Fisheries Information

1.1 Types of fisheries

During the 2010 bluefin tuna fishing season, purse seine was the only gear authorized and there was no trap activity. Bluefin tuna is a highly migratory species along the Libyan coast and fishing activity took place in accordance with the ICCAT measure (Rec. 08-05).

1.2 Fishing effort trends

The total number of active fishing vessels during the 2010 season was 16 purse seiners, while in the previous year there were 25 purse seiners.

1.3 Catch trends

The total catch of bluefin tuna in Libyan waters in 2010 was 645.303 tons. Data on bluefin tuna catch during the period 2003-2010 has been submitted accordingly (**Table 1**).

Section 2: Research and Statistics

The collection of data from the bluefin tuna fishery is necessary for scientific research. However, during the 2010 fishing season, only one type of fishing gear (purse seine) was used. Because of this, data collection was not applicable.

2.1 Fishery data

Some fishery data were collected (Task I) from the purse seine fishing vessels.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Bluefin tuna is the only species targeted by Libyan purse seine fishing vessels and their fishing activity is concentrated in Libyan waters. In order to ensure a sustainable fishing activity for bluefin tuna, the Minister of Agriculture, Husbandry and Marine Wealth issued Decision #61/2010 which regulates licensing, monitoring, control and inspection of bluefin tuna fishing activity. The control measures adopted by ICCAT (Recs. 06-05, 08-05 and 09-06) were fully observed and applied in the 2010 fishing season.

Section 4: Inspection Schemes and Activities

All licensed Libyan fishing vessels operating in the 2010 fishing season had to have a national and a ROP observer on board to monitor and ensure that all fishing activities were conducted in line with pertinent ICCAT Recommendations.

Table 1. Libyan bluefin tuna catches during the period 2003-2010.

Year	*Initial quota (t)*	*Actual catch*
2003	1286	752.2
2004	1300	1299.6
2005	1400	1090.7
2006	1440	1254
2007	128.14	1359
2008	1236.99	1317.8
2009	946.52	1081.64
2010	725.150	645.303

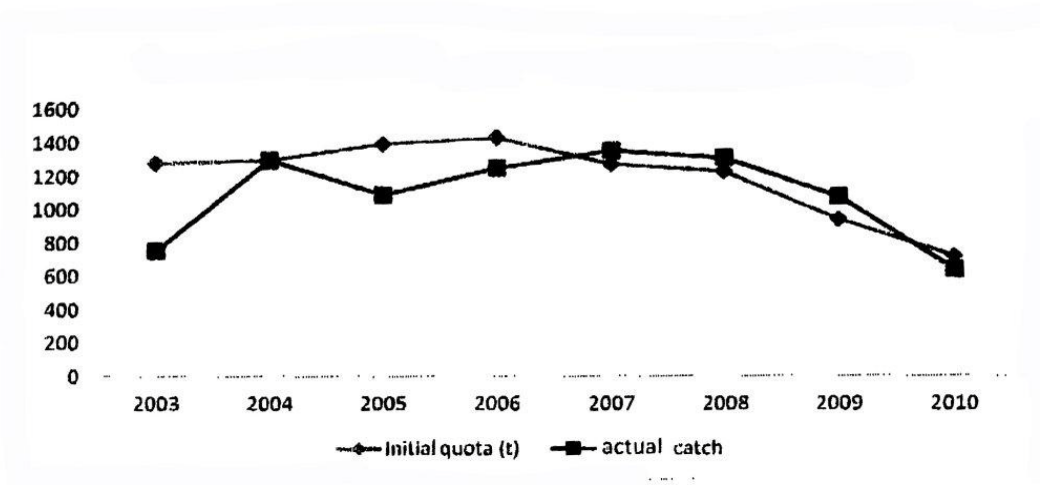

Figure 1. Total initial quota and actual catches of bluefin tuna during 2002-2010.

ANNUAL REPORT OF MAURITANIA
RAPPORT ANNUEL DE LA MAURITANIE
INFORME ANUAL DE MAURITANIA

Ely ould Beibou

SUMMARY

In Mauritania, tuna species are only targeted by the foreign fleets (Spanish, Senegalese and Japanese), fishing under the free license regime. This allows them to land their production outside Mauritania. Tuna species are also caught as by-catch by the industrial pelagic vessels, one hundred percent foreign. The reported catches of these species by these fisheries are strongly related with the sardine catches (preferential prey) that are targeted by these fleets. In 2009, these vessels reported around 4,000 t under "Other tunas". The artisanal and coastal fishery of Mauritania is generally orientated towards deep water species, (cephalopods and demersal fish), but take by-catches of coastal tuna species which in 2009 were on the order of 18 t, although in 2007 they exceeded 100 t (Table 1). The future perspective for fishing these species, by a national fleet from Nouadhibou, seems promising. This involves developing and consolidating the activities related with coastal tunas. These stocks have a potential of additional exploitation which will permit, in the future, tripling the national fishing productions of small tunas and, thus, exceed approximately 10,000 t, the potential usually advanced for these species since the end of the 1990s, thus creating hundreds of jobs. These species, since they are not very migratory, are suitable for local management and exploitation.

RÉSUMÉ

En Mauritanie, les espèces de thon sont ciblées uniquement par des flottilles étrangères (espagnole, sénégalaise et japonaise), opérant sous le régime de licence libre. Ce qui leur permet de débarquer leur production en dehors de la Mauritanie. Ces espèces sont également pêchées accessoirement par les unités industrielles pélagiques, étrangères à cent pour cent. Les captures de ces espèces déclarées par ces pêcheries sont étroitement corrélées avec celles des sardinelles (proie préférentielle) qui sont ciblées par ces flottilles. En 2009, ces unités ont déclaré, sous la rubrique « divers thons » une quantité qui s'élève à environ 4.000 tonnes. La pêche artisanale et côtière mauritanienne est orientée essentiellement vers les espèces de fond (céphalopodes et poissons démersaux), mais réalise des captures accessoires des espèces de thonidés côtiers qui étaient de l'ordre de 18 tonnes en 2009 sachant qu'elles avaient dépassé les 100 tonnes en 2007 (Tableau 1). Les perspectives d'avenir pour les pêches de ces espèces, par une flottille nationale, à partir de Nouadhibou semblent prometteuses. Il s'agit de développer et de consolider l'activité liée aux thons côtiers. Ces stocks recèlent un potentiel d'exploitation additionnel qui permettra, à terme, de tripler la production halieutique nationale en thons mineurs, et donc de passer à près de 10.000 tonnes, le potentiel habituellement avancé pour ces espèces depuis la fin des années 1990, créant ainsi des centaines d'emplois. Ces espèces, du fait qu'elles sont assez peu migratrices, se prêtent à une gestion et à une exploitation locale.

RESUMEN

En Mauritania, solo las flotas extranjeras se dirigen a los túnidos (española, senegalesa y japonesa) y operan en régimen de licencia libre. Esto les permite desembarcar su producción fuera de Mauritania. Asimismo, también pescan estas especies de forma accesoria las unidades industriales pelágicas, extranjeras al cien por cien. Las capturas de estas especies declaradas por estas pesquerías están muy relacionadas con las de sardina (presa preferencial) especie a la que se dirigen estas flotas. En 2009, estas unidades declararon bajo el apartado "diversos túnidos" una cantidad de aproximadamente 4.000 t. La pesca artesanal y costera de Mauritania se orienta principalmente hacia las especies de fondo (cefalópodos y peces demersales), pero se realizan capturas accesorias de especies de túnidos costeros que en 2009 fueron del orden de 18 t, aunque en 2007 superaron las 100 t (Tabla 1). Las perspectivas de futuro para la pesca de estas especies, por parte de una flota nacional desde Nouadhibou, parecen prometedoras. Se trata de desarrollar y consolidar las actividades relacionadas con

los túnidos costeros. Estos stocks encierran un potencial de explotación adicional que permitirá, en un futuro, triplicar la producción pesquera nacional de pequeños túnidos, y por tanto, superar aproximadamente las 10.000 t, el potencial anticipado habitualmente para estas especies desde finales de los 90, creando así cientos de empleos. Estas especies, dado que son bastante poco migratorias, se prestan a la gestión y explotación locales.

I^{ère} Partie (Informations sur les pêcheries, la recherche et les statistiques)

En Mauritanie la pêche est pratiquée par des flottilles industrielles et artisanales, nationales et étrangères. La gestion des pêches relève du Ministère des Pêches et de l'Economie Maritime. L'accès à la ressource est régi par un système de licences (22 licences) qui sont délivrées par ce dernier. On distingue 3 régimes d'accès qui sont le régime d'acquisition réservé aux flottilles nationales, le régime d'affrètement qui adresse les unités étrangères affrétés par les opérateurs nationaux et opérant comme des bateaux mauritaniens et enfin le régime de licence libre qui sont accordées aux navires étrangers opérant dans le cadre des accords bilatéraux de pêche. La pêche industrielle est pratiquée par des congélateurs et des glaciers.

La recherche est la mission principale de l'Institut Mauritanien des Recherches Océanographiques et des Pêches (IMROP). Qui joue à ce titre le rôle d'outil d'aide à la décision pour le Ministère de Tutelle qui est le Ministère des Pêches et de l'Economie Maritime. Les pêcheries industrielles prélèvent pratiquement 90 pour cent de la production annuelle qui avoisine 900 mille tonnes par an.

Chapitre 1 : Information annuelle sur les pêcheries

Les pêcheries en Mauritanie sont identifiées selon les espèces ciblées par l'activité de pêche et les licences accordées à cet effet. Ainsi, les pêcheries les plus importantes sont la pêcherie pélagique qui cible les espèces pélagiques et notamment les sardinelles et les chinchards. Il y a la flottille hollandaise qui opère dans le cadre de l'accord avec l'union européenne et qui cible la sardinelle ronde (*Sardinella aurita*), en face d'une flotte russe qui cible les chinchards.

Les démersaux, sont pêchés par deux flottes essentiellement qui sont la flotte espagnole opérant dans le cadre de l'accord e pêche avec l'union européenne et la flotte nationale utilisant des bateaux chinois affrétés.

Les crevettes (profonde et côtière) sont ciblées essentiellement par des crevettiers espagnols opérant dans le cadre de l'accord e pêche avec l'union européenne.

Les pêcheries poissonnières sont pratiquées en Mauritanie par des flottilles espagnoles opérant dans le cadre de l'accord avec l'union européenne, merlus et poissonniers.

Chapitre 2 : Recherche et statistiques

La recherche dans le domaine des pêches est confiée à l'Institut Mauritanien des Recherches Océanographiques et des Pêches (IMROP). Il s'est doté à cette fin de structures pérennes de recherche lui permettant de tenir à jour les informations sur l'état des ressources, leur exploitation et sur le milieu marin qui les supporte. En effet, L'IMROP compte actuellement environs 150 scientifiques (chercheurs, ingénieurs et techniciens) répartis sur plusieurs laboratoires et services couvrant toutes les thématiques de recherche nécessaires à la bonne conduite des ses programmes de recherche (évaluation des stocks, biologie et écologie des espèces, milieux marin et environnement, sciences sociales, statistique et informatique).

L'IMROP est dotée de deux navires de recherche (un bateau hauturier et un bateau côtier) qui lui permettent de prospecter l'ensemble de la ZEE mauritanienne. Il conduit chaque année quatre campagnes de prospection (2 démersales et 2 pélagiques) en vue de suivre l'état de la ressource. Il conduit également, des missions mensuelles de suivi des paramètres hydro chimiques pour suivre l'état de l'environnement marin qui abrite ces ressources.

Ces campagnes se limitent pour le moment aux profondeurs en deçà de 600 mètres, hors zone de distribution des thons hauturiers. De ce fait, les données disponibles actuellement se limitent aux espèces du thon côtier.

Du fait que les thons ne constituaient pas jusqu'à récemment une priorité pour le gouvernement mauritanien, l'IMROP n'a pas développé des compétences humaines spécialisées dans ce domaine. Par conséquent les études

sur les thons y font encore défaut. Actuellement, l'Institut cherche à combler ce manque par la mise en place des programmes de recherche orientés sur cette ressource. Conformément à cette orientation, un projet de marquage des espèces de thons a été élaboré et soumis à l'ICCAT pour financement.

Les statistiques sur la pêche sont produites par plusieurs institutions relevant du ministère des pêches et de l'économie maritime. Au sein de ses directions centrales, le ministère déteint les informations tenues à jour chaque année sur la liste des navires opérants en Mauritanie et les licences délivrées (type de licence, la redevance, les caractéristiques techniques des navires etc.). Les autres informations sur les quantités pêchées, l'effort de pêche et les données de caractère commercial (marché, valeur des produits etc.) sont produites par d'autres instituions telles que la SMPCP, la DSPCM, l'IMROP et autres.

Pour ses besoins scientifiques et conformément à sa mission, l'IMROP met en œuvre un certain nombre de système de collecte de données et de suivi des pêcheries.

Les statistiques sur l'effort et les captures de la pêche industrielle sont obtenues à l'aide des données collectées dans le cadre des journaux de pêche qui sont obligatoires depuis 1990 en Mauritanie. Ces données sont collectées et introduites dans une base de données gérée par la Délégation à la Surveillance des Pêches et au Contrôle en Mer (DSPCM). Elles sont ensuite transmises à l'IMROP qui les intègre à sa base de données puis les compile et en produit les statistiques de l'effort et des captures de la pêche industrielle.

L'IMROP conduit à son niveau d'autres systèmes de collecte des données complémentaires. Il est doté d'un corps d'observateurs scientifiques (36 individus) qu'il déploie régulièrement sur les flottilles actives en Mauritanie. Une base de données créée à cet effet est gérée par les services de l'IMROP. Il est à noter que les flottilles thonières ne font pas encore l'objet de suivi par le programme d'observation en mer de l'IMROP.

L'IMROP suit aussi les débarquements de la pêche industrielle qui se font en Mauritanie (à Nouadhibou) de manière exhaustive. Il déteint une base de données réservée à cette fin.

Pour ce qui est de la pêche artisanale, l'IMROP conduit depuis l'aube des années 80 un système de suivi des activités de la pêche artisanale. Ce système a connu deux temps importants. Un premier système basé sur le comptage matin et soir des embarcations visualisées dans les points de débarquement pour estimer l'effort de pêche du jour a été mis en œuvre jusqu'en 2005. A partir de cette année, il a été remplacé par un second système qui tient compte la nouvelle réalité de la pêche artisanale et côtière qui commence à prendre de l'importance vu le caractère dynamique et opportuniste des pêcheurs artisanats mauritaniens. En effet, les pêcheurs commençaient à s'adapter à la situation dictée par les réalités de raréfaction des ressources et l'accroissement des charges lié à l'augmentation des prix de carburant et du coût de la nourriture. Ainsi, toutes les pirogues qui sont sorties le jour, ne revenaient plus le soir mais envoyaient leur production avec l'une d'elles et les autres restaient en mer pour minimiser les coûts. Par conséquent, le comptage matin et soit a tout de suite vu ses limites comme méthode d'estimation de l'effort de pêche du jour.
Le nouveau système baptisé système de suivi de la pêche artisanale et côtière (SSPAC), déployé en 2006 est venu répondre à ces incohérences, entre autres. Il permet la collecte des données de base sur l'effort, la capture et les indicateurs socioéconomiques à l'aide d'un réseau d'enquêteurs fixes déployés le long du littoral Mauritanien couvrant, ainsi les cinq zones statistiques et les 22 sites de débarquements qui les composent. Cinq enquêtes sont réalisées dans le cadre du ce système qui sont :

- Enquête retour de mer durant laquelle, tous les jours ouvrables dans les centres urbains et tous les jours dans la brousse, l'enquêteur collecte les données sur les caractéristiques de l'embarcation qui débarque, sur celles de la sortie en mer réalisée par cette embarcation, sur l'origine du produit débarqué, sur les caractéristiques des actions durant la sortie, celles des lots débarqués et réalise des mensurations d'échantillons dans les lots.

- Recensement mensuel du parc actif catégorisé durant laquelle, chaque mois et dans chaque site de pêche, les enquêteurs réalisent le comptage des embarcations par nationalité, par typologie embarcation engin et notent également le nombre des embarcations nouvellement arrivées et de celles qui sont sorties récemment par rapport au mois précédent pour cerner les mouvements migratoires.

- Enquêtes lot auprès des usines où les enquêteurs, pour chaque lot enquêté, prélèvent le nom scientifique de l'espèce, sa catégorie ou taille, son poids total, le nombre d'individus de cette espèce, les fréquences de taille de l'échantillon.

- Récupération des registres des usines où pour chaque usine et par mois, les enquêteurs prélèvent la catégorie d'achat (espèces/catégories), l'origine (PA/PI) et le poids total.

2.1 La pêche industrielle

− Résultats obtenus des ces systèmes de suivi

Cinq espèces de la famille des Scombridés sont pêchées de façon accessoire par les flottilles industrielle de petits pélagiques. Il s'agit de la sarde (*Sarda sarda*), de l'auxide (*Auxis rochei et Auxis thazard*), de la palomète (*Orcynopsis unicolor*) et de la thonine (*Euthynnus alletteratus*).

Dans les statistiques de ces flottilles, ces espèces sont déclarées sous la rubrique divers-thons et ne sont donc pas ventilées par espèce. Les prises réalisées par ce segment sont présentées pour la période 1990 à 2009 (**Figure 1**). En début de période considérée, c'est-à-dire de 1990 à 1994, les captures de ces espèces chutent rapidement puisqu'elles passent d'environ 1000 tonnes en 1990 à 60 tonnes en 1994. Cette évolution traduit assez fidèlement le déclin de la flottille de l'ex Union soviétique dans la zone, le principal pavillon à l'époque dans la ZEE mauritanienne. Avec la forte reprise de l'activité de pêche industrielle, sous l'effet des changements des clés de répartition des captures en faveur des armateurs, de l'introduction du régime de licences libres et de l'entrée dans la zone des navires de l'Union européenne, les captures ont fortement augmenté pour atteindre 4000 tonnes en 1998 avant de diminuer à nouveau entre 1999 et 2001 aux alentours de 3000 tonnes. En 2002, la pêche de ces espèces a enregistré un record avec presque 6000 tonnes. Par la suite l'évolution présente une tendance à la baisse jusqu'à un niveau relativement bas en 2007 (1400 tonnes). Sur les deux dernières années, l'accroissement des prises a été rapide et en 2009, presque 4000 tonnes de divers thons ont été déclarées soit un accroissement de 109 % en 2008 (par rapport à 2007) et 23 % en 2009 (par rapport à 2008).

Sur la base des données observateurs embarqués à bord de ces navires, disponible de 1996 à 2004 et en 2009, la ventilation de cette rubrique divers thons a été conduite afin d'affiner les résultats par espèce. De 2005 à 2008, la répartition de cette rubrique a été obtenue en moyennant les valeurs disponibles pour les années les plus proches. Sept espèces ont été répertoriées dont trois espèces de thons majeurs (*Thunnus albacares*, *Thunnus obesus* et *Xiphias gladius*). Mis à part la première espèce des thons majeurs qui a été présente uniquement dans les captures de 1996 à 1999 avec des niveaux de prises variant entre 1 tonne en 1996 à 752 tonnes en 1998 (les autres espèces ont été pêchées de façon très marginale).

La sarde (*Sarda sarda)*, domine largement les captures (81 % en moyenne) sur toute la série mais particulièrement à partir 2004, où elle devient la seule espèce pêchée. La contribution des autres espèces de thons mineurs est faible et ne dépasse pas les 3 % pour *l'Auxis sp*.

II^{ème} Partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en ouvre des mesures de conservation et de gestion de l'ICCAT

En Mauritanie la surveillance et le contrôle en mer constituent la tâche de la délégation de surveillance et de contrôle en mer (DSPCM) qui veille au respect de la réglementation (nationale et internationale) en vigueur en Mauritanie par les unités autorisées à opérer dans les eaux sous juridiction Mauritanienne.

Etant donné que la Mauritanie, n'ayant pas de flotte thonière et par conséquent n'exploitant pas son quota et que les flottes thonières étrangères opérant dans la ZEE mauritanienne débarquent à l'étranger, l'inspection, des unités de pêche, ne pouvant pas s''assurer du respect des quotas des flottilles thonières, se limite à vérifier la présence des espèces de thons dans les cargaisons de ces unités, en conformité avec les licences détenues par ces unités et les règles de gestion de l'ICCAT. C'est ainsi que la délégation à la surveillance des pêches et au contrôle en mer a souvent relevé la présence des espèces de thons dans les cargaisons des chalutiers pélagiques.

Chapitre 4 : Schéma et activités d'inspection

Toutes les unités de thons qui opèrent en Mauritanie débarquent à l'étranger.

Tableau 1. Evolution des captures accessoires des thons côtiers de la pêche artisanale et côtière.

	2006	*2007*	*2008*	*2009*
Auxis thazard	1,35	-	-	2,80
Katsuwonus pelamis	1,43	2,46	0,22	0,05
Orcynopsis unicolor	67,00	98,10	7,24	9,06
Sarda sarda	0,11	1,58	21,28	6,59
Thunnus obesus	0,06	-	-	0,03
Total	**69,95**	**102,14**	**28,74**	**18,53**

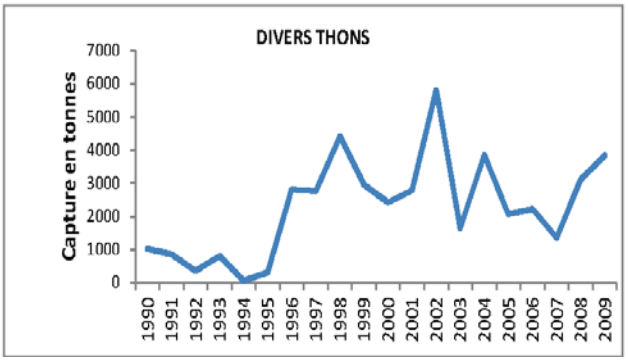

Figure 1. Evolution des prises des divers thons réalisées par les flottilles de pêche industrielle pélagique.

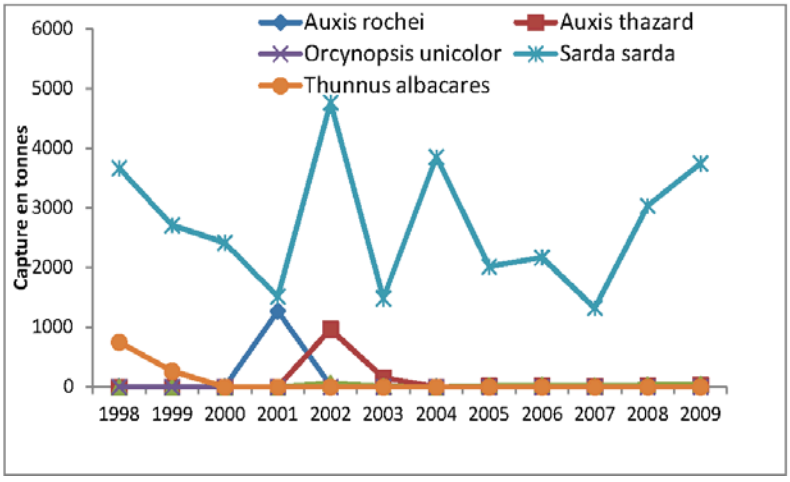

Figure 2. Evolution des captures des divers thons ventilées par espèces suivant les données d'observateurs.

ANNUAL REPORT OF MEXICO
RAPPORT ANNUEL DU MEXIQUE
INFORME ANUAL DE MÉXICO

José G. Trujillo[1], Luis F. Beléndez[2]

SUMMARY

*Yellowfin tuna (*Thunnus albacares*) fishing is carried out in the Gulf of Mexico with the use of medium length longline vessels. In this activity, as well as catching the target species, other species are caught incidentally:* skipjack *(*Katsuwonus pelamis*), bigeye (*Thunnus obesus*), Atlantic bluefin tuna (*Thunnus thynnus*) among others. Yellowfin tuna fishing is carried out throughout the whole year and the highest catches are recorded in May, June and July. Economically, this fishery is of certain significance both at national and international level, given that the export of fresh yellowfin was an important activity in the fishery sector and occupies an important place in the national economy. The total number of vessels that have maintained a continuous fishing activity remains at 25 and 32 vessels in the 2001-2010 period. On the other hand the total amount of catches of yellowfin tuna and tuna-like species was 1,177 t in 2010, which meant a decline of 21% compared to 2009. The National Fisheries Institute (Instituto Nacional de Pesca, INAPESCA) is responsible of developing scientific research of these fishery resources, as well as being responsible for the research and collection of statistics on the longline tuna fishery in the Gulf of Mexico. Monitoring of this fishery has been strengthened thanks to the Observer Program onboard which records the biological, fishery and technical information of the fishery with an observer coverage in each fishing trip.*

RÉSUMÉ

*Des bateaux semi-pélagiques ciblent l'albacore (*Thunnus albacares*) dans le golfe du Mexique au moyen de la palangre. Outre la capture de l'espèce-cible, d'autres espèces sont également capturées accidentellement, citons à titre d'exemple le listao (*Katsuwonus pelamis*), le thon obèse (*Thunnus obesus*), le thon rouge (*Thunnus thynnus*). La pêche de l'albacore a lieu tout au long de l'année, les plus grandes prises se réalisant aux mois de mai, juin et juillet. Cette pêcherie occupe une certaine importance économique tant au niveau national qu'international, l'exportation d'albacore à l'état frais étant une activité importante dans le secteur halieutique, occupant un rôle important dans l'économie nationale. Le nombre total de navires ayant une activité continue de pêche s'est maintenu entre 25 et 32 unités pendant la période 2001-2010. Par ailleurs, le total des captures d'albacore et d'espèces apparentées s'est élevé à 1.177 t en 2010, ce qui représente une baisse de 21 % par rapport à 2009. L'Institut national de pêche (INAPESCA) est chargé de développer la recherche scientifique de ces ressources halieutiques, outre la responsabilité qu'il doit assumer dans la recherche et la collecte des statistiques sur la pêche des thonidés à la palangre dans le golfe du Mexique. Le suivi de cette pêcherie s'est renforcé grâce au programme d'observateurs à bord, lesquels consignent l'information biologique, halieutique et technique de la pêcherie, avec une couverture d'observateurs à chaque sortie de pêche.*

RESUMEN

*La pesca de atún aleta amarilla o rabil (*Thunnus albacares*) en el Golfo de México se ha llevado a cabo con la utilización de embarcaciones de mediana altura a través del palangre. En esta actividad, además de capturar la especie objetivo de pesca, se capturan incidentalmente algunas otras especies como: el barrilete o listado (*Katsuwonus pelamis*), el patudo o bigeye (*Thunnus obesus*), el atún aleta azul o atún rojo del Atlántico (*Thunnus thynnus*), entre otros. La pesca del rabil se efectúa durante todo el año, siendo los meses de mayo, junio y julio en los que se registran las mayores capturas. Esta pesquería tiene cierta importancia económica tanto*

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a nivel nacional como internacional, siendo la exportación de rabil en su calidad de fresco una actividad importante en el sector de la pesca y ocupando un lugar importante en la economía nacional. El número total de barcos que ha mantenido una actividad continua de pesca se mantiene entre los 25 y 32 barcos en el periodo 2001-2010. Por otra parte, el total de capturas del atún aleta amarilla y especies afines fue de 1.177 t en 2010, lo que ha implicado un descenso del 21% con respecto a 2009. El Instituto Nacional de Pesca (INAPESCA) se encarga de desarrollar la investigación científica de estos recursos pesqueros, además de tener la responsabilidad de la investigación y recopilación de estadísticas sobre la pesca del atún con palangre en el Golfo de México. El seguimiento de esta pesquería se ha reforzado gracias al Programa de Observadores a bordo quienes registran la información biológica, pesquera, técnica de la pesquería con una cobertura de observadores en cada viaje de pesca.

Introducción

La pesca de atún aleta amarilla o rabil (*Thunnus albacares*) en el Golfo de México se ha llevado a cabo con la utilización de embarcaciones palangreras de mediana altura. Además de capturar la especie objetivo se pescan incidentalmente especies como: el barrilete o listado (*Katsuwonus pelamis*), el patudo o bigeye (*Thunnus obesus*), el atún aleta azul o atún rojo del Atlántico (*Thunnus thynnus*), entre otros. La pesca del atún aleta amarilla se efectúa durante todo el año, siendo los meses de mayo, junio y julio en los que se registran las mayores capturas.

Esta pesquería tiene cierta importancia económica tanto a nivel nacional como internacional, siendo la exportación de rabil en su calidad de fresco una actividad significativa en el sector pesca. El número total de barcos que ha mantenido una actividad continúa de pesca se mantiene entre los 25 y 32 barcos.

El total de capturas del atún aleta amarilla y especies afines se estima en 1,177 t en 2010, significando un descenso del 21% con respecto a 2009.

El seguimiento de esta pesquería se ha reforzado gracias al Programa de Observadores a bordo quienes registran la información biológica, pesquera y técnica de la pesquería con una cobertura del 100% de observadores en todos los viajes de pesca.

Parte I (Información sobre pesquerías, investigación y estadísticas)

Sección 1: Información anual sobre pesquerías

En base a la información generada por el Programa de Observadores a bordo en 2010, el esfuerzo pesquero de la flota palangrera mexicana del Golfo de México dirigido a la captura de atún aleta amarilla, registró 26 barcos que realizaron 303 viajes en los que se realizaron 2,945 lances y se utilizaron 1´752,286 anzuelos.

Respecto a la caracterización espacial de la captura, las mayores concentraciones se presentan en el segundo y tercer trimestre, en la parte central del Golfo de México, frente a las costas del estado de Veracruz, situación asociada a la mayor ocurrencia de actividad de la flota palangrera en el Puerto de Tuxpan, Veracruz. En el primer y cuarto trimestre del año, la concentración de captura ha sido menor, pero con un patrón de distribución amplio, lo que indica estar relacionado con la presencia y ausencia estacional del recurso en el Golfo de México.

El total de capturas del atún aleta amarilla y especies afines (incluyendo pez espada, pez vela, marlines y tiburones) procedente del Golfo de México fue por 1,177 t, y representa una reducción aproximada del 21% con respecto a las 1,480 t obtenidas en 2009.

Para el atún aleta amarilla, la captura total estimada para 2010 fue de 958 t, de las cuales el 96% correspondió a desembarques, el 4 % a liberados vivos y el 1% a descartes. Por otra parte, la captura total del barrilete disminuyó de 9 t en 2009 a 7 t en 2010.

En lo que respecta al patudo, se registró un incremento al pasar de 1 t en 2009 a 3 t en 2010. El atún aleta negra (*Thunnus atlanticus*) presentó un ligero decremento al registrarse 7 t en 2009 y 6 t en 2010. Para el atún aleta azul se obtuvo una cifra estimada de 14 t, esto es 4 t más que en 2009.

La captura estimada para marlín azul (*Makaira nigricans*) decreció de 93 t en 2009 a 90 t en 2010, observándose un incremento en los liberados vivos. En lo que corresponde al marlín blanco (*Tetrapturus albidus*), se mantuvieron las capturas alrededor de 19 t para 2009 y 2010 respectivamente. La captura estimada para pez espada (*Xhipias gladius*), incluyendo descartes, pasó de 32 t a 35 t, incrementando ligeramente los liberados vivos. Del pez vela (*Istiopurus albicans*) se observó un descenso de la captura total de 48 t registradas en 2009 a 34 t en 2010. Respecto a la captura de tiburón mako o marrajo se registró un ligero incremento pasando de 8 t en 2009 a 9 t en 2010.

Sección 2: Investigación y estadísticas

El compromiso derivado de la participación de México como Parte contratante ante la Comisión ha contribuido a la investigación pesquera para la toma de decisiones sobre la administración, buscando promover la sustentabilidad de la pesca objetivo y la reducción de la captura incidental en el Golfo de México.

El INAPESCA, a través de la Dirección General de Investigación Pesquera en el Atlántico (DGIPA) ha llevado a cabo la administración de la base de datos, considerando la creciente necesidad de nuevos métodos científicos en los estudios de evaluación de poblaciones pesqueras, además se ha trabajado en estrecha colaboración con el sector productivo y el Programa de observadores a bordo.

Las principales actividades relacionadas con la investigación y divulgación han sido:

1. Aspectos taxonómicos, biológicos, ecológicos y pesqueros del atún aleta amarilla y su captura incidental por la flota palangrera de mediana altura en el Golfo de México para la evaluación de su regulación a través de la realización del catálogo para la documentación taxonómica de las especies que inciden en la pesca del atún aleta amarilla por la flota palangrera de mediana altura en el Golfo de México; la investigación de los aspectos biológicos y poblacionales, comparando las relaciones y valores estándares manejados por la Comisión, así como la contrastación de los aspectos pesqueros de la flota palangrera de mediana altura en el Golfo de México; el examen de los puntos de referencia para el manejo sustentable de la pesquería con palangre en el Golfo de México y la diferenciación de las zonas de pesca en base a los rendimientos de los recursos pesqueros obtenidos por la flota palangrera de mediana altura y su distribución estacional en el Golfo de México.

2. Visitas al principal puerto de desembarque de la flota atunera mexicana para el análisis de la captura incidental y la pesca objetivo, además de las maniobras de descarga y proceso de comercialización del atún aleta amarilla en su estado fresco. Reunión con el sector productivo para analizar las líneas de investigación prioritarias, las medidas de administración de la pesquería del atún, así como los compromisos y temas prioritarios ante la CICAA.

3. Publicación de artículos en boletines de divulgación al público en general sobre: Campañas de Investigación Pesquera del atún aleta azul o atún rojo del Atlántico (*Thunnus thynnus*) en el Golfo de México, Acciones en México sobre el derrame de petróleo en el Golfo de México, tema de especial preocupación para México debido a los impactos sobre las poblaciones de pelágicos mayores

4. Participación en reuniones de los Grupos de Especies de CICAA) y en la Reunión del Comité Permanente de Investigación y Estadísticas (SCRS, por sus siglas en ingles), así como en la reunión 2010 del Comité de Cumplimiento de las Medidas de Conservación y Ordenación (COC).

5. Participación en reuniones técnicas internacionales como: MexUS Golfo y Autoridades Pesqueras con personal científico de la NOAA-Miami, Florida y el Taller de larvas de atún rojo del atlántico convocado por la NASA'S dentro del proyecto de investigación denominado "*Improving the NOAA NMFS and ICCAT atlantic bluefin tuna fisheries management decision support system*" en la Universidad de Miami.

6. Participación en el Crucero de investigación científica, dentro del marco de MEXUS Golfo y CICAA, con el objetivo de contribuir a los conocimientos científicos de la especie en el Golfo de México, para poder así brindar los mejores resultados para la administración y manejo en el océano Atlántico a bordo de la embarcación pesquera "Gordon Gunter" de Estados Unidos.

Parte II (Implementación de la ordenación)

Sección 3: Implementación de medidas de conservación y ordenación de CICAA

3.1 Vedas

06-06 Recomendación suplementaria de ICCAT sobre el programa de recuperación del atún rojo del Atlántico Oeste (párrafo 13)

México no realiza capturas dirigidas a los stocks de atún rojo reproductor en el Atlántico, incluyendo tanto aquellas zonas sensibles como las que no son zonas de desove en el Golfo de México.

09-04/08-03 Recomendación de ICCAT para un marco de ordenación para la explotación sostenible del pez espada del Mediterráneo.

México no realiza operaciones de pesca en el Mediterráneo.

3.2 Datos y talla mínima.

96-14 Recomendación sobre el cumplimiento en las pesquerías de atún rojo y pesquerías de pez espada del atlántico norte (párrafo 1)

De acuerdo con los datos presentados por México en la Tarea I no se reporta que se hayan excedido los límites de captura durante 2009.

97-01 Recomendación para incrementar el cumplimiento de las regulaciones de talla mínima

Se mantiene vigente la Norma Oficial Mexicana 023-PESC-1996, que establece que las capturas incidentales de atún aleta azul o rojo únicamente podrán retenerse si los organismos tienen, como mínimo, un peso de 30 kg o bien, una longitud furcal de 115 cm. Los ejemplares con peso o talla inferior a la establecida deben ser liberados en buenas condiciones de supervivencia.

Para la captura incidental, se establece que ésta no debe ser mayor al 20% (este 20% no solo incluye atún rojo, sino también pez espada, pez vela, marlín, entre otros) de su captura nominal obtenida durante un año calendario.

98-14 Recomendación sobre la aplicación de tres recomendaciones sobre cumplimiento
y
01-16 Resolución sobre fechas límite y procedimientos de presentación de datos

De acuerdo con lo establecido en las recomendaciones señaladas, la autoridad pesquera nacional, ha entregado a la Comisión la información estadística sobre las capturas para las pesquerías. De igual manera, se ha hecho llegar la información correspondiente a los datos de la Tarea I y la Tarea II, y en consecuencia, las Tablas de Información.

03-13 Recomendación sobre el registro de capturas realizadas por barcos en la zona del Convenio

La normatividad nacional establece que cada barco con permiso para pescar deberán llevar un libro de registro que se denominará bitácora de pesca. En él lleva el control del quehacer pesquero a bordo de una embarcación, por medio del cual la autoridad competente recibe del pescador el reporte de la actividad que se le ha concesionado o permitido. De igual manera debe llevar el aviso de arribo, que es el documento en el que se reporta a la autoridad competente los volúmenes de captura obtenidos por especie durante una jornada o viaje de pesca.

En el caso de las embarcaciones de pesca deportivo-recreativa, deben entregar la bitácora de pesca correspondiente

3.3 Límites de capacidad

93-04 Resolución sobre las medidas de regulación suplementarias para la ordenación del rabil del Atlántico

México mantiene el nivel del esfuerzo de pesca efectivo sobre el rabil o aleta amarilla que captura en el Atlántico. La NOM-023-PESC-1996, establece las características del sistema de pesca, “embarcaciones con una eslora total máxima de 37 metros, operando un palangre atunero de superficie a la deriva por embarcación”.

Además de ello, se establece un límite máximo permisible de 45 unidades de esfuerzo pesquero, aunque cabe aclarar que la flota palangrera nunca ha alcanzado este límite máximo.

Por otra parte, de acuerdo con los lineamientos y estrategias de manejo establecidos en la Carta Nacional Pesquera 2010, se trabajará en fortalecer las acciones para la reducción de captura incidental y las acciones encaminadas a combatir la pesca ilegal a través del Sistema de Monitoreo Satelital (VMS), así como otras medidas pertinentes en un plan de manejo pesquero específico para este recurso.

98-03 Recomendación de ICCAT sobre medidas de conservación de patudo para barcos pesqueros de 24 metros de eslora total (párrafo 1)

México no realiza pesca dirigida al patudo en la zona del Convenio

04-01 Recomendación de ICCAT sobre un programa plurianual de ordenación y conservación de patudo

México no desarrolla esta pesquería en la zona del Convenio.

3.4 Documentos estadísticos

09-11 Recomendación para enmendar la Recomendación 08-12 sobre el Programa de Documento estadístico de ICCAT para el atún rojo

y

01-22 Recomendación respecto a establecer un Programa de Documento Estadístico ICCAT para el pez espada (párrafo 6).

La normatividad nacional, establece que todos los embarques de atún rojo y pez espada, que se destinen a la exportación, deben presentar los documentos con los que se acredite su legal procedencia y acompañarse de los certificados de ICCAT de exportación de atún aleta roja y pez espada, respectivamente. Estos documentos son utilizados por las autoridades competentes.

Cabe resaltar que, a la fecha, se mantienen actualizados los sellos y firmas de los funcionarios facultados para expedir los certificados de exportación de las especies mencionadas.

3.5 Otras medidas relacionadas con especies individuales

06-09 Recomendación para un mayor reforzamiento del plan de recuperación de las poblaciones de aguja azul y aguja blanca

La Norma Oficial Mexicana NOM-023-PESC-1996, que regula el aprovechamiento de las especies de túnidos con embarcaciones palangreras en aguas de jurisdicción federal del Golfo de México y mar Caribe, establece de igual manera regulaciones sobre límites a la captura incidental y la obligación de regresar al medio marino en adecuadas condiciones de supervivencia los organismos de pesca incidental que sean capturados vivos, dentro de los cuales se encuentran las diferentes especies de marlín o agujas que habitan las aguas marinas del Atlántico.

Para tal efecto, se lleva a cabo el seguimiento del resultado de las operaciones de pesca en los avisos de arribo y bitácoras de pesca. De igual manera se llevan a cabo constantes acciones de inspección y vigilancia por parte de los oficiales de pesca.

Sobre este tema, expresamos nuestro interés por revisar estos parámetros, así como nuestra preocupación por los señalamientos de que México ha rebasado el nivel de su cuota asignada para estas especies, mismos que fueron establecidos tomando como referencia los niveles de captura reportados por la flota mexicana en los años de 1996-1999, periodo en el cual aún no se había establecido a nivel nacional la cobertura del 100% en los viajes de la flota que ha permitido contar con información real sobre los niveles de desembarque. No obstante lo anterior, cabe señalar que los niveles de captura incidental registrados por la flota mexicana para esta especie no han rebasado los niveles establecidos por la citada Norma. En este caso considerar.

03-10 Resoluciones de ICCAT sobre tiburones sobre las pesquerías de tiburones párrafo 2.

México cuenta con diversos instrumentos regulatorios que contribuyen a promover el aprovechamiento sustentable de las diferentes especies de tiburones que habitan las aguas de jurisdicción federal, como el Plan de

Acción Nacional para el Manejo y Conservación de Tiburones y Especies Afines, aplicable desde 2004, el cual establece diferentes lineamientos y medidas de manejo a implementarse, así como la Norma oficial Mexicana NOM-029-PESC-2006, en la que se definen especificaciones técnicas en la forma en que se debe de llevar el aprovechamiento de estos organismos. Esta Norma, establece que podrán establecerse periodos y zonas de veda para la captura de tiburones y rayas, durante los principales periodos de reproducción, nacimiento y crecimiento de las nuevas generaciones de dichas especies.

En este contexto se han definido periodos de veda para diferentes especies de elasmobranquios en ambos litorales de nuestro país, los cuales actualmente se están gestionando para su publicación en el Diario Oficial de la Federación dentro del documento denominado **"**Acuerdo por el que se establecen épocas y zonas de veda para la pesca de especies de fauna en aguas marinas, bahías y sistemas lagunarios estuarinos de jurisdicción federal de los Estados Unidos Mexicanos**"**. Para el Litoral del Golfo de México y Mar Caribe se establecieron los siguientes periodos:

- Veda para la pesca de tiburones del 1 de mayo al 31 de junio de cada año, con excepción de la zona del banco de Campeche.
- Veda para la pesca de tiburones en la zona del banco de Campeche, del 1 al 31 de agosto de cada año.

En el mismo instrumento, se establece veda permanente por tiempo indefinido para las especies:

- Tiburones ballena (*Rhincodon typus*), tiburón peregrino (*Celorhinus maximus*) y tiburón blanco (*Carcharodon carcharias*), en aguas de jurisdicción federal.
- Mantarraya gigante (*Manta birostris, Mobula japanica, Mobula thurstoni, Mobula munkiana, Mobula hypostomata y Mobula tarapacana*), en aguas de jurisdicción federal.

03-11 Resolución sobre tortugas marinas.

Se ha promovido mediante talleres de capacitación, el uso de instrumentos y mecanismos para eliminar la captura incidental de tortugas marinas en las pesquerías de atún y otras. De igual manera, se trabaja en fomentar la liberación de las tortugas marinas que sean capturadas vivas de forma fortuita, así como procedimientos técnicos para reducir la captura fortuita de tortugas y garantizar una cuidadosa manipulación de todas las tortugas que sean liberadas, con el fin de contribuir a su supervivencia.

03-04 Recomendación sobre el pez espada del mediterráneo

México no realiza esta pesquería en dicha área.

05-05 Recomendación para enmendar la recomendación [rec. 04-10] sobre la conservación de tiburones capturados en asociación con las pesquerías que son competencia de ICCAT.

México no realiza pesquería de marrajo dientuso del Atlántico norte.

05-08 Resolución sobre anzuelos circulares

A nivel nacional el uso de anzuelos circulares en pesquerías de palangre pelágico ha sido propuesto como un método para reducir la captura incidental de tortugas marinas y otras especies prioritarias para la conservación.

Se ha lleva a cabo la promoción e investigación para el uso de anzuelos circulares (16/0), con objeto de que sean utilizados en los lances que se efectúan con palangres pelágicos, considerando su adecuada selectividad y la reducción en la captura incidental.

Cabe destacar, que en el caso de la Norma Oficial Mexicana NOM-029-PESC-2007 que regula la pesca responsable de tiburones y rayas en aguas marinas de jurisdicción nacional de ambos litorales, se incluye la obligación de usar anzuelo circular en los palangres, siempre que sean colocados a una profundidad menor a 40 metros, considerando que es la zona donde existe mayor probabilidad de que una tortuga marina pudieran ser enganchada.

06-08 Resolución sobre la pesca de atún rojo en el océano Atlántico

México no realiza esta pesquería en dicha área.

07-06 Recomendación suplementaria sobre tiburones (párrafo 3)

En el Golfo de México y Mar Caribe, México no se cuenta con una flota industrial o semi-industrializada para la pesca de tiburón. De manera específica, tampoco se llevan a cabo pesca dirigida al marrajo sardinero (*Lamna nasus*) y al marrajo dientuso (*Isurus oxyrinchus*) del Atlántico norte.

Sin embargo, desde 1994 se realiza el monitoreo de la pesquería de atún con palangre, en el cual los tiburones forman parte de la captura incidental. La NOM-023-PESC-1993 permite el aprovechamiento de los tiburones que son capturados de forma incidental, sin embargo establece una cuota máxima permitida, además de que se prohíbe el aleteo, por lo que estas medidas contribuyen a disminuir la mortalidad por pesca de las especies de tiburón, lo que es monitoreado a partir de los reportes de bitácoras de pesca y mediante los registros de los observadores a bordo.

La información generada en los reportes se toma en cuenta para ajustar medidas administrativas para detectar y reducir la sobrepesca de tiburones. Además en la última actualización de la Carta Nacional Pesquera, publicada el día 2 de diciembre de 2010, señala como medidas de manejo adicionales, que desde 1993, no se expiden nuevos permisos para captura de tiburón, excepto en el caso de que se sustituyan embarcaciones descartadas o renueven permisos para no incrementar el esfuerzo de pesca existente, aun así, se considera que el estatus de la pesquería aprovechada se encuentra al máximo sustentable**.**

08-07 Recomendación de ICCAT sobre la conservación del zorro ojón (Alopias superciliosus) capturado en asociación con las pesquerías gestionadas por ICCAT.

México ha cumplido con las Recomendaciones del Comité Permanente de Investigaciones y Estadísticas (SCRS) de la CICAA, referentes a la conservación del tiburón zorro ojón (*Alopias superciliosus*), mediante la instrumentación de los programas de investigación que ha llevado a cabo en Instituto Nacional de Pesca, así como la información obtenida de los programas de observadores a bordo y de los reportes de las bitácoras de los propios productores, se tienen avances en establecer la línea base respecto al estado de distribución y abundancia de estas especies con objeto de valorar la viabilidad de establecer medidas administrativas complementarias para la protección de estas especies como pueden ser evitar zonas y temporadas determinadas de pesca en las que se encuentre este recurso más vulnerable a ser capturado de forma incidental.

3.6 Sanciones comerciales

02-17 Recomendación de ICCAT con respecto a Bolivia en cumplimiento de la resolución de ICCAT de 1998 relativa a las capturas no comunicadas y no reguladas de grandes palangreros en la zona del convenio

México no importa patudo atlántico e sus productos, en cualquiera de sus presentaciones, procedente de Bolivia.

03-18 Recomendación de ICCAT sobre medidas comerciales restrictivas respecto al patudo para Georgia

México no importa patudo atlántico y de sus productos en cualquiera de sus presentaciones, procedente de Georgia.

3.7 VMS

03-14/04-11 Recomendación respecto a las normas mínimas para el establecimiento de un Sistema de Seguimiento de Barcos en la zona del Convenio ICCAT.

En junio de 2008 entró en vigor la NOM-062-PESC-2007, la cual hace obligatorio el uso de dispositivos de seguimiento satelital (VMS) para los concesionarios y permisionarios que realicen actividades de pesca, excepto deportivo-recreativa, en embarcaciones pesqueras con motor estacionario (intraborda), potencia nominal superior a 80 Hp (caballos de fuerza), con cubierta corrida y eslora superior a 10,5 metros, que operen en aguas de jurisdicción federal del océano Pacífico, Golfo de México y mar Caribe, dentro de la Zona Económica Exclusiva, así como para aquellas embarcaciones de bandera mexicana que realicen actividades de pesca en alta mar.

Durante 2010 operaron 31 embarcaciones atuneras todas ellas con VMS instalado y funcionando.

3.8 General

97-10 Recomendación para un esquema revisado de inspección

En el área regulada por CICAA, México no tiene embarcaciones que entren, desembarquen o transborden sus capturas en puertos extranjeros.

Respecto a los desembarques en los puertos del país, CONAPESCA, en coordinación con las autoridades nacionales y estatales competentes, vigila que se cumplan las normas vigentes en las operaciones de carga y descarga, así como de cambio de tripulantes en las embarcaciones atuneras del Golfo de México y mar Caribe.

Cabe destacar que la NOM-023-PESC-1996 establece que a cada embarcación atunera le será asignado un puerto base de operaciones, sin perjuicio de que pueda realizar trámites y operaciones de despacho vía la pesca, descargas de productos y manifestar el arribo y el volumen desembarcado en cualquier puerto del litoral del Golfo de México y gar Caribe.

99-07 Resolución sobre la mejora de estadísticas de las pesquerías de recreo

México se destina exclusivamente nueve especies a la pesca deportiva: seis de ellas pertenecen a los denominados “Picudos” (contándose cuatro especies distintas de marlín; pez vela y pez espada) y tres especies afines (sábalo o chiro; pez gallo y dorado), dentro de una franja de 50 millas náuticas contadas a partir de la línea de base desde la cual se mide el mar territorial.

Se ha trabajado en la modernización, actualización y ampliación del Prontuario Estadístico de Pesca Deportiva que se publica en la página de internet de la Conapesca, donde se puede encontrar información sobre número de permisos por entidad federativa, por embarcación, el valor de los permisos, permisos por periodo de tiempo y categoría de embarcación, entre otros datos.

Por otra parte, se han realizado avances importantes en el fomento y regulación de la pesca deportivo-recreativa, actualmente la totalidad de los trámites para obtener un permiso de pesca se realiza totalmente por medios electrónicos. Los prestadores de servicios turísticos de pesca deportivo recreativa están obligados a presentar bitácoras de pesca donde informen de las incidencias de la operación, así como del número de ejemplares capturados.

Asimismo, mediante programas de observadores a bordo se está haciendo el esfuerzo de hacer el seguimiento de una parte representativa de esta actividad, con la cual dar seguimiento y contar con elementos para la toma de decisiones administrativas y regulatorias.

01-18 Resolución acerca del alcance de la pesca IUU

De manera permanente existe la disposición de utilizar la guía de pesca como medio idóneo en las actividades de inspección y vigilancia para el combate de la pesca y movilización ilegal de productos pesqueros, así como el incremento de las operaciones de inspección y vigilancia en aguas de jurisdicción nacional a través de las unidades de superficie de la CONAPESCA y la Secretaría de Marina-Armada de México.

03-12. Recomendación respecto a los deberes de las Partes contratantes y partes, entidades o entidades pesqueras no contratantes colaboradoras en relación con sus barcos que pescan en la zona del Convenio ICCAT

Se mantiene el compromiso y siguen vigentes las disposiciones normativas y legales de que los barcos bajo bandera mexicana cumplan y observen las medidas de conservación y ordenación de la Comisión que apliquen, para tal efecto. Se han establecido medidas como la expedición de permisos de pesca para capturar únicamente las especies autorizadas; ejercer de una forma efectiva sus responsabilidades con respecto a tales barcos, incluyendo el seguimiento y control de sus actividades pesqueras.

De igual manera, tiene establecido y mantiene actualizado un registro de barcos de pesca autorizados a enarbolar su bandera y autorizados a pescar las especies reguladas por ICCAT en la zona del Convenio. Las embarcaciones de bandera mexicana están matriculadas y abanderadas de tal modo que pueden ser fácilmente identificadas conforme a los criterios generalmente aceptados, como la Especificación de criterios de la FAO para el marcado e identificación de barcos pesqueros.

03-16 Recomendación para adoptar medidas adicionales contra la pesca ilegal, no declarada y no reglamentada.

La legislación mexicana vigente contiene disposiciones para reglamentar los desembarques en puertos mexicanos por barcos extranjeros que lo soliciten. Entre otras disposiciones, deberá proveerse información y documentos que avalen exhibir el título correspondiente al amparo del cual se realizó la actividad pesquera, expedido por la autoridad competente del país de origen, así como información sobre el lugar de las capturas, anexando en su caso, copia simple de la bitácora de pesca, o su equivalente, las especies a descargar, volumen y presentación, entre otros.

Respecto a la introducción en jaulas para la cría de túnidos y especies afines capturados, la primera actividad no se realiza en el área de la CICAA.

06-11 Recomendación sobre el establecimiento de un programa para el transbordo.

La Ley General de Pesca y Acuacultura Sustentables vigente en México, establece claramente las disposiciones para regular los transbordos de especies capturadas por embarcaciones pesqueras de bandera mexicana. Entre otros requisitos se establece que se debe contar con un permiso para transbordar especies capturadas por embarcaciones pesqueras de bandera mexicana, el cual será otorgado por la autoridad nacional (CONAPESCA), previo cumplimiento de ciertos requisitos como el número y fecha de la concesión, permiso al amparo del cual se realizó la captura; las especies y su volumen a descargar o transbordar; la fecha y lugar de traslado o transbordo; Los datos que identifiquen la embarcación a la que se transbordarán los productos, y el puerto de destino final.

06-16 Recomendación de ICCAT sobre un programa piloto de documento estadístico electrónico.

México estaría considerando desarrollar un proyecto piloto para mejorar los programas de documento estadístico, conforme con su legislación nacional.

ANNUAL REPORT OF MOROCCO[1]
RAPPORT ANNUEL DU MAROC
INFORME ANUAL DE MARRUECOS

SUMMARY

Catches of tunas and tuna-like species amounted to 10,722 t in 2010, compared to 13,956 t during 2009, i.e., in general, a decrease of 23% as regards to volume. The major species exploited in waters off the Moroccan coasts are bluefin tuna, swordfish, bigeye tuna, yellowfin tuna, albacore, small tunas as well as some shark species. The collection of statistical data on catch and effort is carried out in a thorough manner through the following administrative structures on fishing: Département des Pêches (Department of Fisheries) and the Office National des Pêches (National Office on Fishing) located all along the Atlantic and Mediterranean coasts of Morocco. The Office des Changes (Currency Exchange Office) also carries out a control of the export of the fishing products. As regards scientific research, the Institut National de Recherche Halieutique-INRH (National Fishing Institute), through its five regional centers which cover the entire Moroccan coast, has reinforced the collection of biological data on the major species (bluefin tuna and swordfish). The Regional Center of the INRH in Tangiers serves as coordinator for the collection of all these data. In recent years, monitoring of other species has started, in particular, the tropical species (bigeye tuna, among others), with an extension of the research work towards areas located in the south of Morocco. Consequently, important progress has been made in the collection of biological data, as demonstrated by the series of scientific documents, as well as the Task II data presented by the Moroccan scientists at the various SCRS stock assessment sessions.

RÉSUMÉ

La pêche des espèces de thonidés et des espèces apparentées a atteint une production de 10.722 t au cours de l'année 2010 contre 13.956 t au cours de l'année 2009, soit une baisse d'environ 23% en termes de volume. Les principales espèces exploitées le long des côtes marocaines sont le thon rouge, l'espadon, le thon obèse, l'albacore, le germon, les thonidés mineurs et des espèces de squales. La collecte des données statistiques de pêche et d'effort se fait pratiquement d'une manière exhaustive, à travers les structures administratives des pêches (Département des Pêches et l'Office National des Pêches), implantées tout au long des côtes atlantique et méditerranéenne du Maroc. Un contrôle se fait également en aval par l'Office des Changes, en ce qui concerne les exportations des produits de la pêche. Sur le plan scientifique, l'Institut National de Recherche Halieutique -INRH-, à travers ses Centres Régionaux (au nombre de cinq), couvrant tout le littoral marocain, a renforcé la collecte des données biologiques des principales espèces (thon rouge et espadon). Le Centre Régional de l'INRH à Tanger sert de coordinateur de collecte de toutes ces données. Au cours de ces dernières années, d'autres espèces ont commencé à être suivies, notamment celles des thonidés tropicaux (thon obèse entre autres), avec une extension des travaux de recherche vers les zones situées au Sud du Maroc. Un grand progrès a été ainsi enregistré en matière de collecte de données biologiques, tel qu'en témoignent la série de documents scientifiques, ainsi que des bases de données de la Tâche 2, soumis par les chercheurs marocains aux différentes sessions SCRS, à des fins d'évaluation de stocks de thonidés.

RESUMEN

La pesca de túnidos y especies afines ha alcanzado una producción de 10.722 t durante el año 2010 en comparación con las 13.956 t del año 2009, lo que supone un descenso de aproximadamente el 23% en términos de volumen. Las principales especies explotadas en aguas frente a las costas marroquíes son atún rojo, pez espada, patudo, rabil, atún blanco y pequeños túnidos, así como otras especies de escualos. La recopilación de datos estadísticos de pesca y esfuerzo se realiza prácticamente de un modo exhaustivo, a través de las estructuras administrativas de pesca (Departamento de Pesca y Oficina Nacional de Pesca) situadas a lo largo de toda la costa atlántica y mediterránea de Marruecos. Además, la Oficina de Cambio

[1] Département des Pêches Maritimes - Division de la Protection des Ressources Halieutique/DPMA.

realiza también un control de las exportaciones de los productos de la pesca. En el plano científico, el Instituto Nacional de Investigación Pesquera (Institut National de Recherche Halieutique INRH), a través de sus centros regionales (cinco), que cubren todo el litoral marroquí, ha reforzado la recopilación de datos biológicos de las principales especies (atún rojo y pez espada). El Centro regional del INRH en Tánger ejerce las funciones de coordinador de la recopilación de todos estos datos. Durante los últimos años, se ha comenzado a realizar un seguimiento de otras especies, sobre todo de túnidos tropicales (patudo, entre otras), con una ampliación de los trabajos de investigación hacia las zonas situadas en el Sur de Marruecos. Por tanto, se han constatado importantes progresos en materia de recopilación de datos biológicos, tal y como atestigua la serie de documentos científicos, así como los datos de la Tarea II, presentados por los investigadores marroquíes en las diferentes sesiones de evaluación de los stocks de túnidos del SCRS.

Ière partie : Information sur les pêcheries, la recherche et les statistiques

Chapitre 1 : Information annuelle sur les pêcheries

1.1 Exploitation des thonidés

Les principales espèces de thonidés exploitées par les pêcheurs marocains sont :

- le thon rouge
- le thon obèse
- l'espadon
- l'albacore
- le germon
- les thonidés mineurs (listao, bonite, melva, etc.) ainsi que bien d'autres espèces.

Ces espèces sont exploitées par un armement national diversifié, constitué de navires de pêche armés à la senne, à la palangre et à la ligne à main. Des madragues sont également mises en service pour l'exploitation du thon rouge. Les débarquements sont effectués au niveau des ports, des villages de pêcheurs et des points de débarquement aménagés le long des côtes marocaines. Les espèces débarquées sont constituées d'espèces diversifiées dont le poids individuel varie de 30 à 250 kg pour les thonidés majeurs et l'espadon, et des tailles plus petites pour les thonidés mineurs.

1.2 Zones de pêche

Le thon rouge, le thon obèse et les thonidés mineurs (bonite, melva, listao) sont pêchés habituellement sur la côte Atlantique marocaine. Quelques unités artisanales capturent le thon rouge en Méditerranée marocaine durant les mois de juin à septembre. Des espèces de thons mineurs sont capturées en Méditerranée marocaine.

L'espadon est capturé essentiellement en Méditerranée et en Atlantique sud, entre Tan-Tan jusqu'au sud de Dakhla.

Quant au germon et à l'albacore, ils sont également pêchés en Atlantique, mais en faibles quantités, au moyen de navires côtiers, dans les eaux de la ZEE marocaine.

1.3 Techniques de pêche

Les thonidés et espèces voisines sont pêchés essentiellement par quatre (4) techniques de pêche :

- La madrague

Cet engin cible principalement le thon rouge et les thonidés mineurs. En 2010, 10 madragues ont été calées dans les eaux nationales de la façade Atlantique. Leur période d'activité est la même depuis plusieurs années et se situe entre les mois d'avril et juillet. Parmi les espèces capturées accessoirement, il y a lieu de citer : la melva, la *Sarda sarda* et la bonite en quantités très faibles. Il est à noter que plus de 2.000 individus de thon rouge ont été relâchés par les madragues après épuisement du quota national alloué à ce segment.

− Ligne à main

Elle est utilisée principalement par une importante communauté de pêcheurs artisanaux qui comptent dans leur flottille une centaine de barques artisanales opérant au niveau du Détroit de Gibraltar et le long des côtes méditerranéennes et Atlantiques, de longueur inférieure à 7 m et de TJB < 2 tnx.

Cette activité de pêche, utilisant cet engin de pêche, cible les grandes tailles de thon rouge et parfois même le thon obèse dans les régions sud du Maroc. Elle est presque continue durant toute l'année, avec un arrêt d'activité de deux à trois mois par an.

Quelques individus d'espadon sont capturés mais de manière occasionnelle, d'autres espèces sont également capturées par cet engin, notamment la bonite.

− Senne tournante

Cette technique de pêche est utilisée par les senneurs (dits sardiniers) qui ne pratiquent la pêche aux thonidés que de manière occasionnelle et accidentelle. L'activité se pratique essentiellement en Atlantique et les espèces capturées, notamment des thonidés majeurs, sont d'un poids et d'une taille inférieurs aux individus capturés par les autres techniques de pêche comme la madrague. Généralement, leur poids s'est situé en 2010 au-delà de 80 kg/pièce ou individu.

Il est à noter que cette technique réalise des quantités importantes de prises accessoires constituées essentiellement de thonidés mineurs et de pélamides.

Elle a été également pratiquée par un seul navire de type thonier, spécialisé dans la capture du thon rouge vivant dans les eaux internationales en Méditerranée, dans le cadre d'opérations conjointes.

− Filet maillant dérivant

Le filet maillant dérivant est un engin de pêche qui est encore utilisé pour la pêche de l'espadon, à la fois en Atlantique et en Méditerranée par des navires de type « palangrier » et ce, lors des migrations de cette espèce à travers les côtes marocaines. L'utilisation de cet engin enregistre un net recul en raison de l'approche de la date butoir de son élimination des côtes marocaines, fixée au 31/12/2011.

1.4 Engraissement des thonidés

Aucune activité n'est enregistrée. L'unique projet entamé dans ce sens n'a pas été opérationnel et a cessé ses activités. Cette ferme a été radiée des registres de l'ICCAT.

Chapitre 2 : Statistiques et recherche

Les statistiques générales (tonnes métriques) sont détaillées dans le **Tableau 1.**

2.1 Pêcherie du thon rouge et de l'espadon

Les données statistiques de la pêcherie de thon rouge Est (BFT-E) et de l'espadon (SWO) sont mentionnées au **Tableau 2**.

2.2 Pêcherie des petits thonidés

Les données de la pêcherie des petits thonidés sont illustrées dans le **Tableau 3.**

2.3 Autres espèces

Les captures du voilier, du makaire bleu, de l'albacore, du germon, du thon obèse, des squales et requins sont ventilées dans le **Tableau 4.**

2.4 Tableau récapitulatif des captures par zones et par espèces (t)

Le Tableau récapitulatif des données générales de capture par zones et par espèces (t) est présenté en tant que **Tableau 5**.

2.5 Données de la Tâche II

Ces données ont été communiquées par voie électronique, notamment pour les espèces dont ces informations sont disponibles.

2.6 Prises accidentelles d'oiseaux de mer et taux de capture accidentelle des tortues de mer

Il ressort des enquêtes menées sur le terrain en 2010 auprès des marins pêcheurs des palangriers spécialisés, ce qui suit :

- le nombre moyen d'oiseaux qui sont observés dans le ciel par les marins de ces navires, lors d'une journée de pêche, est d'environ 185 individus (albatros). Il est à préciser que ces individus ne sont pas capturés ou pris accidentellement dans les filets ou les lignes; il s'agit uniquement d'individus qui gravitent autour du navire au moment de la remontée des filets ou de la manipulation du poisson pêché ;
- la fréquence de rencontre des tortues marines lors d'une opération de pêche par ces navires est d'une pièce par 100 jours de pêche (en moyenne, une marée varie d'une à trois journées, mais en général, et au vu des caractéristiques techniques de ces navires de pêche, la marée ne dépasse pas les 24 heures);
- Sur un échantillon de 100 navires spécialisés dans la pêche exclusive des thonidés et espèces apparentées dans la zone située au sud d'Agadir, à l'intérieur de la ZEE marocaine, il a été constaté qu'un navire sur six ne rencontre pas d'oiseaux de mer ou de tortues marines lors des opérations de pêche ;
- les navires qui procèdent à des opérations de traitement du poisson à bord, notamment l'éviscération, rencontrent quant à eux des oiseaux de mer le plus souvent ; dans ces cas, les prises accidentelles d'oiseaux de mer sont de l'ordre d'un oiseau par 30 jours de pêche.

Dans cette zone, des techniques pratiques et astuces sont adoptées pour éviter les prises accidentelles de ces espèces

2.7 Données de capture de la pêche sportive et récréative en Méditerranée

Aucune capture d'espèces thonières n'a été enregistrée en 2010.

Le **Tableau 6** illustre l'échantillon de taille du thon rouge prélevé pendant le transport (Echantillonnage de l'Azrou-1 réalisé pendant la capture le 9 juin 2011).

Observation importante

Il s'agit des données recueillies lors de la pêche individuelle du navire "Azrou-1" en Méditerranée orientale le 9 juin 2011, hors pêche conjointe.

Il est à signaler que le navire marocain "Azrou-1" a opéré durant 2011 une JFO (n°2011-002). Par conséquent, les données des échantillons de taille qui seront communiquées par l'Etat de pavillon (Turquie) des navires ayant pêché conjointement avec "Azrou-1" pour cette saison sont valables pour la Partie marocaine.

2.8 Echantillons de taille de thon rouge prélevés pendant les transferts dans les cages associées aux déclarations de report des fermes

Voir les données qui seront déclarées par la Turquie car le seul navire marocain de type "thonier-senneur" ayant ciblé le thon rouge vivant, en 2011, a opéré dans le cadre de la JFO 2011-022 et sa production a été destinée à des fermes d'engraissement battant pavillon turc.

2.9 Activités de recherche

Les efforts des dernières années, menées par l'équipe de l'INRH-Tanger en termes de suivi scientifique des activités d'exploitation au sein des différentes pêcheries marocaines des espèces de thonidés et espèces apparentées, semblent avoir été couronnés de succès. En témoignent les opérations régulières de l'échantillonnage biologiques du thon rouge, de l'espadon, du thon obèse, d'une part, et les séries de données de capture / effort, de structures démographiques (taille, poids), les captures par taille, reconstituées pour les six dernières années, d'autre part. Comme en témoignent aussi les documents scientifiques par lesquels l'équipe scientifique marocaine contribue activement chaque année à l'amélioration des connaissances biologiques et d'exploitation des principales espèces d'intérêt pour l'ICCAT.

Tout en s'engageant à œuvrer davantage à doubler d'effort pour l'acquisition de données indispensables pour mener à bien les activités de la communauté scientifique de l'ICCAT en termes d'évaluation des stocks de thonidés et espèces apparentées, l'équipe scientifique du Maroc a une forte intention d'élargir ses activités de recherche pour couvrir d'autres aspects, notamment la biologie de croissance, de reproduction, de régime alimentaire, de parasitologie et de pathologie concernant ces espèces. Pour ce faire, l'INRH a construit des laboratoires au sein de son complexe scientifique de Tanger (dont le Centre Régional chargé pour tout genre d'études concernant les pêcheries thonières et le Laboratoire de recherche en pathologie et parasitologie des animaux aquatiques) ; ces laboratoires sont destinés à abriter aussi bien les équipements et matériel appropriés à chacune de ces disciplines que du personnel spécialisé.

Pour pallier aux handicaps financiers qui empêcheraient la concrétisation de ces objectifs, le SCRS/ICCAT, ainsi que les bailleurs de fonds soucieux de l'avenir des stocks de thonidés, sont invités vivement à appuyer le Maroc dans ses efforts. Le programme de recherche sur les pêcheries thonières pour l'année 2009, tel qu'il est exécuté à partir du CR/INRH - Tanger, ne diffère en rien de celui mis en place depuis 2005 ; ce qui le marque ces dernières années c'est qu'il avait été intensifié en termes :

- d'échantillonnage biologique : (i) pour le thon rouge des madragues de l'Atlantique et de la pêche artisanale du Détroit de Gibraltar, (ii) pour l'espadon des zones d'influences du Détroit de Gibraltar et de l'Atlantique Sud (Dakhla), (iii) les thonidés tropicaux, notamment le thon obèse de l'Atlantique Sud (Dakhla) ; opérations d'échantillonnage, à la fois à terre et en mer au niveau même des madragues;
- de collecte de données historiques et récentes de capture et d'effort de l'ensemble des pêcheries thonières nationales (espadon Atl. et Med, thon obèse Atl. et thon rouge Atl.) pour l'amélioration des indices d'abondance ; ces indices qui sont de plus en plus sollicités pour améliorer les évaluations de l'état des stocks et dont le Maroc s'est à présent positionné comme étant une partie contractante de l'ICCAT qui fournit régulièrement ce type de donnée.

Ce qui reste à faire c'est doter le CR/INRH - Tanger de moyens et d'équipements nécessaires (notamment au niveau de son Laboratoire des Ressources Halieutiques) pour qu'il dispose d'un laboratoire de référence en matière d'études biologiques des thonidés (croissance, reproduction, régime alimentaire, voire génétique, etc.). Des objectifs que l'on pourrait atteindre en partie à travers nos implications dans des programmes / projets de recherche internationaux, d'une part, et par le renforcement des capacités de nos chercheurs, à travers des formations pointues en matière de biologie et de nouvelles méthodes d'évaluation, d'autre part.

IIe partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en œuvre des mesures de conservation et de gestion de l'ICCAT

3.1 Limites de taille minimale

Conformément aux Recommandations de l'ICCAT, le Département des Pêches maritimes interdit la capture des poissons sous-taille et ce, aux termes d'un arrêté ministériel, modifiant et complétant l'arrêté du 03 octobre 1988 fixant la taille marchande minimale des espèces pêchées dans les eaux marocaines. Ce projet est en cours d'amendement pour y inclure la nouvelle taille commerciale minimale de thon rouge (Rec ICCAT 06-05) qui a été notifiée aux opérateurs par lettre circulaire.

3.2 Limitation de l'effort de pêche

En application de la note circulaire 3887 du 18 août 1992, les investissements en matière de construction navale ont été suspendus depuis cette date afin d'assurer une compatibilité entre effort de pêche et niveau de l'état des stocks. Par ailleurs, la circulaire n° 001 du 01/02/2005, fixant les conditions d'octroi et de prorogation des autorisations de reconversion, de refonte et de remplacement des navires de pêche permet d'apporter certaines modifications techniques aux navires de pêche actifs.

Pour la pêcherie du thon rouge, le Maroc souscrit pleinement aux dispositions de la Recommandation ICCAT [08-05] en matière de limite de la capacité à celle des madragues, des fermes et des navires autorisés au 1er juillet 2008.

3.3 Contrôle des activités de pêche

Le contrôle des activités de pêche a pour principaux objectifs de veiller à la stricte application de la réglementation en vigueur, de sanctionner les contrevenants et permet par la même occasion de contribuer à la gestion de la ressource, en complément aux instruments déjà mis en place tels que les mesures techniques, les limitations de captures et d'effort de pêche.

Un contrôle strict s'étend à l'ensemble de la filière pêche et notamment à l'exercice de la pêche, les activités de transbordement, de débarquement, de commercialisation, de transport et de stockage des produits de la pêche ainsi que l'enregistrement des débarquements et des ventes.

Le contrôle en mer consiste à vérifier les caractéristiques de l'engin de pêche (contrôle de la conformité de l'engin et du maillage par rapport à l'espèce cible et la zone géographique), à inspecter l'activité de pêche elle-même (journal de bord, légalité de l'activité de pêche par rapport à la période de pêche et au quota), et la cargaison (taille minimale, quantités par espèces).

Les informations statistiques recueillies lors des contrôles permettent aussi de suivre les niveaux de capture.

L'organisation du contrôle est faite de la manière suivante :

- Contrôles en mer : Il est effectué par les autorités maritimes de contrôle et par les membres du corps des observateurs scientifiques.
- Les moyens mis à la disposition des contrôleurs sont : les navires de surveillance, les avions et le suivi par satellite (GPS).
- Le contrôle est effectué à bord des navires et à la capture. Les indications reportées dans le journal de bord sont contrôlées ainsi que le respect des mesures techniques et réglementaires en vigueur.
- Au niveau des madragues, il faudrait rappeler la présence permanente des observateurs scientifiques dont la mission est le contrôle des tailles, espèces, le tonnage et la collecte des données biologiques. Ainsi, 100% des madragues sont couvertes par des observateurs scientifiques du Département des Pêches Maritimes. A la fin de la saison de pêche, après la levée de la madrague, l'observateur présente un rapport détaillé sur l'activité de celle-ci.
- Contrôles à terre : Ils sont effectués par les délégués du Département des Pêches Maritimes, les délégués de l'Office National des Pêches et par les représentants du corps des Observateurs Scientifiques qui forment les Commissions de Contrôle.

Ces inspections sont soit ciblées, soit aléatoires. Elles sont réalisées au débarquement, lors du transport du produit, à la transformation et lors de la commercialisation.

Les documents pouvant servir au contrôle sont : les déclarations de débarquement, les documents de transport qui sont également vérifiés par les autorités de contrôle de la circulation routière et les notes de ventes.

Parallèlement à ces procédures, le Département des pêches maritimes a mis en place, depuis le mois de juin 2004, un schéma pratique permettant de déterminer l'origine des individus d'espadon capturés en Atlantique nord et en Méditerranée. Ce schéma, intitulé « Schéma de contrôle et d'identification de l'origine des captures de l'espadon dans les prises des flottilles marocaines », a permis de mieux affiner les données de prises de cette espèce notamment celles réalisées par les navires pratiquant la pêche dans ses zones d'une part, et les lieux de sa capture d'autre part.

Dans le cas de ce schéma, il ne s'agit pas particulièrement de revoir le système actuel de contrôle de l'activité de pêche de l'espadon, du moment qu'il se fait de manière efficace, mais de l'élargir par des méthodes qui permettront de déterminer principalement avec exactitude l'origine de capture de l'espadon.

Ces mesures s'intègrent également dans le cadre de l'application des dispositions du plan d'action national pour l'abandon du filet maillant dérivant et la reconversion des flottes qui l'utilisent.
Tous ces dispositifs seront renforcés par l'entrée en vigueur, au 1er janvier 2010, de la nouvelle procédure réglementaire de lutte contre les formes de pêche INN.

3.4 Système de repérage et de suivi par satellite des navires de pêche (DRS/GPS)

Dans le cadre d'une gestion rationnelle des ressources halieutiques et dans le but d'assurer un meilleur suivi de l'activité de la flotte sur un grand espace géographique, le Département des Pêches Maritimes a mis en place toute une structure pour l'utilisation des systèmes de suivi et de transmission de données par satellite.

Aussi, et dans le but de contribuer efficacement à contrecarrer la pêche illégale, non-réglementée et non-déclarée (IUU) dans la zone de Convention de l'ICCAT, des outils de contrôle supplémentaires ont été mis en place pour compléter les systèmes électroniques déjà mis en place par les autorités chargées du contrôle des activités de pêche.

Enfin, il faudrait rappeler que le Département des Pêches Maritimes abrite et coordonne les activités du Centre de Contrôle National des Pêches.

3.5 Données commerciales

Au niveau des exportations, des recoupements sont effectués avec les services de l'Office des changes, organisme étatique chargé d'édicter les mesures relatives à la réglementation des opérations de change en autorisant à titre général ou particulier les transferts à destination de l'étranger et en veillant au rapatriement des avoirs obligatoirement cessibles (recettes d'exportations de biens et services), et de l'administration des douanes qui sont sous la tutelle du Ministère de l'Economie et des Finances afin de vérifier l'authenticité des quantités déclarées à l'exportation et les croiser avec le montant des devises rapatriées.

Toutes ces procédures ont été mises en place pour renforcer davantage les dispositifs de contrôle des opérations commerciales des espèces thonières.

Tableau 1. Statistiques générales.

Espèces (code ICCAT)	*TOTAL (tonnes métriques)*	
Espèce/Zone	*Atlantique*	*Méditerranée*
Albacore (YFT)	44	00
Germon (ALB)	00	00
Thon obese (BET)	276	00
Thon rouge (BFT)	1348	206
Thonine (LTA)	05	01
Listao (SKJ)	2317	26
Bonite à dos rayé (BON)	109	57
Melva (FRI)	19	525
Palomette (BOP)	199	14
Espadon (SWO)	963	1610
Thazard (WAH)	71	05
Makaire blanc (WHM)	00	00
Makaire Bleu (BUM)	00	00
Voilier de l'Atlantique (SAI)	1100	00
Squalidés et requins (SHK)	1707	120
TOTAL ™	**8158**	**2564**
Total général ™	**10722**	

Tableau 2. Données statistiques de la pêcherie de thon rouge Est (BFT-E) et d'espadon (SWO).

BFT	*Engin*	*Volume*
Atl	Trap	1348
Atl	PS	00
Atl	LL	00
Atl	Gill	00
Méd	Hand	00
Méd	Gill	00
Méd	PS	98
Méd	LL	107
Méd	Trap	00
Tot-Atl		1348
Tot-Méd		206
Total BFT		**1554**

SWO	*Engin*	*Volume*
Atl	Trap	00
Atl	PS	00
Atl	Gill	00
Atl	LL	963
Méd	LL	1200
Méd	Gill	410
Méd	PS	00
Méd	Hand	00
Méd	Trap	00
Tot-Atl		963
Tot-Méd		1610
Total SWO		**2573**

Tableau 3. Données de la pêcherie des petits thonidés.

Espèces	*Engin*	*Bacorette (LTA)*	*B. Sarda (BON)*	*Listao (SKJ)*	*Melva (FRI)*	*Palomette (BOP)*	*Thazard (WAH)*	*Total*
Atl	Trap	00	09	00	02	00	00	11
Atl	Hand	00	16	408	05	00	00	429
Atl	Gill	00	01	07	00	04	00	12
Atl	LL	00	22	1012	09	135	52	1230
Atl	PS	05	61	890	03	60	19	1038
Méd	Trap	00	00	00	00	00	00	00
Méd	Hand	00	42	14	16	00	00	72
Méd	Gill	00	00	00	06	00	00	06
Méd	LL	00	05	10	187	10	00	212
Méd	PS	01	10	02	316	04	05	338
Tot-Atl		05	109	2317	19	199	71	2720
Tot-Méd		01	57	26	525	14	05	628
Total		**06**	**166**	**2343**	**544**	**213**	**76**	**3348**

Tableau 4. Autres espèces.

	Engin	*Voilier (SAI)*	*Makaire bleu (BUM)*	*Albacore (YFT)*	*Germon (ALB)*	*Thon obèse (BET)*	*Squales & Requins**
Atl	Trap	00	00	00	00	00	00
Atl	PS	00	00	00	00	00	599
Atl	Gill	00	00	00	00	00	00
Atl	LL &Hand	1100	00	44	00	276	1108
Méd	LL	00	00	00	00	00	63
Méd	Gill	00	00	00	00	00	00
Méd	PS	00	00	00	00	00	53
Méd	Hand	00	00	00	00	00	04
Méd	Trap	00	00	00	00	00	00
Tot-Atl		1100	00	44	00	276	1707
Tot-Méd		00	00	00	00	00	120
Total		**1100**	**00**	**44**	**00**	**276**	**1827**

* Espèces de squalidés et requins :

Heptranchias perlo, Hexanchus griseus, Centrophorus granulosus, Centrophorus squamosus, Centrophorus uyato, Centroscymnus coelolepis, Centroscymnus crepidater, Dalatias licha, Deania calcea, Etmopterus spinax, Scymnodon ringens, Squalus acanthias, Squalus blainvillei, Squatina aculeata, Squatina squatina, Squatina oculata, Eugomphodus taurus, Odontaspis ferox, Alopias vulpinus, Cetorhinus maximus, Carcharodon carcharias, Isurus oxyrinchus, Lamna nasus, Galeus melastomus, Scyliorhinus canicula, Scyliorhinus stellaris, Galeorhinus galeus, Mustelus asterias, Mustelus mustelus, Carcharhinus leucas, Carcharhinus longimanus, Carcharhinus obscurus, Prionace glauca, Sphyrna lewini, Sphyrna mokarran, Sphyrna zygaena.

Tableau 5. Récapitulatif des données générales de captures par zones et par espèces (TM).

	Atl	*Méd*	*Total*
Thon rouge	1348	206	1554
Thon obèse	276	00	276
Thon germon	00	00	00
Thon albacore	44	00	44
Espadon	963	1610	2573
Voilier de l'Atlantique	1100	00	1100
Petits thonidés	2720	628	2248
Squalidés & requins	1707	120	1827
TOTAL	**8158**	**2564**	**10722**

Tableau 6. Echantillon de taille du thon rouge prélevé pendant le transport (Echantillonnage de l'Azrou-1 réalisé pendant la capture le 9 juin 2011).

Poids (kg)	*FL (cm)*	*L1 (cm)*
230	236	66
63	149	43
39	129	39
37	127	38
31	115	33

ANNUAL REPORT OF NAMIBIA
RAPPORT ANNUEL DE LA NAMIBIE
INFORME ANUAL DE NAMIBIA

Ministry of Fisheries and Marine Resources

SUMMARY

Namibia, as a member of ICCAT, strives to fully implement all ICCAT conservation measures in force. Foreign fishing vessels entering Namibian ports are thoroughly inspected to ensure that they have not contravened national laws and regulations of Namibia or other states, as well as conservation and management measures developed by ICCAT and any other RFMOs of which Namibia is a member. In addition, monitoring measures are in place to ensure that all products coming from licensed tuna fishing vessels, when entering or leaving the country, are accompanied by a duly completed and validated statistical document. Since 2009, the number of chartered baitboats in Namibia has declined from 25 to 21 in 2010, whereas that of longline boats has slightly increased from 11 to 12 during the same period. A decrease in the amount of albacore and bigeye tuna landed by chartered baitboats was observed in 2010, when compared to 2009, whereas significant increases were observed in the catches of the main longline fisheries, mainly swordfish, blue shark and shortfin mako shark, for the same period. The Ministry of Fisheries and Marine Resources ensures the promulgation of regulations relating to chartering of vessels to fully utilize Namibia's share of marine resources in ICCAT Convention area during 2010, thereby creating a conducive environment for the fishing industry and establishing an unambiguous legal façade for enforcing ICCAT conservation and management measures.

RÉSUMÉ

La Namibie, en qualité de membre de l'ICCAT, s'efforce de mettre pleinement en œuvre toutes les mesures de conservation de l'ICCAT en vigueur. Les navires sous pavillon étranger entrant dans les ports namibiens font l'objet d'une inspection exhaustive afin de veiller à ce qu'ils n'ont pas enfreint la législation et les réglementations de la Namibie ou d'autres États, ainsi que les mesures de conservation et de gestion de l'ICCAT et de toute autre ORGP dont la Namibie est membre. En outre, des mesures de suivi sont en place afin de veiller à ce que tous les produits provenant des navires de pêche de thonidés autorisés, à leur entrée ou sortie du pays, soient accompagnés d'un document statistique dûment complété et validé. Depuis 2009, le nombre de canneurs affrétés en Namibie a diminué, passant de 25 à 21 en 2010, tandis que le nombre de palangriers a légèrement augmenté, passant de 11 à 12 pendant la même période. Une baisse du volume de débarquements de germon et de thon obèse des canneurs affrétés a été observée en 2010, par rapport à 2009, tandis qu'on a constaté une augmentation significative des prises des principales pêcheries palangrières, principalement d'espadon, de requin peau bleue et de requin-taupe bleu pour la même période. Le ministère des Pêches et des Ressources marines veille à promulguer les réglementations relatives à l'affrètement des navires afin d'utiliser pleinement la part des ressources marines de la Namibie dans la zone de la Convention de l'ICCAT pendant l'année 2010 ; à cet effet, un climat propice a été créé pour l'industrie de la pêche et une façade légale non équivoque a été établie aux fins de l'exécution des mesures de conservation et de gestion de l'ICCAT.

RESUMEN

Namibia, en su calidad de miembro de ICCAT, se esfuerza por implementar plenamente toda las medidas de conservación de ICCAT en vigor. Los buques pesqueros extranjeros que entran en los puertos namibios se someten a una exhaustiva inspección para garantizar que no infringen las legislaciones y reglamentos nacionales o de otros Estados, así como las medidas de conservación y ordenación desarrolladas por ICCAT y por otras OROP de las que Namibia es miembro. Además, se han implementado medidas de seguimiento para garantizar que todos los productos procedentes de buques pesqueros atuneros con licencia, en el momento de entrar o salir del país, están acompañados de un documento estadístico debidamente cumplimentado y

validado. Desde 2009, el número de barcos de cebo vivo fletados en Namibia ha descendido pasando de 25 a 21 en 2010, mientras que el número de palangreros se ha incrementado ligeramente pasando de 11 a 12 durante el mismo periodo. En 2010 se observó, en comparación con 2009, un descenso en el volumen de atún blanco y patudo desembarcado por los barcos de cebo vivo fletados, mientras que se han observado importantes incrementos en las capturas de las principales pesquerías de palangre, sobre todo de pez espada, tintorera y marrajo dientuso durante el mismo periodo. El Ministerio de Pesca y Recursos Marinos garantiza la promulgación de reglamentos relacionados con el fletamento de buques para conseguir la plena utilización de la parte de recursos marinos de Namibia en la zona del Convenio de ICCAT durante 2010, y para ello ha creado un ambiente propicio para la industria pesquera y ha establecido una fachada legal no ambigua para la ejecución de las medidas de conservación y ordenación de ICCAT.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Since 2008 the number of chartered baitboats have declined from 39 to 25 in 2009 and finally to 21 in 2010. For the same years this fishery landed 1856 tons of albacore in 2008, 4936 tons in 2009 and only 1263 tons in 2010. Similarly, for bigeye tuna 34 tons were caught in 2008, 60 tons in 2009 and 47 tons in 2010. 70 tons of skipjack tuna were landed in 2009 with a 0 catch for 2008 and 2010. Interestingly, for the first time the baitboats managed to land 9 tons of swordfish and half a ton of shortfin mako shark and 650 kg of blue shark.

From 2008 the number of longline boats has halved from 22 to 11 in 2009 and risen to 12 in 2010. The main species targeted by this fishery are swordfish, 518 tons in 2008, only 25.5 tons in 2009 and 407.5 tons in 2010, blue shark, 1828.5 in 2008, only 207 tons in 2009 and 2351 tons in 2010, and shortfin mako shark, 294.5 tons in 2008, only 23 tons in 2009 and 306.5 tons in 2010. A range of bycatch species caught for 2010 are 57 tons of albacore, 132.5 tons of bigeye tuna, 6.6 tons of yellowfin tuna, 8.7 tons of thresher shark, 23.2 tons of blue marlin and finally 1.5 tons of skipjack tuna.

***Section 2*: Research and Statistics**

No tuna, tuna-like species or large pelagic shark related research was conducted in 2010. Namibia collects statistical data from its tuna fishing fleet, through information gathered from the logsheets supplied to fishing vessels, as well as from RESDAT forms that are filled in by Fisheries Observers.

2.1 Logsheets

The following is noted in these sheets; Vessel License No, IRCS, Captain's name, Trip No, Year & Month, logsheet Serial No, the date of set/shoot & lat&long, date of haul/catch & lat&long, effort (hooks/poles) and the captains guess of the catch (in kg) for each species.

2.2 RESDAT Form 1A

These forms are used for commercial vessels at sea. They are filled in by the Fisheries Observer on board in which he/she notes biological data; for tunas, tuna-like species and swordfish 1) species, 2) total catch (kg), weight sampled (kg) and the form number (e.g., 2A) on which individual fish lengths are recorded (also Vessel ID, Trip No, Station No, Date and First Sampler No. For the large pelagic sharks the sex is also noted on Form 2C (Biological).

2.3 Observers

Namibia has a 100% policy onboard coverage by fisheries observers on all Namibian licensed fishing vessels as well as foreign chartered fishing vessels operating within the Namibian EEZ and in International waters (**Table 1**). Their duties are to ensure compliance to fisheries legislations governing fishing operations and included but not limited to the following:

- Ensure correct and accurate logbook completion;

- Ensure accurate reporting of areas of operation, catches and quantities;
- Correct processing methods onboard fishing vessels and prevent/or limit the discarding of eatable and marketable fish species;
- Collecting scientific data such as species identification, length measurements, sexing and collection of otoliths.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Statistical document programs which Namibia utilizes as established by ICCAT are those for swordfish, big eye and albacore tuna. All Namibian licensed tuna vessels ensure that all products of these species, when entering or leaving the country, are accompanied by a duly completed and validated statistical document. For vessels operating under a charter arrangement, Namibia validates the documents for those on the ICCAT record. Re-export certificates for foreign catches landed in Namibian ports are also issued.

Management measures in force in the large pelagic fishery are: the ICCAT Catch Documentation Scheme, TAC's for swordfish, catch limit on bigeye tuna as by-catch and a sharing arrangement quota on albacore, gear restrictions (longline and\ pole-and-line only), value-added processing is a license condition for pole-and-line vessels and limited entry (number of licences) for the longline fishery.

Section 4: Inspection Schemes and Activities

The Monitoring, Control and Surveillance (MCS) component of Namibia comprises an integrated programme of inspections and patrol at sea, and on land to ensure compliance to Namibian Marine legislation. This is done through deploying fisheries patrol vessels, patrol aircrafts, harbour and plants inspections and coastal patrols respectively. Inspectors at the Ministry of Fisheries and Marine Resources are responsible to enforce fisheries legislation, to monitor and inspect fishing activities along the country’s coastline, in harbours, onshore processing plants and at mid-water. In addition to this they also monitor all landings to ensure compliance with quota limits. Conditions attached to fishing licenses dictate that all fish caught under a Namibian fishing license be offloaded and monitored by a fisheries inspector at either of the two commercial ports of Lüderitz or Walvis Bay.

All foreign fishing vessel entering Namibian ports are thoroughly inspected to ensure that all fishing vessels that they have not contravened national laws and regulations of Namibia or other states, conservation and management measures developed by ICCAT and any other RFMOs of which Namibia is a member. Foreign vessels operating in ICCAT Convention Area regularly make use of Namibian ports to offload their catches. These vessels are monitored and controlled under the ICCAT Port Inspection Scheme whereby the following procedures are in place:

- Advance Entry Notification by foreign fishing vessels are submitted by vessel agents at least 5 working days in advance with copies of their fishing licenses, high seas permits, vessel registration documents, authorized vessel registration on ICCAT website, cargo manifest, crew list and VMS/ positional report;
- The Ministry of Fisheries verify these documentation, confirm consent from flag state that vessel are legal, confirm vessel listing on ICCAT website and IUU listing;
- Approval is then granted for entry into port;
- In port the inspectors verify the original documentation onboard and allow offloading to commence. They monitor the landings and complete a Port Inspection Report at the end.
- The approved Advance Notification and Port Inspection Report are filed for future reference.

Namibia has designed a port state inspection form that records all landings. The fisheries inspector completes the form and results are presented to the master of the vessel for comments. Once satisfied, both the fisheries inspector and master sign the form.

Two patrol vessels namely "*Nathaniel Maxuilili*" and "*Anna Kakurukaze Mungunda*" are deployed at sea to strengthen fisheries control function through regular monitoring, control and surveillance. Inspectors onboard the patrol vessels inspect the fishing vessels for activities ranging from irregular round-straps, outdated vessel hold drawings, displaying of unclear vessel names on the vessel side and incomplete daily log books. Non-compliance in this regard is fined on the spot. There are two fisheries patrol aircrafts "Sea Eagle I" and "Sea Eagle II".

Table1. Level of observer coverage over the last three years 2008-2010.

	Fishing trips		*Observer trips*	
	Pole & line	*Longline*	*Pole & line (% trips covered)*	*Longline (% trips covered)*
Jul 08 – Jun 09	209	3	198 (94.74%)	3 (100%)
Jul 09 – Jun 10	88	5	84 (95.45)	5 (100%)
Jul 10 – Jun 11	260	12	238 (91.54%)	12 (100%)

ANNUAL REPORT OF NORWAY
RAPPORT ANNUEL DE LA NORVÈGE
INFORME ANUAL DE NORUEGA

SUMMARY

*There have been no catches and observations of Atlantic bluefin tuna (*Thunnus thynnus*) and Atlantic swordfish (*Xiphias gladius*) in Norway in 2010. Approximately 100 kg of Atlantic bonito (*Sarda sarda*) were landed in Norway in 2010. Norway continuously works on historical data on tuna and tuna like species and aims to put the data on these species into an ecosystem perspective. During 2010 new historical data on Atlantic bluefin tuna were found after considerable search in various places along the coast of Norway. The search for bluefin tuna material resulted in Task II data (weight, date of catch and catching area) from a total of 14,839 individuals during the time period 1950-1954. Norway participated in all major international scientific meetings concerning Atlantic bluefin tuna in 2010. The prohibition for Norwegian vessels to fish bluefin tuna adopted in 2007 remained in force in 2010. So did the regulation of 20 March 2009 establishing a catch documentation scheme for Atlantic bluefin tuna (*Thunnus thynnus*), bigeye tuna (*Thunnus obesus*) and swordfish (*Xiphias gladius*). The regulation is consistent with the relevant ICCAT recommendations.*

RÉSUMÉ

*Aucun spécimen de thon rouge de l'Atlantique (*Thunnus thynnus*) et d'espadon de l'Atlantique (*Xiphias gladius*) n'a été capturé et observé en Norvège en 2010. Près de 100 kg de bonite à dos rayé (*Sarda sarda*) ont été débarqués en Norvège en 2010. La Norvège mène des travaux continus sur les données historiques concernant les thonidés et les espèces apparentées en vue de placer les données sur ces espèces dans une perspective écosystémique. En 2010, de nouvelles données historiques sur le thon rouge de l'Atlantique ont été trouvées au terme d'importantes recherches menées dans plusieurs endroits le long de la côte norvégienne. La recherche de matériel sur le thon rouge de l'Atlantique a permis d'obtenir des données de la Tâche II (poids, date et zone de capture) à partir d'un total de 14.839 spécimens pendant la période comprise entre 1950 et 1954. La Norvège a pris part à toutes les principales réunions scientifiques internationales concernant le thon rouge de l'Atlantique en 2010. La mesure interdisant aux navires norvégiens de pêcher du thon rouge, adoptée en 2007, était toujours d'application en 2010, à l'instar de la réglementation du 20 mars 2009 établissant un programme de documentation des captures de thon rouge de l'Atlantique (*Thunnus thynnus*), de thon obèse (*Thunnus obesus*) et d'espadon (*Xiphias gladius*). La réglementation est conforme aux recommandations pertinentes de l'ICCAT.*

RESUMEN

No ha habido capturas ni observaciones de atún rojo (Thunnus thynnus) *ni de pez espada del Atlántico (*Xiphias gladius*) en Noruega en 2010. En 2010 se desembarcaron y midieron en Noruega 100 kg de bonito del Atlántico* (Sarda sarda). *Noruega trabaja continuamente en los datos históricos de túnidos y especies afines, con el objetivo de incluir los datos sobre estas especies en una perspectiva ecosistémica. Durante 2010, se han descubierto nuevos datos históricos sobre el atún rojo del Atlántico después de realizar una importante investigación en diversos lugares de la costa de Noruega. La búsqueda sobre material de atún rojo tuvo como resultado los datos de Tarea II (peso, fecha de captura y zona de captura) de un total de 14.839 ejemplares durante el periodo 1950-1954. En 2010, Noruega participó en todas las reuniones científicas internacionales más importantes relacionadas con el atún rojo del Atlántico. La prohibición para los buques noruegos de pescar atún rojo adoptada en 2007 permaneció vigente en 2010. También sigue vigente el reglamento del 20 de marzo de 2009 que establece un programa de documentación de capturas para el atún rojo* (Thunnus thynnus), el patudo (Thunnus obesus) *y el pez espada* (Xiphias gladius). *El reglamento es coherente con todas las Recomendaciones pertinentes de ICCAT.*

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In light of the critical stock situation for bluefin tuna, Norway adopted in 2007 a prohibition for Norwegian vessels to fish and land bluefin tuna in Norway's territorial waters, in the Norwegian Economic Zone and in International waters. The prohibition remains in force.

About 100 kg of Atlantic bonito (*Sarda sarda*), with an average weight of 1.6 kg (±2.1), were reported landed in Norway in 2010. Neither Atlantic bluefin tuna nor Atlantic swordfish were caught by Norwegian fishing vessels in 2010.

Section 2: Research and Statistics

Norway continuously works on historical data for bluefin tuna, and aims to put the data into an ecosystem perspective and as input to assessment models. A sudden appearance of Atlantic bonito was evident in Nordic waters along the southern and south western coast of Norway and Kattegat area in July-October 2010. A report entitled: "Atlantic bonito in Nordic waters: Biology, distribution and feeding" has been written. An historical overview of Atlantic swordfish observations and catches registered in Norwegian waters from 1967 to present is also available. Task II data (weight, date of catch and catching area) from a total of 14,839 individuals of Atlantic bluefin tuna during the time period 1950-1954 has been found and implemented in the ICCAT database. The report "Task II historical data mining on bluefin tuna (BFT) caught in Norway 1950-1954" was written to the Grand Bluefin Year Program (GBYP) in 2010 (Tangen et al 2010). Norway has participated in all major international scientific meetings concerning Atlantic bluefin tuna in 2010. Knowledge about bluefin tuna research and management have been presented in newspapers and aired on national television.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Bluefin tuna is the only tuna species in ICCAT's Convention Area to which Norway is a coastal state. Norway has no long distance fisheries for other tuna or tuna-like species in the Convention area.

In light of the critical stock situation for bluefin tuna, Norway adopted on 3 May 2007 a prohibition for that year for Norwegian vessels to fish and land bluefin tuna in Norway's territorial waters, in the Norwegian Economic Zone and in international waters. A new regulation adopted 19 December 2007 provides for the same prohibiton. This regulation, which entered into force 1 January 2008, is not limited in time, and therefore remains in force until otherwise decided. In addition to the prohibition to fish and land bluefin tuna, the regulation stipulates that in case of incidental by-catches of bluefin tuna in fisheries for other species, all bluefin tuna fit for survival shall be immediately released back to the sea, whereas dead or dying bluefin tuna shall be landed. Any wilful or negligent contravention of these provisions is subject to penalty in accordance with Norwegian law.

Norway adopted on 20 March 2009 a regulation relating to catch documentation for Atlantic bluefin tuna (*Thunnus thynnus*), bigeye tuna (*Thunnus obesus*) and swordfish (*Xiphia gladius*). The regulation, which entered into force 6 April 2009, establishes a catch documentation scheme whereby the Norwegian Directorate of Fisheries will issue catch documents for bluefin tuna, bigeye tuna and swordfish upon landing. Although it is prohibited for Norwegian vessels to fish or land bluefin tuna, dead or dying bluefin tuna shall be landed, and catch documents shall be issued. Furthermore, when bluefin tuna, bigeye tuna or swordfish landed in Norway is subject to domestic trade, the new regulation stipulates that each consignment shall be accompanied by a valid catch document issued by the Directorate of Fisheries. The regulation further stipulates that import of bluefin tuna, bigeye tuna or swordfish is prohibited unless the consignment is accompanied by catch documents validated by the responsible authority in the country where the fish was landed. The importer shall immediately send a copy of the valid catch documents to the Directorate of Fisheries. This also applies to foreign vessels landing bluefin tuna, bigeye tuna or swordfish in Norway. Furthermore, export of bluefin tuna, bigeye tuna or swordfish is prohibited unless the consignment is accompanied by a catch document validated by the Directorate of Fisheries. Re-exports shall be accompanied by valid catch documents and re-export documents issued by the Directorate of Fisheries. When issuing catch documents and re-export documents the Directorate of Fisheries shall use the relevant ICCAT documents. The Customs Authorities and the Directorate of Fisheries may carry

out controls according to this regulation. Any wilful or negligent contravention of the regulation is subject to penalty in accordance with Norwegian law.

Norway has lodged a formal objection against ICCAT Recommendation 10-04 relating to the *Recommendation Amending the Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in Eastern Atlantic and Mediterranean*, due to the lack of transparency in the decision-making process. Furthermore, Norway has lodged an objection against Recommendations 10-06, 10-07 and 10-08, respectively, concerning Atlantic shortfin mako sharks, oceanic whitetip shark and hammerhead sharks. These species are neither of interest to Norwegian stakeholders nor common in Norwegian waters. The reason for this objection is that these Recommendations provide for a prohibition against retaining these shark species on board, whereas the Norwegian fisheries legislation provides for a general discard ban as part of a larger, comprehensive set of policies aimed at promoting an exploitation pattern where unwanted by-catch is minimised and where recruits and undersized fish are spared. A prohibition against directed fishery applies to spurdog, porbeagle and basking shark, which are the shark species of commercial interest in Norwegian waters. Individuals taken as by-catch in other fisheries, which are capable of survival, should immediately be released.

Section 4: Inspection Schemes and Activities

All fishing operations in waters under Norwegian fisheries jurisdiction are subject to resource control. This control is directed at the entire production chain, from the moment of capture in the sea, at the landing site, through storage and sale/export. Both Norwegian and foreign fishing vessels are subject to stringent controls in all Norwegian fishing waters. The Coast Guard annually performs around 2000 inspections of Norwegian and foreign vessels operating in Norwegian waters. As from July 2010 vessels over 15 metres were required to carry satellite transponders that permit their activities to be tracked 24 hours a day, all year round. Once catches have been landed, the landing data are cross-checked against the fishing rights of the vessel.

Section 5: *Other Activities*

Norway has no other tuna fishery related activities.

Reference

Tangen, M., Tangen, Ø. and Nøttestad, L. 2010. Task II historical data mining on bluefin tuna (BFT) caught in Norway 1950-1954. Report to the ICCAT Grand Bluefin Year Program (GBYP). 15 p.

ANNUAL REPORT OF PANAMA[*]
RAPPORT ANNUEL DU PANAMA
INFORME ANUAL DE PANAMÁ

Parte I. (Información sobre pesquería, investigación y estadísticas)

Sección 1: Información anual sobre pesquería

La República de Panamá está ubicada entre los 7°12'07'' y 9°38'46'' de Latitud norte y 77°09'24'' y 83°03'07'' de Longitud oeste, y presenta una extensión de 75.517 km^2 (29.208 millas cuadradas). Panamá forma un eslabón entre América Central y América del Sur y posee costas en el Caribe y en el Pacífico donde emergen unas 1.581 islas e islotes. Las costas suman en total 2.988,3 km, de los cuales 1.700,6 km se encuentran en el Pacífico y 1.287,7 km se encuentran en el Caribe.

Su aguas jurisdiccionales se extienden a unas 200 millas náuticas de ancho sobre las cuales la República de Panamá ejerce soberanía y derechos soberanos, al igual que en el lecho marino. Esta zona se encuentra influenciada por un importante afloramiento en el Golfo de Panamá, en donde la estación seca incrementa la productividad primaria y acelera el desarrollo de un gran número de especies. En las aguas del océano Pacífico se desarrolló el 95% de la actividad pesquera, encontrándose, además, el 80% de la población del país.

La pesca está distribuida en dos grandes sectores: la pesca industrial y la artesanal. Existe igualmente una flota de buques con licencia internacional que pescan en la zona de alta mar, principalmente atún. Entre los rubros de mayor interés en la pesca en aguas jurisdiccionales podemos mencionar: la pesca del camarón blanco, la pesca de anchoveta y arenque, así como la pesca de especies demersales de carácter comercial, pelágicas y de fondo.

En Panamá, la pesca ribereña del Caribe en el océano Atlántico está sectorizada hacia zonas como: Bocas del Toro, Colón y la Comarca de San Blas. Siendo la plataforma continental corta y pronunciada, sólo permite la pesca de especies asociadas a los arrecifes, aunque se ha desarrollado una pesquería industrial de camarón, ésta es de baja intensidad. En esta áreas la pesca artesanal se dedica principalmente a la captura de langosta (*Panulirus sp.*), caracoles (*Strombus sp.*), pulpo y cangrejo centollo. De estas especies, la más importante es la pesca de la langosta (*Panulirus sp.*), resultando la principal pesquería de la región del Caribe. Sin embargo, en los últimos años se ha registrado un aumento en la sobre-explotación del recurso, lo cual ha llevado a establecer la regulación de permisos y hasta la implementación de vedas para algunas de estas especies. Como la pesquería de esta zona es muy limitada, en los últimos años (2000 hasta la fecha) se han establecido actividades asociadas a estas áreas como lo son el cultivo de cobia y corvina y pargos en jaulas flotantes.

− *Información sobre la pesca nacional*

Entre 1990 y 1995, se redujo la flota de buques palangreros japoneses y coreanos por causa de la rentabilidad en la pesca de túnidos, reportando bajas en el registro panameño, el cual se compensa con el cambio de buques de Taipei Chino a banderas de registro abierto, particularmente la de Panamá.

Durante este tiempo nuevas regulaciones internacionales para la pesca de ciertas especies surgen en el seno de Organizaciones Regionales de Ordenación Pesquera, especialmente en ICCAT, quien, en 1994, recomendó una restricción sobre las capturas de atún rojo en el Atlántico, incluido el Mediterráneo. Igualmente en ese mismo año estableció el Programa de Documento Estadístico para el Atún Rojo oficialmente validado. La actividad de los buques de registros abiertos en el Mediterráneo se convierte rápidamente en un problema, y ya en 1992 la ICCAT, se había comunicado oficialmente con Panamá para señalar que buques de su pabellón pescaban en contravención con las medidas de conservación de esa organización.

En 1995, ICCAT advirtió a la República Panamá y a otros países, que buques de su pabellón fueron identificados con prácticas pesqueras contrarias a las medidas de ordenación y, durante el período de 1996 a 1998, en el ámbito internacional se critica muy fuertemente las actividades de la flota pesquera inscrita en el registro de Marina Mercante Panameña. La Dirección de Consular y Naves aprueba el documento estadístico para el atún rojo, y se autoriza la firma del mismo al Cónsul de Panamá en Islas Canarias.

[*] No summary provided. / Aucun résumé soumis. / No se ha facilitado el resumen.

Panamá ha realizado una gran gestión en el control de sus naves de pesca, desde 1997, año en que establece la obligación de obtener una licencia de pesca para naves que pesquen en alta mar o en las ZEE de otros Estados, continuando con la imposición de un sistema de monitoreo satelital (VMS) de obligatorio cumplimiento de todas las naves pesqueras con licencia de pesca internacional para el año 1999 y estableciendo una normativa específica para la eliminación de la pesca IUU, Resolución ADM 1791, Código de Conducta para la Pesca Responsable, Plan de Acción Internacional para la ordenación pesquera y Plan de Acción Nacional de Seguimiento, Control y Vigilancia.

Muchos han sido los retos, entre ellos el hecho de que armadores abusen al usar la bandera panameña en sus embarcaciones aun cuando no sea cierto que estén matriculadas en Panamá, o cuando persiste la creencia de que la nave es panameña cuando en verdad ya ha cambiado de pabellón.

Panamá utiliza un sistema de vigilancia de embarcaciones (VMS) tanto en los barcos grandes de bandera panameña que pescan en el Atlántico, como en todas las naves de pesca panameñas de licencia internacional (naves de pesca que se dedican a la captura de recursos marinos fuera de sus aguas jurisdiccionales), establecido mediante la Resolución Administrativa Nº 101-99 del cuatro (4) de agosto de mil novecientos noventa y nueve (1999). Desde el año 1999, Panamá lleva a cabo un monitoreo satelital de todas sus embarcaciones de pesca de servicio internacional, las que por obligación deben tener instalado el sistema de monitoreo satelital autorizado por la autoridad competente ARAP. Es bueno recalcar que, en el caso de estas naves de pesca, el tamaño de la eslora no exime del cumplimiento de la norma.

A finales de 1997 se establece la obligatoriedad de obtener una licencia de pesca previa a la inscripción en el registro de la Marina Mercante y se prohíbe pescar en el Mediterráneo y la pesca dirigida a la captura de atún rojo y atún blanco del Norte o del Sur en el Atlántico. Por ello, más de mil buques pesqueros de bandera panameña no presentaron solicitudes para la obtención de la licencia de pesca correspondiente y se les eliminó del registro de nuestra Marina Mercante.

Para el año de 1998, Panamá, se adhirió como Parte contratante de ICCAT (Ley N° 74 de 10 noviembre de 1998) y a partir de 1999 se exige un sistema de localización satelital (VMS), como uno de los requisitos para obtener la licencia de pesca y se adopta el Programa de ICCAT de inspección en puerto.

En 1999, Panamá, logra levantar las sanciones comerciales que le habían sido impuestas desde 1998 por los países miembros de ICCAT, y que impedían la importación de atún de barcos de bandera panameña.

En cumplimiento de las decisiones adoptadas y emanadas por la Resolución A/RES/53/33, de 15 de marzo de 1999, de la Asamblea General de las Naciones Unidas, relativas a la pesca de altura en gran escala con redes de enmalle y deriva, la pesca no autorizada en zonas sujetas a jurisdicción nacional y en alta mar, las capturas incidentales y los descartes en la pesca y a otras cuestiones; la República Panamá emite el Decreto Ejecutivo Nº 90 de 17 de julio de 2002, por medio del cual se prohíbe el uso de redes de enmalle y/o deriva a todas las naves de pesca industrial de servicio interior e internacional con bandera panameña, ya que representa una amenaza importante para el medio ambiente marino, la sostenibilidad de las pesquerías y la biodiversidad marina. Panamá, en concordancia con estos instrumentos internacionales adopta los programas para el control de la pesca ilegal por parte de la Unión Europea y otras organizaciones regionales de ordenación pesqueras (OROP), desde el año 2005.

En el mismo año se incorpora a la Estrategia Marítima Nacional, la necesidad de conformar un Plan Nacional para prevenir, desalentar y eliminar la pesca ilegal, no declarada y no reglamentada. En el marco del organismo regional de ordenación pesquera, CIAT, Panamá como Parte contratante desde 1952, ratifica el Acuerdo sobre el Programa Internacional para la Conservación de los Delfines, mediante Ley N° 75 de 10 de noviembre de 1998.

En cuanto a la flota nacional en el océano Atlántico, está conformada por 2 buques cerqueros y 71 buques palangreros, mayores de 20 m de eslora los cuales pescan atún aleta amarilla (*yellowfin tuna-Thunnus albacares*), patudo (*bigeye tuna- Thunnus obesus*), barrilete (*skipjack tuna- Katsuwonus pelamis*) y especies incidentales.

Con relación a la pesca deportiva, hemos iniciado el proceso de normar esta actividad, no existe una estadística de pesca, excepto en los puntos de mayor actividad para el área del Pacífico; en el Caribe se realiza en áreas como Bocas del Toro y Volcán reefs en Colón. La pesca basada en las normativas ya existente en algunas zonas de pesca para yates de paseo se realiza por captura y liberación de especies como lo es para el caso del pez espada (*Xiphias gladius*).

El Decreto Ejecutivo Nº 83, de 5 de abril de 2005, establece la obligación que todas las naves de pesca de servicio interior (naves que capturan dentro de las aguas jurisdiccionales panameñas) instalen un sistema de verificación de monitoreo satelital (VMS), y el Decreto Ejecutivo No. 17 de 30 de junio de 2008, hace extensiva a todas las naves de pesca mayores de 6 TRB, norma que entró a regir en el año 2009 y que exige que todas las embarcaciones pesqueras tengan un sistema VMS instalado.

Mediante Ley No. 44 de 23 de noviembre de 2006, se crea la Autoridad de los Recursos Acuáticos de Panamá (ARAP) y se introduce una definición para *embarcación pesquera* que acoge las embarcaciones de transporte de pescado o barcos de carga y a los buques de apoyo. Tras algunas discusiones en torno a la definición clara de este tipo de embarcaciones se adopta una Resolución que regula el tema de los buques que reciben trasbordos y de los buques de apoyo a las actividades de pesca. (Anexo II).

En noviembre de 2008 fue aprobado el Código Marítimo de Panamá, allí se establece como pre-requisito para inscribir una nave de pesca en el registro de la Marina Mercante, el obtener una licencia de pesca. Este ha sido un gran logro y, a pesar de todos los esfuerzos que se realizaron durante los años pasados, no es sino hasta ahora que se adopta mediante Ley de la República la obligación de obtener la licencia de pesca, para cualquier tipo de embarcación pesquera; antes se exigía a través de un Decreto Ejecutivo. Entre las normas implementadas, a que se hace referencia en el Anexo I[*] del presente documento, encontramos la definición de la pesca ilegal no declarada no reglamentada (INDNR) y la consideración expresa de no otorgar licencia de pesca a naves que estén bajo esta condición.

En la *Recomendación de ICCAT respecto al formato y protocolo de intercambio de datos en relación con el sistema de seguimiento de buques (VMS) para la pesca del atún rojo en la zona del Convenio ICCAT* [Rec. 07-08], al referirse a la Res. 06-05, el párrafo 30 nos dice que: "todos los buques pesqueros autorizados a pescar activamente atún rojo en el Atlántico este y el Mediterráneo. A efectos de esta recomendación se considerara que los buques pesqueros no incluidos en el Registro no están autorizados a pescar, retener a bordo, transbordar, transportar, transferir o desembarcar atún rojo en el Atlántico este y Mediterráneo". Panamá no autoriza barcos pesqueros para la pesca activa de atún rojo en el Atlántico ni en el Mediterráneo.

En adición a lo anterior, Panamá ha informado y reiterará su solicitud a ICCAT y a los otros organismos internacionales, para que se solicite autorización previa de ingreso de buques de bandera panameña, en el registro de buques de carga, por parte de la Autoridad de los Recursos Acuáticos; todo ello basado en que Panamá ha cuestionado al Secretario Ejecutivo (ver Anexo IV) el hecho de que actualmente cualquier Parte contratante o Parte, Entidad o Entidad pesquera no contratante colaboradora (por sus siglas "CPC") puede inscribir en el registro de buques de carga, un buque sin la anuencia del Estado de pabellón; lamentablemente a la fecha, la respuesta que hemos recibido de ICCAT es que la propia Resolución 06-11 adoptada por las Partes así lo establece.

Panamá se ha opuesto a que las CPCs registren barcos sin que haya sido extendida la correspondiente anuencia previa del Estado de pabellón del buque, y en consecuencia quedarán prohibidos por exclusión, los trasbordos por buques de bandera panameña no inscritos con la anuencia de Panamá y que no participen del programa de observadores de la Organización Regional Pesquera (OROP).

Sección 2. Investigación y estadística

− *Sistema de Información Pesquera*

Panamá reporta datos estadísticos de todas las actividades desarrolladas en los aspectos de la Marina Mercante, Puertos, Gente de Mar y datos de descarga de los productos pesqueros en puertos nacionales e internacionales.

La Autoridad de los Recursos Acuáticos de Panamá (ARAP) se encarga de verificar las capturas y mantiene información de desembarque, exportación, importación de los productos pesqueros, así como información biométrica de las especies explotadas, que son importantes como apoyo al desarrollo pesquero del país.

La ARAP mantiene programas de muestreo periódicos de desembarques en puertos por especies y tallas. Existen Centros de Investigaciones, tales como, el Centro de Ciencias del Mar y Limnología de la Universidad de Panamá, que realiza investigaciones puntuales en sistemas de estuarios y el Instituto Smithsonian de

[*] The Annexes are available from the Secretariat. / Les Annexes sont disponibles auprès du Secrétariat. / Los Anexos están disponibles en la Secretaría.

Investigaciones Tropicales (STRI), que enfoca sus estudios en el área biológica y de la conservación de los ecosistemas marinos.

Asimismo, se realizan investigaciones conjuntas con la CIAT en el laboratorio de investigación científica en ACHOTINES, provincia de Los Santos, que apoya investigaciones de las especies del atún tropical, con el objetivo de cerrar su ciclo biológico. Igualmente, el Plan de Acción del Pacifico Sudeste y el Plan de Acción del Caribe son programas de mares regionales del Programa de Naciones Unidas para el Medio Ambiente (PNUMA), apoyan investigaciones sobre indicadores ambientales y calidad de aguas marinas costera, que permiten atender áreas de riesgo para ecosistemas y especies marinas de interés comercial. Por otro lado, con el apoyo del Ministerio de Ciencias de España se desarrollan investigaciones de prospección pesquera y monitoreo de inventarios de los stocks de los recursos pesqueros en las plataformas continentales. Todo ello contribuye a una mejor toma de decisiones en cuanto al manejo sostenible de los recursos pesqueros y los ecosistemas.

Existe un programa de recolección de datos de pesca para las naves de pesca internacional y específicamente encargado de Tareas I y Tareas II de ICCAT. De igual manera, el procedimiento para la emisión de los certificados de captura en cumplimiento con el reglamento CE/1005 de la Comunidad Europea.

Parte II (Implementación de la ordenación)

Sección 3: Implementación de las medidas de conservación y ordenación de ICCAT

La pesca de atún rojo en aguas de la República de Panamá, no es una actividad regulada, ya que esta especie no se distribuye hacia aguas con jurisdicción de Panamá. Teniendo en cuenta las medidas de conservación y ordenación que mantiene ICCAT, la República de Panamá no otorga licencias de pesca de atún rojo para el Atlántico y Mediterráneo. Sin embargo, se establece la obligatoriedad del cumplimiento de las normas que se recomiendan o resuelven en el seno de la ICCAT.

Dentro de las medidas de ordenación, sobre patudo (*Thunnus obesus*), Panamá sí ha cumplido no sobrepasando su cuota establecida para buques cerqueros. Tampoco ha rebasado sus cuotas para cada una de las distintas pesquerías. Panamá como país a través de la ARAP, ejerce acciones de Seguimiento, Control y Vigilancia, cuenta con un Centro de Control y Seguimiento Pesquero con aplicaciones tecnológicas propias para la vigilancia de las embarcaciones pesqueras. Las embarcaciones pesqueras con pabellón nacional cuentan con un MODEM de comunicación (Iridium, INMARSAT C, INMARSAT D+) bidireccional con la capacidad de recibir interrogaciones y transmitir en tiempo real 24/7, la localización de latitud y longitud, velocidad y rumbo. Para el año de 1998 Panamá se adhirió como Parte contratante de ICCAT (Ley N° 74 de 10 noviembre de 1998) y a partir de 1999 se exige un sistema de localización satelital (VMS), como uno de los requisitos para obtener la licencia de pesca y se adopta el esquema de ICCAT para inspección en puerto. Sin embargo, Panamá cumple con exigir el sistema VMS para los barcos pesqueros desde 1999 y para los barcos de apoyo a la pesca y transporte desde 2001.

Las naves de pesca industrial y las que realizan actividades de pesca internacional deben instalar a bordo un dispositivo de monitoreo satelital, que deben mantener encendido desde el zarpe hasta la recalada de la nave (Decreto Ejecutivo No. 83 de 5 de abril de 2005, Decreto Ejecutivo No. 17 de 30 de junio de 2008). La aplicación del VMS está reglamentada y la información proporcionada por el sistema, es interpretada por la autoridad competente, tiene validez legal de plena prueba. La adulteración de información, la operación sin el funcionamiento del dispositivo, así como el uso indebido del sistema VMS son sancionados por la Autoridad, las cuales se han hecho obligatorias.

Observadores científicos: La autoridad pesquera tiene atribuciones para incluir a bordo de las naves de pesca, observadores científicos o inspectores, según corresponda. Esta disposición es de obligatorio cumplimiento con respecto a las naves nacionales que operan en períodos de veda, y cuando se requiera, a fin de dar cumplimiento a las normativas e investigaciones existentes para la conservación y ordenación de los recursos pesqueros.

El Estado panameño a través de la autoridad competente certifica la idoneidad de los observadores que cumplan con los requisitos del sistema de observadores. Estos deberán remitir la información pertinente en original o copia debidamente autenticada a la autoridad competente.

En cumplimiento de las Recomendaciones de ICCAT, se incluyeron todos los barcos mayores de 20 m de eslora en el Registro de barcos pesqueros de ICCAT. En este sentido es bueno hacer del conocimiento general que

nuestras embarcaciones, independientemente del tamaño de eslora, si poseen licencia internacional tienen la necesidad de cumplir con todas las normas de la OROP del área donde pescan y sobre las especies abarcadas por esa OROP. La norma que regula este cumplimiento y para todas las embarcaciones pesqueras incluidos los grandes palangreros es el Decreto # 4919 de octubre de 2009. Este Decreto establece las normas con respecto a barcos de pesca en aguas internacionales incluidos los barcos de transporte de pescado, así como también las normas sobre el transbordo.

Otras actividades de la pesca de barcos panameños en aguas internacionales o en aguas de otro Estado con permiso del mismo están reguladas por la Resolución # 1791 de 20 de diciembre de 2001.

Sección 4: Actividades de esquema e inspección

En Panamá, existen puertos internacionales con características para el trasbordo o desembarque, sin embargo, pocos buques que faenan en al mar Caribe o en el Atlántico realizan esta actividad en puertos panameños. Los barcos panameños de licencia internacional desembarcan su captura en puertos de otros Estados. El Canal de Panamá, por Constitución, tiene reglas diferentes sobre todo para permitir el paso de naves de distintas nacionales sin distinción, el Canal de Panamá es considerado una vía inter-oceánica internacional, por lo cual no lo consideramos área portuaria.

Sección 5: Otras actividades

Otras actividades de captura se presentaron a la Secretaría en Tareas I y II.

ANNUAL REPORT OF THE PHILIPPINES
RAPPORT ANNUEL DES PHILIPPINES
INFORME ANUAL DE FILIPINAS

SUMMARY

Tuna fisheries contribute significantly to the fish production of the Philippines. They constitute approximately 35% of the total marine fish production of the country, 1.5 million metric tons (t). ICCAT catch is more or less .36% of the Philippine tuna production in terms of volume. The Philippines have 26 Philippine flagged fishing vessels authorized to fish in the ICCAT Convention area and are listed in the ICCAT registry of vessels. Of these 26 vessels, only 10 fishing vessels are authorized to fish in any given year at the same time. The Philippines supports the strengthening of the data collection system to address the conservation and management issues of highly migratory fish stocks by setting a standard data collection and verification for tuna fisheries, as it is now involved in the data collection project funded by the Western and Central Pacific Fisheries Commission (WCPFC). It supports the ICCAT Statistical Document Program for Bluefin, Bigeye and Swordfish and also supports the observer program although a small player in the ICCAT. The Philippines expresses its strong commitment to promote effective management in order to achieve the long-term conservation and sustainable use of highly migratory fish stocks in the ICCAT Convention area.

RÉSUMÉ

Les pêcheries thonières contribuent dans une grande mesure à la production halieutique des Philippines. Elles représentent approximativement 35 % de la production halieutique totale du pays à hauteur de 1,5 million de tonnes. La prise d'espèces relevant du mandat de l'ICCAT représente environ 36 % de la production thonière des Philippines en termes de volume. Les Philippines disposent de 26 navires de pêche sous le pavillon des Philippines autorisés à pêcher dans la zone de la Convention de l'ICCAT qui sont inscrits dans le Registre ICCAT des navires. Sur ces 26 navires de pêche, seuls 10 d'entre eux sont autorisés à pêcher au cours de toute année donnée en même temps. Les Philippines soutiennent le renforcement du programme de collecte de données lié aux questions de conservation et de gestion des stocks de grands migrateurs en établissant la collecte et la vérification standardisées des données des pêcheries thonières en participant actuellement au projet de collecte des données financé par la Commission de la pêche dans le Pacifique central et occidental (WCPFC). Les Philippines soutiennent le Programme ICCAT de document statistique concernant le thon rouge, le thon obèse et l'espadon et soutiennent également le programme d'observateurs, malgré leur rôle relativement limité au sein de l'ICCAT. Les Philippines font part de leur ferme engagement visant à promouvoir une gestion efficace dans le but d'atteindre la conservation et l'utilisation durables à long terme des stocks de grands migrateurs présents dans la zone de la Convention de l'ICCAT.

RESUMEN

Las pesquerías de túnidos realizan una importante contribución a la producción pesquera de Filipinas. Responden de aproximadamente el 35% de la producción total de peces marinos del país, con 1,5 millones de t. La captura de especies de ICCAT responde de aproximadamente el 36% de la producción de túnidos de Filipinas en términos de volumen. Filipinas cuenta con 26 buques con pabellón de Filipinas autorizados a pescar en la zona del Convenio ICCAT y que están incluidos en el Registro ICCAT de buques. De estos 26 buques pesqueros, sólo 10 están autorizados a pescar en un año determinado y al mismo tiempo. Filipinas respalda el refuerzo del sistema de recopilación de datos para abordar las cuestiones de conservación y ordenación de stocks de peces altamente migratorios mediante el establecimiento de una verificación y recopilación de datos estándar para las pesquerías de túnidos, ya que ahora está participando en un proyecto de recopilación de datos financiado por la Comisión Pesquera del Pacífico central y occidental (WCPFC). Filipinas respalda el programa de documento estadístico ICCAT para el atún rojo, patudo y pez espada y también el programa de observadores, a pesar de su papel relativamente modesto en ICCAT. Filipinas quisiera expresar su firme compromiso

para fomentar la ordenación eficaz con el fin de conseguir la conservación y el uso sostenible a largo plazo de los stocks de peces altamente migratorios en la zona del Convenio de ICCAT.

PART I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The Philippines is one of the major tuna producers in the western and central Pacific Ocean (WCPO), both for domestic food security and on industrial scale, with over 1.5 million people depending on the fishing industry. It contributes to the country's Gross Domestic Products (GDP) were 2.3% and 4.3% at current and constant prices respectively.

Having fishing vessels operating in the western and central Pacific Ocean, Indian Ocean and Atlantic Ocean, the tuna fisheries continue to provide significant contribution to the total production of the country, catches from the WCPFC accounts for the largest volume in the tuna production estimated at 409,697 metric tons (t). The Philippines fisheries is characterized into commercial fisheries with fishing vessels more than 3 tons gross and the municipal fisheries otherwise known as small-scale or artisanal fisheries with small boats below 3 tons gross and fishing within 15 kilometers from the shoreline. The commercial fisheries catch skipjack, yellow fin tuna, and small portion of bigeye tuna, while the municipal fisheries catch oceanic and neritic tunas.

Section 2: Fisheries Research and Statistics

The statistics for tuna in the Philippines are gathered by the Bureau of Agricultural Statistics of the Department of Agricultural. In view of the provisions of the Philippine Fisheries Code of 1998, Philippine fishing vessels are required to submit fish caught reports every month and failure to do so will mean the none renewal of the their Commercial Fishing and Vessel License (CFVGL). Moreover, landing surveys are conducted in major landing sites in the country by enumerators under our National Stock Assessment Program (NSAP). The Philippines is also involved in the Philippines Data Collection Project (PDCP) of the Western and Central Pacific Tuna Commission (WCPFC) since January 2005 which aims to strengthen the data collection system to address the conservation and management issues of highly migratory fish stocks by setting a standard data collection and verification for the tuna fisheries in the region.

The Philippines is also a participant in the Regional Observer Program of ICCAT to monitor transshipment of catches in the high seas and is contributing a sizable amount in its implementation.

PART II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The Philippines continue to implement relevant ICCAT conservation and management measures as well as Philippine fisheries laws and regulations. All fishing vessels are required to secure Commercial Fishing and Gear License (CFVGL) before they are allowed to fish in Philippine waters. Moreover, if they plan to fish outside Philippine waters they are also required to secure and International Fishing Permit before they are allowed to fish. All these fishing vessels are also required to keep a daily record of fish catch and spoilage, landing points, and gear, species, quantity and value of fish caught and those off-loaded for transshipment, sale and/or disposal. These reports are submitted to the BFAR for record and validation. Failure on their part to submit this requirement is a ground for non-renewal of the CFVGL and International Fishing Permit.

The Philippine Fisheries Code also provide the establishment of a monitoring, control and surveillance system to ensure that the fisheries and aquatic resources in Philippine waters and adjacent waters and also in the other Oceans where our fishing vessels are operating are judiciously and wisely utilized and managed on a sustainable basis. Last October 19, 2009 in observance of the Fish Conservation Week celebration the BFAR has launched a Vessel Monitoring System (VMS). The Philippine Vessel Monitoring System is now in place and in operation. The system has the capability to track Philippine flagged vessels operating in IOTC and ICCAT. At present, BFAR is coordinating with different VMS providers for automatic sending/receiving VMS data of FMC from various systems. Likewise BFAR required commercial fishing vessel owners to submit Vessel Tracking Agreement Form (VTAF) authorizing BFAR to monitor and track their respective vessels. Moreover,

coordinated with WCPFC regarding VMS data access of Fisheries Monitoring Center and granted with privilege of view only and with PNG regarding VMS access of data of those Philippine flagged vessels operating in PNG waters.

The Fisheries Monitoring Center (FMC) with its operation of the Vessel Monitoring System is capable of tracking/monitoring Philippine Flagged Vessels operating in international and within Philippine waters. The Center has tracked six (6) fishing vessels operating in Indian Ocean and 10 vessels in the Atlantic Ocean, respectively. The Western and Central Pacific Fisheries Commission (WCPFC) has given the FMC an access with a privilege of "view only" to monitor the fishing vessels from WCPFC VMS data, out of the 613 fishing vessels, 41 fishing vessels were monitored.

Development and operation of the Vessel Database Management System and other databases including Poaching in which 32 poachers and 762 IUU apprehensions and 117 fishing vessels were apprehended during the FAD closure.

As mentioned in last year´s Annual Report, the Philippines is implementing the approved Philippine Tuna Management Plan providing for management measures such as control of fishing capacity, regulation on the catching of immature fish through mesh size regulation, regulation on fish Aggregating Devices (FADs) by limiting the number per fishing vessel, etc.

Section 4: Inspection Schemes and Activities

The Philippines is a participant of the ICCAT Regional Observer Program to monitor transshipment operations of fishing vessels authorized to fish in the ICCAT Convention Area.

Since July 2002, the Philippines have implemented the ICCAT Tuna Statistical Document Program for bluefin, big-eye and swordfish. We are also doing this in IOTC, WCPFC and CCSBT.

Section 5: Fisheries Information of Philippine Vessels in the Atlantic Ocean

In 2010, the Philippines had twenty six (26) fishing vessels authorized and registered to fish in the ICCAT Convention area. However, only 10 vessels are authorized to fish in the area in any given year. The catches of these vessels for 2010 totaled 1,500 tons and broken down by species are as follows:

Bigeye	-	1,399 tons
Yellowfin	-	88 tons
Swordfish	-	13 tons

ANNUAL REPORT OF RUSSIA
RAPPORT ANNUEL DE LA RUSSIE
INFORME ANUAL DE RUSIA

A. A. Nesterov[1], D. V. Bokhanov

SUMMARY

Russia conducts two types of fishery in the ICCAT Convention area, trawl and purse seine fishing, during which tunas occur in the catches. In the course of non-specialized trawl fishing (small coastal fishes) tunas are found as by-catch. The purse-seine specialized fishing for tunas belonging to a tropical group was resumed in late-2006 and is now at the stage of formation; the vessels are engaged in fishing at regular intervals and in experimental modes of operation. During 2010 and 2011, the specialized (purse) fleet did not operate. In Russia the work related to research of tunas and other species of tuna fishery is carried out in the Atlantic Research Institute of Marine Fisheries and Oceanography (AtlantNIRO), Kaliningrad and in the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), Moscow. These institutions collect catch and biological statistics and analyze the collected data, provide operative fishery monitoring, draw up proposals and recommendations required for the tuna fishing vessels' operation. In the framework of ICCAT, Russia participates in the work of Panel 1 "Tropical Tunas". The research carried out in 2010-2011 includes collection and processing of current fishery and biological materials.

RÉSUMÉ

La Russie a mené deux types de pêcherie dans la zone de la Convention de l'ICCAT, à savoir la pêche au chalut et à la senne, dans le cadre desquelles des thonidés ont été capturés. Dans le cadre de la pêche au chalut non spécialisée (petits poissons côtiers), les thonidés sont capturés en tant que prises accessoires. La pêche à la senne spécialisée ciblant les thonidés tropicaux a repris à la fin de l'année 2006, et connaît actuellement une phase de formation. Les navires participent à la pêche à intervalle régulier et opèrent de manière expérimentale. En 2010 et 2011, la flottille spécialisée de senneurs n'a pas opéré. En Russie, les travaux de recherche portant sur les thonidés et les autres espèces de la pêcherie thonière sont assumés par l'Institut de recherche atlantique des pêcheries marines et de l'océanographie (AtlantNIRO) de Kaliningrad et par l'Institut de recherche fédéral russe des pêcheries et d'océanographie (VNIRO) de Moscou. Ces institutions recueillent les statistiques sur la prise et la biologie et analysent les données collectées, fournissent un suivi des pêcheries opérationnelles et formulent les propositions et les recommandations nécessaires aux opérations des navires de pêche thoniers. Dans le cadre de l'ICCAT, la Russie prend part aux travaux de la Sous-commission 1 « Thonidés tropicaux ». Les travaux de recherche réalisés en 2010 et 2011 englobent la collecte et le traitement des données halieutiques et biologiques actuelles.

RESUMEN

Rusia realiza dos tipos de pesca en la zona del Convenio de ICCAT: arrastre y cerco, en las cuales hay presencia de túnidos en las capturas. Durante la pesca de arrastre no especializada (pequeños peces costeros), se capturan túnidos de forma fortuita. La pesca especializada con cerco de túnidos que pertenecen al grupo tropical se retomó a finales de 2006, y actualmente está en fase de formación; los buques pescan en intervalos regulares y realizan operaciones de pesca experimental. Durante 2010 y 2011 la flota especializada (cerco) no operó. En Rusia, el trabajo de investigación relacionado con la pesca de túnidos y especies afines lo lleva a cabo el Atlantic Research Institute of Marine Fisheries and Oceanography (AtlantNIRO), Kaliningrado, y el Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), Moscú. Estas instituciones recopilan estadísticas biológicas y de captura, analizan los datos recopilados, proporcionan un seguimiento de las pesquerías operativas, y también redactan propuestas y recomendaciones necesarias para las operaciones de los buques pesqueros atuneros. En el seno de ICCAT, Rusia participa en los trabajos de la Subcomisión 1,

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"Túnidos tropicales". Los trabajos de investigación realizados en 2010-2011 incluyen la recopilación y procesamiento de materiales biológicos y pesqueros actuales.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In 2010, the trawl fishing vessels caught 67 t of bullet tuna (*Auxis rochei*), 270 t of frigate tuna (*Auxis thazard*), 268 t of Atlantic black skipjack (*Euthynnus alletteratus*) and 1042 t of bonito (*Sarda sarda*) as by-catch in the central-East Atlantic. In the first half of 2011, according to the preliminary data, the catches taken by trawlers in the central-East Atlantic amounted to 640 t of black skipjack and 968 t of bonito.

Section 2: Research and Statistics

In 2010, the observers from AtlantNIRO sampled biological material on tunas from the trawlers in the central-East Atlantic Ocean (area SJ71 according to ICCAT classification). Fish length, weight, sex and maturity stages of gonads, and stomachs fullness were measured. Small tunas were found in the trawls as a by-catch individually or up to several tens specimens. The material on frigate tuna, bullet tuna, black skipjack and bonito was collected from 4625 specimens for mass measurements and 2738 specimens for biological analyses.

Black skipjack occurred in catches within the area at 16-22°N, 16-17°W every month. Fish length varied from 33 to 56 cm, the mean length constituted 43.2 cm. Fish of minimal length appeared in February, while the largest fish were recorded in April. In January, gonads at maturity stage II were observed in most of the specimens (93.8%). In February-March, the proportion (18.7-26.2%) of maturing fishes (stage III) increased, while in April-May post-spawning fish were observed. The number of females exceeded the number of males, with a mean sex ratio of 0.9. Feeding activity of tuna increased from January to April, and the mean stomach fullness index was 0.6. The mean catch per fishing effort for this species amounted to 119 kg/vessel-fishing day.

Bullet tuna occurred in catches in the area at 19-22°N, 16-17°W from July to December. Fish length varied from 27 to 40 cm, the mean length constituted 32.5 cm. The mean catch per effort was 29 kg/vessel-fishing day.

Frigate tuna occurred in catches from the area at 16-22°N, 16-17°W during the entire year. During the observation period the fish length varied from 25 to 40 cm, the mean length constituted 33.6 cm. The mean length increased from January to March, and then decreased by October-November. In January immature (81.1%) and maturing (18.9%) fish appeared in catches. In February, the proportion of maturing fish increased to 68.5% and pre-spawning fish appeared (3.2%) In March, the proportion of tuna with gonads at stage IV increased, while in April over 20% of all fish were at stages V and VI-IV. In May, the spawning continued. However, the proportion of post-spawning fish increased. In October-November, all fish were with gonads at stage III. The male proportion in catches was higher than that of females (the sex ratio was 0.8).

The mean index of stomach fullness varied from 0.6 to 0.9 by months. The mean catch per effort was 129 kg/vessel-fishing day.

Bonito occurred as a by-catch in the area at 16-22° N, 16-17° W during the entire year. Fish of 28-68 cm in length occurred in catches, the mean length was 42.5 cm. From February to May pre-spawning and spawning fish prevailed in catches (75-90%). The proportion of spawned fish (26.3%) began to increase only in May. In September-October all fish were at maturity stage II. Females prevailed in catches, the sex ratio was 0.6. The feeding intensity of bonito was low and the index of stomach fullness was 0.5. The mean catch per effort was 468 kg/vessel-fishing day.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

During the fishery in the areas where tunas and tuna-like species occur in catches, the ICCAT requirements and recommendations concerning restrictions in tuna fishery, and a ban imposed on fishing quoted species were observed.

3.1 Vessels list

Each year Russia submits the list of vessels over 20 m to the ICCAT Secretariat in compliance with Recommendation [09-08]. The ship owner reported these vessels as the vessels of specialized purse fishery for tunas. In 2010 seven purse seiners were recorded.

3.2 Vessel Monitoring System (VMS)

In compliance with ICCAT Recommendation on VMS equipment improvement [Rec. 04-11], the Satellite Vessel Monitoring System (VMS) was installed onboard all fishing vessels in 2000.

3.3 Closed fishing season

In compliance with Recommendation [04-01] no purse fishery was carried out from 01 to 30 November 2009 and 2010 in the area indicated in the Recommendation.

3.4 Observers program

Russia has implemented the observers program on fishing vessels since 1980. Observers are collecting biological data. During 2010-2011, the observers onboard the vessels fishing in the ICCAT Convention area carried out monitoring of the fishery and collection of fishery and biological data. In 2010, the observers were onboard 8% of the trawl vessels. Availability of observers collecting materials on tuna and tuna-like species by-catch on the annual basis onboard the fishing trawlers improves the statistics quality.

3.5 Bigeye tuna

There are no vessels of specialized fishery for bigeye tuna in Russia. In compliance with Recommendation [04-01] the annual by-catch of bigeye tuna in Russian purse fishery cannot exceed 2100 t. In 2010, bigeye tuna was absent in the catches.

3.6 Transshipment program

In compliance with Recommendation [06-11], catch landing in 2010 and 2011 was carried out at the port.

Section 4: Inspection Activities

The observers work on trawl vessels conducting the target fishery for small pelagic fishes (horse mackerel, sardinella, mackerel, etc.) on an annual basis. Tunas and bonito appeared in catches as a by-catch. The observers monitor the total catches, catch per effort, species composition of the catches, proportion of different species in catches, collect data on fish length and biological state. The group of observers onboard the vessels fill in the documents describing the fishing activity and biological data of the species caught. The observers prepared reports on the basis of their work onboard the vessels.

ANNUAL REPORT OF SENEGAL
RAPPORT ANNUEL DU SÉNÉGAL
INFORME ANUAL DE SENEGAL

Fambaye Ngom Sow,[1] Sidy Ndaw[2]

SUMMARY

*In 2010, the Senegalese industrial fishery is comprised of 6 baitboat vessels that target mainly yellowfin tuna (*Thunnus albacares*), bigeye tuna (*Thunnus obesus*) and skipjack tuna (*Katsuwonus pelamis*) and 01 longline vessels that targets swordfish (*Xiphias gladius*). Besides, a part of the artisanal fishery (hand line, troll and purse seine) and the sport fishery is directed at billfish (marlins, swordfish and sailfish) and small tunas (Atlantic black skipjack, Atlantic bonito, frigate tuna, etc.). In 2010 the total baitboat Senegalese catches were estimated at 4,606 t (1,168 t of yellowfin, 2,412 of skipjack, and 844 t of bigeye). Catches decreased as compared to 2009 (6,720 t). This decrease is due to the reduction in the fishing effort from 1,574 fishing days in 2009 to 1,220 in 2010. Longline fishery catches in 2010 were estimated at 312 t (590 t in 2009). Catches are mainly comprised of swordfish, sharks and blue marlin. As regards the artisanal fishery, catches of small tunas and tuna-like species amounts to 8,719 t. There was an increase in catches compared to 2009 (5,315 t). Regarding sport fishing, catches are estimated at 288 t in 2010 with an effort of 682 trips. Constant monitoring of tuna fishing activities is always guaranteed by the team which has been introduced at the port of Dakar by the Centre de Recherches Océanographiques de Dakar Thiaroye, CRODT. The work consists in the collection of catch and fishing effort statistics. This work is completed with the information of diverse sources (factories, boat owners, Fishery Directorates, etc.). Multi-specific samples are also carried out in the artisanal and industrial fishery. With the funds of the Enhanced Research Programme for Billfish, ERBP (Programme de Recherche Intensive des Istiophoridés), catch, effort and size sampling of billfish has increased in the major landing centres of the artisanal fishery.*

RÉSUMÉ

*En 2010, la flottille thonière industrielle sénégalaise est composée de six canneurs qui exploitent essentiellement l'albacore (*Thunnus albacares*), le thon obèse (*Thunnus obesus*) et le listao (*Katsuwonus pelamis*) et d'un palangrier qui cible l'espadon. Par ailleurs, certaines pêcheries artisanales (la ligne à la main, la ligne de traîne et la senne tournante) et la pêche sportive capturent les poissons porte-épée (marlins, espadon et voilier) et les petits thonidés (thonine, maquereau, bonite, auxide etc.). En 2010, les prises totales des canneurs sénégalais sont estimées à 4.606 tonnes (1.168 tonnes d'albacore, 2.412 tonnes de listao, 844 tonnes de patudo). Les captures ont connu une baisse par rapport à 2009 (6.720 tonnes). Cette réduction est due à la diminution de l'effort de pêche qui est passé de 1.574 jours de pêche en 2009 à 1.220 en 2010. Les prises de la pêche palangrière en 2010 sont estimées à 312 tonnes (590 tonnes en 2009). Les captures sont constituées essentiellement de l'espadon, requins, marlins. Quant aux pêcheries artisanales, les prises de petits thonidés et espèces apparentées s'élèvent à 8.719 tonnes. Les captures ont connu une hausse par rapport à 2009 (5.315 tonnes). Concernant la pêche sportive, les prises sont estimées à 288 tonnes en 2010 pour un effort de pêche de 682 sorties. Le suivi régulier des activités de pêche des thoniers est toujours assuré par l'équipe mise en place au port de Dakar par le CRODT. Le travail consiste à la collecte des statistiques de capture et d'effort de pêche. Ce travail est complété par des informations de diverses sources (usines, armements, Direction des pêches maritimes etc.). Des échantillonnages multispécifiques sont également réalisés en pêche industrielle et pêche artisanale. Grâce aux fonds du Programme de Recherche Intensive des Istiophoridés (EPBR), l'échantillonnage des captures, efforts et tailles des istiophoridés est intensifié dans les principaux centres de débarquement de la pêche artisanale.*

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RESUMEN

*En 2010, la flota atunera industrial senegalesa se componía de 6 cañeros que explotan esencialmente el rabil (*Thunnus albacares*), el patudo (*Thunnus obesus*) y el listado (*Katsuwonus pelamis*) y de 1 palangrero que se dirige al pez espada. Además, ciertas pesquerías artesanales (liña de mano, curricán y cerco de jareta) y la pesca deportiva capturan peces de pico (marlines, pez espada y pez vela) y pequeños túnidos (bacoreta, carita lusitánico y melva, etc.). En 2010, las capturas totales de los cañeros senegaleses se han estimado en 4606 t (1168 t de rabil, 2412 t de listado y 844 t de patudo). Las capturas han registrado un descenso respecto a 2009 (6720 t). Este descenso se debe a la disminución del esfuerzo de pesca, que ha pasado de 1574 días de pesca en 2009 a 1220 días en 2010. Las capturas de pesca con palangre en 2010 se estimaron en 312 t (590 t en 2009). Las capturas se componen principalmente de pez espada, tiburones y marlines. Respecto a las pesquerías artesanales, las capturas de pequeños túnidos y especies afines ascienden a 8719 t. Las capturas han registrado un aumento respecto a 2009 (5315 t). En cuanto a la pesca deportiva, las capturas se estiman en 288 t en 2010, para un esfuerzo de pesca de 682 salidas. El seguimiento regular de las actividades de pesca de los atuneros está garantizado por el equipo del CRODT en el puerto de Dakar. El trabajo consiste en la recopilación de estadísticas de captura y esfuerzo de pesca. Este trabajo se complementa con información procedente de diferentes fuentes (fábricas, armadores, Dirección de pesca marina, etc.). Asimismo, se realizan también muestreos multiespecíficos en la pesca industrial y en la pesca artesanal. Gracias a los fondos del Programa de investigación intensiva sobre marlines (EBRP), el muestreo de las capturas, esfuerzo y tallas de marlines se ha intensificado en los principales centros de desembarque de la pesca artesanal.*

I^{ère} partie (Informations sur les pêcheries, la recherche et les statistiques)

Chapitre 1 : Information annuelle sur les pêcheries

Les captures sénégalaises de thonidés et espèces apparentées de l'Atlantique de toutes les flottilles s'élèvent en 2010 à 13.445 tonnes, soit 6% de plus par rapport à 2009 (12.742 tonnes).

1.1 Les thonidés tropicaux

Les thons tropicaux sont essentiellement composés de l'albacore *Thunnus albacares (YFT)*, du listao *Katsuwonus pelamis (SKJ*) et du patudo *Thunnus obesus (BET).* La flottille industrielle basée à Dakar, composée essentiellement de canneurs congélateurs sénégalais, français et espagnols exploite les mattes de thons présentes dans la zone de la Guinée à la Mauritanie. En 2010, la flottille est composée de six canneurs sénégalais (sept en 2009), un français et sept espagnols.

Outre, les canneurs basés à Dakar, huit senneurs espagnols et un français ont débarqué ou transbordé au port de Dakar 4.931 tonnes, dont 4.303 tonnes pour les espagnols et 628 pour les français.

1.1.1 Les prises de thonidés tropicaux des canneurs sénégalais

Les prises totales des canneurs sénégalais en 2010 sont estimées à 4.606 tonnes (1.168 tonnes d'albacore, 2.412 tonnes de listao, 844 tonnes de patudo, 73 tonnes de thonine et 107 tonnes d'auxide). Les captures ont connu une réduction par rapport à 2009 (6.720 tonnes). Cette réduction suit celle de l'effort de pêche qui est passé de 1.574 jours de pêche en 2009 à 1.220 jours de pêche en 2010. Le **Tableau 1** montre les prises par espèce, les efforts et les prises par unité d'effort (PUE) des canneurs sénégalais de 1991 à 2009. Les **Figures 1** et **2** montrent la distribution des captures et de l'effort des canneurs sénégalais dans l'Atlantique en 2010.

1.1.2 Les prises de la flottille palangrière

La pêcherie palangrière cible l'espadon. Toutefois, d'autres espèces (requins, marlin, voilier etc.) sont capturées accessoirement par cette pêcherie. En 2010, un seul palangrier a été en activité. La prise totale en 2010 est estimée à 312 tonnes (590 tonnes en 2009). Les captures sont constituées d'espadon (180 tonnes), de requins

(80 tonnes), d'albacore (22 tonnes), de marlins (126 tonnes), de voiliers (0,672 tonne) et des ailerons (11 tonnes.). Le **Tableau 2** présente la ventilation des prises par espèce de la pêche palangrière en 2010.

1.2 Les prises des pêcheries artisanales

En 2010, les prises de petits thonidés et espèces apparentées (thonine, maquereau bonite, palomette, bonite à dos rayé, thazard bâtard, auxide, les poissons porte épée : espadon, marlins et voiliers) des pêcheries artisanales utilisant la ligne à la main, la ligne de traîne et la senne tournante s'élèvent à 8.719 tonnes. Les captures ont connu une hausse par rapport à 2009 (5.315 tonnes). Le **Tableau 3** montre l'évolution des captures de la pêche artisanale de 2000 à 2010.

1.3 Les prises de la pêche sportive

Au Sénégal, la pêche sportive cible les marlins (BUM-*Makaira nigricans*), voiliers (SAI-*Istiophorus albicans*) et espadon (SWO-*Xiphias gladius*), pendant la saison de pêche qui se situe de mai à décembre. Elle cible également les coryphènes, les thonidés et autres espèces. Le **Tableau 4** présente les prises totales en poids collectées par mois dans les centres de Dakar et Mbour. Ainsi, les captures s'élevaient à 288 tonnes, dont 82 tonnes de voiliers, 29 tonnes de marlins et 99 tonnes d'albacore. L'effort de 682 sorties en 2010 est illustré.

Chapitre 2 : Recherche et statistiques

Le Centre de Recherches Océanographiques de Dakar Thiaroye (CRODT) est responsable du suivi des thoniers sénégalais, français et espagnol. Un suivi scientifique régulier des activités de pêche est toujours assuré par l'équipe mise en place au port de Dakar par le CRODT. Le travail consiste à la collecte des statistiques de captures et d'effort de pêche. Le système de collecte des statistiques repose sur une enquête détaillée quotidienne, auprès des patrons thoniers lors de chaque débarquement, complétée par des informations de diverses sources (usines, armements, Direction des pêches maritimes etc.). Des échantillonnages sont également réalisés lors des débarquements au port de Dakar. La gestion des données se fait en partenariat avec l'Institut de Recherche pour le Développement (IRD) et l'Institut Espagnol d'Océanographie (IEO). Nos activités sont financées pour l'essentiel par le budget national appuyées par l'UE à travers l'IEO et l'IRD. En 2010, 288 échantillons de tailles plurispécifiques sont réalisés sur les canneurs sénégalais contre 226 en 2009. Un total de 69.177 poissons a été mesuré, dont 15.743 albacores, 7,556 patudos, 41,336 listaos, 4,467 thonines et 75 individus d'auxides.

Au niveau de la pêche artisanale, le CRODT a développé depuis plus d'une trentaine d'année un système d'enquête et de collecte des statistiques au niveau des différents sites de débarquement répartis le long du littoral sénégalais. Ces statistiques sont recueillies par des enquêteurs suivant un protocole d'échantillonnage établi scientifiquement. Grâce au fonds du Programme de Recherche Intensive des Istiophoridés (EPBR), l'échantillonnage des tailles des istiophoridés (le voilier-*Istiophorus platypterus)* est réalisé dans les principaux centres de débarquement de la pêche artisanale, notamment à Soumbédioune, Yoff et Mbour.

II^{e} Partie (Mise en œuvre de la gestion)

Chapitre 3 : Mise en œuvre des mesures de conservation et de gestion de l'ICCAT

En ce qui concerne la mise en œuvre des mesures de conservation et de gestion pertinentes de l'ICCAT, la Direction des Pêches maritimes (DPM) a mis en place, en relation avec les armements, les mécanismes pour s'assurer du respect des conventions internationales en matière de capture et de commercialisation des captures de thonidés et espèces apparentées.

Dans son engagement à surveiller et à contrôler ses navires qui pêchent en haute mer, le Sénégal, dans le cadre de la révision en cours du Code de la Pêche maritime, a étendu le champ d'application dudit code aux navires battant pavillon sénégalais pêchant en haute mer.

Au niveau de la pêche artisanale, le Sénégal a fait des efforts conséquents pour la maîtrise de la capacité de pêche à travers le programme national d'immatriculation informatisée des embarcations de type artisanal, dont les pirogues qui capturent les thonidés et espèces voisines (acessoirement ou ciblé).

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Chapitre 4 : Schéma d'inspection

La totalité des navires sénégalais disposent d'une balise Argos fonctionnelle à la charge des armateurs qui leur permet ainsi de suivre les opérations de leur flotte. L'embarquement de balise est une obligation préalable pour l'obtention et la détention d'autorisation de pêche régie par un arrêté ministériel portant organisation et fonctionnement du système de positionnement et de localisation des navires.

Tous les débarquements nationaux comme étrangers sont suivis et inspectés grâce au dispositif d'inspection mis en place au port de Dakar.

Tableau 1. Prises par espèces, efforts et prises par unité d'effort (PUE) des canneurs sénégalais de 1991 à 2010.

	Prises (t) canneurs				*Effort*	*PUE (t/j)*			
Année	*YFT*	*SKJ*	*BET*	*Total*	*j/pec*	*YFT*	*SKJ*	*BET*	*Total*
1991	79	309	10	399	73	1,08	4,24	0,14	5,45
1992	--	--	--	--	--	--	--	--	0,00
1993	13	42	5	60	27	0,46	1,56	0,20	2,22
1994	6	59	11	76	40	0,16	1,49	0,27	1,90
1995	20	18	60	98	74	0,27	0,24	0,81	1,31
1996	41	163	84	288	91	0,45	1,79	0,92	3,16
1997	208	455	204	867	1,76	1,18	2,59	1,16	4,93
1998	251	1679	676	2606	511	0,49	3,29	1,32	5,10
1999	834	1479	1473	3786	572	1,46	2,59	2,58	6,62
2000	252	1506	1131	2889	697	0,36	2,16	1,62	4,14
2001	295	1271	1308	2874	512	0,58	2,48	2,55	5,61
2002	447	1053	565	2065	395	1,13	2,67	1,43	5,23
2003	279	733	474	1486	370	0,75	1,98	1,28	4,02
2004	668	1323	561	2552	691	0,97	1,91	0,81	3,69
2005	1301	4874	721	6896	1236	1,05	3,94	0,58	5,57
2006	1262	3534	1267	6063	1326	0,95	2,66	0,95	4,76
2007	816	2278	804	3898	1206	0,68	1,89	0,67	3,24
2008	550	3667	926	5143	1500	0,37	2,44	0,62	3,43
2009	1157	4513	1041	6711	1574	0,73	2,87	0,66	4,26
2010	1168	2413	844	4425	1220	0,96	1,09	0,38	2,45

Tableau 2. Prises d'espèces apparentées, de thonidés et requins par la flottille palangrière en 2010.

Espèces	*Quantité (kg)*
Espadon	180.408
Voilier	672
Requin bleu	56.153
Marlin	12.612
Albacore	21.980
Requin mako	17.572
Requin	5.728
Requin marteau	1.403
Aileron	10.598
Divers	4.615
Total	**311.741**

T**ableau 3**. Prises (en tonnes) de petits thonidés, d'istiophoridés et xiphiidés par la pêche artisanale de 2000 à 2010.

Espèces	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Orcynopsis unicolor	14	28	6	7	67	85	29	240	33	158	53
Scomberomorus tritor	778	408	584	532	288	489	196	845	189	305	239
Acanthocybium solandri	0	0	0	7	0	0	1	0	0	2	6
Euthynnus alletteratus	3336	4969	2659	4394	4160	2166	3826	3815	2972	1684	6207
Sarda sarda	286	545	621	195	197	486	2304	1020	1154	2544	1668
Katsuwonus pelamis	7	6	287	45	154	341	90	195	60	83	36
Thunnus obesus	0	0	3	5	4	4	1	3	35	3	14
Auxis thazard	0	4	0	13	285	159	83	119	249	11	70
Thunnus albacares	3	0	25	3	10	43	63	39	4	111	12
Istiophorus platyptarus	782	953	240	673	291	250	256	614	338	550	402
Makaira nigricans		11	24	32	8	0	5	4	0	0	1
Xiphias gladius	2	2	17	2	4	7	7	6	6	28	11
Total	**5448**	**6926**	**4466**	**5908**	**5468**	**1864**	**6861**	**6900**	**5040**	**5315**	**8719**

Tableau 4. Effort, captures, captures des voiliers et marlins par la pêche sportive de 2010.

Mois	*Effort (Nombre de sorties)*	*YFT (kg)*	*SAI (kg)*	*BUM (kg)*
5	60	920	5652	1894
6	120	730	15750	3432
7	125	995	17905	6067
8	130	1413	15006	5154
9	119	785	13432	5818
10	70	2356	7363	4126
11	58	2749	6446	2275
Total	**682**	**9948**	**81554**	**28766**

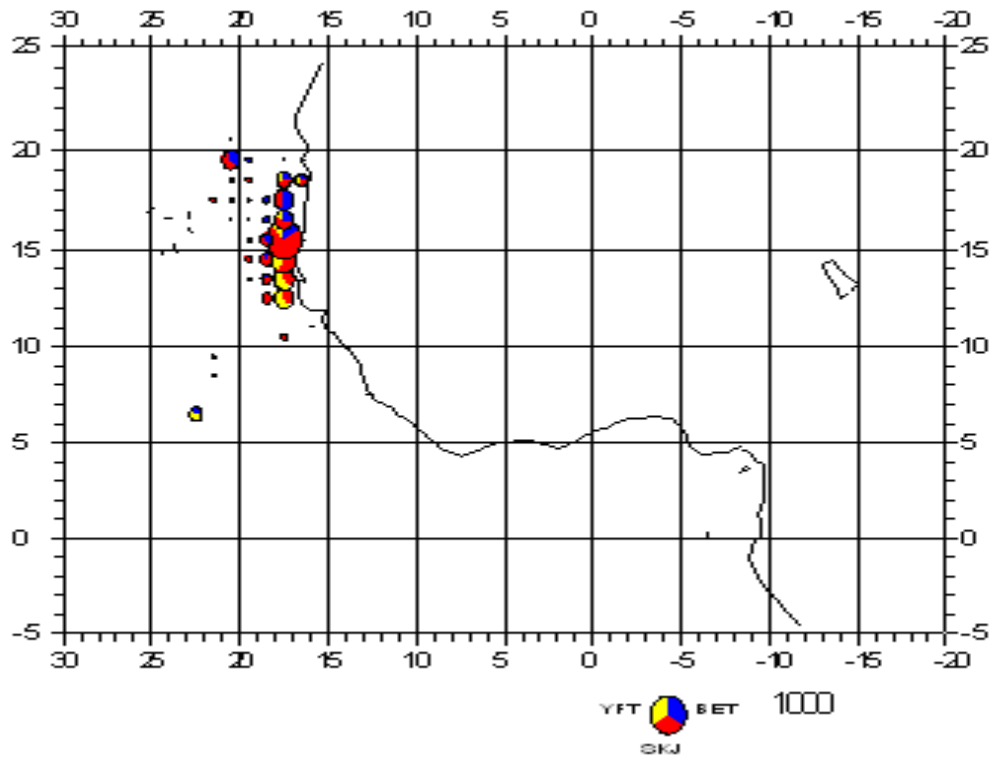

Figure 1. Carte de distribution des captures des canneurs sénégalais dans la zone de pêche.

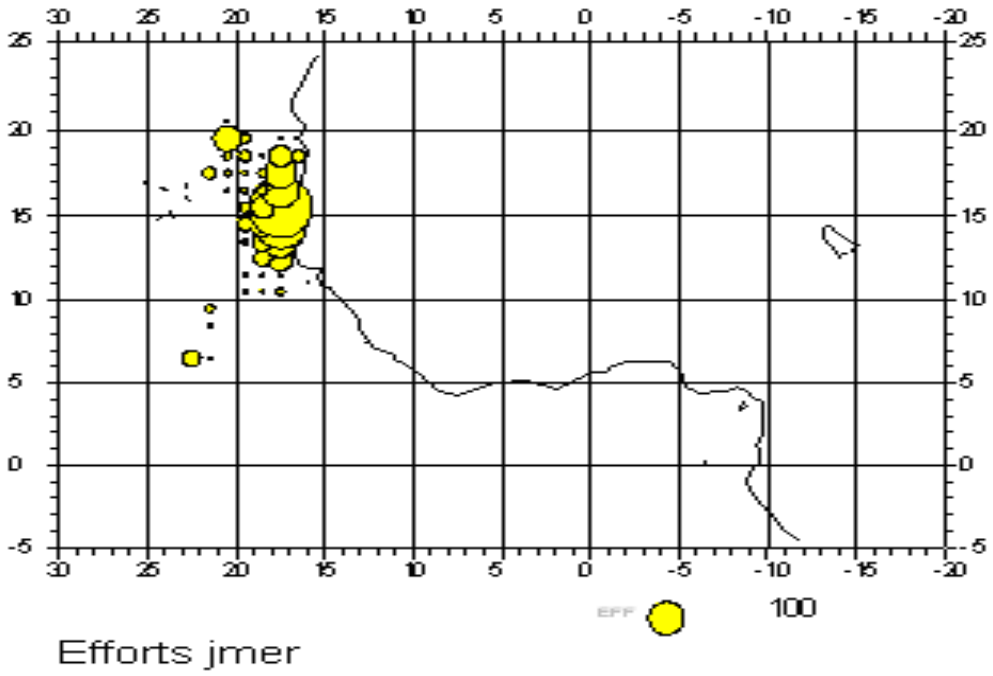

Figure 2. Carte de distribution des efforts des canneurs sénégalais dans la zone de pêche.

ANNUAL REPORT OF SOUTH AFRICA*
RAPPORT ANNUEL DE L'AFRIQUE DU SUD
INFORME ANUAL DE SUDÁFRICA

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Poling, rod and reel, linefish fishery, and recreational fishery

The fishery generally operates between September and May along the west coast of South Africa. The total reported annual pole fleet (including rod and reel) albacore catch was 4 063 t and is second highest reported catch since 2004 and could be attributed in part to high availability of albacore in the early part(January-April) of 2010 and due to slight improvements in reporting systems. However, the total catch declined since 2009, which was linked to a decrease in effort from 5 233 days (2009) to 4 518 days (2010), which may have been attributed to a decrease in the nominal CPUE also from 967 kg.day^{-1} in 2009 to 889 kg.day^{-1} in 2010. The decrease in the CPUE was mainly due to the poor availability of albacore in the latter part of the year. Consequently, a number of vessels starting seeking charter agreements with Namibia towards the end of 2010. Yellowfin catches have continued to decline from 840 t in 2007 to 314 t in 2008 to 213 t in 2009 and finally to 182t in 2010. The pole/rod and reel fishery has also reported a catch of 7.9 t of bigeye tuna and 2.2t of skipjack tuna. The decline in the yellowfin catches has occurred despite more vessels gearing up to target yellowfin and is therefore mainly a consequence of limited availability of the resource in the waters adjacent to Cape Town.

The traditional commercial line fishery, which opportunistically target albacore and yellowfin tuna when they are close inshore and when linefish species are not available; caught 89 t of albacore and 22 t of yellowfin in 2010 (Table 1). The commercial line fishery skippers in reporting their catches have in some instances grouped their tuna catches under a 'general tuna' category. These catches are most likely albacore and yellowfin tuna and contributed a further 101t of catches to the commercial line fishery catches. We are continually working on correcting species identification in catch reporting.

The recreational fishery, including informal charter and sport fisheries using rod and reel and spearguns, also operates in the vicinity of Cape Town and targets albacore and yellowfin from small fishing vessels (5-10m). Although catch and effort in the recreational fishery for yellowfin and albacore are not quantified, the total catch is estimated between 100-140 t for albacore and a further 20-40 t for yellowfin in the Atlantic Ocean. Other species that are occasionally landed would include blue and black marlins. Recreational fishers are restricted by a bag limit of 10 tuna per day and catches may only be used for own consumption. Sea conditions and distance to fishing grounds far offshore (> 25 NM) limits fishing operations to the months of December – May. In South Africa the total number of deep-sea anglers and underwater tuna fishers is estimated at 40 000. However, not all fisher's fish in the Atlantic Ocean and some do not fish for tuna and tuna-like species. Furthermore, a number of fishers do not stay close to the coast and will only fish when on holiday.

1.2 Tuna/swordfish longline fishery

The number of longline vessels decreased from 31 in 2009 to 26 in 2010, and most of these vessels were active in the Indian Ocean (accounting for 88% of the longline effort) due to better catch rates of yellowfin and bigeye. Fewer vessels led to a decrease in the effort from 2009 to 2010 at 0.62 million hooks. Total reported catch and nominal CPUE increased for bigeye (137 t at 195.8 kg.1000hooks^{-1}) and blue sharks (9 t at 14.9 kg.1000.hooks^{-1}). In contrast total reported catches and nominal CPUE declined for, albacore (83 t at 134.3 kg.1000hooks^{-1}), swordfish (145 t at 180 kg.1000hooks^{-1}), yellowfin (52 t at 82.5 kg.1000hooks^{-1}) and shortfin mako (24 t at 39.3 kg.1000hooks-^{1}).

1.3 Shark longline fishery

The Department of Agriculture, Forestry and Fisheries (hereafter referred to as the Department) consolidated the pelagic shark fishery with the large pelagic fishery in March 2011. Nine shark exemption holders were permitted to fish in 2010, but only four vessels were active in the Atlantic Ocean. Effort continued to reduce from 265 thousand hooks in 2008 to 150 thousand hooks in 2009 to 104 thousand hooks in 2010. Catches of blue shark

* No summary provided. / Aucun résumé soumis. / No se ha facilitado el resumen.

and shortfin mako remained stable at 102 t and 119 t respectively, but nominal CPUE continues to increase for both species.

Section 2: Research and Statistics

2.1 Poling, rod and reel, and sport fishery

Concerted efforts are continually being made between the Department and Industry associations to improve reporting by the tuna pole fishery as 30% of the logbook data were not captured.

No port sampling trips were undertaken in 2010 to obtain length frequencies of albacore landed by the poling fleet due to a loss of research capacity. The lack of capacity has further resulted in no length frequencies of yellowfin caught by rod and reel being reported to ICCAT.

The pole sector currently has 10 vessels with experimental permits in the use of live bait. Sufficient data is yet to be collected and analysed to quantify improvements in pole catch rates with the use of live bait.

There was still no statistical system in place to record recreational catch and effort.

2.2 Tuna/swordfish longline fishery

Skippers in the tuna/swordfish longline fishery have been required to complete daily logs of catches since 1997. After 2001 the comparison between reported catch statistics and US trade statistics were very similar, indicating good reporting for this sector in recent years. Reporting is considered to cover 100% of all swordfish, yellowfin and bigeye catches made by this sector. Although the logbooks have been used to report nominal catches to the RFMOs this will change in future in favour of using landing declarations as monitored by the Fishery Control Officer when the fish are discharged. This is more accurate as all fish are required to be weighed.

Since 1998, South Africa has implemented an on board observer programme for the longline fishery, which is still in place. The intended observer coverage is 20% of all domestic fishing trips and 100% of all foreign charter fishing trips. Approximately 15.0 % observer coverage was achieved for all domestic fishing trips in 2010 and 100% coverage for foreign charter vessels. Through the observer programme it was estimated that less than 2 t of the swordfish caught were under the legal size limit of 119 cm LJFL.

2.3 Shark longline fishery

Permit holders in the shark longline fishery are also required to complete daily logs of catches. Levels of reporting from the four vessels are good with coverage of approximately 90%. No size frequencies have been collected from this fishery and neither has any observers been placed on any of these vessels.

2.4 Research

Various projects were initiated in 2008 including: collection of material for studying the age and growth of albacore and bigeye tuna; the life history, stock delineation and spatial movement and distribution of bigeye tuna, swordfish and blue sharks between the Atlantic and Indian Oceans. The Department, with the assistance of NGOs and universities, continued to assess the impact of longline fisheries on seabirds and investigated various mitigation and management measures. The recent establishment of a large pelagic fishery represents an important milestone in the development of South African fisheries. However, research activities directed at the large pelagic species targeted by longline are in its infancy in South Africa and to date only three dedicated research trips have been undertaken since 2008. South Africa's involvement in the South West Indian Ocean Fisheries Programme (SWIOFP) through Component 4: Assessment and sustainable utilization of large pelagic resources has provided momentum to our research programme. The primary focus is to understand the distribution and movement of swordfish, bigeye and yellowfin tuna within the SWIO region, to which end 15 pop-up archival tags (PATs) have been provided for deployment on swordfish, yellowfin and bigeye tunas as well as hook monitors and time depth records for deployment of an instrumented longline. Prior to the inception of this project, two bigeye tuna and four blue sharks have been tagged with PATs and 441 blue sharks with conventional tags.

In 2010, three yellowfin tuna were tagged with PAT tags provided by SWIOFP. The three tags popped up and transmitted data earlier than what they were programmed for, indicating that the animals had died prematurely

and the tags had exceeded their depth limit of 1200 m. The trends in the data are yet to be analysed in detail to understand the cause of these premature pop-ups. Three blue sharks were also tagged with PAT tags in 2010 and a further two blue sharks were tagged with SPOT tags in 2011. The Department's national research cruise in 2011 was a momentous achievement during which 11 swordfish were successfully PAT tagged in the SWIO region with SWIOFP tags. Swordfish have proven to be very sensitive to handling and South Africa is the first country to achieve PAT tagging of swordfish in this region. Tags have been programmed for either 90 or 180 days and, although one swordfish has been reported to have died shortly after tagging, we await the success of the 10 other tags deployed.

The Department continues to collaborate with WWF, University of Washington Seas Grant, and Birdlife SA to assess the impact of longline fisheries on seabirds, turtles and sharks and to investigate various mitigation and management measures. A National Plan of Action for seabirds was also published in 2008, which aimed to reduce seabird mortalities below 0.05 seabirds.1000hooks^{-1}. Good collaboration with the fishing industry, researchers and managers, continual refining of mitigation measures, the implementation of stringent management measures through permit conditions, and close monitoring has resulted in seabird mortalities to decrease and in the mortality rate in 2010 was 0.06 seabirds per thousand hooks and is almost at the goal identified in NPOA-seabirds.

Rhodes University (Grahamstown) is also collaborating with the Department and is conducting research on the stock delineation of yellowfin in the boundary region between the Indian and Atlantic Oceans by conducting genetic analysis and investigating movement patterns. The results, which form part of a MSc thesis, have yet to be released and verified.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Closed seasons

96-02, 98-07, 02-08: South Africa does not catch northern bluefin tuna (*Thunnus thynnus thynnus*), hence these management measures are not applicable.

Data and minimum size

96-14: Not applicable to South Africa

97-01: As a result of the reduced swordfish size adopted in 2005, undersize swordfish (< 119 cm FL or < 18 kg dressed weight) are confiscated by the Fishery Control Officers/ Monitors who are required to monitor all discharges of longline vessels fishing on a South African permit.

98-14: South Atlantic swordfish catches are presented in the ICCAT Reporting Table.

01-16: Task I and II data were submitted to ICCAT in August 2011, for 2010 data. ICCAT reporting tables for south Atlantic swordfish is included in Annual Report. No revisions of historical data were conducted this year.

03-13: All tuna pole/ rod and reel, tuna/swordfish/shark longline vessels are required to complete a daily log of all fishing activity and meets the standards described in the ICCAT Field Manual.

Oth: All fishing sectors targeting large pelagic species, except for the recreational sector, are managed by a TAE (with TAE = no of vessels) as determined by the Minister of Agriculture, Forestry and Fisheries. The Regulations in terms of the Marine Living Resources Act (1998) also specify minimum weight limits for bigeye tuna (3.2 kg), bluefin tuna (6.4 kg), yellowfin tuna (3.2 kg). The swordfish minimum size limits of 125 cm LJFL and 25 kg mass were reduced to 119 cm LJFL and 18 kg in order to minimize dumping at sea. An estimate of the total amount of undersize swordfish caught is reported in the Compliance Tables.

Capacity limits

93-04: South Africa is a developing country, which only started commercial longlining in 1997, and cannot restrict its effort on yellowfin to that of 1992. Furthermore, yellowfin caught in the vicinity of Cape Town are likely to be of Indian Ocean origin.

98-03: The limitation of bigeye tuna fishing capacity is not applicable to South Africa according to paragraph 3.

04-01: South Africa is in the process of developing a tuna longline fleet which would target bigeye, but currently bigeye tuna is caught on domestic vessels targeting swordfish. Nonetheless, South Africa is exempted from this resolution, as it is a developing country with reported bigeye catch in 1999 less than 2 100 t.

Statistical documents

94-05: South Africa neither imports nor exports northern bluefin tuna; hence this resolution is not applicable.

01-21: Bigeye tuna statistical documents have been issued since 2003 and the management of these documents was improved upon in 2007.

01-22: Swordfish statistical documents have been issued since 2003, and the management of these documents was improved upon in 2007.

Other measures relating to individual species

96-09: Billfishes (excluding swordfish) and sharks are designated as by-catch species in the tuna/swordfish longline fishing sectors and are limited to a combined maximum of 10% of the total tuna and swordfish catch by weight. Longline skippers are also encouraged to release live billfishes according to their permit conditions.

97-09: Longline skippers are encouraged to release live billfishes, including blue and white marlins.

01-11/ 04-10: South Africa annually reports catch and effort data for mako and blue sharks. Annual length frequencies are also provided. To limit the tuna/swordfish longline fishery impact on sharks permit holders were only allowed a 10% by-catch of sharks by weight. Finning is banned, and skippers are required to land shark trunks and fins simultaneously, with fins not allowed to exceed 8% of trunk weight. Furthermore, in expanding the tuna longline fishery the Department has taken a decision to terminate pelagic shark targeting so that shark catches are adequately controlled.

09-03: South Africa has not exceeded her swordfish initial quota of 932 t (adjusted quota of 1532 t) in 2010. Only 144.7 t landed.

02-14: Various bird mitigation measures have been included as permit conditions, such as:

- All longliners are required to deploy a tori line when setting.
- No bright lights are to be used when setting at night.
- Baits are required to be properly defrosted to ensure faster sinking rates.
- All tuna longline vessels are only allowed to set at night.
- Bird limits have been introduced per vessel per year and if non-compliance with bird mitigations were found then the vessel would be required to stop fishing at either 25 birds or 50 birds.

In addition, scientific observers also collect data on bird mortality rates and provide dead specimens for identification. Awareness programmes have been held to educate permit holders/ skippers of detrimental impact longliners have on seabird populations. To encourage responsible fishing permit holders have been given bird posters so as to be able to identify the common species occurring in Southern African waters. WWF and Birdlife SA have also provided vessels with tori lines and given instructions on how to use them. In addition, research into seabird mitigation has taken place on board the fishing vessels during2009-2010 with the assistance of the University of Washington Sea Grant. Seabird mortality has been greatly reduced due to the collaborative efforts and was recorded at 0.06 seabirds per thousand hooks in 2010.

03-10: Although the shark NPOA has been redrafted in 2011South Africa has already implemented a number of measures to manage and conserve shark population. For example: shark catches are restricted to 10% of the weight of tuna and swordfish; skippers are encouraged to release sharks alive; skippers are required to carry dehooking devices on board the vessel; and no finning is allowed.

09-07 all species of thresher shark are prohibited from being landed. In addition hammerhead sharks and oceanic whitetips have also been banned.

03-11: Skippers are required to release turtles alive. An on board observer programme has been established which collects data on turtle interactions. South Africa is currently investigating circle hooks as a means to reduce turtle catch.

03-04: Mediterranean swordfish is not applicable to South Africa.

05-05: Not applicable to South Africa as our vessels do not fish for North Atlantic mako.

05-08: South Africa encourages the use of circle hooks in its longline fishery, but has not implemented a study on the effects of circle hooks on catch rates as yet.

06-08: Resolution pertaining to fishing for bluefin in the Atlantic Ocean is not applicable to South Africa.

07-06: South Africa has started to conduct research on the life history and spatial distribution and movement of blue sharks in the Atlantic and Indian Oceans. One of the key priority areas would be to examine whether a short-fin mako nursery exists along the south coast of South Africa.

07-07: Data on sea-bird mortality in 2008 has been provided to ICCAT. Although seabird mortality data was collected in 2009 and 2010 it has as yet not been reported to ICCAT.

Trade sanctions

02-17, 06-13: South Africa has no developed markets for bigeye tuna hence this species is not imported.

VMS

03-14, 04-11: Any pole, rod and reel, tuna/swordfish/shark vessel, irrespective of size, is required to have a functional VMS (as approved by the Department) in place before a vessel is permitted to embark on any fishing trip.

General

97-10 (para 7): Thus far longline vessels fishing on a South African permit have only discharged in South African ports. However, provisions are made in the permit conditions that if a vessel discharges in another country the permit holder is required to arrange for a South African Fishery Control Officer to monitor the discharge.

99-07: The tuna recreational sector is restricted by a bag limit of 10 tuna per person per day as stipulated in the Regulations in terms of the Marine Living Resources Act (1998). The minimum size limits as stipulated by the Regulations in terms of the Marine Living Resources Act (1998) also applies to the recreational sector. No statistical system is in place to quantify catches made by the recreational fishery. A shore-based observer programme was established in 2007 which may allow for better catch estimates from this sector.

01-18: South Africa does not allow IUU vessels to enter its EEZ. Furthermore, no port services are made available to the vessels should they be allowed to enter in the case of *force majeure*. In addition, transhipments at sea are not permitted.

02-21: South Africa is in the process of developing its fishing capacity and as such has chartered foreign vessels in the tuna longline fishery. These vessels were under the control of South African regulations and permit conditions. All vessels were equipped with VMS and were required to take an observer on board on all fishing trips. Charter notification for 2011 and a chartering report for 2010 were submitted to ICCAT. In

addition a number of South African pole vessels were authorized to fish under charter in Namibia in 2010 and 2011.

03-12: Commercial tuna fishing vessels are authorised by the Department to fish for tuna by means of a permit. A high seas licence is required if the vessel is to fish on the high seas. The original permit and licence are required to be on board the vessel on all fishing trips. Fishing vessel call signs and names also have to be marked in a specific manner.

03-16: South Africa does not allow any IUU vessels to land product in South African ports. Moreover, South Africa does not allow entry to the EEZ for IUU vessels. Transhipment of tuna into cages by IUU vessels are not applicable to South Africa as we do not have any tuna farming in South Africa.

06-11 (Annex 3, para 6): South Africa does not permit transhipments at sea; hence this Resolution is not applicable.

06-16: South Africa has an electronic statistical document programme in place for Patagonian and Antarctic toothfish under CCAMLR, but has not implemented any pilot electronic programme for tuna and tuna-like species.

09-08: South Africa has provided a list to ICCAT of vessels > 20m in the tuna pole and longline fisheries that were authorized to operate in the Atlantic Ocean for 2011.

Section 4: Inspection Schemes and Activities

South Africa has continued to improve on the implementation of Port State Measures through collaborating with other national agencies such as National Ports Authority and Customs and Excise. South Africa has a full Port Inspection Scheme in place in accordance with ICCAT recommendations. This includes foreign vessels requiring an EEZ permit to enter and discharge in South African ports. Port access for foreign vessels is limited to Cape Town harbour, Port Elizabeth harbour and Durban harbour, where sufficient capacity exists to monitor the vessels. EEZ permits are only issued to authorized vessels. No IUU-listed vessels are allowed to enter South Africa's ports or to discharge in South African Ports. In applying for an EEZ permit, skippers have to provide South African authorities with the necessary flag State authorization documents, quantity of fish and species onboard to be discharged as well as the gear type used. A letter of authorization from the flag State is required if South African authorities are uncertain about the application for a discharge permit. Transhipments are only allowed in port on the authority of a transhipment permit. In applying for this permit the skipper has to provide South African authorities with the vessel details, quantity of fish and species to be transhipped, and where it was caught. Random inspections and monitoring are made on foreign vessel discharges and transhipments. Vessels participating in the South African tuna/swordfish longline and tuna pole fishing sectors are required to notify the local Fishery Control Officer prior to landing. All domestic longline discharges are required to be monitored and inspected by South African authorities. The Statistical Document Programme for swordfish and bigeye, which was implemented in 2003, is now well established.

Section 5: Other Activities

Surveillance of coastal waters is provided by the fisheries offshore patrol vessels and *ad hoc* patrols by spotter planes, and navy vessels.

ANNUAL REPORT OF ST. VINCENT AND THE GRENADINES
RAPPORT ANNUEL DE ST VINCENT ET LES GRENADINES
INFORME ANNUAL DE SAN VICENTE Y LAS GRANADINAS

Cheryl Jardine-Jackson[1]

SUMMARY

In this report, local landings of large pelagics during 2010 and high seas fishing fleet landings for 2010 are presented for St. Vincent and the Grenadines. The local landings correspond to the efforts of a small-scale artisanal fishing fleet. However, the high seas fishing fleet is more industrial in nature. As a small island developing state, St. Vincent and the Grenadines must continue to explore all available sources of revenue in order to ensure food security for its people while meeting the challenges of sustainable use and a changing global environment. However, such efforts must be in compliance with acceptable international practices and standards. St. Vincent and the Grenadines continues to develop, refine and implement the relevant legislative, management, monitoring and enforcement mechanisms with regards to its high seas fishing fleet. These measures are geared toward ensuring the activities of these vessels are fully compliant with management initiatives taken by ICCAT and other relevant organizations.

RÉSUMÉ

Ce rapport présente les débarquements locaux des grandes espèces pélagiques réalisés en 2010, ainsi que les débarquements de la flottille de pêche hauturière au titre de 2010 pour St Vincent et les Grenadines. Les débarquements locaux correspondent aux efforts d'une petite flottille de pêche artisanale. Cependant, la flottille de pêche hauturière est à caractère plus industriel. En tant que petit État insulaire en développement, Saint Vincent et les Grenadines doit continuer à explorer toutes les sources disponibles de revenus, afin de garantir la sécurité alimentaire de ses ressortissants, tout en relevant les défis de l'utilisation soutenable et d'un environnement mondial changeant. Or, ces efforts doivent respecter les normes et pratiques internationales acceptables. Saint Vincent et les Grenadines continue à développer, perfectionner et mettre en œuvre les mécanismes de législation, gestion, suivi et exécution en ce qui concerne sa flottille de pêche hauturière. Ces mesures visent à garantir que les activités de ces navires sont pleinement conformes aux initiatives de gestion prises par l'ICCAT et d'autres organisations pertinentes.

RESUMEN

En este informe se presentan los desembarques locales de grandes pelágicos y los desembarques de la flota pesquera de altura de San Vicente y las Granadinas para 2010. Los desembarques locales corresponden a los esfuerzos de una flota pesquera artesanal a pequeña escala. Sin embargo, la flota pesquera de altura es de naturaleza más industrial. Como pequeño estado insular en desarrollo, San Vicente y las Granadinas debe continuar explorando todas las fuentes disponibles de ingresos con el fin de garantizar la seguridad alimentaria de sus ciudadanos a la vez que cumple los desafíos de la utilización sostenible y de un medio ambiente global cambiante. Sin embargo, dichos esfuerzos deben cumplir las prácticas y normas internacionales aceptables. San Vicente y las Granadinas continúa desarrollando, refinando e implementando los mecanismos pertinentes legislativos, de ordenación, de seguimiento y de ejecución respecto a su flota pesquera de altura. Estas medidas están destinadas a garantizar que las actividades de estos buques cumplen todas las iniciativas en materia de ordenación de ICCAT y de otras organizaciones pertinentes.

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Part I (Information on Fisheries, Research and Statistics)

Section 1: National Fisheries Information

1.1 The local fishing fleet

The local pelagic fishing fleet of St. Vincent and the Grenadines is predominantly artisanal in nature. In 2010 there were approximately 750 registered vessels and 1,600 fulltime fishers. Because of the small-scale nature of fishing operations, any one of these vessels is likely to catch tunas and tuna-like species opportunistically. However, it is estimated that 250 of these vessels (500 fishers) target these species. More than 95% of these vessels are open fiberglass boats less than 8 m in length. They are equipped with 15-125 HP gasoline outboard engines. The other 5% of the pelagic fishing fleet is comprised of six (6) longliners (13 m in length) and several "day tour" boats that are engaged in sport fishing.

In general, a fishing trip has a duration of one day for the open fiberglass vessels (4:00 am-4:00 pm) and up to five days for the longliners. The smaller vessels fish predominantly in the eastern waters of the state, 50 miles off-shore. The longliners conduct fishing in the western waters, 150 miles off-shore. Trolling by the open vessels, longlining by the longliners, beach seining and gillnetting are the primary fishing gears used to catch tuna and tuna-like species.

1.2 The high seas fishing fleet

St. Vincent and the Grenadines is also responsible for a high seas fishing fleet. These vessels are foreign owned vessels registered with SVG and conduct their fishing activities on the high seas. In 2010 there were 36 vessels fishing in the Atlantic. Tuna and tuna-like species were caught with yellow fin tuna being the main species targeted. The areas of 05-10N and 35-40W, 05-10N and 45-50W and 05-10N and 50-55W were the three main areas for fishing activity in the Atlantic by these vessels in 2010.

In 2010, 36 vessels fishing in the Atlantic were 20 meters and over. Of these vessels, 18 were a little over 23 m, 3 were 27-30 m, 3 were between 30-40 meters, 8 were between 40-50 meters and 4 were over 50 meters.

Section 2: Research and Statistics

2.1 Data collection system

− Local

St. Vincent and the Grenadines used a system of stratified cluster sampling to estimate catch and fishing effort for 21 landing sites on mainland St. Vincent. A total census is collected at the Kingstown market which is the main market on the island. Data are collected from all landing sites using a cluster-stratified random sampling methodology. That is, all landing sites clustered into zones and then divided according to their status of importance (primary, secondary, tertiary) which then determines the frequency of sampling – primary sites (most frequently), tertiary sites (less frequent). All species-specific landings are then raised on a monthly basis to estimate total landings weight per month. Information is taken from boats at random eight hour periods between the hours of 6:00 am and 7:00 pm. These eight-hour periods are divided into two four-hour periods with a one hour break for lunch. Sampling is done for the first available vessel after the data collector arrives and then the next available vessel given the length of time spent conducting the interview. The completed data forms are submitted to the Data Officer to be reviewed and digitized.

In 2010-2011, the Japan International Cooperation Agency (JICA) in collaboration with the Caribbean Community (CARICOM) Secretariat and the Caribbean Regional Fisheries Mechanism (CRFM) Secretariat undertook a pilot project on improving the artisanal fishery statistical systems in St. Vincent and the Grenadines. The study was completed in September 2011 and a proposal for the implementation of a revised sampling program was made. This revised sampling program will come in effect early 2012 and a revised document would be forwarded to all relevant parties.

− High seas

2.2 Port Sampling Programme

The open registry operated by St. Vincent and the Grenadines is government-owned and operated. It contributes significantly to the National economy. In 2009, St. Vincent and the Grenadines along with Belize signaled the

need for ICCAT support to help improve the sampling of the commercial tuna fishing fleets, primarily at high priority landing locations such as the trans-shipment port in Trinidad and Tobago. The proposal to establish a 12-month sampling programme at the two main trans-shipment ports in Trinidad and Tobago has been approved by ICCAT. A Memorandum of Understanding (MOU) will be drawn up by Trinidad and Tobago as soon as St. Vincent and the Grenadines receives official notification. Two data collectors would be recruited to operate at the two main ports in Trinidad. They would be trained in sampling techniques and would be supervised daily by the ICCAT statistical correspondent for Trinidad and Tobago.

2.3 Logbook system

A logbook system is presently in place as stipulated in the Highseas Fishing Regulations, 2003, paragraph 6. Information is recorded daily on sheets provided by the Fisheries Division and is sent to the division for analysis. The logbooks capture information such as the position (lat, long) of the vessel, date, catch and effort (weight, species, hooks) and size (length frequency) data.

2.4 VMS System

St. Vincent and the Grenadines utilizes an internet version of vessel position monitoring. This can display the reporting positions of each vessel on a daily basis. The program utilizes the Inmarsat C, Argos and Fax systems. The vessel positions are downloaded at least twice per day although information can be downloaded up to five times per day. The text details are exported to Excel where the positions are saved for future use.

2.5 Data storage

Presently, data are being stored in the Fisheries Database CARIFIS (CARICOM Fisheries Information system) and excel. Two network computers are used to store data on fishers, vessels, catch and effort and other relevant fisheries data.

2.6 Local statistics

In 2010 approximately 200 metric tons (t) of tuna and tuna-like species were landed at landing sites around St. Vincent and the Grenadines. Skip jack tuna (44.4 t), yellowfin tuna (34.7 t), Mahi Mahi (64.43 t) and wahoo (39.67 t) were the species of great importance. There was a significant decrease of una and tuna-like species by the local artisanal fishing fleet for 2010 when compared to 2009. There was an overall decrease of 60.9 t that is approximately a 30.4% decrease.

2.7 High seas statistics

The total reported landings of 1,569.658 t for 36 vessels fishing on the high seas in 2010 was less than 2,987.713 t, for 31 vessels fishing in the Atlantic in 2009 (Task II). In particular, landings for yellowfin tuna decreased substantially by 1,410 t. In 2010, 819.494 t of yellowfin tuna were landed as compared to the 2,230 t in 2009. Swordfish also decreased substantially in 2010 by 32.8 t when compared with 2009. Albacore, kingfish, bigeye tuna and skipjacks showed some increase in landings.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Legislation

The Fisheries Division operated under the Ministry of Agriculture, Lands and Fisheries and is responsible for the overall management and development of the fisheries sector. The Division has the following pieces of legislation to assist in this task:

- The Maritime Areas Act 0f 1983
- The Fisheries Act, No 1 of 1986
- The Fisheries Regulations, No 8 of 1987 to the Act No 1 of 1986
- The Fisheries Processing Regulations of 2001
- The High Seas Fishing Act of 2001
- The high Seas Fishing Regulations, November 2003

3.2 Compliance

3.2.1 Moratorium

The moratorium on the registration of new high seas fishing vessels established in June 2001 is still in effect. This moratorium prevents further increased in the overall tuna fishing effort in the ICCAT Convention Area by St. Vincent and the Grenadines fishing vessels. The measure is also contributing to the effort limitation regulations in effect for yellowfin and bigeye tunas and the catch limitations for other species.

3.2.2 Licensing of high seas vessels

To date, high seas fishing vessels are in compliance with the specific terms and conditions as stipulated by section 6 of the High Seas Fishing Regulations of 2003.

3.2.3 IUU declaration

In July 2010, at the 2nd Special Meeting of CFRM Ministerial Council, The Castries Declaration on Illegal, Unreported and Unregulated Fishing (IUU) was passed. St. Vincent and the Grenadines is party and committed to this declaration.

3.2.4 Training

The ICCAT statistical correspondent for St. Vincent and the Grenadines is currently on study leave pursuing studies in Ocean Governance, which upon completion of his studies will enhance the legislative, management, monitoring and enforcement mechanism of the high seas fishing fleet, which will ensure that high seas vessels are fully compliant with management initiatives taken by ICCAT

ANNUAL REPORT OF TRINIDAD AND TOBAGO
RAPPORT ANNUEL DE TRINIDAD ET TOBAGO
INFORME ANUAL DE TRINIDAD Y TOBAGO

Louanna Martin[1]

SUMMARY

*As in 2009, the Trinidad and Tobago catch of tuna and tuna-like species for 2010 was estimated at just over 4 300 t. Serra Spanish mackerel (*Scomberomorus brasiliensis*) again was the most abundant species in the catch. The fleet of operational longliners decreased to 24 in 2010 from 25 in 2009, however, there has been an expansion of the fleet and currently there are 31 operational longliners. The number of these vessels that are over 24 m LOA is four. Significant advances have been made with respect to the implementation of the Vessel Monitoring System (VMS) pilot programme for the monitoring of these longliners. The programme is expected to be operational by December 2011. Trinidad and Tobago also continues to work towards finalising the terms of its request for assistance from ICCAT with respect to the implementation of a data collection program to generate Task II size data for the major tuna and tuna-like species. Work on the gillnet mesh-size experiment-mentioned in the previous Annual Report, which began in early to mid-2011, has halted as a result of the departure of the responsible staff member. The study of the recreational fishery was completed in early 2011. New fisheries management legislation which will strengthen Trinidad and Tobago's capability to meet its international fisheries management obligations and which provides for management of the recreational fishery is expected to be laid in Parliament in 2012. The inspection of landings of the semi-industrial longline fleet, the implementation of the Statistical Document Programs (SDPs) and the monitoring of operations at the transshipment ports in Trinidad are ongoing.*

RÉSUMÉ

*À l'instar de 2009, la prise de thonidés et d'espèces apparentées réalisée par Trinidad et Tobago a été estimée à 4.300 t au titre de l'année 2010. Le thazard serra (*Scomberomorus brasiliensis*) constituait une fois de plus l'espèce la plus abondante de la prise. La flottille de palangriers opérationnels a diminué en 2010, passant de 25 unités en 2009 à 24 unités ; cependant, la flottille a connu une augmentation et compte actuellement 31 palangriers opérationnels. Parmi ces navires, quatre navires mesurent plus de 24 mètres de longueur hors-tout. D'importants progrès ont été réalisés en ce qui concerne la mise en œuvre du programme pilote de système de surveillance des navires (VMS) aux fins du suivi de ces palangriers. Il est escompté que le programme soit opérationnel d'ici décembre 2011. Trinidad et Tobago poursuit également à œuvrer à la finalisation des termes de sa demande d'assistance de l'ICCAT afin de mettre en œuvre un programme de collecte des données en vue de générer des données de taille de Tâche II des principaux thonidés et espèces apparentées. Il a été mis un terme aux travaux appliqués à une expérience portant sur la taille du maillage des filets maillants, mentionnés dans le rapport annuel précédent, réalisés au début jusqu'à la mi-2011, en raison du départ du responsable de l'équipe. L'étude portant sur la pêcherie récréative a été finalisée au début de l'année 2011. Il est escompté qu'une nouvelle législation en matière de gestion des pêcheries, qui renforcera la capacité de Trinidad et Tobago de remplir ses obligations internationales en la matière et qui portera sur la gestion de la pêcherie récréative, soit soumise au parlement en 2012. L'inspection des débarquements de la flottille palangrière semi-industrielle, la mise en œuvre des Programmes de documents statistiques (SDP) et le suivi des opérations de transbordement au port à Trinidad sont en cours.*

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RESUMEN

Al igual que en 2009, la captura de Trinidad y Tobago de túnidos y especies afines para 2010 se estimó en algo más de 4.300 t. La serra (Scomberomorus brasiliensis) *fue una vez las especies más abundante en la captura. La flota de palangreros operativos descendió pasando de 25 en 2009 a 24 en 2010. Sin embargo hubo una expansión de la flota y actualmente hay 31 palangreros operativos. De estos buques, sólo cuatro tienen una eslora superior a 24 m. Se han producido avances importantes en la implementación del Sistema piloto de seguimiento de buques para el seguimiento de estos palangreros. Se prevé que el programa esté operativo antes de diciembre de 2011. Trinidad y Tobago también sigue trabajando en la finalización de los términos de la solicitud de asistencia de ICCAT para la Implementación de un programa de recopilación de datos para generar datos de talla de Tarea II para los principales túnidos y especies afines. Los trabajos del experimento sobre tamaños de malla mencionados en el informe anual anterior y que se habían desarrollado desde comienzos a mediados de 2011, se detuvieron debido a la partida del miembro responsable del personal. El estudio sobre pesquerías de recreo se completó a comienzos de 2011. Se prevé que en 2012 se presenten ante el Parlamento nuevas legislaciones de ordenación de las pesquerías que reforzarán la capacidad de Trinidad y Tobago a la hora de cumplir sus obligaciones internacionales en lo que concierne a la ordenación de pesquerías y que establecerán una ordenación para las pesquerías de recreo. Se están realizando inspecciones de los desembarques de la flota de palangre semi-industrial, se están implementando los Programas de Documento Estadístico (SDP) y se está procediendo al seguimiento de las operaciones en los puertos de transbordo de Trinidad y Tobago.*

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The Trinidad and Tobago catch of tuna and tuna-like species for the year 2010 was estimated, from the landings of commercial vessels and all of the major game fishing tournaments held, at 4 333 t. As has also occurred in the previous few years, Yellowfin tuna (*Thunnus albacares*), was by far the most abundant species in the catch of the longliners.

The fleet of longliners continues to increase. Currently there are 31 operational vessels; an increase from the 25 and 24 vessels that were operational in 2009 and 2010 respectively. Four of the operational longliners are over 24 m LOA. The fleet of artisanal vessels has remained relatively stable in size.

Section 2: Research and Statistics

Trinidad and Tobago is continuing its work on concluding an agreement with ICCAT with regard to securing ICCAT's assistance to implement a data collection program to generate Task II size data for the major tuna and tuna-like species.

The aggregation of the catches of Atlantic blue marlin and Atlantic sailfish by the artisanal fleet in the data collection system is currently being addressed. Because the two species are commonly known by a single local name data collectors are being re-trained with respect to the correct recording of the species names.

The study of the recreational fishery in Trinidad which was undertaken through the collaborative efforts of the University of the West Indies, Centre for Resource Management and Environmental Studies (CERMES) and the Fisheries Division, Ministry of Food Production, Land and Marine Affairs, has been completed. Publication of a paper is expected in the coming year.

The gillnet mesh-size experiment to examine the ecological and economic impacts of an increase in the most popular mesh size currently utilized by the artisanal fleet in Trinidad to catch pelagic species, was initiated in April 2011. Soon, thereafter, however, the responsible member of staff terminated employment with the Fisheries Division. Replacement personnel are yet to be identified. The results of the experiment are to be utilised in facilitating the transition from the use of the current 3.75 inches (9.5 cm) stretched mesh to 4.25 inch (10.8 cm) stretched mesh as prescribed by the law.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

New legislation governing fisheries management in Trinidad and Tobago is expected to be laid in Parliament in 2012. The (draft) Fisheries Management Bill 2011 has recently undergone a process of review by a Cabinet-appointed committee of experts and is currently the subject of public consultations. The new legislation will strengthen Trinidad and Tobago's capability to meet its international fisheries management obligations and includes provisions for managing the recreational fishery.

Trinidad and Tobago longliners greater than 24 m LOA will be outfitted by December 2011 with Vessel Monitoring System (VMS) devices under a pilot programme being implemented by the Fisheries Division. Monitoring of the vessels will be done by the Division's Fisheries Monitoring, Surveillance and Enforcement Unit (FMSEU). It is intended that the time frame over which the programme will be implemented will serve as a transition period during which knowledge will be gathered and documented to facilitate efficient functioning of the national system to be implemented thereafter.

The Castries (St Lucia) Declaration on Illegal, Unreported and Unregulated Fishing, the most important Caribbean initiative to date addressing IUU fishing, was approved by the Ministerial Council of the Caribbean Regional Fisheries Mechanism at its Second Special Meeting held on 28 July 2010. The Declaration indicates the resolve of the CRFM Member States to ensure that nationals do not support or engage in IUU fishing and recognises the responsibilities of Flag State, Port State and Coastal State as well as the role of market related measures in addressing the problem.

Section 4: Inspection Schemes and Activities

The FMSEU, which at present is critically short staffed, is in the process of recruiting staff members. It is expected that the new personnel will be hired by early 2012. The existing staff members of the Unit are primarily engaged in the inspection of landings of the semi-industrial longline fleet and the implementation of the Statistical Document Programs (SDPs).

Transshipment port monitoring is ongoing at the two port locations in Port of Spain and Chaguaramas. Foreign fishing vessel use of the transshipment ports is monitored particularly in relation to the conduct of IUU fishing activities. Landings data are also collected.

ANNUAL REPORT OF TUNISIA
RAPPORT ANNUEL DE LA TUNISIE
INFORME ANUAL DE TÚNEZ

Hechmi Missaoui

SUMMARY

*Tuna fishing is regulated by law No. 94-13 of 31 January and by the texts of implementation, principally by the Decree of 28 September 199*5 *on the exercise of fishing and the Decree of 13 April 2010 amending the Decree of 21 May 2008 relative to the organization of the fishing of bluefin tuna. The Decree of 13 April 2010 included the provisions of paragraph 20 of Recommendation 08-05 establishing the fishing period and paragraph 27 establishing the minimum size of catch. In 2010 within the framework of compliance of Recommendation 08-05 and 09-06, meetings on awareness were organized by the competent fishing and aquaculture authority for boat owners and fattening farm operators. Likewise, and in compliance with the national observer programme onboard tuna vessels, administration and research staff were selected to carry out this task. To this aim, a Ministerial Decision No. 1660, dated June 1, 2010 was enacted as regards to this and workshops were carried out in the presence of representatives of the competent authority and observers. The total catch of bluefin tuna in 2010 amounted to 1,043.580 tonnes (26,179 fish). Of these catches 99,48 % of these catches were placed in cages in fattening farms and then commercialised mainly in Japan. 44.200 t of bluefin tuna was imported and placed in cages, i.e. 4,08% of the total amount placed in cages.*

RÉSUMÉ

*La pêche des thonidés est régie notamment par la loi N° 94-13 du 31 janvier et ses textes d'application : l'arrêté du 2*8 *septembre 199*5 *portant sur l'exercice de la pêche et l'arrêté du 13 avril 2010 amendant l'arrêté du 21 mai 2008 et relatif à l'organisation de la pêche du thon rouge. L'arrêté du 13 avril 2010 a inclus les dispositions du paragraphe 20 de la Recommandation 08-05 fixant la période de pêche et le paragraphe 27 sur la taille minimale de capture. En 2010, dans le cadre de l'application des dispositions des Recommandations 08-05 et 09-06, des réunions de sensibilisation ont été organisées par l'autorité compétente de la pêche et de l'aquaculture au profit des armateurs et des opérateurs des fermes d'engraissement. De même, et en application du programme d'observateurs nationaux à bord des thoniers, des cadres de l'administration et de la recherche ont été sélectionnés pour accomplir cette mission. Pour ce faire, une décision ministérielle N°1660 du 01 juin 2010 a été décrétée à ce sujet et des ateliers de travail ont été réalisés en présence de représentants de l'autorité compétente et des observateurs. Les captures totales du thon rouge en 2010 ont atteint 1.043,580 tonnes (26.179 pièces). 99,48 % de ces captures ont été mises en cage dans les établissements d'engraissement puis commercialisées principalement au Japon. La quantité de thon rouge importée et mise en cage a atteint 44,200 tonnes, soit 4.08% de la quantité totale mise en cage.*

RESUMEN

La pesca de túnidos se rige principalmente por la ley nº 94-13 del 31 de enero y sus textos de aplicación: el decreto del 28 de septiembre de 1995 sobre el ejercicio de la pesca y el decreto del 13 de abril de 2010 enmendando el decreto del 21 de mayo de 2008 y relativo a la organización de la pesca de atún rojo. El decreto del 13 de abril de 2010 ha incluido las disposiciones del párrafo 20 de la Recomendación 08-05 que fijan el periodo de pesca y del párrafo 27 sobre la talla mínima de captura. En 2010, en el marco de la aplicación de las disposiciones de las Recomendaciones 08-05 y 09-06, la autoridad competente de pesca y acuicultura ha organizado reuniones de sensibilización para los armadores y operadores de instalaciones de engorde. Igualmente, y en aplicación del programa nacional de observadores a bordo de atuneros, se ha seleccionado personal de la administración y la investigación para cumplir esta misión. Para hacerlo, se publicó la decisión ministerial nº 1660 del 1 de junio de 2010 a este respecto y se han realizado talleres de trabajo en presencia de representantes de las autoridades competentes y de los observadores. Las capturas totales de atún rojo en 2010

alcanzaron las 1043,580 t (26179 ejemplares). El 99,48 % de estas capturas se ha introducido en jaulas en las instalaciones de engorde y después se ha comercializado, principalmente a Japón. La cantidad de atún rojo importado e introducido en jaulas ha alcanzado las 44.200 t, es decir un 4,08% de la cantidad total introducida en jaulas.

Ière Partie (Informations sur les pêcheries, la recherche et les statistiques)

Chapitre 1 : Information annuelle sur les pêcheries

En 2010, la flottille de pêche de thon rouge immatriculée en Tunisie se compose de 42 thoniers qui exercent la pêche à la senne. Ces navires mesurent entre 18 m et 38.13 m de longueur hors tout et fonctionnent avec des moteurs de 286 CV à 1450 CV. Parmi ces thoniers, 11 navires ont des coques construits en acier, tandis que 11 navires sont fabriqués en bois.

Toute la flottille thonière a réalisé des sorties de pêche pour cibler le thon rouge. Il convient de noter qu'en dehors de la saison de pêche au thon rouge, certains effectuent des sorties en mer pour la pêche de Bonitou (*Auxis rochei*), l'auxide (*Auxis thazard*), la thonine commune (*Euthynnus alletteratus*). La plupart des thoniers ont une autonomie importante. Certains peuvent rester jusqu'à deux semaines en mer et ont un rayon d'activités important par rapport à la côte.

La prise totale préliminaire déclarée à titre provisoire des thonidés et d'espèces apparentées s'élevait à 7.468 tonnes, soit une baisse de 13,21% par rapport au 8,605 tonnes de l'année 2009. La baisse des quotas est à l'origine de la diminution du volume de thon rouge.

Les prises de thon rouge ont totalisé 1.043 tonnes. Tous les thoniers tiennent des registres officiels de bord, des carnets de pêche et des documents de capture. Ces documents permettent de réaliser les analyses de capture par unité d'effort, par sortie de pêche et par lieu de pêche.

On a recensé en 2010 75 sorties de pêche réalisées par des thoniers qui ont débarqué 1.043 tonnes de thon rouge, ce qui correspond en moyenne à 13,9 tonnes par sortie.

La capture moyenne des prises par navire s'élève à 27,4 tonnes contre 46 tonnes pendant la saison de 2009. L'estimation du poids moyen des pièces capturées de thon rouge s'élève à 39,9 kg.

Chapitre 2 : Recherche et statistiques

Les établissements d'engraissement en nombre de quatre situés au large de la région de Mahdia et Sousse et les ports de débarquement en nombre de 10, sont les lieux permettant de recevoir les captures des senneurs. Parmi les 1.043 tonnes de thon rouge capturés, 1.038 tonnes, soit 99,5 % sont retenus vivants dans les cages d'engraissement, le reste est vendu sur le marché local.

Tous les thonidés et espèces apparentées capturés par les thoniers sont exportés ou vendus sur le marché. Le thon rouge vendu localement ou exporté est accompagné du document statistique exigé par l'ICCAT.

L'administration tunisienne de pêche utilise les données consignées dans les carnets de pêche, les documents de capture et les journaux de pêche afin d'obtenir les statistiques nationales de prise et d'effort des pêcheries. Ces documents sont conçus selon les exigences de l'ICCAT et sont diffusés sous forme de carnets avant le démarrage de la campagne.

Des réunions de sensibilisation ont été menées à ce sujet pour familiariser les professionnels à remplir ces documents.

En 2010, la gestion des pêcheries de thon rouge a commencé d'introduire certaines informations sur la pêcherie thonière dans le système VMS. Ces informations concernant notamment des données sur les navires (longueur, puissance motrice, tonnage, les lieux de pêche…) peuvent être recueillies électroniquement à l'entrée des navires aux ports de pêche. Ainsi, l'administration sera dans les prochaines années en mesure de mener à bien une analyse plus utile des données.

A ce sujet, il est à noter que tous les navires de pêche de thon rouge et les navires de soutien sont suivis par VMS. Près de 10.000 messages ont été envoyés en 2010 à l'ICCAT.

En 2010, un important effort de recherche sur le suivi de la croissance du thon rouge au niveau des fermes d'engraissement a été lancé. Cet effort a continué en coopération avec les scientifiques des institutions spécialisées, lequel prévoie notamment la collecte d'épines, des gonades aux fins des études de détermination de l'âge et de la reproduction.

D'autres travaux de recherche sur la même espèce ont été aussi réalisés en 2010 et ont inclus notamment :

- le traitement des informations issues des opérations d'échantillonnages dans les fermes d'engraissement ;
- l'étude technique des engins de pêche employés par les thoniers senneurs ;
- l'estimation du taux de croissance de thon rouge en captivité dans les établissements d'engraissement par les méthodes mathématiques (relation taille-poids) et l'emploi des pièces calcifiées (otolithométrie et scalimétrie).

Chapitre 3 : Mise en œuvre des mesures de conservation et de gestion de l'ICCAT

La législation relative à l'ICCAT mise en place en 2009 a fait partie des réglementations des pêcheries en 2010. Le texte y afférent promulgué le 13 avril 2010 interdit la capture, le débarquement, le stockage et l'écoulement de thon rouge pesant moins de 30 kg de poids total. Le non respect de cette réglementation peut entraîner une amende d'un montant maximum de 10 milles Dinars, l'emprisonnement pendant un an ou les deux peines.

Le contrôle des poids individuels des poissons est assuré par les observateurs à bord et les gardes-pêche au niveau des ports de débarquement. Le contrôle au niveau du commerce de thon rouge est assuré par la douane et les services vétérinaires.

ANNUAL REPORT OF TURKEY
RAPPORT ANNUEL DE LA TURQUIE
INFORME ANUAL DE TURQUÍA

Ministry of Food, Agriculture and Livestock,
General Directorate of Fisheries and Aquaculture[1]

SUMMARY

During the course of 2010, the total catch of tuna and tuna-like fishes amounted to 10,546 t. In 2010, Turkey's total catch of bluefin tuna, albacore, Atlantic bonito and swordfish were 409.377 t, 402 t, 9,401 t, and 334 t, respectively. The entire bluefin tuna catch was caught by purse seiners, the majority of which have an overall length 30-50 m and a tonnage of 200-300 GRT. The fishing operation was conducted intensively off Antalya Bay and in the region between Antalya Gazi Paşa and Cyprus. In the Mediterranean, fisheries were conducted in the region between Cyprus-Turkey and in the region Cyprus-Syria. The highest bluefin tuna catch was obtained in June. Recommendations and resolutions imposed by ICCAT were transposed into national legislation and implemented. All conservation and management measures regarding bluefin tuna fisheries and farming are regulated by national legislation through notifications, considering ICCAT's related regulations. The Fisheries Information System has been updated in order to meet the requirements of data exchange at the national and regional level. Major research activities in 2010 focused on albacore and swordfish.

RÉSUMÉ

Au cours de 2010, la prise totale de thonidés et d'espèces apparentées s'est élevée à 10.546 t. En 2010, la prise totale turque de thon rouge, de germon, de bonite à dos rayé et d'espadon a totalisé 409,377 t, 402 t, 9.401 t, et 334 t, respectivement. Toute la prise de thon rouge a été réalisée par des senneurs, dont la plupart avait une longueur hors-tout de 30 à 50 m et entre 200 et 300 TJB. Les opérations de pêche se sont déroulées intensivement dans la baie d'Antalya et dans la région située entre Antalya (Gazi Paşa) et Chypre. En Méditerranée, les pêcheries se sont déroulées dans la région située entre Chypre et la Turquie et entre Chypre et la Syrie. Le plus grand volume de prise de thon rouge a été réalisé au mois de juin. Les recommandations et résolutions imposées par l'ICCAT ont été transposées dans la législation nationale et mises en œuvre. Toutes les mesures de conservation et de gestion relatives aux pêcheries et à l'engraissement du thon rouge sont réglementées par la législation nationale, à travers des notifications, qui tient compte des réglementations pertinentes de l'ICCAT. Le Système d'information des pêcheries a été actualisé afin de respecter les exigences en matière d'échange de données au niveau national et régional. En 2010, les principales activités de recherche se sont centrées sur le germon et l'espadon.

RESUMEN

Durante el transcurso de 2010, la captura total de túnidos y especies afines ascendió a 10.546 t. En 2010, las capturas totales turcas de atún rojo, atún blanco, bonito y pez espada ascendieron a 409,377 t, 402 t, 9.401 t y 334 t, respectivamente. Toda la captura de atún rojo la realizaron cerqueros que en su mayoría tienen una eslora total de 30-50 m y un tonelaje de 200-300 TRB. Las operaciones de pesca tuvieron lugar de forma intensiva en aguas de la bahía de Antalya y en la región entre Antalya Gazi Paşa y Chipre. En el Mediterráneo, las pesquerías se llevaron a cabo en la región entre Chipre y Turquía y en la región Chipre-Siria. La mayor cantidad de capturas de atún rojo se obtuvo en junio. Las recomendaciones y resoluciones de ICCAT han sido traspuestas a la legislación nacional e implementadas. Todas las medidas de conservación y ordenación respecto a la pesca y engorde de atún rojo están reglamentadas en la legislación nacional mediante notificaciones, que tienen en cuenta las regulaciones

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relacionadas de ICCAT. El sistema de Información sobre Pesquerías ha sido actualizado para que cumpla los requisitos de intercambio de datos a nivel nacional y regional. En 2010 las principales actividades de investigación se centraron en el atún blanco y pez espada.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In 2010 the total catch of tuna and tuna-like fishes (including small tunas and swordfish) was 10,546 t, an increase as compared to 2009.

1.1 Albacore

Albacore, which historically used to be by-catch from the bluefin tuna fishery in the past, has increasingly been caught as the target species in recent years. The catch quantity of albacore has increased remarkably from 208 t in 2008 to 631 t in 2009 (**Table 1**). The fishing season for this species was concentrated between May and July in the eastern Mediterranean Sea. The total catch in 2009 was 631 t.

1.2 Atlantic bonito

Bonitos play a major role in Turkish fishery. Bonito fishing is intensively carried out in Black Sea and Marmara Sea using purse seines, gillnets, encircling nets and hand lines. The total catch in 2010 was 9,401 t. There has been a considerable decrease in catch quantity since 2005.

1.3 Bluefin tuna

Turkey's total catch of bluefin tuna in 2010 was 409.377 t, a decrease compared to the previous year (665 t in 2009). Almost all of the catch was caught by purse seiners. Almost all of the total purse seine catch was transferred to cages at the farming facilities authorized by ICCAT for fattening purposes.

The Ministry of Food, Agriculture and Livestock (former MARA) issued bluefin tuna fishing licenses to 17 fishing vessels in 2010, in accordance with domestic legislation as well as relevant ICCAT regulations. The majority of the bluefin tuna purse seiners had an overall length of 30-50 m and a tonnage between 200-300 GRT. All these fishing boats were equipped and monitored with a Vessel Monitoring System (VMS). In addition to the fishing vessels, 44 vessels were licensed as tug boats transporting bluefin tuna cages. The total number of bluefin tuna purse seiners by tonnage for the period 2003-2010 is presented in **Table 2**.

The bluefin tuna fisheries in 2010 started on 16 May and ended on 14 June. The fishing operation was conducted intensively off the Antalya Bay and in the region between Antalya Gazi Paşa and Cyprus. In the Mediterranean, fisheries were conducted in the region between Cyprus-Turkey and in the region Cyprus-Syria. The highest bluefin tuna catch amount was obtained in June. While the harvesting in bluefin tuna farms in the Mediterranean Sea was conducted in October, this was conducted more in December and less in early January for the bluefin tuna farms in the Aegean Sea**.**

1.4 Swordfish

The swordfish fishery in Turkey is carried out in Aegean Sea and eastern Mediterranean Sea. While swordfish fishing is carried out using harpoon in the northern Aegean Sea, it is carried out by longlines in the eastern Mediterranean Sea. The total catch amount in 2009 was 301 t. Compared with previous years, the fishery trend has not changed since 2000.

1.5 Other tunas

The bullet tuna and little tunny fishery is carried out in Aegean Sea and eastern Mediterranean Sea using purse seines, gill nets and encircling gillnets. In 2010, the total catches of little tunny and bullet tuna were 1,046 t and 1,081 t, respectively, with a considerable decrease as compared to the previous year.

Section 2: Research and Statistics

2.1 Research

2.1.1 Research on species other than bluefin tuna

In 2009-2010, for the analyses of age and growth of the albacore, biological samples were obtained from the gillnet fishery. Albacore (*Thunnus alalunga*) and swordfish (*Xiphias gladius*) are target species in this fishery. Furthermore, common dolphinfish (*Coryphaena hippurus*), bluefin tuna (*Thunnus thynnus*), ocean sunfish (*Mola mola*), bullet tuna (*Auxis rochei*), litlle tunny (*Euthynnus alletteratus*) and Mediterranean spearfish (*Tetrapturus belone*) are being caught as by-catch. A total of 155 specimens of albacore were examined. The fork length of albacore ranged from 57 cm to 94 cm, with nearly one-third of the fish (33.3%) in the 75-80 cm range, and the mean was 71.7 ± 0.48 cm (Ceyhan et al 2011).

Another study was carried out for swordfish covering some main fishing ports along the Turkish coasts between August 2008 and April 2010. In this study, the characteristics of swordfish fleet, fishing gears and length distribution and the length-weight relationship of swordfish were examined. In the study, a total of 1203 swordfish were measured. Length frequency indicated that the length distribution of swordfish ranged from 51 to 242 cm. The average lengths according to fishing gears were 140.8±2.8cm for gill netting (GN), 85.9±1.3 for longlining (LL) and 81.3±07 cm for purse seining (PS). 65% of fish had a LJFL less than 80 cm and LL and PS were responsible for this phenomenon (Akyol and Ceyhan 2011).

Two research programs were conducted for bullet tuna in Turkish waters. One aims to identify the age and growth parameters of bullet tuna in Turkish waters and the other aims to identify the age and growth parameters of bullet tuna in Turkish waters.

In the former study, a total of 186 dorsal fin spines obtained from the bullet tuna specimens were analyzed for ageing and growth studies. The fork length of the aged individuals ranged from 34 to 48 cm for males and from 35 to 46.5 cm for females. Fish ages ranged 1 to 5 years and the mean lengths by age were calculated for both sexes. Growth parameter estimates were calculated from 150 cut spine sections which provided readable growth annuli by sex (Kahraman et al 2011).

In the latter study, a total of 216 bullet tunas, 110 males (50.93%) and 106 females (49.07%), from the Turkish Mediterranean coasts were sampled monthly between December 2008 and December 2009. The sex ratio was 1:1.04. A total of 106 ovaries were obtained from the females and these ovaries were histologically examined to determine the reproductive conditions and developmental stages of oocytes. The gonado-somatic index (GSI) values calculated for females indicated that spawning generally occurred between May and September. The most intensive spawning period was observed between June and August. A total of 40 females collected between May and September were sexually mature (Kahraman et al 2010).

2.1.2 Bluefin tuna research

Some research is being carried out by the Istanbul University Faculty of Fisheries concerning age and growth, reproduction biology, determination of diet composition, determination of reproduction area, tagging and genetics of bluefin tuna.

AZTI-Technalia and Istanbul University signed a protocol for 2011 for sampling surveys and in this respect, during the harvesting period in 2011, 150 bluefin tuna will be sampled for age and genetic analysis. Between 21-24 June 2011 a tuna larvae survey was conducted, and the 83 larvae obtained were sent to AZTI-Technalia.

2.2 Statistics

During the bluefin tuna fishing season, daily bluefin tuna data were collected and assessed at the Ministry of Food, Agriculture and Livestock to determine and pre-announce the closure time to the fishing vessels. Task I and Task II data were regularly reported to the ICCAT Secretariat.

2.3 Fisheries information system

Turkey has continued to implement a Fisheries Information System (FIS) to improve its fisheries management system through collection and analyzing fishery data. Technical works to update and integrate the current vessel

registry system into FIS have completed. FIS comprises data on landings, logbooks, vessel monitoring system, sale notes, observer and control forms, first buyer notification, and storage notification.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

In deference to relevant ICCAT conservation and management measures, the Ministry of Food, Agriculture and Livestock introduced the Amended Notification on Regulating Commercial Fishing at Seas and Inland Waters, covering the period 2009-2012, in order to ensure more sustainable fishing activities, improved quality for fishing products, and better conservation of fisheries resources. Essential regulations on the bluefin tuna and swordfish fisheries were directly transposed from current and applicable ICCAT Recommendations adopted by the Commission.

Fishing for tunas and tuna-like species, bluefin tuna fattening and trade activities were continued to be regulated by the Ministry of Food, Agriculture and Livestock through the above-mentioned Notification based on Fisheries Law-1380 as well as the Ministerial Communication on Tuna Fishing, the Ministerial Communiqué on Aquaculture Production (Fattening) of Bluefin Tuna and the Ministerial Communiqué Concerning the Foreign Trade of Bluefin Tuna.

The Ministerial Communication of bluefin tuna fisheries is issued every year before the commencement of the fishing season. The rules and the reporting forms which are the obligations of the bluefin tuna fishing vessels, such as: Bluefin Tuna Fishing License, Bluefin Tuna Transfer License, Fishing Notification Form, Certificate of Vessel's Origin, Dead Tuna Notification Form, Duties of Supervisors, Technical Specifications of Vessel Monitoring Device, Landing Ports are announced by Ministerial Communications.

3.1 Closed seasons and catch limits

3.1.1 Bonito

Bonito fishing by all gear types, including stake nets, is banned between 1 April and 31 August throughout the territorial waters. However, longlining for bonito is allowed between 15-31 August. The fishery of bonito smaller than 25 cm is prohibited (Official Gazette 10.07.2010-No.27637).

3.1.2 Bluefin tuna

It is obligatory to hold a special fishing/transport permit for a bluefin tuna catching/ other vessel. The authorized fishing period for bluefin tuna by purse seiners has been set from 16.05.2010 to 14.06.2010. However, if the catch quota allocated by ICCAT is exhausted before the closure time, the Ministry of Food, Agriculture and Livestock has the authority to extend the time closure.

The 2011 catch quota for bluefin tuna has been set at 523,559 metric tons. In order to monitor and supervise the fishing quota, the catch amount and location shall be reported to the Ministry of Food, Agriculture and Livestock, particularly by the fax machine of the fishing vessel after each fishing operation.

The vessel owner/skipper of the bluefin tuna fishing vessels shall communicate weekly catch report, including nil catch returns, by e-mail to the Ministry of Food, Agriculture and Livestock. This report shall be transmitted by the latest Monday noon with the catches taken during the preceding week ending Sunday midnight GMT.

Furthermore, quota pursuit has been exercised by the Ministry of Food, Agriculture and Livestock through inspections at farms and a standard weight increase model has been applied for the time period from the date of commencement of the ranching until the date of harvesting.

Vessel chartering has been prohibited. An individual quota system for bluefin tuna catching vessels has been applied.

It is forbidden to land or transfer the caught bluefin tunas to any landing ports other than those designated by the Ministry.

For fishing amounts that have not been submitted to the Ministry although fished in the fishing season, which exceed the allocated catch quota and were caught after the end of the fishing season, the Bluefin Tuna Catch Documentation (BCD) and Health Certificate shall not be issued. If the caught bluefin tuna are live they shall be released and if dead they shall be seized.

The sales of bluefin tuna or bluefin tuna products (except for internal organs) in domestic and overseas shall be forbidden without an accompanying BCD.

The fishing vessels that could not fish their entire individual quota cannot transfer the amount which has not been fished to the next year.

The skipper of the fishing vessel must complete the Bluefin Tuna Catch Documentation (BCD) and the ICCAT Transfer Declaration after transfer operations to a carrier vessel and deliver the documents to the skipper of the carrier vessel. The carrier vessels shall not leave the area without the accompanying documents.

It is obligatory to inform the Ministry about the catch amount and the coordinates of fishing area following each fishing operation.

The Bluefin Tuna Catch Documentation (BCD) and the ICCAT Transfer Declarations shall accompany the product during the transfer operation to a farm or to a specific port. Tug vessels must keep the documents including the time starting for carrying, their position and their routes to final destination, planned arrival time and the amount of bluefin tuna in the cages and to inform MARA before the beginning of the operation. Furthermore, the skipper of tug vessel must provide the recording of transfer operation to tug cages by under-water video camera and maintain records on board.

The transfer and transport of bluefin tuna that originated from other countries cannot be initiated without prior authorization of the origin country.

Transfer operations to farming cages cannot be initiated without the Ministry’s authorization. Farm authorities also must provide the recording of transfer operation from tug cages to farm cages through video cameras under the water and keep the records on board. In addition to these rules, the stocking of bluefin tuna into farms without the correct, factual and validated documents and information is forbidden.

Furthermore, in case of determining bluefin tuna that have been caught by fishing vessels without fishing permission or adequate individual quota or determining bluefin tuna that have been misstated, the fish shall be seized and released.

Finally, following the completion of tugging operations, determining of bluefin tuna in the farms shall be conducted by the Provincial Directorate. In case of determining unrecorded bluefin tuna, the fish in question shall be released (Official Gazette 10.07.2010-No. 27637).

3.1.3 Swordfish

Swordfish fishing by all gear types is banned between 1 October and 30 November throughout the territorial waters.

The catch of swordfish less than 125 cm is prohibited.

It is mandatory for the fishing vessels catching swordfish to obtain a "Fishing Permit" from the Provincial Directorate issuing vessel's license. Applications by the fishermen to acquire a special fishing permit for swordfish is subject to some technical criteria. However, applications by the fishermen can legally be made even until the last day, i.e., 29 November 2011, for this season.

As of 30 November 2011, the special fishing permits to be acquired by fishermen (or to be issued by the Ministry) shall apply to the 2012 fishing season for swordfish. When an application made is approved by the Ministry, the special permit information is simultaneously recorded in the Fisheries Information System (FIS) operated by the Ministry.

Turkey announced its position for elimination of modified driftnet usage in ICCAT Circular #3225/2010. Accordingly, usage of all modified driftnets has been prohibited as from 1 July 2011.

Further, all fishing vessels with the modified driftnets are under obligation to shift their fishing gears in accordance with provisions of Revised Notification No. 2/1 Regulating Commercial Fishing (Official Gazette 31.03.2011-No.27891).

3.1.4 Little tunny, bullet tuna and albacore

Fishing for little tunny and bullet tuna by entangling nets is permitted throughout the fishing season within territorial waters. Purse seiners are allowed to harvest the mentioned species between 15 April and 15 May in specified areas (Official Gazette 31.03.2011-No.27891).

In the Aegean Sea, little tunny and albacore landings are prohibited in certain areas for different reasons, such as the protection of spawning areas and juveniles, protection of artisanal fisheries, etc.

3.2 Length and weight prohibitions

The minimum lengths and weights of the capture fisheries are given in **Table 3**. The catch of bluefin tuna weighing less than 30 kg is prohibited. However, an incidental catch of maximum 5% of bluefin tuna weighing between 10 and 30 kg is authorized (Official Gazette of 31 March 2011-No. 27891).

3.3 Vessel Monitoring System

It is obligatory to equip all bluefin tuna fishing and towing vessels with an operational VMS which has functions established by the Ministry. In any case that there exists a defect in device, at first it is also obligatory to inform the Ministry about the situation and then to submit regular position data to the Ministry.

3.4 Licensing and fishing methods

The use of airplanes or helicopters for the purpose of bluefin tuna spotting is prohibited. Mesh size in the bag part of the bluefin tuna nets shall not be less than 44 mm (Official Gazette 10.07.2010-No. 27637).

It is mandatory for bluefin tuna fishing vessels and bluefin tuna tug boats to obtain a “Bluefin Tuna Fishing License” and a “Bluefin Tuna Tug Vessel License” from the related Provincial Directorate. In addition to these, vessels that tug bluefin tuna cage(s) for farming purposes are obliged to have a “Bluefin Tuna Transfer License” and to notify the Ministry of their location, final destination, planned arrival time, and the amount of product in the cage(s) (Official Gazette 10.07.2010-No. 27637)

The “fishing/transport permit” belonging to vessels that do obey the bluefin tuna fishing rules shall be confiscated and sent to the Provincial Directorate permits in order to be cancelled. Furthermore, every vessel that has permission to fish bluefin tuna shall be obliged to record the data required by the Ministry with regard to the amount of bluefin tuna caught and sold and shall be obliged to obey the rules with regard to implementation (Official Gazette 10.07.2010-No. 27637).

3.5 Observers

In accordance with the Ministerial Communication on bluefin tuna fishing, vessels over than 24 m and less than 24 m that have been permitted to fish bluefin tuna and allocated a catch quota are obliged to accommodate ICCAT Regional Observers during the entire fishing period and to accommodate national observers during 20% of the fishing period, respectively.

Regardless of the fishing vessel size it is obligatory to cover an ICCAT Regional Observer on fishing vessels carrying out joint fishing operations during the fishing season. Also, transfer operations from fishing vessels to a carrier vessel or a transfer operation between two carrier vessels shall be carried out with an accompanying ICCAT Regional Observer.

During the farming operations it is obligatory to cover ICCAT Regional Observers during all transfer operations to farming cages and harvest operations from cages.

Furthermore, it is obligatory to have signed the ICCAT Transfer Declaration forwarded to the skipper of the carrier vessel by the skipper of the catching vessel, to the ICCAT Regional Observer.

The observers reported on the fishing, transfer and towing operations. Information on the amount of bluefin tuna caught was mainly based on estimations through watching slow-motion video recordings of bluefin tuna transferred from the fishing net to the cage.

Section 4: Inspection Schemes and Activities

In 2010, control and at-sea/landing inspections during the bluefin tuna fishing, transfer and caging operations were carried out by the Coast Guard and MARA staff, respectively. In addition to on-site checks/observations during transfer and caging operations, regular inspections were made by MARA staff.

MARA assigned 10 landing ports to ensure the efficiency of inspections of bluefin tuna operations in accordance with relevant ICCAT Recommendation. Those ports and landing points were announced to fishermen and the concerned authorities before the commencement of the fishing season in 2010.

In 2010, Turkey participated in the ICCAT Joint Inspection Scheme with a large number of patrol boats and inspector staff during the bluefin tuna fishing season. During the fishing campaign, 32 vessels were inspected by the Turkish Coast Guard under this scope.

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Table 1. Catches (t) of tunas and tuna-like species (2003-2010).

Species	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Atlantic bonito	6,000	5,701	70,797	29,690	5,965	6,448	7,036	9,401
Bluefin tuna	3,300	1,075	990	806	918	879	665,4	409,4
Swordfish	350	386	425	410	423	386	301	334
Albacore	0	27	30	73	852	208	631	402
Little tunny	0	568	507	1230	785	1,072	1309	1046
Bullet tuna	0	284	1020	1031	993	836	1873	1081

Table 2. The total number of bluefin tuna purse seiners, by tonnage (2003-2010).

Tonnage (as GRT)	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
<50	1	3	1	1	2	2	-	-
51-100	4	1	7	4	2	3	-	-
101-200	7	9	16	8	4	13	5	-
201-300	27	40	50	42	44	50	30	6
301-400	3	7	8	6	7	9	6	1
>400	8	8	14	14	18	21	16	10

Table 3. Length and weight prohibitions, by species.

Species	*Minimum length (cm)*	*Minimum weight (kg)*
Bluefin tuna *(Thunnus thynnus)*		30*
Atlantic bonito *(Sarda sarda)*	25	
Swordfish *(Xiphias gladius)*	125	

* For incidental catch purposes, a maximum of 5% bluefin tuna catch weighing between 10 and 30 kg is authorized (Official Gazette of 31.03.2011-No.27891).

ANNUAL REPORT OF THE UNITEN KINGDOM (OVERSEAS TERRITORIES)
RAPPORT ANNUEL DU ROYAUME-UNI (TERRITOIRES D'OUTRE-MER)
INFORME ANNUAL DE REINO UNIDO (TERRITORIOS DE ULTRAMAR)

SUMMARY

The level of fishing activity of the United Kingdom-Overseas Territories engaged in ICCAT during 2010 has not altered significantly from previous years. The level of catches overall remains modest and in line with quotas, with the focus of the fishing industry being artisanal or sports related, in part due to a short-term reduction in the number of vessels fishing in Bermuda. The UK-Overseas Territories do not have any registered fishing vessels over 20 metres targeting tuna or tuna-like species in the Atlantic.

RÉSUMÉ

Le niveau des activités de pêche menées en 2010 par le Royaume-Uni (Territoires d'outre-mer) dans le cadre de l'ICCAT n'a guère changé par rapport aux années antérieures. En règle générale, le niveau des prises demeure modeste et conforme aux quotas, cette situation étant partiellement due à une réduction à court terme du nombre de navires pêchant aux Bermudes. L'industrie de la pêche est majoritairement représentée par la pêche artisanale ou sportive. Les territoires d'outre-mer du Royaume-Uni ne comptent sur leur registre aucun navire de pêche de plus de 20 mètres ciblant les thonidés ou les espèces apparentées dans l'Atlantique.

RESUMEN

Durante 2010, el nivel de actividad pesquera de los Territorios de Ultramar del Reino Unido que participan en ICCAT no ha experimentado cambios importantes respecto a años anteriores. El nivel de capturas globales sigue siendo modesto en general y se mantiene en el nivel de las cuotas. La industria pesquera se centra sobre todo en las pesquerías artesanales y deportivas, debido en parte a la reducción a corto plazo en el número de buques que pescan en Bermudas. Reino Unido (Territorios de ultramar) no tiene buques pesqueros registrados de más de 20 m de eslora que dirijan su actividad a los túnidos o especies afines en el Atlántico.

Compliance

The United Kingdom Overseas Territories (UK OT) received a Letter of Concern dated 18 January 2011 highlighting deficiencies in the UK OT data submission and seeking clarification on the harvesting of blue marlin. The United Kingdom Overseas Territories responded to the Letter of Concern on 7 March 2011 and 9 June 2011, respectively, which addressed these issues fully.

The United Kingdom Overseas Territories strongly supports the work of the Compliance Committee and believes that its work is essential to conserving the fishing stocks under ICCAT's remit. It is important to note, however, that the Overseas Territories are small islands at various stages of development with limited human and financial resources available. Despite this, progress within the UKOTs continues to be made. This year, Bermuda reports that monitoring of commercial and recreational catches increased while they have also made amendments to their Fisheries Regulations so that they now set out, as a precautionary measure, a minimum legal size of seven pounds for wahoo. The British Virgin Islands has continued with the implementation of its logbook programme and continual monitoring of fishing tournaments which is contributing to better catch reporting and further monitoring systems are being developed.

All applicable ICCAT conservation and management measures are implemented into the national law. Given the low amount of fishing activity there is a limited amount of inspection activity to report. Each territory carries out inspection and compliance monitoring in accordance with domestic national law. There is no new scientific information or data to be submitted in addition to task and compliance data already submitted to ICCAT.

− *BERMUDA*

Part I: (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The number of vessels licensed to fish commercially in Bermuda declined from 203 vessels to 179 vessels in 2010 due to the implementation of new local policies. However, it is expected that these vessels will return to the fishery in the coming year. The number of vessels actively fishing for tuna and tuna-like species remains at about one-third and most of the fishing effort is carried out in the inner 50 km (including two offshore banks) of the Bermuda Exclusive Economic Zone. The active longline vessel fishes further offshore.

The Bermuda domestic fleet is made up predominantly of fiberglass commercial fishing vessels. A small number of vessels are configured for pelagic longlining but only one vessel is currently active. Limited development of longline fishing in Bermuda has meant that quotas for swordfish, albacore tuna and bluefin tuna have not been fully utilized. The small quota allocation for swordfish has hindered development of this sector.

Section 2: Research and Statistics

The total catch of tuna and tuna-like species by the Bermuda domestic fleet in 2010 was approximately 140.5 metric tonnes (t). This represents a decrease in landings of about 22.5 t from the previous year. This can largely be attributed to a decrease in the landings of wahoo year over year. Details of the catch composition are presented in **Table 1**.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The Fisheries Act 1972 and associated regulations can be amended when necessary to implement ICCAT Conservation and Management Measures. Although not stipulated by ICCAT, the Fisheries Regulations were amended in 2010 to include a minimum legal size of seven pounds for wahoo. This was a precautionary measure, based on what is known of the biology of this species, as the wahoo is the most frequently taken pelagic species in Bermuda waters.

Section 4: Inspection Schemes and Activities

Fisheries wardens are responsible for enforcement under the Fisheries Act 1972 and routinely stop local vessels to inspect catches and determine compliance with legislation.

Section 5: Other Activities

Monitoring of commercial and recreational catches increased in 2010. Fish caught during several local fishing tournaments were measured. In addition, thirty logbooks were distributed under the recreational fisher's voluntary logbook scheme.

− *ST. HELENA*

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The main commercially exploited resource are yellowfin, bigeye, albacore and skipjack tunas which are seasonal, and in abundance between February and June each year. Wahoo, mackerel and various species of groundfish make up the bulk of catch throughout the remainder of the year.

All fish from the local commercial fleet are landed daily and delivered within 12 hours of being caught. Fishing is done by reel-rod / pole and line for the local fishermen. No longlining was carried out during the period. Types

of bait used are live, dead and artificial. A maximum of 12 boats fished full-time complementing a crew of 26 persons.

Section 2: Research and Statistics

Fish landings into the Fisheries Corporation over the period January 2010 to December 2010 totalled some 385.04 metric tonnes (t) of fish. Of this amount, 20% of the species consisted of tuna, 4.9% of wahoo, 65% of skipjack, <0.5% of shark, <0.5 of marlin and the rest consisting of various other non-ICCAT species consisting of grouper, conger, cavalley, bullseye, soldier, yellowtail, dorado and filefish.

The main ICCAT species caught by St. Helena in 2010 over a total of 2162 fishing days are given in **Table 2**.

Data of fish catches within the St Helena Exclusive Fishing Zone are submitted to the ICCAT Secretariat on an annual basis.

Part II: (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

ICCAT conservation and management measures are implemented where appropriate under the Fishery Limits Ordinance which makes provision for the regulation of fishing and for other matters connected thereto. Under the Ordinance, fishing by fishing boats, whether St. Helenian or foreign, are prohibited unless authorised by a licence granted by the Governor. A licence under this section will authorise fishing subject to such conditions as appear to be necessary.

Foreign vessels are licensed for longline fishing only; the use or carriage of nets is not allowed within the fishery limits of St. Helena.

There was no take-up of foreign vessel licensing during 2010 although the opportunity to do so still exists. All foreign vessels taking up licenses to fish within St. Helena's EEZ are required to have on board a Vessel Monitoring System as part of the conditions of the license.

Section 4: Inspection Schemes and Activities

Fish landings from the local fleet are made predominantly into the one establishment i.e. the St Helena Fisheries Corporation. The Fisheries Corporation is responsible for providing catch statistics to the Government Directorate of Fisheries. Because of the centralized landings, catches are monitored by staff of the Directorate of Fisheries for control purposes.

Section 5: Other Activities Nil

− TURKS AND CAICOS ISLANDS

Part I (Information on Fisheries, Research and Statistics)

The Turks and Caicos Islands fisheries have been viewed as small in comparison to the Caribbean region. However, the Turks and Caicos Islands are and remain a strong leader in its collection of fisheries data with regards to both the spiny lobster and queen conch. However, with limits within the Department, data collection with regards to scale fish including pelagic species has been limited. However, if there were to be an increase in tourism, the Turks and Caicos Islands would expect to have an increase in the domestic consumption of scale fish.

In terms of export earnings scale fish is not captured for the purpose of export, but instead for the domestic consumption through restaurants and hotels. The potential problem with data collection is that most if not all catch is not landed at licensed processors. There is a "back door" for the sale of scale fish to the local economy. With the collection of data, the Turks and Caicos Islands can attempt to make recommendations for amendments to the regulations for the protection of the various species, while still allowing for the diversification into the fishery.

However, it has become evident that pelagic species are being sought by recreational sport fishers. With limited resources, this sector of the fishery has yet to have data recorded.

Section 1: Annual Fisheries Information

The Turks and Caicos Islands base commercial fishing on the shallow water banks, primarily the Caicos Bank and the Turks Bank. The Mouchoir Bank is considered within the territorial water of the Islands, but used mainly for the purpose of capture of scale fish. The vessels most often utilized in the Turks and Caicos Islands are small retrofitted V-hull boats ranging in length from 18 ft-20 ft with a 85-115 hp out board engines. Less than three trap boats collect lobster and scale fish, while two other vessels are utilized specifically for landing of scale fish with banned reels (i.e. grouper and red fish) with the occasional pelagic fish.

Commercial fishermen from the Turks and Caicos Islands often work more than one fishery at a time. Using only free diving methods with no underwater breather apparatus, fishers are found diving in depths ranging from 3 meters to 30 meters. The normal day for a fisher entails leaving the dock between 7:00 and 8:00 a.m. and return between 4:00 and 5:00 pm, considered a1 boat-day. Commercial fishermen are found to be opportunistic in their catch. In the past few years, fishers have increased their catch of scale fish for the domestic markets. Large vessels with the banned reels (three licensed) have attempted to establish in the local market; however, it has been difficult based on financial constraints and interest of Turks and Caicos Islands Belongers.

Within the past ten years, the commercial fisheries have directly employed an average of 360 fishers per year. In the 2010-2011 fishing season, the number of commercially licensed persons was at 288. Similarly, the number of commercially licensed vessels average 154 licensed vessels but in 2010-2011 there were 131 commercially licensed vessels.

When referring to the catch of scale fish, effort is measured by the number of days at sea. The larger individual boats carry between 5-12 men on the vessel each day. Smaller vessels carry between 1-3 people on board.

Section 2: Research and Statistics

Catch and effort data for scale fish is collected at the landing docks and processing facilities. Fish are measured by standard length, fork length and total length and reported with species name. A weight is collected if time allows. Captains are then interviewed for the number of days at sea, number of crew, location, etc.

Export data for fish are collected for personal export only. Scale fish is not exported on a commercial scale.

The Department of Environment and Coastal Resources (Fisheries Sub-unit) has collected local consumption data of marine products to determine the seafood consumption rate. The data are dated (2004-2005) and not analyzed.

Data on large and coastal pelagic are collected during local fishing tournaments. This data are stored and shared with international monitoring organizations, such as ICCAT and the FAO.

Catch data from confiscated international vessels poaching in the waters of the Turks and Caicos Islands are also monitored. These vessels usually fish on the Mouchoir Bank, and in waters which local fishers do not utilize except in the case of scale fish. By monitoring the catches from these vessels, the Department anticipates the use of these data to assess the status of the fish stocks in these areas.

Part II (Management and Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Currently, there is no export of any ICCAT species, but only local consumption. Landings are recorded, but in limited supply because of limited resources to dedicate to less economically important species.

Section 4: Inspection Schemes and Activities

Based on the limited resources, there has been little achieved in regards to inspection schemes and activities.

Section 5: Other Activities

Nothing to report.

− BRITISH VIRGIN ISLANDS

Part I: (Information on fisheries, research and statistics)

Section 1: Annual Fisheries Information

While the commercial fishing fleet of the Virgin Islands (UK) remained of comparable size to previous years, only one vessel targeted species of ICCAT interest with about the same effort as recent years, accounting for about 1.04 metric tons. This vessel's effort accounted for 62% of the Swordfish (*Xiphias gladius)* catch in 2010. Additional catches were the result of tournaments targeting tuna/tuna-like species, and sport-fishing activity. It noteworthy to mention that the sportfishing vessels were also holders of commercial fishing licences and that all catch were caught and landed locally. (Broader swordfish demand is met from imports from Thailand).

Section 2: Research and Statistics

As is typical, most fishing activity occurred within the inner 50 km and the associated banks of the Virgin Island's Exclusive Economic Zone with vessels seldom venturing further offshore. Details of landings can be found in **Table 3**. During the 2010 fishing season 7.34 metric tonnes of tuna and tuna-like species were locally caught and landed.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The Territory continues its efforts to better utilise its allotted quota with efforts to encourage and enhance the harvesting of the off-shore fisheries. The implemented logbook programme and continual monitoring of fishing tournaments has contributed to better catch reporting and further monitoring systems are being developed.

The VI Fisheries Act, 1997 and VI Fisheries Regulations, 2003, remain the primary legislation setting limits with regard to any fishery, the declaration of any species as a protected species, declaration of any area as a protected area and the granting or refusal to grant licenses with respect to any fishery. The process involves ministerial declaration, based on the advice of the Chief Conservation and Fisheries Officer and consultation with the Fisheries Advisory Committee. This provides a ready framework for compliance with ICCAT management recommendations.

Section 4: Inspection Schemes and Activities

Currently efforts are implemented to inspect vessels and gears of each commercial fishing applicant. Focus is placed primarily on new applicants and random gear inspections of current license holders are attempted though limitations on human capacity greatly limits the frequency of such efforts.

Section 5: Other Activities

Nil.

Table 1. Species composition of the Bermuda domestic fleet catch.

Species	*Weight (t)*
Yellowfin tuna	37.5
Bluefin tuna	0
Bigeye tuna	0.2
Blackfin tuna	9.5
Albacore tuna	0.4
Atlantic black skipjack tuna	3.5
Skipjack tuna	0.2
Wahoo	81
Blue marlin	1
White marlin	0.4
Swordfish (North Atlantic)	2.8
Shark	4
TOTAL	**140.5**

Table 2. Major ICCAT species caught by St. Helena in 2010 (over a total of 2162 fishing days).

Species	*Weight (t)*
Yellowfin tuna	64
Albacore tuna	4
Bigeye tuna	11
Skipjack tuna	250
Shark	<0.5
Marlin	<0.5

Table 3. Summary table of landings of tuna and tuna-like species within the Virgin Islands (UK) during 2009-2010.

Code	*Scientific name*	*Common name*	*Weight (t)*
BLF	*Thunnus atlanticus*	Blackfin tuna	0
YFT	*Thunnus albacores*	Yellowfin tuna	0.5
SWO	*Xiphias gladius*	Swordfish	1.40
WHA	*Acanthocybium solandri*	Wahoo	1.50
KGM	*Scomberomorus cavalla*	King mackerel	0.30
BON	*Sarda sarda*	Atlantic bonito	4.0
SAI	*Istiophoridae albicans*	Sailfish	0
WHM	*Tetrapturus albidus*	White marlin	(2.0 catch and release)
BUM	*Makaira nigricans*	Blue marlin	(4.0 catch and release)
BIL	*Istiophoridae*	Other/unclassified billfish	0
	Thunnus spp.	Other/unclassified tuna	0.3
	Isurus oxyrinchus	Shortfin mako	0
Total landed			**7.34**

ANNUAL REPORT OF THE UNITED STATES
RAPPORT ANNUEL DES ÉTATS-UNIS
INFORME ANUAL DE ESTADOS UNIDOS

U.S. Department of Commerce, NOAA Fisheries[1]

SUMMARY

Total (preliminary) reported U.S. catch of tuna and swordfish, including dead discards, in 2010 was 9,190t, a decrease of about 5% from 9,632 metric tons (t) in 2009. Estimated swordfish catch (including estimated dead discards) decreased slightly from 2,878 t in 2009 to 2,845 y in 2010, and provisional landings from the U.S. fishery for yellowfin slightly decreased in 2010 to 2,648 t from 2,788 t in 2009. U.S. vessels fishing in the northwest Atlantic caught in 2010 an estimated 925 t of bluefin, a decrease of 347 t compared to 2009. Provisional skipjack landings decreased by 65 t to 54 t from 2009 to 2010, estimated bigeye landings slightly increased by about 157 t compared to 2009 to an estimated 673 t in 2010, and estimated albacore landings increased by 140 t from 2009 to 328 t in 2010. In 2010, the United States continued research on several tuna and tuna-like species in several areas such as genetics, age and growth, tagging, habitat utilization, and assessment modeling, among others. The U.S. Atlantic tagging program continued in 2010 and it tagged and released 1,865 billfishes (including swordfish) and 431 tunas during the year. The U.S. Pelagic Observer Program was deployed in 2010 with a target coverage of 8% of the sets of the fleet; however, the expanded observer coverage in the Gulf of Mexico during the bluefin tuna spawning season continued this year observing approximately 58% of the longline sets during this period. The bottom longline observer program was also active from January to December 2010, and a total of 161 hauls on 105 trips were observed. During calendar year 2010, the United States achieved 14.2 percent observer coverage expressed as a proportion of reported sets and 13.9 percent as a proportion of reported hooks in the Atlantic pelagic longline fishery for highly migratory species. In 2010, the United States met its obligations with regard to the implementation of ICCAT's conservation and management measures. Furthermore, the United States takes an ecosystem approach to management of highly migratory species and implements a number of measures go beyond the measures required in ICCAT recommendations. The United States implemented its western bluefin tuna 2010 and 2011 quotas as well as the two-year balancing period for limiting the harvest of bluefin tuna measuring less than 115 cm (45 inches) to 10 percent (by weight) of the U.S. quota. The United States also implemented the reduction in the amount of underharvest that may be carried forward to 2011 (i.e., not to exceed 10 percent of the initial quota allocation). The United States has prohibited all commercial retention of billfish since 1988 and maintains regulations that prohibit all landings of blue and white marlins by any method other than rod and reel. In 2011, the United States implemented the measures for northern swordfish adopted by ICCAT in 2010, including the U.S. catch limit of 3,907 t ww, the provision allowing the United States to catch up to 200 t of its North Atlantic swordfish quota between 5 degrees North latitude and 5 degrees South latitude, and the provision to transfer 25 t to Canada. At present, the Atlantic pelagic longline fishery of the United States typically targeting ICCAT-managed species, such as swordfish and bigeye, albacore, skipjack and yellowfin tunas, is subject to several discrete time/area closures to reduce all bycatch (e.g., undersized swordfish, billfish, etc). Furthermore, pelagic longline vessels may only fish for ICCAT species if they observe strict circle hook and bait restrictions and use approved sea turtle release gear in accordance with release and handling protocols. Effective in May 2011, the United States now requires the use of "weak hooks" by pelagic longline vessels fishing in the Gulf of Mexico to reduce bycatch of bluefin tuna by pelagic longline vessels targeting other species, such as swordfish and yellowfin tuna. The United States submitted its report on the history of U.S. swordfish fishing and development plan on September 15, 2011, pursuant to ICCAT Recommendation 10-02.

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RÉSUMÉ

La prise totale (préliminaire) de thonidés et d'espadon, déclarée par les États-Unis en 2010 (rejets morts y compris) s'est élevée à 9.190 t, soit une diminution de près de 5 % par rapport aux 9.632 t de 2009. La prise estimée d'espadon (rejets morts estimés compris) a légèrement diminué, passant de 2.878 t en 2009 à 2.845 t en 2010, et les débarquements provisoires de la pêcherie américaine d'albacore ont légèrement diminué en 2010 (2.648 t) par rapport à 2009 (2.788 t). Les navires américains pêchant dans l'Atlantique Nord-Ouest ont réalisé, en 2010, une capture estimée de 925 t de thon rouge, soit une diminution de 347 t par rapport à 2009. En 2010, les débarquements provisoires de listao ont diminué de 65 t par rapport à 2009, s'établissant à 54 t. Les débarquements estimés de thon obèse ont légèrement augmenté d'environ 157 t par rapport à 2009 (673 t estimées en 2010) et les débarquements estimés de germon ont augmenté de 140 t par rapport à 2009s'établissant à 328 t en 2010. En 2010, les États-Unis ont poursuivi leurs recherches sur plusieurs espèces de thonidés et d'espèces apparentées dans des domaines tels que la génétique, l'âge et la croissance, le marquage, l'utilisation de l'habitat et des modélisations de l'évaluation, entre autres. Le programme de marquage de l'Atlantique des États-Unis s'est poursuivi en 2010. Dans le cadre de celui-ci, 1.865 istiophoridés (dont des espadons) et 431 thonidés ont été marqués pendant l'année. En 2010, le programme d'observateurs pélagiques des États-Unis ciblait une couverture de 8 % des opérations réalisées par la flottille ; néanmoins, la couverture étendue d'observation dans le golfe du Mexique pendant la saison de la reproduction du thon rouge a été poursuivie cette année et approximativement 58 % des opérations palangrières ont été observées pendant cette période. Le programme d'observateurs de la flottille palangrière de fond a également été actif entre janvier et décembre 2010 et un total de 161 halages et 105 sorties a été observé. Au cours de l'année 2010, les États-Unis ont atteint une couverture par observateurs de 14,2 % exprimée comme proportion des opérations déclarées et 13,9 % exprimée comme proportion d'hameçons déclarés dans le cadre de la pêcherie palangrière pélagique de l'Atlantique ciblant les espèces de grands migrateurs. En 2010, les États-Unis ont rempli leurs obligations vis-à-vis de la mise en œuvre des mesures de conservation et de gestion de l'ICCAT. De surcroît, les États-Unis adoptent une approche écosystémique de gestion des espèces de grands migrateurs et mettent en œuvre des mesures allant au-delà des mesures requises dans les recommandations de l'ICCAT. Les États-Unis ont mis en œuvre leurs quotas de thon rouge de l'Ouest de 2010 et 2011, ainsi que la période d'ajustement de deux ans visant à limiter la capture de thon rouge mesurant moins de 115 cm à 10 % (en poids) du quota des États-Unis. Les États-Unis ont également mis en œuvre la réduction du volume de sous-consommation pouvant être reporté de 2011 (ce report ne pouvant pas dépasser 10 % de l'allocation initiale de quota). Les États-Unis ont interdit la retenue commerciale à bord d'istiophoridés depuis 1988 et maintiennent des réglementations interdisant tous les débarquements de makaires bleus et blancs autrement qu'à la canne et au moulinet. En 2011, les États-Unis ont mis en œuvre les mesures s'appliquant à l'espadon de l'Atlantique Nord adoptées par l'ICCAT en 2010, incluant la limite de capture des États-Unis de 3.907 t ww, les dispositions autorisant les États-Unis à capturer jusqu'à 200 t de leur quota d'espadon de l'Atlantique Nord entre 5 degrés de latitude Nord et 5 degrés de latitude Sud ainsi que les dispositions permettant de transférer 25 t au Canada. À l'heure actuelle, la pêcherie palangrière pélagique de l'Atlantique des États-Unis, ciblant traditionnellement les espèces relevant de l'ICCAT, telles que l'espadon et le thon obèse, le germon, le listao et l'albacore, fait l'objet de plusieurs fermetures spatio-temporelles séparées en vue de réduire toutes les prises accessoires (entre autres, d'istiophoridés et d'espadon sous-taille). De surcroît, les palangriers pélagiques ne peuvent pêcher des espèces relevant de l'ICCAT qu'à la condition de respecter strictement les limitations d'hameçons circulaires et d'appât et d'utiliser des engins de remise en liberté de tortues marines conformément aux protocoles de remise à l'eau et de manipulation. Depuis mai 2011, les États-Unis imposent l'utilisation d'« hameçons faibles » aux palangriers pélagiques se livrant à des opérations de pêche dans le golfe du Mexique afin de réduire les prises accessoires de thon rouge par les palangriers pélagiques ciblant d'autres espèces, telles que l'espadon et l'albacore. Les États-Unis ont soumis leur rapport sur l'historique et leur plan de développement de la pêche de l'espadon le 15 septembre 2011, en vertu de la Recommandation 10-02 de l'ICCAT.

RESUMEN

En 2010, la captura total (preliminar) comunicada estadounidense de túnidos y pez espada, incluyendo los descartes muertos, ascendió a 9.190 t, un descenso de aproximadamente un 5% con respecto a las 9.632 t de 2009. La captura estimada de pez espada (incluyendo la estimación de descartes muertos) descendió ligeramente pasando de 2.878 t en 2009 a 2.845 t en 2010, y los desembarques provisionales estadounidenses de la pesquería estadounidense de rabil descendieron ligeramente pasando de 2.788 t en 2009 a 2.648 t en 2010 En 2010, los buques pesqueros estadounidenses capturaron en el Atlántico noroccidental un volumen estimado de 925 t de atún rojo, lo que supone un descenso de 347 t en comparación con 2009. Los desembarques provisionales de listado experimentaron un descenso de 65 t en 2009, situándose en 54 t en 2010. Los desembarques estimados de patudo también experimentaron un ligero descenso de aproximadamente 157 t con respecto a 2009, situándose en 673 t en 2010, y los desembarques estimados de atún blanco se incrementaron en 140 t con respecto a 2009, situándose en 328 t en 2010. En 2010, Estados Unidos continuó con las investigaciones sobre varios aspectos de algunas especies de túnidos y especies afines como la genética, edad y crecimiento, marcado, utilización del hábitat y modelación de la evaluación, entre otros. El programa estadounidense de marcado en el Atlántico continuó en 2010 y se marcaron y liberaron 1.865 istiofóridos (incluido el pez espada) y 431 túnidos durante el año. En 2010, el Programa estadounidense de observadores pelágicos tenía una cobertura objetivo del 8% de las operaciones de la flota, sin embargo, la ampliación de la cobertura durante la temporada de reproducción del atún rojo en el Golfo de México continuó durante este año con una cobertura de aproximadamente el 58% de las operaciones de palangre durante dicho periodo. El programa de observadores de palangre de fondo también estuvo activo desde enero hasta diciembre de 2010, y se observó un total de 161 operaciones en 105 mareas. Durante el año civil 2010, Estados Unidos consiguió una cobertura de observadores del 14,2%, expresado como una proporción de las operaciones comunicadas y un 13,9% expresado como una proporción de los anzuelos comunicados en la pesquería de palangre pelágico de especies altamente migratorias del Atlántico. En 2010, Estados Unidos cumplió sus obligaciones con respecto a la implementación de las medidas de conservación y ordenación de ICCAT. Además, Estados Unidos ha adoptado un enfoque ecosistémico en la ordenación de las especies altamente migratorias, y ha implementado una serie de medidas que van más allá de las medidas requeridas en las recomendaciones de ICCAT. Estados Unidos implementó sus cuotas de atún rojo occidental de 2010 y 2011, así como el periodo de dos años de equilibrio para limitar la captura de atún rojo de menos de 115 cm al 10% en peso de la cuota estadounidense. Estados Unidos también ha implementado una reducción en lo que concierne al remanente de capturas que puede traspasarse a 2011 (a saber, que este traspaso no supere el 10% de la asignación de cuota inicial). Estados Unidos ha prohibido toda retención comercial de marlines desde 1988, y mantiene reglamentos que prohíben cualquier desembarque de aguja azul y aguja blanca por cualquier método que no sea caña y carrete. En 2011, Estados Unidos implementó las medidas para el pez espada del Norte adoptadas por ICCAT en 2010, lo que incluye el límite de captura de Estados Unidos de 3.907 t (ww). Estas disposiciones permiten a Estados Unidos capturar hasta 200 t de su cuota de pez espada del Atlántico norte entre 5º N y 5º S, y la transferencia de 25 t Canadá. En la actualidad, la pesquería palangrera pelágica del Atlántico de Estados Unidos que se suele dirigir tradicionalmente a especies gestionadas por ICCAT, como el pez espada, patudo, atún blanco, listado y rabil, está sujeta a varios cierres espaciotemporales diferenciados encaminados a reducir toda la captura fortuita (por ejemplo, marlines, pez espada de talla inferior a la regulada, etc.). Además, los palangreros pelágicos sólo pueden pescar especies de ICCAT si cumplen las estrictas restricciones sobre cebo y anzuelos circulares y utilizan dispositivos de liberación de tortugas marinas aprobados de conformidad con los protocolos de manipulación y liberación. Desde mayo de 2011, Estados Unidos requiere la utilización de "anzuelos suaves" para los palangreros pelágicos que pescan en el Golfo de México con el fin de reducir la captura fortuita de atún rojo realizada por los palangreros pelágicos que se dirigen a otras especies, como el pez espada y el rabil. De conformidad con la Recomendación 10-02 de ICCAT, el 15 de septiembre de 2011, Estados Unidos presentó su informe sobre el historial de pesca y el plan de desarrollo de la pesquería de pez espada de Estados Unidos.

Part I (Information on Fisheries, Research and Statistics)

Section 1: National Fisheries Information

Total (preliminary) reported U.S. catch of tuna and swordfish, including dead discards, in 2010 was 9,190 metric tons (t), a decrease of about 5% from 9,632 t in 2009. Estimated swordfish catch (including estimated dead discards) slightly decreased from 2,878 t in 2009 to 2,845 t in 2010, and provisional landings from the U.S. fishery for yellowfin slightly decreased in 2010 to 2,648 t from 2,788 t in 2009. U.S. vessels fishing in the northwest Atlantic caught in 2010 an estimated 925 t of bluefin, a decrease of 303 t compared to 2009. Provisional skipjack landings decreased by 65 t to 54 t from 2009 to 2010, estimated bigeye landings slightly increased by about 157 t compared to 2009 to an estimated 673 t in 2010, and estimated albacore landings increased by 140 t from 2009 to 328 t in 2010.

Section 2: Statistics and Research

2.1 Fisheries statistics

2.1.1 Tropical tuna fishery statistics

Yellowfin tuna. Yellowfin is the principal species of tropical tuna landed by U.S. fisheries in the western North Atlantic. Total estimated landings slightly decreased to 2,648 t in 2010, from the 2009 landings estimate of 2,788 t (**Table 1**). The 2010 estimate is considered provisional and may change owing to incorporation of late reports of commercial catches as they become available and to possible revisions in estimates of rod and reel catches. A high proportion of the estimated landings were due to rod and reel catches of recreational anglers in the NW Atlantic (1,109 t). Estimates of U.S. recreational harvests for tuna and tuna-like species are periodically reviewed and this may result in the need to report additional revisions to the available estimates in the future. In the case of commercial landings, the highest proportion of estimated landings in 2010 corresponded to the U.S. longline fleet operating in statistical area LLYF12 (745 t). Nominal catch rate information from logbook reports (longline catch per 1,000 hooks) for yellowfin by general fishing areas is shown in **Figure 1**.

Skipjack tuna. Skipjack tuna are also caught by U.S. vessels in the western North Atlantic, but it is a minor component of the U.S. total tuna landings. Total reported skipjack landings (preliminary) decreased from 119.4 t in 2009 to 54.7 t in 2010 (**Table 2**). Estimates of recreational harvests of skipjack continue to be reviewed and could be revised again in the future. **Figure 2** presents nominal catch rate information (longline catch per 1,000 hooks) based on logbook reports.

Bigeye tuna. The other large tropical tuna reported in catches by U.S. vessels in the western North Atlantic is bigeye tuna. Total reported catches and landings (preliminary) for 2010 increased by approximately 158 t from 515.2 t in 2009 to 673.4 t (**Table 3**). Note that, like yellowfin tuna, the estimates of rod and reel catch are considered provisional and may be revised based on results of a future review of recreational harvest estimates. **Figure 3** presents nominal catch rates (longline catch per 1,000 hooks) estimated from logbook reports.

2.1.2 Temperate tuna fishery statistics

Albacore tuna. Albacore are landed by U.S. vessels; however, historically, albacore has not been a main target of the U.S. commercial tuna fisheries operating in the North Atlantic. Reported commercial catches were relatively low prior to 1986; however, these catches increased substantially and remained at higher levels throughout the 1990s, with nearly all of the production coming from the northeastern U.S. coast. The U.S. landings from the Caribbean increased in 1995 to make up over 14% of the total U.S. harvest of albacore, but have since remained below 4% of the total. Nominal catch rates from U.S. pelagic longline logbook reports are shown in **Figure 4**. Estimated total catches of albacore were 329 t in 2010, an increase of 140 t from 2009 (**Table 4**).

Bluefin tuna. The U.S. bluefin fishery continues to be regulated by quotas, seasons, gear restrictions, limits on catches per trip, size limits, and no-sale provisions for the U.S. angling category. To varying degrees, these regulations are designed to manage total U.S. landings in conformance with ICCAT recommendations. U.S. 2010 provisional estimated landings and dead discards from the northwest Atlantic (including the Gulf of Mexico) were approximately 803 t and 122 t, respectively. Those estimated landings and dead discards represent a decrease of approximately 347 t from the 2009 estimates. The 2010 landings by gear were: 29 t by harpoon, 682 t by rod and reel, and 211 t caught as bycatch by longline directed fisheries for other species (including discards) of which 55 t were from the Gulf of Mexico.

In response to 1992 regulations limiting the allowable catch of small fish by U.S. fishermen, in conformity with ICCAT agreements, enhanced monitoring of the rod and reel fishery was implemented in 1993 for the purpose of providing near real-time information on catch levels by this fishery. This monitoring activity has continued and has included estimation of catches by finer scale size categories than reported above. The preliminary estimates for the 2010 rod and reel fishery off the northeastern United States (including the North Carolina winter fishery) for landings in several size categories were 43 fish < 66 cm, 1876 fish 66-114 cm, 2065 fish 115-144 cm and 706 fish 145-177 cm (an estimated 0.21, 31, 80, and 59 t, respectively). Note that additional rod and reel landings of bluefin >177 cm SFL, monitored through a sales reporting system, are included in **Table 5**.

2.1.3 Swordfish fishery statistics

For 2010, the provisional estimate of U.S. vessel landings and dead discards of swordfish was 2,845 t (**Table 6**). This estimate represents a slight decrease from the 2,878 t estimated for 2009. The provisional landings, including discard estimates, by ICCAT area for 2010 (compared to 2009) were: 288 t (494 t) from the Gulf of Mexico (Area BIL91); 2,210 t (1,865 t) from the northwest Atlantic (Area BIL92); 41 t (23 t) from the Caribbean Sea (Area BIL93); and 305 t (496 t) from the North Central Atlantic (Area BIL94A).

U.S. swordfish landings are monitored in-season from reports submitted by dealers, vessel owners and captains, NMFS port agents, and mandatory daily logbook reports submitted by U.S. commercial vessels permitted to fish for swordfish. The U.S. swordfish longline fishery is also being monitored via a scientific observer sampling program, instituted in 1992. Approximately 8% of the longline fleet-wide fishing effort is randomly selected for observation during the fishing year. The observer sampling data, in combination with logbook reported effort levels, support estimates of approximately 8,510 fish discarded dead in 2010. For the North Atlantic (including Gulf of Mexico and Caribbean Sea), the estimated tonnage discarded dead in 2010 was 131 t, of which 126 was estimated due to longline gear. Overall, the estimates of dead discarded catch decreased by about 17 t compared to the 2009 levels, which corresponded to approximately 5% of the commercially landed catch.

Total weight of swordfish sampled for sizing U.S. commercial landings by longline, trawl, and handline was 1,967 t, 18 t, and 122 t in 2010. The weight of sampled swordfish landings in 2010 were 95%, 85%, and 93% of the U.S. total reported annual landings of swordfish for longline, trawl, and handline, respectively. Again, incorporation of late reports into the estimated 2010 landings figure will likely result in changes in the sampled fraction of the catch. Recent estimates of rod and reel landings of swordfish based on surveys of recreational anglers, range from about 5-76 t per year within the period 1996-2010.

2.1.4 Marlins and sailfish fishery statistics

Blue marlin, white marlin, and sailfish are landed by U.S recreational rod and reel fishermen and are a bycatch of the U.S. commercial tuna and swordfish longline fisheries. The U.S. Fisheries Management Plan for Atlantic Billfishes was implemented in October 1988. The Plan allows billfish that are caught by recreational gear (rod and reel) to be landed only if the fish is larger than the minimum size specified for each species covered by the Plan. Recreational landings of each billfish species can be estimated using: (a) the Southeast Fisheries Science Center (SEFSC) Recreational Billfish Survey (RBS) which provides the number of billfish caught during tournaments held along the southeastern U.S. coast (south of 35^0 N latitude), in the Gulf of Mexico, and U.S. Caribbean Sea regions (i.e., U.S. Virgin Islands and Puerto Rico); (b) the Large Pelagics Recreational Survey (LPS) conducted by the National Marine Fisheries Service (NMFS) which provides estimates of recreational harvest of highly migratory species (including billfish), from waters along the northeastern U.S. (north of 35^o N latitude); (c) Marine Recreational Fishery Statistics Survey (MRFSS); (d) a Headboat survey (large multi-party charter boats); and/or (e) a coastal sport fishing survey of the Texas recreational fishery (TPW). In addition, recreational catch statistics by self-reported catch cards also document billfish landings in some states.

The estimates of 2010 U.S. recreational rod and reel landings for these billfish species, combining the geographical areas of the Gulf of Mexico (Area BIL91), the northwestern Atlantic Ocean west of the 60^o W longitude (Area BIL92), and the Caribbean Sea (Area BIL93) are: 4.4 t for blue marlin, 2.1 t for white marlin, and 3.8 t for sailfish. The estimates for 2009 were: 6.2 t for blue marlin, 1.6 t for white marlin, and 2.8t for sailfish.

In addition to restrictions on U.S. recreational harvest, the Management Plan also imposed regulations on commercial fisheries by prohibiting retention and sale of the three species at U.S. ports. For this reason, there are no U.S. commercial landings for any of the three Atlantic species. However, estimates of dead discards in the U.S. longline fleet are made using the data from mandatory pelagic logbooks and scientific observer data

collected on this fleet. The procedure for estimating the historical bycatch of blue marlin, white marlin, and sailfish was detailed in SCRS/96/97-Revised. This procedure was implemented for estimating bycatch mortalities from the U.S. longline fleet. Revisions to historical landings of billfish previously reported to ICCAT were based on review of the estimates conducted at the 1996 ICCAT Billfish Workshop held in Miami, FL (USA). Estimates of the billfish bycatch discarded dead in the U.S. commercial longline and other commercial fisheries in 2010 were 17.2 t for blue marlin, 7.6 t for white marlin, and 4.2 t for sailfish. The estimated 2009 U.S. discarded dead bycatch was 36.7 t, 9.3 t, and 9.2 t, respectively for the three species.

2.1.5 Shark Fishery Statistics

The U.S. Federal Fisheries Management Plan (FMP) implemented in 1993 (NMFS 1993) identified three management groups: large coastal sharks, small coastal sharks, and pelagic sharks. The pelagic complex included ten species: shortfin mako (*Isurus oxyrinchus*), longfin mako *(Isurus paucus*), porbeagle (*Lamna nasus*), thresher (*Alopias vulpinus*), bigeye thresher (*Alopias superciliosus*), blue (*Prionace glauca*), oceanic whitetip (*Carcharhinus longimanus*), sevengill (*Heptranchias perlo*), sixgill (*Hexanchus griseus*), and bigeye sixgill (*Hexanchus vitulus*). The 1993 FMP classified the status of pelagic sharks as unknown because no stock assessment had been conducted for this complex. The Maximum Sustainable Yield (MSY) for pelagic sharks was set at 1,560t dressed weight (dw), which was the 1986-1991 commercial landings average for this group. In 1997, as a result of indications that the abundance of Atlantic sharks had declined, commercial quotas for large coastal, small coastal, and pelagic sharks were reduced. The quota for pelagic sharks was set at 580 t. In 1999, the U.S. FMP for Atlantic Tunas, Swordfish, and Sharks (NMFS 1999) implemented the following measures affecting pelagic sharks: (1) a reduction in the recreational bag limit to 1 Atlantic shark per vessel per trip, with a minimum size of 137 cm fork length for all sharks; (2) an increase in the annual commercial quota for pelagic sharks to 853 t dw, apportioned between porbeagle (92 t), blue sharks (273 t dw), and other pelagic sharks (488 t dw), with the pelagic shark quota being reduced by any overharvest in the blue shark quota; and (3) making the bigeye sixgill, sixgill, sevengill, bigeye thresher, and longfin mako sharks prohibited species that cannot be retained. Regulations on prohibited species went into effect in 2000, whereas those on pelagic shark quotas were enacted in 2001. Presently, the commercial quotas for pelagic sharks are 273 t dw (blue sharks), 1.7 t dw (porbeagles), and 488 t dw (pelagic sharks other than porbeagle or blue).

Landings and dead discards of sharks by U.S. pelagic longline fishermen are monitored and reported to ICCAT. In 2010, the species of shark with largest amount of landings (in weight) corresponded to shortfin mako with a total of ca. 217 t whole weight (ww), followed by blue shark, thresher sharks (*Alopias spp.*), and hammerhead sharks (*Sphyrna* spp.) with ca. 8.4, 7.9, and 4.8 t ww, respectively.

In 2010, estimates of dead discards for blue shark amounted to almost 164 t ww, the largest amount of any shark species discarded by this fleet. The second largest amount of dead discards by this fleet corresponded to scalloped hammerhead shark with ca. 50 t ww followed by night shark with 42 t ww. Dead discards of bigeye thresher, longfin mako, silky, and dusky sharks were estimated at ca. 27, 26, 21, and 21 t ww, respectively.

2.2 Research Activities

2.2.1 Bluefin tuna research

As part of its commitment to the Bluefin Year Program, research supported by the United States has concentrated on ichthyoplankton sampling, tagging and biological sampling from fisheries.

Ichthyoplankton surveys in the Gulf of Mexico during the bluefin spawning season were continued in 2010 and 2011. In addition to the regular survey, which occurs over a fixed spatial grid in May, adaptive sampling was carried out in spring 2010 and 2011 in collaboration with NASA and scientists from Mexico (INAPESCA). Adaptive sampling focused on the western Caribbean, with stations sampled between the Windward Passage and the Yucatan Peninsula. Station selection was guided by a larval habitat model, run on remotely sensed satellite data. Preliminary visual identifications suggest larval occurrence only along the Yucatan Peninsula, inshore of the Caribbean Current. This confirms results from less extensive sampling in 2009 and 2010. In addition, work was completed examining overlap between observed surface oil from the 2010 Deepwater Horizon oil spill and bluefin tuna spawning grounds. Results suggest a maximum of approximately 5% of larval habitat was covered with observed surface oil on a weekly basis between April 20 and May 31, 2010, with up to 11% of larval habitat covered by potentially contaminated water. Work has continued on a collaborative project investigating the potential effects of climate change on bluefin tuna spawning grounds in the Gulf of Mexico, through to the end of the 21st century. Results suggest that in the future, spawning may be initiated earlier in the year, due to

warming water temperatures, and that spawning activity may be curtailed in the warmer months of May and June. In July 2011, larval bluefin tuna scientists from the United States and Spain attended an informal workshop, to discuss parallel lines of research, and potential future collaboration efforts. Environmental constraints on larval distributions between the Gulf of Mexico and Mediterranean Sea were discussed, as were variables influencing larval feeding, growth and survival.

The Large Pelagic Research Center, University of Massachusetts (LPRC) deployed sixteen PSAT tags (Microwave Telemetry Inc., X-tag model) on juvenile bluefin tuna in 2010. Of these sixteen tags, so far they have received data from seven tags and have four tags apparently still on mission, scheduled to report in late 2011. In partnership with the St. Andrews Biological Lab (DFO), 28 PSATS were deployed on adult ABFT in 2010. So far, data have been received from nineteen tags with the remaining tags scheduled to report by October 2011. The popup tag deployments on ABFT since 1997 now exceed 477 tags. The LPRC has also collected gonad samples from >250 bluefin tuna over four years from the Gulf of Mexico. Histological examination and maturity classification has been completed, and thus far, the majority of fish are actively spawning or immediately post-spawning. Stereological analysis on ovarian tissue has been completed on samples from the Gulf of Mexico and the Mediterranean Sea. Statistical comparisons of these data will provide insights into the spawning condition of bluefin tuna from both known spawning grounds.

The NOAA Fisheries Southeast Fisheries Science Center deployed 5 PSAT tags on giant bluefin tuna caught by longliner operations in the Gulf of Mexico as part of a post-release survival study in 2010 and 2011. Delays in the resumption of normal fishing activities following the disruptions caused by the DWH spill, combined with the effects of the newly required “weak hooks”, have limited opportunities to tag. The program anticipates working in conjunction with the weak hook study in the GOM starting Feb. 1, 2012.

Scientists from Stanford University and the Tag-A-Giant research team continued to deploy electronic tags on bluefin tuna in the western Atlantic in 2010-11 (n=51 deployments). Tagging in the Gulf of St. Lawrence (GSL) in collaboration with Canadian scientists and fishermen confirmed a strong linkage between this foraging area and the Gulf of Mexico (GOM) spawning grounds. Data are being examined to compare surface and vertical habitat utilization before, during and after the Deepwater Horizon oil spill. In collaboration with scientists from the University of British Columbia, a Bayesian, spatially explicit, quarterly time step, statistical catch-at-age model that is fitted to conventional and electronic tag-track data, historic catch-at-age reconstructions and otolith microchemistry data on origin is being finalized to better account for stock mixing in assessments. The model, called Multistock Age-Structured Tag-integrated stock assessment model (MAST), reconstructs abundances and depletions from 1950 to 2009 (83% and 67% declines for the western and eastern stocks, respectively) and projects the outcomes of various rebuilding plans. The team continues to use its 26 new microsatellite loci for population assignment of individual fish to one of the known stocks (GOM, eastern Mediterranean, western Mediterranean), allowing among other applications, stock assignment of historical tag tracks that did not include a visit to a documented spawning ground and analysis of regional stock composition over time (e.g., in coastal North Carolina).

The NOAA Fisheries Southeast Fisheries Science Center initiated the first ever comprehensive sampling program for bluefin tuna in 2010, collecting otoliths, dorsal spines, caudal vertebrae and other tissues in a manner representative of the catch. The 2010 pilot program produced only a few dozen otoliths, however an additional 300 were collected opportunistically by the LPRC from a few participating commercial fish houses. Subsequently, SEFSC scientists and contractors met with several university scientists to expand and better coordinate a collaborative approach to sampling both the recreational and commercial fisheries. As a result, the number of fish sampled has increased markedly, with several hundred samples having already been taken (covering all of the major fisheries). The various parties will collaborate on analyses of the collected specimens, for purposes such as determining stock and age structure, as well as age and growth (including looking for potential changes in growth over time).

Scientists from Texas A & M University and the University of Maryland assigned natal origin (Mediterranean Sea or Gulf of Mexico) to Atlantic bluefin tuna collected off North Carolina (U.S.A.) in 2011, targeting an abundant 2003 year-class. Maximum likelihood estimates of the sample’s mixture were based on stable isotope composition, $\delta^{18}O$ and $\delta^{13}C$, of base-line natal age-1 juveniles. Estimated contribution rate of Gulf of Mexico members to the 2003 year-class was 64.2% ± 15.3% SD. This estimate was robust to error in year-class assignment (i.e., ageing error) but showed moderate imprecision due to low sample size (n=27). When all ages were included from the sampled North Carolina aggregation (3-17 years; N=109), the contribution of Gulf of Mexico was estimated at 50.3% ± 7.3%. Analysis of archived otoliths from US landed fish of similar size range to the 2003 year-class (154-197 cm) indicated a slightly higher Gulf of Mexico contribution: 77.5% ± 10.3%

(sample years 1996-1998; N=54). Results support the inference that the 2003 year-class, evident in US fisheries during the past 5 years, received contributions from both natal populations.

Scientists from the University of Massachusetts and University of Maryland are developing a biologically realistic model of Atlantic bluefin tuna stocks, incorporating the best available empirically-derived data, to examine how structure and connectivity influence population and fishery dynamics. The simulation framework allows for representation of population structure (i.e., multiple spawning components) and varying rates and patterns of movement among areas.

From late March through mid June 2010, the NOAA Fisheries Southeast Fisheries Science Center conducted extensive observations of the pelagic longline fishery in the Gulf of Mexico. Roughly 50% of known fishing trips and a higher percentage of total effort was observed. Various biological samples were taken from the bluefin including otoliths, gonads and muscle. Contracts were awarded to conduct research on bluefin stock structure, growth, gender determination and reproduction.

At the same time as the extended coverage observer program, the NOAA Fisheries Southeast Fisheries Science Center has been assessing the efficacy of a new 16/0 "weak" circle hook designed to reducing the bycatch mortality of bluefin tuna in the directed yellowfin tuna fishery in the Gulf of Mexico. The 2008-10 study was a continuation of research conducted in April, 2007 to examine "weak link" concepts which would allow bluefin tuna to escape capture on pelagic longlines, while retaining yellowfin tuna. Results of the study indicate that the new circle hook design reduces the bluefin tuna catch rate by an estimated 56.5% with no significant reduction in the target catch of yellowfin tuna. Consequently, the National Marine Fisheries Service published a final rule requiring the new hook design in the Gulf of Mexico pelagic longline fishery effective May 5, 2011. Research on this new bycatch reduction technology will continue through 2012 in order to improve the statistical precision and confidence of the results and assess how quickly the escapement occurs.

2.2.2 Swordfish research

U.S. and Canadian scientists reported in 2010 on collaborative tagging programs of the United States and Canada. Recognizing there are benefits in pooling available PSAT data, Canada (DFO, St. Andrews Biological Station) approached the SEFSC (Miami) and the Marine Resources Research Institute of the South Carolina Department of Natural Resources to collaborate. Both laboratories maintain or have maintained active swordfish tagging programs. Taken together, these labs constitute all the available information from swordfish electronic tagging programs on the east coast of North America, and cover deployments ranging from Newfoundland to Florida. An FTP site for sharing this information has been established, courtesy of the SEFSC. A Canadian-funded contract with CLS Argos (Toulouse, France) has been developed, which will allow a common and mutually-agreed analyses method to be applied to the most informative individual tracks. It is envisaged that this approach should provide a comprehensive insight into swordfish migrations off eastern North America.

U.S. scientists reported information from 31 pop-up satellite archival tags attached to swordfish from the eastern Pacific, central Pacific, and western North Atlantic-Caribbean. Diel vertical movement patterns were described, including correlations with temperature and light levels. It was suggested that swordfish vertical distribution patterns, especially during daytime, are influenced largely by resource availability. At night, when swordfish are typically targeted by fisheries, both ambient light and temperature influence movements. Understanding vertical movement patterns of swordfish can help evaluate gear vulnerability, improve population assessments, and potentially reduce fisheries bycatch.

U.S. scientists also evaluated the post-release behavior modification (possibly a result of capture and handling stress) of several HMS species, including swordfish, using empirical eigen function analysis to detect changes in vertical movement patterns recorded by 183 pop-up satellite archival tags (PSATs) deployed on large pelagic fish, including 16 swordfish. Decreased vertical movement characterized the irregular behavior of blue sharks and porbeagles, whereas all other species, including swordfish, showed increased vertical activity. This approach provides a useful method of revealing behavioral modification during the post-release recovery period of PSAT-tagged large pelagic fish, although the extent of influence on normal behavior is not fully understood.

Scientists from Nova Southeastern University in Florida report that socio-economic analyses of swordfish and sailfish recreational tournaments in the Florida Straits is underway, as well as a Cooperative Research Program (CRP) funded study of 20 PSATs deployed on swordfish in the Florida Straits. This program is being conducted by Nova Southeastern University in association with the SEFSC and UM/RSMAS. Results of these programs should be available in the near future.

A U.S. scientist participated in the ICCAT SCRS Mediterranean Swordfish Stock Assessment Session, held in Madrid, Spain, June 28 to July 2, 2010.

2.2.3 Tropical tunas research

U.S. scientists participated in the ICCAT SCRS bigeye tuna data preparatory meeting, held in Madrid, Spain, April 26 to 30, 2010. U.S. scientists also participated in the ICCAT SCRS Bigeye Tuna Stock Assessment Session, held in Pasaia, Guipuzkoa, Spain, July 5 to 9, 2010.

In 2010, SEFSC scientists have presented several papers to the SCRS concerning tropical tunas. A stock synthesis assessment model was developed and evaluated for bigeye tuna. This tool was also used to compare the outcomes of a range of various assessment models (from simple stock production models through a more complex fully integrated model) when applied to available data for bigeye. Abundance indices were developed for bigeye from U.S. pelagic longline fleet data, and a SEFSC scientist collaborated with Portuguese scientists on the development of bigeye abundance indices from Azores baitboat fleet data. Bigeye tuna was also used as a case study to evaluate the incorporation of scientific uncertainty in defining precautionary management targets. A U.S. scientist also participated in describing how sampling coverage affects by-catch estimates in the purse seine fishery.

U.S. scientists have continued to conduct cooperative research with scientists from Mexico, pursuing the development of indices of abundance for species of concern to ICCAT in the Gulf of Mexico as well as descriptive analyses of that fishery.

Scientists at NOAA's Southeast Fisheries Science Center (SEFSC) have been collaborating since 2008 with the Texas A & M University, using popup satellite archival tag (PSAT) technology to evaluate habitat use of yellowfin tuna in the Gulf of Mexico. Fish were captured using rod and reel gear near the edge of the continental shelf in the central Gulf (Mississippi delta region). Progress was made during 2010 and continued through the summer of 2011. A total of 32 tags were deployed on yellowfin tuna ranging from 87-158 cm FL, and were monitored for up to 94 days. Analyses of these data are ongoing, and will help define essential fish habit and improve CPUE standardization approaches.

In response to the Deepwater Horizon oil spill event, SEFSC scientists initiated a pilot study to evaluate the movements, migration patterns and site fidelity of yellowfin tuna in the Gulf of Mexico in order to assess the potential exposure of the stock to contaminants, as well as optimal fishery closure strategies for potential future events. This differed from the work conducted in collaboration with Texas A & M in that generally larger fish were targeted, and longline vessels were used as deployment platforms to also achieve a broader geographic representation of deployment locations, corresponding more closely to the range of the fishery. This study was able to track the movements of five yellowfin for durations of 41 to as much as 172 days. This study has since been funded to deploy an additional 56 tags beginning in 2011 across the Gulf of Mexico fishery (longline and rod and reel) for periods up to one year. In addition to the main study objectives, the resulting data should be of great benefit to improving understanding of stock structure, movement rates, mortality, etc., all important to improving the stock assessments.

2.2.4 Albacore research

U.S. National Marine Fisheries Service scientists continue to be involved in the development of alternative, more detailed statistical-based models, in efforts to evaluate more fully the relationship between this species' population dynamics and associated fishery operations (i.e., areas of uncertainty in an overall stock assessment). In addition, research is being conducted to improve the implementation of the stochastic approach being used currently to estimate catch-at-age for northern albacore.

A U.S. scientist participated in the 2010 ICCAT Mediterranean Albacore Data Preparatory Meeting held in Madrid, Spain June 28 to July 2, 2010.

2.2.5 Mackerels and small tunas research

King mackerel. The last domestic stock assessment of U.S. Gulf of Mexico and South Atlantic king mackerel populations was carried out in 2008. During 2011, SEFSC scientists continued to make routine collections of otolith samples from the directed commercial and recreational fisheries for use in developing age length keys. These updated age length keys will be incorporated into future updated population models. The estimates of age

composition from the updated age length keys will enable analysts to evaluate changes in year class strength since the 2008 stock assessment; additional samples can be acquired through cooperative efforts with state entities. In 2010, the North Carolina Division of Marine Resources worked with a Sea Grant researcher to collect king mackerel tournament (KMT) angler CPUE data using a text messaging survey. This was an effort to look at this text messaging technology and to collect and compare the King mackerel CPUE data that we collected in the 1990's.

Spanish mackerel. The last domestic stock assessment of U.S. Gulf of Mexico and South Atlantic Spanish mackerel populations was carried out in 2008. During 2011, SEFSC scientists continued efforts to acquire otolith samples from the directed commercial and recreational fisheries for use in developing age length keys. These updated age length keys will be incorporated into the next updated population models expected to be made in 2012. The age composition samples will be used to evaluate changes in year class size since the last stock evaluation. Independent researchers from the University of North Carolina are planning in 2012 to conduct stock demographic research and carry out otolith microchemistry examinations of the Gulf of Mexico stock.

2.2.6 Shark research

The ICCAT Shark Working Group met in conjunction with the SCRS Sub-Committee on Ecosystems in Madrid, May 31-June 4, 2010, because both working groups have shared interest in conducting Ecological Risk Assessments (ERA). The Shark Working Group plans to update and expand the 2008 ERA for pelagic sharks starting in 2011.

A cooperative shark research project between Brazil (Universidade Federal Rural de Pernambuco) and the U.S. (NMFS SEFSC Panama City Laboratory and the University of Florida's Florida Museum of Natural History) was initiated in 2007. The main goal of this cooperative project is to conduct simultaneous research on pelagic sharks in the North and South Atlantic Ocean. Central to conducting the research is development of fisheries research capacity in Brazil through graduate student training and of stronger scientific cooperation between Brazil and the U.S. Electronic equipment (hook-timer recorders [HTR] and temperature and depth recorders [TDRs]) was sent from the U.S. to Brazil for deployment aboard commercial longline fishing vessels to investigate preferential feeding times of pelagic sharks and associated fishing depths and temperatures for potential use in habitat-based models and estimation of catchability. To date, seven fishing surveys have been conducted, with 137 sets on commercial pelagic longline fishing vessels carried out between April 2009 and July 2010; each set contained 300 HTRs and 10 TDRs. Preliminary results indicate the importance of the depth of the longline sections and the influence of environmental and operational factors on gear behavior. Mathematical models are also being developed to understand the theoretical longline shoaling and sag ratios. During the fishing operations 11% of the HTRs presented technical problems and did not collect data. A total of 3,537 individuals from 20 species (among them 532 blue sharks, 67 oceanic whitetips, 61 silky sharks, 50 shortfin makos, 21 threshers and 4 manta rays) were caught. Most individuals were caught in the early hours of the night, between 6:00 and 10:00 pm. Of the total number of individuals caught, 87% were hooked during the setting period (18:00 to 22:00), 9% during the haulback (4:00 am to 1:00 pm) and 3% during drifting. Analyses to understand the survivorship of pelagic sharks are still ongoing and will be presented in the future. Additionally, the use of pop-up satellite archival tags (PSATs) on blue, shortfin mako, and other pelagic sharks is intended to provide critical knowledge on daily horizontal and vertical movement patterns, depth distribution, and effects of oceanographic conditions on the vulnerability of these pelagic sharks to pelagic longline fishing gear. Six pop-off satellite archival tags have been deployed to date (2 oceanic whitetip sharks, 3 bigeye threshers and 1 longfin mako) in U.S. Atlantic waters. Data collected for some species are still being analyzed but some preliminary findings have been presented at regional and national conferences. For example, data analyzed for oceanic whitetip shark indicate that the most common depth occupied is less than 75 m (98.2% time) with limited dives to 256 m. Conversely, bigeye thresher dove up to 1464 m and commonly occupied depths from 0-528 m. Archival satellite pop-up tags have also been attached to seven blue sharks and three shortfin mako sharks by pelagic longline fishing vessels in the western South Atlantic Ocean. Of those, data recovered for four female blue sharks and two male shortfin makos have revealed that the female blue sharks moved 1500-4100 km from their release position spending most of the daytime and nighttime hours below and above the thermocline, respectively. The tag of the female that travelled 4100 km popped up in the Gulf of Guinea off the west coast of Africa, indicating a trans-Atlantic migration.

A life history study of several pelagic species (i.e. silky, bigeye thresher and common thresher) was initiated with data collection and sampling on over 100 individuals for age, growth, and reproduction. Reproductive tissues were processed and sectioned using histological techniques. Morphological data on organ measurements have been plotted and will be compared to the histological results. Vertebrae were also processed using histology and image analysis and are currently being read.

Another collaborative project between the SEFSC and Uruguay's fisheries agency (DINARA) entitled "Sustainable fisheries and bycatch reduction of pelagic sharks in the Atlantic Ocean" was initiated in 2009 and continued through 2010. The ultimate goal of this project is to advance knowledge on the productivity and susceptibility of pelagic sharks to longline fisheries in the western South Atlantic Ocean, aspects which are largely unknown for pelagic sharks in the southern hemisphere. To that end, in 2010 six satellite transmitters (4 PSATs, 2 SPOTs) obtained through grants awarded to conduct this project, were deployed on blue sharks to characterize in detail the spatio-temporal habitat use of this species. The two individuals fitted with SPOT tags (a 127 cm FL female and a 245 cm FL male) were captured in the western South Atlantic Ocean in EEZ waters and headed N-NE for the first five weeks after capture and release at a mean speed of 2 km/h. These individuals were tracked for 60 and 257 days, respectively. Of the four individuals tagged with PSAT tags, two never sent a signal and the other two (a 127 cm FL female and a 122 cm FL male) were deployed for 46 and 146 days, respectively. The immature female (which had been double-tagged with an MK10-PAT tag and a SPOT tag) spent 97% of the time at depths <100m. Preliminary results of this project were recently presented at the 2nd Colombian Meeting of Chondrichtyan Fishes in Cali, Colombia in August 2010.

Staff from DINARA and the SEFSC worked cooperatively on the development of identification guides for pelagic and carcharhinid sharks of the Atlantic Ocean for ICCAT. The guide for pelagic sharks was completed in late 2010 (Guide for the Identification of Atlantic Ocean sharks. Domingo et al. ICCAT) and the guide for carcharhinid sharks is expected to be completed in 2011.

As part of a larger program to determine the habitat use and movement patterns of pelagic and semi-pelagic sharks, satellite pop-up archival transmitting (PAT) tags have been deployed on sharks in the U.S. South Atlantic Ocean and Gulf of Mexico. Since 2007, three species of sharks have been tagged with data obtained on three species. An oceanic whitetip shark tagged in the western Gulf of Mexico moved a straight-line distance of 238 km during one track. During the track, the shark rarely dove below 150 m and instead, stayed above the thermocline. The deepest depth attained was recorded from one dive to 256 m. The most frequently occupied depth during the entire track was 25.5-50 m (49.8% total time) and temperature was 24.05-26 °C (44.7% total time). One bigeye thresher shark moved 51 km from the initial tagging location and exhibited a diurnal vertical diving behavior. The most common depths and temperatures occupied were between 25.5-50 m (27.3% total time) and 20.05-22 °C (52.5% total time). The bigeye thresher dove up to 528 m and deeper dives occurred more often during the day with time spent above the thermocline during night. Tags have been deployed on dusky shark; one tag is pending pop-off, four tags transmitted unusable data, and three provided data that could be analyzed. Based on geolocation data, sharks generally traveled an average of 691 km in total. Overall, mean proportions of time at depth revealed dusky sharks spent the majority of their time in waters 0-40 m deep but did dive to depths of 400 m. Dusky sharks occupied temperatures of 20.5-24 °C over 50% of the time. Tagged sharks had varied movement patterns. One shark that was tagged off Key Largo, FL (USA) in January moved north along the east coast of the US, then meandered around the Charleston Bump before continuing north to the North Carolina/Virginia border in June. A second shark also tagged off Key Largo, FL in March traveled south towards Cuba before the tag sent data two weeks later. The third shark, tagged off North Carolina in March, moved little from where it was initially tagged. Data from these species is currently being used as inputs to Ecological Risk Assessments.

2.2.7 Billfish research

The NMFS SEFSC again played a substantial role in the ICCAT Enhanced Research Program for Billfish in 2010, with a U.S. scientist acting as western Atlantic Coordinator (Dr. Eric Prince). The Atlantic-wide coordinator and chairman of the billfish working group is Freddy Arocha (Venezuela). Major accomplishments in the western Atlantic in 2010 were documented in SCRS/2010/150. Highlights include 14 at-sea sampling with observers on Venezuelan industrial longline vessels through September 2010. Most of the trips accomplished were on Korean type vessels fishing under the Venezuelan flag. The majority of these vessels are based out of Cumana targeting tuna, swordfish, or both at the same time. Biological sampling during the 2010 season of swordfish, Istiophorids, and yellowfin tuna for reproductive and age determination studies, as well as genetics research were continued at about the same rate as the previous year. Program participants in Venezuela, Grenada, and Barbados continued to assist in obtaining information on tag-recaptured billfish, as well as numerous sharks, in the western Atlantic Ocean during 2010. A total of 45 tagged billfish were recaptured, most of these were blue marlin.

An international collaboration was formalized in 2008 by the NOVA Southeastern University (Dr. Mahmood Shivji) on billfish genetics in 2008 and continued in 2010. Collaborators include Southeast Fisheries Science Center, Venezuela (Instituto Oceanografico, Universidad de Oriente), Uruguay (Recuros Pelagicos, Direccion

Nacional de Recuros Acuaticos), and Brazil (Universidade Federal Rural de Pernambuco). One of the primary goals is to develop accurate estimates of white marlin/round scale spearfish ratios in the Atlantic Ocean, including retrospective analyses. A paper describing some of the preliminary work was published in the *Endangered Species Research.(*9:81-90) in 2009. In addition, a new paper entitled "Occurrence and broad geographic distribution of roundscale spearfish *Tetrapturus georgii* (Teleostei, Istiophoridae) in the central north and western south Atlantic revealed by DNA analysis: implications for white marlin management" was recently submitted by the contractor. This manuscript will hopefully be published in FY2012. The SEFSC finished PSAT research on billfish and oxygen minimum zones in the Atlantic and was published in Fisheries Oceanography in November 2010 issue. The paper was entitled "Ocean scale hypoxia-based habitat compression of Atlantic istiophorid billfishes". Several of these papers were also published in peer review journals during 2010. Results of the work on Atlantic hypoxia-based habitat compression were presented at the ICES annual conference on climate change in the fall of 2009 (FY2010).

The Fishery Management Group of the University of Miami is carrying out research on Atlantic billfish on three areas, population parameter estimation, population modeling and development of socio-economic indicators. Others at the University of Miami's Rosenstiel School and elsewhere are conducting research on early life history, reproductive biology and ecology of billfishes, as well as age and growth estimation.

2.2.8 Seabird research

Only one seabird, a herring gull, boarded dead in the Mid-Atlantic Bight (MAB), was observed in the U.S. pelagic longline fishery in 2010. This is in contrast to seven reported seabird catches, including three northern gannets (2 live, 1 dead), three greater shearwater (3 dead), and 1 unidentified bird (1 dead) --all from the Mid-Atlantic Bight (MAB) --in 2009. The United States continues to explore modeling approaches for the estimation of total seabird bycatch in its Atlantic pelagic longline fleet. Depending of the model used, total estimated U.S. seabird bycatch ranged from 26 to 122 seabirds in 2010.

2.2.9 Tagging

Participants in the Southeast Fisheries Science Center's Cooperative Tagging Center (CTC) and The Billfish Foundation (TBF) Tagging Program tagged and released 1,865 billfishes (including swordfish) and 431 tunas in 2010. This represents a decrease of 20.2% for billfish and an increase of 17.8% for tunas from 2009 levels. Several electronic tagging studies involving bluefin tuna and billfish in the Atlantic Ocean and adjacent waters continued during 2010. These are discussed in the bluefin and billfish research sections above. There were 79 billfish recaptures from the CTC and TBF projects in 2010. This represents a decrease of 14.1% from 2009. These recaptures were 42 sailfish, 20 swordfish, 7 white marlin, and 10 blue marlin. A total of 25 tunas were recorded as recaptures in 2010, of which 12 were bluefin, and 13 were yellowfin tuna. This recapture level was an increase of 127.3% from the 2009 values. The ICCAT Enhanced Research Program for Billfish (IERPBF) in the western Atlantic Ocean has continued to assist in reporting tag recaptures to improve the quantity and quality of tag recapture reports, particularly from Venezuela, Barbados, and Grenada.

2.2.10 Fishery observer deployments

Domestic pelagic longline observer coverage: In accordance with ICCAT recommendations, randomized observer sampling of the U.S. large pelagic longline fleet was continued into 2010 (see **Figure 5**). Representative scientific observer sampling of this fleet has been underway since 1992. The data collected through this program have been used to quantify the composition, disposition, and quantity of the total catch (both retained and discarded at sea) by this fleet, which fishes in waters of the northwest Atlantic Ocean, Gulf of Mexico, and the Caribbean Sea. Selection of the vessels is based on a random sampling of the number of sets reported by the longline fleet. The percent of fleet coverage through 2010 ranged from 2.5% in 1992 to 12% in 2010. The targeted sampling fraction of the U.S. pelagic longline fleet was increased to 8% in 2002.

A total of 14,202 sets (10,406,246 hooks) were recorded by observer personnel from the Southeast Fisheries Science Center (SEFSC) and Northeast Fisheries Science Center (NEFSC) programs from May of 1992 to December of 2010. During that period, observers recorded over 472,938 fish (primarily swordfish, tunas, and sharks), in addition to marine mammals, turtles, and seabirds. Document SCRS/04/168 provided a more detailed summary of the data resulting from observer sampling between 1992 and 2002. Similar to 2007, 2008, and 2009, from March 11th through June 11th, 2010, the pelagic longline observer program increased the coverage of the longline fleet operating in the Gulf of Mexico. The goal of this increase was to collect data to better characterize the interaction between the longline fleet and bluefin tuna during the spawning season. A total of 376 longline

sets were observed (264,009 hooks) from 30 vessels, which accounted for approximately 57.8 % of the observed trips during that period.

Shark bottom longline observer coverage: The shark bottom longline fishery is active in the Atlantic Ocean from about the Mid-Atlantic Bight to south Florida and throughout the Gulf of Mexico. The bottom longline gear targets large coastal sharks, but small coastal sharks, pelagic sharks, and dogfish species are also caught. Currently 214 U.S. fishermen are permitted to target sharks (excluding dogfish) in the Atlantic Ocean and Gulf of Mexico, and an additional 285 fishermen are permitted to land shark incidentally. Recent amendments to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan based on updated stock assessments have eliminated the major directed shark fishery in the U.S. Atlantic. The amendments implement a shark research fishery, which allows the U.S. National Marine Fisheries Service (NMFS) to select a limited number of commercial shark vessels on an annual basis to carry observers 100% of trips to collect life history data, and data for future stock assessments. Furthermore, the revised measures set new quotas, reduced retention limits, and modified the list of authorized species in commercial shark fisheries. Specifically, commercial shark fishermen not participating in the limited research fishery are no longer allowed to land sandbar sharks, which have been the main target species for most fishermen. Additionally, commercial fishermen in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea are required to maintain shark fins naturally attached to the shark carcass through landing. The revised measures also affect authorized species in recreational shark fisheries; modify time/area closures for commercial shark vessels deploying bottom longline gear; and modify regions, seasons, and shark dealer reporting frequency in the commercial shark fishery. Observations of the shark-directed bottom longline fishery in the Atlantic Ocean and Gulf of Mexico have been conducted since 1994. From January to December 2010, a total of 161 hauls on 105 trips were observed. Sharks comprised 96.4% of the catch, followed by teleosts (2.1%), invertebrates (0.7%), and batoids (0.6%). Large coastal shark species comprised 82.8% of the shark catch, small coastal shark species comprised 13.9%, and deep water sharks comprised 0.1%. Prohibited shark species were also caught and released including the dusky shark, the Caribbean reef shark, *Carcharhinus perezi*, the sand tiger shark, *Carcharhias taurus*, and the great white shark, *Carcharodon carcharias* (3.2% of shark catch).

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Catch Limits and Minimum Sizes

3.1.1 Rebuilding Program for West Atlantic Bluefin Tuna (Recs. 08-04, 10-03)

Recommendation 08-04 revised the annual West Atlantic bluefin tuna quota for the United States to 1,034.92 t for 2009 and 977.44 t for 2010, including 25 t to account for bycatch related to directed longline fisheries in the vicinity of the management area boundary. Consistent with Recommendation 08-04, the United States implemented the recommended 2010 quota as well as a 2009-2010 two-year balancing period for limiting the harvest of bluefin tuna measuring less than 115 cm (45 inches) to 10 percent (by weight) of the U.S. quota. Recommendation 08-04 maintained the limit from Recommendation 06-06 on the amount of underharvest that could be carried forward to the next year, (i.e., not to exceed 50 percent of a Contracting Party's current initial Total Allowable Catch) for 2010. Since 2008, the U.S. BFT fishery has been managed on a calendar year basis. The United States reports dead discard estimates to ICCAT annually and, for 2010, accounted for this mortality as part of the 2010 quota specification calculation process. However, when the United States set the annual quota specifications delineating quotas and subquotas for the fishery at the beginning of 2010, it used a proxy for dead discards as complete prior year dead discard information was not yet available. For example, the 2008 dead discard estimate of 172.8 t was used as a proxy in setting the 2010 quota specifications. After accounting for dead discards by using this proxy, and applying the underharvest from the 2009 fishing year (1 January 2009 through 31 December 2009) to the 2010 fishing year (1 January 2010 through 31 December 2010), the resulting adjusted 2010 fishing year quota was 1,193.2 t. The adjusted quotas presented in the U.S. compliance tables reflect updated landings for 2009 and 2010, as well as updated dead discard amounts for those years rather than the proxies discussed above.

Recommendation 10-03 revised the annual West Atlantic bluefin tuna quota for the United States to 948.70 annually for 2011 and 2012, including 25 t to account for bycatch related to directed longline fisheries in the vicinity of the management area boundary. Consistent with Recommendation 10-03, the United States implemented the recommended 2011 quota as well as a 2011-2012 two-year balancing period for limiting the

harvest of bluefin tuna measuring less than 115 cm (45 inches) to 10 percent (by weight) of the U.S. quota via a final rule that published 5 July 2011 (76 FR 39019). The United States also implemented the reduction in the amount of underharvest that may be carried forward to 2011 (i.e., not to exceed 10 percent of a Contracting Party's initial quota allocation). Taking a different approach in setting the 2011 adjusted quota than used the prior four years, the United States accounted for half of the estimated dead discards up front using the 2010 estimate (122 t) as a proxy, and applied the underharvest from the 2010 fishing year (1 January 2010 through 31 December 2010) to the 2011 fishing year (1 January 2011 through 31 December 2011), resulting in an adjusted 2011 quota of 982.4 t. Total 2011 landings and dead discards will be accounted for and reported to ICCAT in 2012. Consistent with *Rec. 10-03*, the United States began submitting provisional reports of monthly catches of BFT to the Secretariat in June 2011.

Consistent with Recommendation 08-04, the United States prohibits directed fishing for bluefin tuna in the Gulf of Mexico. Additionally, effective in May 2011, the United States now requires the use of "weak hooks" by pelagic longline vessels fishing in the Gulf of Mexico to reduce bycatch of spawning bluefin tuna. A weak hook is a circle hook that meets current U.S. hook size and offset restrictions for the Gulf of Mexico pelagic longline fishery, but is constructed of round wire stock that is thinner-gauge than the circle hooks currently used and is no larger than 3.65 mm in diameter. Weak hooks can allow incidentally hooked bluefin tuna to escape capture because the hooks are more likely to straighten when a large fish is hooked. The purpose of the action is to reduce pelagic longline catch of bluefin tuna in the Gulf of Mexico, consistent with the 2010 SCRS advice that ICCAT may wish to protect the strong 2003 year class until it reaches maturity and can contribute to spawning.

3.1.2 Multi-annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean (Recs. 07-05; 08-05; 09-06; 10-04)

As discussed in Section 3.3, the United States has implemented the Bluefin Tuna Catch Documentation Program (Recommendation 07-10), as amended in 2008 (Recommendation 08-12) and 2009 (Recommendation 09-11) to *monitor* all bluefin tuna imports, including those from the eastern Atlantic and Mediterranean.

3.1.3 Resolution by ICCAT on Fishing Bluefin Tuna in the Atlantic Ocean (Res. 06-08)

Resolution 06-08 requests CPCs to refrain from increasing effort by large-scale tuna longline vessels from the 1999/2000 level in the area north of 10 degrees North latitude and between 35 degrees and 45 degrees West longitude. Consistent *with Resolution 06-08*, the United States has reduced effort by large scale tuna longline vessels in the vicinity of the 45-degree West boundary line for eastern and western bluefin tuna since 1999/2000 through implementation of a limited access program and fishing gear restrictions.

3.1.4 Recommendation to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin Populations (Rec. 06-09, 10-05)

Phase I of the ICCAT rebuilding plan for Atlantic blue and white marlins requires countries to reduce, by 2010,commercial landings of Atlantic white marlin captured in pelagic longline and purse seine fisheries by 67 percent and reduce blue marlin landings by 50 percent from 1996 or 1999 landings (whichever is greater). The United States has prohibited all commercial retention of billfish since 1988. For its part of the rebuilding program, the United States maintains regulations that prohibit all landings of blue and white marlins by any method other than rod and reel, and provides 10% scientific observer coverage of billfish tournament landings through 2010. The United States currently meets or exceeds these observer requirements. The United States also agreed to limit annual landings by U.S. recreational fishermen to 250 Atlantic blue and white marlins, combined, as first recommended by ICCAT Recommendation 00-13. Catch and release rates in the U.S. recreational fishery for Atlantic blue and white marlin are estimated to be very high (90-99%) based on tournament data, and minimum sizes have been established at 168 cm (66 inches) for white marlin and 251 cm (99 inches) for blue marlin.

The regulation that codified the U.S. 250 marlin limit established procedures to remain within the limit; prohibited the retention of billfish on all commercial vessels; and established a permit condition requiring that recreational vessels possessing an HMS permit abide by Federal regulations regardless of where fishing, unless a state has more restrictive regulations. In addition, since 1 January 2008, all anglers participating in Atlantic billfish tournaments have been required to use only non-offset circle hooks when deploying natural baits or natural bait/artificial lure combinations. These management measures are expected to further limit marlin mortality.

All registered Atlantic billfish tournaments are selected to report landings and effort information to the National Marine Fisheries Service. The United States implemented a mandatory reporting program for billfish landed by recreational anglers who are not participating in registered tournaments in March 2003. The United States continues to refine estimation and data collection methodologies for rod and reel catches and landings of marlins. Preliminary 2010 calendar year data from all data sources indicate landings of 28 blue marlins and 72 white marlins from recreational fishing activities. In addition, 19 roundscale spearfish were landed. Please refer to **Appendix 3**[*]: U.S. Compliance Tables for final aggregate U.S. landings.

3.1.5 Recommendation to Establish a Rebuilding Program for North Atlantic Swordfish (Rec. 10-02)

Recommendation 10-02 established a catch limit of 3,907 t ww for the United States for 2011, and included a provision allowing the United States to catch up to 200 t of its North Atlantic swordfish quota between 5 degrees North latitude and 5 degrees South latitude, and a provision to transfer 25t to Canada. The recommendation also limited carryover of unused quota to 50 percent of the baseline quota and provided for a one-time transfer within a fishing year of up to 15% of the TAC allocation to other CPCs with TAC allocations. NMFS published a final rule on 12 September 2011 (76 FR 56120) that fully implements this recommendation. Recommendation 10-02 further specified that each CPC shall submit to the ICCAT Secretariat in 2011, a report on the CPC's history of swordfish fishing and a development/management plan of its swordfish fishery. The United States submitted its report on September 15, 2011, as required under Recommendation 10-02. Consideration of the multi-year conservation and management plans in 2011 shall be based upon those reports and development/management plans as well as the *ICCAT Criteria for the Allocation of Fishing Possibilities* [Ref. 01-25]. The United States has a required minimum size of 47" (119 cm) lower jaw fork length (LJFL) or 29" (73 cm) cleithrum to caudal keel length, which was designed to correspond to the 119-cm LJFL minimum size limit, with zero tolerance.

3.1.6 Recommendation on South Atlantic Swordfish (Recs. 06-03, 09-03)

Recommendation 06-03 established catch allocations for the United States of 100 t each year for the period 2007-2009, inclusive, and allowed up to 100 t ww of underharvest to be carried forward by the United States each of these years. Recommendation 09-03 extended the provisions of Recommendation 06-03 through 2012. Per Recommendation 09-03, in 2010, the United States transferred 100 t of U.S. quota to other CPCs. Under this recommendation, 50 t was transferred to Namibia, 25 t to Côte d'Ivoire, and 25 t to Belize from the available South Atlantic swordfish quota.

3.1.7 Recommendation on the Southern Albacore Catch Limits (Rec. 07-03)

The United States was subject to a catch limit of 100 t in 2010. The United States did not prosecute a directed fishery for southern albacore in 2010.

3.1.8 Recommendation on North Atlantic Albacore Catch Limits (Recs. 98-08; 06-04; 07-02; 09-05)

Under Recommendation 09-05, the annual U.S. landings quota was 527 t for 2010 and for 2011. The recommendation provided that overages/underages of annual catch limits should be deducted from, or added to, specific future catch limits, and Recommendation 09-05 limited carryover of underage to 25 percent of a CPC's initial catch quota. Please refer to **Appendix 3**: U.S. Compliance Tables for final aggregate U.S. landings.

In addition, pursuant to ICCAT's recommendation concerning the limitation of fishing capacity on North Atlantic albacore *(Recommendation 98-08)*, the United States submits the required reports providing a list of U.S. vessels operating in the fishery on an annual basis and implemented limited entry in its pelagic longline fishery in 1999. The 2011 submission indicated that there were 216 vessels authorized to harvest North Atlantic albacore in the Convention area.

3.1.9 Recommendation by ICCAT on Bigeye Tuna Conservation Measures for Fishing Vessels Larger than 24m Length Overall (Rec. 98-03)

The operative paragraphs of Recommendation 98-3, paragraphs 1 and 2, do not apply to the United States per paragraph 3, as the annual average catch of bigeye tuna by the United States was below 2,000t for the prescribed 5 year period.

[*] The Appendices are available at the Secretariat. / Les Annexes sont disponibles auprès du Secrétariat. / Los Anexos están disponibles en la Secretaría.

3.1.10 Recommendation on Bigeye Tuna Conservation Measures (Recs. 04-01; 08-01; 09-01; 10-01)

No catch limits apply to the United States since 1999 catch was less than 2,100 t. To provide additional protection to the bigeye tuna stock, particularly the juvenile component, the United States has implemented a minimum size for this stock (which exceeds that formerly required by ICCAT of 3.2 kg). This minimum size of 27 inches (approximately 6.8 kg) applies to all U.S. fisheries landing bigeye tuna, both commercial and recreational.

3.1.11 Recommendation on Yellowfin Size Limit (Recs. 72-01; 05-01)

In 2005, ICCAT repealed the minimum size limit of 3.2 kg that had been in place since 1972. The United States maintains a minimum size limit of 27 inches fork length (approximately 6.8 kg) in both recreational and commercial fisheries for yellowfin tuna.

3.1.12 Recommendation by ICCAT on Supplemental Regulatory Measures for the Management of Atlantic Yellowfin Tuna (Rec. 93-04)

The United States has implemented a number of regulatory measures that ensure consistency with Recommendation 93-04, which prohibits increases in effective fishing effort for Atlantic yellowfin tuna over 1992 observed levels. The United States implemented a limited access program for pelagic longline vessels in 1999, which has resulted in a decrease in the number of vessels commercially permitted to fish for Atlantic tunas by approximately 70 percent from the early 1990s. The United States also implemented a retention limit of three fish per angler per trip in the recreational and charter/headboat fisheries in 1999. In 2000 and 2001, the United States closed three large areas to pelagic longline fishing in the U.S. Atlantic EEZ (including the Gulf of Mexico), which had demonstrable effects on yellowfin tuna effort and catches. In 2004, the United States also implemented circle hook requirements in the pelagic longline fishery in which yellowfin tuna are caught, which contributes to reducing post-release mortality of incidentally caught yellowfin tunas, and, as noted above, the United States has maintained a minimum size for retaining yellowfin tuna despite the repeal of a minimum size by ICCAT.

3.1.13 Resolution on Atlantic Sharks (Res. 03-10)

Resolution 03-10 requested ICCAT parties and cooperating parties to provide the SCRS bycatch committee with information on shark catches, effort by gear type, and landings and trade of shark products, and called for the full implementation of National Plans of Action (NPOAs) by ICCAT parties and cooperating parties, in accordance with the Food and Agriculture Organization's (FAO) International Plan of Action (IPOA) for the Conservation and Management of Sharks. The U.S. National Plan of Action for the Conservation and Management of Sharks was adopted in February 2001, consistent with the International Plan of Action for Sharks. The United States has provided Task I and Task II data to support stock assessments for shortfin mako, porbeagle and blue sharks.

3.1.14 Recommendations on Atlantic Sharks (Recs. 04-10; 05-05; 06-10; 07-06; 09-07; 10-6; 10-7; 10-8)

The original 2004 Recommendation established a timeline for review of the shortfin mako population assessment and development of recommendations for management alternatives (2005), as well as reassessment of blue sharks and shortfin mako (2007) by SCRS. Following the 2005 assessment, Recommendation 04-10 was amended via Recommendation 05-05 to include additional requirements for CPCs to implement and report on measures taken to reduce fishing mortality of North Atlantic shortfin mako sharks caught in association with fisheries managed by ICCAT. The United States establishes and tracks annual quotas for pelagic sharks, which include landings of shortfin mako sharks, to ensure that catches of these species are within the United States' domestically-designated quota. Tracking of the pelagic shark quota in recent years indicates that pelagic sharks, including shortfin mako sharks, do not constitute a significant portion of U.S. shark landings. In accordance with domestic requirements, the United States has catch limits in place for Atlantic porbeagle, shortfin mako, and blue sharks and will continue to submit catch and effort data for sharks to ICCAT.

Recommendation 04-10 also included reporting requirements for shark catches, including available historical data on catches; full utilization of shark catches; a requirement that CPCs prevent their vessels from having shark fins onboard that total more than 5% of the weight of sharks; a requirement that the ratio of fin-to-body weight of sharks be reviewed by the SCRS by 2005; and prohibitions on fishing vessels retaining, transshipping or landing any fins harvested in contravention to the Recommendation. In addition, the Recommendation encourages the release of live sharks, especially juveniles in fisheries not directed at sharks, as well as additional

research to improve the selectivity of fishing gears and identify shark nursery areas. The United States continues to fulfill the requirements of these recommendations through research and data collection programs and a variety of fishing restrictions. The United States was already in conformance with the finning prohibition in Rec. 04-10 through provisions of the Shark Finning Prohibition Act of 2000, which prohibited the practice of finning and the possession or landing of shark fins without the corresponding carcass (67 FR 6194, 11 February 2002).

In 2008, NMFS published Amendment 2 to the Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP) that, among other things, required sharks landed in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea, to be landed with their fins naturally attached. (The U.S. Shark Conservation Act of 2010 includes a *nationwide* requirement for most sharks (including all pelagic sharks) to be landed with fins and tails naturally attached). Amendment 2 also established a shark research fishery, which requires 100% observer coverage and collects specific fishery-dependent information on sharks and shark fisheries such as gear selectivity and size class information. The United States enforces a minimum size limit and bag limits for recreationally caught sharks, commercial trip limits, and commercial quotas, and has established a time/area closure for shark bottom longline fishing in the mid-Atlantic to protect sharks in the nursery grounds.

Recommendation 07-06 requires CPCs to take action toward the conservation of porbeagle sharks and North Atlantic shortfin mako sharks and to contribute data and research to future stock assessments of the species. U.S. scientists participated in the 2008 assessments for shortfin mako and blue sharks and the 2009 porbeagle shark assessment. Consistent with Recommendation 07-06, the United States significantly reduced the porbeagle shark quota in 2008 in Amendment 2 to the 2006 Consolidated Atlantic HMS FMP from 91 metric tons to 1.7 metric tons and implemented a rebuilding plan for this species. The United States is actively involved in pelagic shark research and continues to submit Task I and Task II data for sharks to ICCAT on an annual basis.

Recommendation 08-07 requires that all nations release bigeye thresher sharks unharmed and report all data on incidental catches. The United States has prohibited the harvest of bigeye thresher sharks in commercial and recreational fisheries since 1999. Since 2006, bottom longline and gillnet fishermen fishing for sharks have been required to attend workshops to learn how to release sea turtles, other protected species, and prohibited shark species in a manner that maximizes survival. NMFS published a final rule on 7 February 2007 (72 FR 5633), that requires participants in the Atlantic shark bottom longline fishery to possess, maintain, and utilize handling and release equipment for the release of sea turtles, other protected species, and prohibited shark species. Recommendation 09-07 prohibits retention of bigeye thresher sharks, as well as requires CPCs to submit Task I and II data for all thresher sharks and where possible, requires implementation of research projects to determine nursery areas for these species. As mentioned above, the United States has prohibited the retention of bigeye thresher sharks since 1999 and continues to submit Task 1 and Task II data for sharks as well as actively engaging in pelagic shark research.

In 2010, three recommendations were adopted requiring CPCs to take action toward the conservation of Atlantic sharks. Recommendation 10-06 required CPCs to include information in their 2012 Annual Reports on actions taken to implement Recommendations 04-10, 05-05, and 07-06, and the steps taken to improve their Task I and Task II data collection for direct and incidental catches. As noted above, the United States has implemented regulations to fully comply with Recommendations 04-10, 05-05, and 07-06 and will include additional information, as necessary, in the 2012 Annual Report. In addition to Recommendation 10-06, Recommendations 10-07 and 10-8 prohibit retaining, transshipping, landing, storing, or selling hammerhead sharks in the family Sphyrnidae (except for *Sphyrna tiburo*) and oceanic whitetip sharks (*Carcharhinus longimanus*) caught in association with ICCAT fisheries. Additionally, discard and release data for these species must be reported to ICCAT. NMFS published a final rule on 29 August 2011 (76 FR 53652) that fully implements the requirements of Rec. 10-07 and 10-08.

3.2 Closed Seasons

3.2.1 Domestic Time/Area Closures for ICCAT Species

The United States takes an ecosystem approach to management of HMS fisheries. As such, the United States implements a number of measures that go beyond the measures required in in ICCAT recommendations.

Closures affecting ICCAT-managed fisheries. At present, the Atlantic pelagic longline fishery of the United States typically targeting ICCAT-managed species, such as swordfish and bigeye, albacore, skipjack and yellowfin tunas, is subject to several discrete time/area closures. These closures are designed to reduce all bycatch (*e.g.*, undersized swordfish, billfish, *etc.*) in the pelagic longline fishery by prohibiting pelagic longline fishing for ICCAT-managed species in those areas during specified times. These closures affect offshore fishing

areas up to 200 nautical miles (nm) from shore (see Figure 3.2.1). Those closures are as follows: (1) Florida East Coast: 50,720 nm^2year-round; (2) Charleston Bump: 49,090 $nm^2$from February through April each year; (3) DeSoto Canyon: 32,860 nm^2year-round; and (4) the Northeastern United States: 21,600 nm^2during the month of June each year. The Northeast Distant Statistical Sampling Area (NED) (2,631,000 nm^2), which had been closed year-round (per regulations at 50 CFR part 223 and 635) from 2001 through mid-2004, has been reclassified as a gear restricted area.

NMFS issued Exempted Fishing Permits to three pelagic longline vessels to conduct research in portions of the Charleston Bump and Florida East Coast Closed Areas from 2008 to September 2010. This research, which was carried out with academic partners, should allow NMFS to determine the relative effectiveness of the pelagic longline closed areas under current fishery conditions and provide data which could help NMFS make determinations about whether modifications to the existing closed areas are warranted.

To reduce sea turtle mortality, pelagic longline vessels may only fish for HMS in the NED if they observe strict circle hook and bait restrictions and use approved sea turtle release gear in accordance with release and handling protocols. Outside of the NED, in order to reduce sea turtle mortality, the U.S. HMS pelagic longline fishery is required to use circle hooks with certain bait combinations, depending on the region, as well as the required, approved sea turtle release gear and release and handling protocols. If selected, pelagic longline vessels must carry observers when fishing in or outside of the NED.

Effective 18 June 2009, in order to conduct research to minimize marine mammal interactions, there is also a Cape Hatteras Special Research Area (CHSRA) that is located in the mid-Atlantic Bight, which requires vessels fishing with pelagic longline gear to carry observers, when needed. Additionally, since June 2009 U.S. pelagic longline vessels must limit the length of the longline mainline to 20 nautical miles in length to reduce serious injuries and mortalities of both pilot whales and Risso's dolphins in the Mid-Atlantic Bight. Observers may conduct additional scientific investigations while on board pelagic longline vessels fishing in the CHSRA designed to support the goals of the pelagic longline take reduction plan (PLTRP).

Closures Affecting Non-ICCAT-Managed Fisheries: In addition, all HMS gear types are prohibited year-round, except for surface trolling from May through October, in the Madison Swanson and Steamboat Lumps Marine Reserves (**Figure 6**). Both of these reserves are located shoreward of the Desoto Canyon Closed Area; the Madison-Swanson Marine Reserve is 115 nm^2 in size, and the Steamboat Lumps marine reserve is 104 nm^2 in size. The Edges 40 Fathom Contour is a 390 nm^2 gag spawning region located between the Madison-Swanson and Steamboat Lumps closure area, within the Gulf of Mexico. This area is closed to fishing for any Gulf of Mexico Fishery Management Council-managed species and all HMS fishing from 1 January through 30 April of each year to provide additional protection for spawning gag grouper.

Effective 1 January 2005, the United States implemented a mid-Atlantic shark closed area for bottom longline gear from January through July of each year to protect dusky shark and juvenile sandbar sharks in pupping and nursery areas. Additionally, on 7 February 2007, NMFS published a final rule (72 FR 5633) that complements regulations that the Caribbean Fishery Management Council (CFMC) implemented on 28 October 2005 (70 FR 62073), that closed six small distinct areas off of Puerto Rico and the U.S. Virgin Islands to bottom longline gear, year-round. The purpose of these closed areas is to protect essential fish habitat of reef-dwelling species. These areas are defined in Title 50, section 622.33(a) of the U.S. Code of Federal Regulations.

NMFS published a final rule on 7 February 2007 (72 FR 5633), that requires participants in the Atlantic shark bottom longline fishery to possess, maintain, and utilize the same equipment and follow the same protocols for the safe handling and release of sea turtles and other protected species as required in the pelagic longline fishery. Additionally, on 23 September 2008 (73 FR 54721), NMFS published a final rule that requires U.S. HMS pelagic longline and bottom longline vessels to possess an additional sea turtle control device as of 1 January 2009.

Finally, NMFS published a final rule on 24 June 2008 (73 FR 35778; correction published on 15 July 2008, 73 FR 40658), to complement regulations implemented by the South Atlantic Fishery Management Council (SAFMC). The SAFMC published a final rule on 13 January 2009 (74 FR 1621), that implemented eight Type II Marine Protected Areas (MPAs) from North Carolina to the Florida Keys. Type II MPAs are closures throughout the year to most gear types except some fishing, such as trolling for HMS and other coastal pelagic species. NMFS backstopped these closures because of enforcement issues; many shark and snapper grouper fishermen possess the same permits, and the gear is indistinguishable between the two fisheries. Therefore, NMFS has closed the eight MPAs to shark bottom longline gear.

3.3 Trade and Compliance Related Measures

3.3.1 Trade Restrictive Recommendations (Recs, 02-17; 03-18)

No new trade restrictive measures were adopted by the Commission at the 2010 annual meeting. The trade restrictive measures that are currently in effect prohibit the importation of bigeye tuna from Bolivia (Recommendation 02-17) and Georgia (Recommendation 03-18). These measures have been implemented by the United States.

3.3.2 Recommendation Concerning Trade Measures (Rec. 06-13)

Recommendation 06-13 directs CPCs that import products of tuna and tuna-like species to collect relevant import, landings, or associated data on such products in order to allow for submission of that information to the ICCAT Secretariat. The United States collects information through a combination of programs, including the bluefin tuna catch documentation program, bigeye and swordfish statistical document programs, and through domestic Customs programs, and relevant information is provided to the Commission.

3.3.3 Bluefin Tuna Catch Documentation Program (Rec. 09-11)

On 2 June 2008 (73 CFR 31380), the United States published final regulations effective 2 July 2008, implementing the ICCAT bluefin tuna catch documentation program per Recommendation 07-10. This program repealed the pre-existing statistical document program and now tracks bluefin tuna landings and international trade using a bluefin tuna catch document. In June 2009, the U.S. program was updated to comply with the program changes implemented by Recommendation 08-12 and the U.S. program is consistent with Recommendation 09-11, which replaced Recommendation 08-12 in 2009.

The U.S. program continues to require that bluefin tuna be fitted with a tail tag upon sale to a domestic dealer, and the tag (or tag number in the case of a cut carcass) must remain with the fish, thus tracking bluefin tuna from domestic harvest to international markets. The 2010 annual bluefin tuna catch documentation report was submitted to ICCAT before the 1 October 2010, deadline and covered the time period from 1 July 2009, through 30 June 2010. The United States continues to work towards implementation of an electronic reporting system for imports covered by RFMO consignment document programs.

3.3.4 Swordfish and Bigeye Tuna Statistical Document Programs (_Recs. 00-22, 01-21, 01-22, 03-19)

ICCAT's Statistical document programs for swordfish and frozen bigeye tuna have been implemented by the United States. As required under the statistical document programs, the United States submits reports to ICCAT twice yearly, providing information on import, export and re-export activity involving these species products. Statistical document reports for swordfish and bigeye tuna were submitted to the ICCAT Secretariat in April 2011 for the period covering July 2010 through December 2010, and before the 1 October 1 2010, deadline for the first half of the 2011 calendar year.

3.4 Observer Programs and Related Activities

3.4.1 Minimum standards for fishing vessel scientific observer programs.

Recommendation 10-10 establishes minimum standards for fishing vessel scientific observer programs. The U.S. observer program currently meets two main objectives: monitoring of interactions between fishing gear and protected species (marine mammals, sea turtles, and sea birds), and monitoring of fishing effort and catch (estimation of total landings of target species and/or bycatch of non-target or prohibited species). An overview of observer programs in the United States can be found online at http://www.st.nmfs.noaa.gov/st4/nop/index.html. During calendar year 2010, the United States achieved 14.2 percent observer coverage expressed as a proportion of reported sets and 13.9 percent as a proportion of reported hooks in the Atlantic pelagic longline fishery for highly migratory species. Click on the pelagic longline link on the map on the National Observer Program web page at http://www.st.nmfs.noaa.gov/st4/nop/index.html for information regarding the different observer programs.

The United States is coordinating with the Chilean government and the Instituto de Fomento Pesquero (Institute for Fisheries Development) to host the 7th International Fisheries Observer and Monitoring Conference to be held in April 2013 in Vina del Mar, Chile. The previous conference was held in Portland, Maine in July 2009

and sponsored the participation of a number of attendees from developing nations. A continuation of the conference series that started in 1998, this event is an important opportunity to improve fishery monitoring programs worldwide through sharing of practices and is a valuable forum for dialog between those responsible for monitoring fisheries and those who rely upon the data they collect. For additional information on U.S. capacity building activities, see **Appendix 6**: Capacity Building Assistance to ICCAT Countries.

3.5 Vessel Monitoring

3.5.1 Recommendation by ICCAT Concerning Minimum Standards for the Establishment of a Vessel Monitoring System in the ICCAT Convention Area (Recs. 03-14, 04-11, 07-08)

The United States has implemented a fleet-wide VMS requirement in the Atlantic pelagic longline fishery (25 June 2003, 68 FR 37772). This rule requires all vessels away from port with pelagic longline gear onboard to operate their VMS units. In addition to what is required by these recommendations, the United States also requires VMS operation for vessels with bottom longline gear onboard between 33°00' N. latitude and 36°30' N. latitude or near the mid-Atlantic shark closed area and for shark gillnet vessels operating during the right whale calving season (24 December 2003, 68 FR 74746). Recommendation 07-08 applies to vessels fishing for bluefin tuna in the eastern Atlantic Ocean and Mediterranean Sea and is not applicable to the United States.

3.6 Measures to Ensure Effectiveness of ICCAT Conservation and Management Measures and to Prohibit Illegal, Unreported and Unregulated Fishing

3.6.1 Management Standard for the Large-Scale Tuna Longline Fishery (Res. 01-20)

In 2001, ICCAT resolved that minimum management standards should be established for issuance of fishing licenses to tuna longline vessels greater than 24 meters in overall length and that an annual report should be submitted to ICCAT using a specific format. The U.S. submission is provided via ICCAT form: COMP-017-LSTLV, and is attached as **Appendix 2**.

3.6.2 Recommendation by ICCAT Concerning the Duties of Contracting Parties and Cooperating Non-Contracting Parties, Entities, Fishing Entities in relation to their vessels in the ICCAT Convention Area (Rec. 03-12)

The United States is implementing this measure through various means (e.g., licensing requirements, monitoring control, and surveillance measures, maintaining up-to-date records of U.S. vessels authorized to fish species managed by ICCAT in the Convention area, etc.) as described throughout this annual report.

3.6.3 Recommendation Further Amending the Recommendation by ICCAT to Establish a List of Vessels Presumed to Have Carried Out Illegal, Unreported, and Unregulated Fishing Activities in the ICCAT Convention Area (Rec. 09-10), Recommendation by ICCAT to Adopt Additional Measures Against Illegal, Unreported and Unregulated (IUU) Fishing (Rec. 03-16) and Resolution by ICCAT Further Defining the Scope of IUU Fishing (Res. 01-18)

The United States has laws and regulations that serve to prohibit the import of tuna and tuna-like species from vessels included in the IUU vessel list or which are not on the ICCAT positive vessel list *(50 CFR Part 635.41).* The United States has developed regulations to clarify domestic implementation of other aspects of this recommendation including restriction of entry into port and access to port services for vessels on the ICCAT IUU vessel list. Such vessels may also be prohibited from engaging in commercial transactions, if allowed entry into port. The actions taken against listed IUU vessels will be in accordance with the relevant conservation and management measure and in consultation with other U.S. agencies.

IUU fishing is the focus of growing attention in the United States, due to its adverse impacts on target fish stocks, habitat, fish markets, bycatch, and competition with legal fishing. The United States has taken action to implement Resolution 01-18, which calls upon CPCs to take every possible action, consistent with relevant laws, to instruct importers, transporters, and others in the fishing industry to refrain from engaging in transaction and transshipment of tunas and tuna-like species caught by fishing vessels that have been engaged in IUU fishing activity. The U.S. fishing industry has been further advised that, in addition to potentially violating U.S. law, doing business with a vessel identified on a RFMO's IUU list may include restricted port access or unloading prohibitions imposed at the intended destination.

Recommendation 03-16 requires CPCs to take the necessary measures to prohibit landings, placement in cages for farming, and/or transshipment of tunas or tuna-like species that were caught by fishing vessels engaged in IUU fishing activity consistent with their rights and obligations under international law. U.S. vessels do not participate in Atlantic bluefin tuna farming operations, and the United States prohibits at sea transshipment.

3.6.4 Recommendation by ICCAT to Promote Compliance By Nationals of Contracting Parties, Cooperating Non-Contacting Parties, Entities, or Fishing Entities with ICCAT Conservation and Management Measures (Rec. 06-14)

This recommendation requires CPCs to take appropriate measures in accordance with their applicable laws and regulations to investigate and respond to allegations and verifiable incidents of IUU fishing activities by their nationals, cooperate with the relevant agencies of other CPCs, and to report to ICCAT on actions and measures taken in accordance with the recommendation, effective July 2008. The United States complies with the requirements of this recommendation by pursuing reports of illegal fishing activities by its citizens. A report of enforcement related activities pertaining to ICCAT species, which includes any IUU related enforcement actions, can be found in **Appendix 4**, NOAA Enforcement Actions Taken on ICCAT Species.

3.7 Other Recommendations

3.7.1 Recommendation by ICCAT on Vessel Chartering (Rec. 02-21)

A final rule was published on 6 December 2004 (69 FR 70396), to implement recommendation 02-21 concerning vessel chartering. The United States collects all relevant information for monitoring before issuing the permits necessary to allow chartering to be undertaken and will continue to report any chartering activities to ICCAT. Since the adoption of recommendation 02-21, the United States has issued only one chartering permit (in late 2004), which authorized chartering activities to take place in the ICCAT Convention area during 2005.

3.7.2 Recommendation by ICCAT Concerning the Recording of Catch by Fishing Vessels in the ICCAT Convention Area (Rec. 03-13)

The United States requires vessels issued commercial Atlantic tunas, shark, or swordfish permits, as well as charter and headboat vessels fishing for Atlantic highly migratory species, to maintain and submit logbooks upon selection for reporting by the U.S. Government regardless of vessel length. This includes, for example, 100 percent of Atlantic pelagic longline vessels fishing for Atlantic tunas, shark, or swordfish, regardless of vessel length. For information on the implementation of this recommendation relative to recreational fishing vessels, see section 3.7.3 below.

3.7.3 Resolution on Improving Recreational Fishery Statistics (Res. 99-07)

Recreational landings are estimated through a combination of tournament surveys (the Recreational Billfish Survey), the Large Pelagics Survey (LPS), the Marine Recreational Fishing Statistics Survey (MRFSS), mandatory non-tournament landings reporting requirements for Atlantic blue and white marlins, sailfish, swordfish, and bluefin tuna, as well as state landings data. Final regulations adopted in 1999 require selected HMS charter/headboat vessels that do not already complete a logbook to do so. Registration of all recreational fishing tournaments for Atlantic highly migratory species has been required since 1999. All tournaments for Atlantic highly migratory species are required to submit landing reports, if selected for reporting. Longstanding U.S. policy is to select 100 percent of billfish tournaments for reporting. All non-tournament landings of Atlantic billfish and swordfish are required to be reported to the National Marine Fisheries Service within 24 hours of landing. In the fall of 2007, the United States enhanced recreational reporting by implementing a new internet based non-tournament reporting system for Atlantic billfish, including swordfish. The United States is in the process of improving on the current MRFSS system through the Marine Recreational Information Program (MRIP). MRIP is an improved national system of regional surveys that will replace existing marine recreational fishing data collection programs and provide better regional monitoring of recreational fishing participation, effort, catches, landings and releases of finfish species.

The United States has established a national registry of saltwater anglers, including those fishing for ICCAT-managed species, which will include names and contact information among other information. The registry is intended to improve foundational information concerning recreational fishery participation, which will support improvements in the overall monitoring recreational fisheries. Information about the registry can be found at: www.countmyfish.noaa.gov.

3.7.4 Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels 20 meters in Length Overall or Greater Authorized to Operate in the Convention Area (Rec. 09-08)

The United States submitted the list of vessels required, pursuant to this recommendation, to ICCAT in June 2010. At that time, there were 427 U.S. vessels that met the appropriate criteria. Additional information is available in **Appendix 5**: Report on Internal Actions Taken to Ensure That Tuna Vessels on the ICCAT Record of Vessels over 20 Meters Are Fishing in Accordance with ICCAT Management and Conservation Measures

3.7.5 Recommendation by ICCAT on the Bycatch of Sea Turtles in ICCAT Fisheries (Rec. 10-09)

In 2004 (6 July 2004; 63 FR 40734), the United States codified regulations to reduce sea turtle bycatch in Atlantic pelagic longline fisheries for highly migratory species. These measures pertain to the entire U.S. Atlantic pelagic longline fishery, and include: mandatory bait specifications, use of circle hooks (size of hook depending on fishing locale), and the mandatory possession and use of sea turtle handling and release gear on board all vessels with pelagic longline gear. The United States continues to modify the suite of disentanglement and release gears required to be onboard longline vessels as new gears and information on best practices are developed. Beginning in 2010, the United States reported sea turtle interactions in the U.S. pelagic longline fleet to ICCAT.

3.7.6 Recommendation by ICCAT Establishing a Program for Transshipment by Large-Scale Longline Fishing Vessels (Rec. 06-11)

This recommendation establishes a program of transshipment affecting tuna longline and carrier vessels, including the establishment of an ICCAT record of authorized carrier vessels, documentation requirements, and extensive obligations and procedures pertaining to transshipment to assist in combating IUU fishing, ensure adequate monitoring of transshipment activities, and collecting catch data from large-scale vessels. U.S. regulations prohibit transshipment of highly migratory species products in the Convention area.

3.7.7 Recommendation by ICCAT for a Revised Port Inspection Scheme (Rec. 97-10)

The United States generally prohibits foreign fishing vessels from landing in U.S. ports, fish or fish products harvested or taken onboard on the high seas, with a few exceptions, including for landings in some Pacific U.S. territories. Under U.S. domestic law, all fishing vessels, including those carrying fish species subject to regulations pursuant to a recommendation of ICCAT, and their catch, gear, fishing logbooks and manifests are subject to inspection. See Section 4 below for additional information.

3.7.8 Recommendation by ICCAT on Compliance with Statistical Reporting Obligations (Rec. 05-09)

Recommendation 05-09 requires Contracting parties and CPCs to provide explanations regarding reporting deficiencies and data gaps along with plans for corrective action. Following the 2010 ICCAT Annual meeting, the United States received a letter of concern from ICCAT which indicated a deficiency in the U.S. submission of catch and effort data for sharks. This year, the United States corrected this deficiency and submitted its catch and effort data for sharks with its other Task I and Task II data submissions consistent with SCRS requirements.

3.7.9 Recommendation by ICCAT on Bluefin Tuna Farming (Rec. 06-07)

Atlantic bluefin tuna are not farmed in U.S. waters. The U.S. bluefin tuna catch documentation program applies to farmed as well as wild-caught product and catch documents are required for imports of all farmed product.

3.7.10 Electronic Statistical Document Program (Rec. 06-16)

The United States continues to implement an electronic system for the collection and dissemination of international trade information. The International Trade Data System (ITDS) is a project required under U.S. domestic legislation and is aimed at improving the efficiency of import and export processes. ITDS will help U.S. government agencies monitor the origin and safety of imported products. Given the domestic requirement to collect information from the trade community (shippers, carriers, brokers, etc.) in an electronic format, the United States is taking steps to integrate ICCAT's statistical and catch document programs into the internet-based electronic data collection system. NMFS has cataloged all of the information collection requirements and the respective data elements for the several seafood trade monitoring programs established either by U.S. domestic law or by the RFMOs to which the United States is a party. These data collection requirements have

been reviewed by U.S. Customs and Border Protection and a set of data formats and coding instructions has been developed. Additionally, NMFS has worked with U.S. Customs on a document imaging system which will allow brokers to attach electronic images of the paper certificates to the entry filings. NMFS issued an Advance Notice of Proposed Rulemaking in May 2009 (www.regulations.gov <http://www.regulations.gov>) and continues to consult with U.S. importers and exporters from ICCAT parties to determine the most efficient means of collecting the required data in electronic format. More detailed information on the U.S. International Trade Data System can be found on the www.itds.gov <http://www.itds.gov> internet site.

3.7.11 Recommendation by ICCAT on Reducing Incidental Bycatch of Seabirds in Longline Fisheries (Rec. 07-07)

The United States does not have any vessels actively participating in ICCAT-managed fisheries south of 20 degrees S. longitude. However, consistent with this recommendation, in 2010, the United States reported seabird interactions in the U.S. pelagic longline fleet to ICCAT.

3.7.12 Other Resolutions and Recommendations

The following were not addressed in this report as the United States does not participate in the relevant fishery or does not participate in specific activities covered by the measures or the measures required action by groups other ICCAT's measures:

- [Rec. 09-13] Other: ICCAT Inspection Reports
- [Res. 09-12] Resolution by ICCAT for the Pilot Application of the Kobe 2 Decision Matrix
- [Rec. 09-04] Recommendation by ICCAT for a Management Framework for the Sustainable Exploitation of Mediterranean Swordfish and Replacing ICCAT Recommendation 08-03
- [Rec. 07-08] Recommendation by ICCAT Concerning Data Exchange Format and Protocol in Relation to the Vessel Monitoring System for the Bluefin Tuna Fishery in the ICCAT Convention Area
- [Rec. 07-01] Recommendation by ICCAT on Mediterranean Swordfish
- [Rec. 03-04] Recommendation by ICCAT Relating to Mediterranean Swordfish
- [Rec. 99-03] Recommendation on the Establishment of a Closed Area/Season for the Use of Fish-Aggregation Devices

Section 4: Inspection Scheme and Activities

U.S. Atlantic enforcement for ICCAT species is undertaken by the NOAA Office of Law Enforcement (OLE), the U.S. Coast Guard, and, pursuant to cooperative enforcement agreements, by States and territories with maritime boundaries in the Atlantic Ocean, Gulf of Mexico, and/or Caribbean Sea. Enforcement activities include monitoring and inspecting offloads at landing facilities and marinas in conjunction with dealer record checks and at-sea boarding and inspection.

A summary of NOAA enforcement actions taken in ICCAT fisheries is provided in **Appendix 4**. The U.S. Coast Guard also enforces HMS fishery regulations. From 1 October 2010 to 15 September 2011, the Coast Guard boarded 262 vessels resulting in two significant violations. As enforcement of regulations for tuna and tuna-like species is just one of many vital component missions that the Coast Guard undertakes in the course of fisheries enforcement and of other duties, for every actionable incident documented, Coast Guard personnel have logged hundreds of hours monitoring for a range of violations. From 1 October 2010 to 15 September 2011, the total Coast Guard Atlantic Ocean and Gulf of Mexico fisheries enforcement focused effort involved 2,276 aircraft patrol hours, 7,190 boat patrol hours, and 54,195 cutter (large vessel) patrol hours.

In addition to ICCAT's requirements, the United States supported the development of the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU fishing (the Agreement) and, upon its adoption in November 2009, was one of the first to sign it. Since that time, we have been engaged in the development of implementing legislation and expect the Agreement and draft implementing legislation to be transmitted to Congress this fall. U.S. ratification of the Port State Measures Agreement will complement existing regulations that restrict port entry and access to port services to vessels included on the IUU lists of ICCAT and other RFMOs of which the United States is a party.

Section 5: Other Activities

Recent U.S. management action for Atlantic highly migratory species can be found online at: http://www.nmfs.noaa.gov/sfa/hms.

Federal register notices containing the full text of proposed and final regulations can be found at: http://www.gpoaccess.gov/fr/index.html.

Appendix 6 provides a summary of capacity building assistance to ICCAT countries (2008-2011).

Table 1. Annual landings (t) of yellowfin tuna from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline	701.7	757.8	460.5	416.4	744.6
	Gillnet	4.7	4.2	0.6	0.0	0.5
	Handline	105.1	113.2	30.1	58.7	44.2
	Trawl	0.7	2.4	0.0	0.0	1.6
	Troll	0.0	6.9	2.4	5.4	1.2
	Trap	0.0	0.0	0.05	0.1	1.4
	Rod and reel*	4,649.2	2,726	657.1	742.6	1,087
	Unclassified	3.9	7.0	1.4	2.2	10.2
Gulf of Mexico	Longline	1,128.5	1,379.3	756.5	1,147	506.4
	Handline	49.9	26.2	11.2	21.6	13.7
	Rod and reel*	258.4	227.6	366.3	264.7	18
Caribbean	Longline	179.7	255.6	107.1	136.7	183.4
	Trap	0.4	0.0	0.0	0.0	0.0
	Gillnet	0.0	0.0	0.04	0.04	0.0
	Handline	7.8	9.1	3.7	3.3	1.9
	Rod and reel*	0.0	12.4	9.7	3.5	4.5
NC Area 94A	Longline	0.0	1.8	0.4	0.0	0.0
SW Atlantic	Longline	0.0	0.0	0.0	0.0	28.7
	TOTAL	7,090.0	5,529.5	2,407.2	2,802.3	2,648.1

* Rod and reel catches and landings represent estimates of landings based on statistical surveys of the U.S. recreational harvesting sector.

Table 2. Landings (t) of skipjack tuna from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline	0.04	0.0	0.1	0.4	1.4
	Gillnet	0.2	0.07	0.04	3.3	0.2
	Handline	0.2	0.3	0.4	2.8	1.7
	Trawl	0.7	0.005	0.003	0.0	0.0
	Trap	0.3	0.0	0.0	0.0	0.0
	Pound net	0.5	0.0	0.0	0.0	0.0
	Rod and reel*	34.6	27.4	21.0	75.7	28.9
	Unclassified	0.06	0.6	0.5	1.2	0.1
Gulf of Mexico	Longline	0.0	0.0	0.05	0.05	0.05
	Handline	0.0	0.2	0.06	0.2	0.1
	Rod and reel*	6.4	23.9	16.3	22.0	15.5
Caribbean	Longline	0.2	0.02	1.3	0.05	0.0
	Trap	0.05	0.0	0.0	0.0	0.0
	Gillnet	0.02	0.0	0.01	0.6	0.0
	Handline	10.0	13.7	16.0	8.8	6.2
	Rod and reel*	7.7	0.2	11.3	4.3	0.4
	TOTAL	61.0	66.5	67.1	119.4	54.7

Table 3. Annual landings (t) of bigeye tuna from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline	469.4	331.9	380.2	384.7	528.8
	Gillnet	0.2	1.0	0.04	0.0	0.0
	Handline	21.5	16.8	6.9	4.6	2.5
	Harpoon	0.2	0.0	0.0	0.0	0.0
	Trawl	0.0	0.4	0.0	0.0	1.2
	Trap	0.0	0.0	0.0	0.3	0.7
	Troll	0.0	0.9	0.8	0.6	0.0
	Rod and reel*	422.3	126.8	70.9	77.6	115.5
	Unclassified	0.8	0.9	2.1	1.9	6.7
Gulf of Mexico	Longline	37.7	37.0	14.0	19.5	8.1
	Handline	1.5	0.01	0.0	0.07	0.06
	Rod and reel	24.3	0.0	0.0	0.0	0.8
Caribbean	Longline	10.5	3.4	8.9	22.2	5.1
NC Area 94A	Longline	3.0	8.4	4.6	3.7	3.7
SW Atlantic	Longline	0	0	0	0	0.2
	TOTAL	991.4	527.3	488.5	515.2	673.4

Table 4. Annual landings (t) of albacore tuna from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline	84.8	109.9	107.2	141	165.3
	Gillnet	2.1	1.0	2.1	5.6	0.5
	Handline	2.6	5.4	0.2	0.5	2.0
	Trawl	1.1	0.3	0.01	0.08	0.03
	Trap	0.5	0.4	0.005	0.01	0.2
	Troll	0.0	0.2	0.2	0.07	0.04
	Rod and reel*	284.2	393.6	125.2	22.8	46.3
	Unclassified	5.6	4.2	2.0	1.3	2.2
Gulf of Mexico	Longline	7.6	15.4	10.2	16.7	7.1
	Handline	0.07	0.0	0.0	0.01	0.01
Caribbean	Longline	10.5	1.2	0.4	0.3	0.7
	Rod and reel*	0.0	0.0	0.0	0.0	103.6
	Handline	0.4	0.2	0.4	0.003	0.05
NC Area 94A	Longline	0.03	0.3	0.08	0.3	0.6
	TOTAL	399.5	532.1	248.1	187.9	328.7

Table 5. Annual catches (t) of bluefin tuna from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline**	104.4	70.7	107.1	166.7	139.4
	Handline	0.3	0.0	0.6	0.1	2.7
	Harpoon	30.3	22.5	30.2	65.7	29.0
	Purse seine	3.6	27.9	0.0	11.4	0.0
	* Rod and reel (>145 cm LJFL)	217.2	235.4	305.7	717.1	570.8
	* Rod and reel (<145 cm LJFL)	158.2	398.6	352.2	143.3	111.4
	Unclassified	0.0	0.0	0.3	0.0	0.0
Gulf of Mexico	Longline**	88.1	81.2	111.6	111.6	54.6
NC Area 94A	Longline**	12.1	12.4	12.3	56.0	17.5
	TOTAL	614.8	848.7	919.9	1,272	925.3

* Rod and reel catches and landings represent estimates of landings and dead discards when available based on statistical surveys of the U.S. recreational harvesting sector.
** Includes landings and estimated discards from scientific observer and logbook sampling programs.

Table 6. Annual catches (t) of swordfish from 2006 to 2010.

Area	*Gear*	*2006*	*2007*	*2008*	*2009*	*2010*
NW Atlantic	Longline**	1,165.2	1,649.6	1,622.5	1,696	1,897
	Gillnet	0.0	0.2	0.0	0.05	0.0
	Handline	32.5	125.2	83.2	123	220.6
	Harpoon	0.3	0.0	0.0	0.05	0.6
	Trawl	3.5	6.5	7.6	23.7	21.1
	Trap	0.0	0.0	0.0	0.0	1.8
	Rod and reel*	50.6	65.9	56.7	19.0	63.7
	Unclassified	0.2	0.2	0.2	0.0	2.1
	Unclassified discards	5.1	5.5	4.1	3.0	3.6
Gulf of Mexico	Longline**	328.1	457.7	361.6	476.1	281.5
	Handline	0.1	0.2	1.2	1.9	2.6
	Rod and reel*	2.1	2.3	19.0	12.6	2.8
	Unclassified discards	2.7	5.5	4.6	3.5	1.3
Caribbean	Longline**	88.9	27.8	57.9	22.6	41.4
	Handline	0.0	0.0	0.0	0.003	0.0
	Unclassified discards	0.0	0.0	0.0	0.2	0.04
NC Area 94A	Longline**	378.6	338.9	311.6	496.4	304.8
	Unclassified discards	0.0	0.5	0.0	0.0	0.01
SW Atlantic	Longline**	0.0	0.0	0.0	0.0	0.3
	TOTAL	2,057.9	2,682.8	2,530.3	2,878	2,845.4

* Rod and reel catches and landings represent estimates of landings and dead discards when available based on statistical surveys of the U.S. recreational harvesting sector.
** Includes landings and estimated discards from scientific observer and logbook sampling programs.

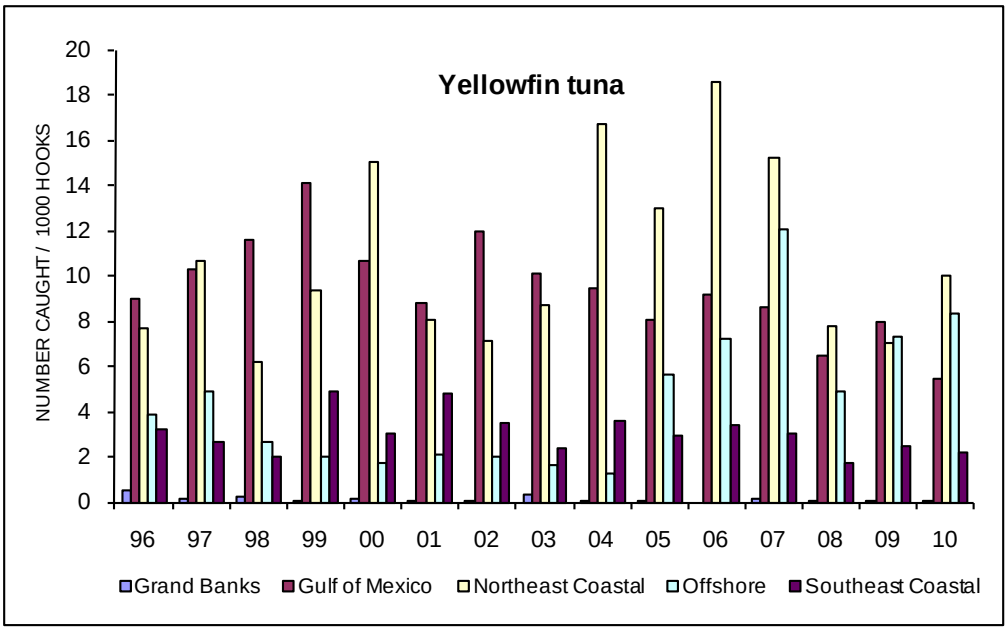

Figure 1. Nominal catch rates for yellowfin tuna in U.S. pelagic longline logbook reports.

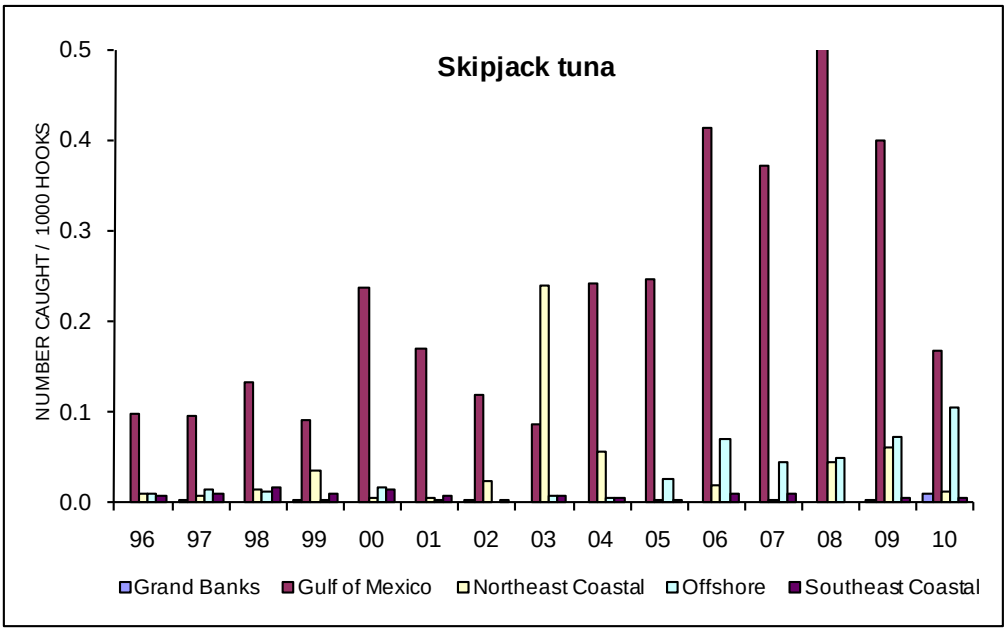

Figure 2. Nominal catch rates for skipjack tuna in U.S. pelagic longline logbook reports.

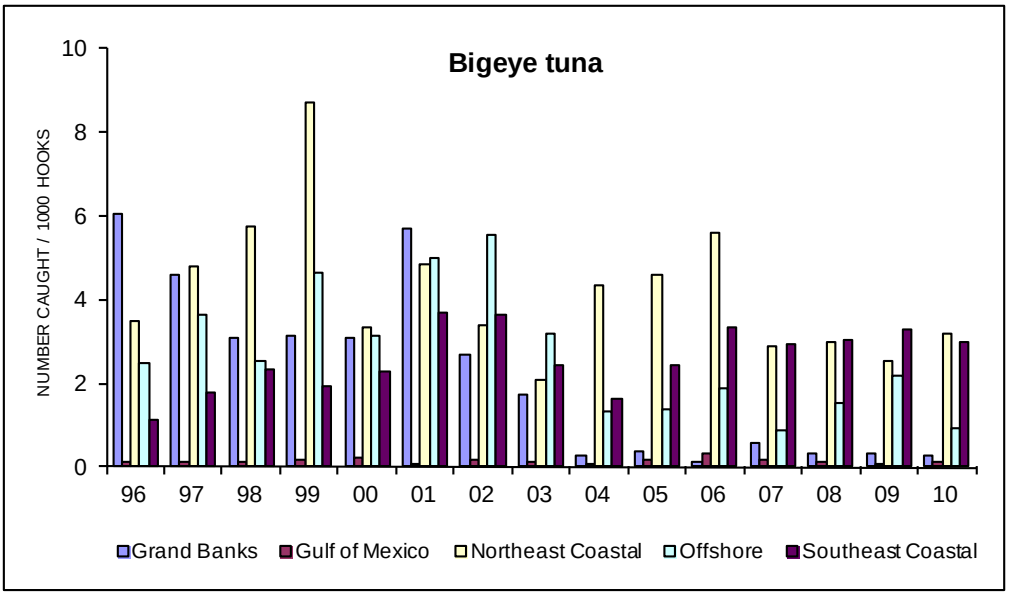

Figure 3. Nominal catch rates for bigeye tuna in U.S. pelagic longline logbook reports.

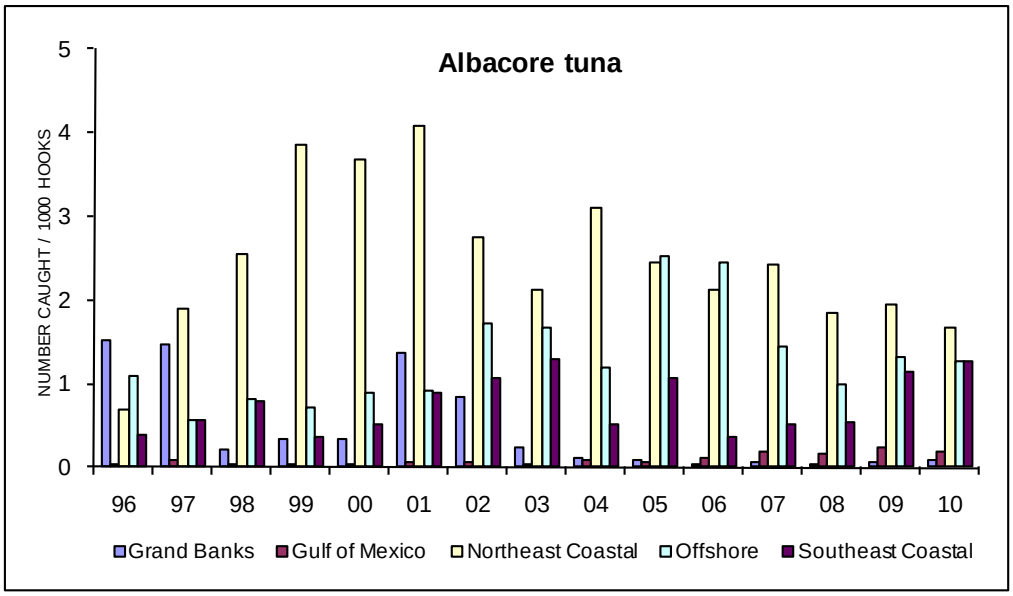

Figure 4. Nominal catch rates for albacore tuna in U.S. pelagic longline logbook reports.

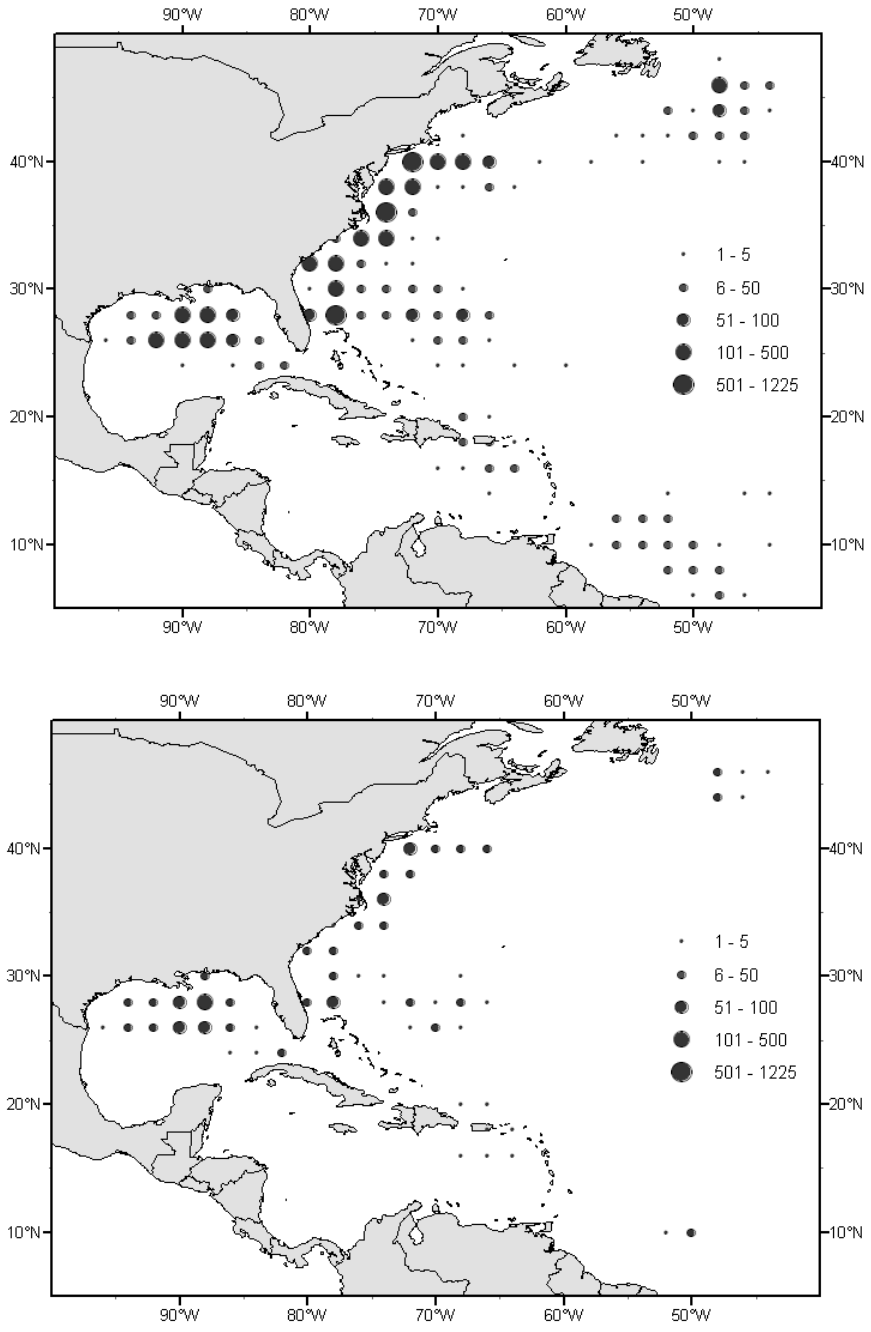

Figure 5. Position of longline sets as reported in pelagic logbooks (upper panel) and observed by the U.S. pelagic observer program (lower panel) in 2010 summarized by 2^{o}x2^{o} squares.

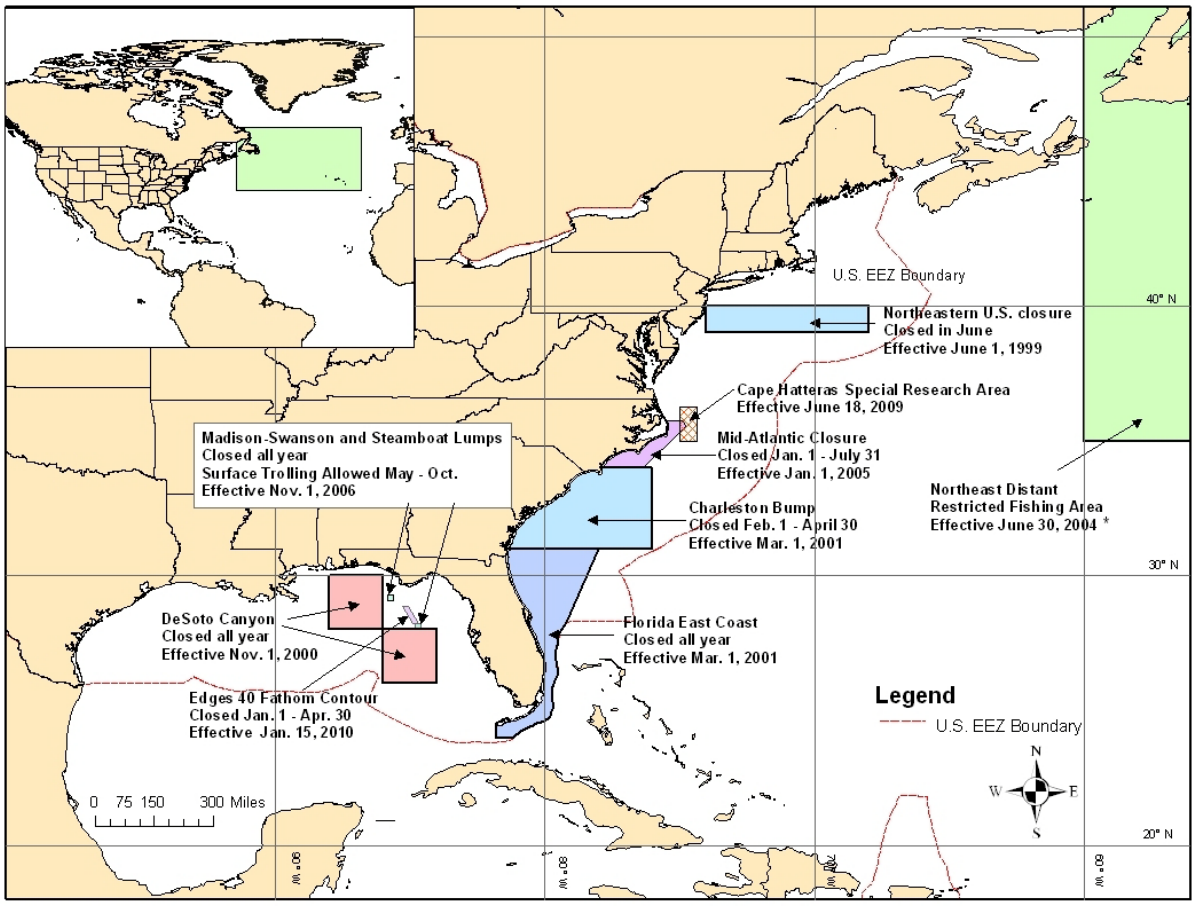

Figure 6. Selected existing U.S. time/area closures in HMS fisheries. Inset shows extent of the Northeast Distant restricted fishing area. The Mid-Atlantic Closure is applicable to bottom longline gear only. Note: the Northeast Distant (NED) was a closed area to all vessels as of 2001. It became the NED Restricted Fishing Area on 30 June 2004, when it was opened to those participating in the NED experiment. The Cape Hatteras Special Research Area (CHSRA) requires vessels fishing with pelagic longline gear to carry observers, when needed, and limit longline mainline to 20 nautical miles in length. The Caribbean bottom longline closures and South Atlantic MPAs closed to bottom longline gear are not included.

ANNUAL REPORT OF URUGUAY*
RAPPORT ANNUEL DE L'URUGUAY
INFORME DE URUGUAY

Andrés Domingo y Sebastián Jiménez[1]

Parte I (Información sobre pesquerías, investigación y estadísticas)

Sección 1: Información sobre la pesquería

Durante el año 2010, se redujo el esfuerzo pesquero en la flota atunera uruguaya con palangre de superficie. La mayoría de los barcos fueron fresqueros menores de 27 m de eslora. El esfuerzo estuvo dirigido principalmente a la captura del pez espada *(Xiphias gladius)*. Durante este año se continuó con el proyecto de investigación para la prospección del atún ojo grande (*Thunnus obesus*) dentro de la ZEE de Uruguay, iniciado conjuntamente con una empresa japonesa durante el 2009.

La captura total (preliminar) desembarcada y comunicada en 2010 fue de aproximadamente 654 t. Se pescaron 222 t de pez espada, los desembarques de tiburón azul *(Prionace glauca)* estuvieron alrededor de las 208 t y los de moro *(Isurus oxyrhinchus)* en las 23 t. Dentro de los atunes, el aleta amarilla (*Thunnus albacares*) fue la especie más pescada representando el 19% (122 t) de la captura total, seguido por el albacora (*Thunnus alalunga*) y el atún ojo grande, ambos representando el 4 y 3% de la captura, respectivamente (**Tabla 1, Figura 1**). A partir de finales de 2010, la flota comenzó a descartar los tiburones martillo (*Sphyrna* spp), de acuerdo con las recomendaciones de CICAA, y el tiburón pinocho (*Lamna nasus*), por decisión de la administración nacional. La flota continúa realizando descartes de otros peces pelágicos y de aquellos ejemplares de atunes y pez espada dañados, o de pequeñas tallas capturados vivos, así como de tortugas y aves marinas.

Sección 2: Investigación y estadísticas

La Dirección Nacional de Recursos Acuáticos (DINARA) del Ministerio de Ganadería, Agricultura y Pesca (MGAP), a través del Laboratorio de Recursos Pelágicos (LaRPe), es quien tiene a cargo el seguimiento estadístico, la investigación y la administración de estos recursos. A tales efectos dicha institución procesa la información procedente de cuadernos de pesca, boletas de desembarques y muestreos en puerto. Durante el año 2010 se realizaron diversas actividades vinculadas a las estadísticas, investigación y ordenación. Algunas de estas actividades se desarrollaron conjuntamente con otras instituciones gubernamentales, la Universidad de la República del Uruguay y organizaciones no gubernamentales e incluso se ha venido trabajando en conjunto con otros países como Australia, Brasil, Estados Unidos y Venezuela. Se continuó con el Programa Nacional de Observadores a bordo de la Flota Atunera (PNOFA), desarrollando las actividades que se venían cumpliendo y ampliando las mismas. En 2010 se continuó con las campañas de investigación iniciadas en el 2009 a bordo del buque de investigación científica B/I "Aldebarán" de la DINARA con el objetivo general de recabar información más detallada sobre las especies, experimentos de diferentes medidas mitigatorias de la captura incidental, dirigidas a aves y tortugas, entre otras. A su vez, se realizó un esfuerzo en el marcado de peces pelágicos, complementando las tareas de investigación realizadas en la pesquería.

2.1 Investigación

La investigación se desarrolló principalmente a partir de la información proveniente de los partes de pesca y del PNOFA y, durante 2009-2010, se integraron los datos obtenidos en el buque de investigación.

2.1.1 Programa de observadores

El PNOFA cubrió una importante parte de la actividad de la flota de bandera nacional durante 2010 y el 100% en la flota de palangre profundo que participó en la investigación del atún ojo grande. Este programa se desarrolla desde el año 1998, y ha permitido recabar importante información relacionada con todos los aspectos de la pesquería y la biología de las especies capturadas. Durante 2010 se observaron unos 162.977 anzuelos (datos preliminares) en la flota de bandera nacional y alrededor de unos 600.000 anzuelos en la flota de palangre

*No summary provided. / Aucun résumé soumis. / No se ha facilitado el resumen.

[1] Dirección Nacional de Recursos Acuáticos. Recursos Pelágicos

profundo. Los viajes fueron realizados por observadores científicos los cuales han aprobado los cursos que dicta la DINARA y han recibido un entrenamiento adicional en el LaRPe.

En 2010 se continuó con el Programa Internacional Cooperativo de Marcaje de la CICAA, tanto en barcos pesqueros de la flota uruguaya y el barco de investigación, así como en los barcos de bandera japonesa que operaron en Uruguay. Durante 2010 se colocaron 991 de las marcas (información preliminar) proporcionadas por la CICAA. La mayoría de los individuos marcados fueron tiburones (**Figura 2**), siendo el tiburón azul la principal especie con 562 individuos (57% del total de individuos marcados). La segunda y tercera especie, en cuanto al número de marcas fueron el tiburón pinocho (n=140) y el tiburón martillo (*Sphyrna zygaena*), respectivamente. Con respecto a los peces óseos, las principales especies marcadas fueron el atún albacora (n=65), seguido por el pez espada (n=32) y el atún aleta amarilla (n=19). Se han obtenido recapturas de al menos ocho individuos de tiburón azul (**Figura 3**).

Dentro de las actividades del PNOFA se continúa con el trabajo dirigido a la educación y sensibilización de los trabajadores y armadores pesqueros. Conjuntamente con el "Proyecto Albatros y Petreles" se ha editado y distribuido en los diferentes barcos pesqueros el "Boletín Atlántico Sur" Nº 8 (http://cicmar.org).

En la reunión intersesiones del Subcomité de ecosistemas de la CICAA se presentó información sobre la composición de las especies capturadas por la flota de palangre uruguaya, utilizando datos recopilados por el PNOFA. También se presentó otro documento que analizó los diferentes factores que afectan a la cobertura de observadores en la flota de palangre uruguaya y los sesgos potenciales que pueden producirse cuando se observan menos del 100% de las operaciones pesqueras.

2.1.2 Pez espada

En el marco del PNOFA, se continuó con la recopilación de datos de talla por sexo, colecta de muestras (tejido destinados a estudios genéticos) y marcaje, utilizando las marcas que provee CICAA.

2.1.3 Atunes tropicales

En 2010 Uruguay participó de la reunión de la CICAA de evaluación del stock de patudo. Durante la reunión Uruguay presentó tres documentos sobre esta especie. Dos trabajos presentaron los datos estandarizados de la CPUE de la flota atunera uruguaya, uno de ellos para el periodo 1981-2009 y basado en partes de pesca, y el otro para el periodo 1998-2009 basado en datos colectados por el PNOFA. El documento restante, sintetizó la información obtenida a través del Programa Nacional de Observadores de la Flota Atunera Uruguaya (PNOFA) desde 1998 hasta 2009, analizando las capturas de Uruguay, esfuerzo, composición de tallas y sexo en el océano Atlántico suroccidental. También se analizan los datos obtenidos por cinco barcos de bandera japonesa que realizaron una prospección en convenio con la Dirección Nacional de Recursos Acuático de Uruguay (DINARA), así como la información obtenida en dos cruceros de investigación. Ambas fuentes de información correspondieron a 2009.

Al igual que en otras especies se continuó con el seguimiento de las estadísticas de captura de aleta amarilla y atún ojo grande, esfuerzo de pesca y colecta de muestras biológicas por parte del Programa de Observadores. Se continúa también con el Programa de Marcado en las especies de atunes tropicales.

2.1.4 Albacora

Se continúa con el seguimiento de las estadísticas de captura y esfuerzo y colecta de muestras biológicas por parte del Programa de Observadores.

2.1.5 Agujas

Uruguay participó de la reunión de la CICAA de 2010 de preparación de datos sobre aguja azul. Se presentó la información del PNOFA sobre la captura de aguja azul desde abril de 1998 a diciembre de 2009 y por barcos de bandera japonesa que operaron en aguas de Uruguay desde marzo a septiembre de 2009.

Se vienen desarrollando estudios genéticos para la identificación de especies, en conjunto con otros países (Brasil, Estados Unidos y Venezuela) y estudios de edad y crecimiento en *Tetrapturus pfluegeri* en conjunto con la Universidad de Miami (RSMAS) de Estados Unidos, la Universidad de Oriente (UDO) de Venezuela, la Universidad Rural Federal de Pernambuco (URFP) de Brasil y la Universidad de la República de Uruguay.

2.1.6 Tiburones

Durante 2010 se comenzó con un proyecto de Telemetría satelital en tiburones, que tiene como objetivo determinar y caracterizar los movimientos y el uso de hábitat del tiburón azul en el océano Atlántico sur. Esta iniciativa fue creada a partir de un convenio entre la DINARA y la NOAA (Agencia Nacional de Océanos y Atmósfera de EEUU), y cuenta con el apoyo técnico de la ONG Centro de Investigación y Conservación Marina-CICMAR. En 2010, cinco individuos fueron equipados con transmisores satelitales durante viajes de pesca comercial de la flota uruguaya. Se están empleando tres tipos de transmisores satelitales: transmisores MK10-PAT configurados para colectar y archivar información de profundidad y temperatura durante nueve meses; transmisores SPOT5 que permiten conocer la ubicación del individuo cuando este se encuentra en la superficie y transmisores SPLASH que permiten conocer la posición del individuo cuando éste se encuentra en la superficie, y obtener también datos sobre la temperatura y profundidad donde éste se desplaza.

Se continuó el desarrollo de trabajos sobre la biología y ciclo reproductivo del tiburón azul; estructura poblacional del tiburón pinocho y diversidad de tiburones pelágicos en aguas jurisdiccionales uruguayas, entre otros. Se continuó también con el marcaje de tiburones.

Durante 2010 se finalizó la Guía para la identificación de tiburones del océano Atlántico, financiada por la CICAA. Dicha elaboración fue realizada entre el LaRPe de DINARA y el laboratorio de Panamá City de la NOAA/NMFS. A su vez durante el 2010, se trabajó en el segundo tomo de la "Guía para la identificación de tiburones del océano Atlántico".

2.1.7 Aves marinas

Actualmente se continua trabajando en la instrumentación del "Plan de Acción Nacional para Reducir la Captura Incidental de Aves Marinas en las Pesquerías Uruguayas" efectivizando las medidas propuestas en el mismo.

Dos líneas principales de investigación se han desarrollado en los últimos años. La primera refiere al seguimiento y evaluación de la problemática de la captura incidental de aves marinas en la flota uruguaya, y la segunda al desarrollo y prueba de medidas de mitigación para su implementación en la flota. Para esto se vienen desarrollando trabajos conjuntos con el "Proyecto Albatros y Petreles de Uruguay (PAP)" integrantes del grupo de trabajo "Albatross Task Force"de "BirdLife International", vinculados a la investigación y mitigación de la captura incidental de estas especies. Se están haciendo pruebas de medidas de mitigación tanto en la flota pesquera uruguaya como en el barco de investigación de la DINARA.

Con respecto a la evaluación de la problemática, durante el 2010 se publicó un artículo en la revista "Aquatic Living Resources", presentado previamente en la reunión de la CICAA, donde se estimó las capturas anuales para las principales especies de aves marinas capturadas y sus distribuciones espacio-temporales. Durante 2010 se continuó trabajando en una evaluación de riesgo ecológico para las aves marinas con el objetivo de obtener una visión del impacto relativo de la pesquería en las poblaciones de aves marinas.

Con respecto a las medidas de mitigación, se continuó con un experimento comenzado en 2009, con el objetivo de determinar el efecto del uso de una línea espantapájaros en la captura de aves marinas. Los resultados fueron muy positivos, sin embargo se concluyó que era necesario extender este proyecto hasta 2011 para obtener mayor información. Los resultados fueron presentados en la reunión intersesiones del Subcomité de ecosistemas de la CICAA.

También se continuó con un proyecto de investigación iniciado en 2009 para determinar el efecto de reducir la distancia entre el anzuelo y el destorcedor con peso, mediante el uso de "Safe Leads", en el ataque de las aves a la carnada durante la calada y en la captura de las especies objetivo.

Durante 2010, se comenzó con el experimento para el testeo de un dispositivo de calado submarino "la cápsula". Este dispositivo intenta calar los anzuelos a una profundidad que las aves marinas no alcanzan mediante buceo. Se realizaron tres viajes de pesca para evaluar el concepto del calado submarino y determinar su factibilidad. Este experimento se desarrolló en un barco de la flota de palangre uruguaya en colaboración con la *Australian Antartic Division*, AMERRO Engineering de Australia, la ONG CICMAR de Uruguay y Goldenstar S.A.

2.1.8 Tortugas marinas

Durante 2010 se continuó con el monitoreo de la captura incidental de tortugas marinas en la flota uruguaya de palangre pelágico y en los barcos de bandera japonesa que operaron en aguas de Uruguay. A su vez, se continuó con los estudios de telemetría satelital y con experimentos para determinar la eficacia de medidas de mitigación para estas especies.

El LaRPe continuó colaborando junto a organizaciones de otros países, en el desarrollo de una iniciativa llamada "*Movements of Atlantic Leatherback Turtles: Steps Toward Bycatch Reduction and Transoceanic Cooperation for Conservation*". Dicho proyecto, coordinado por el Programa de Tortugas Marinas para Latinoamérica y el Caribe del WWF, ha generado una plataforma de compilación y diseminación de información sobre rutas migratorias y movimientos transoceánicos de las tortugas laúd (*Dermochelys coriacea*) y cabezona (*Caretta caretta*), para colaborar con el diseño de medidas para reducir la mortalidad por captura incidental en las pesquerías que operan en el océano Atlántico.

Con el objetivo de determinar y caracterizar sus movimientos, uso de hábitat y supervivencia post-liberación, desde inicios de 2008, la DINARA, en conjunto con la NOAA y el CICMAR, ha equipado con transmisores satelitales a tortugas cabezonas juveniles capturadas incidentalmente por la flota palangrera Uruguaya. Durante el 2010 se continuó con este proyecto y se alcanzó un total de 16 tortugas cabezonas monitoreadas. Hasta la fecha, se ha logrado rastrear exitosamente a estos individuos, a los cuales se les colocaron transmisores SPLASH y SPOTS. Más información, imágenes y resultados de este proyecto pueden consultarse en los siguientes sitios: http://cicmar.org/archives/131. http://www.dinara.gub.uy (Recursos Pelágicos). http://www.seaturtle.org/tracking/?project_id=441

Se continuó con los experimentos para determinar la efectividad de los anzuelos circulares en la disminución de la captura de tortugas marinas, tanto en la flota que utiliza palangre de tipo americano como en el buque de investigación de la DINARA. También se analiza el efecto sobre las demás especies, incluyendo aquellas con valor comercial y las consideradas como captura incidental. Este proyecto se realiza en colaboración con la NOAA/National Marine Fisheries Service (NMFS), Pacific Island Fisheries Science, Honolulu, USA.

Se continúa con la colecta y análisis de muestras genéticas de los individuos capturados incidentalmente tanto de *C. caretta* como de *D. coriacea*.

2.1.9 Cetáceos

Se continuó con la investigación en este grupo, analizando información de distribución e interacción con la flota de palangre.

2.1.10 Buque de Investigación

Se realizó una campaña de investigación en el B/I "Aldebarán" perteneciente a la DINARA. La campaña se realizó en octubre y se utilizó palangre pelágico de deriva tipo americano.

Parte II (Implementación de la ordenación)

Sección 3: Implementación de las medidas de conservación y ordenación de la CICAA

Se continúa con la implementación del "Plan de Acción Nacional para Reducir la Captura Incidental de Aves Marinas en las Pesquerías Uruguayas". Ya se ha comenzado a utilizar líneas espantapájaros en prácticamente toda la flota atunera y se están haciendo pruebas de nuevas configuraciones de las mismas.

Se continúa con la instrumentación de las medidas de conservación presentadas en el "Plan de Acción Nacional para la conservación de los condrictios en las pesquerías uruguayas.

Entre las normas nacionales sobre ordenación continúan vigentes las referidas a tallas mínimas de captura para pez espada (25 kg, 15% de tolerancia), patudo y rabil (3,2 kg). Los muestreos de tallas a bordo del presente año siguen demostrando que los ejemplares de pez espada, rabil y patudo capturados son principalmente adultos de grandes tallas, como es de esperar de una pesquería con palangre en este área. Se han iniciado actividades y convocatorias para lograr una mayor y mejor colaboración con otros organismos estatales.

Se continuó con el trabajo de control en puerto de buques de tercera bandera iniciado durante 2009, a través de un grupo conformado por funcionarios de la DINARA (OROPS). Se realizaron inspecciones en puerto para determinar cuáles son las especies desembarcadas en el puerto de Montevideo, cual es su origen y controlando aspectos formales de la documentación de los barcos.

Tabla 1: Capturas declaradas por Uruguay (2007-2010), por especie**.**

Año	*SWO*	*ALB*	*BET*	*YFT*	*BSH*	*SMA*	*POR*
2007	464	34	22	35	337	36	3
2008	370	53	27	66	359	41	40
2009	501	97	31	76	942	106	14
2010	222	24	23	122	208	23	6

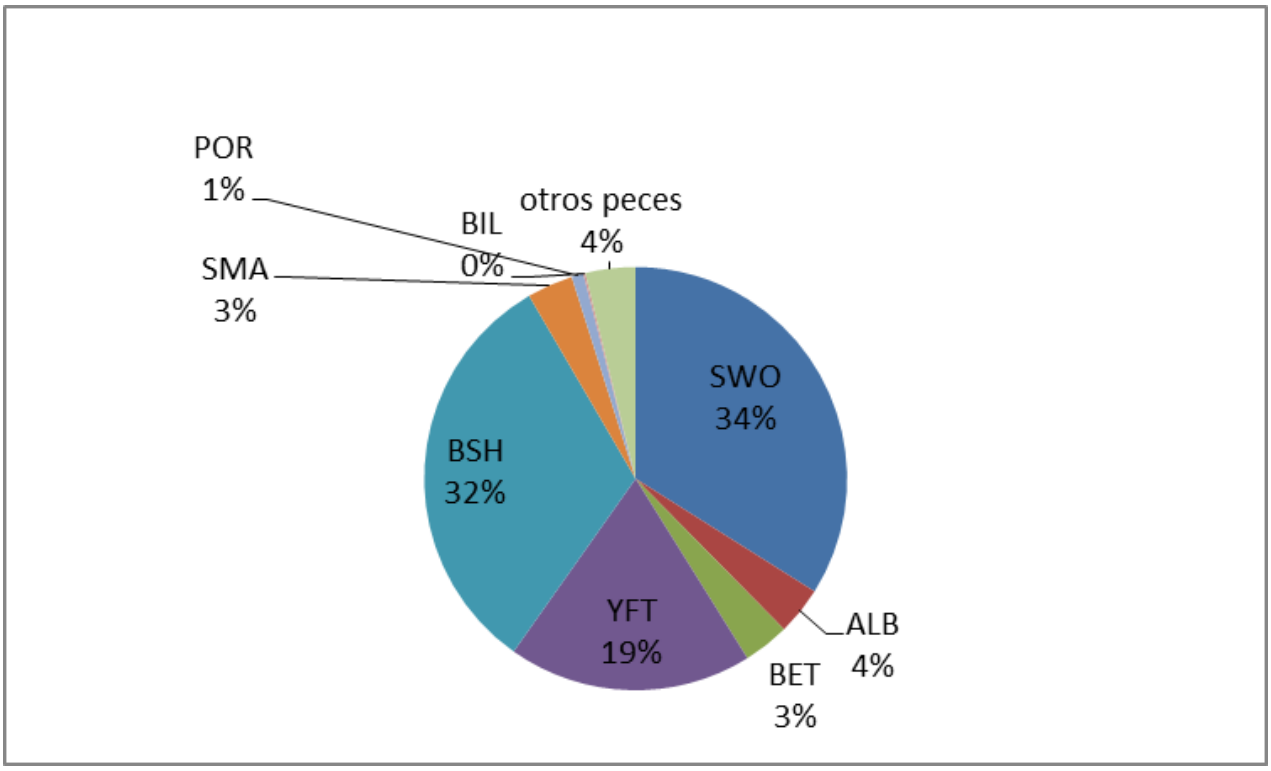

Figura 1. Porcentaje por especie de las capturas declaradas por Uruguay en 2009.

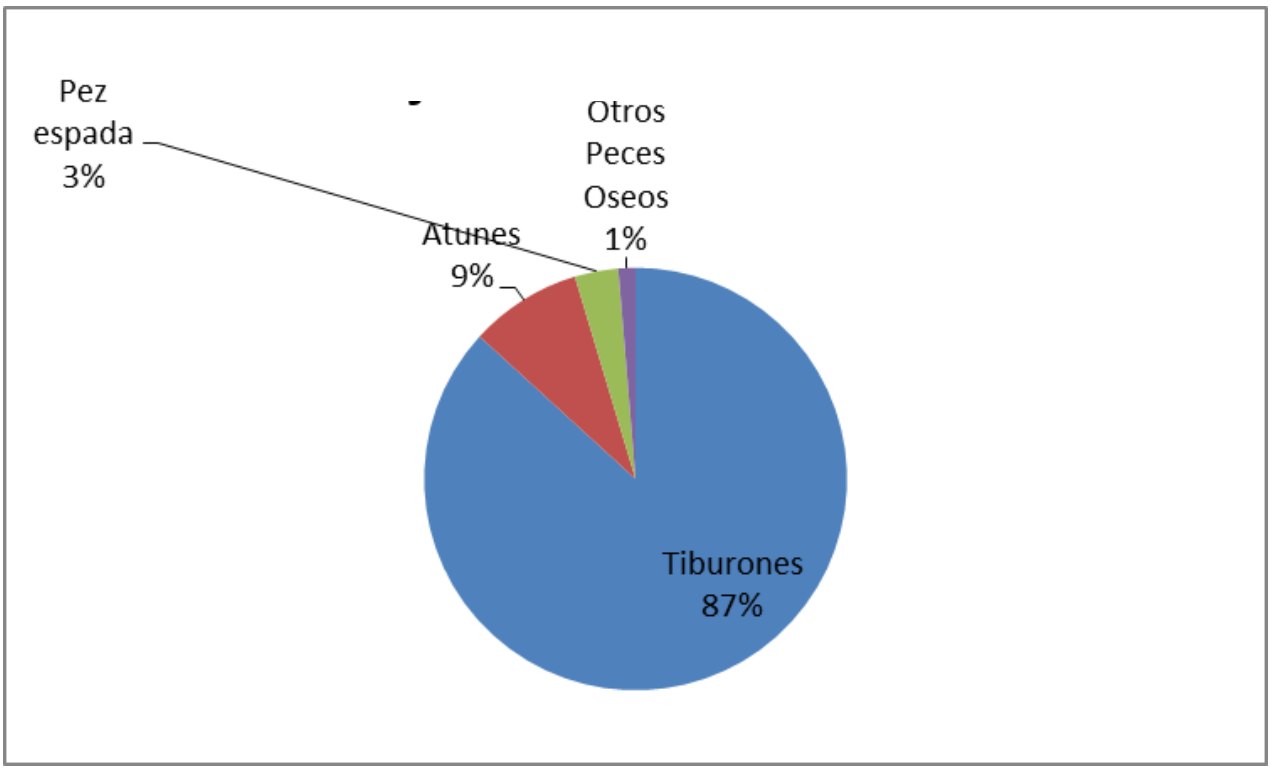

Figura 2. Distribución por grupo del número total de individuos marcados por el Programa Nacional de observadores de la flota atunera uruguaya durante 2010.

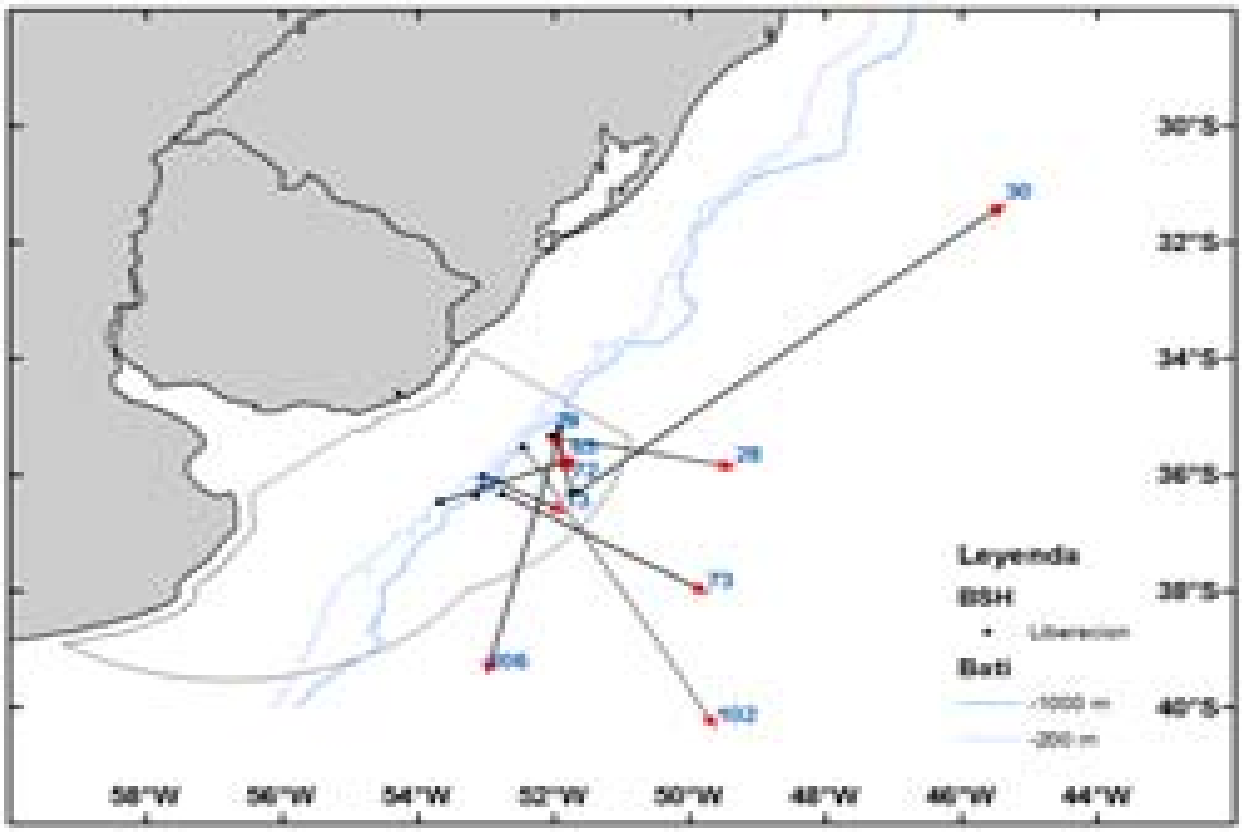

Figura 3. Distribución de las recapturas de tiburones azules marcados en Uruguay**.**

ANNUAL REPORT OF VENEZUELA
RAPPORT ANNUEL DU VENEZUELA
INFORME ANUAL DE VENEZUELA

Instituto Socialista de la Pesca y de la Acuicultura (INSOPESCA)

SUMMARY

*The Venezuelan fleet targeting pelagic resources in 2010 in the Atlantic Ocean was comprised of 69 industrial vessels (53 longliners, 8 purse seiners and 8 baitboats). In addition, 35 artisanal vessels were registered that fish using driftnets. This year, landings of tunas and tuna-like species from the Atlantic amounted to 8.437 t. Of these, 98,2% were tunas, among which the most important species was yellowfin tuna (*Thunnus albacares*) with 56,7 %, whereas catches of skipjack tuna (*Katsuwonus pelamis*), blackfin tuna (*Thunnus atlanticus*) and bigeye tuna (*Thunnus obesus*) represented 25,1%, 3,9% and 3,4%, respectively. The by-catch was comprised of billfish, notably sailfish (*Istiophorus albicans*) with 2,1% and blue marlín (*Makaira nigricans*) with 1,6 %; shark landings represented 1,7%. 61,2% of the landings were from the purse seine fishery, 12,9% from baitboat, 22,5% from longline, and 3,3% from the artisanal fishery. In 2010, research on the fishery for large pelagic species continued, including tunas, billfish and sharks. The scientific observer program on board industrial longline vessels continued as well as the coverage of sport fishing tournaments in the central coastal area of the country.*

RÉSUMÉ

*En 2010, la flottille vénézuélienne ciblant les ressources pélagiques opérant dans l'océan Atlantique était composée de 69 unités industrielles : 53 palangriers, 8 senneurs et 8 canneurs. On enregistre également 35 embarcations artisanales qui utilisent des filets maillants. Les débarquements de thonidés et d'espèces apparentées de l'océan Atlantique se sont élevés cette année à 8.437 t. Ceux-ci étaient composés à 98,2% de thonidés, parmi lesquels l'albacore (*Thunnus albacares*) était prédominant (56,7%) tandis que le listao (*Katsuwonus pelamis*), le thon à nageoires noires (*Thunnus atlanticus*) et le thon obèse (*Thunnus obesus*) représentaient 25,1%, 3,9% et 3,4% respectivement. Les prises accidentelles étaient composées de poissons porte épée, parmi lesquels des voiliers (*Istiophorus albicans*) (2,1%) et des makaires bleus (*Makaira nigricans*) (1,6%), ainsi que des requins dont les débarquements ont représenté 1,7%. 61,2% des débarquements ont été réalisés par la pêcherie de senneurs, 12,9% par des canneurs, 22,5% par des palangriers et 3,3% par des pêcheurs artisanaux. En 2010, les programmes de recherche sur la pêcherie de grands pélagiques se sont poursuivis, englobant les thonidés, les poissons porte épée et les requins. De la même façon, le Programme d'observateurs scientifiques à bord d'embarcations palangrières industrielles a été maintenu, tout comme la couverture des tournois de pêche sportive sur la côte centrale du pays.*

RESUMEN

*La flota venezolana orientada a los recursos pelágicos que operó en el océano Atlántico estuvo conformada en 2010 por 69 unidades industriales: 53 palangreros, 8 cerqueros y 8 cañeros; y se registran además 35 embarcaciones artesanales que operan con redes de enmalle. Ese año se produjeron desembarques de túnidos y especies afines provenientes del océano Atlántico por 8.437 t. El 98,2% de éstas lo representan los atunes, entre los cuales el más importante fue el aleta amarilla (*Thunnus albacares*) con 56,7%, mientras que el bonito listado (*Katsuwonus pelamis*), el aleta negra (*Thunnus atlanticus*) y el ojo gordo (*Thunnus obesus*) alcanzaron 25,1%, 3,9% y 3,4%, respectivamente. La captura incidental estuvo conformada por peces de pico, entre los que se destacan el pez vela (*Istiophorus albicans*) con 2,1% y la aguja azul (*Makaira nigricans*) con 1,6% y tiburones cuyos desembarques representan el 1,7%. El 61,2% de los desembarques provinieron de la pesquería de cerco, el 12,9% de la de caña, el 22,5% de la de palangre y el 3,3% de las pesquerías artesanales. En 2010 continuaron las investigaciones sobre la pesquería de los grandes pelágicos; éstos incluyen los atunes, peces de pico y tiburones; y se mantuvo el programa de observadores científicos a bordo de*

embarcaciones industriales de palangre, así como la cobertura de los torneos de pesca deportiva en el litoral central del país

Parte I (Información sobre pesquerías, investigación y estadística)

La estadísticas de captura y esfuerzo de las pesquerías industriales venezolanas de caña, cerco y palangre son recabadas por el Instituto Socialista de la Pesca y Acuicultura (INSOPESCA) mediante un programa de recolecta de bitácoras en los puertos de desembarque y de muestreos biológicos multiespecíficos. Se cuenta con la cooperación de diversas instituciones nacionales e internacionales tales como el INIA, Universidad de Oriente, ICCAT e IRD.

Sección 1: Información anual sobre pesquerías

1.1 Pesquerías de cerco

La flota cerquera venezolana estuvo conformada por 26 embarcaciones, de las cuales 8 faenaron en el océano Atlántico occidental y el resto en el océano Pacífico oriental (**Tabla 1**). El área de pesca de los cerqueros venezolanos estuvo comprendida entre los 5° y 15°N y 51° y 71°W (**Figura 1**).

Los desembarques realizados por la flota cerquera fueron de 5.156,3 t, lo cual representa un incremento del 28,25% respecto a 2009. El atún aleta amarilla, *Thunnus albacares*, representó el 52,8% de los desembarques de la flota, y el bonito, *Katsuwonus pelamis*, 37,4%. Otras especies capturadas por la flota fueron atún aleta negra (*Thunnus atlanticus*), carachana negra (*Auxis thazard*), atún albacora (*Thunnus alalunga*) y atún ojo gordo, (*Thunnus obesus),* las cuales representaron el restante 9,8% de los desembarques. El esfuerzo ejercido por estas embarcaciones en 2010 fue de 770 días de pesca, superior en un 6,4% al ejercido en 2009 (**Tabla 2**).

1.2 Pesquerías de caña

La flota cañera venezolana estuvo conformada en 2010, por ocho unidades de pesca que faenan en las mismas áreas que las de la flota de cerco (**Figura 1**). Los desembarques de esta flota alcanzaron 1.089 t, disminuyendo estos en 20,9 % en relación con el año 2009. Las especies más importantes en la captura de esta flota fueron el atún aleta amarilla (*T. albacares*), con 74,2% y el listado (*K. pelamis*), con 16,2%; mientras que el atún ojo gordo (*T. obesus*) y el atún aleta negra (*T. atlanticus*) contribuyeron con el 9,6% de los desembarques totales de la flota. El esfuerzo aplicado fue de 761 días de mar lo cual representó una disminución del 6,2% con respecto a 2009 (**Tabla 3**). Las áreas de pesca coinciden con las de los cerqueros.

1.3 Pesquerías de palangre

El número de embarcaciones de palangre pelágico venezolanos que operaron en el océano Atlántico en 2010 fue de 53 unidades. El área de pesca de estas embarcaciones se extiende entre 11°-17°N y 61°-75°W en el mar Caribe y en la parte occidental del océano Atlántico 5°-17°N y 48°-60°W (**Figura 1**).

Los desembarques controlados en la flota de palangre pelágico basadas en el Puerto de Cumaná y Puerto La Cruz, arrojaron un total de 1.905,2 t. en 2010, mientras que el esfuerzo aplicado fue de 3.579.611 anzuelos (**Tabla 4**).

El atún aleta amarilla (*T. albacares*) fue la especie más importante de los desembarques, representando el 65,5% de los mismos, mientras que para los otros túnidos, como el atún albacora (*T. alalunga*) y el atún ojo gordo (*T. obesus*), el porcentaje fue del 12,7 y 1,6%, respectivamente. Los peces de pico representaron el 10,6% de los desembarques de la flota, de los cuales el mayor porcentaje correspondió al pez vela con un 4,7%. Entre los tiburones los principales desembarques por especie fueron el tiburón azul (*Prionace glauca) y* el tiburón carite, (*Isurus oxyrinchus).*

1.4 Pesquerías artesanales

1.4.1 Playa Verde (Litoral Central de la República Bolivariana de Venezuela)

La pesquería de peces de pico en esta zona se realiza durante todo el año. La flota que opera en la misma está integrada por 35 embarcaciones con eslora comprendida entre 7 y 10 m, y utilizan como arte de pesca una red de trasmallo a la deriva.

Los desembarques totales realizados por esta flota fueron de 286,2 t, integrados fundamentalmente por peces de la familia *Istiophoridae*, entre los cuales destacan la aguja azul (*Makaira nigricans*), con el 32,9% y el pez vela, (*Istiophorus albicans)* con un 31,0% de los desembarques. Los túnidos capturados representaron el 23,6%, mientras que los desembarques de tiburones de varias especies representan el 4,8% (**Tabla 5**). La flota que se dedica a la captura de estas especies en el litoral central de Venezuela realizó 3.347 viajes.

Sección 2: Investigación y estadística.

En la República Bolivariana de Venezuela se llevan a cabo investigaciones sobre la pesquería de los grandes pelágicos; éstos incluyen los atunes, peces de pico y tiburones. En 2010, se continuó con los muestreos biológicos de las diferentes especies desembarcadas en puertos de los estados Sucre, Anzoátegui y Nueva Esparta y la recolección de datos de captura y esfuerzo de las diferentes pesquerías. Se muestrearon 12.743 ejemplares de túnidos y peces de pico provenientes de las flota de caña, cerco, palangre y de la artesanal con redes de enmalle (**Tabla 6**).

Se realizó el control de la captura y el esfuerzo de las embarcaciones industriales que ejercen pesquerías en el océano Atlántico occidental bajo las modalidades de caña, cerco y palangre pelágico. La flota industrial realizó 512 viajes, con un porcentaje de cobertura global de 100%.

En el Programa de Investigación Intensiva sobre Marlines en la República Bolivariana de Venezuela (PIIM-VZLA), auspiciado por la Comisión Internacional para la Conservación del Atún Atlántico (CICAA), se continuó con el programa de observadores científicos en embarcaciones de palangre pelágico y con los muestreos en puertos de desembarques de peces de pico. En 2010 se efectuaron 14 cruceros con observadores científicos en embarcaciones palangreras industriales, con una cobertura del 3,7% del total de los viajes realizados por la flota palangrera en ese año. La información registrada por los observadores ha contribuido a las estimaciones de tasas de captura estandarizadas de las diversas especies de peces de pico y de tiburones. También ha contribuido al conocimiento de la distribución espacio-temporal de las tasas de capturas de esas especies, así como de especies objetivo de las pesquerías con palangre.

Otra de las actividades que ejecuta el PIIM-VZLA se realiza en la comunidad pesquera de Playa Verde (Litoral Central de Venezuela). La actividad consiste en el monitoreo diario de los desembarques de peces de pico y otros grandes pelágicos como pez espada, tiburones, dorado y sierra canalera o peto. La actividad consiste en el registro diario de tallas, peso, e identificación de sexo de todos los ejemplares de peces de pico y de pez espada desembarcados. Adicionalmente, en esta comunidad se observó el mayor número de ejemplares con marcas, las cuales son registrados por el PIIM-Vzla con toda la información del ejemplar y luego son enviadas a la Secretaría CICAA. En el año 2010 se registraron un total de 26 ejemplares marcados. Durante este año se continúo con la recolección de muestras biológicas de aguja blanca y pez vela además de aguja picuda y marlín peto para los estudios de edad, crecimiento y reproducción que se llevan a cabo entre científicos de la Universidad de Oriente junto con científicos de otros países miembros.

Se continuó el monitoreo de los torneos de pesca deportiva en el litoral central de la República Bolivariana de Venezuela (área La Guaira), cubriéndose los tres torneos realizados en 2010.

Parte II (Implementación de la ordenación)

Normativas para regular la pesquería de atún en el país

El Ministerio del Popular para la Agricultura y Tierra es el órgano con competencia en materia de Pesca y Acuicultura, y el ente ejecutor es el Instituto Socialista de la Pesca y Acuicultura INSOPESCA. Este último tiene, entre otras competencias, la de establecer los principios y las normas para la aplicación de prácticas responsables de pesca que aseguren la gestión y el aprovechamiento eficaz de los recursos acuáticos vivos, respetando el ecosistema y la diversidad biológica.

La República Bolivariana de Venezuela, a través del Ministerio con competencia en materia de pesca y acuicultura, puede adoptar medidas orientadas a la conservación y recuperación de las poblaciones bajo aprovechamiento. En este sentido, se concluyó la revisión de las capturas históricas de albacora desde el inicio de la asignación de cuotas al país. No obstante, que Venezuela no tiene una pesquería dirigida a la captura de la albacora, se identificaron las embarcaciones de la flota que reportan la mayoría de las capturas de esta especie de túnido, a fin de aplicar medidas de ordenamiento de monitoreo, control y gestión.

En ese mismo orden de ideas, la República Bolivariana de Venezuela desea implementar un programa de monitoreo de identificación especies en conflicto, en la localidad de Playa Verde (zona central del país) y en los puertos de Juangriego, Guiria, Puerto Santo, Carúpano y Guanta (en el oriente del país), como lo son los ejemplares de las diversas especies del género *Tetrapturus* (aguja blanca, aguja picuda y marlín peto), así como especies de tiburones y rayas capturados por las pesquerías atuneras venezolanas.

Por otra parte, se continúan aplicando medidas de vigilancia y control de la norma técnica de ordenación para regular la pesca y comercialización de las especies de la familias *Istiophoridae* y *Xiphiidae* en todo el territorio nacional, dispuestas en la Providencia Administrativa Nº 69 de año 2003, la cual, entre otras disposiciones limita el número y tamaño de las embarcaciones y artes de pesca, y establece una zona de protección pesquera de las especies mencionadas.

Igualmente se mantiene el trabajo para la conformación del Programa Nacional de Observadores a bordo de embarcaciones atuneras que faenan en el océano Atlántico centro occidental. Este programa permitirá la colecta de información sobre las capturas incidentales, descartes, capturas prohibidas y otras actividades de investigación requeridas, lo cual fortalecerá el seguimiento de esta pesquería y complementará la información que se lleva con los métodos de sistema de cuadernos de pesca, datos de desembarques y sistema de muestreo en puerto.

La legislación pesquera nacional fomenta la actuación de los diferentes actores vinculados al desarrollo de las pesquerías de túnidos y especies afines, a través de los órganos consultivos como lo son los Consejos Consultivos, Comité de Seguimiento del Atún y los Grupos de Expertos, con la finalidad de propiciar la participación y consulta permanente entre instituciones públicas, privadas, así como de representantes de los pescadores, para la asesoría de la Administración Pesquera en la propuestas de políticas, y formulación de planes o programas relativos a la pesca de los grandes pelágicos.

Tabla 1. Composición de la flota industrial venezolana en el océano Atlántico Centro Occidental, según la capacidad de almacenaje en 2010.

C. Almacén (t)		*BB*	*LL*	*PS*	*TOTAL*
0	50		33		33
51	100	3	15		18
101	150	2	5		7
151	200	1			1
201	250				
251	300	2		1	3
301	350				
351	400				
401	450				
451	500				
501	550				
551	600			5	5
601	650				
651	700				
701	750				
751	800				
801	850				
851	900				
901	950			1	1
951	100			1	1
	TOTAL	**8**	**53**	**8**	**69**

Tabla 2. Captura (t) y esfuerzo (días de pesca) de la flota cerquera venezolana en el océano Atlántico centro-occidental durante el año 2010.

Trim.	*1*	*2*	*3*	*4*	*TOTAL*	*%*
YFT	1.076,6	451,1	88,8	1.105,5	2.721,9	52,8
SKJ	774,7	201,8	135,2	819,6	1.931,2	37,5
FRI	159,9	4,3	6,9	29.4	200,5	3,9
ALB	0,0	16,1	0,0	0,0	16,1	0,3
BET	0,0	5,7	1,3	41,8	48,8	0,9
BLF	70,7	78,0	6,8	82,3	237,8	4,6
TOTAL	**2.081,9**	**757,0**	**239,0**	**2.078,5**	**5.156,3**	**100,0**
F (días)	**212**	**176**	**158**	**224**	**770**	

YFT= aleta amarilla
SKJ= listado
FRI= carachana
EFF= esfuerzo (d. de pesca)
ALB= albacora
BET= ojo gordo
BLF= aleta negra

Tabla 3. Captura (t) y esfuerzo (días) de la flota de caña venezolana en el océano Atlántico centro-occidental durante el año 2010.

Trim.	*1*	*2*	*3*	*4*	*TOTAL*	*%*
YFT	168,4	167,3	145,5	327,4	808,6	74,2
SKJ	33,4	11,3	18,2	113,7	176,6	16,2
FRI	0,0	0,0	0,0	0,2	0,2	0,0
ALB	0,0	0,0	0,0	6,4	6,4	0,6
BET	0,0	4,9	0,0	0,0	4,.9	0,5
BLF	0,0	0,0	0,0	92,4	92,4	8,5
TOTAL	**201,9**	**183,5**	**163.7**	**540,0**	**1089,1**	**100.0**
F (días)	**189**	**157**	**143**	**272**	**761**	

- ver leyenda en la Tabla 1.

Tabla 4. Captura (t) y esfuerzo (anzuelos) de la flota palangrera atunera venezolana en el océano Atlántico centro occidental durante el año 2010.

Trim.	*1*	*2*	*3*	*4*	*TOTAL*	*%*
YFT	80,4	491,8	426,2	250,3	1.248,7	65,5
BET	2,1	11,9	3,9	13,5	31,4	1,6
ALB	25,4	61,8	97,0	57,3	241,5	12,7
SAI	6,0	15,3	37,2	30,5	89,0	4,7
SWO	0,4	4,5	5,0	6,7	16,5	0,9
BUM	4,7	9,8	13,7	13,5	41,7	2,2
WHM	8,2	12,8	12,3	13,1	46,4	2,4
SPF	1,1	4,2	2,3	16,8	24,4	1,3
DOL	1,0	3,6	2,9	1,8	9,2	0,5
WAH	3,0	7,7	6,8	7,2	24,7	1,3
BLF	0,1	0,0	0,2	0,2	0,5	0,0
T AZUL	6,6	19,2	25,7	22,4	74,0	3,9
T CARITE	3,1	6,0	6,1	6,7	21,9	1,1
SARDA	0,0	0,1	0,0	0,0	0,1	0,0
MACUIRA	0.2	0,0	0,0	0,0	0,2	0,0
T VARIOS	4,1	8,3	10,7	12,0	35,1	1.8
TOTAL	**146**	**657**	**650**	**452**	**1.905**	**100.0**
F (anzuelos)	**398.740**	**1.197.540**	**1.046.451**	**936.880**	**3.579.611**	

WAH	Peto	CCP	Tiburon macuira
DOL	Dorado	ALV	Tiburon zorro
WHM	A. blanca	BSH	Tiburon azul
BUM	Aguja azul	SMA	Tiburon carite
SAI	Pez vela	OTH SHK	Tiburones varios
SWO	Pez espada	OTH	Otras especies
SPF	Pez lanza	f	Esfuerzo

Tabla 5. Captura (kg) y esfuerzo (viajes) en la pesquería artesanal de peces de pico con redes de enmalle en el litoral central año 2010.

*Especie **	*I*	*II*	*III*	*IV*	*TOTAL*	*%*
BUM	23,03	35,20	19,55	16,50	94,28	32,9
WHM	1,57	1,09	4,07	0,98	7,71	2,7
SAI	8,25	25,99	36,15	18,33	88,72	31,0
SWO	0,75	2,12	0,43	3,88	7,17	2,5
DOL	2,61	4,38	1,71	0,89	6,98	2,4
SHX	5,43	4,63	1,87	1,95	13,88	4,8
YFT	2,58	0,55	0,12	0,80	4,05	1,4
ALB	16,15	4,98	1,60	1,37	24,09	8,4
WAH	0,40	1,19	0,91	0,32	2,82	1,0
SKJ	5,58	2,80	1,30	1,06	10,73	3,7
BON	1,15	3,31	1,34	4,20	9,99	3,5
LTA	1,08	0,11	0,23	0,13	1,56	0,5
FRI	4,12	1,95	5,97	2,37	14,41	5,2
TOTAL	**70,08**	**88,30**	**75,23**	**52,77**	**286,39**	**100,0**
SALIDAS	**799**	**970**	**928**	**650**	**3347**	
BARCOS/MES	**91**	**92**	**96**	**100**	**379**	

* Ver leyenda en la Tabla 4.

Tabla 6. Muestreos biológicos de túnidos y especies acompañantes en la pesquería de túnidos en el océano Atlántico centro-occidental, año 2010.

SP	*BB*	*%*	*PS*	*%*	*LL*	*%*	*GN*	*%*	*TOTAL*	*%*
YFT	308	87,46	544	15,52	503	20,95			1.355	10,63
SKJ	183	388,26	2.415	68,90		0,00			2,598	20,39
FRI	1	39,07	243	6,93		0,00			244	1,91
ALB		3,05	19	0,54	886	36,90			905	7,10
BET	21	14,15	88	2,51	5	0,21			114	0,89
BLF	109	31,51	196	5,59		0,00			305	2,39
WAH					68	2,83			68	0,53
SAI					519	21,62	4.175	67,18	4.694	36,84
SPF					84	3,50			84	0,66
SPG						0,00			0	0,00
BUM					47	1,96	1.303	20,97	1.350	10,59
SWO					23	0,96	134	2,16	157	1,23
WHM					192	8,00	348	5,60	540	4,24
DOL					37	1,54			37	0,29
SHX					37	1,54	255	4,10	292	2,29
TOTAL	**622**	**100,00**	**3.505**	**100,00**	**2.401**	**100,00**	**6.215**	**100,00**	**12.743**	**100,00**
		4,88		**27,51**		**18,84**		**48,77**	**100,00**	

SP= Especie
PS= Cerco
BB= Caña
GN= Red de enmmalle

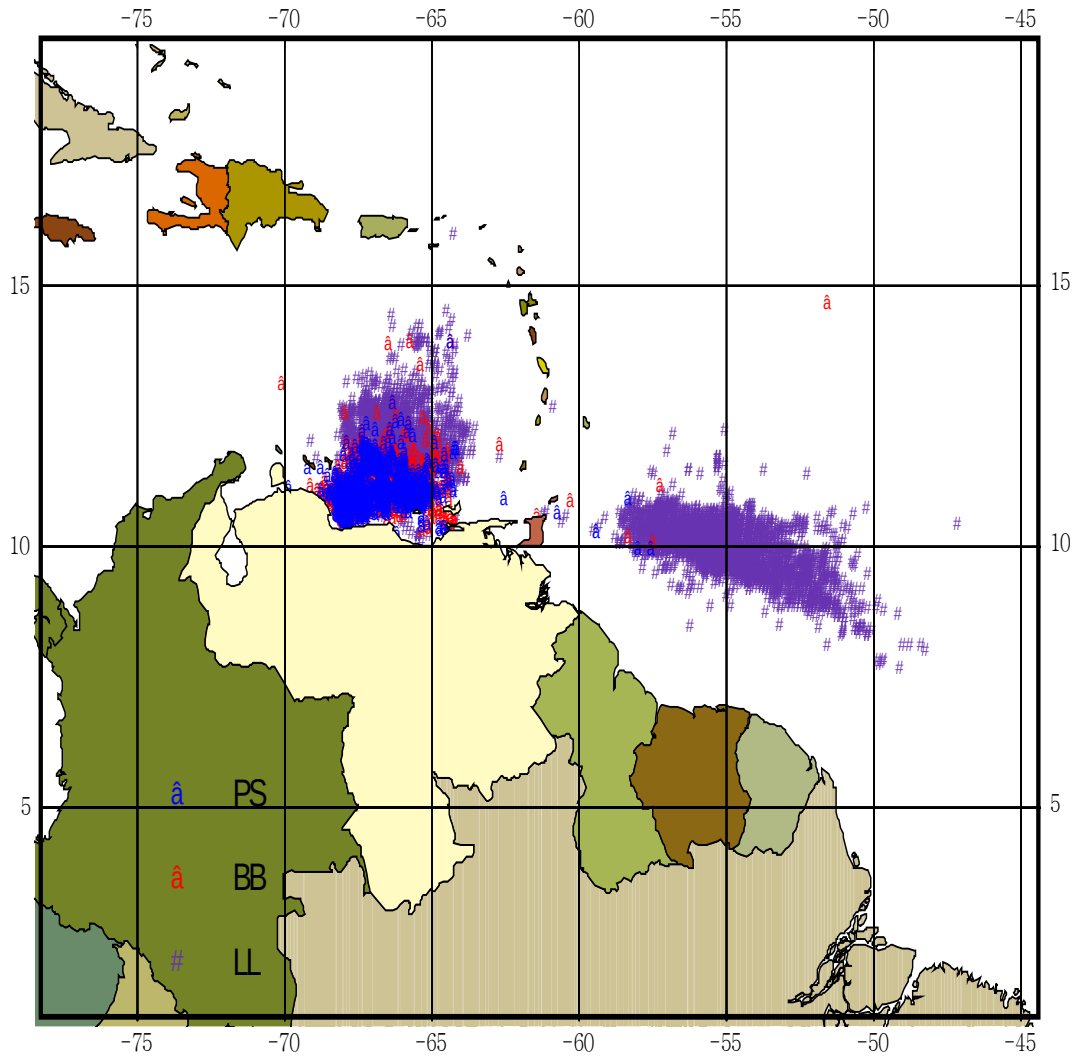

Figura 1. Áreas de pesca de las embarcaciones atuneras venezolanas año 2010.

REPORTS OF OBSERVERS FROM COOPERATING NON-CONTRACTING PARTIES, ENTITIES OR FISHING ENTITIÉS / RAPPORTS DES OBSERVATEURS DES PARTIES, ENTITES OU ENTITÉS DE PÊCHE NON-CONTRACTANTES COOPÉRANTES / INFORMES DE OBSERVADORES DE PARTES, ENTIDADES O ENTIDADES PESQUERAS NO CONTRATANTES COLABORADORAS

ANNUAL REPORT OF CHINESE TAIPEI
RAPPORT ANNUEL DU TAIPEI CHINOIS
INFORME ANUAL DE TAIPEI CHINO

Fisheries Agency, Council of Agriculture[1]

SUMMARY

In 2010, the total number of longline vessels authorized to operate in the Atlantic Ocean was 117, which included 67 vessels authorized to target bigeye tuna and 50 vessels authorized to target albacore. The total catch of tuna and tuna-like species of the longline fleet was estimated to be 31,007 metric tons (t) in 2010. Tropical tunas (bigeye tuna, 13,189 t and yellowfin tuna, 824 t) were the most dominant species caught accounting for 45% of the total catch, and albacore (12,562 t) accounted for 41%. The Fisheries Agency has set catch quotas for Atlantic bigeye tuna, northern and southern Atlantic albacore, and for by-catch species, namely swordfish, blue marlin and white marlin. Catches of these species were well below catch limits allocated by the ICCAT for 2010. All Chinese Taipei longline vessels operating in the Atlantic Ocean were equipped with satellite tracking devices (Vessel Monitoring System, VMS) on board. Statistics (fleets characteristics/Task I/Task II/size/observer by-catch data) were submitted to the ICCAT Secretariat within the required timeframe. In 2010, 18 observers were placed on fishing vessels in the Atlantic Ocean, and the observer coverage was above the requirement set by ICCAT. The research programs for 2010 conducted by scientists included stock assessments, standardizations of catch-per-unit-effort on bigeye tuna, swordfish, albacore and blue marlin (and other incidental catch species), shark fin ratio, shark bycatch re-estimation, incidental catch rate and mortality rate by sighting of seabirds, sea turtles and cetaceans. The research results were presented at the regular meeting and inter-sessional working group meetings of SCRS.

RÉSUMÉ

En 2010, le nombre total de palangriers autorisés à opérer dans l'océan Atlantique s'est élevé à 117 unités, dont 67 navires autorisés à cibler le thon obèse et 50 navires autorisés à cibler le germon. La prise totale de thonidés et d'espèces apparentées de la flottille palangrière a été estimée à 31.007 t en 2010. Les thonidés tropicaux (thon obèse, 13.189 t et albacore 824 t) constituaient les principales espèces capturées, représentant 45 % de la prise totale, tandis que le germon (12.562 t) représentait 41 % de la prise totale. L'Agence des pêches a établi des quotas de capture pour le thon obèse de l'Atlantique, le germon du Sud et du Nord et pour les espèces accessoires, à savoir l'espadon, le makaire blanc et le makaire bleu. Les prises de ces espèces étaient nettement en deçà des limites de prise allouées par l'ICCAT au titre de 2010. Tous les palangriers battant le pavillon du Taipei chinois opérant dans l'océan Atlantique sont équipés de systèmes de surveillance des navires par satellite (VMS), installés à bord. Les statistiques (caractéristiques des flottilles/Tâche I/Tâche II, données de taille, d'observateur et sur les prises accessoires) ont été soumises au Secrétariat de l'ICCAT dans les délais impartis. En 2010, 18 observateurs ont été détachés sur des navires de pêche opérant dans l'océan Atlantique et le taux de couverture d'observation était supérieur au niveau requis par l'ICCAT. Les programmes de recherche menés par des scientifiques en 2010 englobaient des évaluations de stocks, des

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standardisations de la prise par unité d'effort du thon obèse, de l'espadon, du germon et du makaire bleu (et d'autres espèces accessoires), le ratio de prélèvement d'ailerons de requins, la ré-estimation de la prise accessoire de requins, le taux de prise accessoire et le taux de mortalité par observation d'oiseaux de mer, de tortues de mer et de cétacés. Les résultats de ces travaux ont été présentés lors de la réunion ordinaire et lors des réunions intersessions des groupes de travail du SCRS.

RESUMEN

En 2010, el número total de palangreros autorizados a operar en el Atlántico era 117, lo que incluía 67 buques autorizados a dirigirse al patudo y 50 buques autorizados a dirigirse al atún blanco. La captura total de túnidos y especies afines de la flota de palangre se estimó en 31.007 t en 2010. Los túnidos tropicales (patudo, con 13.189 t, y rabil, con 824 t) fueron las especies predominantes, y respondieron del 45% de la captura total seguidas por el atún blanco (12.562 t), que respondió del 41% de la captura total. La Agencia de Pesca ha establecido cuotas de captura para el patudo del Atlántico, el atún blanco del Atlántico norte y sur y para las especies de captura fortuita, es decir, pez espada, aguja azul y aguja blanca. Las capturas de estas especies se situaron en un nivel muy inferior a los límites de captura asignados por ICCAT para 2010. Todos los palangreros de Taipei Chino que operaron en el océano Atlántico estuvieron equipados con dispositivos de seguimiento por satélite a bordo (VMS). Las estadísticas (características de la flota/Tarea I/Tarea II/talla/datos de captura fortuita de observadores) fueron enviadas a la Secretaría de ICCAT en los plazos requeridos. En 2010, 18 observadores se embarcaron en pesqueros en el Atlántico y la cobertura de observadores fue superior a la establecida por ICCAT. Los programas de investigación llevados a cabo por los científicos en 2010 incluyeron evaluaciones de stock, estandarizaciones de la captura por unidad de esfuerzo del patudo, pez espada, atún blanco y aguja azul (y de otras especies de captura incidental), ratio de aletas de tiburón, reestimación de la captura fortuita de tiburones, tasa de captura incidental y tasa de mortalidad por avistamiento de aves marinas, tortugas marinas y cetáceos. Los resultados de las investigaciones fueron presentados en la reunión ordinaria del SCRS y en las reuniones intersesiones de los grupos de trabajo del SCRS.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

− *General overview*

The longline fleet of Chinese Taipei commenced operating in the Atlantic Ocean in the early 1960s to target albacore and yellowfin tunas. In the mid-1980s, newly built longliners equipped with deep-freezers started operating in the tropical area to target bigeye tuna.

Bigeye tuna, yellowfin tuna and albacore are the most dominant tuna species in the catch which comprised the majority (about 80%, **Table 1**) of the total catch of Chinese Taipei longline fishery in the Atlantic Ocean. **Figure 1** shows the catch distribution from 2008 to 2010. It was noted that the catches of bigeye and yellowfin tunas were located mainly in the area between 15°N and 15°S, and a higher concentration of albacore was observed in the area north of 15°N and in the area south of 15°S. Swordfish was the most dominant bycatch species among the tuna and tuna-like species.

The annual geographic distribution of the tuna longline fishing effort (number of hooks) from 2008 to 2010 (**Figure 2**) showed that fishing effort was distributed in a wide area of 40°N-45°S. The major fishing activities were concentrated in the tropical waters between 15°N and 15°S. In addition, the distribution of higher fishing effort was located in waters off the southwest coast of Africa as well as in waters off the southeast coast of South America in the South Atlantic Ocean.

The number of vessels declined from 205 in 1998 to 117 in 2010 following the implementation of a 3-year vessel reduction program between 2005 and 2007. Subsequently, there was a decline in the overall catch by the fishery, from 45,437 t in 1998 to about 31,007 t in 2010 (**Table 1**). More detailed information on major tuna species is described as follows:

− *Albacore*

In the Atlantic Ocean, two stocks of albacore have been identified and separated by the parallel 5°N as set by ICCAT for the purpose of application of fishery management measures. The annual catch of South Atlantic albacore fluctuated between 9,000 t and 17,500 t in the last decade. The catch of South Atlantic albacore in 2010 was 10,975 t, an increase of 2,297 t from that of the previous year as the result of an increase in fishing effort. The catch of North Atlantic albacore in 2010 was 1,587 t, a significant increase of 724 t from 2009. The total catch of albacore in 2010 was estimated to be 12,562 t, an increase of 3,021 t from 2009. The catch of albacore in 2010 by the fleet of Chinese Taipei was well below the catch limit allocated under ICCAT Rec. 07-02, Rec.09-05, and Rec. 07-03.

− *Bluefin tuna*

Bluefin tuna was targeted seasonally by some longliners in the Mediterranean prior to 2007. The catch of bluefin tuna was 277 t in 2005 and drastically reduced to 9 t in 2006. Although Chinese Taipei was entitled to catch 71.12 t, 68.71 t, 66.3 t and 41.6 t for 2007, 2008, 2009 and 2010, respectively, of bluefin tuna in the eastern Atlantic and Mediterranean, as from 2007, no vessel was authorized to fish bluefin tuna and there was no catch reported.

− *Tropical tunas*

The catches of bigeye and yellowfin tunas in 2010 were estimated to be 13,189 t and 824 t, respectively, showing a decrease of 63 t and 567 t, respectively, from that of the previous year (13,252 t and 1,391 t in 2009). In accordance with the catch limits as stipulated in ICCAT Rec. 04-01, Rec. 08-01 and Rec. 09-01, the catch of bigeye tuna in 2010 by the fleet of Chinese Taipei was well below the catch limit allocated.

− *Swordfish*

The preliminary estimate of swordfish catch was 498 t in 2010, comprising 88 t from the North Atlantic Ocean and 410 t from the South Atlantic Ocean. In accordance with the catch limits as stipulated in ICCAT Rec. 06-02, Rec. 06-03 and Rec. 09-03, the catch of swordfish in 2010 by the fleet of Chinese Taipei was well below the catch limit allocated.

− *Billfish species*

Billfish species are bycatch for the longline fishery and the catch estimates of Chinese Taipei vessels operating in the Atlantic Ocean for white marlin, blue marlin, sailfish, spearfish and other marlins were 20 t, 153 t, 37 t, 11 t and 9 t, respectively, in 2010.

− *Sharks*

Sharks are also bycatch species captured by longline fishery. Based on the best information available from the fishery, blue shark was the most dominant species caught in the Atlantic Ocean, followed by mako shark, silky shark and other sharks. The catch of sharks was 1,626 t in 2009 and 1,904 t in 2010. The preliminary catch estimates in 2010 for blue shark, shortfin mako, silky shark and other sharks were 1,727 t, 161 t, 1 t and 15 t, respectively.

Section 2: Research and Statistics

2.1 Data collection and processing system

Task I data are obtained by information from (1) weekly catch reports; (2) the total catch from the recovered logbooks; (3) statistical documents reported to the Fisheries Agency; (4) monthly traders' sales records of Chinese Taipei longline fleet; (5) the verification on settlement of fish sales from the Fisheries Agency; and (6) tuna export data from the Organization for the Promotion of Responsible Tuna Fishery (OPRT). If necessary, adjustments are made on the data.

As for Task II catch and effort data, all the data are complied based on logbooks, which are required for submission to the authorities. Information required to be filled in logbooks includes daily positions from VMS, number of hooks, catches of main tuna and tuna-like species by number and weight, baits, and sea surface temperature.

First, all logbook information is screened for its validity. Then the Task I data are used as a reference in producing a version of the Task II data.

As for the size data in Task II, fishermen are required to measure the first 30 fish they have caught and retained on board, regardless of the species. These size data have been sent to the ICCAT Secretariat as actual size data. In addition, the catch-at-size database was created by Chinese Taipei scientists based on these size data, in conjunction with Task I and II catch data.

For improvement of the statistical system, Chinese Taipei has taken the following measures to collect the fishery-independent data.

As most distant water longliners of Chinese Taipei unload their catches at overseas ports, the launching of a port sampling program at major foreign landing ports will be helpful for the collection of fishery-independent data. Three pilot sampling trips were made at foreign ports in the three oceans in 2006 during fishing seasons. For the Atlantic Ocean, the pilot sampling program was conducted in November 2006 in Port of Spain, Trinidad and Tobago. Port sampling cooperation was entered with the canneries in Port of Spain, Trinidad and Tobago to collect samples and size measurements at cannery pier side at time of offloading in 2006. From December 2006 to December 2009, 21,855 albacore length data were collected from 19 albacore-targeted vessels, among which 20,660 included weight data in addition to length data. The port sampling program in the Atlantic Ocean was terminated in 2010.

The observers were required to collect fishery data and size measurements on target species and bycatch species. Biological samples of bigeye tuna, albacore, swordfish and bycatch/incidental catch species were also collected. The budgets for the observer program from 2007 to 2010 were as follows:

- 2007 US$2,073,111
- 2008 US$2,048,394
- 2009 US$2,128,000
- 2010 US$2,270,000

The observer program for the Atlantic longline fleet began in 2002. For the period of 2007-2010, the deployment of observers on all fishing vessels in the Atlantic Ocean, including the observers on bigeye vessels, was as follows:

	2007	*2008*	*2009*	*2010*
On all vessels	20	21	25	18
On bigeye vessels	14	17	20	15

The coverage of observers on albacore vessels has been over 5% and on bigeye vessels has been over 10% since 2007.

Observer data recorded include (1) operational information such as vessel name, captain name, tonnage, length and communication equipment; (2) daily operating records, including latitude and longitude, bait, number of hooks, wind speed and other environmental factors; (3) fish characteristics, including body length and weight, condition and gender; (4) bycatch characteristics, including species, amounts, status (live release or discarded) and fin–body ratio of sharks; and (5) biological samples such as otoliths, stomach contents, muscles, spine and others. Each observer took 2-3 trips each year, approximately three months per trip.

The observer Task II/size data of bycatch (sea turtles, seabirds and sharks) for 2009-2010 were sent to the ICCAT Secretariat by E-mail on July 28, 2011.

As from 2003 all the Chinese Taipei longline vessels operating in the Atlantic Ocean were required to install VMS with a workable spare set. The data from VMS have been used to resolve the positions on logbooks to improve the logbook data quality. Additionally, as from 2006, each bigeye-targeted vessel has been required to report daily catch to the Fisheries Agency through VMS or facsimile in the form of an e-logbook. The data from the daily e-logbook through VMS were incorporated into the statistical system for quicker collection of catch data as well as improvement of MCS functions.

Reportedly, Chinese Taipei is the first CPC to conduct a pilot e-logbook program. The e-logbook system substantially shortens the time for obtaining catch data from fishing vessels, and meanwhile, it provides effective tool for the Fisheries Agency to monitor the quota or catch limit allocated to the individual fishing vessel. In

addition, the daily catch received through e-logbook can be processed and aggregated into Task II in a much shorter period of time, and readily made available for stock assessment.

2.2 Research

The domestic scientists carried out a series of research programs, including stock assessments, standardizations of catch-per-unit-effort on bigeye tuna, swordfish, albacore and blue marlin (and other incidental catch species), shark fin ratio, shark bycatch re-estimation, incidental catch rate and mortality rate by sighting of seabirds, sea turtles and cetaceans. The research results were presented at the regular meeting and inter-sessional working group meetings of SCRS. For the research work on global tuna fisheries, the budgets for the period between 2007 and 2010 were as follows:

- 2007 US$1,469,000
- 2008 US$1,675,533
- 2009 US$1,432,531
- 2010 US$1,481,724

The scientific papers presented by Chinese Taipei at recent ICCAT meetings are given in the References section of this report.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Limit on the number of fishing vessels

− Bigeye Tuna (ICCAT Recs. 04-01, 06-01, 08-01, 09-01)

In accordance with ICCAT Recommendations 06-01, 08-01 and 09-01, Chinese Taipei limited the number of fishing vessels catching bigeye tuna to 60 in 2009 and 67 in 2010. The list of authorized vessels was duly submitted to ICCAT.

− Northern albacore (ICCAT Recs. 98-8, 99-5)

In accordance with the *Recommendation by ICCAT on the Limitation of Fishing Capacity on Northern Albacore* [Rec. 98-08], the number of fishing vessels for catching northern albacore was set at the average number for the period of 1993-1995. Following the limitation of the number of fishing vessels, 14 vessels were authorized to fish northern albacore in 2010 and the list of vessels was duly submitted to ICCAT.

3.2 Catch limits and minimum sizes

In accordance with the relevant ICCAT Recommendations, catch limits have been set on northern and southern albacore, bigeye tuna, northern and southern swordfish, blue marlin and white marlin. Measures to prohibit catch of undersized fish for swordfish were also enforced.

As regards the *Recommendation by ICCAT Regarding Compliance with Management Measures Which Define Quotas and/or Catch Limits* [Rec. 00-14], Chinese Taipei has taken into account of the requirement of the adjustment of underage/overages in the management of its tuna fishery in the Atlantic Ocean. Catch estimates together with the status of overages/underages in 2010 were provided to the Secretariat in the Compliance Table.

− Bigeye tuna (ICCAT Recs. 04-01, 08-01, 09-01)

For 2010, the Chinese Taipei's adjusted quota of bigeye tuna was limited to 21,450 t[2] in accordance with ICCAT Recs. 04-01, 08-01 and 09-01. To ensure the catch of bigeye tuna did not exceed the limit, and to minimize the chances of overuse of the catch limit, the Fisheries Agency provided an individual catch limit to each vessel. Once the individual vessel catch limit is exhausted, the vessel must stop fishing and return to a designated port. In 2010, 13,189 t of bigeye tuna were caught by the Chinese Taipei fleet.

[2] 2010 adjusted catch limit of bigeye tuna by Chinese Taipei fleet is 21,450 tons due to the underage of 2008 exceeding 30%of 2010 catch limit (16,500 t x (1+30%)=21,450 t).

− Bluefin tuna (ICCAT Recs. 08-05, 09-06)

Although Chinese Taipei was entitled to catch bluefin tuna in the eastern Atlantic and Mediterranean in accordance with ICCAT Recs. 08-05 and Rec. 09-06, the Atlantic bluefin tuna fishery was voluntarily closed by prohibiting fishing vessels from fishing eastern bluefin tuna in 2009 and 2010 to allow the eastern bluefin tuna stock to recover. Hence, no vessel was authorized to fish bluefin tuna and no catch was reported in 2009 and 2010. In addition, the unused quota of 66.3 t of bluefin tuna in 2009 was carried over to the year 2011 in accordance with paragraph 15 of Rec. 08-05, which was duly informed ICCAT.

− Northern albacore (ICCAT Rec. 09-05)

Chinese Taipei was limited to a catch of 3,271.7 t in 2010 according to the *Recommendation by ICCAT to Establish a Rebuilding Program on North Atlantic Albacore* [Rec. 09-05] for the period 2010-2011. In addition to the catch limitation, Chinese Taipei may apply the carry-over mechanism against its underage in 2008 of the northern albacore catch to 2010 up to 817.9 t (25% of initial catch limit) and transfer 100 t from its catch allocation to St. Vincent and the Grenadines. Therefore, the adjusted catch limit of this stock for Chinese Taipei is 3,989.6 t. Only 1,587 t of northern albacore was caught by our fleet.

− Southern albacore (ICCAT Rec. 07-03)

In accordance with the *Recommendation by ICCAT on the Southern Albacore Catch Limits for 2008, 2009, 2010 and 2011* [Rec. 07-03], a total allowable catch (TAC) of 29,900 t of southern albacore was to be shared among all countries fishing for the stock. As the main fishery state, the Chinese Taipei fleet caught 10,975 t of southern albacore in 2010.

− North swordfish (ICCAT Rec. 06-02, 08-02, 09-02, 09-04)

According to the *Supplemental Recommendation by ICCAT to Amend the Rebuilding Program for North Atlantic Swordfish* [Recs. 06-02, 08-02 and 09-02], Chinese Taipei was limited to a catch of 270 t in 2010 and may apply the carryover mechanism against its underage in 2008 of north swordfish catch to 2010 up to 135 t, which adds to an adjusted catch limit of 405 t north swordfish catch for Chinese Taipei. Only 88 t of north swordfish was caught in 2010. In addition, restrictions on minimum weight (< 25 kg) and size (lower jaw fork length (LJFL) < 119 cm) of swordfish for vessels operating in this region were applied. Domestic measures were taken to ensure compliance with these measures.

In accordance with the *Recommendation by ICCAT for A Management Framework for the Sustainable Exploitation of Mediterranean Swordfish and Replacing ICCAT Recommendation 08-03* [Rec. 09-04], fishing for Mediterranean swordfish shall be prohibited in the Mediterranean Sea during the period from 1 October to 30 November. In fact, no vessel was authorized to fish for Mediterranean swordfish in 2010 by Chinese Taipei.

− South swordfish (ICCAT Rec. 09-03)

In accordance with the *Recommendation by ICCAT on the South Atlantic Swordfish Catch Limits* [Rec. 09-03], Chinese Taipei was limited to a catch of 459 t in 2010 and may apply carryover mechanism against its underage in 2009 of the south swordfish catch to 2010 up to 35 t, which adds to the adjusted catch limit of 494 t of south swordfish for Chinese Taipei. Domestic measures were taken to ensure compliance with these recommendations. 410 t of south swordfish was caught in 2010 by the fleet of Chinese Taipei.

− Atlantic white marlin and blue marlin (ICCAT Rec. 06-09)

In accordance with the *Recommendation by ICCAT to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin Populations* [Rec. 06-09], Chinese Taipei's catch of Atlantic white marlin and blue marlin was respectively limited to 186.8 t and 330 t in 2010. Domestic measures were taken to ensure compliance with these recommendations. The catch of abovementioned species in 2010 was 20 t and 153 t, respectively.

3.3 Measures to reduce incidental catch of sea turtle, seabird and sharks (ICCAT Recs. 95-02, 01-11, 03-10, 03-11, 04-10, 05-05, 06-10, 07-06, 07-07, 08-07, 08-08, 09-07)

- Education: To disseminate the information on conservation of incidental catch species, in recent years, pamphlets and leaflets were distributed to fishermen, fishing industries and domestic conservation groups to promote the concept of conservation of sea turtles, seabirds and sharks.

- Data collection:
  a) Observers have been placed on distant water tuna longline vessels to record the length, species and related information of incidental catch since 2000.
  b) Fishermen are required to record incidental catches of sharks as well as live releases, in accordance with ICCAT data reporting requirements.
- NPOA: In 2006, Chinese Taipei established the National Plans of Actions (NPOA) for reducing catch of seabirds in longline fisheries and for the betterment of management and conservation of sharks.
- Ban on bigeye thresher sharks: Fishermen are required to prohibit the retaining onboard, transshipping, landing, storing, selling, or offering for sale any part or whole carcass of bigeye thresher sharks. If incidental catch occurs, the catch shall be promptly released to sea. Fishermen shall record the event in accordance with ICCAT data reporting requirements.

3.4 Closed seasons (ICCAT Recs. 08-05, 09-06)

In an effort to conserve bluefin tuna stocks, Chinese Taipei voluntarily implemented domestic regulations to prohibit all longline vessels from fishing in the eastern Atlantic, Western Atlantic and the Mediterranean for the entire year since 2009.

3.5 Ban on imports (ICCAT Recs. 02-17, 03-18)

In accordance with ICCAT Recs. 02-17 and Rec. 03-18, imports of products of bluefin tuna, swordfish, and bigeye tuna caught from those countries under trade restrictive measures are prohibited.

3.6 Implementation of the ICCAT Management Standard for Larger-Scale Tuna Longline Vessels (ICCAT Res. 01-20, ICCAT Rec. 09-08)

Pursuant to the [Res. 01-20] *Resolution Concerning a Management Standard for the Large-Scale Tuna Fishery* [Rec. 06-09], the Report of Implementation of the ICCAT Management Standard for Large-Scale Tuna Longline Vessels (LSTLVs) has been submitted to the Secretariat.

Likewise, in accordance with the *Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels 20 Meters in Length Overall or Greater Authorized to Operate in the Convention Area* [Rec. 09-08], a list of vessels larger than 20 meters length overall that were authorized to fish for tuna and tuna-like species in the ICCAT Convention Area was submitted to ICCAT Secretariat.

3.7 Vessel Monitoring System (ICCAT Recs. 03-14, 04-11)

In accordance with the *Recommendation by ICCAT Concerning Minimum Standards for the Establishment of a Vessel Monitoring System in the ICCAT Convention Area* [Rec. 03-14] and the *Recommendation by ICCAT Concerning Implementation of the VMS Recommendation* [Rec. 04-11], all large-scale tuna fishing vessels authorized to fish for tuna and tuna-like species in the ICCAT Convention area were required to install satellite-based vessel monitoring system (VMS) and report their positions every 6 hours.

To ensure uninterrupted reporting of their positions and in the case of malfunction of the VMS, all fishing vessels and transport vessels operating in the Atlantic Ocean have been required to install a spare set of VMS since 2005, to make immediate replacement in case of machine breakdowns. The staff at the land-based monitoring center has been instructed to closely monitor the activities of vessels through VMS reporting.

3.8 Observer Program (ICCAT Recs. 04-01, 06-09)

In 2010, Chinese Taipei dispatched 15 observers on board the active bigeye vessels, with observer coverage of over 10%. In addition, observers were placed onboard the LSTLVs targeting albacore tuna to achieve a minimum 5% observer coverage based on the policy of the Fisheries Agency. These observers collected fishery data and size measurements on major target and bycatch species. Biological samples of bigeye, albacore, swordfish and bycatch/incidental catch species were also collected.

3.8.1 Measures to Ensure effectiveness of the ICCAT Conservation and Management measures and to prohibit Illegal, Unreported, and Unregulated fisheries （ICCAT Rec. 09-10）

To prevent illicit activities from reoccurring, the Fisheries Agency has been exerting its greatest efforts in cracking down on any violation under the applicable legal framework. In 2010, no IUU fishing activities were detected or reported to have conducted by Chinese Taipei flagged vessels in the Atlantic Ocean.

3.8.2 Restriction in the export of fishing vessels

Chinese Taipei promulgated the "Regulations on Permission for the Export of Fishing Vessels" in 2005 and these regulations were amended in 2007. According to the said Regulations, it is required to have consultations with the authority of the country that plans on importing the fishing vessel, and to provide information on the fishing activities of vessel if the investment for the building of the vessel is derived from a national of Chinese Taipei. The objective of the Regulation is primarily to prevent the expansion of fishing capacity with Chinese Taipei as beneficiary. Export of newly-built fishing vessels in Chinese Taipei will not be permitted where the country planning for such importation of the fishing vessel refuses to consult with Chinese Taipei, or if such export will be in contravention to the conservation measures adopted by the RFMOs, or the vessel will be destined to countries under sanction by RFMOs, or to non-members or non-cooperating non-members of RFMOs. Under the spirit of the said Regulations, exports of fishing vessels built in Chinese Taipei will in no way breach the conservation and management measures adopted by the relevant RFMOs.

3.8.3 Prior approval for operation of foreign flag vessels by Chinese Taipei nationals

To show Chinese Taipei's determination to eliminate IUU fishing activities, through tremendous efforts, the "Ordinance to Govern Investment in the Operation of Foreign Flag Vessels" was enacted and promulgated on 17 December 2008. The essence of the legislation is to have both the beneficial owner State (the State whose national owns the vessel) and the flag State assume the responsibility of fisheries management. This legislation is a major breakthrough, in which instead of focusing on the location of crime as appeared traditionally in the legislation of Chinese Taipei, it takes into account the person who commits the crime, that is, IUU fishing activities in a foreign country by any Chinese Taipei national will be subject to criminal prosecution, and when convicted the offender will be liable to imprisonment.

3.8.4 Transhipment (ICCAT Rec. 06-11)

As ICCAT established the Program for Transhipment in May 2007 in accordance with the Rec. 06-11, Chinese Taipei started authorizing its bigeye vessels to conduct at-sea transhipment. In 2010, 65 bigeye vessels were authorized to conduct at-sea transhipment. In addition, 46 bigeye vessels and 28 albacore vessels were authorized to conduct in-port transhipment. The detailed report on the implementation of Regional Observer Program of ICCAT in 2010 by Chinese Taipei was duly submitted to ICCAT Secretariat.

3.8.5 Statistical Document (ICCAT Recs. 01-21, 01-22, 03-09, 03-19)

In accordance with ICCAT Recommendation, the system for the issuance of the "ICCAT Bigeye Tuna Statistical Document" and the "ICCAT Swordfish Statistical Document" in accordance with the ICCAT recommendation has been carried out 1 July 2002 and 1 January 2003, respectively. In 2010, 618 Statistical Documents were issued for the trading of bigeye tuna and swordfish caught in the Atlantic Ocean. Among these, 75.2% were issued for bigeye tuna and 24.8% for swordfish. Most of the catch was exported to Japan.

3.8.6 Bluefin Tuna Catch Documentation (ICCAT Rec. 09-11)

In accordance with ICCAT Recommendation, Chinese Taipei established a domestic regulation for the purpose of implementing the ICCAT bluefin tuna catch documentation in 2008. In fact, as no fishing on bluefin tuna was authorized, no Atlantic Bluefin Tuna Catch Documentation (BCDs) were issued by Chinese Taipei in 2010.

Section 4: Inspection Scheme and Activities

4.1 Inspections

In 2010, port inspections on 73 vessels were carried out in Cape Town, South Africa to ensure the compliance of ICCAT measures by the vessels of Chinese Taipei.

Section 5: Other Activities

5.1 Contributions to ICCAT

Being a non-member of ICCAT, Chinese Taipei has no obligation to share the budget of ICCAT. However, in view of the importance of the stock conservation and assessment and being an important user of the tuna stocks in the Atlantic Ocean, Chinese Taipei has been making voluntary contributions to ICCAT since 1998. The contributions from Chinese Taipei to ICCAT, which in the recent five years totaled more than 500 thousand Euros, are shown in **Table 2**.

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Table 1. Catch estimate (in round weight, t) for Chinese Taipei tuna longline fishery operated in the Atlantic Ocean during 1998-2010.

Year	*ALB*	*N.ALB*	*S.ALB*	*BET*	*YFT*	*BFT*	*SBF*[2]	*SWO*	*N.SWO*	*S.SWO*	*WHM*	*BUM*	*BIL*[3]	*SKJ*	*OTH*	*SKX*	*TOTAL*
1998	19,204	3,098	16,106	16,314	5,328	456	42	1,433	286	1,147	506	578	411	75	121	969	45,437
1999	23,162	5,785	17,377	16,837	4,411	249	30	1,453	285	1,168	464	486	332	40	558	2,068	50,090
2000	22,520	5,299	17,221	16,795	5,661	313	24	1,650	347	1,303	437	485	165	41	714	1,666	50,471
2001	20,232	4,399	15,833	16,429	4,805	633	223	1,448	299	1,149	152	240	49	25	975	675	45,886
2002	21,651	4,330	17,321	18,483	4,659	666	16	1,474	310	1,164	178	294	206	39	758	653	49,077
2003	21,908	4,557	17,351	21,563	6,486	445	170	1,511	257	1,254	104	319	112	40	931	1,803	55,392
2004	17,566	4,278	13,288	17,717	5,824	51	17	775	30	745	172	315	59	43	871	1,380	44,790
2005	13,270	2,540	10,730	11,984	3,596	277	2	884	140	744	56	151	104	38	1,106	1,455	32,923
2006	14,650	2,357	12,293	2,965	1,260	9	0	549	172	377	44	99	105	38	1,289	2,678	23,686
2007	14,443	1,297	13,146	12,116	1,947	0	0	774	103	671	54	233	184	16	1,759	2,890	34,416
2008	11,073	1,107	9,966	10,418	1,122	0	3	809	82	727	38	148	149	27	1,412	2,211	27,410
2009	9,541	863	8,678	13,252	1,391	0	3	701	89	612	28	195	108	6	1,239	1,626	28,090
2010[1]	12,562	1,587	10,975	13,189	824	0	5	498	88	410	20	153	57	13	1,782	1,904	31,007

[1] Preliminary data.
[2] Catch estimate of SBF has been revised to be consistent with CCSBT database in 2004.
[3] Catch estimate of BIL was including black marlin, sailfish, spearfish and other billfishes.

Table 2. Chinese Taipei contributions to ICCAT, 2006-2010.

Year	*Contribution to ICCAT*	*Note*
2010	100,000 Euros	100,000 Euros for Commission
2009	108,000 Euros	Contributions including: 1) 100,000 Euros for Commission 2) 5,000 Euros to the "ICCAT Enhanced Research Program for Billfish Fund" 3) 3,000 Euros to the "Bluefin Tuna Research Program Fund"
2008	100,000 Euros	100,000 Euros for Commission
2007	100,000 Euros	100,000 Euros for Commission
2006	100,500 Euros	100,500 Euros for Commission

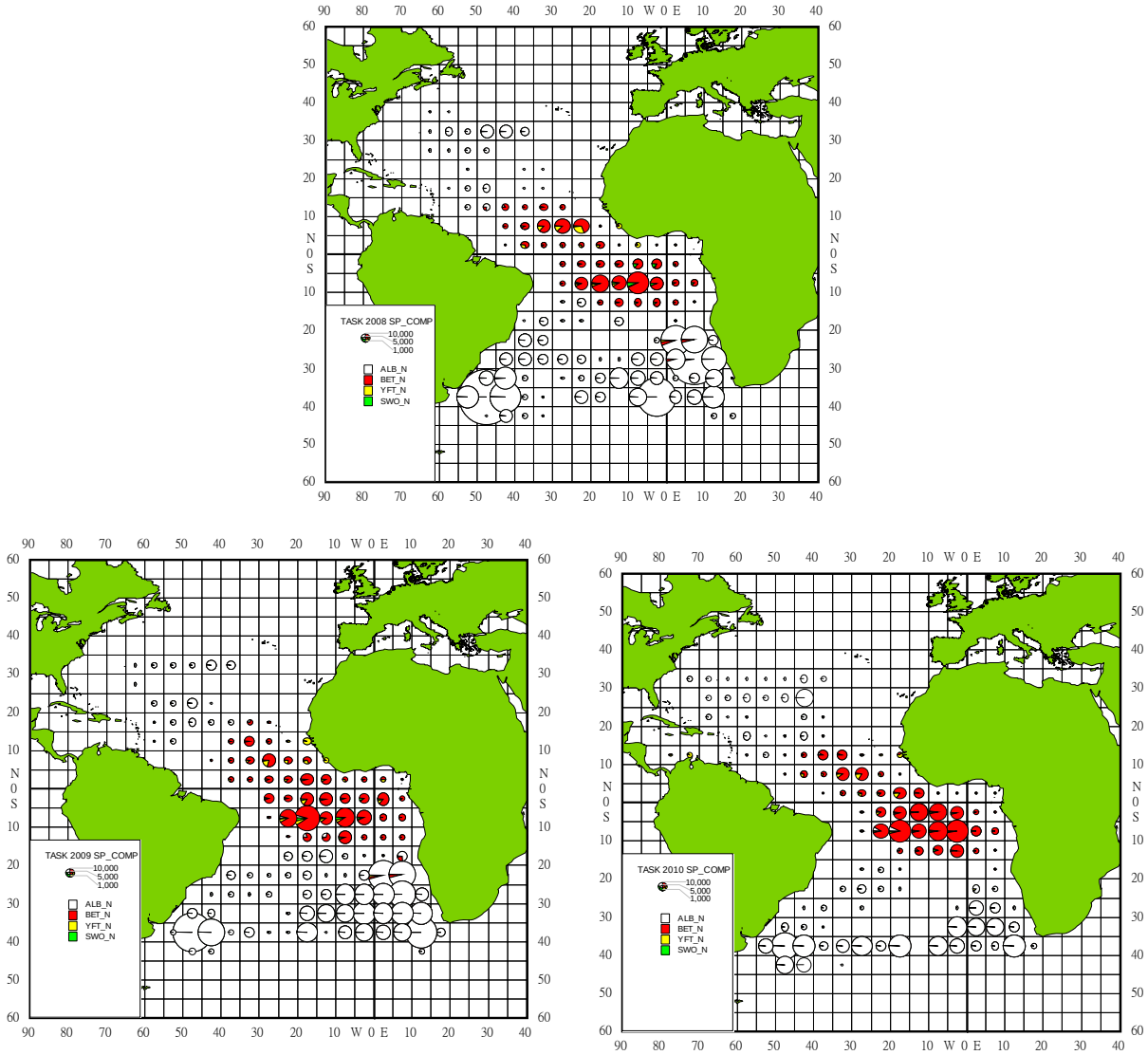

Figure 1. Distribution of catch composition of the main tuna species in the Atlantic Ocean, 2008 (top), 2009 (left, preliminary data) and 2010 (right, preliminary data).

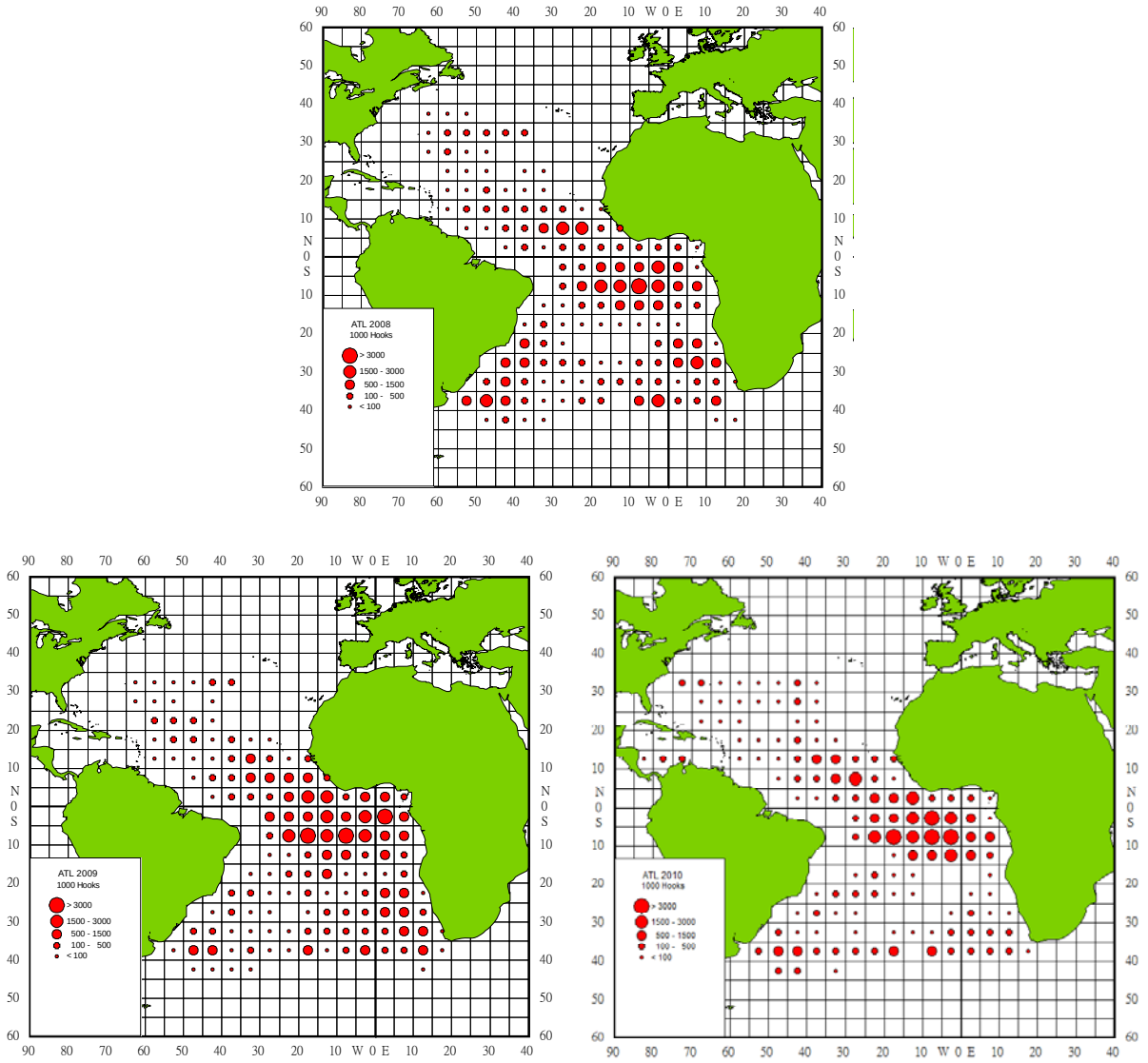

Figure 2. Geographic distribution of the Chinese Taipei tuna longline efforts (number of hooks) in the Atlantic Ocean, 2008 (top), 2009 (left, preliminary data) and 2010 (right, preliminary data).

ANNUAL REPORT OF CURAÇAO
RAPPORT ANNUEL DE CURAÇAO
INFORME ANUAL DE CURAÇAO

Stephen Mambi P. Gr.[1]

SUMMARY

During the year 2010, a total of three purse seiners were registered under the flag of Curaçao. The vessels operated during all the year in the tropical area and had their operations based in the port of Abidjan, Ivory Coast and also in Dakar, Senegal. There were no longliners in our register and the only activity was in the tropical area by the three purse seiners mentioned before.

RÉSUMÉ

En 2010, trois senneurs étaient immatriculés sous le pavillon de Curaçao. Les navires ont opéré tout au long de l'année dans la zone tropicale, et les ports d'Abidjan (Côte d'Ivoire) et de Dakar (Sénégal) constituaient les ports d'attache de leurs opérations. Aucun palangrier ne figurait sur notre registre et la seule activité des trois senneurs susmentionnés a été réalisée dans la zone tropicale.

RESUMEN

Durante el año 2010, un total de tres cerqueros se registraron bajo pabellón de Curaçao. Los buques operaron durante todo el año en la zona tropical y sus bases fueron el puerto de Abidján, en Côte d'Ivoire y el puerto de Dakar, en Senegal. No hay palangreros en nuestro registro y la única actividad se la desarrollaron los cerqueros mencionados en la zona tropical.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The catches of tunas and tuna-like species in 2009 and 2010 are shown in **Tables 1** and **2**.

Section 2: Research and Statistics

Catch data were analized in order to comply with management measures applicable for the vessel type and flag State, being all data in order with the ICCAT Recommendations. The bigeye catches during 2010 were 16,8% of the total catch. Catches of yellowfin and skipjack amounted to 27,9 % and 52,9%, respectively, during 2010.

Catch size and species composition sampling in port has been carried out in collaboration with the Instituto Español de Oceanografía (IEO) of Spain in the main transhipment base of the purse seine vessels operating in 2010, i.e., Abidjan (Côte d'Ivoire).

In general terms, there has been a reduction in total catches of 13,6% from 2009.

Part II: (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Curaçao is committed to comply with all the Recommendations issued by ICCAT.

[1] Senior Policy Worker of the Ministry of Economic Development of Curaçao.

The vessels are monitored and controlled by satellite tracking VMS.

The vessels complied with Recommendation 09-01 regarding conservation measures for bigeye tuna.

The vessels report their catches to the Fishing Authority on a monthly basis.

Section 4: Inspection Schemes and Activities

The fishing activity of those species under the ICCAT management in the EEZ of Curaçao was not relevant. On the other hand, there were no discharges of tuna or tuna-like species to be analysed in the country.

Section 5: Requirements for Vessels Larger Than 24 Metres in Length

The fishing vessels under the flag of Curaçao larger than 24 metres in length must fulfil the following obligations in order to fish in the ICCAT Convention area:

- Be fitted with a Vessel Monitoring System, by satellite tracking system
- Follow strictly all the recommendations issued by ICCAT for their fishery.
- Submit a monthly report of catches to the fishing Authorities.
- Submit a "Transhippment Declaration" each time a transhipment is carried out.
- Submit a "Discharge Declaration" each time a discharge is carried out.
- Every year, submit a list of "Fishing Licenses" that are issued to the vessel by third countries in order to fish in the EEZ of different countries.
- Apply for an International Fishing Permit issued by the government of Curaçao that allows the vessel to operate in the high seas of the Atlantic Ocean and in the ICCAT Convention area.

Table 1. Curaçao catches of tunas and tuna-like species in 2009.

Yellowfin tuna	*Skipjack tuna*	*Bigeye tuna*	*Other tuna-like species*	*Total*
8.985	9.148	1.372	1.471	20.976

Table 2. Curaçao catches of tunas and tuna-like species in 2010.

Yellowfin tuna	*Skipjack tuna*	*Bigeye tuna*	*Other tuna-like species*	*Total*
5.048	9.590	3.047	427	18.113

ANNUAL REPORT OF GUYANA
RAPPORT ANNUEL DE LA GUYANA
INFORME ANNUAL DE GUYANA

Fisheries Department

SUMMARY

*Guyana's artisanal fishery is nearshore, operating within the national Exclusive Economic Zone and targets a number of groundfish species (*Sciaenidae, Ariidae, Sparidae, *etc). In this fishery, scombrids and sharks are taken as by-catch, and are seasonal. In 2010, a total of 383,615 kg of shark and 150,261 kg of scombrids were harvested. Sharks continue to be landed dressed, which poses a real problem for recording shark catches by individual species.*

RÉSUMÉ

*La pêcherie artisanale de la Guyana opère non loin des côtes, à l'intérieur de la Zone économique exclusive, et cible un certain nombre d'espèces de poissons de fond (*Sciaenidae, Ariidae, Sparidae, *etc.). Dans cette pêcherie, les scombridés et les requins sont capturés en tant que prise accessoire et sont de nature saisonnière. En 2010, un total de 383.615 kg de requins et de 150.261 kg de scombridés a été capturé. Les requins continuent à être débarqués en poids manipulé, ce qui pose un véritable problème pour l'enregistrement des prises de requins par espèce individuelle.*

RESUMEN

*La pesquería artesanal de Guyana es cercana a la costa, opera dentro de la Zona Económica Exclusiva nacional y se dirige a diversos peces de fondo (*Sciaenidae, Ariidae, Sparidae, *etc.). En esta pesquería, los escómbridos y los tiburones se capturan como captura fortuita y son estacionales. En 2010, se capturaron en total 383,615 kg de tiburones y 150,261 kg de escómbridos. Los tiburones se desembarcan en canal, lo que supone un serio problema para consignar las capturas de tiburones por especies individuales.*

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In 2010, the artisanal fishers experienced at least six attacks of piracy at sea including the loss of one life. Also, fishers were challenged by the effect of global economic recession including the constant increase prices for fuel and climate change to the environment. This was evident as there were low fisheries productions and exports. The government of Guyana has implemented an Anti Piracy Act to combat the problem of piracy.

The option to transform the Fisheries Department into a semi-autonomous agency is still under review by the government.

1.1 Description of the fishery

In Guyana, there is an inshore artisanal fishery, using locally made boats that exploit both the demersal and pelagic species found near shore and within the national EEZ. In this fishery five gear types are common: (i) Chinese seine/fyke net, (ii) pin seine, (iii) caddell, (iv) gillnet (nylon and polyethylene), and (v) handline, fish pots.

All the boats are made from wood and are manufactured locally. The boats are 6 to18 m in overall length and are powered by sails, outboard, or inboard engines.

1.2 Fishing gear and vessels

Chinese seine, caddell and pin seine vessels are flat-bottomed dories powered by sail, paddle or small outboard engines which give more maneuverability over shallow, muddy and sandy bottom areas. Chinese seines are funnel-shaped nets, 16m (52 ft) long and 4-6m (13.1-19.6 ft) wide at the mouth. The mesh size gradually tapers from 8cm at the mouth to 1 cm at the funnel end.

Caddell or demersal longline fishing vessels ranged in size from 6.71 to 9.15m (22-30 ft) in length. A caddell line consists of a horizontal/ground line anchored at each end, with a series of about 800 dangling/vertical lines, set with baited hooks at 2m outwards. Each vessel carries between 4-5 wooden trays with each tray having 2-6 main lines.

Nylon gillnet boats are v-bottom boats ranging in size from 7.63 to 9.15 m (25-30 ft) in length. These boats have no cabin but are equipped with an icebox and are usually powered by 48-hp outboard engines. The fishers therefore conduct daily fishing trips. Vessels using the (polyethylene) gillnet gear are v-bottom vessels with a length range of 12.2-15.25 m (40-50 ft). These vessels have a cabin and utilize diesel-powered inboard engines. The length of the trip for a gillnet vessel is usually 10-21 days.

Approximately 60% of the artisanal vessels use gillnets and fishing is done in coastal / shallow waters. The fishers would normally harvest all available species of fish in season for example, snappers and trout, with sharks comprising the main portion of the by-catch. The gillnet gear is responsible for capturing 90 % of the sharks landed in Guyana.
There is strong competition within the industry, as there is a ready market. There are three licensed shark processors in Guyana.

For a normal fishing trip, a vessel would spend 7-15 days at sea. Sharks are harvested all year round, with a peak in landings usually during May-December.

1.3 Catches

Sharks and scombrids are exploited in Guyana mainly with the gillnet gears. This gear type is non-specific and catches all species of fish. The main target resources, however, are the smaller ground fish species (*Macrodon ancylodon, Nebris microps and Micropogonias furnieri*). Due to the incidental nature of the shark catches, this makes it difficult to control the harvest of juvenile sharks caught in the shallower waters and also to record shark catches by individual species. Other gear types that catch sharks are the caddell lines (manual longline), handline, trawl nets and pin seine.

Section 2: Research and Statistics

Sharks are landed dressed, i.e., headless and gutted. Only the juvenile sharks (caught by either caddell, chinese seine or gillnet nylon), which account for 2% of the total catch, are landed whole. In view of this, it continues to be difficult to record shark catches by individual species. The Fisheries Department has noted the need for continued special technical assistance to address the issue of identification of dressed sharks, and is seeking assistance from external agencies such as Food and Agricultural Organization, Caribbean Regional Fisheries Organization to address this task. Some of the important species known to be caught by fishers are hammerhead, tiger, blacktip, sand and what is known locally as waterbelly shark.

All the landings data for sharks and scombrids are reported to ICCAT, together with the numbers of fishing vessels involved in these fisheries (**Tables 1** and **2**). At present, effective fishing effort is not recorded, and hence only Task I data have been reported this year. Notably, the shark fishery is a multi-million dollar fishing activity, and contributed significantly to the overall export of total fish products from Guyana at a value of US$6,093,129 for 2010. The value of the fins and glue is most significant rather than the carcass.

Through the CRFM/JICA/ICNET Pilot Project on Improving Statistical Data, fishers were encouraged to fill logs on each trip made. Notably, not even one percent of the artisanal fishers are adhering to this call. The Department of Fisheries is making it mandatory for licences boat owners to comply by filling the logs and submit same to the department.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

− Plans for expansion

The Department of Fisheries has no plans to expand the artisanal fishery. Also, it is considering a proposal to limit the amount of vessels per gear type as a precautionary approach for conserving the fishery.

Section 4: Inspection Schemes / Activities

The Guyana Coast Guard (GCG) is responsible for monitoring all of the fishing activities within Guyana's Exclusive Economic Zone with assistance from the Fisheries Department and the Marine Police. However, it should be noted that the primary focus for the Guyana Coast Guard in 2010 was to combat anti-piracy, poaching and smuggling of illegal fuel. In 2010, the Guyana Coast Guard was able to conduct three hundred (300) patrols of which, three (3) were fisheries surveillance patrols. No aerial recognizance was done or apprehension was made for illegal fishing and smuggling fuel.

Table 1. Boat count of artisanal, industrial and semi-industrial vessels, by gear types, 2010.

a) Artisanal

Gear type	*# Vessels*
Gillnet polyethylene 5-6" mesh size	341
Gillnet polyethylene 7- 8" mesh size	80
Gillnet nylon 2-4" mesh size	342
Caddell # 5-9 hooks	55
Chinese seine 4-5 bundles (25-30 lbs each)	285
Pin seine	26
Total artisanal vessels	1129

b) Industrial and semi industrial

Gear type	*# Vessels*
Trawlers nets	127
Handline	20
Traps	52

Table 2. Scombrids and shark production by species (kg), 2010.

Scombrids		*Sharks*	*Total*
Scomberomorus brasiliensis	*Scomberomorus cavalla*	*Unidentified shark species*	
91,520	58,741	383,615	**533,876**