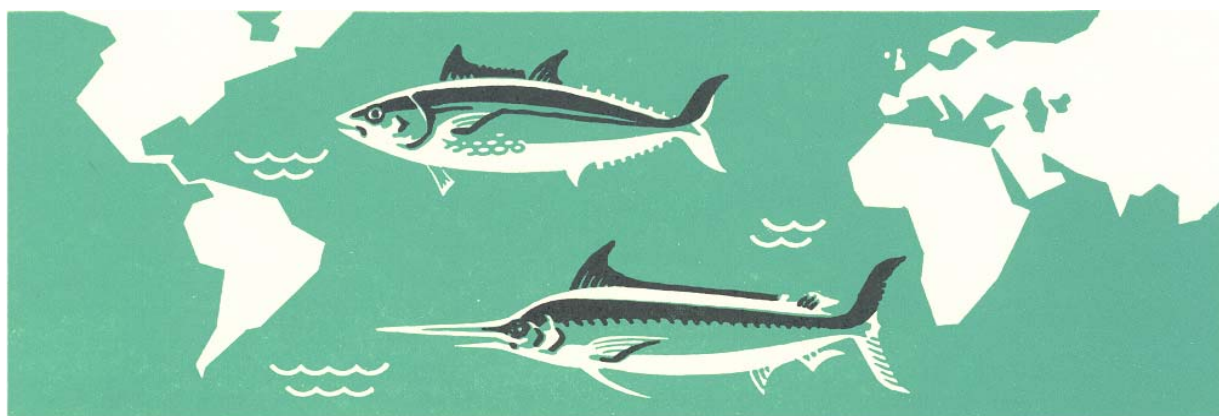

**INTERNATIONAL COMMISSION
for the
CONSERVATION of ATLANTIC TUNAS**

**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, 2006-07
PART II (2007) - Vol. 3
Annual Reports

R A P P O R T
de la période biennale, 2006-07
II^{ème} PARTIE (2007) – Vol. 3
Rapports annuels

I N F O R M E
del período bienal, 2006-07
I^a PARTE (2007) – Vol. 3
Informes anuales

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, 2006-2007, Part II (2007)*", 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 20th Regular Meeting of the Commission (Antalya, Turkey, November 9-18, 2007) 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 a series of 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 for 2007 has been published in three volumes. *Volume 1* includes the Secretariat's Administrative and Financial Reports, 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 Secretariat's Report on Statistics and Coordination of Research and the Report of the Standing Committee on Research and Statistics (SCRS) and its appendices. *Volume 3* (starting with this volume, only published electronically) contains the Annual Reports of the Contracting Parties of the Commission and Observers.

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 2006-2007, II^{ème} Partie (2007)*", dans lequel sont décrites les activités de la Commission au cours de la seconde moitié de cette période biennale.

Ce rapport contient le rapport de la 20^{ème} Réunion ordinaire de la Commission (Antalya, Turquie, 9-18 novembre 2007) et les rapports de réunion 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 de l'année 2007 est publié en trois volumes. Le *Volume 1* réunit les rapports administratifs et financiers du Secrétariat, les comptes rendus de réunion 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 Secrétariat sur les Statistiques et la Coordination de la Recherche et le Rapport du Comité Permanent pour la Recherche et les Statistiques (SCRS) et ses appendices. Le *Volume 3* (qui, à partir du présent volume, ne sera publié qu'électroniquement) contient les Rapports annuels des Parties contractantes de la Commission et des Observateurs.

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.

PRESENTACIÓN

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, 2006-2007, IIª Parte (2007)*", 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 Vigésima Reunión Ordinaria de la Comisión (Antalya, Turquía, 9-18 de noviembre de 2007), 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 de 2007 se publica en tres volúmenes. El **Volumen 1** incluye los Informes Administrativo y Financiero de la Secretaría, 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** contiene el Informe de la Secretaría sobre estadísticas y coordinación de la investigación y el Informe del Comité Permanente de Investigación y Estadísticas (SCRS) y sus apéndices. El **Volumen 3** (sólo se publica en formato electrónico) incluye los Informes anuales de las Partes contratantes de la Comisión y de los observadores.

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.

WILLIAM T. HOGARTH

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

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¹ Reports received and distributed for the 2007 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 2007 Commission Report).

² Rapports reçus et diffusés pour les réunions annuelles de l'ICCAT de 2007. 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 2007).

³ Informes recibidos y distribuidos durante las reuniones anuales de ICCAT de 2007. 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 2007).

**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 ARGELIA**

SUMMARY

The fishing activity for tunas and tuna-like species in 2006 was characterized by the implementation of a new regulatory measure establishing the conditions and the fishing methods on these species in waters under Algerian jurisdiction. Likewise, this new measure (Executive Decree No. 06-367 of October 19, 2006) which affects mainly the fishing areas, the minimum market sizes, the closed fishing seasons and the control mechanisms of this fishing, is based on the provisions of the ICCAT recommendations, particularly Recommendation 06-05. In the course of this year and within the scope of the program to revive the fishing sector, Algeria has received new tuna type fishing vessels (purse seiners and longliners) measuring more than 24 meters. Other vessels have also been ordered and will be received. Moreover, the Ministry of Fishing and High Seas Resources has developed and initiated several projects related to the sustainable exploitation and management of the high seas resources, notably, the installation of fish markets in each maritime province of the country, the implementation of a VMS system on board the fishing vessels, and the development of a conservation and management plan for the Algerian fisheries.

RÉSUMÉ

L'activité de la pêche aux thonidés et espèces voisines durant l'année 2006 a été caractérisée par la mise en place d'un nouveau dispositif réglementaire fixant les conditions et les modalités d'exploitation de ces espèces dans les eaux sous juridiction algérienne. Ainsi, ce nouveau dispositif (Décret exécutif n°06-367 du 19 octobre 2006) qui porte essentiellement sur les zones de pêche, les tailles minimales marchandes, les périodes de fermeture de la pêche et les modalités de contrôle de cette activité, s'est basé sur les dispositions des recommandations de l'ICCAT, notamment la Recommandation 06-05. Au cours de cette année et dans le cadre du programme de relance économique du secteur de la pêche, l'Algérie a réceptionné de nouvelles unités de pêche de type thonier (senneurs et palangriers) mesurant plus de 24 mètres. D'autres navires sont également programmés et seront réceptionnés. Par ailleurs, le Ministère de la Pêche et des Ressources Halieutiques a inscrit et a lancé plusieurs projets se rapportant à l'exploitation et à la gestion durable des ressources halieutiques, dont notamment l'installation des halles à marées au niveau de chacune des wilayas maritimes du pays, la mise en place du système VMS à bord des navires de pêche et l'élaboration d'un plan d'aménagement et de gestion des pêcheries algériennes.

RESUMEN

Durante el año 2006, la actividad de pesca de túnidos y especies afines se caracterizó por la implementación de un nuevo dispositivo reglamentario que establece las condiciones y modalidades de explotación de estas especies en las aguas bajo jurisdicción argelina. Además, este dispositivo (decreto ejecutivo n° 06-367 del 19 de octubre de 2006), que se refiere sobre todo a las zonas de pesca, las tallas mínimas comerciales, los periodos de veda a la pesca y las modalidades de control de esta actividad, se basa en las disposiciones de las recomendaciones de ICCAT, sobre todo la Recomendación 06-05. Durante este año y en el marco del programa de reactivación económica del sector pesquero, Argelia ha recibido nuevas unidades de pesca de tipo atuneros (cerqueros y palangreros) con una eslora superior a 24 m. También se prevé recibir otros buques. Asimismo, el Ministerio de Pesca y Recursos Pesqueros ha elaborado y ha puesto en marcha varios proyectos relacionados con la explotación y gestión sostenible de los recursos pesqueros, entre ellos cabe destacar la instalación de lonjas de pescado en las willayas (provincias) marítimas del país, la instalación del sistema de seguimiento de buques (VMS) en los buques pesqueros y la elaboración de un plan de ordenación y gestión de las pesquerías argelinas.

1^{ère} 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 2006 à 3.837 tonnes, réparties comme suit:

- Thon rouge 1.698 t
- Espadon 682 t
- Thonidés mineurs 1.457 t

Cette production a été réalisée grâce à l'intervention d'une flottille nationale de pêche dont la longueur des unités varie entre 6 m et 24 m et une puissance motrice de 9 CV à 500 CV et composée de 93 senneurs et de 295 palangriers artisanaux ainsi que par 15 long liners de 45 m, affrétés.

Il y a lieu de signaler, à ce propos, que durant l'année 2006 et dans le cadre du programme de relance économique du secteur de la pêche, l'Algérie a réceptionné 3 unités de pêche de type thonier mesurant plus de 24 mètres, dont deux senneurs, d'une longueur de 25 et de 25,50 mètres et d'une jauge brute de 69 et 60 tonneaux et un palangrier de 25,62 mètres et d'une jauge brute de 90 tonneaux. D'autres nouvelles unités sont programmées et seront prochainement réceptionnées par des armateurs nationaux, soit dans le cadre de l'aide de l'Etat, soit sur fonds propre.

1.1 Fréquences de taille

L'étude des fréquences de taille réalisée sur des échantillons estimés à 2602 individus, capturés durant les mois d'avril et mai 2006 a fait ressortir que la taille des spécimens varie dans une gamme allant de 80 à 340 cm. Cependant, l'échantillon considéré est principalement composé d'individus dont la taille varie entre 200 cm et 240 cm.

La distribution des fréquences de taille du thon rouge est illustrée à la **Figure 1**.

1.2 Fréquences de poids

En ce qui concerne la variation pondérale des prises de thon rouge, la **Figure 2** montre que sur l'échantillon considéré, le poids des individus varie entre 15 et 450 kg avec une prédominance des individus de 140 à 220 kg.

1.3 Relation taille- poids

La **Figure 3** illustre la relation taille-poids de l'année 2006

1.4 Sex-ratio

L'étude du sex-ratio global révèle une nette différence en faveur des femelles (53,6%) par rapport à celle des mâles (46,4%) (**Figure 4**). Le sex-ratio global est représenté dans le **Tableau 1** et illustré par la **Figure 4**.

Par ailleurs, il a été enregistré une dominance en faveur des femelles pour les tailles comprises entre 150 et 220 cm et au delà de 230 cm nous observons une nette dominance des mâles.

Chapitre 2: Recherche et statistiques

Dans le cadre du programme de développement du secteur de la pêche en Algérie, et pour le suivi de l'exploitation des ressources halieutiques, le secteur de la pêche, sur avis des scientifiques, a mis en place un dispositif réglementaire qui consiste à l'instauration des autorisations de pêche et l'obligation de la tenue d'un journal de pêche à bord de chaque navire quelles que soient ses caractéristiques. Le journal de pêche sera renseigné par le capitaine du navire pour chacune des pêches effectuées. Ces informations permettront à l'agent de collecte de statistiques au niveau des ports structurés de vérifier la fiabilité des données.

Les informations statistiques demandées portent essentiellement sur les espèces pêchées, le quota pêché, les zones de pêche, etc.

Aussi, le secteur a mis en place une Commission permanente pour l'établissement d'un fichier national sur toute la flottille de pêche exerçant dans les eaux sous juridiction nationale. Ce fichier constituera une base de données des différents types de navires de pêche battant pavillon algérien: sardiniers, petits métiers, chalutiers, thoniers et plaisanciers. Toutes les informations se rapportant à l'armateur, à l'autorisation de pêche, au navire, à la pêche, etc. seront enregistrées sur ce fichier.

Plusieurs projets permettant le suivi, le contrôle et la collecte de toutes les informations et les données statistiques ont été inscrits et lancés par l'Algérie, dont notamment l'installation des halles à marées au niveau de chacune des wilayas maritimes du pays.

Quant à la recherche scientifique se rapportant aux thonidés et aux espèces voisines, des travaux de recherche notamment sur les paramètres biologiques de ces espèces sont effectués par les différents instituts et Universités du pays spécialisés dans les sciences halieutiques.

Par ailleurs et dans le cadre de la pêche aux grands migrateurs halieutiques, en plus des deux contrôleurs embarqués à bord de chaque thonier pour la collecte et le renseignement des canevas statistiques, deux élèves stagiaires relevant de l'Institut de technologie de la pêche et de l'aquaculture sont embarqués à bord de chaque navire avec un programme de recherche mis en place par l'Institut pour exécution à bord des navires. Le programme porte essentiellement sur les techniques de pêche et la biologie des espèces.

Il y a lieu de signaler que l'Algérie va se doter dans le cadre de son programme de développement, d'un navire de recherche qui fera des campagnes d'évaluation périodiques et régulières ainsi que des travaux de recherches scientifiques.

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

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

Dans le cadre de la loi n°01-11 du 03 juillet 2001, relative à la pêche et à l'aquaculture, le secteur des pêches a mis en place un nouveau décret exécutif n°06- 367 du 19 octobre 2006 qui fixe les conditions de délivrance du permis de pêche commerciale des grands migrateurs halieutiques dans les eaux sous juridiction algérienne en se basant sur les recommandations de l'ICCAT.

Ce texte vise principalement à réglementer:

- Les zones de pêche
- Les tailles minimales marchandes des espèces
- Les périodes de pêche
- Les modalités de contrôle
- Les engins de pêche
- Les informations statistiques à collecter

Chapitre 4: Schémas et activités d'inspection

Le décret 06-367 du 19 octobre 2006 fixant les conditions de délivrance du permis de pêche commerciale des grands migrateurs halieutiques prévoit, dans le cadre du suivi des opérations de pêche, l'embarquement de deux contrôleurs à bord de chaque navire étranger et ce, durant toute la campagne de pêche.

Ces contrôleurs ont pour mission principale le contrôle des zones de pêche, du quota autorisé à être pêché, les tailles minimales marchandes, les espèces pêchées, etc.

Par ailleurs, la réglementation nationale prévoit une visite d'inspection de ces navires, au niveau du port d'accostage, par une Commission locale regroupant différentes institutions du pays (pêche, douanes, gardes côtes) avant et à la fin de chaque campagne de pêche.

Aussi, il y a lieu de noter que dans le cadre du renforcement du système de suivi et de contrôle de l'activité de la pêche, le Ministère de la Pêche et des Ressources Halieutiques a inscrit et a lancé une opération de mise en place du système VMS de suivi des navires de pêche.

Chapitre 5: Autres activités

L'Administration des pêches, depuis quelques années et dans le cadre de son programme de développement, a lancé plusieurs opérations se rapportant à l'exploitation et à la gestion durable des ressources halieutiques, il s'agit notamment, de l'élaboration du plan d'aménagement et de gestion des pêcheries algériennes.

Tableau 1. Sex-ratio *Thunnus thynnus*.

Effectif	Sexe	
	Mâles	Femelles
2602	46,4	53,6

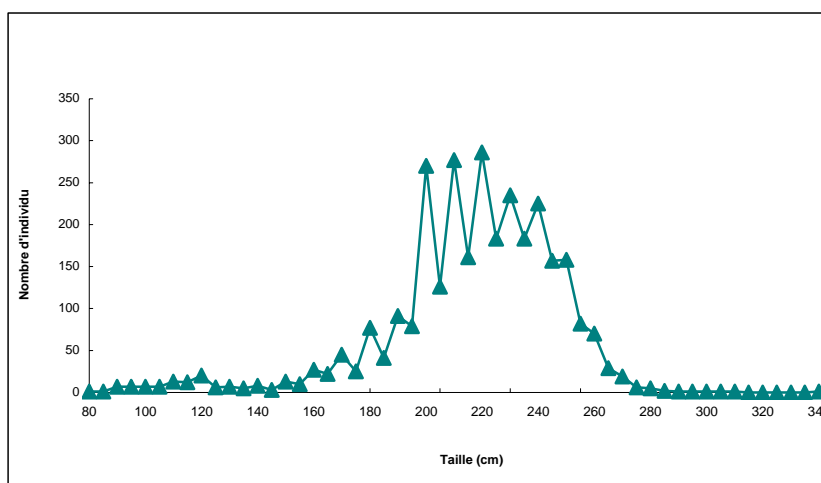


Figure 1. Distribution des fréquences de tailles de *Thunnus thynnus*.

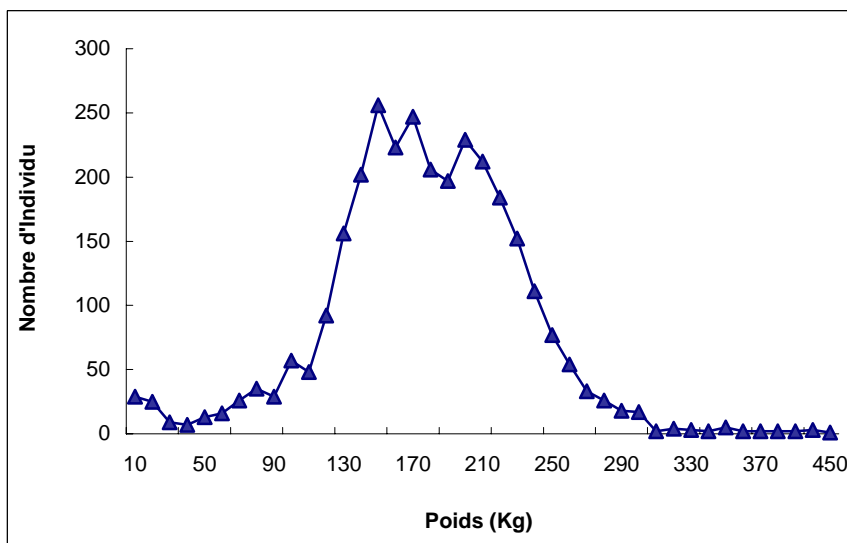


Figure 2. Distribution de fréquences de poids.

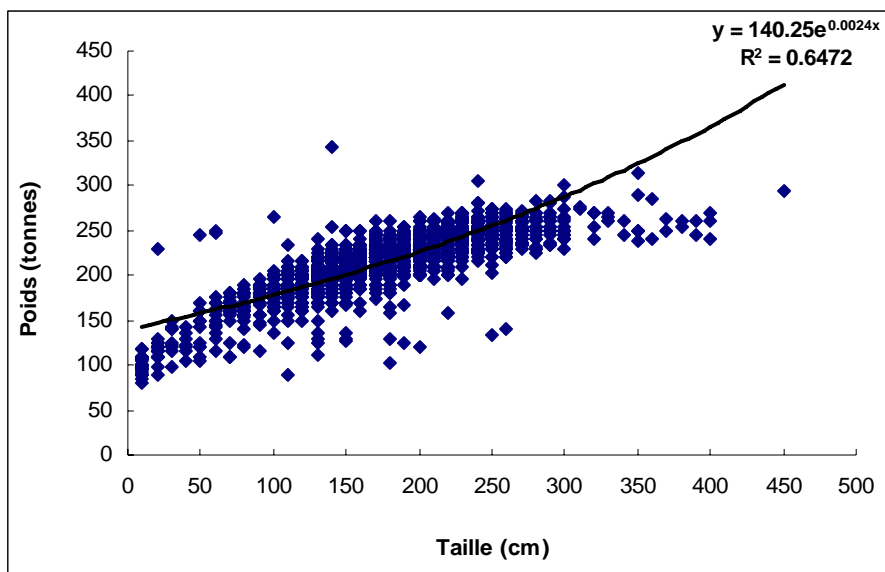


Figure 3. Relation taille-poids.

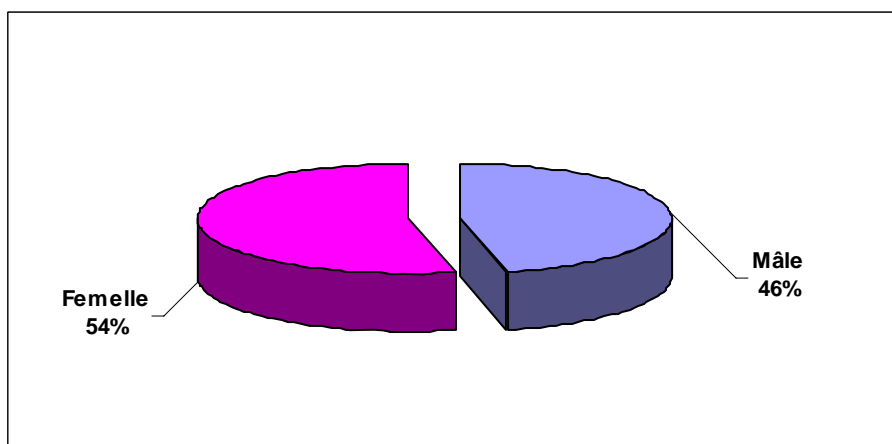


Figure 4. Pourcentage des mâles et des femelles.

**ANNUAL REPORT OF ANGOLA
RAPPORT ANNUEL DE L'ANGOLA
INFORME ANUAL DE ANGOLA**

Henriette Lutuba N'silulu¹

SUMMARY

Angola is a country in the southeastern Atlantic Ocean with a surface area of 1,246,700 km² and a 1,650 km coast, from 5°S to 17°S latitude. The continental platform (up to 200 m depth) has a surface area of 51,000 km² (Altunaga, 1999). The coast is dominated by two current systems which are the cold Benguela and the Angola current (Moroshkin et al. 1970). The Exclusive Economic Zone is 200 nautical miles. The fishing sector occupies third place economically, after the petroleum and diamond sectors. Fishing is the major source of animal protein for the country and the consumption per inhabitant amounts to an average of 19 kg, for the coastal area. The fishing sector is the major source of employment for many Angolans. The majority of the population carries out artisanal fishing for self-sufficiency.

RÉSUMÉ

L'Angola est un pays comptant une superficie de 1.246.700 km² et la longueur de la côte est de 1.650 km à partir de 5°S à 17°S de latitude de l'océan Atlantique sud est. La plateforme continentale (jusqu'à 200 m de profondeur) présente une superficie de 51.000 km² (Altunaga, 1999). La côte est dominée par deux systèmes de courants qui sont le courant froid de Benguela et le courant de l'Angola (Moroshkin et al. 1970). La Zone Economique Exclusive est de 200 milles nautiques. Le secteur de la pêche occupe la troisième place économique après le secteur du pétrole et du diamant. Le poisson est la principale source de protéine animale dans le pays et la consommation par habitant atteint une moyenne de 19 kg/an au niveau de la zone côtière. Le secteur de la pêche est la principale source d'emploi pour plusieurs Angolais. La majorité de la population exerce la pêche artisanale pour l'autosuffisance.

RESUMEN

Angola es un país con una superficie de 1.246.700 km² y su costa mide 1.650 km desde 5°S a 17°S de latitud del océano Atlántico sudeste. La plataforma continental (hasta 200 m de profundidad) presenta una superficie de 51.000 km² (Altunaga 1999). La costa está dominada por dos sistemas de corrientes que son la corriente fría de Benguela y la corriente de Angola (Moroshkin et al. 1970). La Zona Económica Exclusiva es de 200 millas náuticas. El sector de la pesca ocupa el tercer lugar desde el punto de vista económico, por detrás del petróleo y los diamantes. El pescado es la principal fuente de proteínas animales del país y el consumo por habitante alcanza una media de 19 kg por año en la zona costera. El sector pesquero es la mayor fuente de empleo para muchos angoleños. La mayoría de la población ejerce la pesca artesanal como medio de subsistencia.

1^{ère} Partie (Information sur les pêcheries, la recherche et les statistiques)

Chapitre 1: Information annuelle sur les pêcheries

La diversité spécifique de thonidés le long de la côte Angolaise est influencée par la présence du courant froid de Benguela au sud et du courant chaud du Golfe de Guinée au nord du pays. La ressource de thonidés dans les eaux angolaises est divisée en deux principaux groupes que sont le groupe de petits thonidés et le groupe de grands thonidés.

Le groupe de petits thonidés est dominé principalement par les espèces suivantes:

- Bonite à dos rayé (*Sarda sarda*)
- Maquereau espagnol (*Scomber japonicus*)
- Thonine commune (*Euthynnus alletteratus*)

¹ Institut d'investigation des Pêches, Avenida 4 de Fevereiro, 26 Edifício Atlântico, C.P. 2603, Luanda, Angola; henrim60@yahoo.com.

Ces espèces sont principalement capturées par la pêche artisanale et aussi pêchées comme prise accessoire de la pêche de petits pélagiques (chinchard, sardinelles) dans le cadre de la pêche semi industrielle et industrielle. Elles sont davantage capturées dans les eaux angolaises pendant les mois d'octobre et de janvier selon K. Lankester (2002) dans le rapport de « EU-Angola Agreement », septembre 2002.

Le groupe de grands thonidés est constitué principalement des espèces:

- Thon obèse (*Thunnus obsesus*)
- Albacore (*Thunnus albacares*)
- Germon (*Thunnus alalunga*)
- Espadon (*Xiphias gladius*)

Ces espèces se trouvent en haute mer le long de la marge de la plateforme et leur exploration est effectuée par les embarcations de grande portée pendant une période définie (pêche industrielle).

Pour le moment, les embarcations de grande portée qui explorent les grands thonidés sont des embarcations étrangères qui pêchent sous leur pavillon dans la Zone Economique Exclusive des eaux angolaises. La pêche artisanale est pratiquée normalement à bord des pirogues de longueur inférieure ou égale à 14 m, propulsées à la rame ou par des petits moteurs hors-bord de 15-40 CV. La pêche artisanale est exclusivement exercée par les Angolais.

1.1 Types d'engins

Les types d'engins normalement utilisés pour les espèces cibles sont les sennes, chalutage, cannes, ligne à main et aussi les palangres pour les embarcations étrangères.

1.2 Les prises

Durant l'année 2006, on a capturé 4.998 tonnes le long de la côte et ces prises proviennent de la pêche artisanale, semi-industrielle et industrielle de petits pélagiques (**Tableau 1**).

Les prises pour engins de pêche sont représentées au **Tableau 2**.

Sur les douze embarcations dotées de licences pour capturer les grands thonidés durant l'année 2005, seulement une embarcation a fourni des données de prise et sur les seize embarcations dotées de licences durant l'année 2006, deux embarcations ont déclaré des prises pour l'année 2006. Les données de prises déclarées par embarcation pour les années 2004-2006 pour les grands thonidés sont représentées au **Tableau 3** à titre d'information seulement.

Chapitre 2: Recherche et statistiques

L'INIP a identifié et mis en œuvre en 2005 le plan d'échantillonnage des Pêches commerciales au niveau national qui couvre les segments de la flotte semi-industrielle et industrielle. Ce plan a comme objectif d'effectuer la collecte de l'information biologique qui permettra d'étudier et d'améliorer les connaissances de la dynamique des principales ressources de pêche, essentiellement les époques de reproduction et la structure de fréquence de taille des prises. Cette information est nécessaire pour définir l'état des ressources. En 2006, L'INIP avait organisé un atelier national pour analyser les informations collectées. Les résultats de cet atelier ont été présentés au 2^{ème} Conseil Consultatif du Ministère des Pêches qui a eu lieu dans la province de Benguela et ont servi de base pour ajuster les périodes de fermeture (clôture) établies dans les mesures de gestion de 2007 pour l'espèce mackerel (Jurel). Au niveau national, on continue de faire des efforts pour que ce plan d'échantillonnage soit aussi dirigé vers les espèces de thonidés côtiers dans la flotte semi-industrielle et artisanale et un projet est déjà élaboré pour l'échantillonnage des thonidés côtiers pour améliorer la qualité des données exigées par l'ICCAT. La pêche artisanale dispose de 188 sites où les activités de pêche peuvent être suivies par les enquêteurs locaux qui peuvent être assistés par des enquêteurs cadres de l'INIP et l'IPA.

En ce qui concerne la pêche sportive et récréative en Angola, les données sont contrôlées par l'association de cette pêcherie et celles-ci sont disponibles sur le site web de la pêche sportive de l'Angola (www.ipescas.nexus.ao). Ils font des compétitions internationales et régionales.

Les données statistiques sont obtenues à partir de la DNPPR (Direction Nationale de Pêche et Protection des Ressources), du GEPE (Cabinet d'Études de Plans et Statistiques), et de l'IPA (Institut de Pêche Artisanale). Nous signalons à cet égard que l'INIP a besoin de l'appui de l'ICCAT sur le plan de l'échantillonnage.

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

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

Il est un peu difficile de mettre en œuvre les mesures de conservation et de gestion de l'ICCAT une fois que les bateaux se trouvent en haute mer et ne déchargent pas aux ports de l'Angola mais le pays est en train de faire un effort pour mettre en œuvre le programme d'observateurs à bord des embarcations.

Chapitre 4: Schémas et activités d'inspection

Les inspecteurs se déplacent au port de déchargement pour réaliser le contrôle, après quoi ils octroient la licence de pêche.

Tableau 1. Prises de thonidés (tonnes) de la pêche artisanale, semi-industrielle et industrielle durant l'année 2006.

<i>Espèce</i>	<i>Artisanale</i>	<i>Semi-indust + Indust Locale</i>	<i>Total</i>
<i>Scomber japonicus</i>	1114	926	2040
<i>Euthynnus alletteratus</i>	2946	12	2958
<i>Sarda sarda</i>			
<i>Thunnus obesus</i>			
<i>Xiphias gladius</i>			
<i>Thunnus albacares</i>			
Total	4060	938	4998

Tableau 2. Prises de thonidés (tonnes) par engins de pêche durant l'année 2006.

<i>Espèce</i>	<i>Lignes</i>	<i>Filets maillants</i>	<i>Sennes + chaluts</i>	<i>Total</i>
<i>Scomber japonicus</i>	1114		926	2040
<i>Euthynnus alletteratus</i>	2946		12	2958
<i>Sarda sarda</i>				
<i>Thunnus obesus</i>				
<i>Xiphias gladius</i>				
<i>Thunnus albacares</i>				
Total	4060		938	4998

Tableau 3. Prises (tonnes) et effort (nombre de bateaux) de la pêche industrielle durant les années 2004-2006.

<i>Espèces</i>	<i>2004</i>		<i>2005</i>		<i>2006</i>	
	<i>Prises</i>	<i>Effort</i>	<i>Prises</i>	<i>Effort</i>	<i>Prises</i>	<i>Effort</i>
<i>Thunnus obesus</i>	476	16	75		139	2
<i>Katsuwonus pelamis</i>	10	8				
<i>Xiphias gladius</i>			3		3	
<i>Thunnus albacares</i>			111		2	
Total	486	24	190	1	144	2

ANNUAL REPORT OF BELIZE*
RAPPORT ANNUUEL DU BELIZE
INFORME ANUAL DE BELICE

Angelo Mouzouropoulos¹ and Beverly Wade²

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Fisheries Information

Belize is an active member of the following organizations: UN, IMO, FAO, CRFM (Caribbean Regional Fisheries Mechanism), OSPESCA (*Organización del Sector Pesquero y Acuicola del Istmo Centroamericano*), COPACO (*Comisión de Pesca para el Atlántico Central Occidental*). Belize has ratified the ICCAT Convention and is a Contracting Party of the Commission with effect from July 19, 2005. It has also ratified the IOTC Convention and is a Contracting Party of IOTC with effect from May 16, 2007. Although Belize is currently a Cooperating non-Contracting Party of IATTC, on June 12, 2007 it acceded to the “Antigua Convention”. Therefore, Belize will also become a Member of IATTC, at the latest by when this Convention comes into force, which is expected in 2009. Belize is a Cooperating non-Contracting Party of the North East Atlantic Fisheries Commission (NEAFC) and has applied for Cooperating non-Member status of the Western & Central Pacific Fisheries Commission (WCPFC). Belize has also ratified the FAO “Compliance” Agreement, the “Fish Stocks” Agreement and the “IPOA-IUU”, the provisions of which have already been incorporated into Belize’s High Seas Fishing Act 2003. It has also ratified the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC). The above formalize Belize’s commitment to the elimination of activities which diminish the effectiveness of conservation measures.

Over the last decade, the local fishing industry of Belize has made a significant contribution to the development of the country by providing direct employment to fishermen and processing personnel. It is an important foreign exchange earner and continues to contribute significantly to Belize’s economy with export earnings in 2006 of US\$42 million. The local capture fishing activity is carried out within the shallow protected waters of the main barrier reef as well as the three atolls. It revolves mainly around lobster and conch fisheries as well as shrimp trawling. Fisheries production for the year 2006 showed an increase of 9.36% and 23.28% for conch meat and fish fillet compared to 2005, respectively. However, the production for lobster tails, lobster head meat, marine shrimp, whole fish, stone crab claws and squid showed a decrease of 14.6%, 16.27%, 33.91%, 45.06%, 30.26% and 95.17%, respectively.

The fleet which fishes on the high seas is registered by the International Merchant Marine Registry of Belize (IMMARBE) and is licensed by the Fisheries Department. Matters of policy are determined jointly by the Minister of Agriculture and Fisheries and the Director General of IMMARBE. IMMARBE is dedicated to providing “an efficient, cost effective quality ship registration service and to enforce national laws and international Conventions which have been ratified by Belize in the interest of safety at sea and the protection of the environment.” It is a Gold Corporate Sponsor of Belize’s Audubon Society which became the first Belizean Member of the World Conservation Union, the world’s largest environment organization, based in Switzerland. Belize was placed on the IMO White List in November, 2001. In 2003, IMMARBE’s Quality Management System which incorporates Fishing Vessel Administration attained accreditation to the new ISO 9001:2000. Furthermore, as a result of its quality measures involving the de-registration of some 1,584 vessels of all types, the Port State Control three-year rolling detention ratios for the Belize registered fleet have improved dramatically, e.g. in the U.S. Coast Guard from 23.08% in 2001 to 0.0% in 2005. As a result, in 2006 the Belize Ship Registry (IMMARBE) qualified for the U.S. Coast Guard’s Quality Shipping for the 21st Century (QUALSHIP 21) Program. In 2007, it requalified for this prestigious designation. Belize is one of only ten out of 166 Flag States/Ship Registries in the world holding this award in 2007 and the only one in Central America.

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

¹ Director General, International Merchant Marine Registry of Belize, Head Delegate of Belize to ICCAT.

² Fisheries Administrator, Fisheries Department, Head Scientist of Belize to ICCAT.

1.2 Catch and effort statistics

The following information on Belize catch and effort statistics has been submitted to the ICCAT Secretariat in accordance with their Circular #256/07 dated February 14, 2007:

- Submission of yellowfin and skipjack data for 2006 - submitted March 27, 2007.
- Submission of bigeye tuna data for 2006 - submitted May 18, 2007.
- Submission of shark statistics for 2006 - submitted June 11, 2007.
- Submission of albacore statistics for 2006 - submitted June 21, 2007.

Section 2: Research and Statistics

2.1 Within Belize's territorial waters

The Belize Fisheries Department conducts timely monitoring on the major commercial species such as the Spiny Lobster and Queen Conch at the major fishing grounds and within the Marine Protected Areas in order to ensure the sustainable harvesting of the species.

2.2 Belize's high seas fleet

On October 31, 2006, Belize registered and licensed 10 tuna longline fishing vessels measuring 23.90 meters LBP/27 meters LOA to fish a part of the quotas allocated to Belize. The Commission was notified of these registrations in Belize's Opening Statement at the 15th Special Meeting of the Commission (Dubrovnik, November 2006) as well as its submission to the Secretariat dated December 12, 2006. The reports on these vessels' activities up to December 31, 2006 have already been submitted to the Secretariat as mentioned under Section 1.2 above. Also, on February 5, 2007, Belize notified the Secretariat that it had allocated its southern swordfish quota of 150 t to one existing long liner in the Belizean fleet.

As the result of attaining Contracting Party status of ICCAT in July 2005 and Belize's subsequent membership of Panels 1, 2, 3 and 4, Belize has the following quotas for 2007: Bigeye, yellowfin, skipjack and small tunas (wahoo, dolphinfish, mackerels): Unlimited; North Atlantic albacore, including underages from 2005 and 2006 (100 t and 200 t, respectively): 500 t; South Atlantic albacore, including underages from 2005 and 2006 (180 t and 360 t, respectively): 900 t; North Atlantic swordfish: 130 t (with flexibility clause); and South Atlantic swordfish: 150 t.

As requested at the ICCAT Meeting in Dubrovnik, Belize submitted its catch data for south albacore to the Secretariat with copy to the SCRS Chairman on April 4, 2007, in compliance with Recommendation 04-04.

In compliance with ICCAT Circular #1543/07 dated August 30, 2007, Belize submitted its Reporting Form for Compliance in 2006 and its Report on Internal Actions Taken to Ensure that Tuna Vessels on the ICCAT Record of Vessels over 24 Meters are Fishing In Accordance with ICCAT Management and Conservation Measures.

2.3 Reporting of catch and effort

Fishing vessel owners/operators are required to submit data on their fishing operations based on Belize's format for such reporting, which includes a detailed Fishing Log and a Fishing Vessel Voyage Report showing information regarding positions, time/dates, set catches by species including weights, start times, number of hooks etc., details of discards etc., species unloaded, names of ports or details of transshipment in compliance with the requirements of RFMOs concerning the standards for the providing operational catch and effort data.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Legislation

Details of the provisions of the Belize High Seas Fishing Act 2003 and the fishing vessel licensing system were included in the Annual Report of Belize for 2005.

3.2 Deregistration of non-compliant fishing vessels

All Belize fishing vessels operating in the ICCAT Convention area are compliant with ICCAT's conservation and management measures as well as the national laws and regulations of Belize. Furthermore, there are no Belize registered fishing vessels on the IUU Lists of any RFMO worldwide.

On June 1, 2006, Belize fined and deregistered ex-officio the refrigerated cargo vessel *M.V. ELPIS IMO #7900481* due, *inter alia*, to breachment of the Belize High Seas Fishing Act of 2003. The Belize flag State Inspector had boarded this vessel in Las Palmas and had established that it was involved in the carriage of demersal fish species, such as Denton.

By way of background information, in August 2003, Belize had implemented its High Seas Fishing Act 2003 which regulates high seas fishing activities and introduced the requirement of licensing of "all vessels which are used or intended for use on the high seas for the purposes of commercial fishing including mother ships and any other vessels directly engaged in fishing operations". This includes refrigerated cargo vessels that are engaged in the transshipment/carriage of fish. As soon as the Belize High Seas Fishing Act 2003 came into force, the Owners of all Belize refrigerated carriers were informed that in the event that they wished to transship and/or carry any marine resources, they needed to apply for a license, install VMS and comply with the transshipment and related regulations of Belize. The owners of the *M.V. ELPIS* had not declared their involvement in or wish to engage in the carriage of fish. Consequently, upon discovery of this offence, Belize decided to fine and deregister this vessel ex officio per Resolution No. 2727 dated June 1, 2006. Subsequent to its deregistration, this vessel transferred to the Registry of Panama and changed its name to *M.V. SOMANG*.

In order to ensure that the owners of refrigerated cargo vessels who have not applied for a license to receive transshipments of fish or to engage in the transportation thereof are in no doubt as to the severity of any breach of our regulations relating thereto, Belize has devised and implemented the requirement of a "Letter of Guarantee" to be signed by each such vessel Owner (see Appendix 3)³.

3.3 VMS

In 2003, Belize successfully implemented VMS Reporting on all its 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 Pole Star Space Application Ltd. who utilize an automatic, real time internet based service called Purplefinder Vessel Management Solutions. This reporting system complies with paragraph 4 of the *Recommendation by ICCAT Concerning Minimum Standards for the Establishment of a Vessel Monitoring System in the ICCAT Convention Area* [Rec. 03-14]. For example, the margin of error is +/- 20 meters with a confidence level of 99%.

3.4 General

With regard to paragraph 7 of the *Recommendation by ICCAT for a Revised ICCAT Port Inspection Scheme* [Rec. 97-10] regarding port inspections for the purpose of ensuring compliance, surveillance is conducted on a regular basis or as a result of an investigation by: boarding at sea or in port, plant checks, observer teams, requesting the assistance of other Governments/organizations as necessary. Belize has carried out 49 inspections on vessels in the ICCAT Convention area during the period from January 1, 2004 to August 31, 2007, 14 of which were conducted during the 12 months ending August 31, 2007.

With regard to the *Resolution by ICCAT on Improving Recreational Fishery Statistics* [Res. 99-07], this is practiced in Belize's national waters. However, all fishing boats engaged in such activities are obliged to respect all the 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.

With regard to the *Recommendation by ICCAT to Adopt Additional Measures Against Illegal, Unreported and Unregulated (IUU) Fishing* [Rec. 03-16], these are contained in the Belize Quality Management System and will be reflected in Belize's National Plan of Action for IUU which will be submitted to FAO shortly.

Regarding the *Recommendation by ICCAT Establishing a Programme for Transshipment* [Rec. 06-11], Belize does not currently have any LSTLVs or fishing vessels below 24 meters in Length Overall in the ICCAT

³ Available from the Secretariat.

Convention area that wishes to engage in transshipment at sea or any refrigerated cargo vessels that wish to receive such transshipments. However, Belize has implemented a program to control transshipments at sea from fishing vessels to our refrigerated carrier vessels which may apply for authorization to receive such transshipments.

3.5 Statistical Documents

Belize has not issued any Statistical Documents for bluefin tuna or bigeye tuna.

Belize has complied with the *Recommendation by ICCAT Establishing a Swordfish Statistical Document Program* [Rec. 01-22]. Hitherto, during 2007, Belize has:

- issued Statistical Documents for exports of swordfish caught in the IATTC Convention area by six Belize registered fishing vessels totaling 60,911 kgs which were landed in Costa Rica and subsequently exported to Pontevedra, Malaga and Vigo, in Spain.
- issued Statistical Documents for exports of swordfish caught in the ICCAT Convention area by one Belize registered vessel totaling 73,450 kgs which were landed in Montevideo, Uruguay.
- issued Statistical Documents for exports of swordfish caught in the IOTC Convention area by one Belize registered vessel totaling 6,000 kgs which were landed in Kaohsiung, Taiwan and subsequently exported to Singapore.
- submitted copies of all Statistical Documents to the ICCAT Secretariat.

3.6 Other measures regarding individual species

With regard to the *Recommendation by ICCAT Regarding Atlantic Blue Marlin and Atlantic White Marlin* [Rec. 97-09], Belize has 0 fishing vessels which have caught, as by-catch, a total of 15,827 kgs of Atlantic blue marlin.

With regard to the *Resolution by ICCAT on Atlantic Sharks* [Res. 01-11], Belize has minimize waste and discards from shark catches in accordance with Article 7.2.2(g) of the Code of Conduct for Responsible Fisheries. Furthermore, Belize only has one vessel targeting shortfin mako and blue sharks.

With regard to the *Resolution by ICCAT on Incidental Mortality of Seabirds* [Res. 02-14], Belize is in the process of producing a National Action Plan for Reducing Incidental Catches of Seabirds in the longline fishery. Belize has recently commenced requiring specific data from its fishing vessels on interactions with seabirds and will shortly commence submitting data to the SCRS on a voluntary basis.

With regard to the *Resolution by ICCAT on the Shark Fishery* [Res. 03-10], FAO Consultants visited Belize in August/September 2005 and reviewed the National Plan of Action for Sharks.

With regard to the *Resolution by ICCAT on Sea Turtles* [Res. 03-11], Belize encourages the release of marine turtles that are generally incidentally caught alive during its fishing activities and has recently commenced requiring specific data for the incidental by-catch of sea turtles. Belize will collect and provide all available information on the interaction with sea turtles in ICCAT fisheries to the SCRS.

3.7 Trade sanctions

The *Recommendation by ICCAT Regarding Bolivia Pursuant to the 1998 Resolution Concerning the Unreported and Unregulated Catches of Tunas by Large-scale Longline Vessels in the Convention Area* [Res. 02-17] and the *Recommendation by ICCAT for Bigeye Tuna Trade Restrictive Measures on Georgia* [Rec. 03-18] are respected.

Section 4: Inspection Schemes and Activities

For the purpose of ensuring compliance, surveillance is conducted on a regular basis or as a result of an investigation by boarding at sea or in port, plant checks, observer teams, requesting the assistance of other Governments/organizations as necessary. As already stated under 3.4 above, Belize has carried out 49 inspections on vessels in the ICCAT Convention area during the period from January 1, 2004 to August 31, 2007. Of these, 14 inspections were conducted during the 12 months ending August 31, 2007.

Section 5: Other Activities

Belize has submitted its list of fishing vessels to FAO, together with the information required per paragraphs 1 and 2 of Article VI of the FAO "Compliance Agreement." Belize is updating its records on a monthly basis.

Belize has submitted, to all RFMOs in whose Convention areas Belize fishing vessels/refrigerated cargo vessels are operating, its catch and effort statistics/transshipment reports, together with such other data and information as are required by their respective Resolutions. Apart from ICCAT, the other RFMOs are: IOTC, IATTC, NEAFC and WCPFC.

On April 11, 2007 Belize issued a Report entitled "Fishing Vessels - Definition of Length" which was distributed to the Chairmen and Executive Directors/Executive Secretaries of all RFMOs as well as to the FAO. In this Report, Belize identified the discrepancy between the definition contained in the relevant IMO Conventions and FAO/ILO Agreements/Guidelines which is often referred to as the Length Between Perpendiculars (LBP) and that contained in certain RFMO Conventions, Resolutions and Recommendations which defines the length of fishing vessels as being the "Length Overall" or "Overall Length". Belize perceives that there is a pressing need to harmonize the definition of length so that it is consistent with the IMO Conventions/FAO Compliance Agreement and thus be readily verifiable by inspection of the certification onboard such vessels so as to ensure transparency and to avoid the possibility of abuse (in relation to VMS and transshipment recommendations), apart from being an essential prerequisite for any future introduction of IMO or FAO Identification Numbers for fishing vessels of a certain length and above. In the meantime, Belize has submitted the Length Between Perpendiculars (LBP) as well as the Length Overall (LOA) for each of its fishing vessels both to the ICCAT Secretariat as well as to all other RFMOs.

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

Paulo Travassos and Fábio Hazin¹

SUMMARY

In 2006, the Brazilian tuna longline fleet consisted of 91 boats (61 national and 30 chartered), registered in 7 different ports. There was a decrease of about 8% in the total number of vessels from 2005, when 99 vessels were operating. The number of baitboats remained the same as in 2005 (41, all national), and were based in the same ports (Rio de Janeiro, Itajaí, and Rio Grande). An experimental purse seine fishery began in 1997, being carried out mainly by sardine fishing boats that sporadically target tunas. In 2006, the number of these boats was 14. The Brazilian catch of tunas and tuna-like fishes was 41,490.6 t (live weight), in 2006, representing a decrease of 15.2% from 2005. The majority of the catch again was taken by baitboats (24,771.5 t), with skipjack tuna being the most abundant species (23,012.2 t). The total catch of the tuna longline fishery (11,147.4 t) was about 34.7% less than 2005, with swordfish being the most abundant species (4,119.7 t), accounting for 36.9% of the catches. During 2006, incidental catches of turtles and seabirds by Brazilian tuna fishing vessels continued to be recorded. In June 2006, the Brazilian NPOA-Seabirds was launched by IBAMA and it is now being implemented. Besides the catch and effort data regularly collected from Brazilian tuna fisheries, in 2006, a total of 32,408 fish were measured at landing, and 49,370 at sea, by observers on board, resulting in a total of 81,778 fish measured. In order to adequately comply with ICCAT recommendations, the Brazilian government has implemented the following new rules: (a) Interministerial Rule No. 02, of September 4, 2006, the National Fishing Vessel Monitoring System (Programa Nacional de Rastreamento de Embarcações Pesqueiras-PREPS); and (b) Rule No. 01, of September 29, 2006, establishing the National Onboard Fishing Fleet Observer Program (Programa Nacional de Observadores de Bordo da Frota Pesqueira, PRO-BORDO).

RÉSUMÉ

En 2006, la flottille palangrière brésilienne se composait de 91 embarcations (61 nationales et 30 affrétées), immatriculées dans sept ports différents. Le nombre total de navires a diminué d'environ 8% par rapport à 2005 où 99 navires étaient en opération. Le nombre de canneurs est resté le même qu'en 2005 (41 navires, tous nationaux) et ils étaient basés dans les mêmes ports (Rio de Janeiro, Itajaí et Rio Grande). Une pêche expérimentale à la senne a démarré en 1997, réalisée principalement par des navires pêchant la sardine et ciblant sporadiquement les thonidés. En 2006, on recensait 14 de ces navires. En 2006, la prise brésilienne de thonidés et d'espèces apparentées s'élevait à 41.490,6 t (poids vif), ce qui représentait une diminution de 15,2% par rapport à 2005. La majorité de la capture a, une fois de plus, été réalisée par les canneurs (24.771,5 t), le listao étant l'espèce la plus abondante (23.012,2 t). La prise totale de la pêcherie palangrière thonière (11.147,4 t) était inférieure d'environ 34,7% à celle de 2005, l'espadon étant l'espèce la plus abondante (4.119,7 t) et représentant 36,9% des prises. En 2006, les prises accessoires de tortues et d'oiseaux de mer effectuées par les thoniers brésiliens ont continué à être enregistrées. En juin 2006, IBAMA a lancé le plan d'action national-oiseaux de mer du Brésil et il est désormais mis en œuvre. Outre les données de prise et d'effort régulièrement recueillies auprès des pêcheries thonières brésiliennes, en 2006, un total de 32.408 poissons ont été mesurés au débarquement, et 49.370 en mer, par des observateurs embarqués, soit au total 81.778 poissons mesurés. Afin de se conformer adéquatement aux recommandations de l'ICCAT, le Gouvernement du Brésil a mis en œuvre les nouvelles lois suivantes : (a) Loi interministérielle N° 02 du 4 septembre 2006, Système national de suivi des navires de pêche-PREPS ; et (b) Loi N°01 du 29 septembre 2006, établissant le Programme national d'observateurs embarqués à bord de la flottille de pêche-PRO-BORDO.

RESUMEN

En 2006, la flota palangrera atunera de Brasil constaba de 91 buques (61 nacionales y 30 fletados), registrados en siete puertos diferentes. Se produjo un descenso de aproximadamente el 8% en el número total de buques respecto a 2005, cuando operaron 99 buques. El número de buques de cebo vivo

¹ Universidade Federal Rural de Pernambuco-UFRE, Departamento de Pesca e Aquicultura-DEPAq, Recife, Pernambuco.

permaneció igual que en 2005 (41 unidades, todas nacionales), con base en los mismos puertos (Río de Janeiro, Itajaí y Río Grande). En 1997 se inició una pesquería experimental de cerco, realizada principalmente por buques sardineros que esporádicamente se dirigen a los túnidos. En 2006, el número de estos buques ascendió a 14 unidades. La captura brasileña de túnidos y especies afines fue de 41.490,6 t (peso vivo) en 2006, lo que representa un descenso del 15,2% respecto a 2005. La mayoría de la captura fue realizada de nuevo por los buques de cebo vivo (24.771,5 t), siendo el listado la especie más abundante (23.012,2 t). La captura total de la pesquería de palangre de túnidos (11.147,4 t) fue casi el 34,7% menor que en 2005, siendo el pez espada la especie más abundante (4.119,7 t), que respondió del 36,9% de las capturas. Durante 2006, se continuó con el registro de las capturas incidentales de tortugas marinas y aves marinas realizadas por los pesqueros atuneros brasileños. En junio de 2006, el IBAMA inició el PAN-Aves marinas de Brasil que se está implementando actualmente. Además de los datos de captura y esfuerzo recogidos regularmente en las pesquerías de túnidos de Brasil, en 2006 se midieron en el momento del desembarque 32.408 ejemplares de peces, y en el mar los observadores embarcados midieron 49.370 ejemplares, lo que da un total de 81.778 ejemplares medidos. Con el fin de cumplir adecuadamente las Recomendaciones de ICCAT, el gobierno brasileño ha implementado las siguientes leyes: (a) Ley interministerial n° 02, del 4 de septiembre de 2006, sobre el Sistema Nacional de Seguimiento de Buques Pesqueros (Programa Nacional de Rastreamento de Embarcações Pesqueiras- PREPS); y (b) Ley n° 1 del 29 de septiembre de 2006, que establece el Programa Nacional de Observadores a bordo de la Flota Pesquera (Programa Nacional de Observadores de Bordo da Frota Pesqueira- PRO-BORDO).

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

In 2006, the Brazilian tuna longline fleet consisted of 91 vessels registered in the following ports: Rio Grande (1), Itajaí (8), Santos (8), Itaipava (20), Recife (11), Cabedelo (7), and Natal (36). Of these 91 longliners, 61 were national and 30 were foreign chartered vessels. There was a decrease of 8.1% in the total number of vessels from 2005, when 99 vessels were operating. The number of bait-boats operating in 2006 was 41, the same from 2005. These 41 vessels (100% national) were based in the same ports (Rio de Janeiro, Itajaí, and Rio Grande). An experimental purse seine fishery began in 1997, being done mainly by sardine fishing boats that sporadically target tunas. In 2006, the number of these boats was 14.

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 41,490.6 t (live weight), in 2006 (**Table 1**), representing a decrease of 15.2% from 2005 (48,911.0 t). The majority of the catch again was taken by bait-boats (24,771.5 t; 59.7%), with skipjack tuna being the most abundant species (23,012.2 t), accounting for 92.9% of the bait-boat catches. Catches of this species decreased by 8.9%, from 2005. With a total catch of 1,214.1 t, yellowfin tuna was the second dominant species in the baitboat fishery.

Total catch of the tuna longline fishery (11,147.4 t) was about 34.7% smaller than 2005, with swordfish being the most abundant species (4,119.7 t), accounting for 36.9% of the longline catches. Blue shark and bigeye tuna, which accounted for 22.7% (2,532.5 t) and 12.8% (1,422.9 t) of the catches, ranked second and third, respectively. With a total catch of 1,329.4 t, yellowfin tuna was the fourth most abundant species in the longline fishery, accounting for 11.9%.

The total catches of white and blue marlin were, respectively, 89.7 t and 297.6 t, representing a decrease of about 63.2% and 51.2%, from 2005, when the catches of these species were 243.4 t and 609.8 t. This same trend was observed in the catches of sailfish, which decreased by 66.5% from 2005 (415.4 t), reaching 139.3 t, in 2006. This strong decrease in the catches of marlin species was mainly associated to the end of fishing operations of a foreign chartered fleet (11 vessels), flagged to Panama and based in Recife², which operated only until May 2006. Data collected from observers on board, indicated the following amount of discards: 14.8 t live and 1.6 t dead, for white marlin, and 46.9 t live and 2.2 t, dead for blue marlin, showing a significant improvement from the previous year.

The total catch of the purse seine fishing boats in 2006 was 245.5 t, with skipjack tuna accounting for 97.3% of that figure.

² This fleet ceased fishing operations in Brazil in the first quarter of 2006.

Part of the Brazilian catches also resulted from fishing activities of small-scale fishing vessels based mainly in Itaipava-ES (southeast coast). Although this fleet is comprised of relatively small boats (~15m), it is highly mobile, operating throughout most of the Brazilian coast and targeting a variety of species with different gears, including longline, handline, troll and other surface gears. In 2006, this fleet caught 1,888.4 t, with yellowfin tuna, dolphinfish, and swordfish accounting for 46.3% (874.0 t), 16.6% (314.4 t), and 16.1% (303.7 t) of the total catches, respectively (**Table 1**).

The monitoring of sea turtles and seabirds by-catch in longline fisheries is has been carried out since 1998 for both groups. However, due to difficulties related to data collection and analysis of incidental catches, this work has focused on obtaining reliable catch rates instead of estimating total catch, which might be very unreliable. To that aim, the Brazilian fishing ground was divided into two areas according to the level of importance of catches of endangered species involved and the distribution of fishing effort: to the north and to the south of 20°S. The catch rates in these two different areas in 2006 are shown in **Tables 2, 3** and **4**. Some seabirds were caught to the north of 20°S in 2006. However, considering the incomplete data available on these catches, they were not included here. As shown in these tables, the catch rates are very high and consequently worrisome in some areas for some species.

Section 2: Research and Statistics

Several institutions directly assisted the Special Secretariat of Fisheries and Aquaculture (SEAP) in processing and analyzing data from 2006: Universidade Federal do Pará-UFPA (Federal University of Pará), located in the North; Universidade Federal do Rio Grande do Norte-UFRN (Federal University of Rio Grande do Norte) and Universidade Federal Rural de Pernambuco (Federal Rural University of Pernambuco-UFRPE), located in the Northeast, Universidade Federal do Espírito Santo-UFES (Federal University of Espírito Santo), Instituto de Pesca de São Paulo (São Paulo Fishery 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 (Brazilian Institute for the Environment and Renewable Natural Resources-IBAMA), continued to conduct several research and statistics activities on tuna species caught by Brazilian boats.

Besides the catch and effort data regularly collected from Brazilian tuna fisheries, in 2006 a total of 32,408 fish were measured at landing, and 49,370 at sea, by observers on board, resulting in a total of 81,778 fish measured, as follows: yellowfin=15,952; bigeye=13,775; albacore=4,502; swordfish=40,377; blue marlin=2,961; white marlin=2,911; and sailfish=1,300.

Data have also been collected from several recreational fisheries based off southeast and northeast Brazil, mainly in the Rio de Janeiro, Vitória, and Fernando de Noronha, where sport tournaments are conducted by local yacht clubs. These data were collected mainly under the scope of a program implemented by IBAMA for the control and statistics of recreational fisheries in Brazil.

In 2006, an important billfish research effort in cooperation with U.S. scientists continued to be developed, including collection of spines and gonads for age and growth and reproduction studies, as well as habitat utilization, through PSAT tags, and gear selectivity, by the use of circle hooks, hook timers, and TDRs. In 2006 new cooperative on shark research was begun and is presently being developed by scientists from both countries.

Research on the incidental catches of turtles and seabirds continued, aimed mainly at testing and implementing mitigation measures to reduce such catches, through partnerships between the Special Secretariat of Fisheries and Aquaculture (SEAP), sea turtle and seabird conservation NGOs (Projeto TAMAR, Projeto Albatroz, and others), as well as universities.

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 the following new rules regulating the Brazilian tuna fishery:

- *Interministerial Rule No. 02, of September 4, 2006, establishing:*

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

– Rule No. 01, of September 29, 2006, establishing:

The National Onboard Fishing Fleet Observer Program (Programa Nacional de Observadores de Bordo da Frota Pesqueira –PRO-BORDO).

Table 1. Total catches (t), by species and fishing gear, taken by Brazilian tuna fishing vessels in 2006.

<i>Species</i>	<i>Gear</i>						<i>Total catch</i>
	<i>LL</i>	<i>BB</i>	<i>PS</i>	<i>HL</i>	<i>SP</i>	<i>UN</i>	
ALB	267,214	85,119	0	0	0	8,503	360,836
BET	1,422,955	48,363	0	3,343	0	4,608	1,479,269
BIL	2,700	88	0	108	0	16,132	19,028
BLF	1,981	0	0	0	194	240,065	242,240
BRS	0	0	0	0	0	1,431,900	1,431,900
BSH	2,532,528	73	0	6,138	0	52,592	2,591,331
BTH	66,670	0	0	0	0	16,104	82,774
BUM	239,234	0	0	0	1,094	57,317	297,645
CVX	66,635	0	0	1,023	0	0	67,658
DOL	64,894	0	0	0	0	696,496	761,390
FAL	155	0	0	0	0	0	155
FRI	0	410,039	3,700	3,700	0	185,700	603,139
KGM	564	0	0	0	27	315,040	315,631
MAK	17	326	0	0	0	26,938	27,281
OCS	6,512	0	0	0	0	69,961	76,473
OFH	116,845	0	0	0	0	292,816	409,661
RSK	200,773	319	0	0	0	192,334	393,426
SAI	81,098	0	0	0	259	57,903	139,260
SKJ	2,391	23,012,194	238,900	0	10	16,809	23,270,304
SMA	183,208	0	0	0	0	0	183,208
SPF	5,286	0	0	0	0	0	5,286
SPN	175,717	0	0	0	0	1,357	177,074
SWO	4,119,754	0	0	500	0	309,925	4,430,179
TIG	2,446	0	0	0	0	0	2,446
TUN	123,365	814	0	5,963	2,002	0	132,144
WAH	49,653	0	0	0	787	60,539	110,979
WHM	85,457	0	0	0	0	4,276	89,733
YFT	1,329,401	1,214,126	2,900	30,064	234	1,213,455	3,790,180
Total	11,147,453	24,771,461	245,500	50,839	4,607	5,270,770	41,490,630

Table 2. Seabird CPUE (number/1,000 hooks) in the Brazilian longline fishery during 2006, South of 20°S (150 sets monitored/180,670 hooks).

<i>P. conspicillata</i>		<i>T. chlororhynchos</i>		<i>T. melanophris</i>	
(n)	CPUE	(n)	CPUE	(n)	CPUE
8	0.0443	64	0.3542	62	0.3432

Table 3. Sea turtle CPUE (number/ 1,000 hooks) in Brazilian longline fishery, during 2006, South of 20°S (699 sets monitored/790,733 hooks).

<i>C. caretta</i>		<i>C. mydas</i>		<i>D. coriacea</i>		<i>L. olivacea</i>	
(n)	CPUE	(n)	CPUE	(n)	CPUE	(n)	CPUE
485	0.6134	1	0.0013	51	0.0645	8	0.0101

Table 4. Sea turtle CPUE (number/1,000 hooks) in Brazilian longline fishery, during 2006, North of 20°S (1,778 sets monitored/2,443,014 hooks).

<i>C. caretta</i>		<i>C. mydas</i>		<i>D. coriacea</i>		<i>L. olivacea</i>	
(n)	CPUE	(n)	CPUE	(n)	CPUE	(n)	CPUE
4	0.0016	7	0.0029	119	0.0487	80	0.0328

**NATIONAL REPORT OF CANADA
RAPPORT ANNUEL DU CANADA
INFORME ANUAL DE CANADÁ**

B. Lester¹, S. Paul², J. Neilson³, S. Campana⁴, L. Hunt⁵

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 2006 was 755.1 t. A total of 557 licensed fishermen participated in the directed bluefin fishery using rod and reel, handlines, electric harpoon and trap nets to harvest 732.9 t. Each fish harvested 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 2006 was 1433.1 t with landings reaching 1403.6 t. The tonnage taken by longline was 1200t while 203 t were taken by harpoon. Only 51 of the 77 licensed swordfish longline fishermen landed fish in the 2006 fishery. The other tunas (albacore, bigeye and yellowfin) are at the northern edge of their range in Canada throughout the year. Canadian catches of these species have traditionally been a minor portion of the overall Canadian catch of large pelagic species. In 2006, other tunas accounted for nearly 18% of commercial large pelagic species landed. Yellowfin tuna (292.9t) was the most important other tuna species landed, followed by bigeye and albacore. Porbeagle is the only shark species for which there is a directed longline fishery with harvests reaching 192t in 2006. 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, and log record data must be submitted by each fisherman whether a fish is harvested or not. Canada fully supports research that improves the basic inputs and approaches of the Atlantic bluefin and swordfish stock assessments. Canadian scientists have been active in the studies of: age determination for bluefin tuna and in a study on the origin of bluefin tuna caught in the southern Gulf of St. Lawrence using the otolith microchemistry. They are also actively involved in joint tagging studies for both bluefin tuna and swordfish in collaboration with Canadian fishing industry and universities in both Canada and the United States.

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 2006 s'est élevé à 755,1 t. Un total de 557 pêcheurs titulaires de licences ont participé à la pêche dirigée sur le thon rouge à la canne et moulinet, à la ligne à main, au harpon électrique et aux filets de madrague et ont capturé 732,9 t. Chaque poisson pêché 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 1.433,1 t au titre de 2006, avec des débarquements atteignant 1.403,6 t. Le tonnage capturé à la palangre se chiffrait à 1.200 t, tandis qu'un volume de 203 t était capturé au harpon. Sur les 77 titulaires de permis de pêche de l'espadon à la palangre, seuls 51 en ont débarqué en 2006. Les autres thonidés (germon, thon obèse et albacore) se trouvent à la limite septentrionale de leur aire de répartition au Canada tout au long de l'année. Les prises canadiennes de ces espèces ont traditionnellement représenté une faible proportion de la prise globale canadienne de grands pélagiques. En 2006, les autres thonidés constituaient près de 18% des débarquements commerciaux de grands pélagiques. L'albacore (292,9 t) était la principale espèce thonière dans les débarquements, suivie du thon obèse et du germon. Le requin-taube commun est la seule espèce de requins pour laquelle il existe une pêche palangrière dirigée, comptant des captures de 192 t en 2006. 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

¹ Fisheries and Oceans Canada, Resource Management Branch, Ottawa, ON, K1A 0E6.

² Fisheries and Oceans Canada, Science, Biological Station, St. Andrews, NB, E5B 2L9.

³ Fisheries and Oceans Canada, Science, Biological Station, St. Andrews, NB, E5B 2L9.

⁴ Fisheries and Oceans Canada, Science, Bedford Institute of Oceanography, Dartmouth, NS, B2Y 4A2.

⁵ Fisheries and Oceans Canada, Resource Management, Dartmouth, NS, B2Y 1J3.

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. A la fin de chaque sortie de pêche, des observateurs de quai indépendants et agréés doivent être présents lors du déchargement et chaque pêcheur doit soumettre les données des carnets de bord, qu'un poisson ait ou non été capturé. Le Canada apporte son plein soutien à la recherche qui améliore les données de base et les stratégies d'évaluation des stocks de thon rouge et d'espadon de l'Atlantique. Les scientifiques canadiens ont participé activement aux études sur la détermination de l'âge du thon rouge et à une étude sur l'origine du thon rouge capturé au sud du Golfe de St Laurent à l'aide de la microchimie des otolithes. Ils prennent également une part active à des études conjointes de marquage visant à la fois le thon rouge et l'espadon en collaboration avec l'industrie de la pêche canadienne et les universités à la fois au Canada et aux Etats-Unis.

RESUMEN

El atún rojo se captura en aguas canadienses de junio a noviembre, en la Plataforma continental, en el Golfo de San Lorenzo, en la Bahía de Fundy y en las aguas frente a Terranova. La cuota ajustada canadienses para 2006 fue de 755,1 t. Un total de 577 pescadores con licencia participaron en la pesquería dirigida al atún rojo, utilizando caña y carrete, liñas de mano, arpones eléctricos y almadrabas para capturar 732,t. Cada ejemplar capturado se marca de forma individual con un número único y es obligatorio pesar cada ejemplar en el muelle. La pesquería de pez espada en las aguas canadienses se desarrolla de abril a diciembre. La cuota ajustada de canadiense para 2006 fue de 1.433,1 t, con desembarques de 1.403,6 t. Los palangreros capturaron 1.200 t y 203 t se capturaron con arpón. Solo 51 de los 77 pescadores con palangre con licencia para pescar pez espada desembarcaron esta especie en la pesquería de 2006. En cuanto a los otros túnidos (atún blanco, patudo y rabil), éstos tienen a la altura de Canadá su límite septentrional, y pueden encontrarse durante todo el año. Las capturas canadienses de estas especies han representado tradicionalmente una proporción menor dentro del conjunto de las capturas canadienses de grandes pelágicos. En 2006, los otros túnidos respondieron de algo más que el 18% de los desembarques de grandes pelágicos comerciales. El rabil (292,9 t) fue la especie desembarcada más importante, seguido del patudo y el atún blanco. El marrajo sardinero ha sido la única especie de tiburón objeto de una pesca dirigida con palangre, con unas capturas que ascendieron a 192 t en 2006. Todos los buques comerciales que pescan especies pelágicas tienen que comunicar su intención de pescar antes de las mareas y tienen que comunicar sus capturas desde el mar. El sistema estadístico atlántico canadiense proporciona un seguimiento en tiempo real de la captura y el esfuerzo para todas las mareas de pesca dirigidas a especies pelágicas. Al final de cada marea, durante el desembarque, deben estar presentes los controladores a pie de muelle independientes y certificados, y cada pescador debe presentar los datos consignados en sus cuadernos de pesca, con independencia de que se haya producido o no captura. Canadá respalda completamente la investigación para mejorar las contribuciones básicas y los enfoques de las evaluaciones del stock de atún rojo y pez espada del Atlántico. Los científicos canadienses han desarrollado activamente estudios sobre determinación de la edad del atún rojo y el origen del atún rojo capturado en la parte meridional del Golfo de San Lorenzo, utilizando microquímica de otolitos. También están activamente implicados en estudios de marcado conjuntos para el atún rojo y el pez espada en colaboración con la industria pesquera canadiense y las universidades de Canadá y Estados Unidos.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Bluefin tuna

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 the 2006 calendar year was 755.1 t. The Canadian nominal landings of Atlantic bluefin tuna in 2006 were 732.9 t (**Table 1**). The 22.2 t shortfall plus half of the unused dead discards from the 2006 fishery will be carried over to 2007 in deriving the 2007 Canadian quota.

All traditional bluefin tuna fishing areas produced catches of tuna in 2006 (**Table 2**), however, there were landings which were not accompanied by geographic data at the required scale for dividing catch into individual fishing areas within western Nova Scotia. These data were classified as ‘unspecified’ in **Table 2**, and therefore, areas within the western Nova Scotia fishing area (with the exception of the St. Margaret’s Bay trap fishery) must be considered a minimum. 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 (128 t, minimum). The Gulf of St. Lawrence rod and reel fishery produced the largest fraction of the total Canadian landings in 2006 (312 t, 42% of total). The Gulf of St. Lawrence fish weighed about 400 kg (round), on average. Fish captured in the Hell Hole fishery weigh about 180 kg (round), on average.

Additional catches (**Table 2**) were also taken from the St. Margaret’s Bay traps (3.0 t), from the rod and reel fishery off northeastern Nova Scotia (45 t), and from coastal fishing areas off Halifax and Liverpool, Nova Scotia (101 t). Throughout the Scotian Shelf, 19.7 t were taken by electric harpoon. Again in 2006, catches on the Tail of the Grand Banks of Newfoundland were low. The Newfoundland fishery has shown marked fluctuations in recent years, due primarily to decreased effort as a result of market considerations.

In 2006, 557 licensed fishermen participated in the directed bluefin fishery, one offshore longline license was authorized to direct for other tuna with a small bluefin by-catch provision, and four fish-trap license holders in St. Margaret’s Bay used 7 bluefin tuna trapnet licenses (**Table 3**).

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. Fleets operate independently of each other, adopting their own strategies to address when and how to harvest the resource.

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 ICCAT recommendation for the Canadian swordfish quota for 2006 was 1,348 t. Canada’s adjusted quota for 2006 was 1,433.1 t. Canadian nominal landings in 2006 were 1,403.6 t (**Table 1**), resulting in an underage of 29.5 t. The 2006 dead discard estimate was 38.0 t which will be deducted from the initial catch limit in 2008.

The tonnage taken by longline was 1,200t (or 86% of the catch), while 203 t were taken by harpoon (**Table 4**). The mean round weight of fish caught by longline and harpoon was 74 kg and 108 kg, respectively (**Table 4**). Only 51 of the 77 licensed swordfish longline fishermen landed fish in the 2006 fishery (**Table 4**). This number is slightly higher than 2005 but is still significantly lower than the mid-1990’s when all, or nearly all, of the swordfish longline licenses were active (**Table 4**). The reduced effort in recent years is a result of a combination of factors including the reduced quota, increased opportunities for fishing other species, relatively low market value, and the introduction of the ITQ system for this fishery. Although a total of 962 fishermen are eligible for harpoon licenses, only 78 were active in 2006 as harpooning swordfish is usually an opportunistic activity conducted during other fisheries.

1.3 Other tunas

The other tunas (albacore, bigeye and yellowfin) are at the northern edge of their range in Canada, and they are found along the edge of the Gulf Stream and Georges Bank, the Scotian Shelf and the Grand Banks (and beyond) throughout the year. Canadian catches of these species have traditionally been a minor portion of the overall Canadian catch of large pelagic species. In 2006, however, the other tunas accounted for nearly 18% of commercial large pelagic species landed. Yellowfin tuna was the most important other tuna species landed, followed by bigeye and albacore. Yellowfin tuna landings were up to 292.9t in 2006, close to the recent highest level of 303.5 t in 2004. This was likely due to the availability of this species in Canadian waters, and market conditions and fish value. Fifty-two (52) of the 78 licensed other tuna fishermen were active in 2006.

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 has been 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. It is believed that the by-catch for these two shark species is larger than reported because of discarding and live releases. A Management Plan for all shark species was first implemented in 1995. The 2001 porbeagle stock assessment resulted in a new five-year management plan for sharks beginning in 2002, including a 75% quota reduction for porbeagle and closure of the porbeagle mating grounds in order to facilitate stock rebuilding. Total reported landings in all shark species in Canada were down in 2006 from the previous year. Porbeagle catches were down to 192.2 t, blue shark to 4.4 t and of shortfin mako down to 71.4 t (**Table 1**).

In 2006, 28 exploratory shark fishing licenses were authorized to land porbeagle and/or blue shark, with all other sharks, including shortfin mako restricted to a by-catch (**Table 3**). This reduction from 55 licenses in 2001 has been achieved through the attrition of inactive licenses, a management measure implemented in response to the current stock status. In addition, there are also more than 1000 recreational shark licenses that are restricted to hook and release fishing only (**Table 3**), except when participating in a small number of approved derbies that allow for retention of catch, under strict protocols, for scientific research purposes.

Section 2: Research and Statistics

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 such as by-catch and highgrading 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.

2.1 Bluefin tuna research

Canada fully supports research that improves the basic inputs and approaches of the Atlantic bluefin stock assessments. Highlights of the 2006 scientific research program at the Biological Station (St. Andrews) included the following activities:

- Using funds from the Bluefin Year Program (BYP), a program of biological sampling of bluefin tuna in the southern Gulf of St. Lawrence will be continued in 2007. In contrast to previous years, the fishery is continuing into the month of September. As before, once the sampling program has been completed, the results will be reported to the SCRS.
- Canada, along with several other ICCAT Contracting Parties, has been active in studies of age determination for bluefin tuna. In particular, Canadian scientists have confirmed results from a pilot investigation of bluefin tuna age and growth reported to the SCRS last year, with a larger (n = 30) sample size. Funding, in part, was provided by the Bluefin Year Program. Full results of this study will be made available prior to the next bluefin tuna stock assessment. A plan of research for age and growth investigations has been completed, and will include publications related to the validation exercise, decadal differences in growth of bluefin tuna, and implications for the stock assessment. Several SCRS scientists as well as outside scientists will be working on these contributions.

- In collaboration with scientists at Texas A&M University, Canada is investigating the origin of bluefin tuna caught in the southern Gulf of St. Lawrence using the otolith microchemistry approach. Using archived material, trends in the proportion of eastern and western tuna in this mixing area will be documented for a period of several decades.
- In collaboration with scientists from the University of New Hampshire Large Pelagics Research Center and the Nova Scotia tended line bluefin tuna industry, Canada has undertaken successful tagging of bluefin tuna, an initiative that continued into 2007.

2.2 *Swordfish research*

- Canada provides estimates of dead swordfish and bluefin discards based on Observer coverage of the domestic large pelagic longline fleet.
- Results from the first (2005) and second (2006) years of a swordfish tagging study have been very encouraging. Some of the tags have remained attached to the fish for more than one year, and have provided the most detailed information available yet on habitat utilization, diel vertical movements, and seasonal horizontal movements. To date, no tagged fish have left the western Atlantic. Two more years of tagging efforts are planned.
- Canada has initiated a study to develop prototype satellite archival tags whose sole purpose is to measure fish survival after capture and release. The intent of the study is to develop a tag with considerably lower cost than current designs, and smaller size, allowing application to a broader size range of animals. Testing of the data logging module has been completed, and development of the Argos radio transmitter is proceeding.
- Canada is undertaking a study of the foraging of swordfish in Canadian waters, in conjunction with staff of the Large Pelagics Research Centre at the University of New Hampshire.
- A Ph.D. student at Memorial University of Newfoundland and Labrador is in the second year of her dissertation research, examining patterns of by-catch in the Canadian pelagic longline fishery.

2.3 *Sharks*

The current shark management plan includes greatly reduced porbeagle quotas (set at or below MSY) in order to facilitate stock rebuilding. Planning is currently underway to implement a fishery-independent survey to monitor population recovery. Archival satellite popup tags have been deployed on mature northwest Atlantic porbeagles to locate the pupping ground, with more tagging planned for 2007.

The primary directed fishery for blue sharks is recreational. Although a previous analysis of the status of blue sharks in Canada indicated that shark derby catches were a minor component of blue shark catch mortality in Canada (most of the mortality was associated with by-catch from pelagic longline fisheries), shark derby mortality was reduced by about 60% by increasing the minimum landed size to 8'. All blue sharks less than 8' were to be released alive after tagging. A Canadian shark tagging program was implemented to further involve 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 abundance in Canadian waters. Concurrently, archival satellite popup tags were applied to blue sharks discarded during commercial fishing operations by the pelagic longline fleet in order to estimate discard mortality. This program will be continued in 2007.

2.4 *Incidental catch*

Canada initiated a study of by-catch in its pelagic longline fishery in 2005. The intent of the investigation is to relate patterns of by-catch to fishing practices. The potential to do such work is enhanced for certain years, when the Canadian fishery practices can be compared to Japanese practices in the same waters and months (for example, the Japanese fishery had high levels of Canadian observer coverage when it operated in the Canadian EEZ in 1999).

2.5 *Precautionary Approach*

Canada strongly supports 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 new research aimed at improving stock assessments. Furthermore, as the Precautionary Approach is not limited to the development of reference points, Canada also strongly promotes 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 has issued multi-year management plans prior to the opening of the respective fishing seasons. Details of management measures and their enforcement are provided in Appendix A. These plans are compiled 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 Conditions of License (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 Bluefin Management Plan (Appendix A). The 2006 quota was set at 755.1 t (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.

3.1.2 Swordfish

Canada has implemented the ICCAT regulatory recommendations that apply to swordfish in the Canadian Atlantic Swordfish Management Plan (Appendix A)*. The 2006 quota was set at 1,618.0 t (see 1.2 above), and there is 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. In 1998-2005, landings of fish <119 cm LJFL were reduced to as close to zero as possible.

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 2006. A multi-year management plan for both swordfish and other tunas was published in 2005. Fishing effort is restricted by limiting entry into the directed fishery to vessels having a swordfish/other tunas longline license and to one offshore vessel with an other tuna longline license. 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 Observer Program since 1977. Observers collect biological data, and monitor compliance with fishing regulations. In 2006, 5% observer coverage (by sea days fished) on the pelagic longline fleet fishing for swordfish and other tunas was achieved. Data from the Observer Program are used to estimate dead discards, and document incidental catch of non-target species.

* Available from the Secretariat.

3.4 Vessel monitoring

Canada has eight licenses for large pelagic vessels over 24 meters in length. Most fishing is conducted within the 200 mile zone. 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 such that in certain years less than eight vessels over 24 meters in length may actually operated in the fishery. All Canadian longline vessels, regardless of length, are required to use a vessel monitoring system.

3.5 Inspection schemes and activities

Canada has a Port Inspection Scheme consistent with the ICCAT Regulatory Recommendation that entered into force on June 13, 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 Document Programs for bluefin tuna, swordfish and bigeye. Programs for swordfish and bigeye tuna were introduced in 2003 for all exports.

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. 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 Statistical Documents once copies are returned from Japan.

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

Section 4: Inspection Schemes and Activities

Canada has a Port Inspection Scheme consistent with the ICCAT Regulatory Recommendation that entered into force on June 13, 1998. 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 2.1 and 2.2 above), aerial and vessel surveillance are used to monitor the fleets at-sea. Shore-based patrols monitor routine landings, watch for illegal landings and conduct airport and border surveillance. Observer coverage is used periodically to monitor specific important management questions in the commercial fishery. Test fisheries are established to define areas and times to minimize the catch/by-catch of restricted species or undersized targeted species.

Table 1. Canadian landings (tonnes round weight) of large pelagic fish species, 1996-2006.

<i>Species</i>	<i>Landings</i>										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Swordfish	739.1	1,089.5	1,115.1	1,118.5	967.8	1,078.9	959.3	1,284.9	1,203.3	1,557.9	1403.6
Bluefin tuna	598.0	504.5	596.0	576.1	549.1	523.7	603.7	556.6	536.9	599.7	732.9
Albacore tuna	23.9	30.8	23.2	38.8	121.7	51.0	112.7	55.7	27.1	52.1	27.3
Bigeye tuna	144.0	165.7	119.6	262.8	327.0	241.2	279.3	181.6	143.1	186.6	196.1
Yellowfin tuna	154.5	100.1	56.6	21.8	105.2	125.3	70.4	72.7	303.5	239.5	292.9
Unspec. tuna	0.0	0.0	0.0	0.0	0.5	0	.1	0.4	0.2	1.3	0.0
Blue shark	11.8	10.9	4.5	53.5	18.4	0.4	5.1	6.0	0.3	11.4	4.4
Shortfin mako	67.4	110.1	69.5	70.4	77.8	69.3	78.2	73.3	79.5	90.9	71.4
Porbeagle	1,015.4	1,339.4	1,007.8	958.2	902.3	498.6	236.6	142.4	231.5	202.2	192.2
Unspec. sharks	12.7	42.5	37.3	17.6	10.7	19.7	21.1	13.4	11.3	14.7	8.3
Marlin ¹	8.3	8.3	7.9	4.8	5.3	3.2	2.1	1.4	1.7	4.7	3.1

¹ Prior to 2002, marlin catches were reported as white marlin, although the ability to distinguish between white and blue marlin is not clear. This has been addressed for 2002 and in subsequent years.

Table 2. Canadian bluefin tuna landings and discards (tonnes round weight) by fishing area, 1995-2006.

<i>Bluefin fishing area</i>	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>(West to East)</i>												
Western NS												
o Bay of Fundy	43	32	55	36	38	18	31	13	10	5	3	4
o Georges Bank										3	18	15
o Hell Hole	211	147	101	152	182	74	182	125	188	60	18	128
o SWNS (coastal)	0	60	84	106	93	113	61	114	28	40	0	101
o St. Marg's Bay	72	90	59	68	44	16	16	28	84	32	9	3
o Unspecified ³										141	224	100
NE Nova Scotia	61	41	69	82	26	7	25	35	7	11	21	45
G of St. Lawren.	175	111	101	115	164	236	149	205	192	239	251	312
Newfoundland	10	95	30	21	10	71	51	68	33	5	26	11
Offshore	4	22	6	16	18	13	7	16	14	0.5	30	14
Year-end adj ¹	-	-	-	-	1	1	<1	<1	<1	-	<1	<1
Total Landings	576.1	598.0	504.5	596.0	576.1	549.1	523.7	603.6	556.6	536.9	599.7	732.9
Discards ²	-	-	6.0	16.3	10.7	46.0	13.2	36.9	14.0	14.6	0.0	2.0
<i>Canadian quota</i>	<i>613.5</i>	<i>613.5</i>	<i>552.6</i>	<i>600.7</i>	<i>577.7</i>	<i>569.5</i>	<i>553.0</i>	<i>594.7</i>	<i>580.0</i>	<i>645.9</i>	<i>731.8</i>	<i>755.1</i>

¹ e.g., seized, Bermuda fishery or tournaments.

² Discarded dead from swordfish longline fishery: no estimates prior to 1997; 1997 actual tonnage observed by at-sea Observers; 1998-2006 estimate for entire fishery based on Observer coverage (see SCRS/1999/77).

³ Landings which were not accompanied by geographic data at the required scale for dividing catch into individual fishing areas in the western Nova Scotia area.

Table 3. Distribution of tuna, swordfish longline and shark fishing licences by region and species¹ in 2006.

Region	Number of licences ¹							
	Bluefin		Swordfish (LL)		Other tuna (LL) ⁴		Sharks	
	Total	Active	Total	Active	Total	Active	Explor.	Rec.
Gulf	602	380	0	0	0	0	10	34
Newfoundland	55 ³	10	4	1	4	1	0	26
Scotia-Fundy	42	42	73	50	74	51	16	1059
St. Margaret's Bay ²	24	7	-	-	-	-	-	-
Quebec	<u>54</u>	<u>26</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	777	557	77	51	78	52	28	1119

¹ Bluefin tuna, swordfish, other tunas, and sharks (exploratory longline licenses) are regulated by limited entry. Recreational shark licenses are restricted to hook and release only, and the number varies from year-to-year, depending on demand.

² Four fish trap license holders with 6 bluefin trapnet licenses each.

³ 38 of these licenses 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 licenses, license conditions and tags, and submitted log records.

Table 4. Summary of 1995-2006 swordfish vessels landing fish, landings (tonnes round weight), discards¹, average weight of fish (kg round) by gear, percentage of small fish by number², and percentage of catch sampled for size.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of vessels											
landing fish											
Longline	77	60	49	53	61	63	46	44	45	48	51
Harpoon	112	105	109	66	92	84	71	89	86	86	78
Landings (t)											
Longline	646	1,000	875	1101	873	957.6	922	1,138 ³	1,116	1,365.0	1200.3
Harpoon	<u>93</u>	<u>89</u>	<u>240</u>	<u>18</u>	<u>95</u>	<u>121.3</u>	<u>38</u>	<u>147</u>	<u>87</u>	<u>192.9</u>	<u>203.3</u>
Total	739	1,089	1,115	1,119	968	1,078.9	959	1,285	1,203	1,557.9	1403.6
Discards (t) ¹											
Average weight (kg)											
Longline	-	5.0	51.7	34.6	49.9	26.4	32.7	78.6	44.8	106.3	38.0
Harpoon											
(# sampled)											
Harpoon	69	70	61	56	58	69	72	63	70	69	74
(# sampled)	(9,077)	(14,438)	(13,447)	(19,630)	(12,991)	(13,611)	(12,859)	(17,298)	(15,368)	(20,333)	(15,541)
% small fish by number landed ²											
<125 cm	161	131	126	109	111	102	117	108	121	117	108
<119 cm	(561)	(652)	(1911)	(147)	(830)	(1287)	(413)	(1364)	(658)	(1,646)	(2275)
% of catch sampled											
3	3	5	3	3	3	2	<1	2	<<1	<<1	<<1
<1	<1	2	<1	<<1	<<1	<1	<<1	<1	<<1	<<1	<<1
97	97	100	95	100	100	100	100	100	100	100	100

¹ Discarded dead from swordfish longline fishery: no estimates prior to 1997; 1997 actual tonnage observed by at-sea Observers; 1998-2006 estimate for entire fishery based on Observer coverage (see SCRS/1999/77).

² 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*
RAPPORT ANNUEL DU CAP-VERT
INFORME ANUAL DE CABO VERDE

Vanda Marques da Silva Monteiro¹

1^{ère} Partie (Information sur les pêcheries, la recherche et les statistiques)

La pêche des thonidés est une des plus anciennes au Cap-Vert, la ligne à la main était utilisée dans la pêche artisanale et la ligne/canne dans la pêche industrielle ou semi-industrielle.

Dans la décennie de quatre-vingt-dix, la flotte de pêche industrielle a vécu des renouvellements importants, avec l'introduction de 20 nouveaux bateaux. Les plus vieux bateaux ont été progressivement désactivés. Ainsi, seulement 25% de la flotte avait plus de 15 ans en 1995, alors que 43% avait moins de 5 ans. En 2002, la flotte industrielle a fait l'objet un nouveau renouvellement avec l'introduction de 10 nouveaux bateaux de 26 m, en fibre de verre, avec une grande autonomie de pêche dans la ZEE du Cap-Vert et dans les eaux territoriales des pays de la sous-région.

La pêche des thonidés a une grande importance au Cap-Vert en raison de son poids socio-économique, de l'approvisionnement des conserveries, et de la réduction du déficit de la balance commerciale, par le biais des exportations, et aussi en raison du nombre important d'emplois directs et indirects que cette activité génère. Ainsi, une des priorités de notre recherche au sein de l'INDP, a été son accompagnement pour mieux connaître l'état de cette ressource et identifier des alternatives pour sa pêche.

En raison de plusieurs problèmes, le *Bulletin Statistique des Pêches*, qui devrait être annuel, a déjà quelques années de retard. En ce moment, seul le numéro 12 relatif à l'année 2003, est disponible. Nous pensons qu'à la fin de 2008, la situation pourra s'être normalisée.

Au Cap-Vert, il n'existe pas de pêche dirigée vers les requins. En l'absence de séries de données statistiques officielles de captures, il faudrait admettre que les stocks sont sous-exploités, mais on doit tenir compte de la fragilité de nos activités de surveillance et des possibilités de captures étrangères non déclarées, dans la ZEE du Cap-Vert. Habituellement, les requins font partie des captures accessoires des palangriers et dans la sous-région de l'Ouest Africain, ces ressources sont intensément surexploitées, ce qui dégage une tendance à l'augmentation de l'effort de pêche dans notre ZEE, surtout par des bateaux qui opèrent dans la sous-région.

La pêche sportive au Cap-Vert était une activité peu pratiquée mais, avec le développement du tourisme, elle est devenue une activité très convoitée et de plus en plus intense. Le pays a besoin d'une réglementation claire et très développée en la matière de façon à mieux discipliner l'exercice de cette activité, étant donné qu'il y a une certaine concurrence avec les pêcheurs artisanaux et aussi pour garantir une utilisation responsable des ressources et des régions côtières. Il est nécessaire qu'il y ait des règles claires afin de discipliner l'activité et d'assurer aussi bien la protection de l'environnement marin et la durabilité des ressources que la viabilité économique du tourisme qui profite de cette activité.

Chapitre 1: Information annuelle sur les pêcheries

Les principales espèces ciblées par cette pêcherie sont : l'albacore (*Thunnus albacares*), le listao (*Katsuwonus pelamis*), le thon obèse (*Thunnus obesus*), la thonine commune (*Euthynnus alletteratus*), l'auxide (*Auxis sp*), et le thazard-bâtard (*Acanthocybium solandri*).

Le niveau d'exploitation de la ressource ciblée par cette pêcherie est très loin du maximum soutenable et donc là son exploitation appropriée peut devenir un axe important de développement de l'économie nationale.

Ces ressources sont exploitées par la flotte artisanale et par la flotte industrielle ou semi-industrielle. Les principales zones de pêche sont les montagnes sous-marines et les inclinaisons sous-marines autour des îles.

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

¹ Instituto Nacional de Desenvolvimento das Pescas, C.P. 132, Mindelo, Sao Vicente; vamarmon@hotmai.com.

1.1 Captures

La capture de la flotte cap-verdienne de thonidés et d'espèces apparentées en 2006 dans la ZEE du Cap-Vert est estimée à 3.665 tonnes et de la flotte espagnole avec pavillon cap-verdien, en dehors du Cap-Vert, est estimé à 14.555 tonnes.

Des makaires et des espadons sont pêchés dans les eaux du Cap-Vert, principalement par les bateaux de l'Union européenne et par la pêche sportive.

Les données provisoires de capture dans la ZEE du Cap-Vert en 2004-2006 et 2005-2006 sont illustrées à la **Figure 1**.

1.2 Flotte et arts

Le dernier recensement a été fait en 2005 et la flotte cap-verdienne a été constituée selon le **Tableau 1**.

Les requins paraissent toujours comme une capture accessoire d'autres pêcheries, ou comme une information additionnelle dans les prospections de recherche dirigées vers d'autres espèces. La flotte étrangère de palangriers de surface est à peine autorisée pour la pêche des thonidés, où le requin apparaît comme une pêche accessoire, mais la capture est très élevée.

Au-delà du marché national, le produit de la pêche de thonidés est orienté vers l'exportation de produits frais, congelés et en conserve.

Les ressources sont exploitées par la flotte artisanale, à travers des pirogues et par la flotte industrielle, au moyen d'embarcations plus grandes.

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

Le nombre d'embarcations artisanales présente une tendance stable, mais la taxe de motorisation a évolué de 73% en 1999 à 74% en 2005. Les bateaux possèdent une capacité d'action et d'autonomie très réduite.

Les embarcations de pêche industrielle sont les plus grandes unités, beaucoup d'entre elles sont obsolètes, appartenant majoritairement aux entités privées. Elles sont aussi majoritairement des thoniers, des langoustiers et des senneurs.

Le nombre de pêcheurs en 1999 était de 4.283. La tendance est à la diminution, étant donné qu'en 2005 seuls 3.108 pêcheurs ont été recensés.

1.3 Flotte étrangère

La flotte étrangère autorisée opère dans la ZEE du Cap-Vert dans le cadre d'accords ou de contrats de pêche (**Figure 2**). Les embarcations appartiennent majoritairement aux pays de l'Union européenne et d'Asie. La flotte de pêche japonaise utilisait déjà en 1965 le port de Mindelo, ce qui paraît indiquer qu'elle opérerait dans les eaux du Cap-Vert. D'après les données déclarées à l'ICCAT, la flotte étrangère opère dans la région comprise entre 10° à 20° N et 20° à 30° W, laquelle appartient à la ZEE du Cap-Vert.

L'analyse des demandes des embarcations étrangères autorisées montre qu'habituellement les thonidés représentent l'espèce ciblée. D'une manière générale, les espèces les plus capturées par la flotte étrangère sont les requins, le patudo, l'espadon et l'albacora.

Les palangriers asiatiques pêchent essentiellement l'albacora et le patudo.

En ce qui concerne la remise des données statistiques et la déclaration des captures, quelques embarcations de l'Union européenne et seulement les embarcations de nationalité espagnole déclarent les captures effectuées.

Chapitre 2: Recherche et statistiques

La responsabilité de toutes les questions relatives aux espèces de grands migrants au Cap-Vert incombe à l'INDP et à la DGP, les deux institutions appartenant au MITM.

La collecte des données statistiques sur les thonidés et les espèces apparentées est faite sur les ports de débarquement, par les enquêteurs. Ces données sont ensuite informatisées pour analyse.

Toutes les espèces de thonidés et d'espèces apparentées pêchées au Cap-Vert sont soumises aux échantillonnages de taille.

Un Bulletin statistique est publié toutes les années. Pour des raisons diverses, sa publication ces dernières années a pris quelque retard, mais la situation sera normalisée à la fin 2008.

Le Cap-Vert fournit des informations régulières pour l'actualisation des statistiques et les évaluations du stock au niveau de l'ICCAT.

A ce niveau, nous nous proposons:

- i) d'améliorer la capacité d'évaluation des stocks;
- ii) de réaliser des estimations périodiques des stocks de thonidés, dans notre ZEE, avec l'aide des experts de l'ICCAT;
- iii) de mieux contrôler les données de la flotte étrangère;
- iv) de réaliser des études socio-économiques périodiques sur la pêche.

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

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

Pour exécuter les recommandations de l'ICCAT, le Gouvernement du Cap-Vert, à travers le Plan d'aménagement des Pêches actualisé en 2006, a annulé la prohibition de capture des exemplaires d'albacore et de patudo de moins de 3,2 kg et il a maintenu la réserve d'une région exclusive pour les activités de pêche à l'intérieur des trois milles nautiques, destinée à la pêche nationale.

3.1 Pêche étrangère

- Interdire à la flotte étrangère toutes les activités de pêche à l'intérieur des 12 milles nautiques.

3.2 Requins

- La pratique de la pêche aux requins aux fins uniques du prélèvement des ailerons est interdite dans la ZEE du Cap-Vert (Résolution 3/2005 du 21 février).

Tableau 1. Composition de la flottille du Cap-Vert (basée sur recensement de 2005).

<i>Quantité</i>	<i>Type</i>	<i>Equipement</i>	<i>Nombre de pêcheurs</i>
766	Bateaux (pirogues)	Moteur hors-bord	3 en moyenne
270	Bateaux (pirogues)	Sans moteur	3 en moyenne
80	Bateaux (industriels)	Moteur interne	11 en moyenne

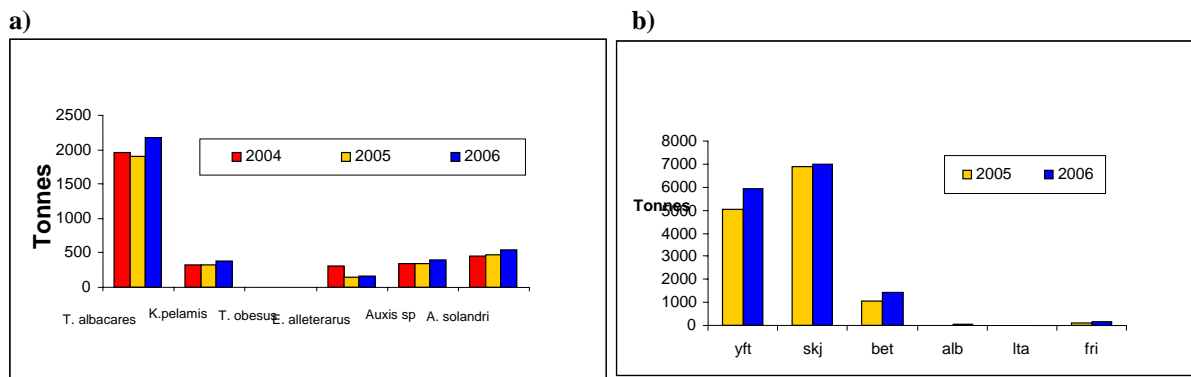


Figure 1. Données provisoires de capture dans la ZEE du Cap-Vert : (a) 2004-2006; (b) 2005-2006. (Source: Division Statistiques des Pêches de l'INDP).

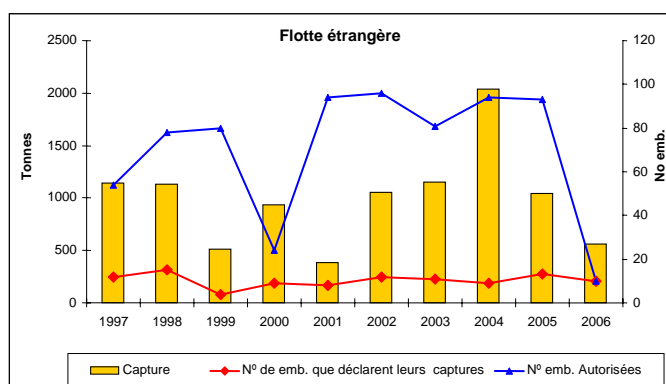


Figure 2. La flotte étrangère. (Source: DGP).

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

Song Liming, Xu Liuxiong, Dai Xiaojie, Zhou Yingqi¹

SUMMARY

Longline is the only fishing gear for tunas by the Chinese tuna fishing fleet in the Atlantic Ocean. There were 33 tuna longliners operating in 2006 which caught a total of 9,906.6 t of fish, including tuna and tuna-like species and sharks (in round weight). This catch was higher than that of 2005 (8,969 t). Bigeye tuna and bluefin tuna are the targeted species, and their catches amounted to 7,200 t and 42 t, respectively, in 2006. Bigeye tuna accounted for 72.7% of the total, which was about 1,000 t (16.1%) higher than that of 2005. Yellowfin tuna, swordfish and albacore are taken as by-catch. Yellowfin tuna catches decreased from 1,185.5 t in 2005 to 1,085 t in 2006. Swordfish and albacore catches were 372 t and 302 t (an 87.7% and 46.2% increase from the previous year), respectively. 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 Shanghai Fisheries University (SFU). China has carried out a national scientific observer program for the tuna fishery in ICCAT waters since 2001. In 2006, one observer was dispatched on board a tuna longline fishing vessel in the Chinese Atlantic from January to April. The area covered was 04°48'N-11°53'N, 27°00'W-37°43'W and the average nominal CPUE of bigeye (yellowfin) tuna was 12.10 (2.80) fish/1000 hooks based on the observer data. In terms of implementation of the relevant ICCAT conservation and management measures, the fishery administration authority of China requires all fishing companies operating in the Atlantic Ocean to report their fisheries data monthly to the Branch of Distant Water Fisheries of China Fisheries Association and the Tuna Technical Working Group in SFU in order to comply with the catch limits. The Chinese Fishery Authority has established a fishing vessel management system, including the issuance of licenses to all the authorized Chinese fishing vessels operating in the high seas of the world oceans. The high seas Chinese tuna fishing fleet has been required to have a VMS system installed since October 1, 2006. The Chinese Fishery Authority has strictly abided by the National Observer Program and the ICCAT Regional Observer Program for transshipment at sea.

RÉSUMÉ

La palangre est le seul engin de pêche utilisé pour les thonidés par la flottille chinoise dans l'Océan Atlantique. 33 palangriers thoniers ont opéré en 2006, totalisant une prise de 9.906,6 t de poissons, notamment des thonidés et des espèces apparentées ainsi que des requins (en poids vif), chiffre supérieur à la prise de 2005 (8.969 t). Le thon obèse et le thon rouge sont les espèces cibles, leurs prises s'élevant respectivement à 7.200 t et 42 t en 2006. Le thon obèse représentait 72,7% de la capture totale, chiffre supérieur de 1.000 t (16,1%) environ à celui de 2005. L'albacore, l'espadon et le germon sont capturés en tant que prise accessoire. Les prises d'albacore ont diminué, passant de 1.185,5 t en 2005 à 1.085 t en 2006. Les prises d'espadon se sont élevées à 372 t et 302 t, soit une augmentation de 87,7% et 46,2%, respectivement, par rapport à l'année précédente. Les données compilées, y compris les données de la Tâche I et II et le nombre de bateaux de pêche, ont été régulièrement déclarées au Secrétariat de l'ICCAT par la Shanghai Fisheries University (SFU). La Chine a entrepris, depuis 2001, un programme national d'observateurs scientifiques pour la pêcherie de thonidés dans les eaux relevant de l'ICCAT. De janvier à avril 2006, un observateur a été détaché à bord d'un palangrier de la flottille chinoise ciblant les thonidés dans l'Atlantique. La zone couverte était 04°48'N-11°53'N-27°00'W-37°43'W et, selon les données de l'observateur, la CPUE nominale moyenne du thon obèse (albacore) s'est située à 12,10 (2,80) poissons/1.000 hameçons. En ce qui concerne la mise en œuvre des mesures de conservation et de gestion pertinentes de l'ICCAT, les Autorités de l'Administration des Pêches chinoises demandent à toutes les compagnies de pêche opérant dans l'Océan Atlantique de déclarer chaque mois leurs données sur les pêcheries à la Section des Pêcheries en Eaux Lointaines de l'Association des Pêches de la Chine (China Fisheries Association Branch of Distant Water Fisheries) et au Groupe de Travail Thonidés (Tuna Working Group) de la SFU afin de respecter les limites de

¹Shanghai Fisheries University, 334 Jungong Road, Shanghai 200090, People's Republic of China.

capture. Les Autorités des Pêches chinoises ont établi un système de gestion des navires de pêche, comprenant l'émission de licences pour tous les navires de pêche chinois autorisés opérant en haute mer dans les océans du monde. Depuis le 1^{er} octobre 2006, la flottille de pêche chinoise ciblant les thonidés en haute mer est tenue de s'équiper du système VMS. Les Autorités des Pêches de la Chine respectent strictement le Programme national d'observateurs ainsi que le Programme régional d'observateurs ICCAT pour les transbordements en mer.

RESUMEN

El palangre es el único arte pesquero utilizado para capturar túnidos por la flota pesquera atunera china en el Atlántico. En 2006 operaron 33 palangreros atuneros y se capturó un total de 9.906,6 t de pescado, incluyendo túnidos y especies afines y tiburones (en peso vivo), cifra que superó la captura de 2005 (8.969 t). El patudo y el atún rojo son las especies objetivo, y sus capturas ascendieron a 7.200 t y 42 t, respectivamente, en 2006. El patudo respondió del 72,7% del total, y fueron aproximadamente 1.000 t (16,1%) más que en 2005. El rabil, el pez espada y el atún blanco se capturan como captura fortuita. Las capturas de rabil descendieron desde 1.185, 5 t en 2005 hasta 1.085 t en 2006. Las capturas de pez espada ascendieron a 372 t y 302 t, un aumento del 87,7% y el 46,2% respecto al año anterior, respectivamente. Los datos recopilados, incluyendo la Tarea I y Tarea II así como el número de buques pesqueros, han sido comunicados de forma rutinaria a la Secretaría de ICCAT por la Universidad de Pesca de Shanghai (SFU). Desde 2001, China ha llevado a cabo un programa nacional de observadores científicos para la pesquería de túnidos que se desarrolla en aguas de ICCAT. En 2006, se envió un observador a bordo de un palangrero atunero chino en el Atlántico desde enero hasta abril. El área cubierta era 04°48'N-11°53'N-27°00'W-37°43'W y la CPUE nominal media del patudo (rabil) fue 12,10 (2,80) peces / mil anzuelos basada en los datos del observador. En términos de implementación de las medidas de conservación y ordenación de ICCAT pertinentes, las autoridades pesqueras de China requieren a todas las empresas pesqueras que operan en el Atlántico que declaren sus datos pesqueros mensualmente al Departamento de Pesquerías de aguas distantes de la Asociación de Pesca de China y al Grupo de trabajo técnico de túnidos de la SFU con el fin de cumplir los límites de captura. Las Autoridades pesqueras de China han establecido un sistema de gestión de los buques pesqueros que incluye la expedición de licencias a todos los buques pesqueros chinos autorizados que operan en alta mar en todos los océanos del mundo. La flota pesquera atunera china de altura debe ir equipada con VMS desde el 1 de octubre de 2006. Las Autoridades pesqueras chinas acatan estrictamente el Programa de Observadores Nacionales y el Programa Regional de Observadores de ICCAT para los transbordos en el mar.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Longline is the only fishing gear used by the Chinese tuna fishing fleet in the Atlantic Ocean. In 2006, 33 tuna longliners operated and caught a total of 9,906.6 t of tunas and tuna-like species, 937 t more than in 2005. The Chinese fishing fleet mainly targeted bigeye tuna and bluefin tuna and caught yellowfin tuna, swordfish and albacore as by-catch. In the last three years, the highest CPUE of bigeye tuna and yellowfin tuna was reported in the first quarter and the lowest yellowfin CPUE was reported in the third quarter. The lowest bigeye tuna CPUE was reported in the third quarter in both 2004 and 2006 and in the fourth quarter in 2005, respectively (**Figure 1** and **Figure 3**). It is noted that bigeye and yellowfin CPUE in 2004 was the highest of the last three years (**Figure 3**). In 2004, fishing effort was highest in the month of December and was lowest in the month of July (**Figure 3**). In 2005, fishing effort was highest during the fourth quarter (**Figure 2** and **Figure 3**). In 2006, fishing effort was highest in the month of March and lowest in the month of May (**Figure 3**). Monthly fishing effort in 2004 was the lowest of the last three years (**Figure 3**). The Chinese tuna longline fishing fleet utilizes the deep longline fishing method. There are 17-19 hooks per basket with a branch line of 49-53 meters in length. The length of the main line between the two branch lines is 46-51 meters. The species composition of the catch in the Atlantic is indicated in **Table 1**.

1.1 Albacore

Albacore are caught as by-catch by the Chinese fleet. The total catch in 2006 was estimated at about 302 t, a 46.2% increase over that of the previous year (206.5 t). Of this amount, 202 t were caught in the North Atlantic Ocean and 100 t were caught in the South Atlantic Ocean.

1.2 Bluefin tuna

The Chinese fleet caught 42 t of bluefin tuna from the northeast Atlantic Ocean in 2006, 18 t more than in the previous year (23.7 t in 2005).

1.3 Tropical tunas

The tropical tuna statistics reported by China include bigeye tuna and yellowfin tuna in the Atlantic Ocean. The 2006 total catch of bigeye tuna amounted to 7,200 t, 16.1% higher than that of 2005 (6,200.2 t), while the yellowfin catch amounted to 1,085 t, 8.5 % lower than in 2005 (1,185.6 t).

1.4 Swordfish

The total catch of swordfish in 2006 was 372 t, an 86.7% increase from the previous year. Of this amount, 72 t (107.9 t in 2005) were caught in the North Atlantic Ocean and 300 t (91.3 t in 2005) were caught in the South Atlantic Ocean.

Section 2: Research and Statistics

The Tuna Technical Working Group (TTWG) in SFU is authorized by the Chinese Fisheries Authority (CFA) to be in charge of the compilation of Atlantic tuna fishery data, including Task I and Task II data as well as the number of fishing vessels, which are routinely reported to the ICCAT Secretariat. One observer was dispatched on board a Chinese tuna longline fishing vessel in the Atlantic Ocean in January, 2006. The observer worked from January 20 to April 24, 2006 and recorded biological data on bigeye tuna and yellowfin tuna, and catch composition and nominal CPUE of the main species caught by the fishing vessel (**Table 2**). The data indicated that the average nominal CPUE of bigeye tuna (yellowfin tuna) was 12.10 (2.80) fish/1000hooks, and the highest CPUE was reported in April (January), reaching 20.51 (3.96) fish/1000hooks (**Table 2**).

The CFA required that all the fishing companies operating in the Atlantic Ocean report their fisheries data on a monthly basis to the Branch of Distant Water Fisheries of China Fisheries Association and the TTWG in SFU in order to comply with the catch limits. The CFA also requires fishing companies to report incidental catch of sea turtles and sea birds if their fishing boats happened to catch these and encourages scientists to conduct research on mitigation methods to reduce the incidental catch of sea turtles, sea birds and sharks.

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 established by ICCAT on bigeye tuna, eastern bluefin tuna, northern and southern swordfish, blue marlin and white marlin, the CFA required that all the Chinese fishing companies operating in the Atlantic Ocean report their fishery data on a monthly basis to the Branch of Distant Water Fisheries of China Fisheries Association (BDWF-CFA) and the TTWG in SFU.

According to the statistics, the catch of Chinese tuna fleet in 2006 did not exceed the quota set by ICCAT. The Chinese tuna fleet has strictly abided by the minimum size criteria established by ICCAT for conservation of juvenile tunas.

3.2 Tuna Statistical Document Program

Since July 2002, all the exported bluefin tuna and bigeye tuna caught by the Chinese tuna fleet must be accompanied by a Bluefin Tuna Statistical Document and Bigeye Tuna Statistical Document, respectively, as required by the Resolution and Recommendation adopted by ICCAT.

3.3 Fishing vessel management

In 2003, the CFA began implementing a licensing system for the distant water fishery. The fishing companies have to apply for a fishing license for the fishing vessel to operate in high seas, in accordance with the fishing license permit system in effect since June 2003. As a responsible fisheries nation, China has made great effort to strengthen tuna fisheries management. The major measures implemented include:

- Implementation of a fishing license system

The CFA has issued “High Seas Fishing Permit” to all fishing boats authorized to operate in the high seas of the world oceans. The “fishing permit” explicitly specifies the fishing area, the main targeted species and the fishing time etc. It is relatively easy for the harbor superintendent agency to identify if the fishing activities of the boat were officially permitted by checking the documents of the fishing boat when the boat enters their harbor for whatever reason.

- Data collection and report system

All the fishing companies have to submit their fisheries data every month to the TTWG in SFU. A pilot logbook data submission system was initiated in IOTC waters two years ago. Detailed information about catch and fishing effort has been collected. In 2006, the CFA required that all fishing boats to complete the logbook and will consider the implementation of a logbook system as one of the main conditions when renewing the fishing permits and licenses.

The CFA has been emphasizing improvement of the data report system and the submission of fisheries statistics to regional tuna fisheries management organizations as required.

- Implementation of the VMS program

The CFA has implemented a VMS program and required that all the large-scale tuna longliners to install the VMS equipment after October 1, 2006.

3.4 National Observer program and regional Observer program

In accordance with the Commission’s Resolution on the bigeye 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 TTWG in SFU was authorized by the CFA to be responsible for the national tuna scientific observer program in the Pacific, Atlantic and Indian Oceans. The National Observer Program has been carried out normally under the full cooperation of the BDWF-CFA and supported by SFU. As usual, scientists, or the graduate and post-graduate students majoring in marine fisheries science and technology, marine fisheries researchers from SFU have been trained before being selected as candidates as tuna scientific observers.

A national scientific observer was dispatched on board the Chinese Atlantic tuna longline fishing fleet in January 2006. The observer worked on board the fishing vessel for a three-month period (from January 20 to April 24, 2006) and measured 516 bigeye, 29 yellowfin, and the other tuna and tuna-like species during his mission. The area covered was 04°48’N -11°53’N, 27°00’W-37°43’W. An observer will be dispatched on board the Chinese Atlantic tuna longline fishing fleet in October, 2007.

In accordance with the 2006 Recommendation by ICCAT establishing a program for transshipment at sea, Chinese LSTLVs operating in ICCAT waters have financed the respective cost of implementing this ICCAT observer program based on their quota allocated by the BDWF-CFA. The CFA has strictly abided by the ICCAT

observer program. The CFA 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 that the transshipment was conducted in accordance with this recommendation. This confirmation was based on the information obtained through the ICCAT Observer Program.

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Table 1a. Catches of tunas and tuna-like species (in round weight, t), 1993-1998.

<i>Species</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>
Bluefin tuna	--	97.4	136.9	92.8	48.7	85.3
Yellowfin tuna	139.0	155.9	200.0	124.3	83.6	698.3
Bigeye tuna	70.1	428.3	475.7	519.8	427.1	1502.9
Swordfish	72.5	85.7	104.2	131.9	39.6	365.3
Albacore	--	14	8	20	--	--
Skipjack	--	--	--	--	--	4
Unspecified shark	--	--	--	--	--	5
Short mako	--	--	--	--	--	--
Spearfish	--	--	--	--	--	2.4
Blue marlin	--	--	--	--	--	--
White marlin	--	--	--	--	--	3.6
Sailfish	--	--	--	--	--	--
Other	41.0	68	76.0	80	90	--
Total	322.6	849.3	1,000.8	968.8	689.0	2,666.9

Table 1b. Catches of tunas and tuna-like species (in round weight, t), 1999-2006.

<i>Species</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
Bluefin tuna	103	79.6	68.1	39.1	19.3	41.0	23.7	42
Yellowfin tuna	2,190	1,674.2	1,055.8	696.7	1,049.7	1,305.2	1,185.5	1,085
Bigeye tuna	7,347	6,563.5	7,210	5,839.5	7,889.7	6,555.3	6,200.2	7,200
Swordfish	838	365.6	302	513.2	669.1	333.6	199.2	372
Albacore	60	104.7	82.7	225.7	181.6	144.3	206.5	302
Skipjack	--	--	--				0	0
Unspecified								
Shark	31	--	--				--	--
Short mako	--	152.8	--				--	--
Spearfish	--	--	--				--	--
Blue marlin	--	23.2	91.6	87.8	88.5	58.4	96.3	99
White marlin	--	2.4	19.8	22.8	7.6	6.5	8.6	5.6
Sailfish	--	7.4	8.1	11.7	4.7	4.5	7.8	16
Other	415	234.2	532.4	590.3	137.4	173.1	1040.9	785
Total	10,984	9207.6	9,370.4	8,026.8	10,048	8,621.7	8,968.7	9,906.6

Table 2. Catch (kg) composition and nominal CPUE (fish/1000 hooks). (From observer data January 20 to April 24, 2006).

<i>Species</i>		<i>Jan</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>Sub-total</i>
Bigeye (BET)	No.	271	500	850	1,325	2,946
	Catch	9,398	20,770	26,857	32,375	89,400
	CPUE	9.68	7.22	11.0	20.51	12.10
Yellowfin (YFT)	No.	111	217	73	205	606
	Catch	4,861	9,490	3,191	2,355	19,897
	CPUE	3.96	3.13	0.94	3.17	2.80
Swordfish (SWO)	No.	8	22	19	23	72
	Catch	402	854	659	1,162	3,077
	CPUE	0.29	0.63	0.25	0.36	0.38
Blue marlin (Bum)	No.	0	8	12	13	33
	Catch	0	300	710	570	1,580
	CPUE	0.20	0.23	0.16	0.2	0.20
Total	No.	390	747	954	1566	3656
	Catch	14,661	31,414	31,417	36,462	113,954
	CPUE	14.13	11.21	12.35	24.24	15.48

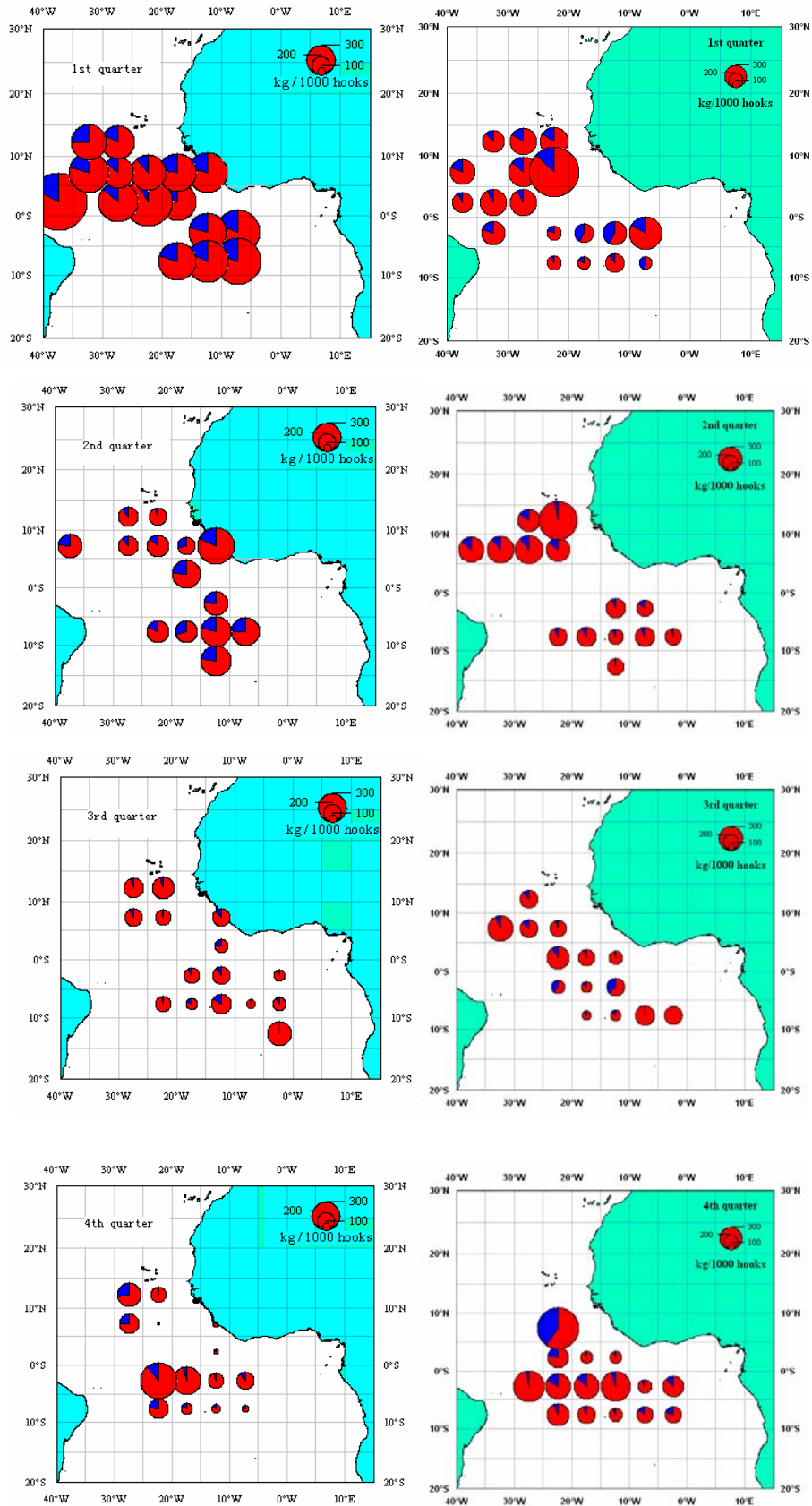


Figure 1. The CPUE distribution of bigeye tuna (in red or dark gray) and yellowfin (in blue or black) by 5°x5° and quarter in 2005 (left panel) and 2006 (right panel).

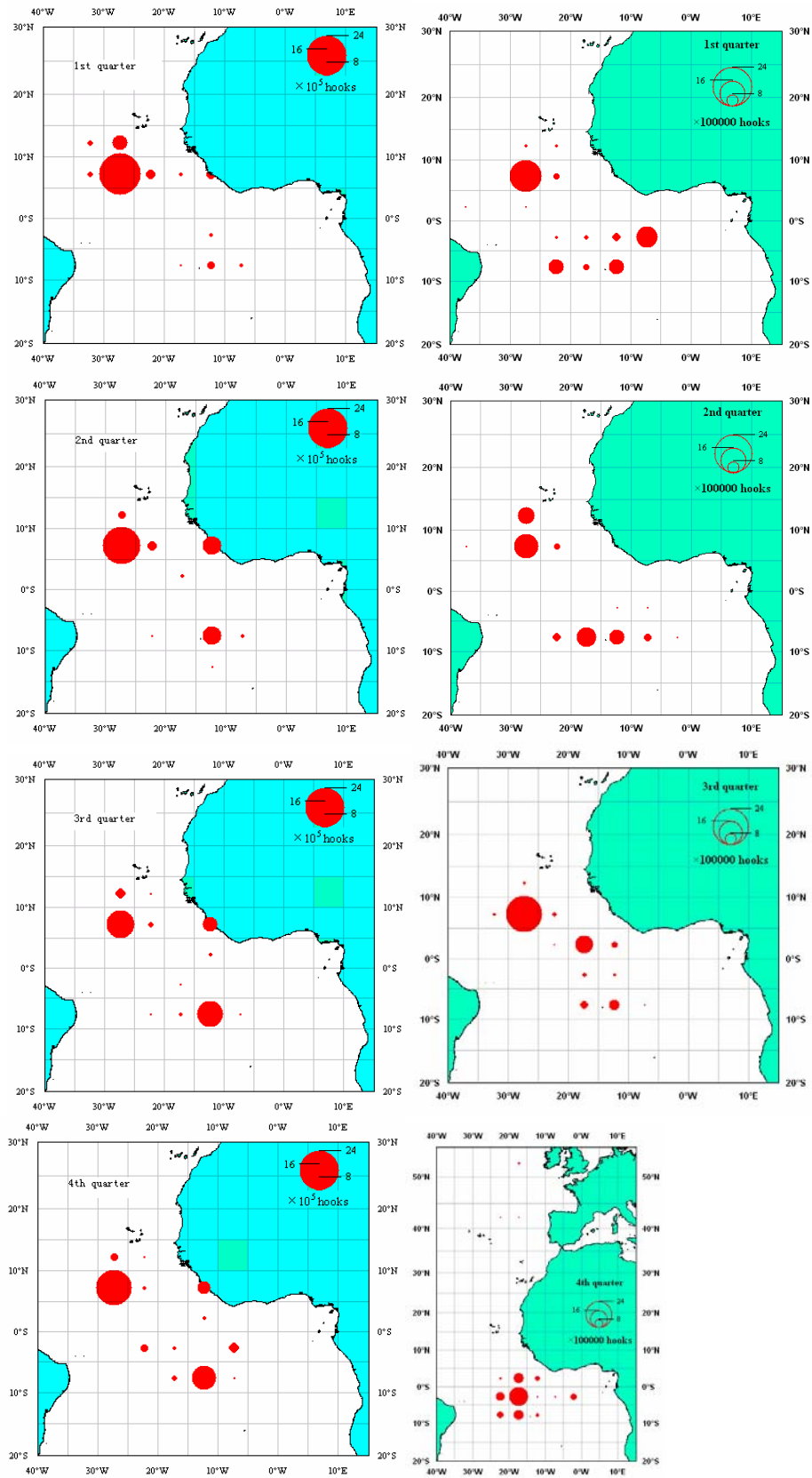


Figure 2. Distribution of fishing effort by 5°x5° and quarter in 2005 (left panel) and 2006 (right panel).

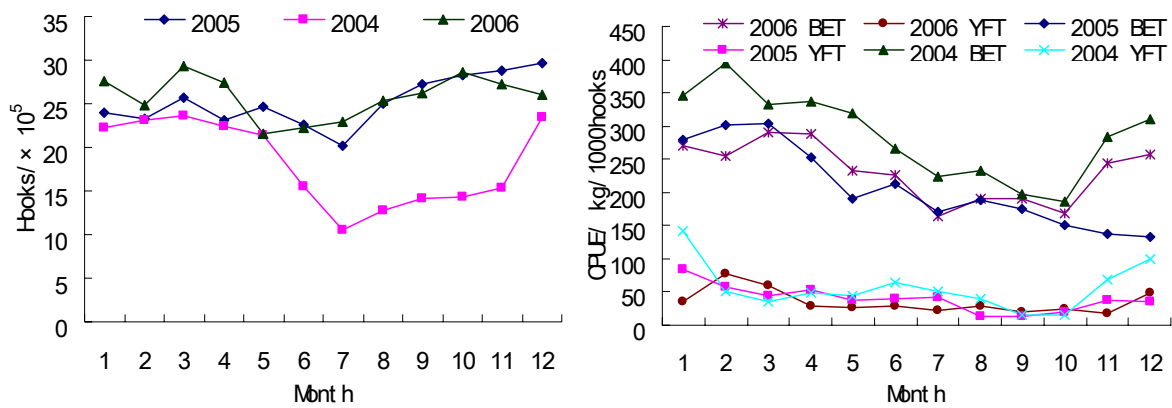


Figure 3. Distribution of fishing effort (left panel) and CPUE (bigeye-BET and yellowfin-YFT, right), by month in 2004-2006.

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

N'Da Konan¹ et Dédo Gnégoury René²

SUMMARY

Côte d'Ivoire, by means of tuna vessel observation, monitors the European (French and Spanish) industrial fishery. In 2006, some 23 tuna vessels processed 123,404 tons (t) of tunas (landings, transshipments, canneries) and reported 19,082 t of "false fish" (comprised of large pelagics rejected by the canneries, of small tunas and all other species landed by the purse seiners). High seas driftnet artisanal fishing is carried out by Ivorian and Ghanaian fishers. Overall, these vessels carried out slightly more than 19,396 trips with 18,698 fish sampled and also landed large tunas (yellowfin, skipjack), some small tunas (Atlantic black skipjack et frigate tunas), billfish (marlins, sailfish), swordfish and sharks. Thus, the amounts landed were: 2,047.69 t of large pelagics, 468.93 t of small tunas, 296.11 t of billfish and swordfish, and 81.83 t of sharks.

RÉSUMÉ

La Côte d'Ivoire, par le biais de l'Observatoire thonier, suit la pêcherie industrielle européenne représentée par les flottilles française et espagnole. En 2006, avec 23 thoniers, il a été traité 123.404 tonnes de thons (débarquements, transbordements, conserveries) et enregistré 19.082 tonnes de "Faux thons" (composés de grands pélagiques refusés par les conserveries, de thonidés mineurs et toute autre espèce débarquées par les senneurs). La pêcherie artisanale hauturière au filet maillant est pratiquée par les Ivoiriens et les Ghanéens. Dans l'ensemble, ils ont effectué un peu plus de 19.396 sorties, dont 18.698 enquêtées et ont débarqué aussi bien des grands thonidés (albacore, listao), des thonidés mineurs (thonines et auxides), des billfish (marlins, voiliers), espadons et requins. Ainsi, s'établit-il comme quantités débarquées : 2.047,69 tonnes de grands pélagiques; 468,93 tonnes de thons mineurs; 296,11 tonnes de billfish, espadons, et 81,83 tonnes de requins.

RESUMEN

Côte d'Ivoire, mediante el observatorio atunero, hace un seguimiento de la pesquería europea industrial representada por las flotas francesa y española. En 2006, con 23 atuneros, se han tratado 123.404 t de túnidos (desembarques, transbordos y conserveras) y se han registrado 19.082 t de "faux thons" (compuesto por grandes pelágicos rechazados por las conserveras, por pequeños túnidos y por cualquier otra especie desembarcada por los cerqueros). En Ghana y Côte d'Ivoire se practica la pesquería artesanal de altura con redes de enmalle. En total, se han efectuado algo más de 19.396 salidas, de las cuales 18.698 han sido objeto de una encuesta y se han desembarcado también grandes túnidos (rabil y listado), pequeños túnidos (bacoreta y melva), peces de pico (marlines y peces vela), peces espada y tiburones. Así, las cantidades desembarcadas son las siguientes: 2.047,69 t de grandes pelágicos; 468,93 t de pequeños túnidos; 296,11 t de peces de pico, y 81,83 t de tiburones.

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

Chapitre 1: Information annuelle sur les pêcheries

1.1 Information sur les pêcheries

La Côte d'Ivoire dispose d'un réseau hydrographique dense composé de fleuves, rivières, retenues d'eaux hydroélectriques et hydro-agricoles, de plans d'eau lagunaire et surtout d'une zone littorale maritime de 550 km de long.

¹ Université d'Abobo-Adjamé/CRO- 02 BP 801 Abidjan 02(Côte d'Ivoire). E-mail: ndakonanci@yahoo.fr

² Centre de Recherches Océanologiques. Email: rymer_zak@yahoo.fr

La pêche industrielle maritime, tout comme celle artisanale maritime, principales activités pratiquées dans la zone littorale, représentent au niveau national une source d'alimentation pour la population, contribuent à l'édification du tissu industriel du pays, procurent de nombreux emplois et concourent à l'équilibre de la balance commerciale grâce aux exportations. Le présent rapport fait la synthèse des données relatives aux grands pélagiques, particulièrement les thons au port de pêche d'Abidjan, à travers les activités des thoniers (français, ghanéens, guinéens, espagnols et assimilés), celles des piroguiers aux filets maillants dérivants sur les côtes ivoiriennes. Il met également l'accent sur l'importance du débarquement du « Faux Thon » ou « faux poisson ».

1.2 La pêche industrielle

La Côte d'Ivoire, bien que dépourvue de thoniers, joue un rôle très important dans la gestion des thonidés de l'Atlantique. La recherche halieutique marine et lagunaire y est assurée par le Centre de Recherches Océanologiques (CRO). Comme les années antérieures, au cours de l'année 2006, la pêche industrielle thonière a été suivie par le CRO en partenariat avec l'Institut français de Recherche pour le Développement (IRD) et l'Institut Espagnol d'Océanographie (IEO).

Les débarquements de thons au port de pêche d'Abidjan durant l'année 2006 ont été essentiellement assurés par des senneurs français et espagnols. A ces bateaux se sont ajoutés ceux battant pavillons d'autres pays dont particulièrement le Ghana. Au total, 32 bateaux ont débarqué ou transbordé au port de pêche d'Abidjan en 2006 (**Tableaux 1 et 2**). Ces bateaux se répartissent comme suit : 17 espagnols, 6 français, 7 ghanéens et 2 de Guinée Conakry.

L'activité thonière au cours de l'année 2006 a donné pour toutes les flottilles confondues un résultat de 142.482 tonnes de thons débarqués, dont 39,7% soit 56.585 tonnes destinés aux conserveries, 46,9% soit 66.815 tonnes à l'exportation et 13,4% soit 19.082 tonnes de « faux poisson » vendus au marché local.

Par ailleurs, nous procédons chaque année à l'estimation des quantités de thons pêchées dans la Zone Economique Exclusive (ZEE) ivoirienne à partir des déclarations de l'Union européenne. Ces captures déclarées présentent une variabilité interannuelle et saisonnière importante: 14% des captures françaises en Atlantique tropical en 1999, 8% en 2000, 12% en 2001, 3% en 2002, 15% en 2003, 5% en 2004 et 2,6% en 2005 (**Tableau 3**).

Parallèlement au thon des conserveries, les senneurs débarquent du thon destiné au marché local appelé communément "Faux Poisson" dont le tonnage de 2006 est légèrement inférieur à celui de 2005 : 19.082 tonnes en 2006 (**Tableau 5**) et 20.751 tonnes en 2005 (**Tableau 4**). Ce faux poisson correspond aux thons refusés par les usines parce que trop petits, trop salés ou trop abîmés pour la transformation. Dans ces conserveries, l'on ne traite que l'albacore (*Thunnus albacares*), le listao (*Katsuwonus pelamis*), le patudo (*Thunnus obesus*) et le germon (*Thunnus alalunga*). Les prises accessoires constituent l'autre grande partie du Faux poisson. On y retrouve principalement l'auxide (*Auxis thazard*), la thonine (*Euthynnus alletteratus*), le poisson banane (*Elagatis bipinnulata*), le baliste, le barracuda et le thon blanc ou wahoo (*Acanthocybium solandri*). Au nombre des poissons porte-épée, il n'a pas été relevé d'espadon (*Xiphias gladius*) dans les prises accessoires; les prises de marlin bleu (*Makaira nigricans*) et de voiliers (*Istiophorus albicans*) se trouvent au **Tableau 6**.

1.3 Les pêcheries artisanales

Une équipe de trois enquêteurs opère quotidiennement sur les deux points de récolte de données. Sur le plateau continental ivoirien existe une pêcherie artisanale qui exploite les thons et autres grands pélagiques. C'est une pêcherie piroguière aux filets maillants dérivants qui a débuté en 1984. Depuis 1988, cette pêche artisanale fait l'objet d'un suivi régulier qui est actuellement amélioré dans le cadre du « programme Billfish » de l'ICCAT. Les principaux groupes de poissons débarqués sont : les Istiophoridés (voiliers et marlins), les Xiphiidés (espadons), les requins et les petits thonidés. Les pêcheurs utilisent des pirogues qui pêchent de nuit au filet maillant dérivant à proximité d'Abidjan d'où ils peuvent facilement écouler leurs captures. La zone de pêche se situe à environ 5 à 10 milles de la côte au-delà du plateau continental qui est peu étendu. Le coup de filet dure une nuit et les poissons sont directement vendus chaque matin au port de pêche d'Abidjan et dans d'autres débarcadères annexes. Les espèces de poissons porte-épée débarquées et de loin les plus abondantes sont : marlin bleu (*Makaira nigricans*), marlin blanc (*Tetrapturus albidus*), voilier (*Istiophorus albicans*) et espadon vrai (*Xiphias gladius*). Les requins composés essentiellement de requins soyeux (*Carcharhinus falciformis*), requins marteaux sans creux (*Sphyrna zygaena*), requin marteaux avec creux (*S. lewini*) et requins makos (*Isurus spp*) viennent quantitativement en deuxième position (**Tableau 7**). Les thonidés tels que l'albacore (*Thunnus albacares*), le listao (*Katsuwonus pelamis*) l'auxide (*Auxis thazard*) et la thonine (*Euthynnus alletteratus*) sont

accessoirement débarqués de manière accidentelle, les gros poissons comme le patudo (*Thunnus obesus*), des raies manta (*Manta Spp*), des wahoo (*Acanthocybium solandri*), des coryphènes (*Coryphena sp*), des tortues (*Chelonia mydas*, *dermochelys coriacea*) et quelques dauphins sont capturés par les pêcheurs artisanaux. Le **Tableau 7** présente les captures totales pondérales annuelles des grands pélagiques (porte-épée et requins) par la pêche piroguière au filet maillant dérivant. Ainsi, plus de 300 tonnes de grands pélagiques (porte-épée et requins) sont capturés annuellement par cette pêcherie, en plus des petits et grands thonidés (**Tableau 8**).

1.4 Les conserveries

L'activité thonière au cours de l'année 2006 a donné pour toutes les flottilles confondues un résultat de 142.482 tonnes de thons débarqués, dont 39,7% soit 56.585 tonnes destinés aux conserveries, 46,9% soit 66.815 tonnes à l'exportation et 13,4% soit 19.082 tonnes de « faux poisson » vendus au marché local. Avec la réouverture de SCODI au cours de l'année 2006, les conserveries sont passées de deux à trois; les deux autres étant CASTELLI et PÊCHE ET FROID.

Comparativement à l'année 2005, il y a eu amélioration du résultat en 2006 au niveau des thons de conserveries et d'exportation (123.404 tonnes en 2006 contre 97.870 tonnes en 2005) avec un trafic de 222 marées contre 184 en 2005.

Chapitre 2: Recherche et statistiques

Un travail régulier de suivi scientifique est effectué par le Centre de Recherches Océanologiques. Ce suivi comprend le recueil des statistiques de capture et d'effort de pêche.

La Côte d'Ivoire, bien que dépourvue de thoniers, joue un rôle très important dans la gestion des thonidés de l'Atlantique. Son système repose sur une enquête détaillée par jour, auprès des patrons thoniers lors de chaque débarquement, complétée par les captures effectives de diverses sources (usines, armements, Manifeste du port). Ce travail de collecte des données, exécuté par sept enquêteurs et une opératrice de saisie, est supervisé par un technicien supérieur halieute. L'ensemble des renseignements sont saisis sous logiciel AVDTH, codés, et mis sous support informatique, ensuite centralisés après traitement, vérification et correction. La gestion des données se fait en collaboration avec l'IRD et l'IEO.

En pêche artisanale maritime, trois types de recueil de données sont exécutés : le recensement du parc piroguier et des engins de pêche, le relevé de l'effort de pêche et l'enquête portant sur les captures, sur les fréquences de taille et sur les prix. Compte tenu du manque de moyen financier, le recensement de la flottille piroguière est concentré autour d'Abidjan. Il est mené par les enquêteurs de pêche artisanale. Les informations collectées concernent les points d'attache et d'origine de la pirogue, l'équipage, l'activité, la puissance du moteur, les engins utilisés, etc. Le relevé de l'effort de pêche est effectué au niveau des deux principaux points de débarquement. Il est effectué par les trois enquêteurs (deux au quai principal et un au nouveau quai). A partir des enquêtes effectuées par ceux-ci et pour chaque quai, nous déterminons les captures spécifiques et les fréquences de taille.

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

Chapitre 3: Mesures en œuvre de conservation et de gestion

Afin de mettre en œuvre les recommandations de l'ICCAT, la Côte d'Ivoire, prend de plus en plus toutes les dispositions pour réglementer la pêche thonière dans sa ZEE. Entre autres dispositions, il y a l'établissement d'un système de suivi, de contrôle et de surveillance de toutes les activités de pêche. Il y a également une inspection au port et l'identification de tout navire menant des activités de pêche illicites et ceci aux fins d'une gestion convenables de ses ressources halieutiques.

Chapitre 4: Schémas d'inspection

La Côte d'ivoire dispose d'un schéma d'inspection mis en place au port. Tous les débarquements nationaux comme étrangers font l'objet d'un suivi et d'une inspection.

Tableau 1. Thoniers européens et assimilés et leurs caractéristiques.

<i>Thoniers</i>	<i>Pavillon</i>	<i>Type</i>	<i>Capacité</i>	<i>Année</i>
Albacora 10	Panama	Senneur	800 – 1200 T	1977
Albacora 9	Panama	Senneur	800 – 1200 T	1976
Albacora Caribe	Panama	Senneur	800 – 1200 T	1990
Alboniga	Espagne	Senneur	400 – 600 T	1988
Almadraba uno	Espagne	Senneur	600 – 800 T	1975
Avel Viz	Français	Senneur	400 – 600 T	1984
Bermeotarak Tres	Espagne	Senneur	800 – 1200 T	1988
Cap Saint Paul	France	Senneur	400 – 600 T	1982
Cap saint Pierre 2	France	Senneur	400 – 600 T	1979
Egaluze	Espagne	Senneur	400 – 600 T	1983
Galerna	Ant. Hol	Senneur	800 – 1200 T	1979
Germon	Maroc	Senneur	800 – 1200 T	1979
Kurtxio	Espagne	Senneur	600 – 800 T	1975
Matxikorta	Espagne	Senneur	600 – 800 T	1975
Montecelo	Cap Vert	Senneur	800 – 1200 T	1980
Montefrisa 9	Cap Vert	Senneur	800 – 1200 T	1984
Père Briant	France	Senneur	600 – 800 T	1974
Sant Yago Uno	Guatemala	Senneur	800 – 1200 T	1991
Sant Yago Dos	Guatemala	Senneur	800 – 1200 T	1993
Santa Maria	France	Senneur	400 – 600 T	1982
Txirrine	Espagne	Senneur	400 – 600 T	1971
Txori-Eder	Espagne	Senneur	600 – 800 T	1976
Via Harmattan	France	Senneur	600 – 800 T	1973

Tableau 2. Thoniers ghanéens et assimilés et leurs caractéristiques.

<i>Thoniers</i>	<i>Pavillon</i>	<i>Type</i>	<i>Capacité</i>	<i>Année</i>
Agnes N°1	Ghana	Senneur	800 – 1200 T	1975
Antilla	Ghana	Cargo	-	-
Aurora 2	Ghana	Cargo	3000 T	-
Bermeotarak Cuatro	Ghana	Senneur	800 – 1200 T	1980
Belouga	Guinée K.	Senneur	400 – 600 T	1974
Electra	Ghana	Cargo	1400 T	-
Marine 703	Ghana	Senneur	400 – 600 T	1974
Marine 707	Ghana	Senneur	400 – 600 T	1975
Mervent	Guinée K.	Senneur	400 – 600 T	1974
Panofi Master	Ghana	Senneur	600 – 800 T	1988

Tableau 3. Captures en tonnes dans la ZEE ivoirienne.

<i>Année</i>	<i>Pavillon français</i>	<i>Pavillon espagnol</i>	<i>Total UE (senneurs)</i>
1999	7005	1903	8908
2000	4047	1228	5275
2001	5678	1241	6919
2002	1461	241	1702
2003	7859	2490	10349
2004	2901	2735	5636
2005	1853	703	2556
2006	non parvenu	non parvenu	non parvenu

Tableau 4. Récapitulatif des résultats de l'année 2005 (t : tonne; U : Usine; FT : faux thons).

<i>Pavillons</i>	<i>Marées</i>	<i>Jours de mer</i>	<i>Thons usines (t)</i>	<i>Faux thons (t)</i>	<i>Total (U+FT)</i>
Espagnols et assimilés	97	3359	52479	6279	58758
Français	53	1395	21931	2136	24067
Ghanéens et Guinéens	34	-	23460	12336	35796
Total	184	4754	97870	20751	118621

Tableau 5. Récapitulatif des résultats de l'année 2006 (t : tonne ; U : Usine ; FT : Faux thons).

<i>Pavillons</i>	<i>Marées</i>	<i>Jours de mer</i>	<i>Thons usines (t)</i>	<i>Faux thons (t)</i>	<i>Total (U+FT)</i>
Espagnols et assimilés	136	3970	73601	5789	79390
Français	52	1238	23264	1365	24629
Ghanéens et Guinéens	34	-	26539	11928	38467
Total	222	5208	123404	19082	142482

Tableau 6. Prises accessoires: captures des poissons porte-épée marlin bleu (*Makaira nigricans*) et de voilier (*Istiophorus albicans*) de 2001 à 2006.

<i>Année</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
Marlin bleu	53690	65543	75590	71822	67034	46685
Voilier	12257	23177	18032	6835	12207	14754

Tableau 7. Captures annuelles (tonnes) de poissons porte-épée et requins par les filets maillants dérivants, en Côte d'Ivoire, de 1988 à 2006.

<i>Années</i>	<i>Effort effectif</i>	<i>Voiliers T. albicans</i>	<i>M. bleus M. nigricans</i>	<i>M.blanc T. albidius</i>	<i>Espadons X. gladius</i>	<i>Requins Divers</i>	<i>Total (tonne)</i>
1988	2 908	65.6	130.3	-	12.22		208.1
1989	2 430	54.5	82.0	-	6.77		143.3
1990	2 920	57.9	88.1	-	7.52		153.5
1991	4 981	38.2	105.1	-	18.02	55.7	217.0
1992	6 196	68.8	79.2	-	13.05	101.4	262.5
1993	7 707	39.5	139.5	-	14.42	90.1	283.5
1994	12 756	54.4	211.6	-	19.98	110.9	396.9
1995	14 141	66.3	176.7	-	18.78	106.6	368.4
1996	14 478	90.6	157.4	0.7	25.76	103.4	377.9
1997	12 874	65.1	222.1	1.8	17.66	91.1	397.8
1998	10 328	35.3	182.4	0.9	25.12	55.6	299.3
1999	15 244	80.1	275.5	5.4	25.72	58.1	444.8
2000	12 145	44.5	205.9	1.2	20.10	47.4	319.1
2001	13 994	47.0	196.0	2.4	18.90	68.4	332.7
2002	13 061	65.4	77.9	1.8	19.00	63.2	227.3
2003	27 464	121.0	109.0	3.0	43.00	101.4	377.4
2004	36 779	72.6	114.7	0.9	28.60	48.1	264.9
2005	20 395	93.03	107.0	1.0	31.00	73.0	305.03
2006	19 993	78,21	177.64	0.78	39.48	59.81	355,92

Tableau 8. Captures annuelles (tonnes) de petits thonidés par les filets maillants dérivants en 2005 et 2006.

<i>Année</i>	<i>Total Sorties</i>	<i>Sorties enquêtées</i>	<i>Albacore</i>	<i>Listao</i>	<i>Thonine</i>	<i>Auxide</i>
2005	17056	4223	175,4	1259,4	269,9	3,8
2006	19396	18698	482,44	1565,3	298,3	170,5

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

Vlasta Franičević ¹

SUMMARY

The total Croatian catch of tuna and tuna-like fishes in 2006 was 1,022.6 metric tons (t). 100% of the catch is bluefin tuna. The total catch has been caught by purse seine and transferred into floating cages for growing purposes. Additionally, 1,642 t of large bluefin tuna have been imported in Croatia in 2006 from France, Italy and Libya for growing purposes. The number of licensed vessels actively fishing for tuna and tuna-like species in 2006 was 30. In 2006, within the framework of the Bluefin Year Program (BYP), a study on bluefin tuna farming based on the tagging of live specimens in captivity was completed, analyzed and prepared for publication. Logistical efforts supported by the BYP were made in order to increase the probability of spotting and collecting conventional and electronic tags from bluefin tuna taken to the bluefin tuna farms in the Adriatic Sea. A review was made of the different tagging activities carried out on bluefin tuna in the eastern Atlantic and Mediterranean Sea during 2005, as reported in document SCRS/2006/171. All the conservation and management measures regarding bluefin tuna fisheries and farming are incorporated in national legislation.

RÉSUMÉ

La prise totale de thonidés et d'espèces apparentées de la Croatie en 2006 s'est élevée à 1.022,6 tonnes métriques (t) ; la totalité de la prise se composait de thon rouge. La prise totale a été réalisée à la senne et transférée dans les cages flottantes aux fins d'engraissement. 1.642 t de grands thons rouges ont également été importées en Croatie en 2006, en provenance de la CE-France, la CE-Italie et la Libye aux fins d'engraissement. En 2006, 30 navires titulaires de licence ont activement pêché des thonidés et des espèces apparentées. Dans le cadre du Programme d'Année Thon Rouge (BYP), une étude portant sur l'engraissement du thon rouge, et basée sur le marquage de spécimens vivants en captivité, a été achevée, analysée et préparée en vue de sa publication en 2006. Des efforts logistiques, soutenus par le BYP, ont été déployés afin d'accroître la probabilité de détecter et de collecter des marques conventionnelles et électroniques apposées sur des thons rouges provenant des établissements d'engraissement de thon rouge en Mer Adriatique. En 2005, on a procédé à l'examen des diverses activités de marquage du thon rouge dans l'Atlantique Est et la Méditerranée, comme cela est consigné dans le SCRS/2006/171. Toutes les mesures de conservation et de gestion relatives aux pêcheries et à l'engraissement du thon rouge sont incluses dans la législation nationale.

RESUMEN

La captura total croata de túnidos y especies afines en 2006 fue de 1.022,6 t; el 100% de la captura es atún rojo. La captura total la realizaron los cerqueros y fue transferida a jaulas flotantes para su engorde. Además, 1.642 t de atún rojo grande fueron importadas a Croacia en 2006 desde Francia, Italia y Libia para su engorde. El número de buques con licencia que pescó activamente túnidos y especies afines en 2006 fue de 30. En 2006, en el marco del Programa Año del Atún Rojo (BYP), se realizó, analizó y preparó para su publicación un estudio sobre el engorde del atún rojo basado en el marcado de especímenes vivos en cautividad. Los esfuerzos logísticos, respaldados por el BYP, se hicieron para incrementar la probabilidad de detectar y recopilar marcas convencionales y electrónicas de atunes rojos que se encontraban en instalaciones de engorde de atún rojo en el Adriático. En el SCRS/2006/171 se informa sobre una revisión de las diferentes actividades de marcado llevadas a cabo respecto al atún rojo en el Atlántico oriental y el Mediterráneo durante 2005. Todas las medidas de conservación y ordenación relacionadas con las pesquerías y el engorde de atún rojo se han incorporado a la legislación nacional.

¹Ministry of Agriculture, Forestry and Water Management, Directorate of Fisheries, Croatia, Ivana Mažuranića 30, 23000 Zadar,
E-mail: mps-uprava-ribarstva@zd.htnet.hr

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The total Croatian catch of tuna and tuna-like fishes in 2006 was 1,022.6 metric tons (t). The catch is comprised entirely of bluefin tuna. The total catch was caught by purse seine and transferred into floating cages for growing purposes. Additionally, 1,642 t of large bluefin tuna were imported in Croatia in 2006 from France, Italy and Libya for growing purposes. There were 30 licensed vessels actively fishing for tuna and tuna-like species in 2006.

Section 2: Research and Statistics

During 2006, within framework of the Bluefin Year Program (BYP) a study on bluefin tuna farming based on the tagging of live specimens in captivity, and all tagged specimens that remained in the cages were harvested at beginning of the year. The results of all these research activities were summarized, analyzed and prepared for publication. At the end of this year, logistical efforts supported by the BYP were made to increase the probability to spot and to collect conventional and electronic tags from bluefin tuna taken to bluefin farms in the Adriatic Sea.

In addition, a review was made of the different tagging activities carried out on bluefin tuna in the eastern Atlantic and Mediterranean Sea during 2005, as was reported in Ticina (2007).

A national sampling program targeting bluefin tuna harvested from aquaculture facilities has been carried out in accordance with Recommendation 05-04. Within framework of this sampling program, collection of Task II data has been done.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

All conservation and management measures regarding bluefin tuna fisheries and farming are incorporated in national legislation.

Section 4: Inspection Schemes and Activities

Croatia has nothing to report at this time.

Section 5: Other Activities

Croatia has nothing to report at this time.

Reference

TICINA, V. 2007. Tagging of the northern bluefin tuna (*Thunnus thynnus*) in the East Atlantic and Mediterranean Sea in 2005. Collect. Vol. Sci. Pap. ICCAT, 60(4): 1416-1420.

**ANNUAL REPORT OF EQUATORIAL GUINEA
RAPPORT ANNUEL DE LA GUINÉE ÉQUATORIALE
INFORME ANUAL DE GUINEA ECUATORIAL**

José Bikoro Eko Ada¹

SUMMARY

The Republic of Equatorial Guinea, a country geographically located in the Gulf of Guinea, is bounded on the North by the Republic of Cameroon, on the East and South by the Republic of Gabon, and on the West by the Atlantic Ocean. The country is divided into two major regions: an insular region, which encompasses the Islands of Bioko and Annobon, and a Continental Region (Muni River), where the Islands of Greater Elobey, Lesser Elobey and adjacent islets. Equatorial Guinea has a surface area of 28,051.46 km², distributed as follows: Bioko Island 2,017 km², Annobon Island 17.00 km², Continental area 26,000 km², Corisco island 15.00 km², Greater Elobey 2.27 km², and Lesser Elobey 0.19 km². The Exclusive Economic Zone of Equatorial Guinea has a surface area of 312,000 km², around the Islands of Bioko and Annobon and off the coasts of the Continental Region. The major characteristics of this maritime extension or Exclusive Economic Zone are: continental platform area (from 0-200 m depth) 14,710 km², continental shelf area (200-700 m depth) 3,080 km², Exclusive Economic Zone area 312,000 km², length of the coasts 410 Km., and length of the continental shelf 425 Km.

RÉSUMÉ

La République de Guinée équatoriale est située dans le Golfe de Guinée. Elle est limitée par la République du Cameroun au nord, par la République du Gabon à l'est et au sud et débouche sur l'Océan Atlantique à l'ouest. Le pays est divisé en deux régions principales : une région insulaire, qui englobe les îles de Bioko et d'Annobon, et une région appelée continentale (Río Muni), à laquelle sont rattachées les îles de Corisco, d'Elobey Grande, d'Elobey Chico et les îlots adjacents. La superficie de la Guinée équatoriale est de 28.051,46 km² et se distribue comme suit : île de Bioko 2.017 km²; île d'Annobon 17,00 km²; surface continentale 26.000 km²; île de Corisco 15,00 km²; île d'Elobey Grande 2,27 km² et île d'Elobey Chico 0,19 km². La Zone Economique Exclusive de la Guinée équatoriale s'étend sur 312.000 km², autour des îles de Bioko et d'Annobon, face aux côtes de la région continentale. Cette étendue maritime ou Zone Economique Exclusive se caractérise notamment par une zone de la plate-forme continentale de 0-200 m de profondeur (14.710 km²) ; une zone du talus continental de 200-700 m de profondeur (3.080 km²) ; une zone de la Zone Economique Exclusive de 312.000 km²; une longueur de côtes de 410 km et une longueur du talus continental de 425 km.

RESUMEN

La República de Guinea Ecuatorial, país enclavado geográficamente en el seno del Golfo de Guinea, limita al Norte con la República de Camerún, al Este y Sur con la República de Gabón y al Oeste con el Océano Atlántico. El país está dividido en dos regiones principales: una región Insular, que engloba las islas de Bioko y Annobon, y una región denominada Continental (Río Muni), donde están integradas las islas de Corisco, Elobey Grande, Elobey Chico e islotes adyacentes. La extensión superficial de Guinea Ecuatorial es de 28.051,46 km², distribuida como sigue: Isla de Bioko 2.017 km²; Isla de Annobon 17,00 km²; superficie Continental 26.000 km²; Isla de Corisco 15,00 km²; Isla de Elobey Grande 2,27 km²; e Isla de Elobey Chico 0,19 km². La Zona Económica Exclusiva de Guinea Ecuatorial alcanza una superficie de 312.000 km², alrededor de las Islas de Bioko y Annobon y frente a las costas de la Región Continental. Las características principales de esta extensión marítima o Zona Económica Exclusiva son: Área de la plataforma continental de 0-200 m de profundidad) 14.710 km²; área de talud continental (200-700 m de profundidad) 3.080 km²; área de la Zona Económica Exclusiva 312.000 km²; longitud de las costas 410 Km.; y longitud del talud continental 425 Km.

¹ Ministerio de pesca y Medioambiente, Dirección General de Pesca, Carretera de Luba s/n, Malabo; Email: bikoroeko@hotmail.com

Parte I (Información sobre Pesquerías, Investigación y Estadística)

Sección 1: Información anual sobre pesquerías

El sector de la pesca de la República de Guinea Ecuatorial, está compuesto principalmente de tres tipos de pesquerías: la pesca industrial, la pesca artesanal marítima, la pesca artesanal continental y/o acuicultura. Entre estos tres tipos de pesquerías, la pesca artesanal marítima y continental sigue enfrentándose con varias dificultades para su desarrollo óptimo.

1.1 La pesca industrial

La pesca industrial, considerada como la pesca de altura o de gran altura, sigue desde hace varias décadas en manos de las flotas extranjeras que faenan en las aguas jurisdiccionales de Guinea Ecuatorial, bajo la cobertura de los acuerdos bilaterales y multilaterales suscritos con países y organizaciones internacionales.

La ausencia de una pesca industrial nacional es significativa, y está motivada por la falta de una flota industrial propia que explote los abundantes recursos halieúticos existentes.

No obstante, el Gobierno ha constatado que la sostenibilidad de la política pesquera y su desarrollo sectorial no puede descansar en la voluntad de las flotas pesqueras extranjeras, que pueden obtener licencias cuando quieren y retirarse a su merced. Conviene asentar el desarrollo sectorial en la creación de una empresa nacional que constituya el instrumento nacional de desarrollo del sector y el brazo ejecutor de su política pesquera. Con esta iniciativa se espera crear la capacidad nacional que permita la explotación de los recursos, garantizar y asegurar el abastecimiento permanente de pescado variado a la población, llevar a la exportación las especies con gran demanda en los mercados internacionales, manteniendo así la sostenibilidad productiva del sector.

Sobre esta base, el Gobierno de Guinea Ecuatorial crea la Sociedad Nacional de Pesca (SONAPESCA), la cual viene a constituir el brazo motriz para una explotación racional y ordenada de los recursos pesqueros.

Mientras que la Sociedad Nacional de Pesca sigue en la fase organizativa de su funcionamiento estructural, la producción de la pesca industrial, aproximadamente el 90%, sigue en manos de las flotas extranjeras, siendo su producción llevada a la exportación en los mercados internacionales, fundamentalmente en lo que concierne a las especies con gran demanda en esos mercados como son los túnidos y otras especies.

La zona marítima de Annobon, situada a 600 km al Sur de la Isla de Bioko entre los paralelos 1:01°25S, L:05°37E, es la más rica en recursos de túnidos, con una estimación de producción anual máxima equilibrada de más de 55.000 t/año.

Durante el último Convenio suscrito con la Unión Europea, periodo 1997-2000, que preveía la presencia de 68 barcos (30 buques cerqueros, 8 buque cañeros y 30 buques palangreros de superficie), el nivel medio de capturas durante el periodo había sido fijado en 4.000 t/anales, lo cual demuestra la existencia de abundantes recursos de túnidos en la zona marítima de Annobon, mientras que existe una previsión científica de 55.000 t/año.

Recientemente, y a mediados del pasado mes de junio de 2007, el Gobierno de Guinea Ecuatorial tiene suscrito un Contrato de Pesca con la Asociación Nacional de Armadores de Buques Atuneros Congeladores, con una previsión de ocho buques (*Txori Urden*, *Txori Eder*, *Txirriñe*, *Bermeotarak-4*, *Alboniga*, *Egaluze*, *Bermeotarak-3* y *Juan Ramón*), los cuales han sido autorizados a faenar en dicha zona de Annobon, obteniendo sus correspondientes licencias de pesca.

Esta flota, que próximamente iniciará sus actividades de pesca en la zona de Annobon, pondrá en conocimiento del Gobierno su producción de capturas, utilizando para ello los formularios de estadísticas de capturas diseñados por ICCAT.

También es bien sabido que en la zona marítima de Annobon existe una presencia de muchos barcos que faenan sin autorización, los cuales, aprovechando la insuficiencia en medios de control y vigilancia que padece el país, se embarcan en una intensa actividad ilegal, enrolados en la pesca IUU.

1.2 La pesca artesanal marítima y continental

La pesca artesanal marítima es considerada como la pesca de producción nacional por su constante apoyo en el suministro y abastecimiento de sus capturas de pescado fresco en el mercado interior.

Alrededor de 6.000 pescadores artesanales están consagrados a este sector, suministrando en los mercados locales alrededor de 28.500 t/ anuales de pescado fresco, fundamentalmente compuesto por especies pelágicas costeras y demersales de alto valor nutritivo y comercial.

Guinea Ecuatorial posee una importante red fluvial, que se desarrolla sobre una cuenca hidrográfica bien definida y que varía según cada región, lo cual favorece las actividades de pesca continental o fluvial.

En la región insular esta cuenca está formada alrededor de un grupo de picos volcánicos, con cursos de agua que irradian de los mismos, siendo sus cauces cortos y empinados, sin gran interés halieútico, mientras que en la región continental, debido al enorme volumen de precipitaciones, existen aguas de superficie que constituyen la fuente de las afluencias de una cuenca hidrográfica, con un potencial de recursos en varias especies de agua dulce, donde prácticamente se realizan las actividades de pesca.

No obstante, la pesca artesanal marítima y continental sigue enfrentándose con varias dificultades que inciden de manera negativa en varios factores de orden físico, técnico, económico, institucional y social, que limitan considerablemente su producción:

- Entre los factores de orden físico, hay que destacar el enclavamiento en que se encuentran los distintos puntos de desembarque de la pesca artesanal marítima y continental, así como la falta de una adecuada infraestructura vial en las zonas de enclavamiento, que facilite la comunicación entre los productores (pescadores) y los consumidores (mercados locales), por las distancias y dificultades de entrada.
- Entre los factores de orden técnico, se destaca la falta de infraestructuras de conservación de pescado en los puntos de desembarque, la ausencia de unas embarcaciones mejoradas y la ausencia de métodos y técnicas modernas de producción.
- Entre los factores de tipo económico, es palpable la falta de un sistema financiero y créditos en el sector de la pesca artesanal y la ausencia de inversores privados nacionales en el mismo.
- En lo concerniente a los factores de orden institucional, destaca la falta de personal capacitado, particularmente en el campo de la investigación, así como la insuficiencia de medios para la capacitación de los pescadores.
- Entre los factores de tipo socio-cultural, cabe señalar el nivel de educación de los pescadores que es limitado en conocimientos técnicos y su difícil asimilación a las iniciativas planteadas por el Gobierno de reagruparse para unir esfuerzos y, por consiguiente, aumentar su producción.

Estos factores y otros son los que frenan el desarrollo del sector de la pesca artesanal marítima y continental.

Sección 2: Investigación y estadística

Varios estudios e investigaciones científicas realizadas en el mar territorial y en la Zona Económica Exclusiva de Guinea Ecuatorial señalan que el país posee un gran potencial de desarrollo pesquero, debido a que sus recursos que tienen un gran valor comercial en los mercados de exportación.

El potencial íctico disponible para la producción se compone de cuatro grandes categorías de especies:

- Especies pelágicas,
- Especies demersales,
- Especies crustáceas, relativamente sedentarias, y
- Especies pelágicas altamente migratorias.

Las estimaciones del potencial de la producción anual máxima equilibrada de estas cuatro grandes categorías de especies, tanto en la plataforma continental como en el talud continental, la sitúan en 74.190 t, distribuidas como sigue:

– Especies pelágicas	13.000 t
– Especies demersales	5.050 t
– Especies crustáceas	740 t
– Especies pelágicas oceánicas	55.000 t
– Tiburones	400 t

El sector de la pesca de Guinea Ecuatorial carece de un dispositivo de recogida de estadísticas fiables que permitan conocer el funcionamiento y la evolución de las tendencias de las diferentes pesquerías, lo cual ha dificultado la implementación de un sistema que favorezca el seguimiento de las pesquerías en general y de las pesquerías de túnidos en particular.

La ausencia de este sistema de recopilación de datos estadísticos ha hecho que el Gobierno solicitara de las instituciones y organizaciones especializadas el apoyo necesario para implementar un sistema de recopilación de datos estadísticos que resulte favorable a la hora de emprender un seguimiento de las pesquerías, particularmente de túnidos.

Sobre esta base, el Gobierno de Guinea Ecuatorial expresó, en la reunión de ICCAT de 2004, su deseo de que el Proyecto de mejora de datos ICCAT-Japón (JDIP) le ayudara a establecer un sistema de ordenación de las pesquerías de túnidos, resaltando al mismo tiempo la necesidad de recibir asistencia técnica en la ordenación de las pesquerías, lo que incluye la adopción de medidas que redunden en beneficio de sus pesquerías.

Esta petición ha calado hondo en la Comisión Internacional para la Conservación del Atún Atlántico (ICCAT), organismo que tiene aprobada la iniciativa de apoyar al Gobierno enviando próximamente dos expertos del Instituto Español de Oceanografía, financiados por el JDIP, quienes llegarán a Guinea Ecuatorial a mediados del mes de noviembre de 2007, para implementar el Proyecto e iniciar la ejecución de las actividades.

Las estadísticas existentes y registradas proceden de la captura de la pesca artesanal, fundamentalmente en la zona marítima de Annobon, situada a 600 km al Sur de la Isla de Bioko, una zona muy rica en recursos de túnidos. La **Tabla 1** muestra la producción recopilada de este tipo de pesquería artesanal durante los seis primeros meses (enero-junio) del año 2006. Las estadísticas de mayor producción del año se observan entre los meses de julio-diciembre.

En la **Tabla 2** se presenta la nomenclatura de las especies marinas de la Zona Económica Exclusiva de Guinea Ecuatorial y sus correspondientes códigos.

Parte II (Implementación de la ordenación)

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

El Gobierno de Guinea Ecuatorial, con el fin de dar cumplimiento a las medidas de conservación y ordenación de las pesquerías, tiene promulgado desde el pasado noviembre del año 2003 una nueva Ley Reguladora de la actividad pesquera en la República de Guinea Ecuatorial y su Reglamento de Aplicación. Estos dos instrumentos jurídicos establecen los compromisos del Gobierno de elaborar las políticas y programas de desarrollo y ordenación del sector de la pesca en Guinea Ecuatorial.

Para la elaboración de la Ley Reguladora de la Actividad Pesquera en la República de Guinea Ecuatorial se ha tomado como medida, entre otras, las recomendaciones del Código de Conducta para la Pesca Responsable de la FAO, las recomendaciones y estrategias de otros organismos que nos asisten, como ICCAT y otros, con el fin de asegurar las implementaciones de las disposiciones de las reglamentaciones de conservación y ordenación de los recursos de túnidos.

Las recomendaciones de ICCAT para incrementar el cumplimiento de las regulaciones de las tallas mínimas están siendo aplicadas en Guinea Ecuatorial mediante el Artículo 21 de la Ley Reguladora de las Actividades Pesqueras en Guinea Ecuatorial, del cual cito el texto: *El Ministerio de Pesca y Medio Ambiente elaborará las disposiciones reglamentarias relativas a las especies biológicas que deben considerarse protegidas y cuya captura, por consiguiente, está prohibida, así como los periodos de veda, las disposiciones relativas a las tallas o peso mínimo de las especies biológicas que se pueden capturar.*”

Mediante esta normativa, el Gobierno ha establecido una relación de más de siete especies para cuyos ejemplares, por razón de peso y talla, está prohibido la posesión o venta, como es el caso concreto de *Thunnus albacares* y *Thunnus obesus* (rabil y patudo), si su peso es igual o inferior a 3,2 kg.

Sección 4: Esquemas y actividades de inspección

Recientemente, el Gobierno acaba de suscribir unos contratos de pesca que garantizan a varios armadores que puedan faenar en las aguas de Guinea Ecuatorial. Como ya lo relatamos en los párrafos precedentes, el Gobierno intenta adoptar e implementar las medidas sobre los esquemas de inspección, tanto a nivel de observadores como de las inspecciones en puerto. Dificilmente algunos armadores de la flota atunera admiten estas recomendaciones. Para el caso de Guinea Ecuatorial, la zona de Annobon, la más rica del Golfo de Guinea en recursos de túnidos, está alejada a 600 km al sur de la Isla de Bioko; por lo que, para esas flotas, el cumplimiento de las recomendaciones de ICCAT sobre las actividades y esquemas de inspección presentan siempre su imposibilidad de embarcar a los observadores, siendo un obstáculo las grandes distancias desde la zona de pesca a los puertos nacionales. No obstante, siendo una recomendación de ICCAT, Guinea Ecuatorial en el momento de expedir las autorizaciones o licencias de pesca adoptará estrictamente las medidas recomendadas por la Comisión Internacional para la Conservación del Atún Atlántico.

Sección 5: Otras actividades

La política de desarrollo del Gobierno en el sector se centra fundamentalmente en explotar ordenadamente los abundantes recursos halieúticos existentes, a fin de aprovisionar a la población de pescado y lograr la seguridad alimentaria. Como resultado del programa político de desarrollo del sector de la pesca se han establecido, como prioritarios, los siguientes componentes:

- Luchar contra la pobreza como uno de los objetivos del milenio;
- Mejorar las condiciones de vida de la población pesquera artesanal, contribuyendo as a evitar la emigración del campo hacia los centros urbanos;
- Asegurar cuantitativamente y cualitativamente la alimentación a toda la población del país, en concreto, el aumento del consumo interno de pescado, como principal fuente de proteínas de origen animal;
- Aumentar la producción y la productividad mediante la incorporación de nuevas técnicas y métodos apropiados a las condiciones socio-económicas del país;
- Fortalecer el desarrollo de la pesca artesanal para el aumento de producción, estimulando el consumo interno y mejorando la comercialización, con el fin de encauzar mejor los puntos de venta internos de los productos pesqueros (fábricas de embarcaciones, procesamiento de pescado, conservación, transporte, etc.),
- Evaluar el volumen de los recursos ictiológicos disponibles, determinando las poblaciones de peces de interés comercial, su estado de explotación y otros aspectos biológicos relacionados;
- Establecer centros de adiestramiento para el desarrollo de la piscicultura para las poblaciones enclavadas sin acceso al mar;
- Formar los recursos humanos y crear una Escuela de Pesca;
- Aumentar para el país los beneficios derivados de las actividades de las flotas extranjeras que operan en las pesquerías industriales;
- Concebir un sistema de control y vigilancia en la ZEE y
- Proceder a un reforzamiento institucional.

Con estos componentes y otros tantos, el Gobierno de Guinea Ecuatorial mantiene su compromiso firme de poner en vigencia medidas generales de política, con el fin de lograr la seguridad alimentaria.

Tabla 1. Capturas (en kg) de la pesca artesanal, zona marítima de Annobon, de enero a junio de 2006.

<i>Especies</i>	<i>Enero</i>	<i>Febrero</i>	<i>Marzo</i>	<i>Abril</i>	<i>Mayo</i>	<i>Junio</i>	<i>Total</i>
Albacora	5.450	3.015	2.450	6.567	1.135	5.900	24.517
Patudo	2.500	1.119	3.600	2.985	1.200	2.996	14.400
Bonito	1.230	2.153	2.379	3.250	1.837	3.008	13.857
Picuda	1.500	1.286	1.879	1.764	1.131	3.765	11.325
Pez volador	540	785	865	985	3.624	877	7.110
Tiburón	1.350	3.675	3.876	2.987	5.243	1.230	18.361
Pez sierra	1.124	3.047	2.986	3.065	2.227	2.678	15.125

Tabla 2. Nomenclatura de las especies marinas de la ZEE de Guinea Ecuatorial y sus correspondientes códigos.

<i>Nombre local</i>	<i>Nombre científico</i>	<i>Código</i>
Aguja	<i>Belone spp.</i>	BUM
Anguila	<i>Anquilla spp.</i>	ELE
Arenque	<i>Clupea spp.</i>	CLP
Atún aleta negra	<i>Thunnus atlanticus</i>	BLF
Atún blanco	<i>Thunnus alalunga</i>	ALB
Bacalao	<i>Gadus spp.</i>	WHB
Barracuda	<i>Sphyraena spp.</i>	BAG
Barbudos	<i>Polydactylus virginicus</i>	THF
Barbudo gigante	<i>Polymixia spp.</i>	TGA
Barbudo (10 barbas)	<i>Polymixia spp.</i>	GAL
Besugo		
Bipaca	<i>Ethamalosia fibriata</i>	BUA
Bonito del Atlántico	<i>Sarda spp.</i>	BON
Calamar	<i>Loligo spp.</i>	SQC
Camarón	<i>Panaeus spp.</i>	SUP
Cangrejo del mar	<i>Carcinus spp.</i>	CRA
Capitán	<i>Lachnolaimus maximus</i>	
Cherna	<i>Epinephelus spp.</i>	WRF
Chicharro	<i>Trachurus spp.</i>	
Congrio	<i>CONFER conger</i>	COX
Colorado		DEX
Corvinas	<i>Scianidae</i>	DRU
Gamba	<i>Parapenaeus spp.</i>	SSA
Jurel	<i>Decapterus spp.</i>	JAX
Langostinos	<i>Panacus spp.</i>	
Langosta	<i>Palinurus spp.</i>	SLV
Lenguados	<i>Bothus spp.</i>	SOL
Lisa	<i>Mugil spp.</i>	
Listado	<i>Katsuwonus pelamis</i>	SKJ
Merluza	<i>Merluccius spp.</i>	HKB
Meros	<i>Epinephelus spp.</i>	BSX
Moluscos	<i>Mollusca spp.</i>	MUL
Palometa	<i>Trachinotus spp.</i>	BLB
Pargo	<i>Lutjanus spp.</i>	BRB
Patudo	<i>Parathunus spp.</i>	BIL
Pez espada	<i>Xiphias gladius</i>	SWO
Pez volador	<i>Exocoetus volitans</i>	SFA
Picuda	<i>Sphyraena spp.</i>	BAR
Pulpo	<i>Octopus vulgaris</i>	OCC
Rabil	<i>Thunnus albacares</i>	YFT
Rayas	<i>Raja spp.</i>	SHX
Salmonete	<i>Mullidae</i>	GUA
Sardina	<i>Sardinella spp.</i>	SAA
Sepia		CII
Tiburón	<i>Squaliformes</i>	SKX
Tortuga	<i>Chelonia spp.</i>	TTX

ANNUAL REPORT OF THE EUROPEAN COMMUNITY*
RAPPORT ANNUEL DE LA COMMUNAUTE EUROPEENNE
INFORME ANUAL DE LA COMUNIDAD EUROPEA

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The various fleets of the European Community 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 2006 was about 191.000 tons (t) (summary table in Annex 1)¹.

Chapter 1 of the EC Annual Report, including reports of the various Member States of the European Community, provides details and technical information pertaining to the various fisheries, both by species and by fishing gear, and Chapter 2, concerning research and statistics were previously transmitted to ICCAT for analysis by the Scientific Committee.

Section 2: Research and Statistics

2.1 Research

All the Member States of the European Community have national research institutes or, in certain cases, regional laboratories, supervised by the major universities of the country. The detailed description of the research carried out by the Member States is given in Section 2 of the individual Annual Reports presented.

As regards the tropical tuna fisheries, Member States work in close collaboration with the research institutes of the third countries where the fleets concerned land all or part of their catches.

Scientists of the European Community and its Member States regularly participate in the scientific meetings organized by ICCAT.

Within the scope of the respective national Data Collection Programs, the European Community partially finances studies (50%) aimed at improving the collection of biological data for stocks assessments as well as the quality of these data. Furthermore, the European Community fully or partly finances research programs on highly migratory species carried out jointly with the Member States concerned.

The major work carried out in 2006 within the framework of these European research programs is as follows:

2.1.1 Bluefin tuna

- Evaluation of the biological parameters in collaboration with the FAO/COPEMED project and FAO/MedFisis;
- Evaluation of the impact of the spatial and temporal fluctuations on the stock assessment and management of this stock (FEMS program) (project completed in 2006);
- Collection of biological data (in particular, parameters on reproduction and sexual maturity, REPRODOTT program; project completed in 2007) and also the incidence of by-catches;
- Collection of data on the sport fishing of bluefin tuna (Italy);
- Indices of abundance (CPUE), size sampling at landing in the Mediterranean and in the Atlantic;
- Biological sampling to obtain size/sex variables by time-area strata, growth rates;
- Tagging in the Mediterranean and in the Atlantic.

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

¹ The Annexes are available from the Secretariat.

2.1.2 Swordfish

- Evaluation of the biological parameters in collaboration with the FAO/COPEMED project and FAO/MedFis; and
- Tagging in the Mediterranean and in the Atlantic.

2.1.3 Tropical tuna

- Analysis of the diet of yellowfin tuna;
- Evaluation of the impact of the management measures (moratorium, restriction on the use of certain fishing gears for the management of the stocks that are caught in mixed fisheries) - European programs FEMS; project completed in 2006);
- Real time monitoring of the environmental conditions of sub-surface strata in the Gulf of Guinea - PIRATA program;
- Development and updating of the “GAO” oceanographic database enabling marine biologists to have easy access to verified data by various time/area strata.

Parallel to the Community programs, some Member States finance research programs, carried out jointly with other Member States or with third countries.

2.2 Statistics

The European Community as well as its Member States continued their close collaboration with the SCRS in 2006.

2.2.1 Monitoring of the fishing activity

The European Community has binding legislation for its Member States, applicable to all the fleets fishing highly migratory species throughout the range of their fishing activity. This legislation implements the ICCAT Recommendations and stipulates the requirements, in particular:

- the scheme for sampling and the correction of logbooks; and
- the systems for data collection and processing of catch and fishing effort data for the various fleets concerned.

This regulation aims at meeting the ICCAT requirements for Task I and Task II data. The instruments used (vessel logbooks, landings declarations, etc.) and the possibility of exchanging data, results in improved monitoring, particularly in terms of speed and accuracy.

2.2.2 Biological data for scientific monitoring

Since 2001, the European Community has data collection programs in effect (EC Regulation No. 1543/2000, 1639/2001 and 1581/2004) that stipulate the regular, systematic collection of basic data collection which serves for scientific advice and, in particular, stock assessments (National Data Collection Programs). These data include:

- Catch, effort, CPUE, size and age composition of the catches (landings and discards), biological parameters (growth, maturity, fecundity); and
- Economic indicators.

These data must be collected annually in accordance with the guidelines and level of accuracy stipulated by ICCAT and other RFMOs. These regulations include obligations for the Member States to transmit these data to the RFMOs.

2.2.3 Moreover, the Member States adopt national regulations which implement and, in some cases, supplement the Community legislation, to take into account the specific nature of the national fisheries.

Part III (Management Implementation)

Section 3: Implementation of ICCAT conservation and management measures

3.1 At the regulatory level

After each plenary session of ICCAT, the European Community transposes the 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 Community 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 2006 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 Community legislation by the Council Regulation 41/2006 of 21 December 2006 fixing for 2007 the fishing opportunities and associated conditions for certain fish stocks and groups of fish stocks, applicable in Community waters and for Community vessels, in waters where catch limitations are required and modified by Council Regulation 643/2007 as regards the Bluefin Tuna Recovery Plan.

3.1.1 Statistical Document Programmes

The information received from the Member States in the context of implementing these programmes, which indicated a clear interest in the correct application of the programmes, was transmitted to the ICCAT Executive Secretary so that it could be circulated to other ICCAT Parties.

This information concerned in particular the prohibition of landings of swordfish, justified by the non-compliance with various provisions of the statistical document programmes.

Trade flows between other Contracting Parties have been identified, which could relate to the laundering of illegal tuna catches due to their specific features:

- The fish is being imported for processing purposes under a false declaration of origin and its actual origin remains unknown,
- The species declared on importation are not suitable for processing purposes,
- The prices declared at the time of the importation are close to the prices of species which are submitted to ICCAT conservation and management measures, and
- Exports from the processing Contracting Party of processed fish (fillets) of unspecified species to another Contracting Party, which is the main market for unprocessed and processed products of the species referred to the point above.

The data on these trade flows have been provided to the ICCAT Secretariat together with comments, as summarized above, in order to draw the attention of the Parties concerned.

3.2 Compliance

3.2.1 Catch limits

In 2006, the European Community has, in general, respected all the catch limits adopted by ICCAT except for blue marlin and white marlin.

3.2.2 Minimum size (see Annex 2–Compliance Tables)

The European Community overall respects the minimum size for bluefin tuna in the Mediterranean, in particular, in relation to farming activities.

With regard to swordfish, the number of under-size fish in catches exceeding the tolerance fixed by ICCAT has been reduced from the levels observed in previous years. The Community is currently financing studies on gear selectivity (hooks) in order to reduce the catches of juveniles.

3.2.3 Vessels lists

The Community transmitted the vessels lists, on a timely basis, fully respecting the formats required by ICCAT. The following details should be noted:

- There are currently 1504 Community vessels greater than 24 meters authorized to fish in the ICCAT area, a reduction from previous years;
- 1199 Community vessels were authorized to fish for northern albacore in 2006;
- 219 vessels were authorized by the Community to provide or transport bluefin tuna for farming purposes in the ICCAT area;
- 117 Community fishing vessels fished for tuna farming purposes in 2006;

3.2.4 Large-scale longline vessels

The Community took the necessary measures to control the activities of its large-scale longline vessels (see Annex 3) and to ensure that tuna vessels on the ICCAT Record of Vessels over 24 meters are fishing in accordance with ICCAT conservation and management measures (see Annex 4).

3.2.5 Area/season closure for bigeye tuna

In 2006, the European Community respected paragraphs 8 to 12 of the *Recommendation by ICCAT on a Multi-year Conservation and Management Programme for Bigeye Tuna* [Rec. 04-01]. A report on the implementation of internal sanctions required under paragraph 11 of this Recommendation is included in Annex 5.

3.2.6 Bluefin tuna farming report

In 2006, the European Community fully respected the *Recommendation by ICCAT on Bluefin Tuna Farming* [Rec. 06-07]. The Community transmitted the following details:

- Quantities of bluefin tuna cages during 2006: 11,038.5 t
- Quantities of bluefin tuna marketed during 2006: 15,278.6 t

3.3 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.

The European Community has adopted a control regime under the Community fisheries policy which imposes specific obligations on Member States as regards control. In this regard, each Member State must control, inspect and supervise its territory and in the maritime waters under its sovereignty or jurisdiction all fishing activities and in particular directed fishing, transshipment, landing, marketing, transport and storage of fish products and the recording of the landing and sale of fishery products (Council Reg. (EEC) No. 2847/93 of 12 October 1993 establishing a control regulation for the compliance with the common Community fisheries policy, EU Official Journal No. L261 of 20.10.93, p.1). This control regulation was strengthened following the reforms introduced into the common fisheries policy.

In addition to these obligatory provisions, Member States must adopt more restrictive provisions for certain species than those imposed at the Community level or by ICCAT. These provisions, modified to meet 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), a limit on 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.

Some Member States are studying the future compliance of the new measures aimed at controlling fishing activities of highly migratory species and the protection of the resources. These measures should, in particular, strengthen the sector's supervision and monitoring of the fish from catch to retail.

The European Community has also:

- Prohibited the use of driftnets to catch highly migratory species since 1 January 2002; obligatory Community logbook;
- Established on-board scientific observer for longline vessels (juvenile catches);
- 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. 1185/2003, regarding the practice of shark fining;
- 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, transshipments and sales notes as well as on the obligation on authorities to put in place means of remote sensing);
- Adopted Council Regulation (EC) No. 1967/2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea.

The European Community has also strengthened its control regime, centered on three main principles which it considers as priority issues: the improvement of post-landing controls, the control of third country vessels operating in Community waters, and cooperation between the Member States and the European Commission. Finally, the European Commission has created the Community Fisheries Control Agency²:

In April 2005, the Council of Ministers agreed to set up a Community Fisheries Control Agency as a key part of the drive to improve compliance with the rules under the 2002 reform of the Common Fisheries Policy (CFP). The Agency will strengthen the uniformity and effectiveness of enforcement by pooling European Community and national means of fisheries control and monitoring resources and coordinating enforcement activities. This operational co-ordination will help to deal with the shortcomings in enforcement resulting from the disparities in the means and priorities of the control systems in the Member States. The Agency will organise the deployment of national control and inspection means according to a European strategy. Its tasks and mandate will be defined in close co-operation with the Member States in accordance with European Community objectives and priorities.

Operational coordination. The Agency will organise the joint deployment of the national means of control and inspection (surveillance vessels, aircraft, vehicles and other equipment as well as inspectors, observers and other staff) according to European Community strategy. Joint deployment plans will be agreed by the Agency and the Member States concerned on the basis of identified criteria, benchmarks, priorities and common inspection procedures. Multi-national teams will be set up for inspection at sea and onshore in identified areas and on identified fisheries and fleets at given times. The Member States concerned will adopt the necessary measures to undertake the joint control and inspection activities. The Agency will provide support to the Member States in meeting their responsibilities not only in European Community waters but also in relation to fisheries agreements concluded with non-EU countries. It will also be active on the high seas under international control and inspection schemes agreed within the framework of Regional Fisheries Organisations.

The tasks involved will also include training of inspectors, provision of equipment and services for control and inspection, co-ordination of the implementation of joint pilot projects to test new control and inspection technologies, development of joint operational control procedures or establishment of criteria for the exchange of means of control and inspection.

² Regulation (EC) N° 768/2005 establishing a Community Fisheries Control Agency.

In addition, the Agency may offer contractual services which Member States will be able to request and for which they would be charged. These services may range from chartering and manning an inspection vessel to contracting observers on board fishing vessels.

Towards a level playing field. The creation of the Agency will not change the obligations of the Member States in enforcing CFP measures or those of the European Commission in ensuring that Member States fulfil these obligations. The Agency will undertake operational co-ordination to help both the European Community and Member States to fulfill their control and inspection obligations, an activity that is not part of the core tasks of the European Commission.

As well as strengthening the effectiveness of control and monitoring, the Agency's activities will improve the flow of information between and among the Member States and the Commission. It will also lead to better relations between the European Community and its international partners by centralising contact points and promoting more uniform control and inspection methods.

Section 4: Inspection Schemes and Activities

4.1 Member States

4.1.1 In-port inspections

Controls undertaken by the Member States are generally carried out at 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. These controls primarily cover the quantities landed, the sizes, the age and weight of the fish, and the respect of closed fishing periods. They can also intervene at the time of marketing, to verify data.

Some Member States have established an information network between the various landing ports to improve the monitoring of vessel movements.

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 Africa.

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.

4.1.2 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 Community 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 large number of landing points located in their territory.

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

4.1.3 Implementation and results (2006)

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 in the framework of the ICCAT measures to reduce catches of juvenile tunas;
- The constant monitoring and control of fishing activities in waters falling under the jurisdiction of Spain;
- Control of all obligatory documentation.
- In-port results:
 - Atlantic: 252 vessels inspected (35 infringements)
 - Mediterranean: 56 vessels inspected (17 infringements)
- At sea results (four patrol vessels in the Mediterranean and four in the Atlantic):
 - Atlantic: 0 infringements
 - Mediterranean: 70 vessels inspected, including other flags (27 infringements)
- Aerial surveillance:
 - 239 in the Atlantic (zero infringements)
 - 359 in the Mediterranean (three infringements)

At the national level in Spain, inspection activities are primarily focused on bluefin tuna in the Mediterranean Sea and on Albacore in the North Atlantic Ocean. Additionally, Spain has also concentrated on the control of swordfish and tunas, and has prohibited the landing/importation of tuna from vessels which have not respected ICCAT recommendations.

France

- Air controls - No infringements detected.
- Landing Controls - No infringements observed: the landing controls were done in cooperation between the national navy, the CROSS and the land teams of control and special attention was given to minimum size, logbooks.
- At-sea inspections - It should be noted that, the method of storage on board (frozen water and 15% tolerance) makes it difficult to conduct an accurate verification of the quantities stored onboard.
- Daily catch monitoring - by the French authorities led to the closure of the bluefin tuna fishery in the Atlantic Ocean by decrees of July 10, 2006, August 4, 2006, August 7, 2006 and August 11, 2006. The purse-seine fishery in the Mediterranean was closed by decree on September 15, 2006, with the French national quota being closed by decree of October 18, 2006, which was notified to the European Commission.
- On-land controls - notably minimum size of bluefin tuna. The "maritime affaires" control teams proceeded to regular controls on auction sales and supermarkets. No infringement was observed.
- Tropical Tunas - To ensure the respect of the moratorium in the Gulf of Guinea during the period from November 1, to November 30, 2006 was monitored by VMS.

Italy

Within the framework of the implementation of the Community control regulation including for ICCAT control measures, Italy deployed the following resources:

- Human, naval and aerial resources (numerous administrations)
- Significant development of the inspectors' training (specialization as regards fishing)
- 292 patrol vessels, three aircraft
- 4762 on-land inspections, one infringement
- 4029 at sea inspections, three infringements

Portugal

- Human, naval (Navy), and aerial resources
- 150 joint inspection missions undertaken (102 continental area, 14 Madeira, 34 Azores), three infringements
- The Azores Autonomous Regional authority undertook 81 inspections - zero infringements
- Landing controls (swordfish, tunas) through to marketing (minimum sizes, value, statistics, etc.); obligation to pass through the auction (fresh fish)
- Control of tuna consignments intended for the processing industry.

Greece

The control of fishing and trade of tunas is carried out by Port Authorities. In particular, 156 inspection vessels and seven aircraft were engaged in the monitoring of fishing activities, among other tasks.

In 2006, numerous inspections of fishing vessels took place by port authorities and as a result in two cases that all concern Greek fishing (no foreign fishing vessels were caught fishing illegally in Greek waters). Administrative penalties and fines of 1,800 Euros were imposed for infringements concerning existing legislation, as well as a suspension of fishing activities for 30 days.

The tuna farming was inspected and monitored by local and central services.

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 European Community logbooks, landing declarations and sales notes. No infringements detected.

The fishing activities of vessels fishing under charter agreements for highly migratory species and sharks are monitored by MFA HQ and relevant port fisheries offices using a combination of the Satellite Vessel Monitoring System and documentary checks of European Community logbooks, landing declarations and sales notes.

One infraction detected. Enforcement action was taken in respect of one UK longlining vessel which made a single fishing voyage in 2006 whilst operating on the UK register under a bareboat charter. Crucially, the necessary UK domestic and external waters licences were not obtained before fishing commenced. The vessel also did not complete and submit European Community logbooks and landing declarations. The catch was landed at Walvis Bay, Namibia, and the details are given in the Task I and Task II data. A prosecution was taken in July 2007 against the owners and charterers of the vessel for fishing without the authority of a licence issued by UK fisheries departments between 9 February 2006 and 31 May 2006, for failing to keep and submit an European Community fishing logbook and for failing to submit a European Community landing declaration within 48 hrs. of landing. The owners and charterers pleaded guilty to all charges. Total fines and costs amounted to just over £75,000.

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, zero infringements detected,
- The Irish Air Corps CASA maritime patrol aircraft also carried out missions,
- Fishery patrols of the Irish Naval Service monitored the activity of the albacore fleet.

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 12m.

Cyprus

During 2006, Cyprus deployed the following resources for monitoring and controlling fishing activities:

- Human resources: the Fisheries Inspectorate Service (21 Fisheries Inspectors), the Naval Service (10 persons) and a specialized personnel (two persons) which operates the Vessel Monitoring System.
- 4 patrol vessels.

In 2006, there were 1,325 inspections on Cyprus vessels. There were no violations reported regarding illegal tuna fishing activities by Cyprus fishing vessels. Inspections were carried out of foreign fishing involved in tuna farming harvesting activities.

Other Member States

The other Member States also carry out controls in accordance with Community legislation to ensure the respect of the ICCAT conservation measures.

4.2 The European Commission

In addition to the Member States, the European Commission has 29 fisheries inspectors whose task is to supervise the inspection and control activities undertaken by the national services of the Member States.

During 2006, 25 inspection missions directly concerned with the fishing activities of highly migratory species were undertaken, with the priority being placed on the bluefin tuna fisheries, in the Mediterranean and in the Bay of Biscay.

The main goals of the missions were:

- The verification of the respect of the Community regulation regarding driftnet fishing in the Mediterranean;
- Verifying 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;
- Verifying the compliance with Community legislation on catch and landing declarations; and
- 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 Community legislation, which includes, in particular, the ICCAT recommendations.

In 2006, bluefin tuna was a top priority. Inspectors paid closer attention to the control of the vessels documents (logbook), the control of the catch record, the use of the statistical document and to the landing procedures and transport of the fish. Throughout the year, particular attention was paid to the detection of the juvenile bluefin tuna.

The data concerning the tropical tuna are supervised by scientific institutes in the Community pursuant to the provisions of the fishing agreements concluded by the EC with the third countries concerned.

Concerning bluefin tuna, all Member States of the European Community have established a specific catch data recording system, which allows the monitoring of the utilisation of the catch quota.

Section 5: Other Activities

5.1 Satellite-based VMS established by the European Community

The European Community introduced a satellite-based Vessel Monitoring System (VMS) in 1998. In the first phase, from 30 June 1998, vessels exceeding 20 metres between perpendiculars or 24 metres overall length in the following categories were required to be equipped:

- Vessels operating in the high seas, except in the Mediterranean Sea,
- Vessels catching fish for reduction to meal and oil.

In the second phase, which commenced on 1 January 2000, all vessels exceeding 20 metres between perpendiculars or 24 metres overall length wherever they operate were subject to VMS. Since 1 January 2000 *third country* fishing vessels operating in the Community fishing zone must also be equipped with a VMS position monitoring system.

In the final phase in accordance with Article 22 (1b) of EC regulation 2371/2002 all EC fishing vessels exceeding 18 metres in length overall must have installed onboard a fully functioning Vessel Monitoring System (VMS) unit from 1 January 2004 and this has applied to all vessels exceeding 15 metres in length overall since 1 January 2005.

The satellite tracking devices fitted on board the fishing vessels shall enable the vessel to communicate its geographical position to the flag state and to the coastal Member State simultaneously (and from 1 January 2006 at the latest, their speed and course). In practice position reports are retransmitted in nearly real time from the flag state to the coastal state.

The data obtained from VMS shall be treated in a confidential manner.

Tampering with VMS has been defined as a serious infringement³.

Several satellite systems exist that can meet the requirements of the European Community Regulations. Neither the Council nor the Commission has imposed a particular system. Therefore any solution that meets the requirements is acceptable, and different vessels may be equipped with different systems.

VMS has not replaced conventional enforcement tools such as patrol vessels and aircraft; it nevertheless improves the efficiency and effectiveness of their deployment.

Besides monitoring fisheries in Community waters, the EC is also responsible for a significant number of its vessels operating in different parts of the oceans.

Outside Community waters, fishing must take place with due regard to the management measures adopted by the competent international and regional bodies, and by the coastal states. Furthermore, where applicable, masters of community fishing vessels must comply with the national laws and regulations governing the waters of the coastal state, as well as with the specific provisions contained in the Fisheries Agreements.

Since the satellite tracking devices installed on board European Community fishing vessels must be operational at all times, wherever the vessels operate, the control of the fleet operating outside Community waters is being increased significantly by the introduction of VMS. Indeed, the flag Member State knows at all times where its vessels are operating. Therefore the European Community ensures that VMS is used in bilateral fisheries agreements with third countries and in the framework of regional fisheries organisations.

More detailed information on the European Community satellite based VSM was reported to ICCAT in the 2006 European Community Annual Report.

5.2 Community financial assistance for fisheries control

The Community has been providing financial assistance to Member States for fisheries control since 1991. This policy is based on the fact that policing involves high costs, particularly on action at sea, and that such policing in no few occasions involves co-operation amongst Member States, constant training needs, investment in technology and Information Technology (IT) networks and heavy expenditure on patrol vessels & aircraft used for control.

With this objective in mind, three Council Decisions have been adopted providing for Community financial support for Member States' expenditure on fisheries inspection (Decisions 89/631/EC, 95/527/EC and 2004/465/EC). Each decision provides for a financial envelope covering a multi-annual time-frame.

Each year the Commission thereafter adopts a Decision on the eligibility of expenditure for the year concerned (providing for financial assistance for Member States that have foreseen expenditure on fisheries control in their yearly fisheries Control Programme).

³Council Regulation (EC) No 1447/1999 of 24 June 1999 establishing a list of types of behaviour which seriously infringe the rules of the common fisheries policy.

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

SUMMARY

No catches of tunas and tuna-like species were made by France (on behalf of St. Pierre & Miquelon) in 2006. The quotas allocated to the islands did not permit a local boat owner to fish by only vessel. Hence, all the catches of tunas and tuna-like speices by France (St. Pierre & Miquelong) are usually taken by a chartered fishing vessel (30 m longliner). However, as a result of a project for a polyvalent vessel under construction, fishing for the French quotas under French flag will commence in 2009. This vessel will target albacore and bigeye and will also fish bluefin tuna as by-catch. Tuna fishing is regulated by means of fishing licenses issued by the representative of France in the islands. As regards the artisanal vessels (less than 12 m) of the islands, the licenses indicate the possibility of catching tunas only to prevent an excessive by-catch. In effect, the local vessels have a limited sphere of action. Twelve vessels have been granted licenses to fish bluefin tuna on the available quota. This local fleet activity, carried out in the French area using floating lines (a maximum of 2 hooks), is in addition to the traditional activities (cod fishing). The vessels are mandated to report their catches and to carry observers. All the landings are monitored, as are all the products exported. Various French administrations carry out monitoring (Maritime Affairs, Customs, Police...). Some campaigns are regularly carried out to monitor fishing, both at sea and on land. Special attention is given, in particular, to the landings of tunas at the port of St. Pierre. The "Proces verbaux" often established are transmitted to the judicial administration.

RÉSUMÉ

Aucune capture française (au titre de Saint-Pierre-et-Miquelon) de thonidés et espèces apparentées n'a été effectuée pendant l'année 2006. Les quotas attribués à l'archipel ne permettant à un armement local d'exploiter une unité, les captures françaises totales de thonidés et espèces apparentées sont habituellement réalisées par un navire de pêche affrété (palangrier de 30 mètres). Cependant, un projet d'armement polyvalent est en construction et permettra à partir de 2009 d'exploiter les quotas français sous pavillon français. Il ciblera l'espadon, le germon et le patudo et pêchera plus accessoirement du thon rouge. La pêche des thonidés est règlementée par le biais de l'attribution de licences par le représentant de l'Etat sur l'archipel. Pour les navires artisanaux de l'archipel (moins de 12 m), les licences mentionnent la possibilité de capture de thonidés uniquement pour prévenir une exceptionnelle prise accessoire. En effet, les unités locales ont un rayon d'action limitée. Douze navires se sont vu délivrer des licences pour la pêche du thon rouge sur le quota disponible. Cette activité, exercée en zone française au moyen de lignes flottantes (maximum de 2 hameçons), reste pour la flottille locale une pêche en marge des activités traditionnelles (morue). Les navires sont soumis à obligations de déclarations de 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, douanes, gendarmerie...). 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 sur le port de Saint-Pierre. Les procès verbaux éventuellement établis à cette occasion sont transmis à l'administration judiciaire.

RESUMEN

Durante el año 2006 no se ha realizado (en nombre de San Pedro y Miquelón) ninguna captura de túnidos y especies afines. Las cuotas atribuidas al archipiélago no permitían a ningún armador local explotar ninguna unidad, las capturas francesas totales de túnidos y especies afines son habitualmente realizadas por un buque pesquero fletado (un palangrero de 30 m). Sin embargo, se está desarrollando un proyecto para construir un buque polivalente que permitirá, a partir de 2009, explotar las cuotas francesas bajo pabellón francés. Se dirigirá al pez espada, el atún blanco y el patudo y ocasionalmente atún rojo. La pesca de túnidos está reglamentada por medio de la concesión de licencias por parte del representante del Estado en el archipiélago. Para los buques artesanales del archipiélago (menos de 12 m), las licencias mencionan la posibilidad de captura de túnidos únicamente para prevenir una captura

fortuita excepcional. En efecto, las unidades locales tienen un radio de acción limitado. Doce barcos han recibidos licencias para pescar atún rojo sobre la cuota disponible. Esta actividad, ejercida en zona francesa por medio de líneas flotantes (máximo de 2 anzuelos), es para la flota local una pesca al margen de las actividades tradicionales (bacalao). Los barcos están obligados a declarar las capturas y asimismo embarcan puntualmente observadores. Todos los desembarques son objeto de un control, al igual que la totalidad de los productos exportados. Francia dispone de medios de control en varias administraciones (asuntos marítimos, aduanas, gendarmería...). 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. Las sanciones verbales que se establecen eventualmente se transmiten posteriormente a la administración judicial.

1^{ère} Partie (Information sur les pêcheries nationales, la recherche et les statistiques)

Chapitre 1: Information annuelle sur les pêcheries

Aucune capture française (au titre de Saint-Pierre-et-Miquelon) de thonidés et espèces apparentées n'a été effectuée pendant l'année 2006. En 2005, les captures françaises totales de thonidés et espèces apparentées dans l'Océan Atlantique s'élevaient à 64 tonnes (en baisse par rapport à 2004: 87 t).

Les quotas attribués à l'archipel ne permettent à un armement local d'exploiter une unité et le recours à l'affrètement est donc utilisé chaque année. Les captures françaises totales de thonidés et espèces apparentées sont habituellement réalisées, en Atlantique Ouest, par un navire de pêche canadien affrété (palangrier de 30 mètres). En 2006, un accord d'affrètement a été conclu et notifié à la CICTA (courrier France-DPMA n°2145 du 11 août 2006, circulaires 1484/06 du 22 août 2006 et 1775/06 du 9 octobre 2006), mais le navire affrété n'a pas eu la possibilité, pour des raisons de procédure interne, de mener cette campagne de pêche.

A l'instar de l'année passée, 12 navires locaux de la flottille artisanale se sont vu délivrer des licences pour la pêche du thon rouge sur le quota disponible. Cette activité, qui ne peut s'exercer pour ces navires – en raison de leur taille (moins de 12 mètres) - qu'en zone française et au moyen de lignes flottantes grées pour un maximum de deux hameçons, reste pour la flottille locale une pêche en marge des activités traditionnelles de pêche artisanale, qui s'orientent principalement, dans la zone 3Ps, sur la morue.

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

Aucune capture de thon rouge n'a été enregistrée en 2006 par les 12 navires titulaires de licences de pêche pour cette espèce. Il convient de préciser que ces navires ne sont pas grés pour cette pêche et qu'ils ne font que quelques essais durant l'été.

La France, au titre de Saint-Pierre et Miquelon, disposait pour l'année 2006 d'un quota global de 12,81 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). Ainsi, conformément à la recommandation [Rec. 06-06], la France a demandé le report de cette sous consommation sur l'année 2007, année pour laquelle elle disposera donc d'un quota de 16,81 t.

1.2 Germon (stock de l'Océan Atlantique nord)

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: 2,12 tonnes en 2005, 7,06 tonnes en 2004.

1.3 Espadon de l'Océan Atlantique Nord

L'espadon est l'espèce cible recherchée dans cette partie de l'Atlantique Nord Ouest. Le quota jusqu'ici octroyé à la France (35 tonnes annuelles pour les années 2003 à 2006, d'après la recommandation 02-02 de la CICTA, étendue par la recommandation 04-02). Les reports de sous consommation avaient permis des captures de 48,46 t en 2005 et 35,65 t en 2004, ainsi qu'un report de 13,25 t de 2004 à 2006 et 18,74 t de 2005 à 2007. Le quota ajusté pour l'année 2006 était donc de 48,25 t et l'absence de capture cette année permettra donc un report sur l'année 2008, pour laquelle le quota de la France sera donc de 108,25 tonnes, en prenant en compte les 20 tonnes transférées du Royaume Uni à la France pour les années 2007 et 2008 (Rec. 2006-02).

Les reports de sous-consommation vers les années 2007 et 2008 devraient permettre à Saint Pierre et Miquelon de développer une activité ciblée sur cette espèce avec un navire immatriculé sous pavillon français. Ce projet est à l'étude pour l'année 2008.

1.4 Autres espèces

Les autres espèces généralement capturées à la palangre sont le thon obèse (5,7 t en 2005, 28,3 t en 2004) et les requins (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.

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.

II^{ème} 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 de l'année passée.

Cette activité avait été initiée à nouveau pour l'année 2006 dès après la signature d'une convention d'affrètement entre Propeche Sarl et la société canadienne Law Fisheries Limited, convention conclue au mois de juillet 2006 et expirant à la fin de l'année de pêche. Les autorités françaises (Préfecture de Saint Pierre et Miquelon) ont émis une licence de pêche valable du 25 juillet 2006 au 31 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 réglementations en vigueur : décret du 9 janvier 1852 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 signifiée au secrétariat exécutif.

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 n'étant pas intégralement débarquées en France, la France ne dispose pas de la totalité des déclarations dans ce type de montage. Ainsi, la rédaction de la tâche II est réalisée par l'Etat du pavillon concerné, qui dispose de moyens lui permettant un échantillonnage précis des débarquements au port. Une mise à jour a ainsi été fournie au Secrétariat concernant les captures réalisées en 2005.

3.2 Mesures nationales

Des licences sont attribuées par le représentant de l'Etat sur l'archipel aux navires de pêche 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 générée, 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 déclarations 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 de plusieurs administrations. Plusieurs d'entre elles sont présentes sur l'archipel de Saint-Pierre-et-Miquelon (Affaires Maritimes, Gendarmerie Nationale et Douanes françaises). Ces moyens effectuent régulièrement des campagnes 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.

4.1 Bilan des contrôles effectués en 2006:

Des opérations de transbordement ont été enregistrées par les douanes françaises au cours de l'année 2006. Aucune infraction n'a été relevée.

Les transbordements effectués sont les suivants:

- Le 13/01/06, navire "Fujisei maru n°27", propriétaire "Fuji Suisan", pavillon japonais, transbordement de 25 tonnes de thonidés, destinataire Takuo KOBUTA à Yokohama.
- Le 26/01/06, navire "Fujisei maru n°36", propriétaire "Fuji Suisan", pavillon japonais, transbordement de 25 tonnes de thonidés, destinataire Takuo KOBUTA à Yokohama.
- Le 15/03/06, navire "Fujisei maru n°27", propriétaire "Fuji Suisan", pavillon japonais, transbordement de 50 tonnes de thonidés, destinataire Takuo KOBUTA à Yokohama.
- Le 15/03/06, navire "Fujisei maru n°36", propriétaire "Fuji Suisan", pavillon japonais, transbordement de 25 tonnes de thonidés, destinataire Takuo KOBUTA à Yokohama.

Soit un total de 125 tonnes de thonidés, entre opérateurs japonais.

Les documents statistiques sont systématiquement contrôlés.

**ANNUAL REPORT OF GHANA
RAPPOR ANNUEL DU GHANA
INFORME ANUAL DE GHANA**

SUMMARY

Baitboats and purse seiners exploited tuna resources off the EEZ of Ghana. The total number of vessels currently in operation is 37, comprised of 23 baitboats, 10 purse seiners and 4 longliners. The pole and line operators are the main exploiters of tunas in Ghanaian waters, using bait in their fishing operations. In addition, numerous bamboo rafts (fitted with radio buoys) are used as fish aggregating devices (FADs) to enhance the capture of tuna species. Baitboats work in collaboration with purse seiners often sharing their catch. The new AVDTH programme adopted from the French purse seine fleet for processing catch effort and logbook data was used to analyze data for 2006. Catches of the three principal tuna species for the year 2006 dropped to 52,000 t, from 76,000 t in 2005. Skipjack landings contributed over 59% of the overall catches whilst bigeye and yellowfin catches contributed approximately 18% and 23%, respectively. In conformity with the objectives of the Data Fund aimed at improving data collection, Ghana's statistics (1997-2005) for the principal tuna species were revised during the recent bigeye stock assessment meeting based on improved sampling and size composition. As part of the Data Improvement Programme of ICCAT, an observer programme was conducted during the year under review (SCRS/2006/024). Results from the programme indicate higher catch rates from purse seiners fishing off FADs. However, the majority of fish caught were relatively small (40-65 cm) as compared to catches from free swimming schools. Beach sampling of billfishes for catch, effort and size composition continued off the western coast of Ghana from small artisanal drift-gillnet operators. Very few white marlin species were observed in the year under review.

RÉSUMÉ

Les canneurs et les senneurs ont exploité les ressources thonnières au large de la ZEE du Ghana. Le nombre total de navires actuellement en opération s'élève à 37, dont 23 canneurs, 10 senneurs et 4 palangriers. Les pêcheurs à la canne et à l'hameçon exploitent principalement les thonidés dans les eaux du Ghana, en utilisant l'appât dans leurs opérations de pêche. En outre, de nombreux radeaux en bambous (équipés de radiobalises) sont utilisés comme dispositifs de concentration du poisson (DCP) afin d'augmenter la capture des espèces thonnières. Les canneurs opèrent en collaboration avec les senneurs, partageant souvent leur capture. Le nouveau programme AVDTH, adopté de la flottille de senneurs français et qui a pour but de traiter les données de capture et d'effort et des carnets de bord, a été utilisé pour analyser les données de 2006. Les prises des trois principales espèces thonnières ont été ramenées de 76.000 t en 2005 à 52.000 t en 2006. Les débarquements de listao ont représenté plus de 59% des prises totales, tandis que le thon obèse et l'albacore ont représenté environ 18% et 23% respectivement. Conformément aux objectifs du Fonds pour les données destiné à améliorer la collecte des données, les statistiques du Ghana (1997-2005) pour les principales espèces thonnières ont été révisées lors de la récente session d'évaluation du stock de thon obèse en se fondant sur un échantillonnage et une composition par taille améliorés. Dans le cadre du programme d'amélioration des données de l'ICCAT, un programme d'observateurs a été mené au cours de l'année à l'étude (SCRS/2006/024). Les résultats du programme indiquent des taux de capture plus élevés des senneurs pêchant avec des DCP. Néanmoins, la majorité des poissons capturés étaient de taille relativement petite (40-65 cm) par rapport aux prises réalisées en bancs libres. On a poursuivi au large du littoral occidental du Ghana l'échantillonnage des istiophoridés réalisé sur la plage aux fins de l'obtention des données de prise et d'effort et de la composition par taille auprès des petits opérateurs artisanaux opérant au filet maillant dérivant. Très peu de makaires blancs ont été observés au cours de l'année.

RESUMEN

Los barcos de cebo vivo y los cerqueros explotaron los recursos de túnidos en las aguas de la ZEE de Ghana. El número de buques operativos actualmente asciende a 37, lo que incluye 23 barcos de cebo vivo, 10 cerqueros y 4 palangreros. Los operadores de caña y liña son los principales explotadores de los recursos de túnidos en las aguas ghanesas, y utilizan cebo en sus operaciones. Además, se han utilizado numerosas balsas de bambú (equipadas con radio balizas) a modo de Dispositivos de Concentración de Peces (DCP) para incrementar las capturas de túnidos. Los barcos de cebo vivo trabajan en colaboración con los cerqueros y a menudo comparten sus capturas. Se utilizó el nuevo

programa AVDTH, adaptado a partir del de la flota de cerco francesa para el procesamiento de los datos de captura y esfuerzo y de los cuadernos de pesca, para analizar los datos de 2006. Las capturas de las tres especies principales de túnidos descendieron en 2006, pasando de 76.000 t en 2005 a 52.000 t. Los desembarques de listado respondieron de más del 59% de las capturas globales, mientras que las capturas de patudo y rabil respondieron, respectivamente del 18 y 23%. De conformidad con los objetivos del fondo para datos de mejorar la recopilación de datos, se revisaron las estadísticas de Ghana (1997-2005) para los principales túnidos durante la reciente sesión de evaluación de stock de patudo, basándose en el muestreo y composición por tallas mejorados. Como parte del programa ICCAT de mejora de datos se desarrolló un programa de observadores durante el año considerado (SCRS/2006/024). Los resultados del programa indican tasas de captura más elevadas para los cerqueros que pescan con DCP. Sin embargo, la mayor parte del pescado capturado era relativamente pequeño (40-65 cm) en comparación con las capturas realizadas en bancos libres. En las aguas de la costa occidental de Ghana continuó el muestreo en la playa de las capturas de los operadores de redes de enmalle-arrastré artesanales que capturan peces de pico, con el fin de obtener datos de captura, esfuerzo y composición por tallas. Se observaron muy pocas capturas de aguja blanca en el año considerado.

Part 1 (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 The fisheries

The Ghanaian tuna fleet comprises mainly the baitboats and purse seiners fishing off the EEZ of Ghana exploiting mainly skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*Thunnus obesus*). A total of 37 vessels comprising 25 baitboats, 2 longliners and 10 purse seiners) operated during the year under review. This report highlights the activities undertaken by the country in respect of ICCAT programs and measures taken to implement ICCAT Recommendations.

1.2 Resources

The tuna and tuna-like species including the billfishes that occur in Ghanaian waters are part of a large community in the entire East Atlantic Ocean. The most abundant of the species exploited are the skipjack tuna, followed by yellowfin tuna and bigeye tuna. Tuna baitboats are the main exploiters of tunas in Ghanaian waters, using live anchovy (*Engraulis encrasicolus*) and other small pelagics as the main bait for their operations. In addition, the use of bamboo rafts (“*payaos*”) as Fish Aggregating Devices (FADs) is common but not allowed during the period of ICCAT Moratorium on the Use of FAD.

Section 2: Research and Statistics

The Marine Fisheries Research Division (MFRD) of the Fisheries Directorate is the government agency responsible for tuna research and statistics in Ghana. Monitoring of exploitation of the resources by the different fleets, collection of biological data through port (quayside), at sea sampling and observer program and implementation of the moratorium on the use of FAD among others were all executed by the Division.

Catch statistics computed from returns from fishing companies (Task I) showed a decrease of 15.8% in nominal landings between 2005 and 2006 (i.e. 61,800 t in 2005, as compared to 52,000 t in 2006). The percentage contributions of fish were as follows: skipjack 58%, yellowfin 23%, bigeye 18%, and other tuna-like species including black skipjack (*Euthynnus alletteratus*) 1%.

Sampling of the three major species of tuna was carried out from the port of Tema to determine, among others, length frequency distribution to be used for stock assessment purposes. Sampling at port (quayside) of tunas was done following the ICCAT *Field Manual* (Miyake & Hayasi, 1972) and the super sampling scheme. All data collected (Task I, II and III) for 2006 were forwarded to ICCAT in July 2007.

Billfishes have been of immense importance to ICCAT. Like all large pelagics in the Atlantic Ocean, ICCAT has a mandate to conserve these fish species abounding in the Atlantic Ocean. Four main billfish species abound off

the coast of Ghana mainly in the western end, namely; sailfish (*Istiophorus albicans*), swordfish (*Xiphias gladius*), blue marlin (*Makaira nigricans*) and white marlin (*Tetrapturus albidus*).

Billfish are caught primarily from small drifting nets employed from dugout canoes used off the central and western shores of Ghana. Data on catch and effort for the year 2006 have been submitted accordingly in July 2007. A summary of data is presented in **Table 1**.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Implementation of ICCAT SCRS super sampling scheme

In 2003, the SCRS Tropical Species Working Group designed the super sampling scheme as means of improving the quality of the statistics. Ghana is implementing the super sampling scheme and there has been marked improvement in the statistics especially for Task II reporting. The sample size has now increased from 100 to 500 per boat sampled.

3.2 Japan Data Improvement Project (JDIP)

Through funds from the JDIP, Ghana is using the statistical tool ADVTH developed by the EU in processing her statistics. The JDIP made funds available to Ghana for execution of an at sea sampling and observation program between August-November 2007. It is way of testing the ADVTH and also to improve the estimated statistics. The data from the observer program is being analyzed and a final report is in preparation.

It is important to note that Ghana is still experiencing problems in using the ADVTH. Like last year, the 2006 data has to be processed in Madrid by the EU during the bigeye stock assessment meeting. This is not the best way of building capacity of a developing nation.

One Ghanaian scientist was sponsored under the JDIP to attend the 2007 SCRS meeting held in Madrid, Spain from September 25 to October 5, 2007.

3.3 ICCAT Data Improvement Program

One Ghanaian scientist was sponsored under the Program to attend the Bigeye Stock Assessment Session held in Madrid, Spain from June 5 to 12, 2007.

3.4 Implementation of moratorium on the use of FADS

The Ministry of Fisheries has since November 2005 been implementing a vessel monitoring system (VMS) as a means of combating IUU fishing by Ghanaian flag vessels. Currently, all 37 tuna vessels are fitted with transponders and their activities monitored from the control room. During the Moratorium period (November 1 to 30, 2007) all tuna vessels were directed to offload FAD and radio accessories before leaving for sea. Their areas of operations were closely monitored to ensure that they didn't fish in the closed area.

Any vessel whose transponder was not working while at sea is recalled to port and can not leave for sea without a working transponder.

3.5 Compliance with catch limits and quotas table

3.5.1 Catch limits for bigeye tuna

Ghana's catch limit for bigeye tuna for 2006 is 4,602.3 tons (t). Tuna catches by vessels are reported monthly by species composition. Processing of tuna statistical data is done monthly. Thus, catches are monitored throughout the year. The renewal of fishing licenses was done on a quarterly basis. Thus, application for the renewal of a license could be refused in the course of the year when a vessel is found to catch above the anticipated quota. With that measure in place Ghana's catch of bigeye tuna for 2006 was 2,333 t, far below its catch limit for 2006.

3.5.2 Quota for swordfish

Ghana requested 150 t and was granted a quota of 100 t for the industrial tuna fleet. The total catch for 2007 was 100 t. As is the case for bigeye tuna, processing of tuna statistical data is done monthly and thus catches are monitored throughout the year. The renewal of fishing licenses was done on a quarterly basis. Thus, application for the renewal of licenses could be refused in the course of the year when the catch of a vessel was found to be above the anticipated quota.

3.6 *Recommendation by ICCAT on Yellowfin Tuna [Rec. 05-01] and the Recommendation by ICCAT on a Multi-Year Conservation and Management Program on Bigeye Tuna [Rec. 04-01]*

With coming into force the two recommendations, there is no size limit of yellowfin and bigeye tunas to be landed. In view of the fact that the Gulf of Guinea is the spawning grounds for these tuna species, the Directorate of Fisheries still imposed catch limit for the two species. The Directorate of fisheries wrote to all fishing companies to remind them that only 15% tolerance level of undersize fish would be allowed. Quay side sampling of landings of tuna vessel are regular to ensure that undersize yellowfin and bigeye tunas landed are within limit.

3.7 *ICCAT request for information on vessels greater than 24 meters for the ICCAT Record of Vessels [Rec. 02-022]*

The information on the list of Ghana flag vessels greater than 24 meters was submitted to ICCAT Secretariat in February 2007. The updated list is on the ICCAT website at: <http://www.iccat.int>.

3.8 *Recommendation by ICCAT Concerning the ICCAT Bigeye Tuna Statistical Document Program [Rec. 01-21]*

The Recommendation also requires the validation of the ICCAT Bigeye Tuna Re-export Certificate by a government official. A letter dated August 17, 2005 to ICCAT mandated the Marine Fisheries Research Division (MFRD) as the institution responsible for validation of the document and also indicated the officers mandated to sign. During the review period, a total of 310.9 t of bigeye tuna was exported under the program. Copies of completed and certified ICCAT Bigeye Statistical Documents were forwarded to the ICCAT Secretariat in compliance with the above quoted recommendation.

3.9 *Recommendation by ICCAT Establishing a Swordfish Statistical Document Program [Rec. 01-22]*

The Recommendation also requires the validation of the ICCAT Bigeye Tuna Re-export Certificate by a government official. A letter dated August 17, 2005 to ICCAT mandated the Marine Fisheries Research Division (MFRD) as the institution responsible for validation of the document and also indicated the officers mandated to sign. Ghana requested 150 t and was granted a quota of 100 t for the industrial tuna fleet. The total catch for 2007 was 100 t. During the review period, a total of 102.4 t of swordfish was exported under the program. Copies of completed and certified ICCAT Swordfish Statistical Documents were forwarded to ICCAT Secretariat in compliance with the above quoted recommendation.

Section 4. Inspection Schemes and Activities

4.1 At-sea patrols

Since 2000, the Directorate, in collaboration with the Ghana Navy, has been undertaking at-sea patrol operations to inspect fishing gear and equipment, safety equipment and fishing licenses. In 2006, four such operations were undertaken.

4.2 Transshipment at sea

There is currently one carrier vessel operating in Ghana. This vessels leaves for sea with a Fisheries Observer on board to supervise transshipment at sea and also monitor their operations.

Section 5: Other Activities

5.1 Request for increase of swordfish quota to 150 t

Ghana has requested an increase in quota for swordfish to 150 t. Historically, swordfish are abundant in Ghanaian coastal waters and have been exploited by the artisanal canoes using drifting gill nets. Such data are always made available to ICCAT.

5.2 Review of catch limit and quota on bigeye

During the Bigeye Tuna Stock Assessment Session (Madrid, Spain, June 5 to 12, 2007) Ghana's tuna statistics were recalculated by the working group for the period 1997-2006. The revised data have given the true historical catches of bigeye tuna by the Ghanaian tuna fleet. The setting of catch limits and quota for bigeye tuna for its management was based on historical catches by the Contracting Parties. In view of the revised estimates, Ghana is therefore requesting a review of its catch limit and quota for bigeye tuna to reflect the revised estimates.

5.3 Ghana's concerns

5.3.1 Calculation of ICCAT contributions for Contracting Parties

Allocation of ICCAT contributions for Contracting Parties is based on tonnage caught by the vessels plus the tonnage processed by the canneries in each country as a percentage of the total of all ICCAT Members. Ghana's main concern is the lack of a mechanism to validate figures submitted by Contracting Parties. Ghana still believes that some Contracting Parties have been under-declaring their figures to ICCAT. Such action undermines the spirit of the organization.

In conclusion, it is obvious from the above-mentioned concerns that some Contracting Parties are under-declaring their tonnages to avoid being allocated a higher percentage of the ICCAT budget.

Ghana once again proposes a write off of 50% of the arrears it owes ICCAT.

5.3.2 Review of contributions made by non-Contracting Parties to the annual budget

Ghana is of the opinion that the current practice whereby non-Contracting Parties operating the ICCAT Convention Area make voluntary contribution to the annual ICCAT budget should be reviewed. Ghana suggests that the contribution of such Parties should be tied to the quantity of tuna fish caught in the ICCAT Convention area. It is on record that the annual catches of some non-Contracting Parties form a big chunk of the total tuna caught.

6. Conclusion

Over the review period Ghana has implemented all the ICCAT Recommendations that affects her. Ghana has made efforts to fulfill its financial obligations to ICCAT. Ghana hopes that ICCAT will look seriously into the concerns expressed in this report.

Ghana promises ICCAT that it will play its role in ICCAT activities for the benefit of the organization.

Reference

MIYAKE, Makoto and Sigeiti Hayasi. 1972. Field Manual for Statistics and Sampling of Atlantic Tunas and Tuna-like Fishes (1st edition).

Table 1. Summary of billfish catches (t) for 2006.

<i>Year</i>	<i>Sailfish</i>	<i>Blue marlin</i>	<i>White marlin</i>	<i>Swordfish</i>	<i>Effort (trips)</i>
2006	282.5	406.2	0.1	31.9	123,759
2005	541.8	759.0	0.8	54.7	50,248

**ANNUAL REPORT OF ICELAND
RAPPORT ANNUEL DE LA ISLANDE
INFORME ANUAL DE ISLANDIA**

SUMMARY

Iceland did not conduct any bluefin tuna fishery in 2006 and 2007. Research on genetic studies on Atlantic bluefin tuna caught off Iceland in 1999-2002 were published in 2006. An implementation of ICCAT regulation on bluefin tuna fishery is to be found in regulation No. 343, 5. April 2005, on Fisheries of East Atlantic Bluefin Tuna with amendment in regulation No. 139, 26. February 2007. The Ministry of Fisheries issues a quota for bluefin tuna according to allocation scheme decided by ICCAT. Captains are required to register in logbooks made available by the Directorate of Fisheries as well as ICCAT statistical documents. The Directorate checks that the quota is not exceeded. All vessels allowed to fish for bluefin tuna are required to have VMS. Any violation of the regulation is punishable by law.

RÉSUMÉ

L'Islande n'a pas réalisé de pêche de thon rouge en 2006 et 2007. Les programmes de recherche portant sur les études génétiques du thon rouge de l'Atlantique capturé en Islande en 1999-2002 ont été publiés en 2006. La mise en œuvre des réglementations de l'ICCAT relatives à la pêcherie de thon rouge est incluse dans la Réglementation No. 343, du 5 avril 2005, sur les Pêcheries de Thon Rouge de l'Atlantique Est, avec un amendement à la Réglementation No. 139, du 26 février 2007. Le Ministère des Pêches alloue un quota pour le thon rouge, conformément au schéma d'allocation décidé par l'ICCAT. Les capitaines des navires sont tenus de remplir les livres de bord fournis par la Direction des Pêches ainsi que les Documents Statistiques ICCAT. La Direction vérifie que le quota n'est pas dépassé. Tous les navires autorisés à pêcher du thon rouge doivent être équipés d'un système VMS. Toute infraction à cette réglementation est passible de sanction par la loi.

RESUMEN

Islandia no llevó a cabo ninguna pesquería de atún rojo en 2006 y 2007. En 2006 se publicó la investigación de los estudios genéticos sobre atún rojo del Atlántico capturado frente a Islandia en 1999-2002. La implementación de las regulaciones de ICCAT sobre la pesquería de atún rojo está incluida en la regulación número 343, del 5 de abril de 2005, sobre la pesquería de atún rojo del Atlántico Este, con una enmienda a la regulación número 139 del 26 de febrero de 2007. El Ministerio de Pesca establece una cuota para el atún rojo de acuerdo con el esquema de asignaciones establecido por ICCAT. Los patronos deben rellenar los cuadernos de pesca entregados por la Dirección de Pesca así como los documentos estadísticos de ICCAT. La Dirección de Pesca comprueba que no se ha sobrepasado la cuota. Todos los barcos autorizados a pescar atún rojo deben llevar a bordo un VMS. Cualquier infracción de la regulación es sancionable por ley.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Iceland did not conduct any bluefin tuna fishery in 2006 and 2007.

Section 2: Research and Statistics

Results on genetic studies on Atlantic bluefin tuna caught off Iceland in 1999-2002 were published in 2006. The research was a joint research project conducted by the Marine Research Institute, Reykjavík, Iceland and the Virginia Institute of Marine Science, Virginia, USA (Carlsson *et al.* 2006)

The Marine Research Institute, Reykjavik, participated in the work of the ICCAT SCRS working group for bluefin tuna direct ageing by evaluating ageing procedure using whole vertebrae (Rodríguez-Marín *et al.* 2006)

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Bluefin tuna is the only species subject to ICCAT management measures to which Iceland is a coastal State.

Iceland did not conduct any bluefin tuna fishery in 2006 and 2007.

An implementation of ICCAT regulation on bluefin tuna fishery is to be found in regulation No. 343, of 5 April 2005, on Fisheries of East Atlantic Bluefin Tuna with an amendment in regulation No. 139, of 26 February 2007. The Ministry of Fisheries issues a quota for bluefin tuna according to allocation scheme decided by ICCAT. A special vessel license issued by the Directorate of Fisheries is needed for fishing bluefin tuna and the Directorate checks that the quota is not exceeded. Captains are required to register in logbooks made available by the Directorate of Fisheries and the Marine Research Institute, dates, catches, gear and area amongst other information. The Directorate issues ICCAT statistical documents as needed. All vessels allowed to fish for bluefin tuna are required to have VMS and information on location is to be transmitted every hour to the Icelandic Coast Guard. Vessels conducting bluefin tuna fisheries are obliged to transmit catch data between 06:00 and 08:00, every 24 hours. Any violation of the regulation are punishable by law.

Section 4: Inspection Schemes and Activities

The Coast Guard monitors fishing activities in Icelandic waters, including surveillance of areas closed for fishing and inspection of mesh sizes and other gear related practices.

The Directorate of Fisheries has an extensive mandate. In addition to its responsibilities in the area of fisheries management it is also responsible for enforcement of laws and regulations relating to the handling, processing and distribution of marine products.

The Fisheries Management Department of the Directorate issues commercial fishing permit, allocates catch quotas to Icelandic fishing vessels and maintains records of those rights. It also records quota transfers between vessels and checks that vessels do not fish in excess of their quotas. The department collects data on fishing and the catches landed by the Icelandic fleet and monitors compliance with rules on the weighing and recording of catches.

All the catch landed in Iceland by the Icelandic fishing fleet must be weighed and reported in Iceland. Port authorities are responsible for the correct weighing and recording of the catch and for transmitting this information to the Directorate. All landed catch is weighed on certified scales by licensed operators who are employed by the local port authorities. A computer system links all the ports of landings to the Directorate and catch data is transmitted twice a day. The fishing by on-board processing vessels is monitored by weighing the landed products in a similar way and by conversion to catch weight by means of yield indices, calculated for each type of product from each fish species.

A team of inspectors is employed by the Directorate for supervision of correct practices in the fisheries. To a large extent the work of the Directorate's inspectors involves the monitoring of landing and weighing practices but they have many other functions. Inspection on-board processing vessels is extensive and this involves monitoring yield in processing and other catch and processing practices. Supervision at sea for fishing vessels in general is also undertaken and inspectors may board fishing vessels to monitor catch composition, handling methods and fishing equipment. The inspectors have access to the log books that must record details of fishing practices such as location, dates, gear and catch quantity.

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**ANNUAL REPORT OF JAPAN
RAPPORT ANNUEL DU JAPON
INFORME ANUAL DE JAPÓN**

National Research Institute of Far Seas Fisheries¹

SUMMARY

Longline is the only tuna-fishing gear deployed by Japan at present in the Atlantic Ocean. The final coverage of logbooks from the Japanese longline fleet has been 90-95%. In 2005, there were 30,300 fishing days, which was 92% compared to the average value in the recent ten-year period. The catch of tunas and tuna-like fishes (excluding sharks) is estimated to be 26,936 t, excluding discards and sharks in 2005 it was 83% of the average catch for the recent ten-year period. The most important species was bigeye representing 55% of the total tuna and tuna-like fish catch in 2005. The next dominant species was yellowfin, which comprised 17% in weight, and the third species was bluefin tuna (12%). Observer trips on longline boats in the Atlantic were conducted and a total of 554 fishing days were monitored. The Fisheries Agency of Japan (FAJ) sets catch quotas for western and eastern Atlantic bluefin as well as for northern and southern Atlantic swordfish, blue marlin, white marlin and bigeye tuna, and requires all tuna vessels operating in the Atlantic Ocean to submit the following catch information every ten-day period by radio or facsimile. All Japanese longline vessels operating in the Convention area are equipped with satellite tracking devices (VMS) onboard. In accordance with ICCAT recommendations, the FAJ has taken measures to prohibit the catch of undersized several tuna species and the false import of Atlantic bluefin tuna, swordfish and bigeye tuna. Implementations of time and area closures in the Mediterranean and the Gulf of Mexico have been regulated by Ministerial order. Each species statistical document program has been conducted. Records of fishing vessels larger than 24 meters in length overall (LSFVs) have been established. The FAJ dispatched patrol vessels to the North Atlantic to monitor and inspect Japanese tuna vessels and also observe fishing activities of other nations' fishing vessels, and randomly inspected landings at Japanese ports to enforce the catch quotas and minimum size limits. Prior permission from the FAJ is required for any Japanese tuna longline vessel to transship tuna or tuna products to reefers at foreign ports.

RÉSUMÉ

La palangre est le seul engin de pêche ciblant les thonidés actuellement utilisé par le Japon dans l'Océan Atlantique. La couverture finale de la flottille palangrière japonaise par les carnets de pêche dans l'Océan Atlantique a été de 90-95%. En 2005, il y a eu 30.300 jours de pêche, soit 92% par rapport à la valeur moyenne de ces dix dernières années. La prise de thonidés et d'espèces apparentées (à l'exception des requins) est estimée s'élever à 26.936 t, (rejets non compris). En 2005, les requins ont représenté 83% de la prise moyenne de ces dix dernières années. L'espèce la plus importante a été le thon obèse, qui représente 55% de la prise totale de thonidés et d'espèces apparentées en 2005. L'espèce suivante par ordre d'importance a été l'albacore, qui a représenté 17% en poids, suivie du thon rouge (12%). Des observateurs ont été embarqués à bord de palangriers dans l'Atlantique et, au total, 554 jours de pêche ont fait l'objet de suivi. L'Agence des Pêches du Japon (Fisheries Agency of Japan - FAJ) établit des quotas de capture pour le thon rouge de l'Atlantique Est et Ouest, l'espadon de l'Atlantique Nord et Sud, le makaire bleu, le makaire blanc et le thon obèse. Elle demande à tous les thoniers opérant dans l'Océan Atlantique de soumettre des informations de capture tous les dix jours par radio ou facsimilé. Tous les palangriers japonais opérant dans la zone de la Convention sont équipés de systèmes de surveillance des navires par satellite (VMS). Conformément aux recommandations de l'ICCAT, la FAJ a pris des mesures visant à interdire la capture de plusieurs espèces de thonidés sous-taille ainsi que la fausse importation de thon rouge, d'espadon et de thon obèse de l'Atlantique. La mise en œuvre de fermetures spatio-temporelles en Méditerranée et dans le Golfe du Mexique a été réglementée par arrêté ministériel. Tous les programmes de Documents Statistiques pour les diverses espèces ont été réalisés. Des registres des navires de pêche de plus de 24 mètres de longueur hors tout ont été établis. La FAJ a détaché des patrouilleurs dans l'Atlantique Nord

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

afin de procéder au suivi et à l'inspection des thoniers japonais, d'observer les activités de pêche de navires de pêche d'autres nations et d'inspecter aléatoirement les débarquements effectués dans les ports japonais en vue d'appliquer les quotas de capture et les limites de taille minimale. Les palangriers thoniers japonais sont tenus d'obtenir l'autorisation préalable de la FAJ pour pouvoir transborder des thonidés ou des produits de thonidés sur des cargos frigorifiques dans les ports étrangers.

RESUMEN

El palangre es el único arte pesquero que utiliza Japón actualmente en el océano Atlántico. La cobertura final de cuadernos de pesca de la flota palangrera japonesa ha sido del 90-95%. En 2005, se realizaron 30.300 días de pesca, que supone el 92% en comparación con el valor medio del periodo de los últimos diez años. La captura de túnidos y especies afines (excluyendo tiburones) se estima en 26.936 t, excluyendo descartes y tiburones en 2005 fue el 83% de la captura media del periodo de los últimos diez años. La especie más importante fue el patudo, que representó el 55% de la captura total de túnidos y especies afines en 2005. La siguiente especie dominante fue el rabil, que representó el 17% en peso, y la tercera especie el atún rojo (12%). Se llevaron a cabo mareas con observadores en el Atlántico y se hizo el seguimiento de 554 días de pesca. La Agencia de Pesca de Japón (FAJ) establece cuotas de captura para el atún rojo del Atlántico este y oeste sí como para el pez espada del Atlántico norte y sur, la aguja azul, la aguja blanca y el patudo, y requiere que todos los buques atuneros que faenan en el Atlántico envíen la siguiente información sobre la captura cada diez días por radio o por fax. Todos los palangreros japoneses que operan en la zona del Convenio están equipados con dispositivos de seguimiento por satélite a bordo (VMS). De acuerdo con las recomendaciones de ICCAT, la FAJ ha tomado medidas para prohibir la captura de ejemplares de talla inferior a la regulada de diversas especies de túnidos y la importación falsa de atún rojo, pez espada y patudo. La implementación de vedas espaciales y temporales en el Mediterráneo y en el Golfo de México ha sido regulada por orden ministerial. Se ha llevado a cabo el programa de documento estadístico de cada especie. Se han establecido registros de los buques pesqueros de más de 24 m de eslora total (GBA). 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 y aleatoriamente inspeccionó los desembarques en los puertos japoneses para verificar la ejecución de las cuotas de captura y el 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.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Type of fisheries

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

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 logbook coverage of the Japanese longline fleet operating in the Atlantic has been very good (90-95%). To reach this level, however, it takes almost two to three years after the completion of a respective calendar year. The current coverage, which completed collation in electronic form for 2005 and 2006, is estimated to be about 87% and 47%, respectively. Since some trips made by the Japanese longline boats are often longer than 12 months, the coverage for the latter part of 2006 is much lower than the earlier part of that year. Because of the low coverage in 2006, it seems difficult to get reliable total catch amount by raising logbook data. Therefore, the same values of 2005 were repeated as total catch of 2006 and sample (not raised) data was used to express geographic distribution of catch and effort in 2006.

With regard to the implementation of conservation measures on North Atlantic swordfish, the Fisheries Agency of Japan (FAJ) instructed its fishermen to retain only dead fish and to release all the swordfish caught alive in the North Atlantic (North of 5°N) starting in August 2004. At the same time, The FAJ requested fishermen to submit that release information in a designated format.

1.3 Trend of fishing effort

The number of the Japanese longliners which operated in the Atlantic in 2005 was estimated to be 214 (**Table 1** and **Figure 1**). In the recent three years the number of boats showed little change. In 2005, the fishing days were 30,300 days, which was 92% compared to the average value of recent years, suggesting the fleet exerted a lesser amount of time in the Atlantic in recent years.

The annual geographic distribution of longline fishing effort in 2005 and 2006 (**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. On the other hand, hardly any fishing effort was observed in waters off southern America. 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 fourth quarter to the first quarter, while the tropical fishing grounds are fished for all year round.

1.4 Catch trend

The 2005 catch of tunas and tuna-like fishes (excluding sharks) in the Atlantic Ocean and the Mediterranean Sea by the Japanese fishery is estimated to be 26,936 t (**Table 2**). Although the total amount of fishing effort in 2005 was 92% (**Table 1**) of the past average for the last ten years (1997-2006), the total catch excluding discards and sharks in 2005 was only 83% of the average catch for the same years (**Table 2**). The most important species was still bigeye representing 55% of the total tuna and tuna-like fish catch in 2005. The next dominant species was yellowfin, which comprised 17% in weight, and third species was bluefin tuna (12%). The remaining species were mainly comprised of albacore, blue marlin and swordfish. The decline of catch in recent years was likely due to a decrease in the bigeye catch. In 2005, the bigeye catch was 74% of the past average catches (**Table 2**). Swordfish catches decreased slightly (87%) and southern bluefin indicated a decline, down to 41%. On the other hand, yellowfin and albacore catches increased markedly, 114% and 140%, respectively. The swordfish catch did not occur in the North Atlantic between February 2000 and 2003 as all catches of this species were discarded. The amount of annual dead discards of swordfish fluctuated from 263 t to 598 t per year (**Table 2**). The area breakdown of catch by species is also shown in **Table 3** for the recent two years (2004-2005). For bigeye, the catch decreased in both the North and South Atlantic.

The geographic distributions of catch by species are shown in **Figure 4** (bluefin tuna), **Figure 5** (bigeye tuna), **Figure 6** (swordfish) and **Figure 7** (blue marlin). In general, those 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. These patterns are shown more clearly in **Figure 8** which indicates geographic distribution of catch composition by species.

1.5 New developments or shifts in the fishery

No new development or change was observed in recent years. However, there was a declining trend in the total amount of fishing effort, which was observed during 1994 and 2002 in the Atlantic. Effort recovered to some extent in 2003 and remained at about the same level (**Figure 1**).

Section 2: Research and Statistics

The NRIFSF has been in charge of data collection and the 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 intercessional meetings of the Standing Committee on Research and Statistics (SCRS).

2.1 Fishery data

The NRIFSF provided near final 2005 catch, 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 1996 ICCAT Recommendation on bigeye tuna observer program and the 2000 Recommendation on swordfish observer program, seven observer trips on longline boats in the Atlantic were conducted between September 2006 and March 2007. A total of 554 fishing days were monitored. Pop-up tagging was also conducted during these trips, and three bigeye tuna were released. Not all the tags have popped off yet. One of tags did not send data after the date of split-off. The remaining two tags still have corrected data. This year's activities, which have already started, will be conducted on a similar scale as in the past. A total of 8 trips are scheduled between August 2007 and March 2008.

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, NRIFSF and other affiliated scientists participated in the following ICCAT-related meetings in addition to the regular SCRS meetings, at which seven papers were presented: Meeting of the Working Group on Stock Assessment Methods (Madrid, Spain, March 19 to 23, 2007); 2007 Inter-sessional Meeting of the Tropical Tunas Species Group (Recife, Brazil, April 11 to 16, 2007); 2007 ICCAT Bigeye Tuna Stock Assessment Session (Madrid, Spain, June 5 to 12, 2007); 2007 Data Preparatory Meeting of the Shark Species Group (Punta del Este, Uruguay, June 25 to 29, 2007); and 2007 ICCAT Albacore Stock Assessment Session (Madrid, Spain, July 5 to 12, 2007).

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 vessels

3.1.1 Catch reporting by radio

The FAJ requires all tuna vessels operating in the Atlantic Ocean to submit the following catch information every ten-day period (early-, middle- and late-period of a month) by radio or facsimile to the FAJ. In addition, all tuna vessels operating in the designated Atlantic bluefin tuna area are required to report their catches in real time:

- Catch weight of bluefin tuna, swordfish, blue marlin, white marlin and bigeye tuna (Ministerial Order on April 2, 1975, and supplemented on December 13, 1991 for swordfish and February 20, 1998 for blue marlin and white marlin, and July 30, 2001 for bigeye tuna).

3.1.2 Implementation of the Vessel Monitoring System (VMS)

All Japanese longline vessels operating in the Convention area are equipped with satellite tracking devices (VMS) onboard which started to be installed in 1992. Those Japanese longline vessels are also required to report their positions through VMS in accordance with the relevant ICCAT Recommendation.

3.1.3 Catch quotas management

i) Catch quotas

The FAJ sets catch quotas for western and eastern Atlantic bluefin 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, all catches are required to be tagged with the designated plastic band which the FAJ distributes to the fishing vessels operating in bluefin tuna area.

ii) Fishing year

The FAJ sets the "Fishing Year (August to July)" for the purpose of proper quota management for bluefin tuna, swordfish, blue marlin, white marlin and bigeye tuna. The 2006 quotas for these tunas are applied to the 2006 Fishing Year which started on August 1, 2006 and ended on July 31, 2007.

iii) Bluefin catches in the central Atlantic Ocean

For 2003, 2004 and 2005, the 2002 ICCAT Resolution as amended by Supplemental Resolution 04-08 call for CPCs not to increase their catch by large-scale tuna longline vessels from the 1999/2000 level in the central Atlantic Ocean. For 1999 and 2000, the Japanese bluefin catch in the central Atlantic Ocean was 1,144 t and 974 t, respectively; for 2005 and 2004, it was 441 t.

3.1.4 The number of fishing vessels

The FAJ has submitted the list of all the tuna fishing vessels that are licensed to fish for tuna and tuna-like species in the convention area based on the *Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels Over 24 Meters Authorized to Operate in the Convention Area* [Rec. 02-22].

Since 1998, the FAJ limits 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 *Recommendation by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna* [Rec. 04-01] 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 the *Resolution by ICCAT to Authorize Catch Limit Adjustments in the Bigeye Tuna Fishery* [Res. 05-03].

3.2 Minimum size limits

In accordance with ICCAT recommendations, the FAJ prohibits the catch of undersized fish with an exemption of a certain percentage of tolerance, by Ministerial order. The catch prohibition of undersized bluefin was established by a Ministerial order on April 2, 1975 and FAJ amended this Ministerial order several times to cover undersized bigeye, swordfish, etc. The latest amendment of this order was in August 2007 to implement the 2006 Recommendations on bluefin size limits.

All the Japanese pole and line vessels ended their operations in the Convention area to comply with the 1972 recommendation that prohibits any taking and landing of yellowfin tuna weighing less than 3.2 kg because of their high by-catch rate.

3.3 Time and area closure

The FAJ has prohibited Japanese longline vessels from operating in the Mediterranean from June 1 to July 31 by a Ministerial order, in accordance with the 1993 ICCAT recommendation. However, this order was amended in August 2007 to comply with the *Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean* [Rec. 06-05] on extension of time and area closure for eastern Atlantic bluefin. The FAJ also has prohibited Japanese longline vessels from operating in the Gulf of Mexico during the first half of a year.

3.4 National observer program

Based on the 2002 ICCAT Recommendation on the rebuilding program for North Atlantic swordfish, the FAJ implemented a national observer program of vessels operating in the North Atlantic. For 2006, the national observer program covered 14.9% of the total number of fishing vessels operating in the North Atlantic Ocean in accordance with the 2006 Supplemental Recommendation for North Atlantic Swordfish. Similarly, the program covered about 5.8% of the total number of fishing vessels operating in the entire Atlantic Ocean in accordance with the *Recommendation by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna* [Rec. 04-01].

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 and July 28, 2003, respectively in accordance with ICCAT recommendations.

Japan conducts DNA examination against imported tunas to prevent false import.

3.6 Implementation of the ICCAT Bluefin Tuna Statistical Document (BTSD) Program

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.

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

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

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

From July 1, 2002, the Japanese government started to collect BETSDs for 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.

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

From January 1, 2003, the Japanese government started to collect 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 biannual basis.

3.9 Implementation of the Positive Listing Measure

Based on the *Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels Over 24 Meters Authorized to Operate in the Convention Area* [Rec. 02-22], the Japanese Government started the Positive Listing Measure from November 14, 2003. Currently, species and product type covered by the measure are frozen bluefin tuna, frozen bigeye tuna and frozen swordfish. If there are tunas caught by LSFVs not entered in 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 Activities

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 Japanese tuna vessels. The FAJ dispatched patrol vessels to the North Atlantic during the 2006 fishing season. These vessels also observed fishing activities of other nations' fishing vessels.

4.2 Inspection of landings 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% landing inspection has been implemented.

4.3 Management of transshipment at foreign ports

Prior permission from the FAJ is required for any Japanese tuna longline vessels to transship tuna or tuna products to reefers at foreign ports. The FAJ monitors the weight by species, the time and place of transshipments, and conducts inspection of landings at Japanese ports when longline vessels or reefers return to Japanese ports.

Section 5: Other Activities

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 within 30 days after the end of cruise or when the vessel has entered a port. Submission of this report is established by a Ministerial Order of January 22, 1963. 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 turtles, seabirds and sharks

The FAJ has issued administrative guidance and conducted educational programs for fishermen to use fishing gears and other tools to reduce the incidental catch of sea turtles, 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 occurs, they are required to use a device, Tori-pole, to avoid seabirds from approaching the hooks and bait when these are launched. 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. In 2003, Japan reported assessment of implementation of Japan's NPOA to the FAO Committee on Fisheries (COFI). Also, Japan submitted a revised NPOA for the Conservation and Management of Sharks at the 26th COFI Meeting in 2005.

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 are collected by 31 items including species, fresh/frozen and type of product.

5.5 Effort limitation

The number of Japanese tuna longline vessels which can operate in the western Atlantic and in the eastern Atlantic and the Mediterranean for bluefin tuna has been limited to 7 and 47, respectively, in the 006 fishing year. Furthermore, the FAJ requires all the longline vessels operating in the northern part of the East Atlantic Ocean to submit an advance notice to the FAJ on their planned operations, which enables the FAJ to instruct the relevant fishing vessels to shift fishing grounds, if necessary. The number of longline vessels fishing for bigeye tuna has been limited 235 in 2006, in accordance with the *Recommendation by ICCAT on a Multi-year Conservation and Management Program for Bigeye Tuna* [Rec. 04-01].

5.6 Restriction of re-flagging of vessels

No Japanese large-scale tuna longline vessel is authorized to operate on the high seas unless the Government of Japan issues a license. No Japanese vessel can escape from 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 base of operation 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 import 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 the tuna supply.

Since November 1999, the FAJ has implemented a mandatory reporting system, based on this law, to obtain more information on the 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 transported their tuna.

5.8 Non-purchase guidance

In accordance with the *Resolution by ICCAT Calling for Further Actions against Illegal, Unregulated, and Unreported Fishing Activities by Large-scale Longline Vessels in the Convention Area and Other Areas* [Rec. 99-11], the FAJ (i) urges importers, transporters and other concerned people to refrain from engaging in the transaction and transshipment of tuna and tuna-like species caught by the IUU fishing vessels; (ii) informs the general public of IUU fishing activities and urges them not to purchase fish harvested by the IUU fishing vessels; and (iii) urges manufactures and business people to prevent their vessels and equipment/devices from being used in IUU fishing operations since December 1999. With respect to (i) and (ii), the FAJ took the initiative in establishing the Positive Listing Measure in November 2003.

5.9 Scrapping of IUU vessels

To implement the Japan-Chinese Taipei Action Programs to eliminate the IUU fishing vessels, the Japanese Government budgeted for the scrapping of 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 (32.7 billion Japanese yen). 43 IUU vessels were scrapped by the end of 2003.

5.10 Legalization of IUU vessels

In accordance with the *Resolution by ICCAT Concerning Cooperative actions to Eliminate Illegal, Unreported and Unregulated Fishing Activities by Large-scale Tuna Longline Vessels* [Res. 02-26], Japan consulted with Vanuatu and Seychelles, as well as Chinese Taipei, and established the following new measures in order to dispose of 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 were taken for the purpose of reinforcing and complementing the cooperative management scheme mentioned above as well as preventing the increase in overall fishing capacity.

Those 69 vessels will not operate in the Atlantic any more.

5.11 Establishment of OPRT

The Organization for Promotion of Responsible Tuna Fisheries (OPRT) was established in December 2000 in Tokyo, Japan. The organization consists of representatives from fishermen, importers, distributors, processors

and consumers. One of the main tasks of the OPRT is to compile and analyze the import data on tunas and provide them to OPRT member flag states as feedback for their verification of the reported catch data. OPRT's other task is to inform Japanese retailers and consumers of the products caught by IUU fishing vessels. Representatives from the fishermen of Japan and Chinese Taipei are the founding members of OPRT. Fishermen of Korea, Philippines, Indonesia, China, Ecuador and Seychelles have joined OPRT.

Table 1. Annual number of Japanese tuna boats operated in the Atlantic and Mediterranean, 1981-2006.

<i>Year</i>	<i>Number of boats</i>	<i>Longline Fishing Days (sets in 100)</i>	<i>Fishing days per boat</i>	<i>Purse seine Number of boats</i>	<i>Pole and line Number of boats</i>
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	110	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	212	319	154	-	-
2004	216	323	142	-	-
2005	214	303	142	-	-
2006*	214	303	142	-	-
Average (1997 - 2006)	220	328	148	-	-
2006 / average	97%	92%	101%	-	-

*2006 values are assumed to be the same as in 2005.

Table 2. Catches (t) of tuna and tuna-like fishes taken by the Japanese longline fishery, 1981-2006.

Year	Bluefin	Southern bluefin	Albacore	Bigeye	Yellow-fn	Sword-fish	Blue marlin *1	Black marlin	White marlin	Sail-fish *2	Spear-fish	Others	Sub-total	Sharks	Bluefin discards	Sword-fish discards	Grand Total (including sharks but excluding discards)
1981	4,386	2,506	2,298	21,044	4,145	2,233	468		143	94		319	37,636				
1982	3,826	1,135	1,350	32,867	6,062	3,728	1,132		111	173		410	50,794				
1983	3,997	505	1,318	15,141	2,069	1,899	440		44	69		114	25,596				
1984	3,246	1,636	800	24,310	3,967	3,789	833		76	97		342	39,096				
1985	2,523	1,468	1,467	31,602	5,308	4,323	1,090		126	122		468	48,497				
1986	1,664	389	1,209	22,801	3,404	2,660	508		129	99		378	33,241				
1987	2,140	1,120	851	18,575	3,364	2,294	438		134	43		341	29,300				
1988	2,536	548	1,128	31,664	5,982	4,055	823		144	79		366	47,325				
1989	2,523	625	1,214	39,419	6,971	5,593	1,555		146	78		390	58,514				
1990	2,186	1,202	1,324	35,024	5,919	7,307	1,216		126	88		538	54,930				
1991	3,754	1,331	1,346	29,489	4,718	4,688	905		121	88		443	46,883				
1992	3,985	525	1,048	34,128	3,715	3,541	1,017		248	43		265	48,515				
1993	3,858	1,688	951	35,053	3,096	6,386	928		82	60		815	52,917				
1994	3,038	595	1,157	38,502	4,782	4,763	1,524	6	92	53	38	513	55,063	3,221			58,284
1995	5,171	1,409	758	34,223	5,046	3,563	1,366	1	55	52	28	826	52,498	2,149			54,647
1996	4,542	1,219	901	33,171	5,251	3,795	1,679	2	112	50	29	783	51,534	1,364			52,898
1997	3,498	301	838	26,489	3,538	2,765	1,349	1	58	36	31	415	39,319	1,304	8		40,631
1998	4,276	926	884	25,601	5,413	2,518	1,067	2	50	50	40	801	41,628	1,524	-	-	43,152
1999	3,436	946	1,027	21,833	3,405	1,869	790	0	40	26	44	685	34,101	1,001	-	-	35,102
2000	3,523	1,205	1,241	24,605	4,061	954	883	2	83	39	40	734	37,370	696	-	598	38,664
2001	3,083	376	1,467	18,087	2,692	686	335	1	56	9	23	313	27,128	675	-	567	27,803
2002	3,501	1,152	942	15,306	2,105	833	267	2	16	23	28	531	24,705	898	-	319	25,603
2003	3,068	1,952	1,002	20,528	3,049	956	459	1	33	32	65	958	32,102	1,089	-	263	33,191
2004	3,123	92	1,402	18,509	6,260	1,263	539	2	36	75	77	336	31,715	1,464	-	0	33,179
2005	3,241	308	1,715	14,772	4,488	1,245	465	1	35	77	104	485	26,936	1,725	-	0	28,661
2006*3	3,123	308	1,715	14,772	4,488	1,245	465	1	35	77	104	485	2,6818	1,725	-	0	28,543
Average (1997 - 2006)	3,387	756	1,223	20,050	3,950	1,434	662	1	44	44	56	574	32,182	1,210	-	-	33,392
2006 / average	92%	41%	140%	74%	114%	87%	70%	54%	80%	173%	187%	84%	83%	143%			76%

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

*2 Sailfish and spearfish were not separated until 1993.

*3 2006 values are assumed to be the same as in 2005, except for bluefin tuna.

Table 3. Area breakdown of Task I catches (t) taken by the Japanese longline fishery for 2004 and 2005. ICCAT area definition is used for tunas and billfishes. For other species, north and south, and east and west are separated at 5°N and 30°W, respectively. Mediterranean Sea is separated from both west-east and north-south area division.

2004^{*1}

<i>Species</i>	<i>West</i>	<i>East</i>	<i>North</i>	<i>South</i>	<i>Medit.</i>	<i>Total</i>
Bluefin	470	2,015	2,485	0	638	3,123
Southern bluefin	0	92	0	92	0	92
Albacore	684	717	893	509	0	1,402
Bigeye	6,403	12,105	8,746	9,763	0	18,509
Yellowfin	1,194	5,066	2,434	3,825	0	6,260
Swordfish * ²	346	915	575	686	2	1,263
White marlin	12	24	23	13	0	36
Blue marlin	99	440	174	366	0	539
Black marlin	0	2	1	2	0	2
Sailfish	5	70	12	64	0	75
Spearfish	46	31	48	29	0	77
Blue shark	441	771	1,018	194	1	1,213
Other sharks	97	153	149	102	0	251
Other fishes	51	285	105	231	0	336
Total	9,850	22,688	16,662	15,875	642	33,179

^{*1}Almost final.

^{*2}Discards in the North Atlantic are not included.

2005^{*3}

<i>Species</i>	<i>West</i>	<i>East</i>	<i>North</i>	<i>South</i>	<i>Medit.</i>	<i>Total</i>
Bluefin	378	2,598			265	3,241
Southern bluefin	0	308	0	308	0	308
Albacore	1,125	591	1,391	324	0	1,715
Bigeye	5,133	9,639	8,705	6,067	0	14,772
Yellowfin	1,223	3,265	2,295	2,193	0	4,488
Swordfish * ⁴	386	855	740	501	4	1,245
White marlin	19	16	30	6	0	35
Blue marlin	143	323	265	200	0	465
Black marlin	0	1	0	1	0	1
Sailfish	23	53	28	49	0	77
Spearfish	74	30	85	19	0	104
Blue shark	532	952	1,248	237	2	1,486
Other sharks	125	114	184	55	0	239
Other fishes	74	411	157	328	0	485
Total	9,235	19,156	15,128	10,287	271	28,661

^{*3}Almost final.

^{*4}Discards in the North Atlantic are not included.

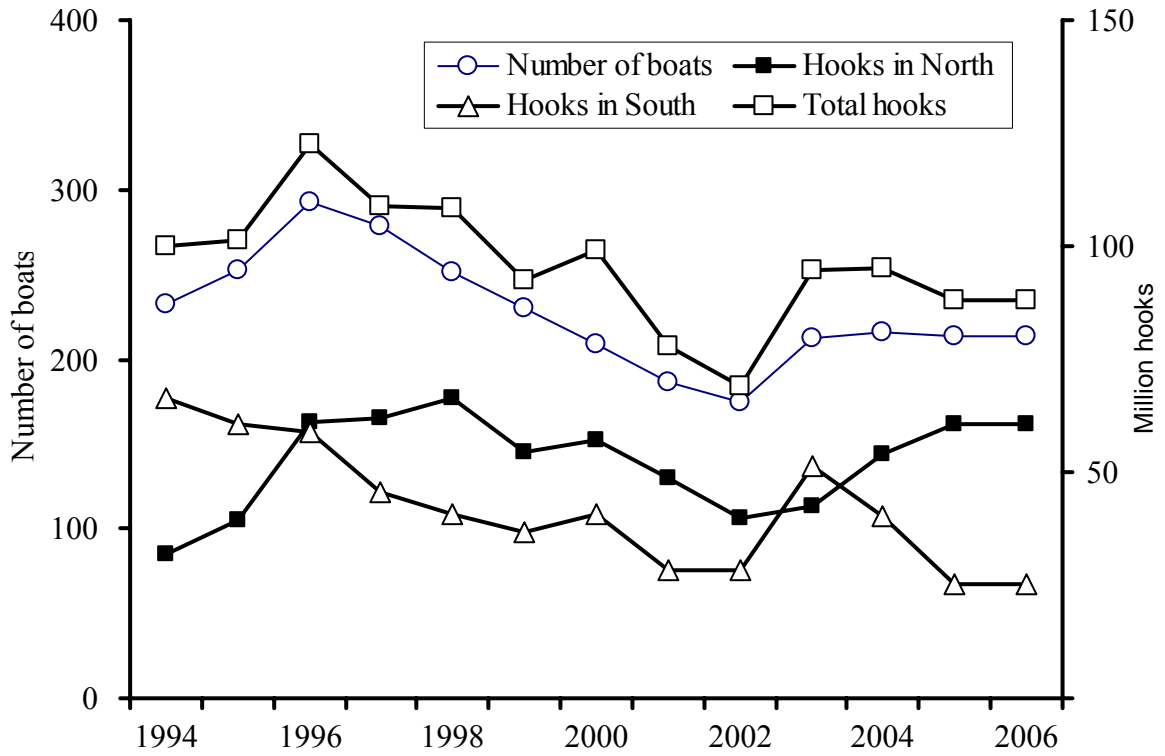


Figure 1. Trends in fishing effort (in number of boats operated and number of hooks used) exerted by the Japanese longline fishery, 1994-2006. The values of 2006 were repeated the figures of 2005.

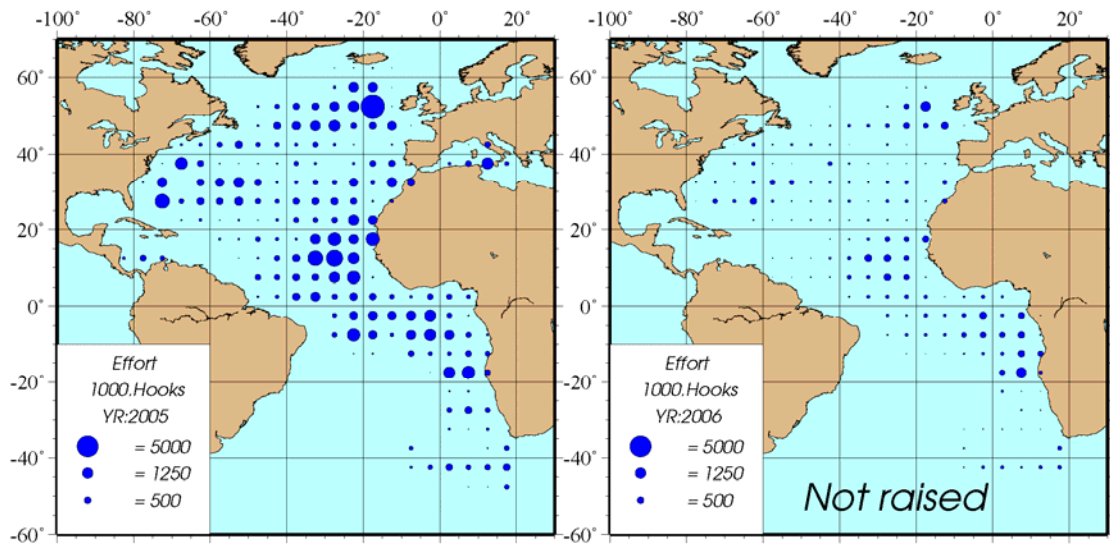


Figure 2. Geographic distribution of Japanese longline effort (in number of hooks) in the Atlantic for 2005 (left) and 2006 (right). The right figure was based on unraised data, thus caution is required when readers compare with the two panels.

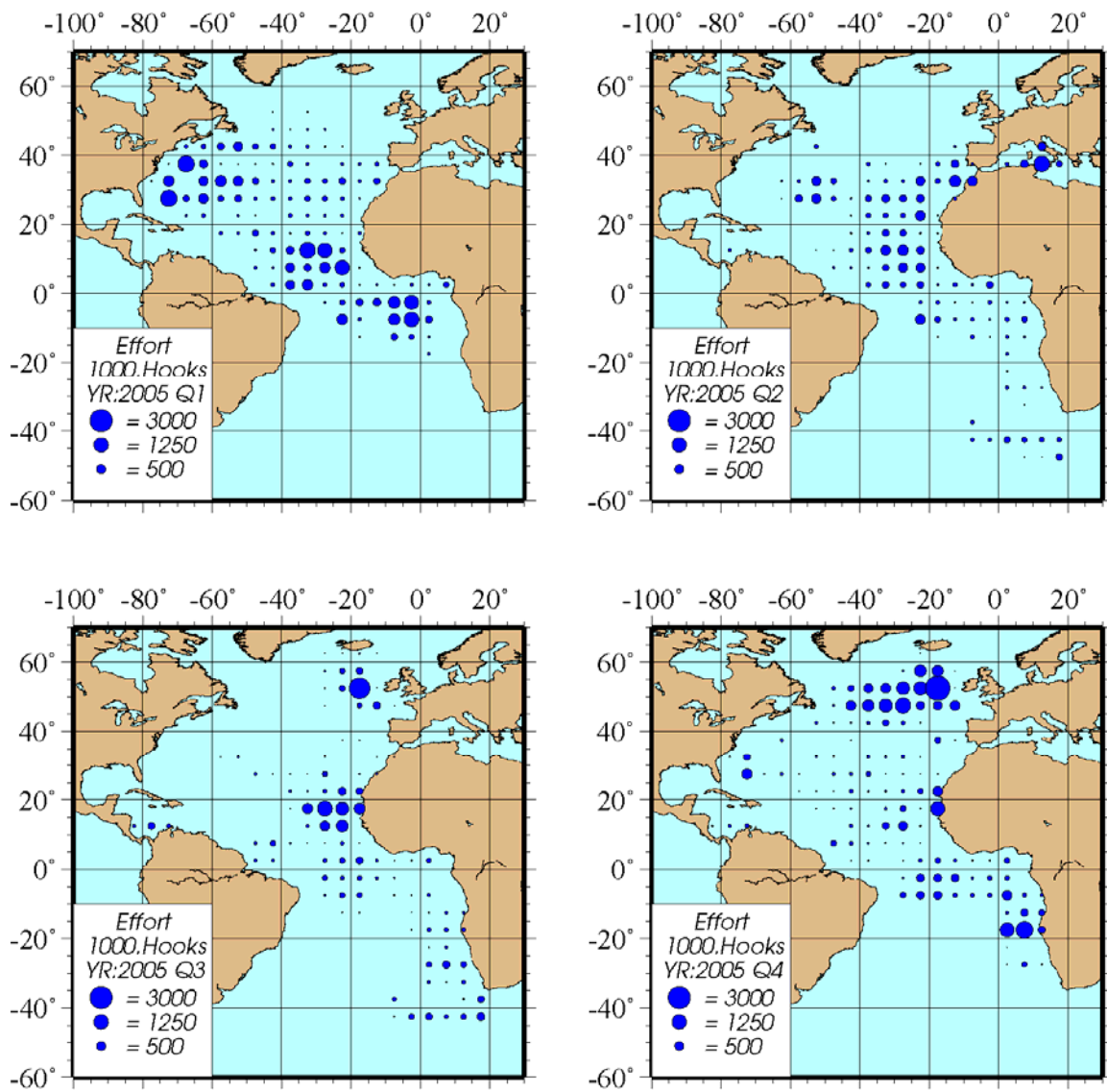


Figure 3. Quarterly distribution of Japanese longline effort (in number of hooks) in the Atlantic for 2004. All panels were based on raised data.

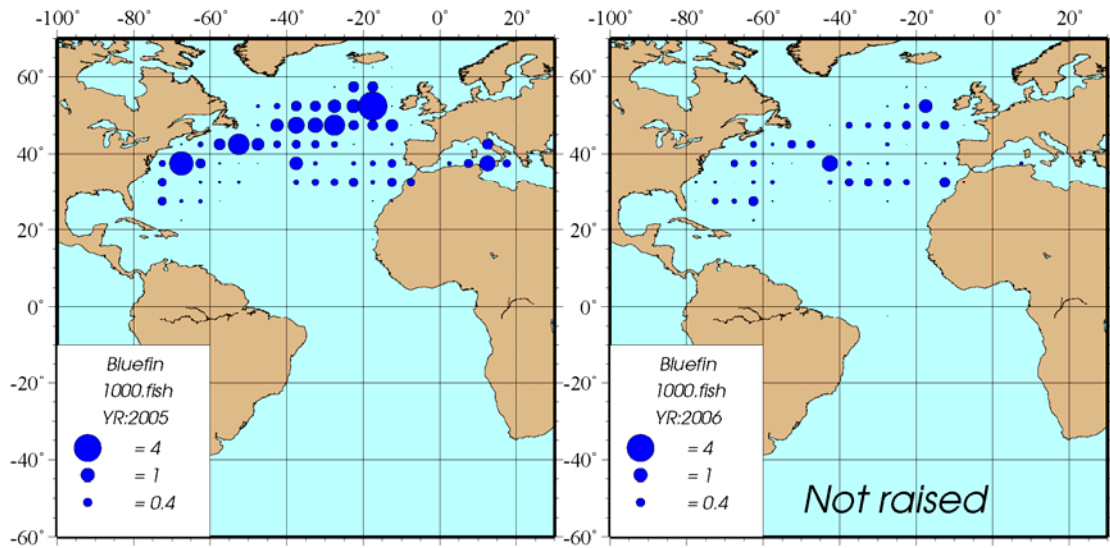


Figure 4. Geographic distribution of bluefin catch (in number) in the Atlantic for 2005 (left) and 2006 (right). The right figure was based on unraised data.

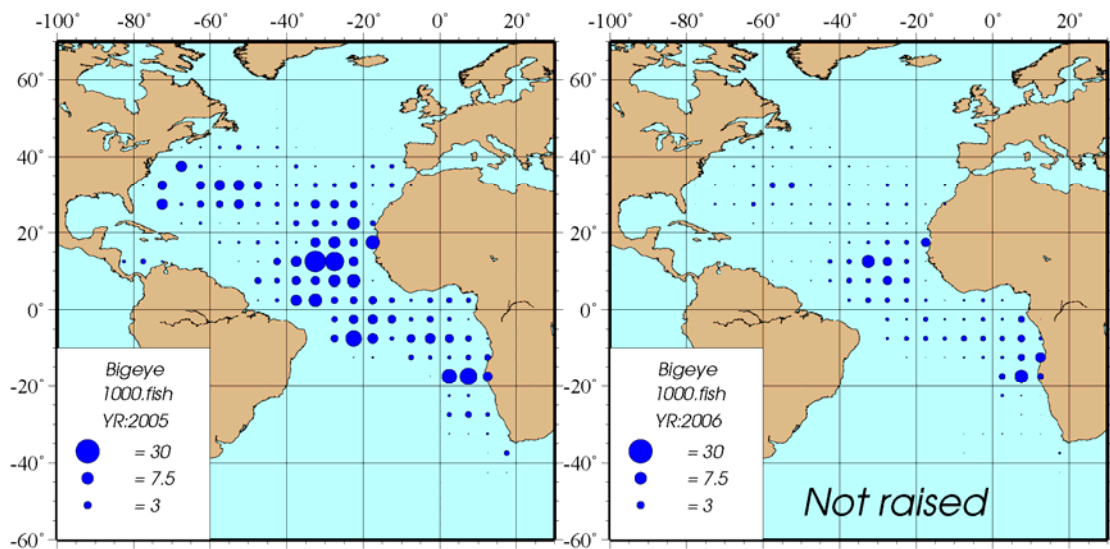


Figure 5. Geographic distribution of bigeye catch (in number) in the Atlantic for 2005 (left) and 2006 (right). The right figure was based on unraised data.

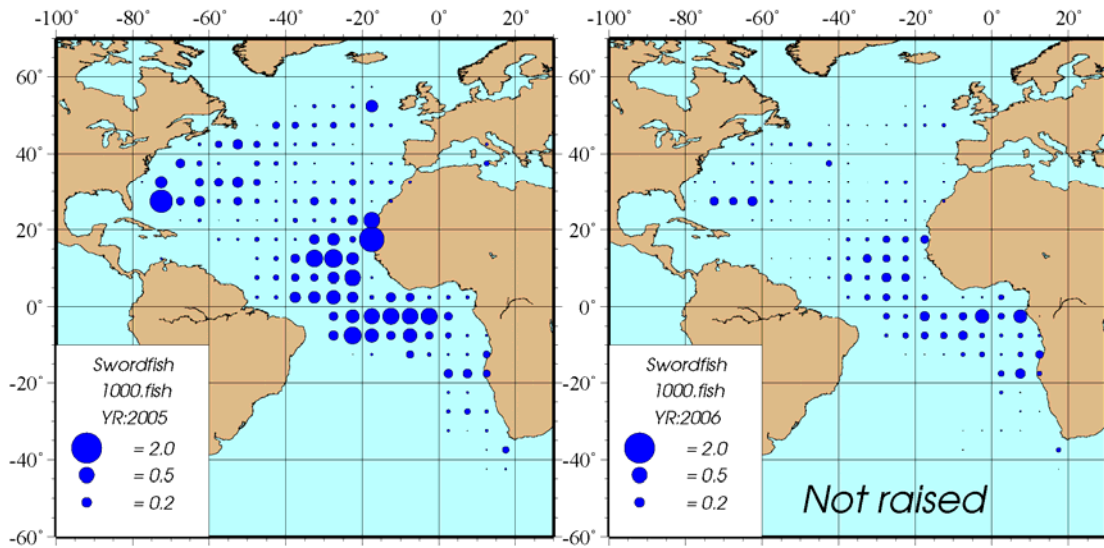


Figure 6. Geographic distribution of swordfish catch (in number) in the Atlantic for 2005 (left) and 2006 (right). The right figure was based on unraised data.

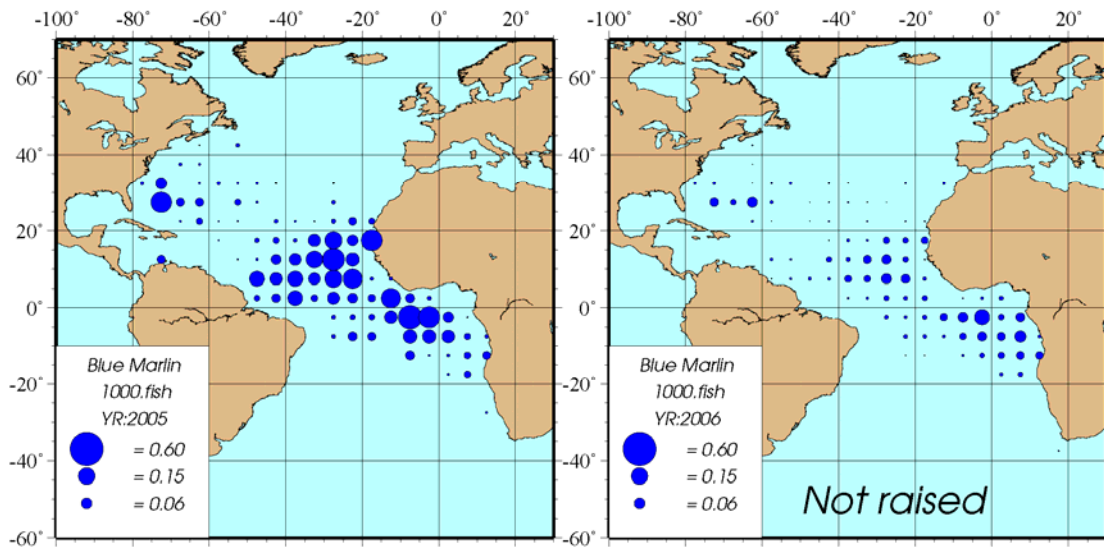


Figure 7. Geographic distribution of blue marlin catch (in number) in the Atlantic for 2005 (left) and 2006 (right). The right figure was based on unraised data.

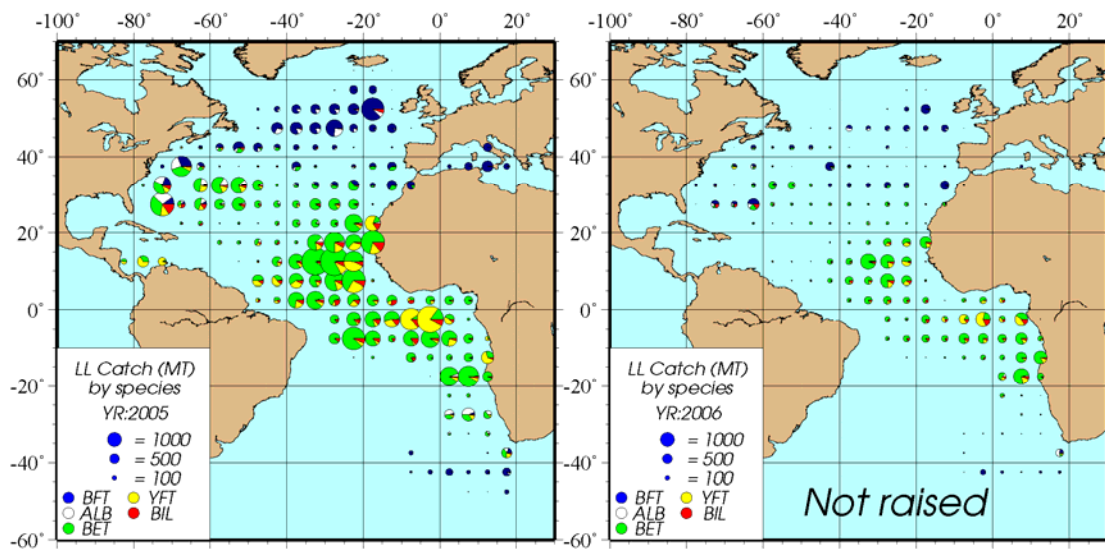


Figure 8. Species composition in the Japanese longline catch (in weight) for 2005 (left) and 2006 (right). Species are categorized into five groups: BFT (bluefin and southern bluefin), ALB (albacore), BET (bigeye), YFT (yellowfin) and BIL (swordfish and all billfishes). The right figure was based on unraised data.

ANNUAL REPORT OF KOREA*
INFORME ANNUEL DE LA CORÉE
INFORME ANUAL DE COREA

Doo Hae An, Seon-jae Hwang, Soon-Song Kim and Dae-Yeon Moon¹

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 The fishing fleet and catches

The tuna fishery is still the most important distant water fishery in Korea and most of the Korean longline and purse seine fishing occurs in the Pacific and Indian Oceans. However, the fisheries for Atlantic tunas and tuna-like species have shown a gradual decline year after year since the mid-1980s. During the 1990s, the average number of Korean tuna longliners active in the Atlantic was less than 10 each year with 1,700 metric tons (t) of annual catch. Since the mid-1990s, although 54 longliners are registered in the IOTC area, many registered vessels migrate between the Indian and Atlantic Oceans, depending on the fishing conditions of each ocean. The gear-type-based licensing in Korea, not limiting fishing grounds, enables the switch between fishing grounds for those tuna longliners. In 2002 and 2003, Korean tuna longliners did not operate in the Atlantic Ocean but tuna purse seiners which were chartered from Turkey operated in the Mediterranean Sea and targeted bluefin tuna in 2004 and 2005. Further, some longliners which were targeting bigeye tuna and yellowfin tuna have also operated in the Atlantic Ocean since 2004.

Until recent years, bigeye tuna and yellowfin tuna were the most important tuna species for the Korean tuna longline fishery, not only in terms of catches but also for their high commercial value for sale on the sashimi market compared to other species.

1.2 Annual catch trends and number of vessels

The total annual catches of all tuna and tuna-like species in the Atlantic Ocean are given in **Table 1**. The recent changes in catch trends were mainly due to the fishing operations of purse seiners in 2004 and 2005 and the re-entry of Korean tuna longliners in the Atlantic Ocean.

In 2006, eight Korean longliners operated in the ICCAT area, with total catches amounting to 2,770 t, which was a slight decrease from the catch of the previous year. Almost 85% of the total catch in 2006 was comprised of two species, bigeye tuna (2,067 t) and yellowfin tuna (283 t). In particular, bigeye tuna catches increased sharply, from 770 t in 2005 to 2,067 t in 2006.

1.3 Distribution of fishing ground

Korean longliners operated mainly in the tropical area of the Atlantic Ocean and Mediterranean Sea targeting bigeye, yellowfin and bluefin tunas. However, the fishing grounds have fluctuated annually depending on the fishing conditions for the target species and oceanographic conditions (**Figure 1**).

Section 2: Research and Statistics

The National Fisheries Research and Development Institute (NFRDI) carried out routine scientific monitoring work as in past years. This monitoring covers the collection of catch and fishing effort statistics from the Korean tuna longliners and purse seiners chartered by Turkey and operating in the Atlantic Ocean. The requested Task I and Task II data are routinely provided to the ICCAT Secretariat.

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

¹ National Fisheries Research and Development Institute, Busan, Korea.

2.1 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 bodies. Therefore, the mission of trained observers is similar to that set out in the conventions of the fisheries bodies. Before the official observer program was launched, Korea had irregularly dispatched NFRDI scientists onboard commercial tuna vessels to monitor fisheries and to collect reliable catch statistics, including biological samples, which were unobtainable by the regular data collection system. In 2006, an observer was deployed on Korean tuna longline vessels that operated in the EEZ of Algeria to catch bluefin tuna in the Mediterranean Sea.

2.2 Data reporting system

The NFRDI has established a new database system for handy processing and analysis of fisheries data by fishery scientists. Old data files will be revisited and reviewed for the correction or verification of existing fishery statistics. Consequently, Korea does not exclude the possibility of minor correction in its fishery statistics in the future.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

To implement the recommendations adopted by ICCAT, Korea has introduced them to its domestic regulations. These include the minimum size limits for bigeye, yellowfin, bluefin tuna and swordfish. With a view to protecting the spawning stock of northern bluefin tuna in the Mediterranean Sea, a new domestic regulation has been effective since 1995.

Table 1. Nominal catches (in t) of tunas and tuna-like fishes by the Korean longline and purse seine fisheries in the Atlantic Ocean, 1985-2006.

Year	No. of vessels	BFT	YFT	ALB	BET	SBF	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

() = Estimated by ICCAT Secretariat (ICCAT Report 1994. Vol. 2).

- = Estimated by distant water fishery information system of Korea.

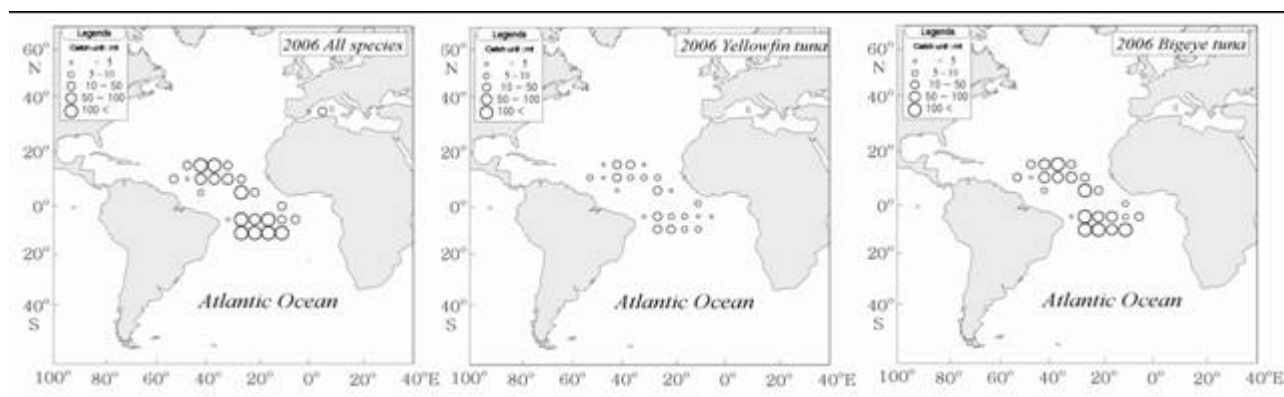


Figure 1. Catch distribution of Atlantic tunas and tuna-like species by the Korean longline fishery in 2006 (excluding the bluefin tuna catches in the Mediterranean Sea).

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

SUMMARY

The Libyan tuna fishery in 2006 season was carried out by trap, longline and purse seine vessels. Fishing effort was directed at bluefin tuna along the Libyan coast and there was a reported catch of 1,253 t of this species (0.06 t by trap, 167.0 t by longline, and 1,085.4 t by purse seine). However, there were reported incidental catches of 13.5 t of swordfish, 1.4 t of sharks, and 1.0 t of other species. Also, one longline vessel targeted bigeye tuna and swordfish in the East Atlantic and a total catch of 67 t (43.0 t bigeye tuna and 24 t swordfish) was reported during 2006. The conservation and management measures implemented by ICCAT were fully respected and an observer was put on board each fishing vessel licensed to fish bluefin tuna on the Libyan Coast and all instruction were given to the observers. For the scientific aspects, the Marine Biology Research Center covers this activity, where scientific observers are put on board some longliners and purse seiners. Part of the tests of these observers is to collect biological information. A total of 312 bluefin tuna were analyzed and information on size composition, length-weight relationship, sex, sex ratio according to weight and length were analyzed.

RÉSUMÉ

La pêche libyenne de thonidés a été exploitée pendant la saison 2006 par les madragues, les palangriers et les senneurs. L'effort de pêche a été exercé sur le thon rouge le long de la côte libyenne et la prise déclarée s'est élevée à 1.253 t de thon rouge (0,06 t par les madragues, 167,0 t par les palangriers et 1.085,4 t par les senneurs). Les prises accidentelles déclarées ont totalisé 13,5 t d'espadon, 1,4 t de requins et 1,0 t d'autres espèces. Un palangrier a également ciblé le thon obèse et l'espadon dans l'Atlantique Est, avec une prise totale déclarée de 67 t (43,0 t de thon obèse et 24 t d'espadon) en 2006. Les mesures de gestion et de conservation adoptées par l'ICCAT ont entièrement été respectées ; un observateur a été embarqué à bord de chaque navire de pêche titulaire de licence pour le thon rouge le long du littoral libyen et toutes les instructions pertinentes ont été données aux observateurs. En ce qui concerne les aspects scientifiques, le Centre de Recherche sur la Biologie Marine couvre ces activités et des observateurs scientifiques sont embarqués à bord de certains palangriers et senneurs. Une partie de leurs tâches consiste à collecter des informations biologiques. Dans l'ensemble, 312 thons rouges ont été analysés et les informations sur la composition par taille, le rapport taille-poids, le sexe, le sex-ratio d'après le poids et la taille ont été étudiées.

RESUMEN

Durante la temporada de 2006, la pesquería libia de túnidos se llevó a cabo mediante almadrabas, palangreros y cerqueros. El esfuerzo pesquero se dirigió al atún rojo a lo largo de la costa Libia y se declaró una captura de 1.253 t de atún rojo (0,06 t de almadrabas, 167,0 t del palangre y 1085,4 t del cerco). Sin embargo, se produjeron capturas incidentales declaradas de 13,5 t de pez espada, 1,4 t de tiburones y 1,0 t de otras especies. Además un palangrero se dirigió al patudo y al pez espada en el Atlántico este, y durante 2006 se declaró una captura total de 67 t (43 t de patudo y 24 t de pez espada). Las medidas de conservación y ordenación adoptadas por ICCAT fueron plenamente respetadas y cada buque pesquero con licencia para pescar atún rojo en la costa de Libia llevaba a bordo un observador con instrucciones. Respecto a los aspectos científicos, el Centro de Investigación de Biología Marina cubre estas actividades, y se embarcaron algunos observadores científicos en varios palangreros y cerqueros, donde parte de su tarea era recopilar información biológica. Se analizó un total de 312 atunes rojos y se estudió la información sobre composición por tallas, la relación talla-peso, el sexo, y la sex-ratio de acuerdo con el peso y la talla.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Mature bluefin tuna migrate every year from the East Atlantic to the Mediterranean through the Strait of Gibraltar, mainly for reproduction. In their migration, bluefin tuna go near the Libyan coastline towards the East from early May to the middle of July.

During the last century, Libyan fishermen caught bluefin tuna by trap nets in western Libyan waters. However, in the last few decades more advanced methods have been implemented, such as longline (LL) and purse seine (PS), which proved to be more effective than the previous static traps. However, the number of trap nets declined from 20 in 1950 to only one trap was in operation in 2006. On the other hand, since 2002 the number of longliners increased from five to nine and the number of purse seiners increased from one to more than 30 in 2006.

1.1 Description of fisheries

In 2006, bluefin tuna fishing was carried out by the following methods:

– Trap nets

Only one trap net operated in 2006, namely the Zreg tuna trap. This tuna trap is situated East of Tripoli and is one of the oldest traps along the Libyan coast. Although this trap was established early in May, unfortunately it only caught 10 bluefin tunas, six of which were medium size fish (100-150 kg).

– Longline

Four Libyan longliners took part in bluefin tuna fishing in 2006. The total catch amounted to 167,0 t of bluefin tuna, 13.5 t of swordfish, 1.4 t of dogfish and 788 kg of other fish species.

– Purse seine

Twenty seven (27) Libyan purse seines were permitted to fish bluefin tuna in Libyan waters in 2006, six of which were unable to catch any fish; the others caught 1,085.4 t which were taken alive for the tuna farms.

Section 2: Research and Statistics

2.1 Research

In order to implement the ICCAT recommendation concerning observer presence on board fishing vessels, scientific observers were put on board the active longliners and purse seiners. Part of the observers' tasks is to collect biological information on bluefin tuna caught by longline and purse seine gears.

A total of 312 bluefin tuna fish were analyzed and information on, size composition, length-weight relationship, sex, sex ratio according to weight and length, were analyzed as indicated in the following **Tables 1 and 2** and **Figures 1 to 5**.

Table 1. Bluefin tuna size and weight measurements, by sex.

	<i>%</i>		<i>Number of</i>		<i>Range</i>	<i>Length (cm)</i>
	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>fish</i>	<i>length (cm)</i>	
100	0	2	0	2	100-104	102
100	100	0	1	1	105-109	103
100	0	0	0	0	110-114	106
100	0	1	0	1	115-119	118
100	33.33333	2	1	3	120-124	120
100	50	1	1	2	125-129	124
100	50	1	1	2	130-134	124
100	75	1	3	4	135-139	125
100	100	0	1	1	140-144	127
100	0	0	0	0	145-149	130
100	75	1	3	4	150-154	133
100	25	3	1	4	155-159	137
100	57.14286	3	4	7	160-164	137
100	100	0	2	2	165-169	139
100	50	3	3	6	170-174	139
100	75	2	6	8	175-179	140
100	45.45455	6	5	11	180-184	150
100	71.42857	2	5	7	185-189	152
100	75	1	3	4	190-194	153
100	57.14286	3	4	7	195-199	153
100	40	3	2	5	200-204	157
100	40	6	4	10	205-209	157
100	58.33333	5	7	12	210-214	158
100	85.71429	1	6	7	215-219	158
100	50	3	3	6	220-224	160
100	66.66667	2	4	6	225-229	160
100	58.33333	5	7	12	230-234	160
100	88.88889	1	8	9	235-239	161
100	44.44444	5	4	9	240-244	163
100	50	4	4	8	245-249	164
100	42.85714	4	3	7	250-254	164
100	0	3	0	3	255-259	165
100	50	1	1	2	260-264	168
100	0	2	0	2	265-269	170
100	0	5	0	5	270-274	170
100	0	0	0	0	275-279	172
100	0	1	0	1	280-284	172
100	0	0	0	0	285-289	173
100	0	0	0	0	290-294	174
100	0	0	0	0	295-299	176
100	0	0	0	0	300-304	176
100	0	0	0	0	305-309	177
100	0	1	0	1	310-314	177

Table 2. Data used to obtain bluefin tuna length-weight relationship.

<i>No.</i>	<i>Length cm</i>	<i>Weight kg</i>	<i>W.G(kg)</i>	<i>Sex</i>
1	102	20	0.4	m
2	103	20	0.3	m
3	106	24	1	f
4	118	30	1	m
5	120	29	0.5	m
6	124	37	6	m
7	124	32	1	f
8	125	37	1	f
9	127	36	1.5	m
10	130	45	3	f
11	133	42	5	m
12	137	55	3.5	f
13	137	58	4.5	f
14	139	45	1.5	m
15	139	54	5.5	f
16	140	58	4.5	f
17	150	58	2	f
18	152	70	5	f
19	153	65	4	m
20	153	70	5.5	f
21	157	61	4	m
22	157	63	6	f
23	158	80	6.5	m
24	158	260	16	m
25	160	94	5	m
26	160	84	6.5	f
27	160	44	4	f
28	161	74	6	f
29	163	86	8	f
30	164	77	6	m
31	164	80	8	m
32	165	83	5	f
33	168	74	4	f
34	170	90	7	f
35	170	97	5	f
36	172	85	7	m
37	172	78	7.5	f
38	173	114	8	m
39	174	92	7	m
40	176	108	6	f
41	176	96	5.5	f
42	177	88	8	f
43	177	94	6	f
44	177	162	18	m
45	178	104	6.5	f
46	178	82	10	m
47	179	93	7	f
48	180	102	9	m
49	180	104	8	m
50	181	108	8	m
51	181	78	7	f

52	182	104	7.5	m
53	184	117	7	f
54	184	112	10	m
55	184	94	4.5	f
56	184	102	6	f
57	184	100	8	f
58	184	86	8	m
59	185	114	8	f
60	185	103	6	m
61	187	113	8	f
62	187	126	8	m
63	188	109	6	f
64	188	96	6	f
65	189	100	8	f
66	192	110	5	f
67	193	129	9	f
68	194	116	8	f
69	194	112	7.5	m
70	195	119	7.5	m
71	197	296	11	f
72	197	124	8	f
73	197	132	10.5	f
74	198	127	10	m
75	199	94	10	m
76	199	88	5	f
77	200	143	8	m
78	200	154	9	f
79	203	151	10	m
80	204	154	11	f
81	204	134	8	m
82	205	146	9	m
83	205	152	11	m
84	206	139	10	m
85	206	161	11	f
86	208	151	8	m
87	208	164	10	f
88	208	136	9	f
89	208	137	9	m
90	209	148	9	m
91	209	125	9	f
92	210	184	11	m
93	210	153	9.5	f
94	210	125	8	m
95	211	152	6.5	f
96	212	153	9	f
97	212	154	8	m
98	212	156	6	f
99	213	210	8	f
100	213	172	8	m
101	213	158	8	f
102	214	217	10	m
103	214	190	9.5	f
104	215	143	7	f
105	215	164	9	f

106	217	168	13	m
107	218	179	10	f
108	218	164	9	f
109	218	172	14	f
110	219	163	7	f
111	220	164	5	f
112	221	176	14	m
113	222	165	8	f
114	222	219	6	m
115	223	173	11	m
116	224	166	7	f
117	225	185	9	m
118	225	227	12	f
119	225	181	8	f
120	227	178	15	m
121	228	214	13	f
122	229	210	12	f
123	230	224	13	f
124	230	189	11	f
125	230	180	8	m
126	230	187	13	m
127	231	216	13	f
128	231	208	12	f
129	231	200	10	f
130	233	232	15	f
131	233	210	10	m
132	233	183	11	f
133	233	176	11	m
134	234	251	9	m
135	235	224	15	f
136	236	210	7.5	f
137	236	220	9	f
138	236	194	10	f
139	237	250	8	f
140	237	209	14	f
141	238	209	7	f
142	238	241	10	m
143	238	219	29	f
144	240	235	6	m
145	240	209	9	f
146	240	242	13	f
147	241	229	9	m
148	241	234	15	f
149	242	223	7	m
150	242	209	10	m
151	243	259	14	m
152	244	246	18	f
153	245	223	12	f
154	246	263	17	f
155	246	243	12	m
156	247	235	5	f
157	247	260	10	m
158	247	157	6	m
159	248	238	13	f

160	248	220	12	m
161	250	261	14	m
162	250	233	11	f
163	250	243	13	f
164	250	250	8	m
165	251	250	6	m
166	251	253	11	m
167	253	239	8	f
168	255	236	12	m
169	255	224	12	m
170	257	262	12	m
171	263	309	16	m
172	264	186	13	f
173	266	292	15	m
174	268	275	8	m
175	270	169	10	m
176	272	286	8	m
177	274	293	3	m
178	274	321	10	m
179	274	334	14	m
180	280	353	17	m
181	312	308	15	m

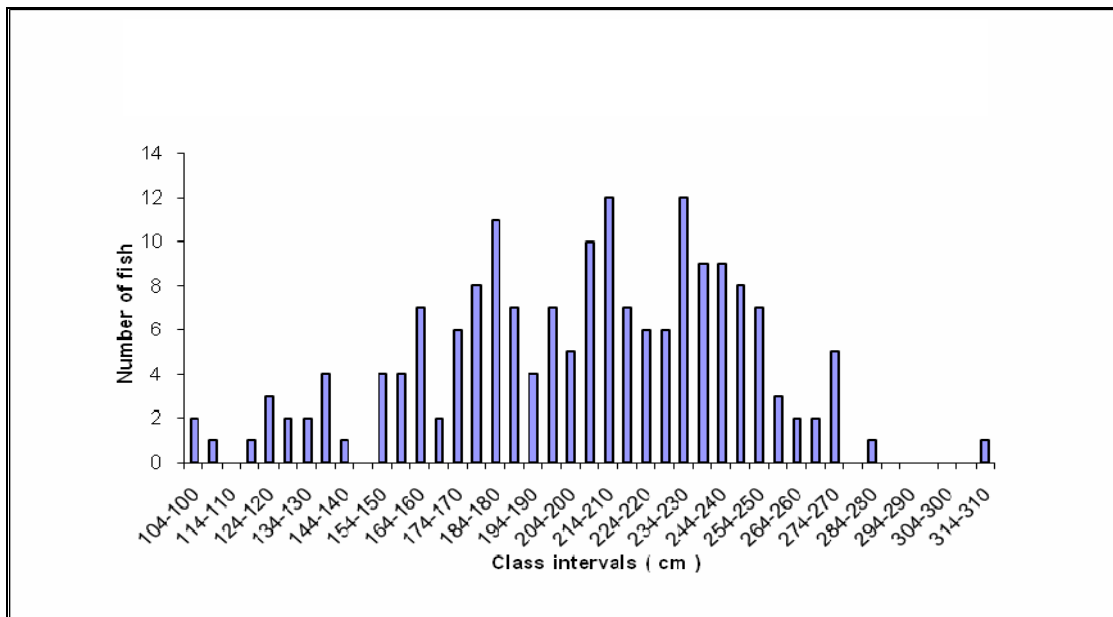


Figure 1. Length frequency distribution of bluefin tuna caught by longline in Libyan waters, 2006.

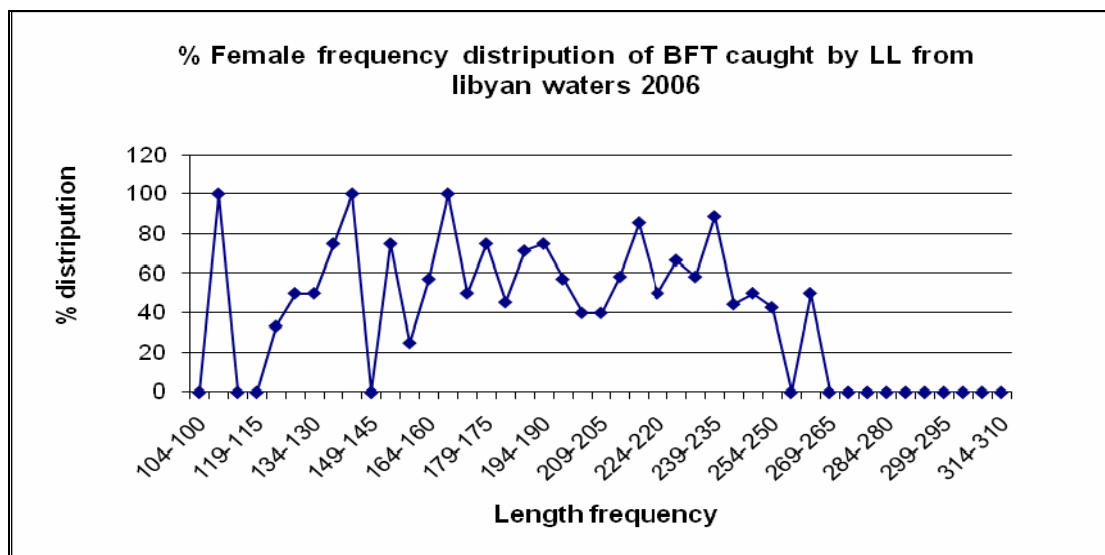


Figure 2. Percent (%) female frequency distribution (length) of bluefin tuna caught by longliners in Libyan waters in 2006.

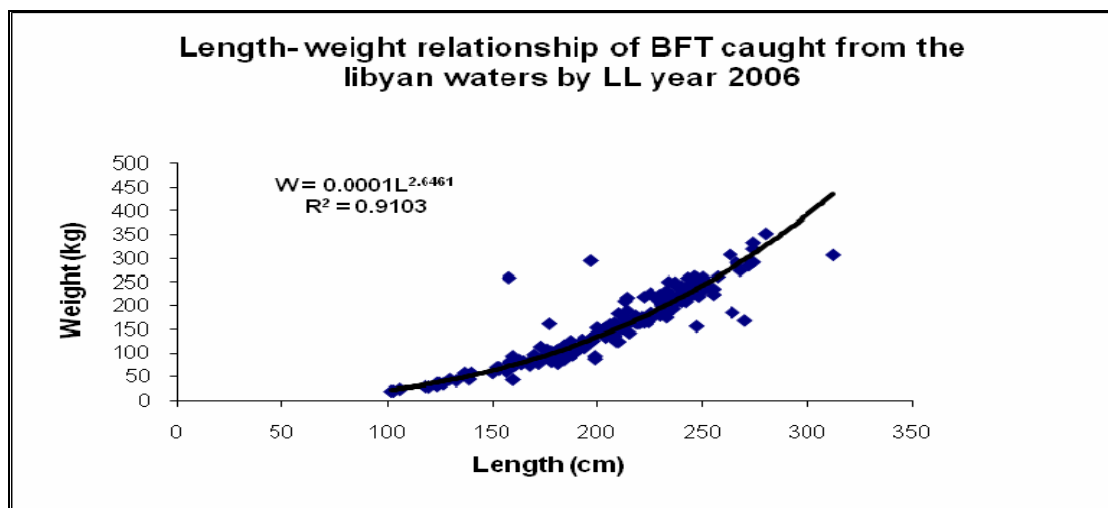


Figure 3. Length-weight relationship of bluefin tuna caught in Libyan waters by longline gear in 2006 (normal scale).

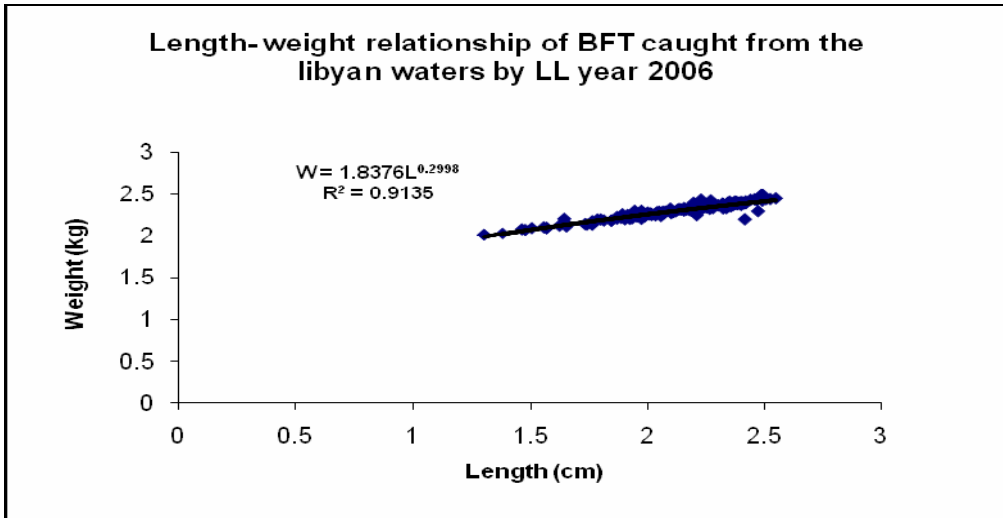


Figure 4. Length-weight relationship of bluefin tuna caught in Libyan waters by longline in 2006 (log scale).

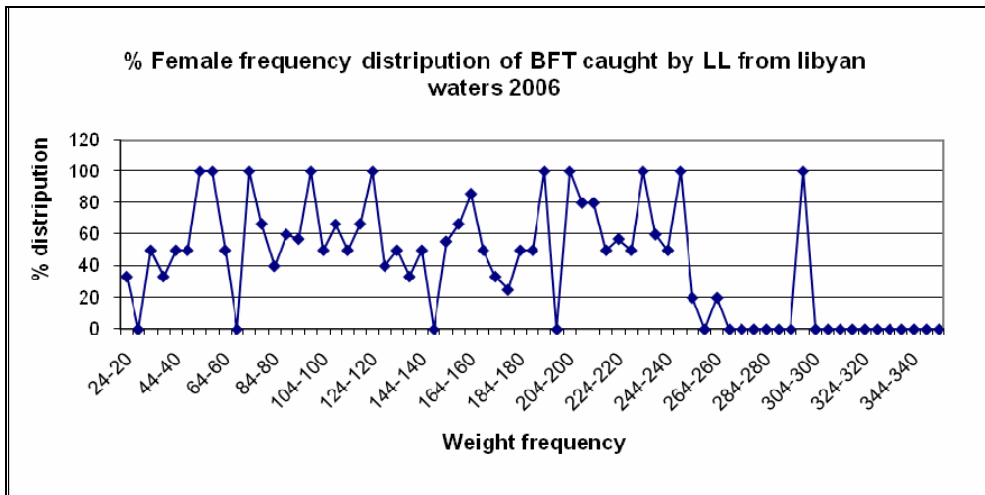


Figure 5. Percent (%) female frequency distribution (weight) of bluefin tuna caught by longline in Libyan waters in 2006.

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

Ramón Corral Ávila¹ y Jesús Jurado²

SUMMARY

Mexican tuna fishing in the Gulf of Mexico in 2006 was carried out by a high seas longline fleet comprised of 30 vessels. The fishing effort was directed at yellowfin tuna (Thunnus albacares). However, there was a reported incidental catch of other tuna species, sharks, among others. In 2006, the reported catch of yellowfin tuna was 938 t, which represented 76% of the total reported catch for the year. In recent years, catches have decreased, with 1,362 t, 1,207 t and 1,050 t in 2003, 2004 and 2005, respectively. Mexico has adhered to the regulatory framework implemented by the International Commission for the Conservation of Atlantic Tunas (ICCAT). With regard to statistical information, work was carried out related to the continuous improvement of the Tuna Information System in the Gulf of Mexico (SIA) in order to provide the best statistical information available annually. Scientific research centered on increasing the catches of yellowfin tuna and reducing incidental catches. In particular, research projects have been initiated on the spatial analysis of fishing effort, analysis of yellowfin tuna size structure, time and area analysis of by-catch, analysis of the bait used to catch tunas, together with an improvement of the database on tuna fishing with longline in the Gulf of Mexico. As concerns the On-board Observer Program, a 100% coverage rate was maintained on fishing trips carried out by longline vessels in the Gulf of Mexico, and the updating of On-board Observers Manual was implemented and training was provided for the National Observer Program. With regard to the catch quotas assigned to Mexico for bluefin tuna (Thunnus thynnus) and swordfish (Xiphias gladius) in the Gulf of Mexico for 2007 and 2008, work has been initiated with the regulatory institutions and the industrial sector to design the program for the exploitation and conservation of these resources.

RESUME

En 2006, la pêche mexicaine de thonidés a été réalisée dans le Golfe du Mexique avec une flottille palangrière de taille moyenne formée de 30 embarcations. L'effort de pêche s'est orienté vers la capture d'albacore (Thunnus albacares). Néanmoins, on enregistre des prises accessoires d'autres espèces de thonidés, de makaires, de requins, entre autres. On a observé, en 2006, une capture d'albacore de 938 t, ce qui représente 76% de la capture totale enregistrée au cours de cette année. Ces trois dernières années, les captures ont subi une baisse, s'élevant à 1.362 t en 2003, 1.207 t en 2004 et 1.050 t en 2005. Le Mexique se conforme au cadre normatif et régulateur qui est mis en œuvre par la Commission Internationale pour la Conservation des Thonidés de l'Atlantique (ICCAT). En ce qui concerne l'information statistique, les travaux liés à la poursuite de l'amélioration du système d'information relatif aux thonidés dans le Golfe du Mexique (SIA) se sont poursuivis afin de fournir les meilleures données statistiques annuellement disponibles. La recherche scientifique s'est consacrée à augmenter la production des captures d'albacore et à réduire les prises accessoires. Des projets ont été notamment lancés aux fins de l'analyse spatiale de l'effort de pêche, l'analyse des tailles de l'albacore, l'analyse spatio-temporelle des prises accidentelles, l'analyse de l'appât utilisé pour la capture des thonidés, conjointement à l'amélioration de la base de données de la pêche de thonidés à la palangre du Golfe du Mexique. S'agissant du Programme d'observateurs à bord, on a maintenu une couverture de 100% des sorties de pêche réalisées par des embarcations palangrières dans le Golfe du Mexique ; le manuel d'observateurs à bord a été actualisé et des cours de formation ont été dispensés dans le cadre du Programme national d'observateurs. Quant aux quotas de capture assignés au Mexique pour les espèces de thon rouge (Thunnus thynnus) et d'espadon (Xiphias gladius) dans le Golfe du Mexique au titre des années 2007 et 2008, des travaux ont été initiés avec les institutions régulatrices et le secteur de l'industrie, afin d'élaborer le programme d'exploitation et de gestion de ces ressources.

¹ Comisión Nacional de Acuacultura y Pesca. Av. Municipio Libre 377, piso 4^o, Col. Santa Cruz Atoyac, Del. Benito Juárez, CP 82100. México, D.F., rcorrala@conapesca.sagarpa.gob.mx

² Instituto Nacional de la Pesca. Dirección general de Investigación Pesquera en el Atlántico. Av. Ejercito Mexicano No.106, Col. Ex-hacienda Ylang Ylang, C. P. 94298. Boca del Río, Ver., México. jesús.inp@gmail.com

RESUMEN

La pesca mexicana de atún en el Golfo de México se realizó con una flota palangrera de mediana altura con 30 embarcaciones, durante el año 2006. El esfuerzo pesquero fue dirigido a la captura de atún aleta amarilla (*Thunnus albacares*). Sin embargo se registra captura incidental de otras especies de atún, marlines, tiburones, entre otros. En el año 2006 se registró una captura de atún amarilla de 938 t, lo que representó el 76% de la captura total registrada en dicho año. En los últimos tres años, las capturas han registrado un decremento, registrando 1.362 t, 1.207 t, y 1.050 t en 2003, 2004 y 2005, respectivamente. México se ha apegado al marco normativo y regulatorio, implementado por la Comisión Internacional para la Conservación del Atún Atlántico (ICCAT), por sus siglas en inglés. En relación a la información estadística, se han continuado los trabajos relacionados en la mejora continua del sistema de Información de Atún en el Golfo de México (SIA), para proveer la mejor información estadística disponible anualmente. La investigación científica se ha enfocado a incrementar los rendimientos de las capturas de atún aleta amarilla y a reducir la captura incidental. En particular, se han iniciado proyectos para el análisis espacial del esfuerzo pesquero, análisis de la estructura de tallas del atún aleta amarilla, análisis espacial y temporal de la captura incidental, análisis de la carnada utilizada para la captura del atún, aunando a la mejora de la base de datos de la pesca del atún con palangre del Golfo de México. En lo que respecta al Programa de Observadores a bordo, se ha mantenido una cobertura del 100% en los viajes de pesca realizados por embarcaciones palangreras en el Golfo de México, así mismo se ha implementado la actualización del manual de observadores a bordo e impartido la capacitación al Programa Nacional de observadores. En relación a las cuotas de captura asignadas a México para las especies de atún aleta azul o rojo (*Thunnus thynnus*) y pez espada (*Xiphias gladius*) en el Golfo de México para los años 2007 y 2008, se han iniciado los trabajos con las instituciones reguladoras y el sector industrial, para diseñar el programa de explotación y manejo de estos recursos.

Introducción

Durante todo el año, el Golfo de México registra actividades de pesca de atún en la Zona Económica Exclusiva (ZEE), a través de una flota palangrera de mediana altura, representada por 30 embarcaciones, durante el año 2006, la misma que dirigió el esfuerzo pesquero a la captura de atún aleta amarilla o rabil, (*Thunnus albacares*); no obstante, se registra captura incidental de otras especies altamente migratorias.

En los últimos tres años, las capturas del atún aleta amarilla han registrado cifras en decremento por el orden de 1.362 t, 1.207 t y 1.050 t en 2003, 2004 y 2005, respectivamente. Entre las especies que se capturan incidentalmente destacan: a) otras especies de atunes como el atún azul o rojo (*Thunnus thynnus*), el patudo (*Thunnus obesus*), el barrilete o listado (*Katsuwonus pelamis*) y el atún aleta negra (*Thunnus atlanticus*); b) marlines y especies afines, como el pez espada (*Xiphias gladius*), el pez vela (*Isthiophorus albicans*), el marlín azul (*M. nigricans*) y marlín blanco (*Tetrapturus albidus*); c) tiburones, como el tiburón puntas blancas (*Carcharhinus longimanus*), el puntas negras (*C. limbatus*) y el tiburón mako (*Isurus oxyrinchus*).

Por otra parte, se han continuado los trabajos relacionados con el Sistema de Información de Atún en el Golfo de México (SIA) para dar cumplimiento a las solicitudes estadísticas de ICCAT en correspondencia a la ordenación y conservación del atún aleta amarilla y la captura incidental. En el caso de los pequeños túnidos, bonito (*Sarda sarda*), sierra (*Scomberomorus maculatus*) y peto (*Acanthocybium solandri*), se recabó, concentró y verificó la información estadística de capturas, con el fin de actualizar la base de datos del año 1993 al año 2006. Cabe mencionar que estas cifras corresponden únicamente a las reportadas por la flota de pequeña de altura con actividad pesquera en la zona costera de los estados que colindan con el Golfo de México.

De igual manera, se ha mantenido la cobertura total de los viajes de pesca realizados por embarcaciones palangreras en el Golfo de México, del Programa de Observadores a bordo, con el objetivo de registrar la información correspondiente a las maniobras de pesca, capturas de atún aleta amarilla, esfuerzo pesquero y captura incidental. Conjuntamente con el Programa Nacional de Aprovechamiento del Atún y Protección al Delfín (PNAAPD) se trabajó en la actualización del manual de campo y la capacitación de observadores a bordo, además de llevar a cabo reuniones con el sector industrial para consolidar los compromisos a nivel nacional e internacional.

Adicionalmente, México mantiene el compromiso de cumplir y observar las medidas de manejo establecidas en el marco de ordenación de ICCAT, con el propósito de para la mejora y el envío oportuno de la información estadística de la flota pesquera, las capturas nominales, el esfuerzo pesquero y la estructura de tallas, además de trabajar conjuntamente en el Programa de Seguimiento Estadístico.

Cabe destacar que durante 2006 se han iniciado los trabajos con las Instituciones y Dependencias reguladoras y el sector industrial, para diseñar el programa de explotación y manejo de los recursos que permita administrar y utilizar de manera responsable y sustentable las cuotas de captura asignadas a México para las especies de atún aleta azul o rojo y pez espada en el Golfo de México.

Finalmente, se reitera el compromiso de México por trabajar en el seno de la ICCAT para alcanzar medidas y métodos que permitan realizar una pesca responsable a través de instrumentar las acciones que apuntan a alcanzar un rendimiento máximo sostenible, apoyar disposiciones dirigidas al enfoque precautorio, regulación de la capacidad de la flota y el combate a la pesca ilegal, no regulada y no documentada; asimismo, se ha externado la preocupación por la votación por correspondencia y el establecimiento de medidas en materia de comercio para promover la aplicación adecuada de las medidas de ordenación, entre otras.

Parte I (Información sobre Pesquerías, Investigación y Estadística)

Sección 1: Información anual sobre las pesquerías

Durante el año 2006 se registraron 30 embarcaciones con actividad de pesca, las cuales realizaron un total de 363 cruceros de pesca. Durante estos viajes de pesca, se registró una captura de atún aleta amarilla de 938 t, lo que representó el 76% de la captura registrada en el año 2006. En la **Tabla 1** se muestra la captura de atún aleta amarilla en el Golfo de México por la flota mexicana de 1995 a 2006 y la cobertura de observadores a bordo del Programa Nacional, la cual se ha mantenido al 100%. La distribución espacial de la captura del atún aleta amarilla, durante 2006, presenta un patrón de distribución amplio en la ZEE, con una mayor concentración frente al Estado de Veracruz (**Figura 1**), sin embargo las mayores capturas se registraron en el segundo y tercer trimestre (**Tabla 2**).

Se realizaron un total de 3.514 lances, en los cuales se utilizaron 2.042.681 anzuelos. La distribución geográfica del esfuerzo de pesca con palangre durante 2006 (**Figura 2**) muestra que la mayor parte del esfuerzo de pesca se ejerció en la parte oeste del Golfo de México, principalmente frente a las costas de Veracruz. Sin embargo existe también una tendencia de mayor concentración del esfuerzo en la parte suroeste, así como en la parte central del Golfo de México.

El atún aleta amarilla contribuyó con el 95% de la captura total en el Golfo de México de especies de atunes. La mayor captura de esta especie se realizó durante los meses de verano y principios de otoño. Las especies de atún incidentalmente capturadas fueron: atún aleta negra (1%), atún azul (1%) y barrilete (1%). Otras especies de atunes que se capturaron de manera incidental fueron: el patudo, el bonito y algunas especies de pequeños túnidos.

Además de lo anterior, se capturaron incidentalmente especies de marlines y especies similares, que representaron el 13% de la captura registrada. Las especies más abundantes en la captura incidental fueron: el marlín blanco con 829 individuos capturados, el pez vela con 2.454 individuos, el pez espada con 946 individuos y el marlín azul con 1.640 individuos.

En cuanto a la captura incidental de tiburones se registraron 629 ejemplares, de los cuales el tiburón puntas negras representó el 25%, el cazón el 6%, el tiburón mako o marrajo el 17%, el tiburón zorro el 18%, el resto de individuos representó el 35% de la captura registrada de este grupo taxonómico.

Sección 2: Investigación y estadísticas

Se continuó trabajando en estrecha colaboración con el programa de observadores a bordo, el cual ha mantenido la cobertura del 100% de los viajes de pesca. El objetivo del programa nacional es recolectar información sobre las estadísticas de captura (objetivo e incidental), la estructura de tallas, el esfuerzo pesquero, las características de las maniobras de pesca, etc.

En 2006, se participó con regularidad en reuniones científicas relacionadas con la pesca del atún con palangre en el Golfo de México. Durante el mes de marzo se llevó a cabo la reunión binacional MexUs-Golfo, en la que se discutieron diversos temas relacionados con la pesquería del atún aleta amarilla y su captura incidental. Se continúa trabajando en la estandarización del esfuerzo pesquero aplicado a la pesca del atún con palangre en el Golfo de México por la flota mexicana y estadounidense.

Durante 2006 se continuaron los trabajos en materia de intercambio de información de la flota atunera, el esfuerzo pesquero, la captura objetivo y captura incidental, dentro del marco de las reuniones del Comité Permanente de Investigación y Estadísticas (SCRS, por sus siglas en inglés) convocadas por ICCAT.

Los principales estudios desarrollados en 2006 en el marco de las líneas prioritarias de investigación del Instituto Nacional de la Pesca (INAPESCA) fueron los siguientes:

- Mejora de la base de datos de la pesca del atún con palangre del Golfo de México, de 1993 al 2006.
- Investigación para el Manejo Pesquero a través de:
 - Análisis espacial del esfuerzo pesquero de la flota atunera.
 - Análisis de la estructura de tallas del atún aleta amarilla.
 - Análisis espacial y temporal de la captura incidental.
 - Fomento de la liberación oportuna de las tortugas capturadas incidentalmente.
 - Análisis de la carnada utilizada para la captura del atún.
 - Diseño del plan de manejo y explotación sustentable del atún aleta azul y el pez espada.
- Participación en la actualización del manual de campo y la capacitación de los observadores científicos del Programa Nacional.
- Implementación del plan de manejo para el desarrollo de la pesca dirigida al atún aleta azul y pez espada en el Golfo de México.

Parte II (Implementación de la ordenación)

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

3.1 Límites de captura y talla mínimas

3.1.1 Recomendación de ICCAT sobre el cumplimiento en las pesquerías de atún rojo y pesquerías de pez espada del Atlántico norte [Rec. 96-14]

En el caso de México no se reporta que haya excedido los límites de captura para dichas especies en el año pesquero previo.

3.1.2 Recomendación de ICCAT para incrementar el cumplimiento de las regulaciones de talla mínima [Rec. 97-01]

A través de la Norma Oficial Mexicana NOM-023-PESC-1996, se establecen las especificaciones sobre el aprovechamiento de especies de túnidos con embarcaciones palangreras para el Golfo de México y mar Caribe. Esta disposición 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. En cuanto a la captura incidental se establece que ésta no debe ser mayor al 20% (este 20% no sólo incluye atún rojo, sino también pez espada, pez vela, marlín, entre otros) de su captura nominal obtenida durante un año calendario. Asimismo, en su compromiso por llevar a cabo una pesca responsable continúa vigente la disposición para lograr la recuperación de especies, evitando las capturas dirigidas a los stocks de atún rojo reproductor en el Atlántico en zonas de desove del Golfo de México.

3.2 Sobre cumplimiento

3.2.1 Recomendación de ICCAT sobre la aplicación de tres recomendaciones sobre cumplimiento [Rec. 98-14] y Resolución sobre fechas límite y procedimientos de presentación de datos [Rec. 01-16]

Para cumplir con estas recomendaciones, se comunica anualmente a la Comisión, como parte del Informe Nacional, la información estadística sobre las capturas para las pesquerías. De igual manera, se ha hecho llegar a la Comisión la información correspondiente a los datos de la Tarea I y la Tarea II, los Informes Nacionales, y en consecuencia, las Tablas de Información, se han hecho llegar en tiempo y forma.

3.3 Otras recomendaciones

3.3.1 Recomendación de ICCAT sobre el registro de capturas realizadas por barcos en la zona del Convenio ICCAT [Rec. 03-13]

La normatividad mexicana establece que, a efecto de verificar la legal precedencia de los productos pesqueros capturados por barcos de pesca que enarbolan bandera mexicana, deben de presentar el aviso de arribo, documento en el que se reporta, a la autoridad competente, los volúmenes de captura obtenidos por especie durante una jornada o viaje de pesca.

De igual manera, la NOM-023 establece que todos los embarques de atún aleta azul o rojo que se realicen con destino a la exportación, además de los documentos con los que se acredite la legal precedencia, deberán acompañarse de un Certificado de participación en el Programa Estadístico para el atún aleta azul, que expedirán los jefes de las oficinas federales de pesca utilizando el formato oficial que se publicó en la NOM-023, esta medida garantiza la integración de las capturas obtenidas por los productores.

Asimismo, establece como obligación para los permisionarios y concesionarios permitir y facilitar la participación a bordo de la embarcación de los observadores autorizados, así como apoyarlos en las actividades de captación de información especialmente aquella que se obtiene del instrumental de pesca, comunicación y navegación. Adicionalmente, el técnico de pesca, el capitán o ambos deben registrar las circunstancias y resultados de las operaciones de pesca en los cuadernos de bitácora, anotando los datos considerados en el formato oficial.

3.3.2 Recomendación de ICCAT sobre medidas de regulación suplementarias para la ordenación del rabil del Atlántico [Rec. 93-04]

La NOM-023 tiene como propósito establecer un régimen de pesca que garantice un óptimo aprovechamiento de las existencias de atún aleta amarilla o rabil, utilizando barcos equipados con palangre atunero de deriva en aguas de jurisdicción federal del Golfo de México y mar Caribe, así como la conservación y preservación de este recurso y de las especies susceptible de ser capturadas de manera incidental.

En dicho instrumento regulatorio se establecen las características del sistema de pesca (uso de embarcaciones con una eslora de 37 m, operando un palangre atunero de superficie a la deriva por embarcación) para el aprovechamiento del atún aleta amarilla, así como el límite máximo permisible de 45 unidades de esfuerzo pesquero, especificando que esta cifra será revisada periódicamente con base en los resultados de la investigación científica y tecnológica sobre el desarrollo de la pesquería y que el esfuerzo permisible se notificará anualmente mediante avisos publicados en el Diario Oficial de la Federación.

3.3.3 Recomendación de ICCAT sobre un programa plurianual de ordenación y conservación para el patudo [Rec. 04-01]

Para el caso de México, no se desarrolla esta pesquería en la zona del Convenio.

3.3.4 Resolución de ICCAT sobre la implementación efectiva del programa ICCAT de Documento Estadístico para el atún rojo (DEAR) [Res. 94-05], Recomendación de ICCAT sobre el Programa de Documento estadístico ICCAT para el patudo [Rec. 01-21], Recomendación de ICCAT respecto a establecer un programa de documento estadístico para el pez espada [Rec. 01-22]

Además de contar con la NOM-023, en la cual se establece que todos los embarques de atún rojo que se destinen a la exportación deben presentar los documentos con los que se acredite su legal precedencia y acompañarse del

certificado de ICCAT de exportación de atún aleta roja, se difundieron entre las autoridades competentes los cambios en dichos formularios, así como los realizados en los certificados para exportación de pez espada y patudo. Cabe mencionar que no existen exportaciones de atún rojo de la zona del Atlántico, toda vez que la captura es mínima y se trata de captura incidental. Asimismo se actualizaron los sellos y firmas de los funcionarios facultados para expedir los certificados de exportación de las especies mencionadas.

3.3.5 *Resolución de ICCAT sobre la liberación de marlines capturados vivos con palangre* [Res. 96-09]

La NOM-023 establece que las especies de marlín, pez vela y pez espada que durante las operaciones de pesca de los túnidos sean capturadas de manera fortuita, deben ser liberadas en buenas condiciones de supervivencia. Única y exclusivamente podrán retenerse los ejemplares de dichas especies que al traerlos al costado del barco ya se encuentren muertos.

3.3.6 *Resolución de ICCAT sobre tiburones atlánticos* [Res. 01-11] y *Resolución de ICCAT sobre la pesquería de tiburones* [Res. 03-10]

La normatividad vigente establece que las especies de tiburón que se retengan a bordo deben ser aprovechadas íntegramente. Se prohíbe el aprovechamiento exclusivo de las aletas. De igual manera, la flota de captura que opera en el Atlántico utiliza anzuelos circulares, lo que permite una pesquería selectiva e imposibilita la captura de tiburones de manera incidental

Adicionalmente al Plan Nacional para la Conservación de Tiburones, en vigor desde 2004, en 2006 se trabajó en diversas modificaciones al proyecto de la Norma Oficial Mexicana 029-PESC, la cual entre otras disposiciones establece la utilización de sistemas selectivos que eviten la captura incidental de tiburones, y en capturas dirigidas dispone reducir la captura de neonatos y juveniles, establecer periodos de veda o regulaciones de las operaciones de captura en áreas geográficas específicas, utilización de bitácoras, mejoramiento de registros de capturas por especie, establecimiento de zonas de refugio para proteger el proceso de reproducción y/o nacimiento y de programas de observadores a bordo, entre otras.

3.3.7 *Resolución de ICCAT sobre tortugas marinas* [Res. 03-11]

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.

Sección 4: Actividades y esquemas de inspección

4.1 *Recomendación de ICCAT respecto a las normas mínimas para el establecimiento de un Sistema de Seguimiento de Barcos en la zona del Convenio ICCAT* [Rec. 03-14], *Recomendación de ICCAT sobre la implementación de la recomendación respecto al VMS* [Rec. 03-14] [Rec. 04-11]

Se han instalado dispositivos de localización satelital en embarcaciones atuneras con actividad pesquera en el Golfo de México, incluyendo aquellas de más de 24 m de eslora.

4.2 *Recomendación de ICCAT para adoptar medidas adicionales contra la pesca ilegal, no declarada y no reglamentada* [Rec. 03-16]

Por otra parte, se trabaja en la publicación de una Norma Oficial para reglamentar la utilización del Sistema Satelital de Monitoreo de Embarcaciones Pesqueras, la cual es de observancia obligatoria para quienes realicen actividades de captura en embarcaciones pesqueras con motor estacionario (intraborda), potencia nominal superior a 80 Hp, con cubierta corrida y eslora superior a 10 m, 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 la alta mar.

Sección 5: Otras actividades

Adicionalmente, durante el 2006, se continuó con el manejo y seguimiento de la guía de pesca como un medio idóneo en las actividades de inspección y vigilancia para el combate de la pesca y movilización ilegal de productos pesqueros, así como con el incremento de las operaciones de inspección y vigilancia en aguas de jurisdicción nacional a través de unidades de superficie de la Comisión Nacional de Acuacultura y Pesca (CONAPESCA) y la Secretaría de Marina-Armada de México (SEMAR).

5.1 Resolución de ICCAT sobre la mejora de las estadísticas de las pesquerías de recreo [Res. 99-07]

En México se destina exclusivamente nueve especies a la pesca deportiva: marlín azul (*M. nigricans*), marlín rayado (*Tetrapturus audax*), marlín negro (*Makaira indica*), marlín aguja corta (*Tetrapturus angustirostris*), pez espada (*Xiphias gladius*), pez vela (*Istiophorus albicans*), dorado (*Coryphaena hippurus*, *Coryphaena equiselis*), sábalo (*Megalops atlanticus*) y pez gallo (*Nematistius pectoralis*) dentro de una franja de 50 millas náuticas contadas a partir de la línea de base desde la cual se mide el mar territorial.

Durante 2006 se trabajó en la modernización, actualización y ampliación del Prontuario Estadístico de Pesca Deportiva que se publica en la página de Web 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.

Se tienen conformados 23 Comités Estatales de Pesca Deportiva, de los cuales tres se lograron en este año; dejando una organización del 80% del territorio nacional, de igual manera se han constituido 6 Consejos de Administración de Embalses (uno en el 2006) en los puntos más importantes para la Pesca Deportiva de aguas interiores del país.

Tabla 1. Captura total (toneladas métricas) y cobertura de muestreo en la pesca con palangre del atún aleta amarilla (*Thunnus albacares*) en el Golfo de México, de 1995 a 2006.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Captura Total (t)	1.126	771	826	788	1.283	1.390	1.084	1.133	1.362	1.207	1.050	938
Tasa de muestreo de las actividades pesqueras	100%	100%	ND	100%	100%	100%	100%	100%	100%	100%	100%	100%
Número de peces muestreados	27.504	8.097	5.040	8.074	ND	24.266	22.693	32.461	36.875	33.684	29.488	26.255

ND= Datos No Disponibles.

Tabla 2.- Estadísticas de captura del atún aleta amarilla (*Thunnus albacares*) en el Golfo de México, 2006.

<i>Especies</i>	<i>Trimestre</i>				<i>TOTAL</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	
Atún aleta amarilla	176,8	364,0	227,4	169,8	938,0

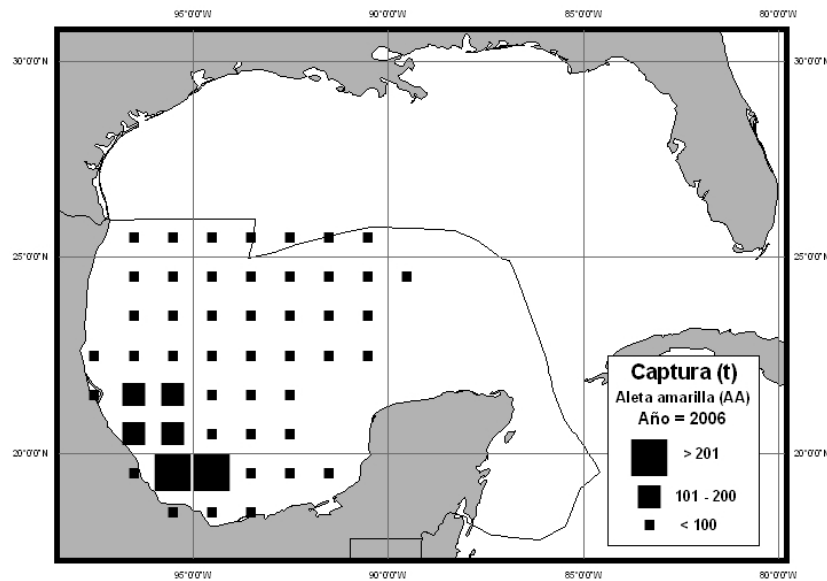


Figura 1. Distribución geográfica de la captura (en toneladas métricas) de atún aleta amarilla (*Thunnus albacares*) en el Golfo de México, para 2006. El mapa se elaboró utilizando la captura por cuadrante de 1° de latitud por 1° de longitud).

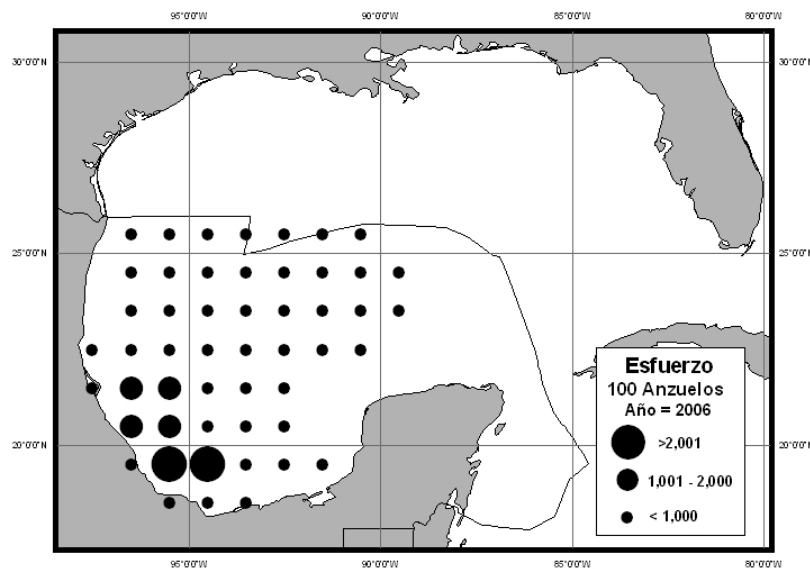


Figura 2. Distribución geográfica del esfuerzo de la flota palangrera mexicana (n° de anzuelos/100) en el Golfo de México, para 2006. El mapa se elaboró utilizando el número de anzuelos totales concentrados por cuadrante de 1° de latitud por 1° de longitud).

**ANNUAL REPORT OF MOROCCO
RAPPORT ANNUEL DU MAROC
INFORME ANUAL DE MARRUECOS**

Département des Pêches Maritimes
Institut National de Recherche Halieutique/CRRH Tanger

SUMMARY

The tuna fishery in Morocco occupies an important place in the Moroccan fishing and industrial sector. During the course of 2006, the catches of all species combined amounted to 13,706 t. However, the fishing methods are artisanal and diversified (traps, small fishing boats, etc.). This fleet is distributed along the Moroccan coast, covering the two maritime sides (Atlantic and Mediterranean). The management measures adopted by ICCAT are applied and monitored to assure a rational and sustainable exploitation of the tuna resources. As regards research, numerous activities are carried out by the services of the National Institute for Fishing Research.

RÉSUMÉ

La pêche thonière au Maroc occupe une place primordiale dans l'activité halieutique et industrielle marocaine. Au cours de l'année 2006, la production, toutes espèces confondues, a atteint 13.706 t. Les modes d'exploitation restent toutefois artisanaux et diversifiés (madragues, barques...). Cette flotte est distribuée le long du littoral marocain couvrant ainsi les deux façades maritimes (Atlantique & Méditerranée). Les mesures de gestion adoptées par l'ICCAT sont appliquées et suivies pour assurer une exploitation durable et soutenable des ressources thonières. Au niveau de la recherche, plusieurs activités ont été menées par les services de l'Institut National de Recherche Halieutique.

RESUMEN

La pesca de túnidos desempeña en Marruecos un papel primordial dentro de la actividad pesquera e industrial marroquí. Durante el año 2006, la producción, para todas las especies agregadas, ascendió a 13.706 t. Sin embargo, las modalidades de explotación siguen siendo artesanales y diversificadas (almadrabas, barcas, etc.) Esta flota opera a lo largo del litoral marroquí, por lo que abarca las dos fachadas marítimas (atlántica y mediterránea). Se aplican y cumplen las medidas de ordenación adoptadas por ICCAT para garantizar una explotación duradera y sostenible de los recursos atuneros. A nivel de investigación, los servicios del Institut National de Recherche Halieutique (Instituto Nacional de Investigación Pesquera) han realizado numerosas actividades.

1^{ère} 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. Les 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. Quelques unités artisanales capturent le thon rouge en Méditerranée durant les mois de juin à septembre. Des espèces de thons mineurs sont capturées en Méditerranée.

L'espadon est capturé essentiellement en Méditerranée en raison du faible quota attribué au Maroc pour le stock Atlantique-Nord. Toutefois, il a été observé le développement d'une pêcherie artisanale et industrielle 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 faible quantités.

1.3 Techniques de pêche

Les thonidés et espèces voisines sont pêchés essentiellement par quatre techniques de pêche :

1.3.1 La madrague

Cet engin cible principalement le thon rouge et les thonidés mineurs. En 2006, quinze 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, *Sarda sarda* et la bonite en quantités très faibles.

1.3.2 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 Déroit de Gibraltar et le long des côtes méditerranéennes et atlantiques (longueur inférieure à 7m et TJB < 2 tnx).

Cette activité de pêche avec cet engin cible les grandes tailles de thon rouge et parfois même le thon obèse dans les régions du Sud. 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 capturées, notamment la bonite.

1.3.3 Senne tournante

Cette technique de pêche est utilisée par les senneurs 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 se situe entre 30 et 60 kg.

Il est à noter que cette technique réalise des quantités importantes de prises accessoires constituées essentiellement de thonidés mineurs.

1.3.4 Filet maillant dérivant

Le filet maillant dérivant est un engin de pêche utilisé essentiellement pour la pêche de l'espadon en Atlantique et particulièrement en Méditerranée par des navires de type « palangrier » et ce, lors des migrations de cette espèce à travers les côtes marocaines.

Il est important de signaler que la plupart de ces navires sont de petites tailles (14-16m LHT) et ont comme principal port d'attache ceux de la Méditerranée.

L'utilisation de cet engin est en net recul en raison de l'approche de la date butoir de son élimination des côtes marocaines.

1.4 Engraissement des thonidés

L'engraissement des thonidés est une activité en cours de développement au Maroc. Actuellement, une seule unité de ce genre a été autorisée à mener ce type d'activité en Atlantique (Sidi-Ifni).

Les espèces qui seront engraisées, dans un premier temps, sont le thon obèse et le thon albacore (Yellowfin Tuna). Toutefois, les promoteurs n'ont pas encore démarré leurs activités en raison de problèmes logistiques liés à l'approvisionnement en matière première.

Les activités d'engraissement de thon rouge ne débuteront que lorsque le nouveau plan d'aménagement de la pêcherie du thon rouge sera finalisé.

Il est à signaler que l'accord qui a été donné par le Département des Pêches Maritimes à ces promoteurs, sous forme de cahier des charges, inclut de nombreuses dispositions adoptées par l'ICCAT.

Chapitre 2: Statistiques et recherche

Les statistiques nationales de la pêche aux thonidés et espèces apparentées sont données dans le **Tableau 1**.

Les données de capture du thon rouge, durant la période 1997-2006 (Tâche I), figurent au **Tableau 2**.

Les données de capture de l'espadon, durant la période 1997-2006 (Tâche I), sont illustrées au **Tableau 3**.

Les données de capture des thonidés mineurs, au titre de 2006, sont illustrées au **Tableau 4**.

Les captures de voilier, makaire bleu, thon obèse, thon germon et thon albacore, réalisées en 2006 (Tâche I), sont ventilées au **Tableau 5**.

L'évolution des captures des squalidés et requins pour la période 1997-2006 (en tonne) est illustrée, à titre indicatif, au **Tableau 6**.

Il est à signaler que les espèces suivantes sont celles qui peuplent les eaux marocaines :

Heptranchias perlo, Hexanchus griseus, Centrophorus granulosus, Centrophorus squamosus, Centrophorus uyato, Centroscygnus coelolepis, Centroscygnus 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.

Les captures par zones et par espèces (t) sont illustrées au **Tableau 7**.

Données de la Tâche II : Ces informations concernent le thon rouge, l'espadon et le thon obèse. Elles sont actuellement en cours de finalisation. Elles seront communiquées ultérieurement.

II^{ème} 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 3 octobre 1988 fixant la taille marchande minimale des espèces pêchées dans les eaux marocaines.

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.

Chapitre 4: Schémas et activités d'inspection

4.1 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, aux activités de transbordement, de débarquement, de commercialisation, de transport et de stockage des produits de la pêche ainsi qu'à 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 :

4.1.1 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 d'un observateur scientifique dont la mission est le contrôle des tailles, espèces, le tonnage et la collecte des données biologiques. Ainsi, 100% des madragues sont couvertes par un observateur scientifique du Département des Pêches Maritimes. A la fin de la saison de pêche, généralement après la levée de la madrague, l'observateur présente un rapport détaillé sur l'activité de celle-ci.

4.1.2 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 spécimens d'espardon 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.

4.2 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-réglémentée et non-déclarée (IUU) dans la zone de la 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.

Chapitre 5: Autres activités

5.1 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 de captures des thonidés pour l'année 2006 (kilogramme).

<i>Espèces</i>	<i>Total</i>
Albacore (YFT)	95.100
Germon (ALB)	98.179
Thon obese (BET)	887.546
Thon rouge (BFT)	2.386.000
Thonine (LTA)	---
Listao (SKJ)	3.784.000
Bonite à dos rayé (BON)	1.744.000
Melva (FRI)	247.000
Palomette (BOP)	---
Espadon (SWO)	2.398.000
Makaire Bleu (BUM)	---
Voilier de l'Atlantique (SAI)	---
Squalidés et requins	2.067.000
Total	13.706.827

Tableau 2. Pêche du thon rouge.

<i>BFT</i>	<i>Engin</i>	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*
Atl	Trap	1.240	1.615	852	1.540	2.330	1.670	1.305	1.098	1.518	1.744
Atl	PS	828	692	709	660	150	884	490	855	871	179
Atl	LL	0	0	0	0	0	0	02	08	16	273
Atl	Gill	0	34	30	28	17	11	00	00	00	00
Méd	Hand	455	634	600	650	195	407	570	597	80	187
Méd	Gill	17	18	6	6	9	14	20	00	00	00
Méd	PS	0	0	0	0	0	0	170	222	12	3
Méd	LL	0	0	0	0	0	0	0	00	00	00
Méd	Trap	63	35	30	39	307	0	0	00	00	00
Tot-Atl		2.068	2.341	1.591	2.228	2.497	2.565	1.797	1.961	2.405	2.196
Tot-Méd		535	687	636	695	511	421	760	819	92	190
Total		2.603	3.028	2.227	2.923	3.008	2.986	2.557	2.780	2.497	2.386

*Données provisoires pour 2006.

Tableau 3. Pêche de l'espadon.

<i>SWO</i>	<i>Engin</i>	1997	1998	1999	2000*	2001	2002	2003	2004	2005	2006
Atl	Trap	5	2	13	3	7	4	7	3	0	8
Atl	PS	10	10	11	22	9	1	1	1	0	0
Atl	Gill	13	179	60	51	243	64	98	76	9	0
Atl	LL	239	0	35	38	264	154	223	255	325	333
Méd	LL	245	323	259	205	754	1.149	1.670	1.954	1.801	1.455
Méd	Gill	4.653	2.905	2.979	2.503	2.266	2.230	1.629	1.299	722	603
Méd	PS	0	0	0	0	4	0	0	0	0	0
Méd	Hand	0	0	0	0	0	0	0	0	0	0
Méd	Trap	2	0	0	0	2	0	1	0	0	0
Tot-Atl		267	191	119	114	523	223	329	335	334	341
Tot-Méd		4.900	3.228	3.238	2.708	3.026	3.379	3.300	3.253	2.523	2057
Total		5.167	3.419	3.357	2.822	3.550	3.602	3.629	3.588	2.857	2.398

Tableau 4. Données de capture des thonidés mineurs, par métier, pour l'année 2006 (Tâche I).

<i>Espèces</i>	<i>Engin</i>	<i>Bacorette (LTA)</i>	<i>B. Sarda (BON)</i>	<i>Listao (SKJ)</i>	<i>Melva (FRI)</i>	<i>Palomette (BOP)</i>	<i>Total</i>
Atl	Trap	00	9	00	18	00	27
Atl	Hand	00	239	556	11	00	806
Atl	Gill	00	309	178	4	00	491
Atl	LL	00	996	2.757	8	00	3.761
Atl	PS	00	102	288	07	00	397
Méd	Trap	00	00	00	00	00	00
Méd	Hand	00	18	00	09	00	27
Méd	Gill	00	1	00	00	00	1
Méd	LL	00	54	05	188	00	247
Méd	PS	00	16	00	02	00	18
Tot-Atl		00	1.655	3.779	48	00	5.482
Tot-Méd		00	89	5	199	00	293
Total		00	1.744	3.784	247	00	5.775

Tableau 5. Données de capture du voilier, makaire bleu, albacore, germon et thon obèse.

2006	Engin	Voilier (SAI)	Makaire bleu (BUM)	Albacore (YFT)	Germon (ALB)	Thon obèse (BET)
Atl	Trap	00	00	00	00	00
Atl	PS	00	00	00	00	00
Atl	Gill	00	00	00	00	00
Atl	LL &Hand	00	00	95	98	887
Méd	LL	00	00	00	00	00
Méd	Gill	00	00	00	00	00
Méd	PS	00	00	00	00	00
Méd	Hand	00	00	00	00	00
Méd	Trap	00	00	00	00	00
Tot-Atl		00	00	95	98	887
Tot-Méd		00	00	00	00	00
Total		00	00	95	98	887

Tableau 6. Données de capture des requins, de 1997 à 2006 (t).

Années	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Captures	1.256	2.245	2.130	3.460	2.200	2.161	2.923	2.996	3.501	2.067

Tableau 7. Captures par zones et par espèces (t).

Espèces	Atlantique	Méditerranée	Totat: Atl+Méd
Thon rouge	2.196	190	2.386
Thon obèse	887	-	887
Espadon	341	2057	2.398
Germon (ALB)	98	-	98
Albacore	95	-	95
Petits thonidés	5.482	293	5.775
Squalidés et requins	1.988	79	2.067
Total	11.087	2.619	13.706

**ANNUAL REPORT OF NORWAY
RAPPORT ANNUEL DE LA NORVÈGE
INFORME ANUAL DE NORUEGA**

SUMMARY

Norway did not catch any bluefin tuna in 2006 and 2007. For 2007 Norway adopted 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. All fishing operations in waters under Norwegian fisheries jurisdiction are subject to stringent resource control directed at the entire production chain. Fishing vessels over 24 metres are required to carry satellite transponders permitting their activities to be tracked 24 hours a day. Norway continuously works on historical data for bluefin tuna, and aims at putting the data into an ecosystem perspective. The Norwegian research on bluefin tuna include efforts to explain the dynamics of bluefin tuna and the drastic decline of this species in northern waters in recent decades.

RÉSUMÉ

La Norvège n'a pas capturé de thon rouge en 2006 et 2007. Pour 2007, la Norvège a adopté une loi interdisant aux navires norvégiens de pêcher et de débarquer du thon rouge dans les eaux territoriales de la Norvège, dans la Zone économique norvégienne et dans les eaux internationales. Toutes les opérations de pêche réalisées dans les eaux placées sous la juridiction des pêcheries norvégiennes sont soumises à un contrôle rigoureux des ressources couvrant toute la chaîne de production. Les navires de pêche de plus de 24 mètres sont tenus de porter des transpondeurs reliés par satellite, permettant le suivi de leurs activités 24 heures sur 24. La Norvège travaille constamment sur les données historiques concernant le thon rouge et vise à placer les données dans une perspective écosystémique. Dans le cadre de la recherche norvégienne sur le thon rouge, des efforts ont été déployés afin d'expliquer la dynamique du thon rouge et la chute drastique de cette espèce qui a été observée au cours de ces dernières années dans les eaux septentrionales.

RESUMEN

Noruega no capturó ningún atún rojo en 2006 y 2007. Para 2007, Noruega impuso a los buques noruegos la prohibición de pescar y desembarcar atún rojo en las aguas territoriales noruegas, en la Zona Económica de Noruega y en aguas internacionales. Todas las operaciones de pesca en las aguas bajo jurisdicción pesquera noruega están sujetas a estrictos controles de recursos dirigidos a toda la cadena de producción. Los buques con una eslora superior a 24 m tienen que llevar transpondedores vía satélite que permitan realizar un seguimiento de sus actividades durante 24 horas al día. Noruega trabaja continuamente en los datos históricos de atún rojo, con el objetivo incluir estos datos en una perspectiva ecosistémica. La investigación noruega sobre atún rojo incluye esfuerzos para explicar la dinámica del atún rojo y el drástico descenso de esta especie en las aguas septentrionales en décadas recientes.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Norway did not catch any bluefin tuna in 2006 and 2007. The Norwegian government banned fishing for bluefin tuna in 2007 and put aside the allocated quota for conservation purposes, due to serious overexploitation of bluefin tuna and thereby unsustainable management of the stock.

Section 2: Research and Statistics

Norway continuously works on historical data for bluefin tuna, and aims to put the data into an ecosystem perspective. A scientific report entitled "Fisheries of bluefin tuna (*Thunnus thynnus*) spawners in the northeast Atlantic" (Cort and Nottestad, 2007) was written, trying to explain the dynamics of bluefin tuna and the drastic decline of bluefin tuna in northern waters in recent decades.

Part II (Management implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Bluefin tuna is the only 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, on May 3, 2007 Norway adopted 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.

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 nearly 3,000 inspections of Norwegian and foreign vessels operating in Norwegian waters. Vessels over 24 metres are 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.

In case of incidental by-catch in other fisheries, all bluefin tuna will be confiscated by the control authorities. Any intentional catch of bluefin tuna will be reported to the police and prosecuted accordingly. Incidental by-catches will be forwarded to the Institute of Marine Research.

Section 5: Other Activities

Norway has no other tuna fishery related activities.

Reference

CORT, J.L. and L. Nottestad. 2007. Fisheriers of bluefin tuna (*Thunnus thynnus*) spawners in the northeast Atlantic. Collect. Vol. Sci. Pap. ICCAT, 60(4): 1328-1344.

**ANNUAL REPORT OF PHILIPPINES
RAPPORT ANNUEL DES PHILIPPINES
INFORME ANUAL DE FILIPINAS**

SUMMARY

To ensure sustainable tuna resources within Philippine waters and in the adjoining seas, where Philippine flagged vessels operate a Philippine Tuna Management Plan has been developed and now in the process of implementation. The tuna management plan is a framework of government regulatory measures providing proper management of the tuna resources. Corollary to this, a Philippine Tuna Industry Council (NTIC) was created by the Department of Agriculture composed of Government and the private sector as a forum to discuss issues and concerns of the tuna industry. The Philippine Fisheries Code also provide the establishment of a monitoring, control and surveillance system to ensure that the fisheries and aquatic resources of the Philippines and adjacent waters and also in the Oceans where Philippine fishing vessels operate, are judiciously and wisely utilized and managed on a sustainable basis. In fact, the Philippines acquired 14 patrol vessels from Spain conduct surveillance our seas. As a member of the Commission, the Philippines has been complying with relevant ICCAT conservation and management measures as well as Philippine fisheries laws and regulations. To this end, Philippine fishing vessels are issued Commercial Fishing Vessel and Gear License (CFVGL), as well as international fishing permit issued by the Bureau of Fisheries and Aquatic Resources (BFAR) for vessels fishing in the high seas. Fishing vessels issued CFVGL and International Permits are to submit fish catch reports and other data as well as those off-loaded for transshipment. Failure to submit this requirement is a ground for non-renewal of the CFVL and international fishing permit. In 2004 the Philippines has 18 Philippine Flagged fishing vessels authorized to fish in the ICCAT Convention Area. However, in the meeting of ICCAT in New Orleans the Philippines was authorized for 8 vessels only to fish in the area in any given year. Since July 2002 have implemented the ICCAT tuna statistical document program for bluefin, bigeye, and swordfish.

RÉSUMÉ

Afin de garantir la durabilité des ressources thonières à l'intérieur des eaux des Philippines et dans les mers adjacentes, où opèrent les navires sous pavillon philippin, un Plan de gestion des thonidés des Philippines a été mis en place et se trouve actuellement en processus de mise en œuvre. Le plan de gestion des thonidés offre un cadre de mesures réglementaires gouvernementales fournissant une gestion adéquate des ressources thonières. En corollaire à ceci, un Conseil de l'Industrie Thonière des Philippines (NTIC) a été créé par le Département d'Agriculture composé du Gouvernement et du secteur privé, afin de servir de forum de discussion des questions et des préoccupations de l'industrie thonière. Le Code des pêches des Philippines prévoit également l'établissement d'un système de suivi, contrôle et surveillance afin de garantir que les pêcheries et les ressources aquatiques des Philippines et des eaux adjacentes ainsi que celles présentes dans les océans où opèrent les navires sous pavillon des Philippines sont judicieusement utilisées et gérées de manière durable. En fait, les Philippines ont acquis, auprès de l'Espagne, 14 patrouilleurs chargés de réaliser des missions de surveillance de leurs mers. En tant que membre de la Commission, les Philippines respectent les mesures pertinentes de conservation et de gestion de l'ICCAT ainsi que la loi et les réglementations des pêcheries des Philippines. A cette fin, le Bureau des Pêcheries et des Ressources Aquatiques (BFAR) délivre aux navires des Philippines pêchant en haute mer une Licence d'engin et de navire de pêche commerciale (CFVGL) ainsi qu'un permis de pêche international. Les navires de pêche qui reçoivent des CFVGL et des permis internationaux doivent soumettre des rapports de capture de poissons et d'autres données ainsi que les quantités déchargées à des fins de transbordement. Le non-respect de cette exigence pourrait entraîner le non-renouvellement du CFVL et du permis de pêche international. En 2004, les Philippines comptaient sous son pavillon 18 navires de pêche autorisés à pêcher dans la zone de la Convention ICCAT. Toutefois, à la réunion de l'ICCAT, à la Nouvelle-Orléans, les Philippines ont uniquement été autorisés à ce que huit navires pêchent dans la zone, quelle que soit l'année. Depuis juillet 2002, les Philippines mettent en œuvre le programme de document statistique thonier de l'ICCAT pour le thon rouge, le thon obèse et l'espadon.

RESUMEN

Para garantizar la sostenibilidad de los recursos atuneros en las aguas de Filipinas y adyacentes, en las que operan los buques con pabellón filipino, se ha desarrollado un Plan filipino de ordenación de túnidos que está actualmente en proceso de implementación. El plan de ordenación es un marco en el que se recogen medidas reglamentarias del Gobierno con el fin de establecer una ordenación adecuada de los recursos de túnidos. Como corolario del plan, el Departamento de Agricultura creó el Consejo Nacional de la Industria Atunera de Filipinas (National Tuna Industry Council, NTIC), compuesto por miembros del Gobierno y del sector privado para que sirva de foro en el que debatir cuestiones y preocupaciones relacionadas con la industria atunera. El Código de pesca de Filipinas estipula también el establecimiento de un sistema de seguimiento, control y vigilancia para garantizar que los recursos pesqueros y acuáticos en aguas de Filipinas y adyacentes, así como en los océanos en los que operan nuestros buques pesqueros, se utilizan de forma prudente y juiciosa y se gestionan de un modo sostenible. De hecho, Filipinas ha adquirido catorce buques patrullas de España para vigilar nuestros mares. Como miembro de la Comisión, Filipinas ha acatado las medidas pertinentes de conservación y ordenación de ICCAT, así como las leyes y regulaciones pesqueras de Filipinas. Para ello, los buques pesqueros filipinos tienen que obtener previamente una licencia para buques y artes pesqueros comerciales (Commercial Fishing Vessel and Gear License CFVGL) así como un Permiso de Pesca Internacional, expedido por la Oficina de Pesca y Recursos Acuáticos de Filipinas (Bureau of Fisheries and Aquatic Resources, BFAR) para los buques que pescan en alta mar. Los buques titulares de un CFVGL y un permiso internacional tienen que declarar las capturas y otros datos, así como los desembarques transbordados. El incumplimiento de este requisito puede dar lugar a que no se renueve la licencia para buques y artes pesqueros comerciales (CFVGL) ni el permiso internacional de pesca. En 2004, había 18 buques con pabellón de Filipinas con autorización para pescar en la zona del Convenio de ICCAT. Sin embargo, en la reunión de ICCAT celebrada en Nueva Orleans, se autorizó sólo a 8 buques filipinos a operar en dicha zona en un año determinado. Desde julio de 2002, Filipinas ha implementado el programa ICCAT de documento estadístico para el atún rojo, patudo y pez espada.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 Description of the Philippine Fisheries

Philippine waters have been a major tuna producer in the western and central Pacific Ocean. Most of the tuna catch is taken by purse seine, ring net and hand line gears with a variety of other artisanal gears also in use, such as multiple hand line and longline. The Philippines is now pursuing a study to recalculate and clarify the Philippine annual tuna production in 2006 from the western and central Pacific Ocean.

The tuna fisheries are divided into two sectors, the municipal and commercial sectors. The municipal fisheries involves vessels less than 3 GRT. The commercial sector, with vessels more than 3 GRT, are prohibited to fish in municipal waters 15 kilometers from the shoreline. The commercial sector provides the majority of the catch of oceanic tunas. The municipal sector also takes oceanic and neritic tunas using handline as the predominant gear.

Section 2: Research and Statistics

To ensure a sustainable tuna resources within Philippine waters and in the adjoining seas, the Philippine Tuna Management Plan has been developed and is now in the process of implementation. The Tuna Management Plan is a framework of government regulatory measures that will provide proper management of the tuna fishery for three major species occurring in Philippine waters, namely skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*T. obesus*). It will also provide protective measures for bluefin tuna (*Thunnus thunnus orientalis*) and albacore tuna (*T. alalunga*) which are not common species in the Philippine waters.

The objectives of the Philippine Management Plan are:

- To maintain tuna catches at a sustainable level;

- To adopt management measures, including the setting of total allowable catch (TAC) within Philippine waters for each of the three major tuna species based on best available information;
- To match fishing effort to TAC by limiting fishing capacity;
- To assure equitable use of the tuna resources by apportioning allowable catch to specific user groups;
- To ensure meaningful scientific information by acquiring timely and accurate data on parameters such as catch, fishing effort and biology; and
- To eliminate illegal, unreported, and unregulated fishing on tuna stocks through a rational monitoring, control and surveillance system.

The Philippine tuna industry council (NTIC) is a council created by the Department of Agriculture comprised of Government and the private sector as a forum to discuss issues and concerns of the tuna industry.

The Philippine Fisheries Code also provides the establishment of a monitoring, control and surveillance system to ensure that the fisheries and aquatic resources of the Philippines and adjacent waters and in oceans where Philippine fishing vessels operate, are judiciously and wisely utilized and managed on a sustainable basis. An MCS center is in the process of development.

Since the mid-1980s larger purse seine vessels operated by Philippine companies have fished in neighboring countries under access, and or joint venture agreements of local companies. The Philippine Fisheries Code encouraged Philippine fishing vessel operators to fish further in the Philippines EEZ and in international waters.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

As a member of the Commission, the Philippines implement Relevant ICCAT conservation and management measures as well as Philippine fisheries laws and regulations. Philippine fishing vessels are issued a Commercial fishing vessel and Gear License (CFVGL), and an international fishing permit and certificate from the Bureau of Fisheries and Aquatic Resources (BFAR). 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, as well as the amount off-loaded for transshipment, sale and/or other disposal. The report is submitted to BFAR for record and validation. Failure to submit this requirement is a ground for non-renewal of the CFVL and international fishing permit.

3.1 Information on Philippine fishing vessels in the Atlantic Ocean

In 2004, the Philippines had 18 Philippine flagged fishing vessels authorized to fish in the ICCAT Convention area. However, at the 14th Meeting of the Commission (New Orleans, USA, November 2004), the Philippines was authorized for only 8 vessels to fish in the area in any given year.

3.2 Research and Statistical Document Programs

The Philippines has a continuing stock assessment program locally and recalculation of the Philippine tuna production from the western and central Pacific Ocean. Since July 2002 the Philippines have implemented the ICCAT tuna statistical document program for bluefin, bigeye, and swordfish.

**ANNUAL REPORT OF RUSSIA
RAPPORT ANNUEL DE LA RUSSIE
INFORME ANUAL DE RUSIA**

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 a by-catch. The purse-seine specialized fishing for tunas belonging to a tropical group was resumed late in 2006, and is now at the stage of formation. The vessels are engaged in fishing at regular intervals and in an experimental mode of operation. In Russia, work related to research on tunas and other species of the tuna fishery is carried out by the Atlantic Research Institute of Marine Fisheries and Oceanography (AtlantNIRO), Kaliningrad and by 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, and develop proposals and recommendations required for tuna fishing vessels operation. Research carried out in 2007, in addition to the collection and processing of current fishery data and biological materials, was aimed at the analysis of retrospective data on a "small tunas" group, and the study of oceanic sharks ability to adapt to habitation in the epipelagial area of the Atlantic Ocean.

RÉSUMÉ

La Russie mène deux types de pêche dans la zone de la Convention de l'ICCAT : la pêche au chalut et la pêche à la senne où les thonidés sont présents dans les captures. 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 2006 et se trouve en ce moment au stade de développement. Les navires pêchent à intervalles réguliers et leur mode d'opération est expérimental. En Russie, les travaux liés à la recherche 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), Kaliningrad, et par l'Institut Fédéral Russe des Pêcheries et d'Océanographie (VNIRO), Moscou. Ces institutions recueillent les statistiques sur les captures et la biologie et analysent les données collectées, fournissent un suivi des pêcheries opératives et formulent les propositions et les recommandations requises pour l'opération des navires de pêche thoniers. La recherche réalisée en 2007, en plus de la collecte et du traitement des données halieutiques et biologiques actuelles, visait à analyser les données rétrospectives sur le groupe de « petits thonidés », et sur l'étude de la capacité des requins océaniques à s'adapter à l'habitat dans la couche épipelagique de l'océan Atlantique.

RESUMEN

Rusia está realizando 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 pescados costeros), se capturan túnidos de forma fortuita. A finales de 2006 se retomó la pesca de cerco especializada en túnidos tropicales, que actualmente está en fase de desarrollo. Los buques se dedican a la pesca en intervalos regulares y en operaciones experimentales. 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, y analizan los datos recopilados, proporcionan un seguimiento operativo de la pesca, y también redactan propuestas y recomendaciones requeridas para las operaciones de los buques atuneros. La investigación realizada en 2007, además de la recopilación y procesamiento de materiales biológicos y pesqueros actuales tiene como objetivo el análisis de datos retrospectivos sobre el grupo de "pequeños túnidos" y el estudio de la capacidad de los tiburones oceánicos de adaptarse a al hábitat epipelágico del océano Atlántico.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

1.1 The fisheries in 2006-2007

A specialized purse seine tuna fishery was carried out in the open part of the Atlantic Ocean by two medium-capacity purse seiners. In 2006, the catch amounted to 436 t, which was comprised of 42 t of yellowfin tuna (*Thunnus albacares*), 393 t of skipjack (*Katsuwonus pelamis*), and 1 t of bigeye tuna (*Thunnus obesus*). The catch per vessel-day amounted to 10.1 t. According to preliminary data, 788 t of tunas were caught by seiners in the first half of 2007 (106 t of yellowfin tuna, 656 t of skipjack and 26 t of bigeye tuna).

The trawl fishing vessels caught 28 t of tunas, comprised of 22 t of bullet tuna (*Auxis rochei*) and 6 t of frigate mackerel (*Auxis thazard*) as by-catch in 2006 in the central east Atlantic. The by-catch of bonito (*Sarda sarda*) was 316 t and that of Spanish mackerel (*Scomberomorus tritor*) was 1 t. The catches taken by trawlers in 2007 were represented by 41 t of bullet tuna and 1 t of bonito.

Section 2: Research and Statistics

In 2006-2007, observers collected biological materials on tuna fishing seiners. These included fish length measurements, weight, sex and gonad maturity stage determination, and estimates of the indices of stomach fullness. The collected material contained mass measurements of 1,859 specimens and biological analyses of 1,000 specimens.

Based on the retrospective data for 1965-1998, the length structure, reproduction periods and seasonal feeding intensity of frigate mackerel (*Auxis thazard*) from the eastern part of the Atlantic Ocean were analyzed. Primary data from 11,273 measurements and 4,245 biological analyses of the fish were processed. The material on tunas caught west of 5°W (central east aggregation) and east of 5°W (southeast aggregation) was summarized.

The length structure of frigate mackerel in the catches taken from all areas is represented by specimens ranging from 20 to 53 cm in length. Fish measured 38 to 42 cm in length (54.1% and 60.0%, respectively) with a mean length of 40.4 cm and 38.6 cm predominate in both aggregations.

The massive spawning of tunas in the central east aggregation was recorded in January and March-July. The southeast aggregation was characterized by three peaks of spawning activity in January-February, June-July and November. In the Sierra Leone area, intensive spawning was observed from March to July, with 69-80% of specimens participating in spawning. In the Gulf of Guinea, peak spawning was recorded in May-July, with the maximum number of spawning tunas, 97%, registered in June. The highest spawning intensity in the Congo-Angola zone was observed in October and November (90 and 64%, respectively).

Specimens of spawning frigate mackerel in the open parts of the ocean occurred infrequently, as their main spawning grounds are in the shelf zones. Spawning specimens outside the economic zone of Sierra Leone were recorded in February, May and October, while spawning outside the Congo-Angola occurred in February and March.

The extent of pelagization and oceanization of the nektonic sharks belonging to the families Lamnidae, Pseudocarchariidae, Alopiidae, Carcharhinidae, and Sphyrnidae was investigated within the framework of studying shark life cycles and developing approaches for simulation of life processes taking place in the ocean. Both commercial and target shark species and by-catch species were studied.

It has been determined that unlike pelagic neritic and far-oceanic sharks, the use of permanent oceanic currents is the essential element of euoceanic shark life cycle providing significant economy of energy during long-range migrations, including transoceanic migrations. In the course of their evolutionary process, the euoceanic sharks have developed a number of adaptations for a more efficient use of such transport streams as currents, namely, larger fin sizes, pectoral fin in particular, lower mineralization of skeleton, and larger relative sizes of the liver. The latter parameter of the sharks of the Carcharhinidae family undergoes considerable changes in the course of the reproductive cycle. It is quite low during the first pregnancy stages, followed by a sharp increase in the hepatosomatic index (HSI), which decreases again by the time of spawning. A sharp increase of HSI during pregnancy provides extra buoyancy, and gives an opportunity to collect small mass food items at a lower speed. The sharks of the Lamnidae family are not subject to such a sharp HSI increase during pregnancy, which is

evidently related to oophagy. Blue shark (*Prionace glauca*), and oceanic whitetip shark (*Carcharhinus longimanus*) are regarded as the main species among euoceanic sharks. Longfin mako (*Isurus paucus*), whose stocks are critically low, obviously belongs to the same group. Judging by palaeontological data (Litvinov, 2007), the low abundance of longfin mako may be attributed both to the influence of the fishery and competitive actions on the part of blue shark, with which they have similar demands towards the habitat. Judging by the number of fossil teeth on the ocean bottom, longfin mako could have been far more numerous and even predominating species in the recent geological past, some one thousand years ago or less. Slow-swimming predatory sharks (Pseudocarchariidae) attain pelagization mainly owing to specific body weight decrease. Such an adaptation, considering the necessity of permanent washing of the gills with a stream of fresh water, requires the presence of a quite pronounced spiracle. The sharks of Sphyrnidae family attain pelagization owing to the increase of relative width of rostrum and the length of both lobes of caudal fin.

Thus, the similarities and distinctions between the energy strategies and sets of adaptations in neritic, far-oceanic and euoceanic shark species revealed during the investigation are significant elements of life cycles and should be taken into consideration in the process of developing the conceptual models.

The statistical information Task I, Form 2, on tropical tunas and bigeye tuna was prepared and forwarded to ICCAT.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

In the purse seine fishery for tunas and tuna-like species, the ICCAT requirements and recommendations concerning restrictions in the tuna fishery, and a ban imposed on fishing species having a quota were observed. To improve the statistics quality, the observers on tuna fishing seiners and trawling vessels operating in the Convention area collected catch statistics and biological materials, as well as data on tuna and tuna-like species by-catch on the annual basis.

**ANNUAL REPORT OF SENEGAL
RAPPORT ANNUEL DU SÉNÉGAL
INFORME ANUAL DE SENEGAL**

Youssouph Diatta¹, Sidy Ndao² et Taïb Diouf³

SUMMARY

Senegal has a maritime coast of 718 km. with an Exclusive Economic Zone (EEZ) of about 60,000 km² and 400 km² of continental waters. This situation favors the development of important types of artisanal and industrial fishing targeting all the pelagic as well as demersal species. This paper deals mainly with the exploitation of tuna and tuna-like resources in the Atlantic.

RÉSUMÉ

Le Sénégal dispose d'une façade maritime de 718 kilomètres avec une Zone Economique Exclusive (ZEE) d'environ 60.000 km² et 400 km² d'eau continentale. Cette situation a favorisé le développement d'importantes formes d'exploitations artisanales et industrielles ciblant toutes les espèces pélagiques comme démersales. Cette présente note s'intéresse essentiellement à l'exploitation de ressources thonières et espèces voisines de l'Atlantique.

RESUMEN

Senegal dispone de una fachada marítima de 718 km, con una Zona Económica Exclusiva (ZEE) de aproximadamente 60.000 km² y 400 km² de aguas continentales. Esta situación ha propiciado el desarrollo de importantes formas de explotación artesanales e industriales de todas las especies pelágicas y demersales. Este informe se centra sobre todo en la explotación de los recursos de túnidos y especies afines en el Atlántico.

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

Chapitre 1: Information annuelle sur les pêcheries

Le Sénégal dispose d'une façade maritime de 718 kilomètres avec une Zone économique exclusive (ZEE) d'environ 60 000 km² et 400 km² d'eau continentale. Cette situation a favorisé le développement d'importantes formes d'exploitation artisanales et industrielles ciblant toutes les espèces pélagiques comme démersales. Cette présente note s'intéresse essentiellement à l'exploitation de ressources thonières et espèces voisines de l'Atlantique.

1.1 La pêche industrielle

La pêche thonière s'intéresse principalement à trois espèces, dont l'albacore (YFT-*Thunnus albacares*), le listao (SKJ-*Katsuwonus pelamis*) et le patudo (BET-*Thunnus obesus*). Ces espèces sont exploitées :

- d'une part, par une flottille de canneurs (BB) ayant Dakar comme port d'attache où la totalité des captures sont débarquées ;
- d'autre part, par la pêche palangrière (LL) qui cible le patudo, l'albacore, également les istiophoridés, mais en 2006 aucune prise n'a été effectuée dans l'Atlantique.

Le **Tableau 1** présente les prises par espèces, les efforts et les prises par unité d'effort (PUE) des canneurs sénégalais de 1991 à 2006 (il n'y a pas eu de bateaux en 1992). Le **Tableau 2** donne les principales caractéristiques des bateaux battant pavillon sénégalais évoluant en 2006; le **Tableau 3** présente le nombre de bateaux en activité. La **Figure 1** présente la variation saisonnière des prises de canneurs sénégalais en 2006. Ces

¹Centre de Recherche Océanographique de Dakar Thiaroye (CRODT), BP 2241, Dakar, Thiaroye, E-mail: youssouphdiatta@hotmail.com

² Direction des Pêches Maritimes, Email: sidindaw@hotmail.com

³ Institut Sénégalais de Recherches Agricoles (ISRA), BP 3120, Dakar. Email: tdiouf@isra.sn

prises varient en fonction de l'effort et selon la saison. Entre mars et octobre, qui semble une période favorable à la pêche, les prises augmentent malgré une baisse de l'effort alors que le phénomène inverse se produit en saison froide. La **Figure 2** montre la variation spatio-temporelle des captures.

1.2 Les pêcheries artisanales

Les pêcheries artisanales exploitent essentiellement, à la ligne à main, à la ligne de traîne, à la senne tournante, au filet maillant encerclant, à la senne de plage et au filet dormant, des petits thonidés (thonine-LTA-*Euthynus alletteratus*, maquereau bonite-MAW-*Scomberomorus tritor*, maquereau espagnol-SSM-*Scomber japonicus (maculatus)*, Palomette-BOP-*Orcinopsis unicolor* et bonite à dos rayé-BON-*Sarda sarda*, Thazard bâtard-WAH-*Acanthocybium solandri*. Elle exploite à la ligne et à la senne tournante des auxides -FRI-*Auxis thazard* ainsi que des poissons porte épée (espadon-SWO-*Xiphias gladius*, marlin-BUM-*Makaira nigricans* et voilier-SAI-*Istiophorus platypterus*) de même que des thonidés majeurs (YFT-*Thunnus albacares*), le listao (SKJ-*Katsuwonus pelamis*) et le patudo (BET-*Thunnus obesus*). Les requins sont également capturés par cette pêche à l'aide de filets dormants et de lignes. Les statistiques de débarquement de ces espèces de 1990 à 2005 ainsi que les efforts (en nombre de sorties) figurent dans les **Tableaux 4, 5 et 6**. Ces prises varient en fonction des espèces et d'une année à l'autre.

1.2.1 Evolution de la flottille artisanale

Le recensement du parc piroguier et des infrastructures liées à la pêche artisanale effectué du 21 au 25 octobre 2002 a permis d'obtenir les résultats suivants (**Tableau 7**). Ces pirogues ont une longueur comprise généralement entre 6 et 18 mètres. Les plus grandes se rencontrent sur la grande côte. Selon les types de pêche, les pirogues à senne tournante sont les plus grandes avec une longueur moyenne de 18 mètres, les pirogues à filet maillant encerclant font 16 mètres, les pirogues glacières à ligne 12 mètres, les pirogues à ligne mesurent en général entre 7 et 9 mètres et les pirogues à filet dormant et dérivant 8 mètres. Les types de pêche pratiqués varient en fonction de l'origine de la pirogue.

1.3 La pêche sportive

Elle cible les marlins, les voiliers et l'espadon et autres espèces pendant la saison de pêche située de mai à novembre. Au Sénégal, les pêcheries sportives sont suivies dans deux grands centres de pêche, à Dakar et à Mbour. Il faut cependant rappeler que la plupart des prises s'évaluait en nombre et qu'aucune mensuration n'était effectuée concernant ces espèces sauf pour les captures record, cela fait que les tableaux ne pouvaient être exploités par l'ICCAT.

Néanmoins, cette année, des fonds ont été mis à notre disposition pour un meilleur suivi de la pêche sportive (amélioration de la couverture statistique des données de pêche sportive). Les résultats définitifs de ces travaux apparaîtront dans le rapport annuel 2007 de l'année 2008. Nous enverrons progressivement les résultats dès que possible.

1.4 Les conserveries

La pêche thonière est intimement liée à l'industrie de la conserverie dont les évolutions ont été très contrastées ces dernières années. De 1998 à nos jours, seulement trois conserveries fonctionnent (SE-SNDS, PFS, INTERCO) mais de façon irrégulière.

A partir de 2003, deux conserveries ont fonctionné normalement jusqu'en 2005. En 2006, seule une conserverie a fonctionné. Le **Tableau 8** montre la variation du tonnage débarqué de 1998 à 2006.

Chapitre 2: Recherche et statistiques

Un travail régulier de suivi scientifique est effectué par le Centre de Recherche Océanographique de Dakar Thiaroye (CRODT). Ce suivi comprend le recueil des statistiques de capture et d'effort de pêche.

En pêche industrielle, ce système repose sur une enquête détaillée par jour, auprès des patrons thoniers lors de chaque débarquement, complété par les captures effectives de diverses sources (usines, armements, Manifeste du port, DPM, ...). Il se déroule au port de pêche de Dakar pour la pêche industrielle où nous disposons de locaux animés par quatre techniciens (trois chargés des enquêtes et un de la saisie). L'ensemble des renseignements sont

saisis sous logiciel AVDTH, codés, et mis sous support informatique, ensuite centralisés après traitement, vérification et correction. La gestion des données se fait en collaboration avec l'IRD et l'IEO.

En pêche sportive, nous recueillons chaque année les prises et efforts des istiophoridés et autres espèces auprès des différents centres de pêche sportive ; une fiche d'enquête a été élaborée et un suivi est régulièrement effectué au niveau des points de débarquement, en collaboration avec la Fédération sénégalaise de pêche sportive.

Pour mieux améliorer les statistiques de pêche, des échantillonnages sont également effectués lors des débarquements au port, dans les usines et les sites de débarquement. Concernant la pêche industrielle, nous avons enregistré 165 échantillons de tailles multispécifiques sur les canneurs sénégalais. Cet échantillonnage est effectué par une équipe de trois enquêteurs basés au port de Dakar.

En pêche artisanale maritime, il existe trois types de recueil de données : le recensement du parc piroguier et des engins de pêche, le relevé de l'effort de pêche et l'enquête portant sur les captures, sur les fréquences de taille et sur les prix. En l'absence de contrainte particulière, généralement d'ordre financier, le recensement a eu lieu deux fois (saison froide et saison chaude). La zone couverte s'étend le plus souvent de Saint Louis à Djiffère. Il est mené par les enquêteurs de pêche artisanale appuyés par une équipe mobile de chercheurs et de techniciens dépêchée depuis le CRODT. Les informations collectées ont trait, entre autres, aux centres d'attache et d'origine de la pirogue, à l'équipage, à l'activité, à la puissance du moteur, aux engins utilisés, etc. Le relevé de l'effort de pêche est effectué au niveau des huit principaux centres de débarquement. Il est effectué par les aides de plage qui s'informent journalièrement sur le nombre de sorties en mer selon l'engin de pêche. Trois procédés liés à la physionomie de chaque centre sont utilisés. Il s'agit du pointage, du double comptage et de l'interview. Pour les enquêtes, la méthodologie est basée sur le principe de l'échantillonnage stratifié croisé (centre x quinzaine x engin de pêche). Ce type de stratification a pour but de mieux prendre en compte les fluctuations spatio-temporelles et les spécificités de chaque type de pêche. De ces enquêtes sont estimées, pour chaque centre d'enquête, les captures spécifiques selon la zone de pêche, les prix moyens des principales espèces et les fréquences de taille.

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

Chapitre 3: Mesures en œuvre de conservation et de gestion

Afin de mettre en œuvre les recommandations de l'ICCAT, le Sénégal a pris toutes les dispositions pour réglementer la pêche thonière : Etablissement d'un système de suivi, de contrôle et de surveillance de toutes les activités de pêche. Inspection au port et identification de tout navire menant des activités de pêche illicites. Veiller à ce que les ressources halieutiques soient convenablement gérées.

Chapitre 4 : Schémas d'inspection

Le Sénégal dispose d'un schéma d'inspection mis en place au port. Tous les débarquements nationaux comme étrangers font l'objet d'un suivi et d'une inspection.

Tableau 1. Prises par espèces, efforts et prises par unité d'effort (PUE) des canneurs sénégalais (BB) de 1991 à 2006.

	<i>Prises (t) canneurs</i>			<i>Effort</i>		<i>PUE (t/j)</i>			
	<i>YFT</i>	<i>SKJ</i>	<i>BET</i>	<i>Total</i>	<i>(jpec)</i>	<i>YFT</i>	<i>SKJ</i>	<i>BET</i>	<i>Total</i>
1991	79	309	10	398	73	1,08	4,23	0,14	5,45
1992									0,00
1993	13	42	5	60	27	0,48	1,56	0,19	2,22
1994	6	59	11	76	40	0,15	1,48	0,28	1,90
1995	20	18	60	98	74	0,27	0,24	0,81	1,32
1996	41	163	84	288	91	0,45	1,79	0,92	3,16
1997	208	455	204	867	176	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	4,56

Tableau 2. Caractéristiques des thoniers sénégalais en 2006.

<i>Nationalité</i>	<i>Nom</i>	<i>Immatriculation</i>	<i>Conservation</i>	<i>Type de pêche</i>	<i>TJB</i>	<i>Engin</i>	<i>Long (m)</i>	<i>Larg (m)</i>	<i>Creux (m)</i>	<i>Puissance (cv)</i>	<i>Armement</i>
Sén	CDT Biame Thiaw	Dak 1124	Congélateur	Pel h	160	BB	30,807,15	3,70	1300		Dakar Thon
Sén	PDT Magatte Diack	Dak 1123	Congélateur	Pel h	160	BB	30,707,15	3,70	1150		Dakar Thon
Sén	PDT Matar Ndiaye	219	Congélateur	Pel h	302,3	BB	32,928,52	4,25	900		Sert SA
Sén	Ramatoulaye	Dak 1141	Congélateur	Pel h	288,4	BB	36,758,52	3,4	950		Sénégalaise de pêche
Sén	Lio 1	Dak 1143	Congélateur	Pel h	293	BB	39,558,2	4,2	815		Tunasen SA
Sén	Lio 2	Dak 1144	Congélateur	Pel h	293	BB	39,558,2	4,2	815		Tunasen SA
Sén	Etoile des mers	Dak 1159	Congélateur	Pel h	139,9	BB	27 07,2	03,6	710		Espasen armement
Sén	Robaleira	Dak 1129	Congélateur	Pel h	284,6	LL	48,808,20	3,60	1320		Viera mar

Tableau 3. Nombre de bateaux en activité de 1991 à 2006.

<i>Année</i>	<i>Canneurs (BB)</i>	<i>Palangrier (LL)</i>
1991	1	0
1992	0	0
1993	1	0
1994	2	0
1995	3	0
1996	2	0
1997	2	0
1998	3	0
1999	4	0
2000	6	0
2001	2	0
2002	2	0
2003	4	1
2004	3	1
2005	6	1
2006	7	3

Tableau 4. Prises en tonnes de petits thonidés, d'istiophoridés et de xiphiidés par la pêche artisanale de 1990 à 2005.

<i>Espèces</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Scomber japonicus</i>	2489	967	1849	1340	1297	2417	1692	2234	1931	1348	2772	1936	8869	14173	3941	5781
<i>Orcynopsis unicolor</i>	16	20	41	29	16	63	60	5	18	24	14	28	6	7	67	85
<i>Scomberomorus tritor</i>	1220	520	1225	1019	939	1614	1318	837	522	491	778	408	584	532	288	489
<i>Acanthocybium solandri</i>		0	2	64	0	0	1	0	1	5	0	0		7	0	0
<i>Euthunnus alletératus</i>	4184	2955	3137	3913	4238	3560	1972	2734	3372	1398	3336	4969	2659	4394	4160	2166
<i>Sarda sarda</i>	525	597	345	171	814	732	1012	1289	2213	2558	286	545	621	195	197	486
<i>Katsuwonus pelamis</i>	5	288	2	0	0	2	1	2	6	4	7	6	287	45	154	341
<i>Thunnus obesus</i>		3		9	1	0	0		2	2	0	0	3	5	4	4
<i>Auxis thazard</i>	94	4	0	33	10	0	0	0	0	7	0	4	0	13	285	159
<i>Thunnus albacares</i>	2	20	23	8	1	1	1	0	1	0	3	0	25	3	10	43
<i>Istiophorus platypterus</i>	1040	466	860	462	162	167	240	555	257	234	782	953	240	673	291	250
<i>Makaira nigricans</i>	1	4	8		9		2	5	0	0		11	24	32	8	0
<i>Xiphias gladius</i>	0	6	5	0	1	1	0	0	4	2	242	2	17	2	4	7
Total	9575	5850	7498	7049	7487	8557	6298	7661	8327	6073	8220	8862	13335	20081	9408	9811

Tableau 5. Prises de requins par la pêche artisanale de 1990 à 2005.

<i>Espèces</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Carcharhinus spp</i>	388	368	1034	1016	1689	950	1571	235	805	968	1713	10736	1042	1387	1651	5247
<i>Sphyrna spp</i>	0	0	0	0	0	128	188	126	92	96	57	686	36	54	168	311
<i>Sphyrnidae divers</i>	140	149	151	131	182	1	2	0	2	21	0	778	0	17	0	7
<i>Mustelus mustelus</i>	398	462	386	437	690	378	596	158	100	155	255	4015	77	143	109	91
<i>Rhizoprionod. acutus</i>	52	9	7	12	5	5	12	0	5	10	20	138	11	23	1	11
<i>Carcharhinidae divers</i>	1	7	0	0	11	5	15	4	22	4	1	70	3	0	0	154
<i>Centrophorus spp</i>	44	8	5	11	2	13	1	0	1	3	2	92	7	0	65	33
<i>Squalidae</i>	3	2	0	0	0	0	0	0	1	1	0	8	0	0	0	5
<i>Pleurotremes divers</i>	0	0	3	2	25	15	8	1	20	0	0	74	13	64	4	3

Tableau 6. Efforts (en nombre de sorties) de petits thonidés, d'istiophoridés, de xiphiidés et de requins par la pêche artisanale de 1990 à 2005.

<i>Engins</i>	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
PVL	27 879	29 788	29 412	13 868	25 783	35 872	41 305	63 417	57 616	48 086	53 449	39 805	33 900	51 919	62 294	66 996
	358	355	366	354	391	402	393	458	530	562	473	419	529	599	627	548
PML	812	948	253	586	526	017	617	765	144	303	781	210	636	169	483	259
	180	164	173	199	212	287	343	331	303	301	459	336	355	292	477	460
FD	581	072	036	537	265	644	881	951	997	980	537	518	756	013	005	060
PGL	11 857	15 450	15 959	19 353	17 496	20 576	24 044	24 521	25 192	23 340	22 999	26 095	24 970	22 757	24 933	22 937
ST	55 533	54 779	60 553	62 470	56 955	53 494	51 133	51 200	55 439	54 644	61 567	64 783	65 225	72 595	67 230	64 299
FME	22 283	18 547	22 671	18 197	13 645	15 697	27 434	35 953	22 401	22 040	20 618	24 418	19 543	22 091	18 204	23 784
SP	6 554	7 709	7 576	6 389	8 783	16 475	15 708	9 523	9 644	10 803	10 804	6 273	4 392	3 828	19 071	14 317

PVL=Pirogue voile ligne; PML= Pirogue motorisée ligne; FD= Filet dormant; PGL= Pirogue glacier ligne; ST= Senne tournante; FME= Filet maillant encerclant; SP= Senne de plage.

Tableau 7. Répartition du nombre de pirogues de 2003 à 2005 en fonction des zones de pêche.

<i>Nombre de pirogues</i>	2003		2004		2005	
	<i>Motorisé</i>	<i>Non motorisé</i>	<i>Motorisé</i>	<i>Non motorisé</i>	<i>Motorisé</i>	<i>Non motorisé</i>
Dakar	2378	130	2551	625		
Thies	2510	61	1566	876		
St-Louis	158	-	173	-		
Fatick	1167	211	774	421		
Ziguinchor	764	1862	770	1740		
Louga	21	119	92	38		
Total	6985	2383	5926	3700		
Toutes régions confondues					3062	9557

Grande côte = St Louis-Louga.

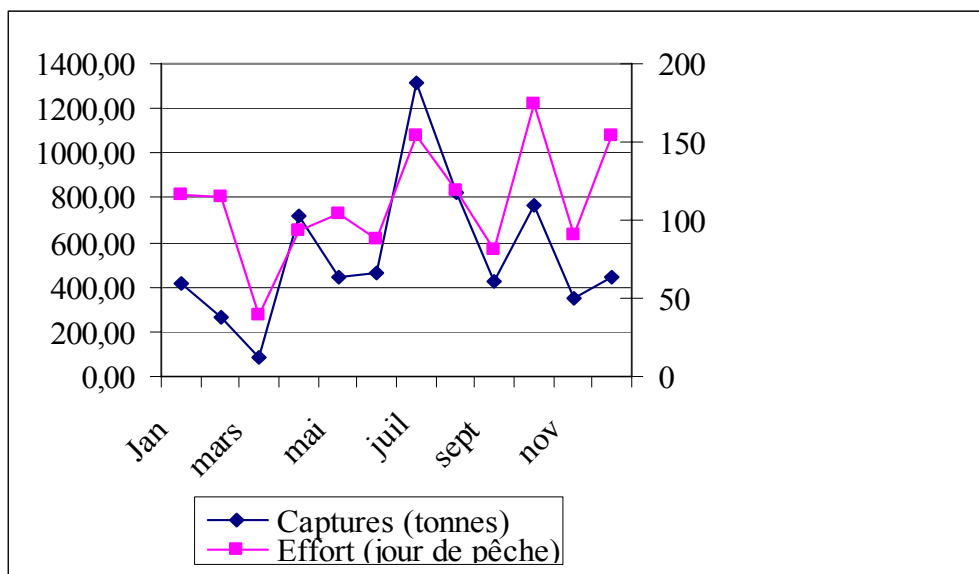
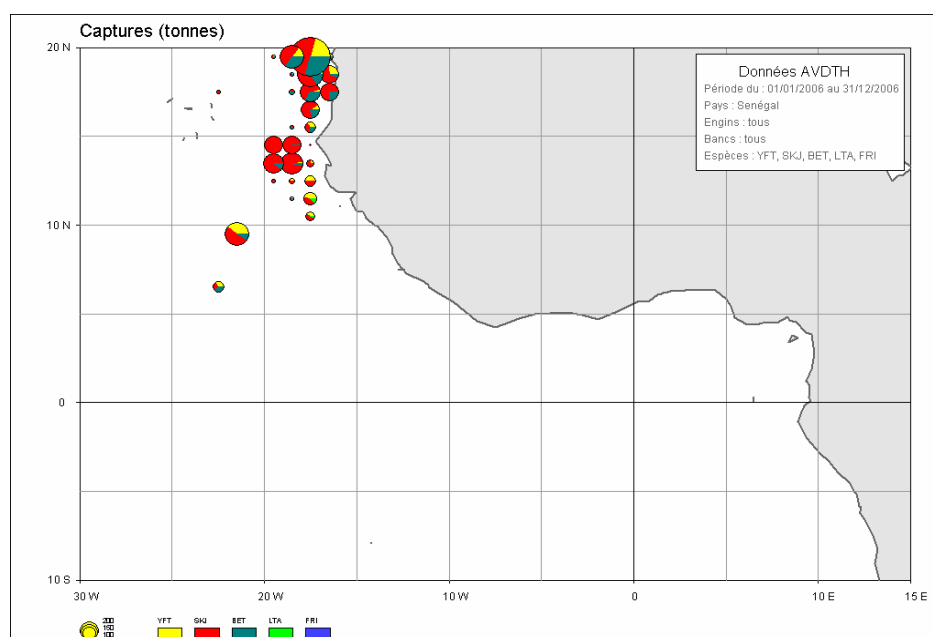
Petite côte = Thies sauf Kayar.

Cap vert = Dakar.

Casamance = Ziguinchor.

Tableau 8 : Tonnage débarqué auprès des conserveries de 1998 à 2006.

	1998	1999	2000	2000	2001	2002	2003	2004	2005	2006
SE-SNCDS	18000	2900	3300	3300	8700	9300	10000	6790	26653	5199
PFS	8900	12000	7900	7900	7000	8700	6300	2547	3822	-
INTERCO	1100	4700	1600	1600	2200	460	-	-	-	-
Total	28100	19700	12800	12800	17900	18460	16300	9337	24475	5199

**Figure 1.** Variation saisonnière des prises de canneurs sénégalais en fonction de l'effort de pêche en 2006.**Figure 2.** Distribution spatio-temporelle des prises de canneurs sénégalais en 2006.

ANNUAL REPORT OF SOUTH AFRICA*
RAPPOT ANNUEL DUE L'AFRIQUE DU SUD
INFORME ANUAL DE SUDÁFRICA

Craig D. Smith¹

Part I (Information on fisheries, research and statistics)

Section 1: Annual Fisheries Information

1.1 Poling, rod and reel, and sport fishery

Poling has been used to target sub-adult albacore in near-shore waters of South Africa since the 1970s. The fishery generally operates between September and May along the west coast of South Africa. The bulk of albacore, including those caught by longline vessels, are exported for canning. Although annual albacore landings have fluctuated around 5, 5000 t round weight there has been a decreasing trend since 1998. Annual fluctuations in catch appear to be strongly influenced by foreign exchange rates and the availability of albacore in inshore waters. 2006 was the first year after the long term rights allocation process where a record number of companies (191) were issued rights to exploit tuna in the tuna pole fishery. Despite an increase in the number right holders and vessels in this sector the reported fishing effort continued to decrease from 3370 sea days in 2004 to 2844 sea days in 2005 to 2509 sea days in 2006 (**Table 1**). Reported catches (round weight) also decreased from 3144t in 2005 to 2161 t in 2006. There was also a substantial difference of 1200t between the export and reported figures, which may indicate a higher level of under-reporting this year than last year (**Table 2**). Nominal CPUE also declined from 1004 kg.day⁻¹ to 861 kg.day⁻¹ (**Table 1**). The reasons for these declines are complex as the fleet characteristics have changed with the influx of new entrants, using smaller vessels. Furthermore, many of the new entrants are targeting yellowfin tuna which has increased from 300 t in 2005 to 444t in 2006. Lastly, a substantial number of traditional poling vessels fish for Namibia for part of the year. The poling fleet also reported 6t of bigeye, and further 146 t of unspecified tuna of which 90% is most likely albacore. Mean albacore FL increased slightly from 75.7 cm in 2005 to 78.3 cm in 2006, but this based on a much smaller sample size compared to the previous year (**Figure 1**).

The rod and reel component of the poling fishery has appeared to stabilize between 30-40 vessels in response to the availability of large (> 40 kg) yellowfin in inshore waters of southern South Africa since 2003. Although the total reported yellowfin catch (dressed weight) decreased from 543 t in 2005 to 500 t in 2006 the nominal CPUE has increased from 627 kg. day⁻¹ in 2005 to 727 kg. day⁻¹. These vessels have improved the targeting of the species by fishing in close proximity to hake longliners and trawlers, which attract the tuna when dumping hake offal. Other reported catches made by this sector includes 324 t of albacore (**Table 1**).

No data was available at the time of this report for traditional commercial line fishery, which also opportunistically target longfin and yellowfin tuna when they are close inshore and when linefish species are not available. The recreational fishery, including informal charter and sport fisheries, also operates in the vicinity of Cape Town and targets albacore and yellowfin using rod and reel, and spearguns from small fishing vessels (5-10m). Although not quantified, catch and effort in the recreational fishery for yellowfin is presumed to be similar to 2005 and would be relatively high compared to previous years, mainly due to the high abundance of yellowfin in the coastal waters of the Southern Cape. Although tuna are landed by these various sectors the total catch is considered to be relatively small in comparison to the commercial rod and reel fishery due to bag limits and the non-sale of catch in the recreational fishery.

1.2 Tuna/swordfish longline fishery

Despite 18 swordfish-directed rights and 26 tuna-directed rights allocated in 2005 only 15 vessels were active in 2006. This was due to a restrictive allocation policy, which had not made provision for foreign flag vessels to fish for more than one year without reflagging. Consequently, right holders could not enter into another chartering agreement with foreign vessel owners. Moreover, suitable domestic tuna longline vessels are not available in South Africa, which ultimately resulted in no fishing activity by the tuna longline sub-sector. Thus the only vessels active were South African flagged vessels operating in the swordfish longline sub-sector. The unintentional reduction in fleet size resulted in the poorest total South African longline catch on record since

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

¹ Marine and Coastal Management, P/Bag X2, Roggebaai 8012, Cape Town, South Africa. csmith@deat.gov.za

2000 (**Figure 2**). Unlike previous years, most fishing effort was concentrated in the Atlantic Ocean (58%). However, fishing effort still continued to decrease since 2004 with only 603 thousand hooks deployed in the Atlantic (**Table 1**). Catch comparisons of the most important species are reflected in **Table 1**. Albacore nominal catch rates remained similar in 2006 at 76 kg.1000 hooks⁻¹. Slight increases were noted for swordfish (233 kg. 1000 hooks⁻¹), yellowfin (253kg. 1000 hooks⁻¹) and mako shark (23 kg.1000 hooks⁻¹). In contrast, blue sharks declined to 44 kg. 1000 hooks⁻¹ and bigeye tuna CPUE decreased by almost 60% to 114 kg. 1000 hooks⁻¹. Comparisons of nominal CPUE are difficult, as fleet characteristics have changed annually since the start of the fishery. However, there is concern with regard to swordfish, as catch rates are substantially lower than that reported at the start of the fishery in 1997 (**Figure 3**). It should also be noted that vessels are subject to a shark by-catch limit of 10% of the weight of tuna and swordfish caught.

Size frequency distributions are presented for swordfish (**Figure 4**), bigeye (**Figure 5**), and yellowfin tuna (**Figure 6**). The mean lengths were 171 cm LJFL for swordfish, 150 cm FL for bigeye, and 135 cm FL for yellowfin. In comparison to the previous year, mean lengths increased for swordfish and bigeye tuna, but decreased for yellowfin tuna.

1.3 Shark longline fishery

The Department of Environmental Affairs and Tourism (hereafter referred to as the Department) made a policy decision in 2004 to terminate its pelagic shark longline fishery in favour of developing tuna and swordfish-directed fisheries where sharks would be managed as a by-catch. This decision was made taking into account the global concern regarding the stock status of pelagic sharks. However, the Department had not realized its objective to consolidate the pelagic shark fishery with the large pelagic fishery in 2005 and consequently the pelagic shark fishery are still operating under exemption until the Department can rectify the situation. Nine shark exemption holders were actively fishing for pelagic sharks in 2006. Despite fishing effort being stable at 123 thousand hooks in the Atlantic Ocean most of the fishing effort occurs in the Indian Ocean. Catches (dressed weight) of mako and blue shark decreased to 85 t and 63 t, respectively in 2006 (**Table 1**). Nominal CPUE decreased for both blue sharks (510 kg.1000 hooks⁻¹) and makos (688 kg. 1000 hooks⁻¹).

Section 2: Research and Statistics

2.1 Poling, rod and reel, and sport fishery

Skippers in the poling fishery have been required to complete daily logs of catches since 1985. Daily logs indicate quantity of catch by species by area. Reporting is a problem in this fishery with as much as 35% of catches not being reported in some years. Customs and Excise records are generally a more reliable estimate of total albacore landed as almost all albacore is frozen whole and exported (with the exception for 2005 when reported catch exceeded exported figures; **Table 2**). The problem with export figures is that it reflects the total albacore landed by all South African fishing sectors. This problem is minimized by subtracting known albacore catches of the longline and rod and reel fishing sectors from the export figure to obtain a more accurate estimate of total albacore landed by the poling fishing sector. Like the poling fleet, the rod and reel fleet is also required to complete daily logs of catches. Reporting of catches is better than that of the poling fleet and coverage is estimated at >90%. There is no coverage of by-catch or discarded catches, but these are expected to be low given the fishing techniques used. There was no statistical system in place to record recreational catch and effort.

Routine port sampling trips are undertaken to obtain length frequencies of albacore landed by the poling fleet. Port sampling decreased from seven trips in 2005 to three trips in 2006, with a total of 461 albacore measured. The decrease in port sampling was a result of all large pelagic research posts in the Department being vacated towards the end of the year. Currently there is no port sampling for rod and reel and sport fishing sectors.

2.2 Tuna/swordfish longline fishery

Skippers in the tuna/swordfish longline fishery have been required to complete daily logs of catches since 1997. The U.S. trade statistics provides a useful means of verifying reporting levels of the longline fishery as most of South Africa's swordfish is exported to the United States of America. After 2001 the comparison between reported catch statistics and US trade statistics were very similar, indicating good reporting for this sector in recent years (**Table 3**). In the last two years the swordfish marketing has diversified, as a result the reported catch now exceeds the US import statistics. Reporting is considered to cover more than 90% of all swordfish, yellowfin and bigeye catches made by this sector. Although the logbooks have been used to report 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. This programme was developed to monitor changes in fishing techniques, assess compliance with permit conditions, validate CPUEs, provide swordfish biological material and length frequencies of target and by-catch species, and to determine discard levels. The intended observer coverage was 20% of all domestic fishing trips and 100% of all foreign charter fishing trips. 17.5 % observer coverage was achieved for sets made in the Atlantic Ocean and is similar to last year. No foreign vessels were fishing for South Africa in 2006. The observer programme also indicated that the longline fishery, in general, grossly under-reports albacore and all by-catch species, including escolar, oilfish, dorado, birds, turtles, and sharks. Finning of sharks is prohibited and seldom occurs in the fishery. Although live and dead discards are recorded these are not reported to ICCAT as the official reporting form only makes provision for weights, which is not possible to obtain when dealing with live releases and mauled fish. Through the observer programme it was estimated that 0.7% of swordfish caught were under the legal size limit of 119 cm LJFL, which amounts to 342 kg of undersize swordfish caught in total in the Atlantic Ocean.

2.3 Shark longline fishery

Permit holders in the shark longline fishery are also required to complete daily logs of catches. Levels of reporting 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

The main focus of large pelagic research in South Africa has been on the life history and stock structure of swordfish in southern African waters. The observer programme has been used extensively since 1998 to collect swordfish length frequencies and biological material for age and growth studies, sexing, maturity staging and dietary studies. Sampling is completed with over 2 500 biological samples processed. A further 1 500 tissue samples were collected for genetic studies to better understand the mixing dynamics of swordfish in the boundary region between the Atlantic and Indian Oceans. A pilot tagging programme for swordfish, bigeye and yellowfin, using commercial longliners as a tagging platform, was started in 2004. Approximately 300 large pelagics were tagged with one swordfish recapture in the Indian Ocean. The analyses of the data have been placed on hold due to the vacating of the large pelagic research post.

Over 500 dorsal spines of albacore have been collected in 2005 and 2006, from both the poling and longline fishery, in an attempt to provide age and growth parameters for the southern Atlantic albacore stock assessment which was conducted in 2007. The spines were not processed in time due to a lack of research capacity.

The Department is also collaborating with WWF and Birdlife SA to assess the impact of longline fisheries on seabirds, turtles and sharks and to investigate various mitigation and management measures.

Part II (Management and implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Closed seasons

[Recs. 96-02, 98-07, 02-08]: South Africa does not catch bluefin tuna (*Thunnus thynnus thynnus*), hence these management measures are not applicable.

3.2 Data and minimum size

[Rec. 96-14]: Not applicable to South Africa.

[Rec. 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.

[Rec. 98-14]: South Atlantic swordfish catches are presented in the ICCAT Reporting Table (**Table 4**).

[Rec. 01-16]: Task I and II data were submitted to ICCAT in early September 2007. ICCAT reporting tables for South Atlantic swordfish is included in Annual Report. No revisions of historical data were conducted this year.

[Rec. 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 meet the standards described in the *ICCAT Manual*.

Other: All fishing sectors targeting large pelagic species, except for the recreational sector, is managed by a TAE (with TAE=no. of vessels) as determined by the Minister of Environmental Affairs and Tourism. 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 a weight of 25 kg were reduced to 119 cm LJFL and a weight of 18 kg in order to minimize dumping at sea. An estimate of the total amount of undersize swordfish caught is reported in the Compliance form.

3.3 Capacity limits

[Rec. 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.

[Rec. 98-03]: The limitation of bigeye tuna fishing capacity is not applicable to South Africa according to paragraph 3.

[Rec. 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.

3.4 Statistical documents

[Rec. 94-05]: South Africa neither imports nor exports bluefin tuna; hence, this resolution is not applicable.

[Rec. 01-21]: Bigeye tuna statistical documents have been issued since 2003 and the management of these documents was improved upon in 2007.

[Rec. 01-22]: Swordfish statistical documents have been issued since 2003, and the management of these documents was improved upon in 2007.

3.5 Other measures relating to individual species

[Rec. 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.

[Rec. 97-09]: Longline skippers are encouraged to release live billfishes, including blue and white marlins. Less than 2 t of marlins were landed in 2006.

[Rec. 01-11]: 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 are 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.

[Rec. 2-03]: South Africa has not exceeded her swordfish catch limit of 1 140 t for 2006. Only 185.5 t landed.

[Rec. 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.
- Bait and offal are not to be dumped on the same side as hauling.
- All tuna longline vessels are only allowed to set at night.

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. In addition, WWF and Birdlife SA have also provided vessels with tori lines and given instructions on how to use them.

[Rec. 03-10]: Although South Africa's shark NPOA is still in draft South Africa has gone to great lengths in managing its shark fisheries. The final NPOA is scheduled to be gazetted in next year.

[Rec. 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.

[Rec. 03-04]: Mediterranean swordfish is not applicable to South Africa.

[Rec. 05-05]: Not applicable to South Africa as our vessels do not fish for North Atlantic mako.

[Rec. 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.

[Rec. 06-08]: Resolution pertaining to fishing for bluefin in the Atlantic Ocean is not applicable to South Africa.

3.6 Trade sanctions

[Recs. 02-17, 03-18]: South Africa does not import bigeye tuna from Bolivia and Georgia.

3.7 VMS

[Recs. 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.

3.8 General

[Rec. 97-10] (para. 7): Thus far 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.

[Rec. 99-07]: The tuna recreational sector is an open access fishery, and 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 to improve catch estimates from this sector.

[Rec. 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, transshipments at sea are not permitted.

[Rec. 02-21]: South Africa is in the process of developing its fishing capacity and as such has chartered 10 vessels from South Korea and two vessels from Philippines in 2005. 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.

[Rec. 02-22]: All required details of vessels participating in South Africa's tuna/swordfish longline fishing sectors have been submitted to ICCAT.

[Rec. 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.

[Rec. 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. Transshipment of tuna into cages by IUU vessels are not applicable to South Africa as we do not have any tuna farming in South Africa.

[Rec. 06-11](Annex 3, para 6): South Africa does not permit transshipments at sea; hence, this resolution is not applicable.

[Rec. 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.

Section 4: Inspection Schemes and Activities

A specialized management unit, namely the Offshore and High Seas Fisheries Management (OHSFM) unit, was established in 2006. One of the responsibilities of this unit is to implement RFMO management and conservation measures. By doing this South Africa has greatly improved its port State control measures. South Africa has a full Port Inspection Scheme in place in accordance with ICCAT recommendations. This includes foreign vessels requiring a permit to discharge in South African ports. Discharge permits are only issued to vessels authorized to fish in particular areas by the relevant RFMO. No IUU or black listed vessels are allowed to enter South Africa's EEZ or allowed to discharge in South African ports. In applying for a discharge 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. Transshipments are only allowed in port under a transshipment permit. In applying for a permit the skipper has to provide South African authorities with the vessel details, quantity of fish and species to be transshipped, and where it was caught. Spot checks are made on foreign vessel discharges and transshipments. 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. Although the Statistical Document Programme for swordfish, bigeye tuna and southern bluefin tuna was implemented in 2003 it was only properly managed in 2007 by the OHSFM.

Section 5: Other Activities

Surveillance of coastal waters is provided by *ad hoc* spotter plane and navy patrols.

Table 1. Nominal catch and effort data for the most important species landed by large pelagic fishing sectors in 2005 and 2006.

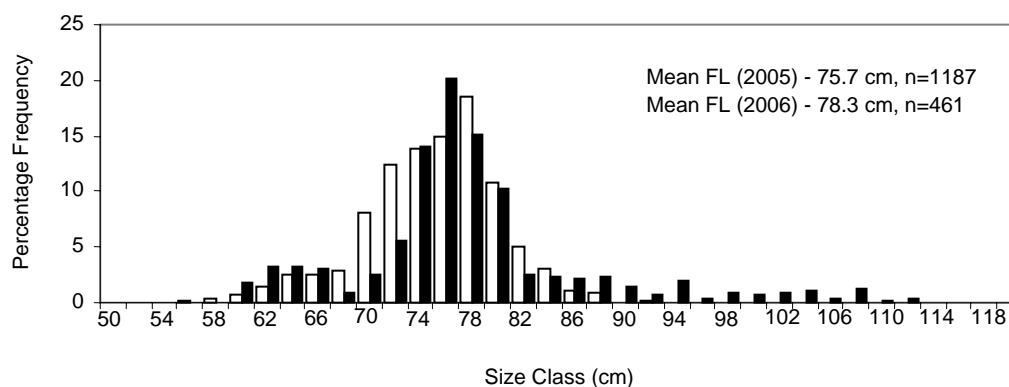
<i>Fishing sector</i>	<i>Total reported effort 2005</i>	<i>Total reported effort 2006</i>	<i>Reported catch by species per year in t dressed weight except for ALB & poling catches</i>											
			<i>ALB 05</i>	<i>ALB 06</i>	<i>SWO 05</i>	<i>SWO 06</i>	<i>YFN 05</i>	<i>YFN 06</i>	<i>BET 05</i>	<i>BET 06</i>	<i>BSH 05</i>	<i>BSH 06</i>	<i>SMA 05</i>	<i>SMA 06</i>
Poling	2844 sea days	2509 sea days	2856	2161	0	0	300	444	1	6	0	0	0	0
Rod and reel	866 sea days	687 sea days	288	324	0	0	543	500	1	0.2	0	0	0	0
Handline	unavailable	unavailable	.	.	.	.	.	.	.	.	.	.	.	.
Sport	unavailable	unavailable	.	.	.	.	.	.	.	.	.	.	.	.
Tun/Swo LL	688839 hooks	603880 hooks	55	46	141	141	168	153	194	69	43	27	7	14
Shark		123524 hooks												
Longline	120070 hooks	hooks	0	0	2	0	13	4	0	0	75	63	102	85
Total			3199	2531	143	141	1024	1101	196	75.2	118	90	109	99

Table 2. Annual albacore landings (t) estimated from baitboat logbooks and custom and excise data 1985-2006.

<i>Year</i>	<i>Logbooks</i>	<i>Exported</i>
1985	6697	
1986	5930	
1987	7275	
1988	6570	
1989	6890	
1990	5280	
1991	3410	
1992	6360	
1993	6743	6881
1994	5268	6931
1995	4246	5213
1996	2856	5635
1997		6708
1998		8412
1999		5101
2000		3610
2001		7236
2002		6507
2003		3470
2004	3170	4561
2005	3144	2685
2006	2161	3365

Table 3. Comparison of reported South African swordfish catches (t) vs U.S. import statistics from South Africa (as reflected by U.S. trade statistics).

<i>Year</i>	<i>Reported catch</i>	<i>U.S. import statistics</i>
1998	394.7	401.7
1999	114.7	1041.5
2000	252.1	909.9
2001	621.7	791.6
2002	1091.1	993.7
2003	807.9	807.9
2004	424	434.2
2005	317	301.1
2006	357	258

**Figure 1.** Albacore size frequency for the South African poling fleet in the Atlantic Ocean in 2005 (light bars) and 2006 (dark bars).

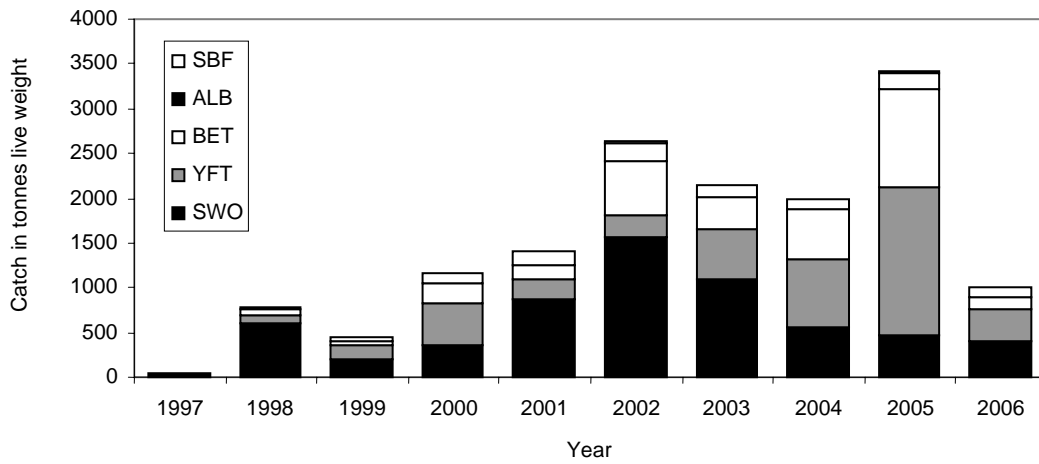


Figure 2. Total reported catch of primary species for the South African tuna/swordfish longline fishing sectors in the Atlantic and Indian Oceans since 1997.

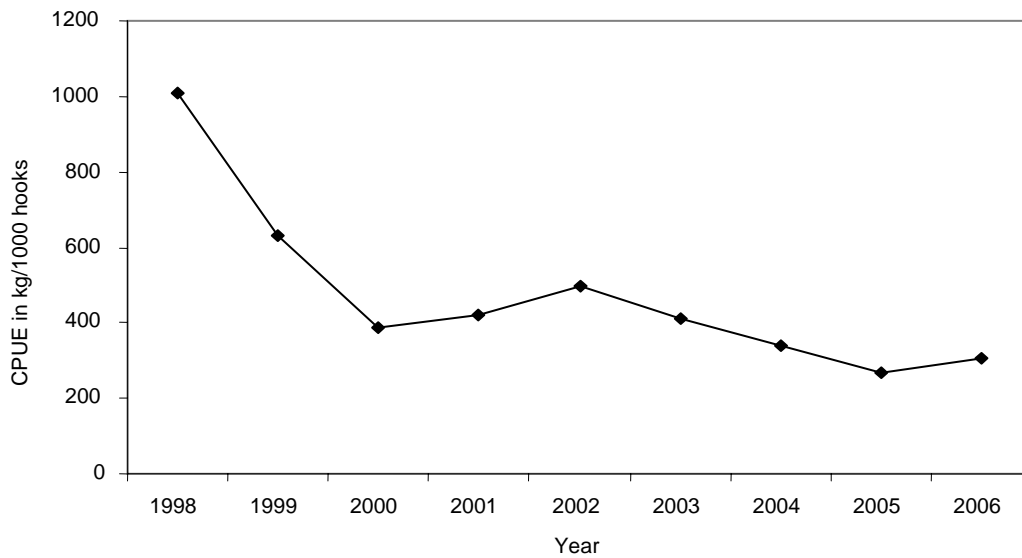


Figure 3. Swordfish CPUE (kg round weight per 1000 hooks) for the South African longline fishery in the Atlantic Ocean from 1998-2006.

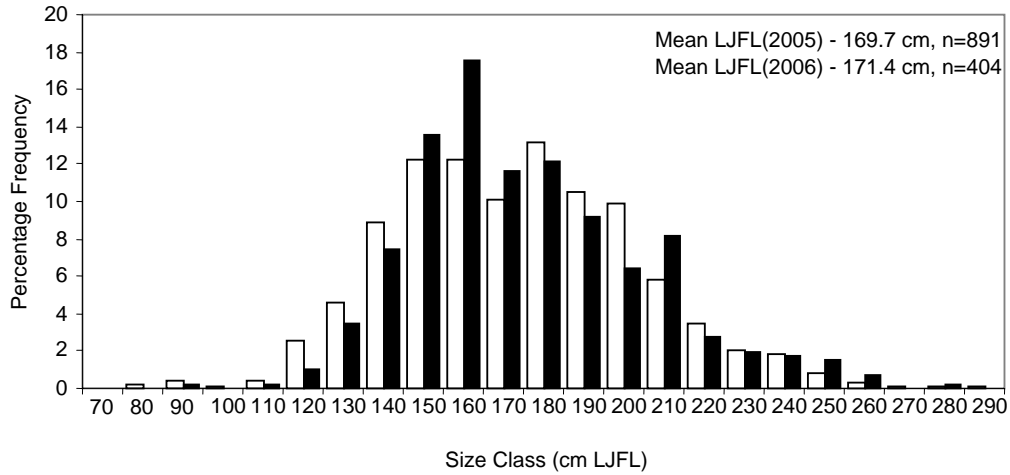


Figure 4. Swordfish length frequency in the Atlantic Ocean in 2005 (light bars) and 2006 (dark bars for the South African longline fishery).

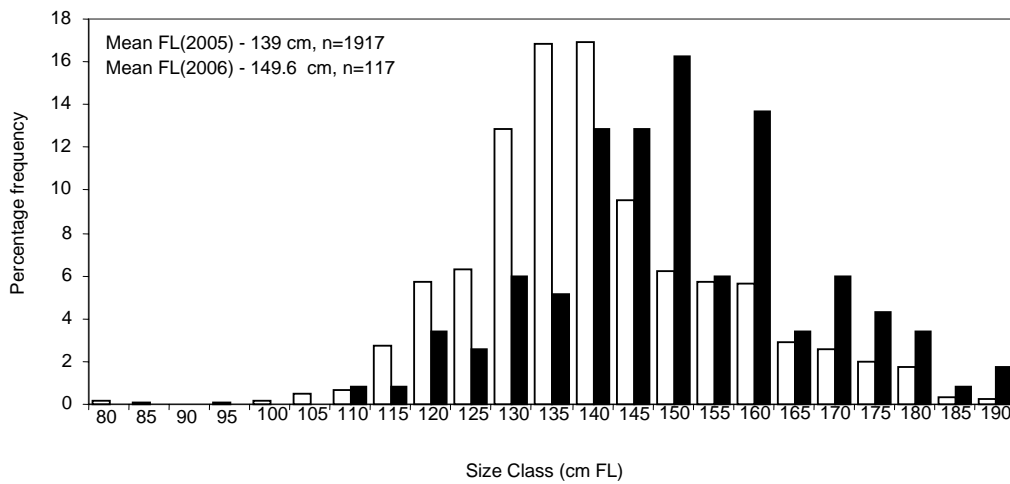


Figure 5. Bigeye size frequency for the South African longline fishery in the Atlantic Ocean in 2005 (light bars) and 2006 (dark bars).

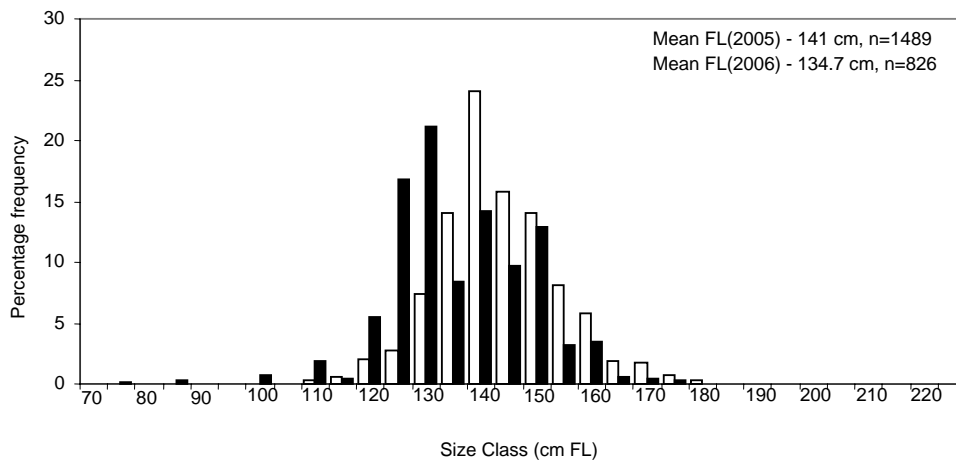


Figure 6. Yellowfin size frequency for South African longline fishery in the Atlantic Ocean in 2005 (light bars) and 2006 (dark bars).

ANNUAL REPORT OF ST. TOME & PRINCIPE*
RAPPORT ANNUEL DE SAO TOMÉ E PRÍNCIPE
INFORME ANUAL DE SANTO TOMÉ Y PRÍNCIPE

Olavio Anibal¹

Parte I (Información sobre Investigación y Estadísticas)

Sección 1: Información anual sobre pesquerías

En Santo Tomé y Príncipe la flota nacional de pesca es en su totalidad artesanal, y está compuesta por más de 1900 pequeñas embarcaciones de entre 5-14 metros de largo.

Dentro de estas embarcaciones, 50 son los que dedican activamente a la pesca de túnidos y especies afines. En 2005, de estas 50 embarcaciones artesanales, 35 correspondían a flota que utiliza redes de cerco de pequeñas dimensiones, midiendo desde 800-1200 metros de largo con 30-70 metros de altura, y están en el puerto de Santo Tomé (P. Cruz, Gamboa y Luxinga), y las otras 15 utilizan la línea de mano y curricán, y 10 de ellas se encuentran en el puerto de Neves al Norte del país y 5 en el la zona sur. Todas estas embarcaciones se mantienen operativas en relación al año 2004 y también respecto a 2006.

La captura de túnidos y especies afines incluyendo tiburones, pez espada, así como algunas especies de menor relevancia (ej. peto y pequeños listados), fue de 1502,5 toneladas (peso vivo) aunque esta cifra representa una disminución del 7,91% en relación al año 2004 (**Tabla 1**).

De estas capturas, la de listado (SKJ) en 2005 fue de 165,9 t, lo que corresponde al 11%, la de aleta amarilla (YFT) fue de 144,5 t siendo el 9,6% y la de patudo (BET) fue de 21 t, que corresponde al 1,4%. Cabe informar de que las capturas representan a peces de pequeñas tallas, entre 40 a 55 cm, cuyo principal arte de pesca son las pequeñas redes cercantes.

Las capturas del marlín azul, marlín blanco y pez espada fueron de 21 t, 33,2 t y 146,6 t respectivamente, y los principales artes de pesca fueron el curricán y las líneas de mano. Las capturas de estas especies hechas por redes son accidentales.

Existen dos métodos de captura de veleros, marlines y pez espada, es decir, el curricán aplicado en la pesca artesanal de Santo Tomé y Príncipe: uno que utiliza anzuelo y otro sin anzuelo vulgarmente llamado “blindado” que consiste en un trozo de nylon monofilamento de 1-2,5mm, con 100-150 metros, amarrado a un rollo de cabo polietileno u otros multifilamento de (6-8mm) con una carnada artificial hecha por un pedazo de poliéster multifilamento que se desfila para quedarse como un trozo de hilo blanco al que se arrastra para que parezca carnada viva.

La pesquería de tiburones es accidental y no existen flotas artesanales que se dirijan específicamente a la captura de tiburones.

Sección 2: Investigación y estadísticas

Algunas tareas están siendo realizadas por parte de distintas instituciones de pesca para mejorar el sistema de recogida de datos de esfuerzo de pesca, capturas por tipo de artes, y se está preparando el reinicio de la recogida de datos biológicos, entre ellos las relaciones talla-peso, etapas de maduración así como las potencialidades de algunas especies de túnidos por periodos del año.

Para estas acciones, Santo Tomé y Príncipe se benefició en 2007 de una asistencia financiera y técnica del fondo de Japón para la mejora de los datos estadísticos, y se realizó también en 2007 con la financiación del Gobierno la actualización de la información sobre la flota pesquera para permitirnos actualizar el esfuerzo que servirá de base a las capturas del año 2007.

Así que en 2006 se produjeron los datos de captura conforme a las muestras realizadas en más de 5 puntos de desembarque y se obtuvieron los resultados incluidos en la **Tabla 1**.

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

¹Director de Pesca Marítima e Desenvolvimento Comunitario, C.P. 59, Sao Tomé; Email: etybi@yahoo.fr

Parte II (Ordenación e implementación)**Sección 3: Implementación de medidas de ordenación y conservación de ICCAT**

Se están desarrollando actividades para la aplicación de la ley de pesca con base en el reglamento que fue recientemente aprobado por el Consejo de Ministros.

Se están planteando algunos acuerdos de cooperación entre el Gobierno (Ministerio de la defensa) “Guarda costera/ Marina” y los Estados Unidos de América para el control pesquero y navegación de los barcos en la ZEE de Santo Tomé y Príncipe.

Se está instalando equipo y equipamientos de inspección pesquera de la Dirección de Pesca con la cooperación española.

Otras medidas están siendo estudiadas al respecto del tamaño mínimo comercial de las especies importantes para preservación del RMS de la población.

Tabla 1. Captura de atún y especies afines (kgs.) de la flota artesanal de Santo Tomé y Príncipe del año 2005.

<i>Especies</i>	<i>PSFS</i>	<i>Artes</i>		<i>Captura total</i>
		<i>TROL</i>	<i>HAND</i>	
SKJ	160.000	0	5.900	165.900
YFT	140.000	0	4.500	144.500
BET	3.500	1.000	1.500	21.000
SAI	40.600	200.000	105.000	345.600
BUM	0	18.000	3.000	21.000
WHM	0	33.200	0	33.200
SWO	0	136.200	10.400	146.600
LTA	175.000		6.700	181.700
FRZ	205.000	0	10.000	215.000
MAW	12.000	0	0	12.000
WAH	0	81.000	6.700	87.700
SKX	0	0	143.300	143.300

Tabla 2. Captura (toneladas) de la flota artesanal (cerquero, curricán y línea de mano) de Santo Tomé y Príncipe referente al año 2006.

<i>Código</i>	<i>2006</i>
Peto (WAH)	76,4
Carite lusitánico (MAW)	13,0
Melva y melvera (FRZ)	289,8
Bacoreta (LTA)	179,3
Listado (SKJ)	143,4
Rabil (YFT)	137,2
Patudo (BET)	4,0
Pez vela (SAI)	292,3
Marlín azul (BUM)	26,10
Marlín blanco (WHM)	28,50
Pez espada (SWO)	138,30
Peces parecidos a los atunes, nep (TUX)	0,0
Tiburones, rayas, etc., nep (SKX)	132,20

**ANNUAL REPORT OF TUNISIA
RAPPORT ANNUEL DE LA TUNISIE
INFORME ANUAL DE TÚNEZ**

SUMMARY

Tuna fishing plays an important role in the economy of some Tunisian coastal regions. Their contribution to the national economy is vital for the entry of foreign currency from the commercialization of the fishing or farmed products on the foreign markets.

RÉSUMÉ

La pêche des thonidés occupe une place importante dans l'économie de certaines régions côtières tunisiennes. Son apport à l'économie nationale est vital en raison des entrées de devises provenant de la commercialisation sur le marché extérieur des produits pêchés ou engraisés.

RESUMEN

La pesca de túnidos ocupa un lugar importante en la economía de algunas regiones costeras tunecinas. Su contribución a la economía nacional es vital, debido a la entrada de divisas procedente de la comercialización en el mercado exterior de los productos procedentes de las capturas o de las instalaciones de engorde.

1^{ère} Partie (Information sur les pêcheries, la recherche et les statistiques)

Chapitre 1: Information annuelle sur les pêcheries

Les engins de pêche utilisés pour la capture des thonidés sont représentés essentiellement par les sennes tournantes. Les madragues qui constituaient le principal engin de capture de thon rouge et des thons mineurs ont été reléguées aux derniers rangs pour être définitivement abandonnées depuis 2003.

1.1 Activité de pêche

Au cours de 2006, les captures des thonidés et espèces apparentées ont totalisé 5.785 tonnes, dont 2.545 tonnes de thon rouge et 949 tonnes d'espadon.

1.2 Zone de pêche

Le thon rouge est principalement exploité le long de la côte tunisienne depuis la frontière tuniso-algérienne jusqu'à la frontière tuniso-libyenne avec une abondance plus importante au niveau du bassin oriental.

L'espadon est pêché principalement sur la côte Est du pays.

Les principaux ports de débarquement des thonidés sont Sfax, Madhia, Sousse et Kélibia.

1.3 Activité d'engraissement du thon rouge

Les quantités de thon rouge vif transférées dans les cages d'engraissement au cours de la campagne de pêche de 2006 ont totalisé 1.758 tonnes, dont 326 tonnes capturées par des bateaux battant pavillon étranger.

Chapitre 2: Recherche et statistiques

La recherche sur les grands pélagiques, en l'occurrence le thon rouge et l'espadon, dans les zones de pêche traditionnelles continue à être effectuée dans le cadre du projet de recherche contractuel entre le laboratoire des ressources vivantes de l'Institut National des Sciences et Technologies de la Mer et le Ministère de tutelle. Il s'agit d'un programme de recherche en matière de connaissances des pêcheries thonières méditerranéennes.

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

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

En application des mesures comprises dans le plan gestion 02-08, la campagne de pêche au thon rouge s'est déroulée durant la période autorisée moyennant une flottille comprenant 39 unités de pêche au thon. Les quantités pêchées n'ont pas accusé un dépassement du quota national.

Les opérations relatives au transfert du thon rouge dans les cages et au prélèvement aux fins d'engraissement ont été réalisées sous le contrôle d'agents relevant de l'autorité compétente.

**ANNUAL REPORT OF TURKEY
RAPPORT ANNUEL DE LA TURQUIE
INFORME ANUAL DE TURQUÍA**

Vahdettin Kürüm¹, F. Saadet Karakulak²

SUMMARY

Recommendations and resolutions imposed by ICCAT were translated 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. Pilot implementation of the Vessel Monitoring System was carried out in 2007 by the bluefin tuna fleet. The Fisheries Information System has been updated in order to meet the requirements of data exchange at national and regional level. The total catch of bluefin tuna was 918 metric tons (t) in 2007. Turkey's total catch of albacore, Atlantic bonito and swordfish were 73 t, 29,690 t, and 410 t, respectively.

RÉSUMÉ

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 concernant les pêcheries de thon rouge et l'engraissement du thon rouge sont régies par la législation nationale par le biais de notifications, qui tiennent compte des réglementations afférentes à l'ICCAT. L'année 2007 a vu la mise en œuvre pilote du système de suivi des navires sur la flottille de thon rouge. Le système d'information des pêcheries a été actualisé afin de remplir les exigences d'échange de données au niveau national et régional. En 2007, la prise totale de thon rouge s'est chiffrée à 918 t. La prise totale de germon, de bonite à dos rayé et d'espadon réalisée par la Turquie s'est élevée à 73 t, 29.690 t et 410 t, respectivement.

RESUMEN

Las Recomendaciones y Resoluciones adoptadas por ICCAT han sido transpuestas a la legislación nacional e implementadas. Todas las medidas de conservación y ordenación relacionadas con las pesquerías y las actividades de engorde de atún rojo están reguladas por la legislación nacional mediante notificaciones que consideran las regulaciones pertinentes de ICCAT. En 2007, se implementó un programa piloto del sistema de seguimiento de buques en la flota de atún rojo. El sistema de Información sobre Pesquerías ha sido actualizado para que cumpla los requisitos de intercambio de datos a nivel nacional y regional. En 2007, la captura total de atún rojo ascendió a 918 t. Las capturas turcas totales de atún blanco, bonito y pez espada ascendieron, respectivamente, a 73 t, 29.690 t y 410 t.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The management of the fisheries technically has been performed in accordance with the Fisheries Circular since the 1940s. The management of fisheries has been integrated and put under the sanction of law by the Fisheries Law in 1971. The secondary regulations which dictate the technical rules of the fisheries are the Fisheries Regulation By-law and the Fisheries Notification issued within the framework of the Fisheries Law.

The Fisheries Regulation By-law regulates and controls fishing licensing, designation of production areas, dangerous and prohibited materials, prohibitions, and hygiene.

The Fisheries Notification is the basic tool of fisheries management and is issued in the official gazette every two years. It regulates basic rules, such as fishing season, fishing gear, mesh size, minimum catch size, protected and prohibited areas, and licenses etc. (Annex I).

¹ Ministry of Agriculture and Rural Affairs. Directorate of Protection and Control, Ankara, Turkey; vahdettink@kkgm.gov.tr

² Istanbul University, Faculty of Fisheries, Ordu cad. No:200 Laleli, Istanbul, Turkey.

* Available at the Secretariat.

In addition to the aforementioned legal regulations, an additional communiqué exists for bluefin tuna fishing management. This communiqué empowers the Ministry of Agriculture and Rural Affairs (MARA) to determine the bluefin tuna catch quotas, and end fishing when the quota limit is reached (Annex II)*.

Every year, a Notice to Fishermen is issued to announce the fishing licenses for bluefin tuna fishing, landing harbors, fishing and other reports requested (Annex III).*

MARA issued bluefin tuna fishing licenses to 77 fishing vessels in 2007, in accordance with the legal regulations summarized above and the ICCAT regulations. All of these fishing boats were equipped and monitored with a Vessel Monitoring System (VMS). In addition to the fishing vessels, 97 vessels were licensed as auxiliary vessels.

Most of the Turkish bluefin tuna fishing vessels, which started fishing in early May, operated in the south of Turkey, while a minor number of vessels operated around Cyprus and Egypt in the Mediterranean. The harvesting was considerably poor until early June. The peak period which had been seen in early May in previous years moved into mid-June in 2007. In May, the fishing vessels remained in the harbors and sheltered in protected areas half of the time due to adverse weather conditions. The main fishing activities started in early June and MARA stopped fishing on 27 June 2007.

From 2003 to 2006 there was a gradual decline in the average size of fish caught by Turkish vessels. The length frequency distribution of bluefin tunas caught by purse seiners in Turkish waters between 2003 and 2006 is presented in **Table 1** and **Figure 1**. Furthermore, while the end of the fishing was 28 May in 2004, it was delayed to 27 June in 2007 (**Table 2**). It is considered that these changes indicate a serious decline in the bluefin tuna stock. All the bluefin tuna caught in June was sold to the bluefin tuna farms.

The primary industrial fishing species in Turkey are anchovy, horse mackerel, bonito, mackerel, chub mackerel and bluefish. These species are harvested throughout the fishing season. The fishing season is closed between 15 April and 31 August, with some exceptions. Since the fishing season is closed for the afore-mentioned species, bluefin tuna fishing provides extra income for fishermen. This extra income has been reduced significantly in comparison to previous years due to the fact that the bluefin tuna catch quota allocated to Turkey by ICCAT has been decreased well below the traditional catch amounts.

Section 2: Research and Statistics

2.1 Research

In 2006, 304 bonito were sampled in the eastern and central Black Sea. Fish measured between 21.9 and 44.0 cm, with an average total length of the sampled fish at 31.42 cm. This fish weighed between 89,52 and 940,70 gr. (average weight 339.33 gr). Out of 286 specimens whose gender could be determined, 43,7% were male and 56,3% were female. While bonito fishing intensifies in September-October, the average total length increased over time. It has been observed that the average total length of female fish was longer than the average total length of male fish (30.68 cm for males and 31.95 cm for females). A survey of the age groups showed that the population is comprised of age groups of 0+ and 1+.

There was an extreme harvest in the bonito fisheries (over 70,000 tons) in 2005. It has been reported that this abundance was also seen in other Black Sea coastal countries. Bonito harvests in 2006 were more copious as compared to previous years.

Scientific studies on the bluefin tuna and albacore fisheries and biology are conducted by the Faculty of Fisheries of Istanbul University, whereas studies on environmental effects of bluefin tuna farms are carried out by the Faculty of Fisheries of Aegean University (Izmir).

2.2 Statistics

Vessels harvesting tuna have to report their data on fishing to MARA by fax within 24 hours after catch in accordance with the requirements of Notification on Regulating Commercial Fishing In Seas and Inland Waters and the Ministerial Communication on Tuna Fishing. Daily fishing data are collected and assessed in the Ministry of Agriculture and Rural Affairs and according to the result of this assessment the closure time is announced to the fishing vessels. The closure date for bluefin fishing is given in **Table 1**, by years.

Statistics of fish, except bluefin tuna, are collected by the Turkish Statistic Institute. The amount of production by years is given in **Table 3**. In 2006, 29 fishermen's shelters, which are fisheries administrative buildings (i.e., port offices) were constructed by MARA. Inspection Officers of MARA work in those buildings. The fisheries administrative buildings are linked with the Fisheries Information System at the Headquarters by a data network system. Since all of the bluefin tuna harvested in Turkey is exported, the harvest amounts are also confirmed against the export amounts.

2.3 Fisheries Information System

A Fisheries Information System (FIS) has currently been developed for Turkey in order to create the applications and procedures needed both to comply with the EC fisheries *acquis* and to improve fisheries management.

FIS is the system that comprises a combination of resources organized to collect, process, transmit, and disseminate the relevant fisheries data. The system is comprised of modules interacting to introduce and extract data to/from a centralized database. This database allocates all of the information collected from the different information sources. The main property of this database is therefore its capacity to relate to all of the data contained within the different programmed modules.

Details of the different modules (components) of the FIS are summarized below.

2.3.1 Catch Information

Catch information is collected using the logbook and landings declaration document. The logbook includes the details of the catches (estimated by the skipper) by gear-type and zone. The landing declaration contains landings and port arrival data and any information on transshipments.

2.3.2 Sales Notes

Only data on the 'first hand sale' of fish have to be collected. An official document is used to identify the agents involved in the sale process, the quantities and the prices for each species sold at the authorized sales centers. Further information about the distribution and storage of the fish landed is also included in this module.

2.3.3 Vessel Registry

The vessel registry is the most important part of the FIS because the vessel is the main unit of operation related to all of the different information sources. All vessels have to be registered to obtain a fishing license. An initial census has been undertaken of the fleet, following which all the entries and exits to/from the fleet have to be controlled so as not to increase fishing capacity.

2.3.4 Licensing

Three types of licenses are included in FIS:

- Vessel license: This license authorizes a certain fishing activity to a certain fishing vessel included in the fleet registry. The license number is the same as the external mark carried by the vessel. The validity period for this license is two years.
- Fisherman License: Every fisherman working on a vessel must have an official registration authorized by MARA. The validity period for this license is five years.
- First Buyer License: In order to be able to trade the fish and fish products on the wholesale fish market, first buyers must be registered with FIS. The first buyer can be an individual person or a representative of a company. The validity period for this license is two years

2.4 Observers

In accordance with the Bluefin Tuna Fisheries Circular of MARA, all bluefin tuna fishing vessels are obliged to host observers onboard not less than 20% of the fishing period. Based on this Circular and ICCAT Recommendation 06-05, MARA assigned observers to the bluefin tuna fishing vessels during the 2007 bluefin tuna fishing season (May-June).

Seven Observers from the Fisheries Department of MARA were onboard different fishing vessels in two groups, for a two-week period. The Observers reported on the fishing operations and social conditions of the crew. Six Observers reported that they had remained on board and closely watched the fishing, transfer and towing operations, but information on the amount of bluefin tunacaught could only be estimated by the Captain of the vessel. One of the the Observers who has experience and a diver's license reported that he had a chance to observe underwater operations during their transfer of bluefin tuna from the net to the towing cage.

The amount and average weight of the fish captured determined by watching slow-motion video recordings of bluefin tuna transferred from the fishing net to the cage and the sale of the fish is realized based on this count and the estimated average weight information.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

ICCAT directives on tuna fishing and the basic rules on regional fisheries management are announced to fishermen by notifications and ministerial communications (currently Notification No. 1/1 of 2006-2008 Fishing Year Regulations for Commercial Fishing at Seas and Inland Waters). Essential regulations on the bluefin tuna fisheries are directly taken from the ICCAT Recommendation, including Rec. 06-05 and Rec. 06-07 and inserted in Notification No.1/1.

3.1 Bonito, large bonito, tuna fish, little tunny, albacore, plain bonito, leer fish, greater amberjack, and pilchard landing

Article-12:

(1) Bonito-large bonito

Bonito and large 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 (Official Gazette 23.05.2007-No.26350).

(2) Bluefin tuna:

- a) Bluefin tuna fishing by purse seiners between 1 July-31 December, by longline vessels 1 June-31 December, and by baitboats 15 November-15 May is prohibited. However, if the catch quota allocated by ICCAT is exhausted before the closure time, MARA has the authority to extend the time closure (Official Gazette 23.05.2007-No.26350).
- b) The catch, retention on board, transshipment, landing, transport, storage and sales of bluefin tuna weighing less than 10 kg is prohibited (Official Gazette 23.05.2007-No.26350).
- c) Use of airplanes or helicopters for the purpose of bluefin tuna spotting is prohibited (Official Gazette 23.05.2007-No.26350).
- d) It is mandatory for bluefin tuna fishing vessels to obtain a "Bluefin Tuna Fishing License" and mandatory for tug boats to obtain a "Bluefin Tuna Tug Vessel License" from the related Provincial Directorate.
- e) The fishing vessels which apply for a "Bluefin Tuna Fishing License" shall be equipped with a functioning VMS system, vehicle phone and a fax machine.
- f) In order to monitor and supervise the fishing quota, the catch amount and the catch point shall be reported to MARA, particularly by their fax machine of the fishing vessel, within 24 hours after each fishing operation.
- g) In case of a possible failure of the fax machine of the catch vessel, notifications made from other fax machines without informing the Ministry, will be rejected.
- h) Bluefin tuna fishing vessels shall return to the shelters/ports and notify the closest provincial administration within three days after the announced closure by MARA.
- i) Vessels which tug bluefin tuna cage(s) for farming purposes are obliged to have a "Bluefin Tuna Transfer License" and must also notify MARA about their location, final destination, planned arrival time, and the amount of product in the cage(s).
- j) After the arrival of the cage(s) at the farm sites, inspection of the fish in the cages shall be made by the provincial administrations. In case of any kind of IUU fish detection, the IUU fish shall be released to nature and any necessary legal action will be taken.

- k) The bluefintuna fishing licenses of fishing vessels that do not comply with the conditions specified therein shall be seized and no other bluefintuna fishing license shall be issued for the same year (Official Gazette 23.05.2007-No.26350),
- l) Each vessel with a “Bluefin Tuna Landing License” shall comply with the regulations imposed in this respect and also shall be liable to keep the records demanded by MARA, with regard to the bluefin tuna amounts caught and sold.
- m) Mesh size in the bag part of the bluefin tuna nets shall not be less than 44 mm.

(3) Atlantic black skipjack, plain bonito, leer fish, greater amberjack and albacore

- a) Fishing for Atlantic black skipjack, albacore, plain bonito, leer fish and greater amberjack by entangling nets is permitted between 1 September and 1 May throughout the territorial waters. Purse seiners are allowed to harvest upmentioned species between 15 April and 15 May in specified areas.

In addition to this, during the general fisheries closure season (1 May-1 September) bluefin tuna fisheries are allowed to harvest bluefin tuna until the end of June It is mandatory for the purse seiners which will benefit from this exception to obtain a "Bluefin Tuna Fishing License", given in Annex 1* from the provincial directorates (Official Gazette 23.05.2007-No.26350).

- b) In the Aegean Sea, Atlantic black skipjack, albacore, plain bonito, leer fish and greater amberjack landings are prohibited in certain areas for different purposes, such as protection of spawning areas and juveniles, protection of artisanal fisheries, etc.

(4) Prohibitions of Length and Weight

Article 15:

The minimum length and weight of the capture fisheries are given in **Table 4**.

Ministerial Communication of BFT Fisheries is issued every year before the commencement of the fishing season. The rules and the reporting forms which are the obligations of the BFT Fishing Vessels, such as; BFT Fishing License, BFT 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.

For bluefin tuna farming:

- A standard weight increase model is applied and ICCAT Statistic Document (Annex I)* is being prepared by the authorized provincial organization, taking into account the weight increase of bluefin tuna for the time period from the date of commencement of the ranching until the date of harvesting.
- Also by chaining^o the Statistical Documents, quota pursuit is exercised by MARA.
- In each bluefin tuna farm, the cages are numbered-and it is not allowed to rear bluefin tuna or more than one origin in the same cage.

Section 4: Inspection Schemes and Activities

The Ministry of Agriculture and Rural Affairs and theh Coast Guard Command have an effective role in fisheries control and inspection. Nonetheless, Police, Gendarmerie, Customs Offices, Forestry Offices, and Municipalities are also authorized constitutionally. MARA works with its organizations in 81 provincials and theh Coast Guard Command performs its duties by means of 156 Coast Guard boats, 11 air platforms, 63 ports in Turkish coasts. The Coast Guard Command carries out its inspections in both territorial waters and international waters.

MARA has assigned 10 ports and landing points to ensure the efficiency of inspections of bluefin tuna operations in accordance with ICCAT Recommendation 06-05. Those ports and landing points have been announced to fishermen and concerned authorities by the Bluefin Tuna Fisheries Directive issued in April 2007.

Table 1. Length data on bluefin tuna captured in Turkish waters between 2003 and 2006.

Years	Sample N	Min.	Length (cm)	
			Max	Average±S.D.
2003	213	101	277	156.36±2.84
2004	201	100	294	154.86±3.15
2005	80	98.5	280	146.55±4.84
2006	275	55.5	261	133.19±2.36

Table 2. Closure dates of the bluefin tuna fisheries, by years.

	2004	2005	2006	2007
Bluefin tuna catch (tons)	1075	990	806	850+26,7
Closure date of fishing season	28 May	9 June	16 June	27 June
Number of bluefin tuna farms	6	6	6	6

Table 3. Catches (t) of tunas and tuna-like species, 1998-2005.

Species	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Bonito	24000	17900	12000	13460	6286	6000	5701	70797	29690	*
Bluefin tuna	5899	1200	1070	2100	2300	3300	1075	990	806	918
Swordfish	450	230	370	360	370	350	386	425	410	*
Albacore							27	30	73	*
Atlantic black skipjack							568	507	1230	*
Bullet tuna							284	1020	1031	*

* The fishery statistics of these species for 2007 are not yet available.

Table 4. Species and minimum length and weight.

Species	Minimum length (cm)	Minimum weight (kg)
Bluefin tuna (<i>Thunnus thynnus</i>)		30 *
Bonito (<i>Sarda sarda</i>)	25	
Swordfish (<i>Xiphias gladius</i>)	130	
Albacore (<i>Thunnus alalunga</i>)	60	
Atlantic black skipjack (<i>Euthynus alletteratus</i>)	45	

*An 8% exception will be applied for the bluefin tuna catch weighing between 10-30 kg., for by-catch purposes. (Official Gazette of 23.05.2007-No.26350)

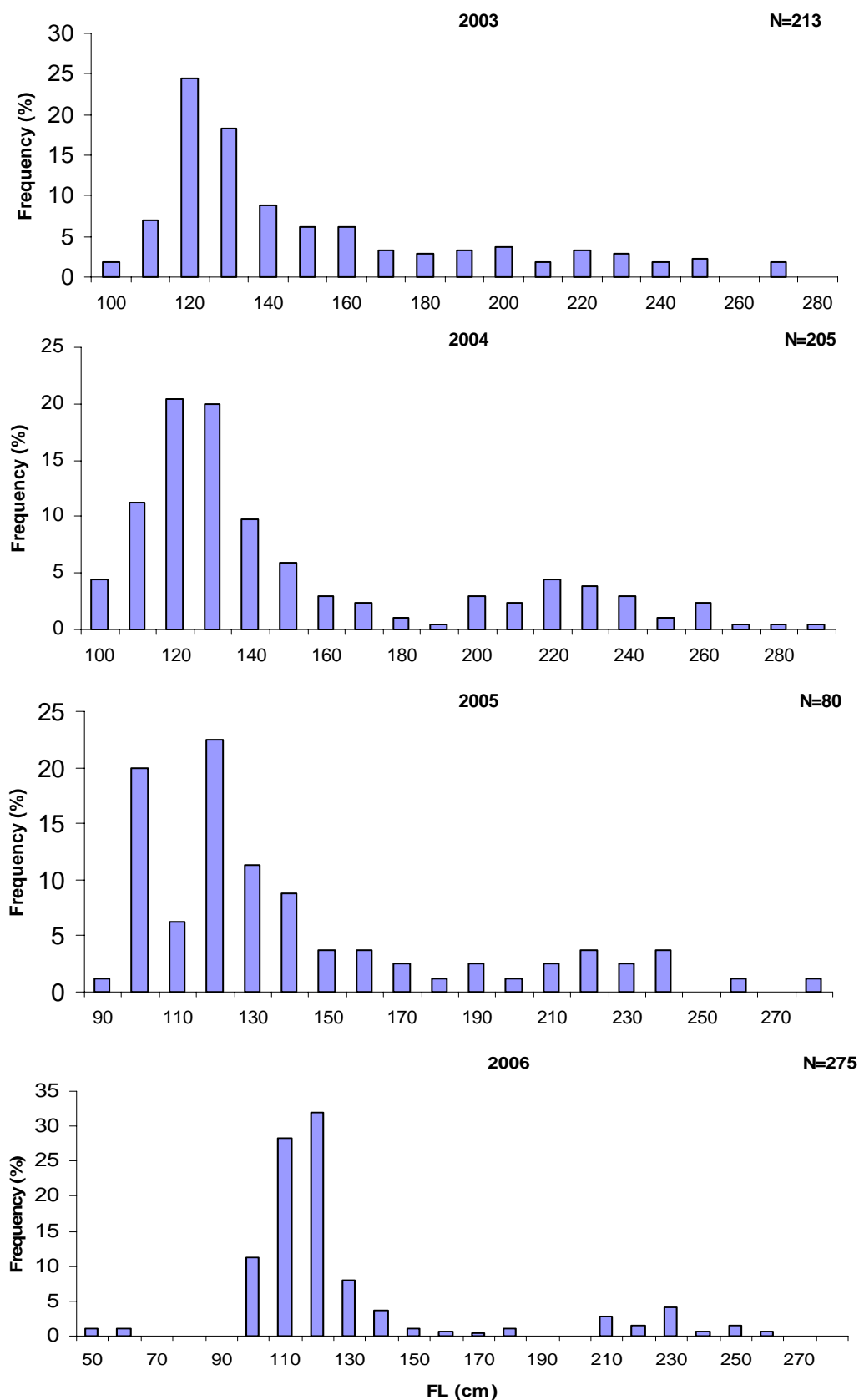


Figure 1. Length frequency distribution of bluefin tuna caught by purse seine, 2003-2006.

**ANNUAL REPORT OF THE UNITED KINGDOM (OVERSEAS TERRITORIES)
 RAPPORT ANNUEL DU ROYAUME-UNI (TERRITOIRES D'OUTRE-MER)
 INFORME ANUAL DEL REINO UNIDO (TERRITORIOS DE ULTRAMAR)**

SUMMARY

The level of fishing activity of the UK Overseas Territories engaged in ICCAT during 2006 has not altered very much from previous years. The level of catches overall remain relatively low with the focus of the fishing industry being artisanal or sport related. Bermuda has witnessed a small reduction in its catch levels whilst St. Helena has seen a moderate increase in catches in comparison with recent years. The catches taken by the other UK Overseas Territories engaged with ICCAT remains broadly consistent with that seen in previous years. The UK Overseas Territories do not have any registered fishing vessels over 24 metres targeting tuna or tuna-like species in the Atlantic. Bermuda remained active in the ICCAT Enhanced Programme for Billfish Research. The Bermuda Marine Resources Division continues to be engaged in a number of regional research programmes directed at various pelagic species including wahoo, yellowfin tuna, blackfin tuna and dolphinfish. The UK Overseas Territories remain committed to providing the necessary statistics for consideration by ICCAT. All applicable ICCAT conservation and management measures are implemented into the national law. Given the low amount of fishing activity there has been no inspection activity to report apart from the occasional monitoring of landed catches.

RÉSUMÉ

Le niveau des activités de pêche menées en 2006 par le Royaume-Uni (Territoires d'outre-mer) dans le cadre de l'ICCAT n'a guère changé par rapport aux années antérieures. Globalement, le niveau des captures demeure relativement faible, l'industrie de la pêche portant son intérêt sur la pêche artisanale ou sportive. Les Bermudes ont connu une faible réduction des niveaux de capture tandis que Ste Hélène a observé une légère augmentation des captures par rapport aux dernières années. Les captures réalisées par les autres territoires d'outre-mer du Royaume-Uni associés à l'ICCAT demeurent en général conformes à ce qui a été observé au cours des années antérieures. Les territoires d'outre-mer du Royaume-Uni ne comptent sur leur registre aucun navire de pêche de plus de 24 mètres ciblant les thonidés ou les espèces apparentées dans l'Atlantique. Les Bermudes ont occupé un rôle actif dans le Programme de recherche intensive sur les istiophoridés. La Division des ressources marines des Bermudes continue à participer à un certain nombre de programmes de recherche régionaux visant diverses espèces pélagiques, incluant le thazard-bâtard, l'albacore, le thon à nageoires noires et la coryphène commune. Les territoires d'outre-mer du Royaume-Uni maintiennent leur engagement à fournir les statistiques nécessaires aux fins de leur examen par l'ICCAT. Toutes les mesures de conservation et de gestion applicables de l'ICCAT sont mises en œuvre dans la législation nationale. Compte tenu du faible volume d'activité de pêche, aucune activité d'inspection n'a été déclarée, à l'exception du contrôle occasionnel des prises débarquées.

RESUMEN

Durante 2006, el nivel de actividad pesquera de los Territorios de Ultramar del Reino Unido implicados en ICCAT no ha variado mucho con respecto a años anteriores. El nivel global de capturas sigue siendo relativamente bajo, con un predominio de las actividades pesqueras artesanales o deportivas. Bermuda ha sido testigo de una pequeña reducción en sus niveles de captura, mientras que Santa Helena ha experimentado un moderado incremento en las capturas en comparación con años recientes. Las capturas realizadas por otros territorios de ultramar del Reino Unido comprometidas con ICCAT siguen la línea de las observadas en años anteriores. Reino Unido-Territorios de Ultramar no tiene registrados buques pesqueros de más de 24 m que dirijan su actividad al atún rojo o especies afines en el Atlántico. Bermuda continuó participando activadamente en el programa de investigación intensiva de marlines de ICCAT. La División de recursos marinos de Bermuda sigue implicada en varios programas de investigación regional dirigidos a diferentes especies pelágicas, como el peto, rabil, atún aleta negra y lampuga. Los Territorios de Ultramar del Reino Unido siguen comprometidos en proporcionar las estadísticas necesarias para su consideración por parte de ICCAT. Todas las medidas de conservación y ordenación de ICCAT aplicables se han traspuesto en la legislación nacional. Dado el escaso nivel de actividad pesquera no hay actividades de inspección que comunicar a parte del seguimiento ocasional de las capturas desembarcadas.

BERMUDA**Part I: (Information on Fisheries, Research and Statistics)****Section 1: Annual Fisheries Information**

The Bermuda commercial fishing fleet consisted of 206 vessels during the year 2006 with approximately one-third of the vessels actively fishing for tuna and tuna-like species. Most of the fishing effort is carried out in the inner 50 km (including two offshore banks) of the Bermuda Exclusive Economic Zone while longline vessels fish 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.

Section 2: Research and Statistics

The total catch of tuna and tuna-like species in Bermuda for 2006 was 134 metric tonnes. This represents a decrease in landings of 28 t over the previous year. A decrease in yellowfin tuna landings, from 61 t in 2005 to 31 t in 2006, accounted for the majority of this decline. Details of the catch composition are presented in **Table 1**.

Bermuda remained active in the ICCAT Enhanced Programme for Billfish Research. Contributions to a study of post-release survival and movement patterns of blue marlin caught on recreational fishing vessels in the western Atlantic, utilizing pop-up satellite tags, are continuing. However, there were no deployments of satellite tags in Bermuda waters in 2006. Data collected during tournament sampling of blue marlin over the past five years has been analyzed and published. The data on reproductive seasonality indicate a significant amount of spawning activity in July. The Bermuda Marine Resources Division (formerly Fisheries) continues to be engaged in a number of regional research programmes directed at various pelagic species including wahoo, yellowfin tuna, blackfin tuna and dolphinfish. Conventional tagging of blue marlin, white marlin, yellowfin tuna and blackfin tuna by charter fishing vessels is ongoing.

The collection of scientific data on billfish, wahoo, yellowfin tuna and blackfin tuna species is ongoing. Tagging programs for pelagic species, in cooperation mainly with recreational fishermen, are ongoing. Data collection provides material for research programs, which when appropriate, can be applied in fisheries management. In addition, recreational fishing for tuna and tuna-like species is monitored (mainly through tournaments) to help to evaluate compliance with ICCAT recommendations.

Table 1. Summary of landings of tuna and tuna-like species by Bermuda, 2006.

<i>Species</i>	<i>Weight (t)</i>
Yellowfin	31
Bluefin	0
Bigeye	0
Blackfin	8
Albacore	0
Atlantic black skipjack	5
Skipjack	<1
Wahoo	86
Blue marlin	2
White marlin	1
Swordfish (North Atlantic)	0
Total	134

BRITISH VIRGIN ISLANDS

Part I: (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The commercial fishing fleet of the Virgin Islands (UK) comprised of 72 vessels during 2006. There were however two vessels, which traditionally account for the majority of the catch of tuna and tuna-like species that did not actively participate in the 2006 fishing season. Some commercial fishing operations with traditionally in-shore interests were noted to move to off-shore fishing during the 2006 season in attempts to capitalize on the gap left in the market. Still, most of the catch landed during this period was a result of a significant increase in tournament participation.

There is a growing interest in the recreational component to the fishery, which is comprised of both local and foreign elements. This component includes Virgin Islands charter boats (local boats that operate as either daily or short term charters to visitors for pleasure fishing) and fishing tournaments open to both local and foreign interests. Most fishing activity occurs within the inner 50 km and the associated banks of the Virgin Island's Exclusive Economic Zone with vessels seldom venturing further offshore.

Section 2: Research and Statistics

During the 2006-fishing season some 17,75 tonnes of tuna and tuna-like species were landed, details of which can be found in **Table 1**.

Part II: (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The Virgin Islands Fisheries Act 1997 makes provisions for the setting of 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. During 2006, the relevant agencies also began a process under which legislation related to marine elements (and the things which affect them) will be strengthened and updated to better address the human impact on the changing and fragile environment.

Section 4: Inspection Schemes and Activities

The Territory continues its efforts to better utilize 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.

Table 1. Summary table of landings of tuna and tuna-like species within the Virgin Islands (UK) during 2006.

<i>Code</i>	<i>Scientific Name</i>	<i>Common Name</i>	<i>Weight (t)</i>
BLF	<i>Thunnus atlanticus</i>	Blackfin tuna	3
YFT	<i>Thunnus albacares</i>	Yellowfin tuna	1
SWO	<i>Xiphias gladius</i>	Swordfish	7
WHA	<i>Acanthocybium solandri</i>	Wahoo	3
KGM	<i>Scomberomorus cavalla</i>	King mackerel	0.25
BON	<i>Sarda sarda</i>	Atlantic bonito	0.25
SAI	<i>Istiophoridae albicans</i>	Sailfish	<0.25
WHM	<i>Tetrapturus albidus</i>	White marlin	1
BUM	<i>Makaira nigricans</i>	Blue marlin	1
BIL	<i>Istiophoridae</i>	Other/Unclassified billfish	1
Total			~17.75

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 10 boats fished full-time complementing a crew of 24 persons.

Section 2: Research and Statistics

Fish landings into the Fisheries Corporation over the period January 2006 to December 2006 totaled some 582.51 metric tonnes of fish. Of this amount, some 77% of the species consisted of tuna, 4% of wahoo, 15% 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 in 2006 over a total of 2,554 fishing days are shown in **Table 1**.

Data on 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 license 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 are not allowed within the fishery limits of St. Helena and its dependencies.

There was no take-up of foreign vessel licensing during 2006 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.

Table 1. Main ICCAT species caught by St. Helena in 2006.

<i>Species</i>	<i>Weight (t)</i>
Yellowfin tuna	343
Albacore tuna	62
Bigeye tuna	25
Skipjack tuna	88
Shark	<0.5
Marlin	2

TURKS AND CAICOS ISLANDS

Part I: (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

The Turks and Caicos Islands commercial fishing fleet consisted of approximately 400 artisanal vessels during the 2006-2007 fishing season. Commercial vessels are predominantly made of fiberglass with a length of 20 feet LOA (6 meters). There are no commercial fishing vessels that actively fish for tuna and tuna-like species. Most fishing occurs within the EEZ of 12 miles (19 km) from shore of the Turks and Caicos Islands. The only tuna and tuna-like species captured within the Turks and Caicos Island waters are that from sport-fishing tournaments that occur on a yearly basis for no more than 4 days each year.

The total catch of tuna and tuna-like species in the Turks and Caicos Islands for 2006 was 0.99 metric tones. This catch was obtained from the total of 12 sport fishing vessels capture during a four-day tournament in July 2006.

Section 2: Research and Statistics

Tournament data is actively collected during the tournaments and logged into a simple database.

Part II: (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

The TCI is considering establishing a data system for local data/information exchange networks/system among the relevant authorities to enable monitoring of national imports and national trade in all tuna and tuna-like species and their products. This would allow TCI to report on activities to ICCAT and to assume the illegally caught products are not passing through our ports.

Section 4: Inspection Schemes and Activities

See above.

**ANNUAL REPORT OF THE UNITED STATES
RAPPORT ANNUEL DES ETATS-UNIS
INFORME ANUAL DE ESTADOS UNIDOS**

U.S. Department of Commerce, NOAA Fisheries

SUMMARY

Total (preliminary) reported U.S. catch of tuna and tuna-like fishes (including swordfish, but excluding other billfishes) in 2006 was 18,081 t, a decrease of about 6% from 19,261 t in 2005. Estimated swordfish catch (including estimated dead discards) in 2006 was 2,048 t, 339 t less than in 2005. Provisional landings from the U.S. fishery for yellowfin increased in 2006 to 7,075 t from 5,568 t in 2005. U.S. vessels fishing in the northwest Atlantic landed in 2006 an estimated 468 t of bluefin, a decrease of 245 t compared to 2005. Provisional estimates of skipjack landings for 2006 amounted to 60.8 t, an increase of 30.1 t over the landings in 2005. Bigeye landings were estimated to be 987 t in 2006, an increase of 503 t over 2005. Albacore landings decreased from 2005 to 2006 by 91 t to 397 t. The landings and size of swordfish, bluefin tuna, yellowfin tuna, billfish and other large pelagic species continue to be monitored through port and tournament sampling, logbook and dealer reporting procedures, and scientific observer sampling of the U.S. fleet. Major research activities in 2005 and 2006 focused on several items. Research on development of methodologies to determine the genetic discreteness of large pelagic fishes in the Atlantic was continued, as were otolith microconstituent analyses and larval surveys for bluefin tuna and other large pelagic species in the Gulf of Mexico. Research on development of robust estimation techniques for population assessment and robust management approaches was also conducted. Participants in the Southeast Fisheries Science Center's Cooperative Tagging Center (CTC) and the Billfish Foundation Tagging Program (TBF) tagged and released 3,333 billfishes (including swordfish) and 329 tunas in 2005. This represents a decrease of 12.3% for billfish and a decrease of 81.5% for tunas from 2004 levels. There continues to be several electronic tagging studies involving bluefin tuna and billfish in the Atlantic Ocean and adjacent waters during 2006. 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. Cooperative research was conducted with scientists from other nations on development of assessment methodologies, on biological investigations and on development of indices of abundance for species of concern to ICCAT.

RÉSUMÉ

La prise totale (préliminaire) de thonidés et d'espèces apparentées (espadon compris, exception faite des autres istiophoridés) déclarée en 2006 par les Etats-Unis s'élève à 18.081 t, soit une diminution d'environ 6% par rapport aux 19.261 t de 2005. En 2006, la prise estimée d'espadon (y compris les rejets morts estimés) s'est chiffrée à 2.048 t, soit 339 t de moins qu'en 2005. Les débarquements provisoires d'albacore de la pêcherie des Etats-Unis ont augmenté en 2006, passant de 5.568 t en 2005 à 7.075 t en 2006. Les navires états-uniens qui pêchaient dans l'Atlantique Nord-Ouest ont débarqué, en 2006, une quantité de thon rouge estimée à 468 t, soit une baisse de 245t par rapport au chiffre de 2005. Les estimations provisoires des débarquements de listao au titre de 2006 se sont élevées à 60.8 t, soit une hausse de 30,1 t par rapport aux débarquements de 2005. Les débarquements de thon obèse ont été estimés à 987 t en 2006, soit une augmentation de 503 t par rapport à 2005. Les débarquements de germon ont chuté de 91 t entre 2005 et 2006, étant ramenés à 397 t. Les débarquements et les tailles de l'espadon, du thon rouge, de l'albacore, des istiophoridés et d'autres grands pélagiques continuent de faire l'objet d'un suivi au moyen de l'échantillonnage au port et lors des tournois, des procédures de déclaration dans les carnets de pêche et par les mareyeurs, et de l'échantillonnage réalisé par les observateurs scientifiques de la flottille des Etats-Unis. Les principales activités de recherche menées en 2005 et 2006 se sont centrées sur plusieurs domaines. On a poursuivi la recherche sur le développement de méthodologies visant à déterminer la distinction génétique des grands poissons pélagiques dans l'Atlantique, ainsi que les analyses des microéléments d'otolithes et les prospections larvaires du thon rouge et d'autres grands pélagiques dans le Golfe du Mexique. On a également réalisé des programmes de recherche sur l'élaboration de techniques robustes d'estimation aux fins de l'évaluation des populations, ainsi que sur la mise au point d'approches de gestion robustes. Les participants au Centre de Marquage en Coopération (CTC) du Centre des Sciences Halieutiques du Sud-Est et au Programme

de Marquage de la Fondation Istiophoridés (TBF) ont marqué et remis à l'eau 3.333 istiophoridés (espadon compris) et 329 thonidés en 2005. Ceci représente une diminution de 12,3% pour les istiophoridés et une chute de 81,5% pour les thonidés par rapport aux niveaux de 2004. En 2006, plusieurs études de marquage électronique du thon rouge et des istiophoridés se sont poursuivies dans l'océan Atlantique et les eaux adjacentes. Le Programme de recherche intensive sur les istiophoridés de l'ICCAT (IERPBF) s'est poursuivi dans l'océan Atlantique ouest afin d'aider à la déclaration des marques récupérées et d'améliorer la quantité et la qualité des rapports de récupération des marques, notamment en provenance du Venezuela, de la Barbade et de la Grenade. Un programme coopératif de recherche a été mené avec des scientifiques d'autres pays aux fins de l'élaboration de méthodologies d'évaluation, d'examen biologiques et de la mise au point d'indices d'abondance pour les espèces relevant de l'ICCAT.

RESUMEN

En 2006, la captura total estadounidense comunicada (preliminar) de túnidos y especies afines (incluido el pez espada, pero excluyendo a otros peces de pico) se situó en 18.081 t, un descenso de aproximadamente el 6% desde las 19.261 t de 2005. En 2006, la captura estimada de pez espada (lo que incluye los descartes de ejemplares muertos) se situó en 2.048 t, 339 t menos que en 2005. Los desembarques provisionales de la pesquería estadounidense de rabil se incrementaron en 2006, llegando a 7.075 t frente a las 5.568 t de 2005. Los buques estadounidenses que pescan en el Atlántico norte desembarcaron en 2006 unas 468 t de atún rojo, un descenso de 245 t con respecto a 2005. Las estimaciones provisionales de desembarques de listado para 2006 ascienden a 60,8 t, un incremento de 30,1 t con respecto a 2005. Los desembarques de patudo se han estimado en 987 t en 2006, un incremento de 503 t en comparación con 2005. Los desembarques de atún blanco experimentaron un descenso de 91 t de 2005 a 2006, con 397 t. Se ha continuado realizando un seguimiento de los desembarques y tallas de pez espada, atún rojo, rabil, marlines y otras grandes especies pelágicas a través de actividades de muestreo en puerto y en torneos, cuadernos de pesca y procedimientos de comunicación de comerciantes, así como mediante el muestreo de la flota estadounidense por parte de observadores científicos. Las principales actividades de investigación en 2005 y 2006 se centraron en varios puntos. Continuaron los trabajos de investigación sobre el desarrollo de metodologías para determinar la diferenciación genética de los grandes pelágicos en el Atlántico, así como los análisis de microelementos de otolitos y prospecciones de larvas para el atún rojo y otras grandes especies pelágicas en el Golfo de México. También se realizaron trabajos de investigación para el desarrollo de técnicas robustas de estimación para la evaluación de población y enfoques de ordenación robustos. Los participantes en el Centro de marcado cooperativo (Cooperative Tagging Center, CTC) del Centro de ciencias pesqueras suroriental (Southeast Fisheries Science Center) y en el Programa de marcado de la fundación de marlines (Billfish Foundation Tagging Program, TBF) marcaron y liberaron 3.333 peces de pico (incluido el pez espada) y 329 túnidos en 2005. Esto supone un descenso del 12,3% para los marlines y del 81,5% para los túnidos con respecto a los niveles de 2004. En 2006 continuaron varios estudios de marcado electrónico de atún rojo y marlines en el océano Atlántico y mares adyacentes. El Programa ICCAT de investigación intensiva sobre marlines (ICCAT Enhanced Research Program for Billfish-IERPBF) en el océano Atlántico occidental ha seguido contribuyendo a la comunicación de recuperaciones de marcas para mejorar la cantidad y calidad de informes de recuperaciones de marcas, sobre todo de Venezuela, Barbados y Grenada. Se realizaron trabajos de investigación en colaboración con científicos de otras naciones sobre el desarrollo de metodologías de evaluación, sobre investigaciones biológicas y sobre el desarrollo de índices de abundancia para las especies competencia de ICCAT.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Total (preliminary) reported U.S. catch of tuna and tuna-like fishes (including swordfish, but excluding other billfishes) in 2006 was 18,081 t, a decrease of about 6% from 19,261 t in 2005. Estimated swordfish catch (including estimated dead discards) decreased 339 t to 2,048 t, and provisional landings from the U.S. fishery for yellowfin increased in 2006 to 7,075 t from 5,568 t in 2005. U.S. vessels fishing in the northwest Atlantic landed in 2006 an estimated 468 t of bluefin, a decrease of 245 t compared to 2005. Provisional skipjack landings increased by 30.1 t to 60.8 t from 2005 to 2006, estimated bigeye landings increased by 503 t compared to 2005 to an estimated 987 t in 2006, and estimated albacore landings decreased from 2005 to 2006 by 91 t to 397 t.

Section 2: Research and Statistics

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 increased to 7,075 t in 2006, from the 2005 landings estimate of 5,568 t (Appendix Table 2.1- yellowfin tuna)¹. The 2006 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 & reel catches made by recreational anglers. A high proportion of the estimated landings were due to rod & reel catches of recreational anglers in the NW Atlantic (4,649 t). Estimates of U.S. recreational harvests for tuna and tuna-like species continue to be reviewed and this may result in the need to report additional revisions to the available estimates in the future. Nominal catch rate information from logbook reports (longline catch per 1,000 hooks) for yellowfin by general fishing areas is shown in Appendix Figure 2.1-yellowfin tuna.

Skipjack tuna. Skipjack tuna also are caught by U.S. vessels in the western North Atlantic. Total reported skipjack landings (preliminary) increased by 30.1 t to 60.7 t from 2005 to 2006 (Appendix Table 2.1-skipjack tuna). Estimates of recreational harvests of skipjack continue to be reviewed and could be revised again in the future. Appendix Figure 2.1-skipjack presents nominal catch rate information (longline catch per 1,000 hooks) based on fishing 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 2006 increased by 503 t from 484 t in 2005 to 987 t (Appendix Table 2.1-bigeye tuna). Note that like yellowfin, the estimates of rod & reel catch are considered provisional and may be revised based on results of a future review of recreational harvest estimates. Appendix Figure 2.1-bigeye presents nominal catch rate information (longline catch per 1,000 hooks) based on fishing logbook reports.

2.1.2 Temperate tuna fishery statistics

Bluefin tuna. The U.S. bluefin fishery continues to be regulated by quotas, seasons, gear restrictions, limits on catches per trip, and size limits. To varying degrees, these regulations are designed to restrict total U.S. landings and to conform to ICCAT recommendations. U.S. 2006 provisional estimated landings and discards from the northwest Atlantic (including the Gulf of Mexico) were 468 t and 91 t, respectively. Those estimated landings and discards represent a decrease of 289 t from the 2005 estimates, and are 507 t less than the 2004 estimates. The 2006 landings by gear were: 4 t by purse seine, 30 t by harpoon, less than 1 t by handline, and 149 t by longline (including discards) of which 51 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 advice 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 2006 rod and reel fishery off the northeastern U.S. (including the North Carolina winter fishery) for landings in several size categories were 78 fish < 66 cm, 1567 fish 66-114 cm, 2929 fish 115-144 cm and 736 fish 145-177 cm (an estimated 0.3, 28, 130, and 53 t, respectively). Note that additional rod and reel landings of bluefin >177 cm SFL, monitored through a sales reporting system, are included in Table 2.2-bluefin tuna.

Albacore. Albacore are landed by U.S. vessels; however, historically, albacore has not been a main focus 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 have 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 rate information from U.S. longline logbook reports are shown in Appendix Figure 2.1-albacore. Estimated total catches of albacore were 396 t in 2006, a decrease of 93 t from 2005 (Appendix Table 2.2-albacore).

¹ Appendices available at the Secretariat.

2.1.3 Swordfish fishery statistics

For 2006, the provisional estimate of U.S. vessel landings and dead discards of swordfish was 2,048 t (Appendix Table 2.3-swordfish). This estimate is lower than the estimate of 2,387 t for 2005. The provisional landings, excluding discard estimates, by ICCAT area for 2005 (compared to 2004) were: 283 t (414 t) from the Gulf of Mexico (Area 91); 1,068 t (1,061t) from the northwest Atlantic (Area 92); 88 t (137 t) from the Caribbean Sea (Area 93); and 373 t (550 t) from the North Central Atlantic (Area 94A).

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. vessels permitted to fish for swordfish. This 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 15,520 fish discarded dead in 2006. For the North Atlantic, the estimated tonnage discarded dead in 2005 is 183 t, of which 175 is estimated due to longline gear. Overall, the estimates of dead discarded catch decreased by 79 t compared to the 2005 levels, and decreased from about 11% to 9% of the landed catch.

Total weight of swordfish sampled for sizing U.S. landings by longline, trawl, and handline was 1,320 t, 2 t, and 22.3 t in 2006. The weight of sampled swordfish landings in 2006 were 99%, 73%, and 87% of the U.S. total reported annual landings of swordfish for longline, trawl, and handline, respectively. Again, incorporation of late reports into the estimated 2006 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 5-48 t per year within the period 1996-2006.

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 discarded by-catch 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 SEFSC Recreational Billfish Survey (RBS) which provides the number of billfish caught during tournaments held along the southeastern U.S. coast (south of 35° 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 which provides estimates of recreational billfish harvest from waters along the northeastern U.S. (North of 35° 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). Studies conducted indicate that use of a time-series running average from the US general marine recreational fishing survey (MRFSS) in combination with data from the RBS or other surveys may provide the most reliable estimates of overall recreational catch and landings for marlins. These methods have been applied for white marlin and sailfish.

Due to concerns over estimates of rod and reel catches landings of marlins, estimates for 2003 and 2004 were reviewed by a scientific committee convened to advise on the appropriateness of the methods and data used and to recommend future improvements needed to reduce uncertainty in the estimates. The preliminary estimates of 2006 U.S. rod and reel landings for these billfish species, combining the geographical areas of the Gulf of Mexico (Area 91), the northwestern Atlantic Ocean west of the 60°W longitude (Area 92) and the Caribbean Sea (Area 93) are: 17 t for blue marlin, 1.1 t for white marlin, and 0.08 t for sailfish. The estimates for 2004 were 15 t, 0.8 t, and 0.08 t, respectively, for the three species

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, no U.S. commercial landings were reported for any of the three Atlantic species. However, estimates of by-catch mortality 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 by-catch of blue marlin, white marlin, and sailfish was detailed in Cramer (1998). This procedure was implemented for estimating by-catch 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 Stock Assessment Workshop held in Miami, Florida (USA). Estimates of the billfish by-catch discarded dead in the U.S. commercial longline and

other commercial fisheries for 2006 were 35 t for blue marlin, 9 t for white marlin, and 5 t for sailfish. The estimated 2005 U.S. discarded dead by-catch was 34 t, 22 t, and 11 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 1,560 t 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) proposed 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 over-harvest 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 (and other species groups) are split equally between three trimester seasons.

Landings of sharks by U.S. longline fishermen holding permits to land and sell swordfish caught in the Atlantic and dead discards of sharks in the US longline fleet targeting tunas and tuna-like species are monitored and reported to ICCAT. There are also additional catches and landings of Atlantic pelagic sharks across the range of US fleets that harvest them, including recreational fisheries, that are updated annually. These total catches are updated herein through 2006 (data for 2006 are preliminary and subject to change). Commercial landings of pelagic sharks in weight steadily increased from the early 1980s, peaked in 2004, and declined in 2005 and 2006, although the data for 2006 are preliminary (Appendix Table 2.6a-sharks). Recreational landings in numbers estimated from the MRFSS survey during 1981-2006 peaked to a maximum of 93,000 fish in 1985, and showed a declining trend since that year, fluctuating between about 42,600 fish in 1986 to about 3,800 fish in 2001. There was a peak in the latest year of data, 2006, mostly the result of an unusually high estimate for thresher sharks (Appendix Table 2.6a-sharks). Pelagic longline dead discards also fluctuated between 1987 and 2006, but generally declined from a maximum of 30,500 fish in 1993 to a minimum of about 2,600 fish in 2005. Total catches ranged from about 12,600 fish in 1981 (no commercial landings or discard estimates were available for that year) to about 95,000 fish in 1985, as a result of the peak in recreational landings that year.

Blue shark (*Prionace glauca*) commercial landings were generally very low (Appendix Table 2.6b-sharks). Recreational landings in numbers ranged from 0 fish in several years to over 20,000 fish in 1987. Pelagic longline discards reached 29,000 fish in 1993, but otherwise oscillated between a minimum of about 1,400 fish in 2005 to a maximum of about 19,000 fish in 1996. In general, there was a decreasing trend in dead discards of blue sharks (Appendix Table 2.6b-sharks). The trends in recreational landings and dead discards were very similar from 1992 to 1997. Total catches ranged from 0 fish in 1982 (a year in which no commercial or recreational landings were reported) to about 43,500 fish in 1993, the year in which dead discard estimates peaked (Appendix Table 2.6b-sharks).

Shortfin mako (*Isurus oxyrinchus*) commercial landings never exceeded 11,000 fish according to available estimates and assumptions about average weights (Appendix Table 2.6c-sharks). Most of the landings were attributable to the recreational fishery, whose landings in numbers peaked in 1985 to about 80,000 fish, and ranged from less than 1,400 fish to over 31,000 fish in the remaining years. Pelagic longline discards of shortfin makos were negligible since the meat of this species is highly valued. Total catches ranged from about 6,000 fish in 1999 to almost 82,000 fish in 1985, when recreational catches peaked (Appendix Table 2.6c-sharks).

Catches of other pelagic species, such as longfin mako (*Isurus paucus*), oceanic whitetip shark (*Carcharhinus longimanus*), porbeagle (*Lamna nasus*), bigeye thresher (*Alopias superciliosus*), and thresher shark (*Alopias vulpinus*) were very small. Total catches of thresher sharks peaked at about 5,300 fish in 1984 and 1999, and then showed a high peak in the latest year of data, 2006, as a result of an unusually high estimate of

recreationally caught thresher sharks. A maximum of about 1,500 fish was estimated to have been landed by the commercial fishery in 1997, the maximum estimate of dead discards from the pelagic longline fishery was about 700 fish in 1989, and no dead discards were reported for 1998-2006. Total catches of longfin makos in any given year were under 450 fish. Very few longfin makos were landed by the commercial fishery, there were no reported landings from recreational fisheries, and only some fish were reported discarded dead from 1992 to 1995. Very few oceanic whitetip sharks were landed by the commercial fishery, except for two peaks of about 1,250 and 1,800 fish in 1983 and 1998, respectively, but otherwise total catches never exceeded 450 fish. Total reported catches of porbeagle, and especially bigeye thresher, were also very low.

2.2 Research activities

2.2.1 Bluefin tuna research

As part of its commitment to the Bluefin Program, research supported by the United States has concentrated on ichthyoplankton sampling, reproductive biology, and methods to evaluate hypotheses about movement patterns, spawning area fidelity, stock structure investigations and population modeling analyses.

Ichthyoplankton surveys in the Gulf of Mexico during the bluefin spawning season were continued in 2006 and 2007. Data resulting from these surveys, which began in 1977, are used to develop a fishery-independent abundance index of spawning West Atlantic bluefin tuna. This index has continued to provide one measure of bluefin abundance that is used in SCRS assessments of the status of the resource (SCRS/2006/082).

Scientists from the Virginia Institute of Marine Science are investigating the stock composition of small bluefin tuna caught off the northeastern U.S. and larger bluefin caught in the Gulf of Mexico and off Canada. Genetic markers derived from young of the year bluefin caught in the Mediterranean Sea and the Gulf of Mexico are being used to assign origin.

Scientists from Texas A&M University and the University of Maryland continue to study the stock structure of bluefin tuna using otolith chemistry particularly focusing on large bluefin from the Gulf of Mexico and the Mediterranean Sea. This research is greatly facilitated through continued collaboration with European scientists.

Scientists from the University of Maryland continue to study the ageing of bluefin tuna particularly for large bluefin from the Gulf of Mexico. Part of this research is conducted with colleagues from Canada.

Scientists at the University of Miami are studying the feasibility of determining bluefin gender from chromosomal material and are studying the use of reproductive hormones to determine participation in spawning.

The Block laboratory of Stanford University and the TAG-A-Giant research team continued to deploy electronic tags in the western Atlantic in 2006 and 2007 (n=32 deployments). These efforts brought the total number of electronic tags deployed on Atlantic bluefin by the TAG team to nearly 1000. Research in the Gulf of Mexico provided oceanographic analyses of the western spawning grounds identified from electronic tags and catch data. The results indicate significant correlations of environmental data indicative of occupancy of cyclonic eddies during the spawning period in the Gulf of Mexico. Research has also focused on genetic analyses of electronic tagged fish. Using nuclear markers confirmed the 2006 SCRS report indicating fish that show (via electronic tags) fidelity to Gulf of Mexico spawning grounds are genetically unique from western tagged bluefin tuna that move into the western Mediterranean to spawn (Boustany *et al.* 2007).

Researchers at the University of British Columbia continue work with TAG scientists and the National Marine Fisheries Service to develop methods to estimate bluefin movement and fishing mortality rate patterns. National Marine Fisheries Service scientists also continue to collaborate with ICCAT scientists from several nations to develop operating models (which will use conventional and electronic tagging data and fishing effort by management area) to evaluate possible harvest control rules management procedures.

Researchers at the University of New Hampshire's Large Pelagic research lab continue to engage in ecological analyses seeking to identify the underlying dynamics of Atlantic bluefin migration, reproduction, age and growth, and forage relationships. In 2006-2007, the LPRC-DFO electronic tagging program included release (so far) of over 34 PSAT tags on giant bluefin in Canadian waters, and continuation of the Tag a Tiny juvenile tagging program. In 2007, over 25 miniature psats, or X-tags, were deployed on juvenile bluefin in the New England region, and implanted archival tagging of school bluefin continues. A study is also underway on shifts in oceanographic regimes and possible impacts on bluefin tuna and their prey.

Research was also recently completed by the National Marine Fisheries Service on the consumption of Atlantic herring by bluefin tuna in the Gulf of Maine-Georges Bank (Overholtz, 2006).

From late April through mid June 2007, the National Marine Fisheries Service conducted extensive observations of the pelagic longline fishery in the Gulf of Mexico. Roughly 70% of known fishing trips and a higher percentage of total effort was observed. During that sampling more than 2,000 yellowfin, about 1,600 swordfish, 150 bluefin, about 130 shortfin mako, and 11 bigeye were observed. Twenty six of the bluefin were landed, 75 were released alive, 41 were released dead and 8 broke off. Various tissues 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.

2.2.2 Swordfish research

Data from observer samples were compared against self-reported information from the U.S. large pelagic mandatory logbook reporting system, and estimates of discard mortality of swordfish, billfish, sharks and other species from the U.S. fleet were developed. Fisher reported and observed swordfish catch, size and catch rate patterns through 2006 were examined in support of monitoring the recovery of north Atlantic swordfish and a pilot study to be conducted in closed areas during the coming year. Standardized indices of abundance were updated through 2006 for the Western North Atlantic using data from the U.S. pelagic longline fleet. Collaborative research with Venezuelan scientists continues on estimating the age-structure of the catch of swordfish. Results of this research will be available for the next assessment of north Atlantic swordfish. U.S. scientists collaborated with Brazilian scientists in conduct of catch rate standardization procedures by offering a course on the topic in Brazil in mid-2006. Central to this collaboration is development of fisheries research capacity in Brazil through graduate student training and of stronger scientific cooperation between Brazil and the United States. Research on measures to mitigate the interactions between pelagic longline and by-catch of marine turtles continued under a cooperative research program involving the U.S. Atlantic pelagic longline fishery.

2.2.3 Tropical tunas research

U.S. scientists participated in the ICCAT SCRS Inter-Sessional Meeting of the Tropical Species Group, held in Sète, France, April 24-28, 2006. Participants continued the recent work of the Group in evaluating alternative measures to protect juvenile tropical tunas.

U.S. scientists from the University of Miami's Rosenstiel School of Marine and Atmospheric Science collaborated with EC scientists on the EU-funded FEMS project, on management strategy evaluations related to tropical tuna fisheries. U.S. scientists have continued to conduct cooperative research with scientists from Mexico using combined longline observer data from the Gulf of Mexico, pursuing the development of indices of abundance for species of concern to ICCAT as well as descriptive analyses of that fishery.

U.S. scientists, in collaboration with French fisheries researchers from the *Institut de Recherche pour le Développement* (IRD) in Brest, France, conducted two studies on aspects of the life history of Atlantic yellowfin tuna. The first research effort was the development of an age and growth curve developed based on directly estimated ages using daily increments in sagittal otoliths. The strengths of this data include not only highly robust estimates of age, but also estimates from the full size range of these fish - large fish (maximum sample size of 179cm FL) as well as a early juvenile fish obtained from the stomach contents of larger yellowfin (5.2 to 8.4cm FL). It is believed that in particular the latter data is the first of its kind to be applied to such a study. Because of the improved resolution of this curve over previous equations, application to stock assessments may result in more accurate biological parameters for use in management. The second research effort was a proof of concept study on the use of microchemistry in juvenile otoliths to assess their utility in developing elemental fingerprints specific to natal origin of yellowfin tuna in the Atlantic Ocean. Results indicate that discrete elemental fingerprints do exist among juveniles from distinct geographic spawning grounds. Application of such information to broader studies including adults distributed throughout the Atlantic may contribute to the understanding of relative contribution of putative spawning zones to the oceanic population as well as help to define movement, migration, and distribution patterns.

In 2007, U.S. scientists have presented several papers to the SCRS concerning indices of abundance and length-frequencies of yellowfin tuna, bigeye tuna, and skipjack.

2.2.4 Albacore research

An important research directive from the Methods Working Group has been to develop 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). To this end, U.S. National Marine Fisheries Service scientists have collaborated with other SCRS scientists (as members of the Albacore stock assessment working group) to help implement the MULTIFAN-CL model. A U.S. scientist has also implemented an alternative age-structured model known as CASAL.

2.2.5 Mackerels and small tunas research

Scientists from the University of West Florida, University of South Alabama and the National Marine Fisheries Service have recently collaborated on the use of otolith shape to distinguish stocks of king mackerel, *Scomberomorus cavalla*. Results indicated that the current practice of assigning all winter mixing zone landings to the Gulf Stock does not reflect real mixing conditions.

2.2.6 Shark research

The ICCAT Shark Species Group conducted a data preparatory meeting for assessment of blue sharks and shortfin makos in Punta del Este, Uruguay, in June 2007. Scientists from the U.S. delegation contributed 4 working documents for this meeting on catches and indices of relative abundance of pelagic sharks and acted as rapporteurs for several sections of the meeting report. A cooperative shark research project between Brazil (*Universidade Federal Rural de Pernambuco*) and the U.S. (NOAA Fisheries and the University of Florida's Florida Museum of Natural History) has been initiated. 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 and temperature and depth recorders [TDRs]) will be 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. Two pop-off satellite archival tags have also been deployed to date (on an oceanic whitetip shark and a longfin mako) in U.S. Atlantic waters.

2.2.7 Billfish research

The NMFS SEFSC again played a substantial role in the ICCAT Enhanced Research Program for Billfish in 2006, with SEFSC scientists acting as general coordinator and coordinator for the western Atlantic Ocean. Major accomplishments in the western Atlantic in 2006 were documented in Prince (2007). Highlights include 11 at-sea sampling with observers on Venezuelan industrial longline vessels through September 2006. Of the trips accomplished, 3 observer trips were on Korean type vessels fishing under the Venezuelan flag. Most of these vessels are based out of Cumana targeting tuna, swordfish, or both at the same time. Biological sampling of swordfish, Istiophorids, and yellowfin tuna for reproductive and age determination studies, as well as genetics research were continued during the 2006 sampling season. These included 1,105 blue marlin, 147 white marlin, 1,501 sailfish, and 201 swordfish. Shore-based sampling of billfish landings for size frequency data, as well as tournament sampling was obtained from Venezuela, Grenada, U.S. Virgin Islands, Bermuda, Barbados, and Turks and Caicos Islands. 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 2006; a total of 97 tag recovered billfish and sharks were submitted to the Program Coordinator in 2006. Age, growth, and reproductive samples (Bermuda) from several very large billfish were obtained during 2006.

A study was initiated by the Virginia Institute of Marine Science (VIMS) on U.S. longline vessels in late 2006 to evaluate post release survival of sailfish in the western Atlantic Ocean. In addition, SEFSC continues to conduct pelagic longline research to evaluate gear behavior, and the effects of gear modification on catch rate and survival of target and non-target species. The first of a series of peer review papers on this topic will be available in the fall, 2007. The SEFSC also finalized PSAT research of sailfish and blue marlin in the eastern and western north Atlantic during 2006. Preliminary results of this work will be presented to an international symposium on the use of electronic tags to monitor the movements of marine species in San Sebastian, Spain, in the fall of 2007.

The cooperative billfish research between U.S. and Brazilian scientists that was initiated in 2005 continued in 2006 and 2007. Additional research in Brazil will also focus on PSAT tagging of billfish and the collection of biological materials for ageing and molecular genetic analyses. The Fishery Management Group of the University of Miami is carrying out research on Atlantic billfish in 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.

The proceedings of the Fourth International Billfish Symposium, which was held in Catalina Island October 31-November 3, 2005, were published in the fall of 2006. The SEFSC Migratory Fishery Biology Branch staff and associated collaborators presented 12 of the 70 papers (and 2 posters) during the meeting. This effort represented about 17% of the papers presented during the entire program and reflects, in a positive way, progress of research on Atlantic billfish.

2.2.8 Seabird research

The University of Washington Sea Grant Program is developing a streamer line system for application to world high-seas pelagic longline fisheries as the cornerstone of seabird by-catch mitigation in these extensive, multi-national fisheries targeting tuna and billfish worldwide. The design will focus on: 1) engineering widely applicable and easy to use deployment, retrieval and rigging systems, as well as towed devices that minimize the fouling of streamer lines on gear to maximize practical application by crews; and 2) identifying optimal streamer line materials, configuration, and performance standards that minimize seabird attacks on baited hooks. Testing will entail measuring the behavioral response of "worst case" seabirds to alternative designs in "worst case" locations in cooperation with partner scientists and organizations. Research results will be directly applicable to ICCAT's implementation of its seabird Resolution [Res. 02-14].

2.2.9 Tagging

Participants in the Southeast Fisheries Science Center's Cooperative Tagging Center (CTC) and the Billfish Foundation Tagging Program (TBF) tagged and released 5,887 billfishes (including swordfish) and 238 tunas in 2006. This represents an increase of 43.4% for billfish and a decrease of 27.7% for tunas from 2005 levels. There continues to be several electronic tagging studies involving bluefin tuna and billfish in the Atlantic Ocean and adjacent waters during 2006. These are discussed in the bluefin and billfish research sections above. There were 39 billfish recaptures from the CTC and TBF projects in 2006. This represents an increase of 30.8% from 2005. These recaptures were one blue marlin, 26 sailfish, two white marlin and ten swordfish. A total of 18 tunas were recorded as recaptures in 2006. These were 14 bluefin, and four yellowfin. This recapture level was an increase of 38.9% from the 2005 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 longline observer coverage. In accordance with ICCAT recommendations, randomized observer sampling of the U.S. large pelagic longline fleet was continued into 2006 (see Appendix Figure 2.2-Observers). 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, 8% sampling of the number of sets reported by the longline fleet. A total of 9,047 sets (6,701,427 hooks) were recorded by observer personnel from the SEFSC and NEFSC programs from May of 1992 to December of 2006. Observers recorded over 331,293 fish (primarily swordfish, tunas, and sharks), in addition to marine mammals, turtles, and seabirds during this time period. The percent of fleet coverage through 2006 ranged from 2.5% in 1992 to 9.0% in 2002. Fleet effort for 2006 has not been finalized, but percent observer coverage is estimated near 8% for the year. Sampling fraction of the U.S. pelagic longline fleet was increased in 2002 to 8%. Document SCRS/04/168 provides a more detailed summary of the data resulting from observer sampling between 1992 and 2002. Data collected by the SEFSC, Miami Laboratory Pelagic Observer Program is available on the internet at <http://www.sefsc.noaa.gov/observerdata.jsp> for the years 1992 to 2005.

Southeast U.S. shark gillnet fishery observer coverage. The directed shark gillnet fishery operates year round in coastal waters off the US southeast coast. Sharks are the primary target species but at times other species are targeted within the same trip. On-board observers have conducted observations of this fishery from 1993-1995 and 1998-present and reports of the catch and by-catch from these observations are available. All vessels that have an active directed shark permit and fish with gillnet gear are selected for coverage. A total of 4 drift, 79 strike and 161 sink gillnet sets were observed on 4, 29 and 42 trips in 2006, respectively. Trips targeted primarily sharks but trips targeting mackerel, kingfish, and multiple teleost species were also observed. Depending on gear and target, total observed catch composition varied from 77-99% shark, 1-20% teleosts and 1-3% batoids.

U.S. 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.

Observations of the Atlantic shark directed bottom longline fishery have been conducted since 1994 by the Commercial Shark Fishery Observer Program, Florida Museum of Natural History, University of Florida, Gainesville, Florida. Starting with the second trimester season of 2005, responsibility for the fishery observer program was transferred to National Marine Fisheries Service, Southeast Fisheries Science Center, Panama City Laboratory. All vessels that have an active directed shark permit and fish with bottom longline gear are selected for coverage. Consequently, observers also board trips that target a combination of shark and grouper, and shark and tilefish. In 2006, observers spent 148 days at sea on 49 trips. Observers monitored 26 vessels and recorded information for 117 sets. The observed bottom longline catch and by-catch for sets targeting shark consisted of 19 species of sharks, 12 species of teleosts, 3 species of batoids.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Catch limits and minimum sizes

3.1.1 Program for West Atlantic Bluefin Tuna [Rec. 98-07; 02-7; Rec. 06-06]

Recommendation 02-07 revised the annual West Atlantic bluefin tuna quota for the United States to 1,489.6 t and allocated 25 t of this total to account for incidental catch by pelagic longline vessels in the vicinity of the management area boundary. This quota and the 2005 underharvest were applied to the 2006 fishing year (June 1 2006 through May 31, 2007) resulting in an adjusted quota of 2,839.2 t. During the 2006 calendar year, the United States landed an estimated 558.9 t of Atlantic bluefin tuna, which includes an estimated 91.3 t of dead discards. Recommendation 06-06 revised the annual West Atlantic bluefin tuna quota for the United States to 1,190.12 t, including the 25 t to account for by-catch related to directed longline fisheries in the vicinity of the management area boundary. Recommendation 06-06 also limits the amount of under-harvest that is carried forward to the next year, i.e., not to exceed 50% of a Contracting Party's current initial Total Allowable Catch. Application of the recommendation resulted in an adjusted quota of 1,629.2 t for the 2007 fishing year. The United States is currently transitioning from a June 1-May 31 fishing year management cycle to a calendar year management cycle in 2007.

3.1.2 Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean [Rec. 06-05]

The United States has implemented the ICCAT Bluefin Statistical Document Program and will continue to monitor those documents for their validity, including as it relates to farmed product.

3.1.3 Recommendation to Establish a Plan to Rebuild Blue Marlin and White Marlin Populations [Rec. 06-09]

Phase I of the ICCAT rebuilding plan requires countries to reduce commercial landings of Atlantic white marlin captured in pelagic longline and purse seine fisheries by 67% and reduce blue marlin landings by 50% from 1996 or 1999 landings (whichever is greater) through 2010. The United States has prohibited all commercial retention of billfish since 1988. For its part of the rebuilding program, the United States agreed to maintain regulations that prohibit all landings of marlins by U.S. pelagic longline fishermen, and to continue 10% scientific observer coverage levels of billfish tournaments through 2010. The United States currently meets or exceeds these observer requirements. The United States limits annual landings by U.S. recreational fishermen to 250 Atlantic blue and white marlins, combined; requires permits for HMS (highly migratory species)

recreational vessels; and has tournament registration and reporting requirements. Catch and release rates in the U.S. recreational fishery for Atlantic 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.

In addition, beginning January 1, 2008, all anglers participating in Atlantic billfish tournaments will be required to use only non-offset circle hooks when deploying natural baits or natural bait/artificial lure combinations. These management measures are expected to substantially reduce marlin mortality. As noted in section 2.1.4 Marlins and Sailfish Fishery Statistics of this report, the United States is working to resolve uncertainty pertaining to estimation methodologies for rod and reel catches and landings of marlins. Preliminary 2007 calendar year data indicate landings of 32 blue marlin and 17 white marlin from recreational fishing activities. Preliminary 2006 calendar year data from all data sources indicate landings of 64 blue marlin and 66 white marlin from recreational fishing activities. Please refer to the U.S. Compliance Table for final aggregate U.S. landings.

The United States implemented a mandatory reporting program for billfish landed by recreational anglers who are not participating in registered tournaments in March 2003. In addition, the United States has taken steps to improve statistical information collection on recreational fishing in the Commonwealth of Puerto Rico and the U.S. Virgin Islands. These efforts have resulted in qualitative information that indicates that billfish landings may have been underestimated in past years. Efforts to produce quantitative historical estimates of non-tournament billfish landings for both U.S. mainland and Caribbean ports have been problematic due to estimation techniques that are subject to imprecision and bias. To increase the accuracy of landing estimates, the United States has worked to improve data collection in Puerto Rico, and to increase enforcement activities in response to reports of illegal sales, unregistered tournaments, and fishing by non-permitted anglers. This effort resulted in the registration of all identifiable tournaments in Puerto Rico during 2006.

3.1.4 *Recommendation to Establish a Rebuilding Program for North Atlantic Swordfish* [Rec. 06-02]

Recommendation 06-02 established a catch limit of 3,907 t ww for the United States for 2007 and 2008, and included a provision allowing up to 200 t of U.S. North Atlantic swordfish quota to be caught between 5 degrees North latitude and 5 degrees South latitude, and a provision to transfer 25 t to Canada. The recommendation also limited carryover of unused quota to 50% of the original quota. The United States is providing 1,345 t of unused quota each year for 2007 and 2008 from the 2003-2006 management period for use by developing States. Starting January 1, 2008, the United States will manage NSWO and SSWO on a calendar year management cycle. During the 2005 fishing year (June 1, 2005-May 31, 2006), there was an underage that was added to the landings quota for the 2006 fishing year. Landings and discard estimates for the 2005 fishing year and 2006 calendar years are provided in the U.S. Compliance tables. The United States has a minimum size of 33 lb (15 kg) dressed weight, and a required minimum size of 29" (73 cm) cleithrum to caudal keel length or 47" (119 cm) lower jaw fork length, which are designed to correspond to the 119 cm minimum size limit, with zero tolerance. Information on compliance with the minimum size is provided in the U.S. compliance tables. The United States codified 2007 and 2008 swordfish quotas, as identified in paragraph 3c) of [Rec. 06-02], in the fall of 2007.

3.1.5 *Recommendation on South Atlantic Swordfish* [Rec. 06-03]

This recommendation establishes catch allocations for the United States of 100 t ww 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. The United States landed 0.0 t of South Atlantic swordfish in 2005. Landings for 2006 are provided in the compliance tables.

3.1.6 *Recommendation on Revision and Sharing of the Southern Albacore Catch Limit* [Rec. 02-06]; [Rec. 03-07]; [Rec. 04-04]

The United States was subject to a catch limit of 100 t in 2006; however, the United States does not have a directed fishery for southern albacore. Estimated U.S. landings of southern albacore tuna were 0.0 t in calendar year 2005 and landings for the 2006 calendar year are provided in the U.S. Compliance tables.

3.1.7 *Recommendation on North Atlantic Albacore Catch Limits* [Rec. 02-05]; [Rec. 03-06]; [Rec. 06-04]

The United States was allocated a landings quota of 607 t ww for 2006, which is a level consistent with average landings for the United States during the mid-1990s. The 2002 recommendation applied for only one year, and

the 2003 recommendation, which applied to three fishing years (2004-2006), was extended to cover 2007 by Recommendation 06-04. The recommendation provides that overages/underages of annual catch limits should be deducted from, or added to, specific future catch limits. The United States landed 487.3 t during the 2005 calendar year. The 2006 calendar year landings are given in the U.S. Compliance tables.

In addition, pursuant to ICCAT's recommendation concerning the limitation of fishing capacity on North Atlantic albacore (1998), the United States submits the required reports providing a list of U.S. vessels operating in the fishery on an annual basis. The 2007 submission indicated that there were 262 vessels authorized to harvest North Atlantic albacore in the convention area.

3.1.8 *Recommendation on Bigeye Tuna Conservation Measures* [Rec. 02-01]; [Rec. 03-01]; [Rec. 04-01]

No catch limits apply to the United States, since 1999 catch was less than 2,100 t. The United States has implemented a higher minimum size than that required by ICCAT, which provides additional protection for juvenile bigeye. This minimum size of 27 inches (approximately 6.8 kg) applies to all U.S. fisheries landing bigeye tuna, both commercial and recreational. The United States landed 483.4 t in calendar year 2005, and 2006 calendar year landings are given in the U.S. Compliance tables.

3.1.9 *Recommendation on Yellowfin Size Limit* [Rec. 72-01]; [Rec. 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.

3.1.10 *Resolution on Atlantic Sharks* [Res. 01-01]; [Res. 03-10]

The 2001 shark resolution calls for the submission of catch and effort data for porbeagle, shortfin mako, and blue sharks; encourages the release of live sharks to the extent possible; encourages the minimization of waste and discards in accordance with the Code of Conduct for Responsible Fisheries; and calls for voluntary agreements not to increase fishing targeting Atlantic porbeagle, shortfin mako, and blue sharks until an assessment can be conducted. Furthermore, the 2003 shark resolution requests ICCAT parties and cooperating parties, in preparation for the 2004 shark assessment, to provide the SCRS Sub-Committee on By-catch with information on shark catches, effort by gear type, and landings and trade of shark products, and calls 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 United States submits catch and effort data for sharks and has catch limits in place for pelagic sharks, including, Atlantic porbeagle, shortfin mako, and blue sharks. U.S. scientists provided data to the SCRS for the 2004 shark assessment, and participated in the shark assessment meeting.

In 2002, pursuant to the 2000 Shark Finning Prohibition Act, the United States banned the practice of finning nationwide (67 FR 6194, February 11, 2002), to reduce discards and waste associated with finning. Additionally, the United States adopted a National Plan of Action for the Conservation and Management of Sharks in February 2001, consistent with the International Plan of Action for Sharks, which calls for management measures to reduce waste to the extent practicable and to protect vulnerable life history stages, such as juveniles.

The United States has managed sharks in the Atlantic Ocean under domestic fishery management plans (FMP) since 1993. The 1993 FMP, among other things, established a fishery management unit for Atlantic sharks, prohibited shark finning by requiring that the ratio between wet fins/dressed carcass not exceed 5 percent, and established other commercial and recreational shark management measures. The 1999 Atlantic Highly Migratory Species FMP established further management measures for Atlantic sharks, including a limited access permit system, recreational retention limits, reduced commercial quotas, and expansion of the prohibited shark list to 19 species. In 2003, the United States again amended its shark management measures and addressed, among other issues, commercial quotas, quota management and administration, a time/area closure for sandbar and dusky shark nursery and pupping areas, and vessel monitoring system requirements for shark vessels to facilitate enforcement of closed areas.

A new Consolidated Fishery Management Plan (FMP) was completed in 2006, which among other actions, contained measures to enhance U.S. data collection efforts by improving identification of dressed shark carcasses. These measures prohibit removal of the 2nd dorsal and anal fin from sharks prior to landing, and require all U.S. shark dealers to attend shark identification workshops.

To date, the United States has not conducted a stock assessment on porbeagle sharks. NMFS has reviewed the 2005 Canadian Stock Assessment and Recovery Assessment report on porbeagle sharks, which indicates that they are over-fished and over-fishing is not occurring. NMFS has deemed the Canadian Assessment to be the best available science and appropriate to use for U.S. domestic management purposes.

3.1.11 *Recommendation by ICCAT [Rec. 05-05] to Amend Recommendation 04-10 Concerning the Conservation of Sharks Caught in Association with Fisheries Managed By ICCAT [Rec. 04-10]; [Rec. 05-05]; [Rec. 06-10]*

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 to include additional requirements for CPCs to implement and report on measures taken to reduce fishing mortality of North Atlantic shortfin mako sharks. The United States currently tracks the annual quota for pelagic sharks, which includes landings of shortfin mako, to ensure that catches of these species are under the designated quota. Tracking of the pelagic shark quota in recent years indicates that pelagic sharks, including shortfin makos, do not constitute a significant portion of U.S. shark landings. 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.

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. Recommendation 05-05 required CPCs to implement the provisions of Recommendation 04-10 for North Atlantic shortfin mako shark populations. The United States continues to fulfill the requirements of these recommendations through data collection programs and a variety of fishery restrictions including the Shark Finning Prohibition Act of 2000. This law prohibited the practice of finning nationwide and the possession or landing of shark fins without the corresponding carcass (67 FR 6194, February 11, 2002). At present, NMFS is proposing an Amendment to the 2006 FMP which proposes to require fishermen to land sharks with all fins attached. Additionally, the United States adopted a National Plan of Action for the Conservation and Management of Sharks in February 2001, consistent with the International Plan of Action for Sharks, which calls for management measures to reduce waste to the extent practicable and to protect vulnerable life history stages, such as juveniles. The United States also currently enforces a minimum size limit and bag limits for recreationally caught sharks, commercial trip limits, and has established a time/area closure for shark bottom longline fishing in the mid-Atlantic to protect sharks in the nursery grounds. Recommendation 06-10 scheduled the next assessment for shortfin mako and blue sharks for 2008. The United States intends to participate in this assessment.

3.2 *Closed seasons*

3.2.1 *Recommendation on the Establishment of a Closed Area/Season for the Use of Fish-Aggregation Devices [Rec. 99-03]*

No U.S. action is necessary for this measure. The United States does not have any surface fleets fishing in the area covered by this recommendation.

3.2.2 *Domestic Time/Area Closures for ICCAT Species*

At present, the Atlantic pelagic longline fishery of the United States is subject to several discrete time/area closures that are designed to reduce by-catch in the pelagic longline fishery by prohibiting pelagic longline fishing for ICCAT species in those areas during specified times. These closures affect offshore fishing areas up to 200 nautical miles (nm) from shore (see **Figure 1**). Those closures are as follows: (1) Florida East coast:

50,720 nm² year-round; (2) Charleston Bump: 49,090 nm² from February through April each year; (3) DeSoto Canyon: 32,860 nm² year-round; and (4) the northeastern United States: 21,600 nm² during the month of June each year. Effective January 1, 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. In addition, all HMS gear types are prohibited year-round, except for surface trolling only from May through October, in the Madison Swanson and Steamboat Lumps Marine Reserves (**Figure 2**). These closures were implemented for the protection of spawning aggregations of gag grouper, and the HMS management measures will expire on June 16, 2010, consistent with Gulf of Mexico Fishery Management Council recommendations. Both of these reserves are located shoreward of the Desoto Canyon Closed Area (Figure 2). The Madison-Swanson Marine Reserve is 115 nm² in size, and the Steamboat Lumps marine reserve is 104 nm² in size. Additionally, on February 7, 2007, NMFS published a final rule (72 FR 5633) that complements regulations that the Caribbean Fishery Management Council (CFMC) implemented on October 28, 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 Code of Federal Regulations. Finally, NMFS published a proposed rule on July 27, 2007 (72 FR 41392), to complement regulations being implemented by the South Atlantic Fishery Management Council (SAFMC). The SAFMC is finalizing Amendment 14A to the Snapper Grouper Fishery Management Plan. A final rule for Amendment 14A is currently being developed. In the final rule, the SAFMC will implement eight Type II 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. The SAFMC has requested NMFS to backstop 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 is proposing to close the eight MPAs to shark bottom longline gear. NMFS anticipates a final rule regarding these MPAs in early 2008.

The Northeast Distant Statistical Sampling Area (NED) (2,631,000 nm²), 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. Pelagic longline vessels may only fish for highly migratory species in this area 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, 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. NMFS published a final rule on February 7, 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.

3.3 *Ban on imports*

3.3.1 Trade Restrictive Recommendations [Rec. 01-15; 02-16; 02-17; 02-18; 02-19; 02-20; 03-17; 03-18; 04-13; 04-14; and 04-15]

On December 6, 2004, the United States published a final rule (69 FR 70396) that implemented or lifted trade restrictions on several countries which were adopted at the 2001, 2002, and 2003 ICCAT meetings. Trade restrictions were implemented against bigeye tuna, bluefin tuna, and swordfish imports from Sierra Leone [Rec. 02-19] and bigeye tuna imports from both Georgia (03-18) and Bolivia [Rec. 02-17]. This rule lifted trade restrictions on Honduras for bigeye tuna [Rec. 02-18], bluefin tuna [Rec. 01-15], and swordfish [Rec. 01-15]. Trade restrictions were also lifted against Belize for bluefin tuna [Rec. 02-16], bigeye tuna [Rec. 02-16], and swordfish [Rec. 02-16] imports. Lastly, trade restrictions for bigeye tuna [Rec. 02-20] imports from St. Vincent's and the Grenadines were also lifted. In 2005, the United States published a final rule on May 17, 2005 (70 FR 28218) that implemented Recommendations [04-13], [04-14], and [04-15] to lift the trade restrictions on imported bigeye tuna [Rec. 04-15] from Cambodia, bigeye and bluefin tuna from Equatorial Guinea [Rec. 04-13], and bigeye tuna, bluefin tuna, and swordfish from Sierra Leone [Rec. 04-14]. There were no additional trade restrictive measures passed by the commission at the 2006 annual meeting.

3.3.2 Recommendation by ICCAT Concerning Trade Measures [Rec. 06-13]

Recommendation 06-13 stipulates that CPCs that import tuna and tuna-like species products 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 relevant information through a combination of programs,

including the bluefin, bigeye, and swordfish statistical document programs and through domestic Customs programs.

3.3.3 Statistical Documentation Programs

The U.S. Bluefin Tuna Statistical Document program has been in place since the 1990s, and statistical document programs for swordfish and frozen bigeye tuna were implemented in 2005. Prior to 2005, the United States had a domestic documentation program for swordfish called the Certificate of Eligibility (COE) which has now been fully replaced by the statistical document program. As required under the program, the United States submits reports to ICCAT twice-yearly, providing information on import, export and re-export activity involving these species products.

3.4 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 to a lesser degree, sea birds), and monitoring of fishing effort and catch (estimation of total landings of target species and/or by-catch of non-target or prohibited species). An overview of observer programs in the United States can be found online at the following address: www.st.nmfs.noaa.gov/st4/nop/index.html. Click on the bullets under "About US" for info about both the National Observer Program, which is a coordinating office for NMFS observer programs in our headquarters outside of Washington, DC, and the Regional Programs. Observers for U.S. vessels in ICCAT fisheries are deployed from Miami, Florida and Panama City, Florida. See Section 2.2.10 of this report for more information.

3.5 Vessel monitoring

3.5.1 Recommendation Concerning Minimum Standards for the Establishment of a Vessel Monitoring System (VMS) in the ICCAT Convention Area [Rec. 03-14]; [Rec. 04-11]

The United States implemented a fleet-wide VMS requirement in the Atlantic pelagic longline fishery effective September 1, 2003 (June 25, 2003, 68 FR 37772), consistent with the terms of Recommendations [03-14] and [04-11]. The United States is in compliance with these recommendations. In addition to what is required for these recommendations, the United States issued a rule in December of 2003 (December 24, 2003, 68 FR 74746), requiring VMS for bottom longline vessels operating near a time/area closure and for shark gillnet vessels operating during the right whale calving season. This rule was implemented in December 2003 for purposes of domestic Atlantic shark management.

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 (Resolution 01-20) and Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels over 24 Meters authorized to operate in the Convention Area [Rec. 02-22]

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. As per [Rec. 02-22], the United States has submitted its list of vessels of more than 24m LOA that are licensed to fish for tuna and tuna-like species in the Convention Area, which includes licensed tuna longline vessels. The U.S. submission regarding [Res. 01-20] is provided in the Appendix on page 20.

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 currently implements all elements of this measure. A list detailing the enforcement actions taken on ICCAT species is provided in the Appendix, page 18.

3.6.3 Recommendation to Establish a List of Vessels Presumed to Have Carried Out Illegal, Unreported, and Unregulated Fishing Activities (06-12)

The United States generally prohibits the landing of any foreign fishing vessels in its ports. Rulemaking to clarify domestic procedures for denying port access to vessels is ongoing and will be implemented in 2008.

3.6.4 Recommendation by ICCAT to Promote Compliance By Nationals of Contracting Parties, Cooperating Non-Contracting 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 already fully 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 the NOAA Enforcement Actions Taken on ICCAT Species, page 18.

3.6.5 Recommendation by ICCAT on Additional Measures for Compliance with the ICCAT Conservation and Management Measures [Rec. 06-15]

Under the United States Bluefin Tuna Statistical Document and domestic management programs, the United States is able to closely monitor domestic landings and exports of Atlantic bluefin tuna to ensure that exports do not exceed landings. Each commercially harvested Atlantic bluefin tuna landed in the United States is tagged with a uniquely numbered tail tag, and reported to NMFS within 24 hours of landing. Landings are tracked to ensure the U.S. fishery remains within its quota. Unique tail tag numbers must remain with Atlantic bluefin tuna carcasses until consumed, and are required for exports of domestically landed Atlantic bluefin tuna. In addition, United States regulations require that statistical documents accompany all imports of bluefin tuna.

3.6.6 Recommendation by ICCAT Establishing a Programme for Transshipment by Large-Scale Longline Fishing Vessels [Rec. 06-11]

No U.S. action is necessary on this recommendation, as current U.S. regulations prohibit transshipment of HMS products in the convention area.

3.7 Other Recommendations

3.7.1 Recommendation by ICCAT on Vessel Chartering [Rec. 02-21]; [Rec. 03-21]

A final rule was published on December 6, 2004 (69 FR 70396), to implement Recommendation [02-21] concerning vessel chartering. Recommendation [03-12] implemented monitoring measures for contracting parties, including maintaining up to date records of fishing vessels entitled to fly its flag and/or authorized to fish species managed by ICCAT in the convention area, which is an integral component of vessel chartering arrangements. The United States is complying with these recommendations by collecting all relevant information for monitoring before issuing the permits necessary to engage in vessel chartering arrangements. The United States issued 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 all commercial fishing vessels over 24 m in length to maintain logbooks specified by NMFS. For information on the implementation of this recommendation relative to recreational fishing vessels, see the following section.

3.7.3 Resolution on Improving Recreational Fishery Statistics [Rec. 99-13]

Recreational landings are estimated through a combination of tournament surveys (the Recreational Billfish Survey), the Large Pelagic 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. Currently, 100 percent of billfish tournaments are selected 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.

3.7.4 Resolution on Sea Turtles [Res. 03-11]

The 2003 resolution on sea turtles encourages ICCAT parties and cooperating parties to collect and provide the SCRS with information on interactions with sea turtles in ICCAT fisheries, including incidental catches and other impacts on sea turtles. The measure also encourages the release of all sea turtles that are incidentally caught alive and to share information, including technical measures, to reduce the incidental catch of sea turtles, and to ensure the safe handling of all turtles that are released to improve their survivability. The resolution also calls for the development of data collection and reporting methods for the incidental by-catch of sea turtles and to support efforts by the FAO to address the conservation and management of sea turtles. The United States complies with all of these requests.

In addition to the above activities, the United States has undertaken extensive research activities in its longline fleet for ways to reduce sea turtle interactions and increase survivability of sea turtles incidentally caught in longline fisheries. Results from U.S. research in the Atlantic Ocean have shown that larger circle hooks significantly reduce turtle catches in the pelagic longline fishery (e.g. with mackerel bait, the number of loggerhead turtles caught was reduced by 65%). Unlike “J” hooks, which are often swallowed, circle hooks often become anchored in the mouth, and therefore hook extraction is easier and safer for sea turtles. A number of tools are being used to remove line, hooks, or the barb or eye of hooks on boated turtles. Long handled line cutters and long handled de-hookers are used to remove gear from turtles too large to be boated. The Epperly Biopsy Pole is used with a stainless steel corer to take tissue samples for genetics. Short handled de-hookers are used to remove hooks from animals that are boated. A dip net is used to bring small (<50 kg) turtles aboard. Mouth openers and gags are used on boated turtles to allow access to internally lodged hooks. U.S. gear experts have presented this by-catch reduction technology and data from the research activities at approximately 15 international events that included fishing communities and resource managers between 2002 and mid-2005.

In 2004 (July 6, 2004; 63 FR 40734), the United States codified regulations that implemented measures to reduce sea turtle by-catch in Atlantic PLL fisheries for highly migratory species. These measures pertain to the entire U.S. Atlantic pelagic longline fishery, and include: mandatory bait specifications depending on fishing locale, 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. While exhibiting annual fluctuations, the U.S. pelagic longline fleet has seen a significant overall decline in the number of sea turtle interactions since implementation of the circle hook regulations in mid-2004. U.S. pelagic longline leatherback sea turtle interactions have ranged from an estimated 1,362 in 2004 to 368 in 2005 to 415 in 2006; loggerhead sea turtle interactions have fluctuated from an estimated 734 in 2004, to 283 in 2005 to 561 in 2006. As new technological solutions are discovered, the United States will continue to help share these innovations with other fishing nations.

3.7.5 Recommendation by ICCAT on Compliance with Statistical Reporting Obligations [Rec. 05-09]

Recommendation [05-09] is intended to address compliance issues with statistical reporting obligations. It requires the Secretariat to identify data gaps, the SCRS to evaluate the impacts of data gaps on stock assessments and formulation of management advice, and for Contracting parties and CPCs, to provide explanations regarding reporting deficiencies and data gaps along with plans for corrective action. The United States is prepared to respond to the Secretariat as required under this recommendation.

3.7.6 Recommendation by ICCAT on Bluefin Tuna Farming [Rec. 06-07]

Atlantic bluefin tuna have not been farmed in U.S. waters. The U.S. Bluefin Tuna Statistical Document Program applies to farmed as well as wild-caught product, so statistical documents are required for imports of all farmed product.

3.7.7 Electronic Statistical Document Program [Rec. 06-16]

The United States continues to implement an electronic system for the collection and dissemination of trade information. The International Trade Data System is a requirement under U.S. domestic legislation aimed at improving the efficiency of import and export processes as well as ensuring compliance with obligations to monitor the origin and safety of products. Given the domestic requirement to collect information from the trade community (shipper, carriers, brokers, etc.) in an electronic format, the U.S. is investigating ways to integrate ICCAT's statistical document programs into the internet-based electronic portal. As the electronic interface is developed, the U.S. will work with its importers and its ICCAT trading partners to determine how to collect the information required by the ICCAT trade monitoring programs through the Internet portal. It is anticipated that pilot projects will be launched with interested ICCAT parties in 2008.

3.7.8 U.S. enforcement actions

A summary of actions taken in ICCAT fisheries is provided below.

Section 4. Other activities

Recent U.S. management action for Atlantic HMS 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>

– *NOAA enforcement actions taken on ICCAT species (September 1, 2006 – August 31, 2007)*

During this reporting period, enforcement efforts consisted of dockside monitoring of offloads at major landing facilities in conjunction with dealer record checks, as well as at-sea boardings and visits to a limited number of concerned recreational marinas. Enforcement officials detected the following violations: Cases opened in this reporting period (83), cases remaining open (58), cases completed (25), warnings issued (10).

- General Requirements of the Atlantic Tunas Convention Act (ATCA) and Magnuson-Stevens Act (MSFCMA) (20 cases)
- General Prohibitions under the ATCA and MSFCMA to include (case number):
 - Falsification of permit application information (1 case)
 - Fishing, catching, possessing, retaining Atlantic highly migratory species without a valid permit (12)
 - Purchase, receipt, transfer, or attempts to do so, for commercial purposes, Atlantic HMS landed by non-permitted vessels, or without a valid dealer permit (2)
 - Sale, transfer or attempted sale or transfer of Atlantic tuna, shark or swordfish to other than a permitted dealer (3)
 - Falsification or failure to record required information (3)
 - Failure to comply with at-sea observer coverage requirements (2)
 - Assault, resist, impede, oppose, interfere with, or obstruct an authorized officer in lawful performance of his duties (1)
 - Fail to install, activate, repair or replace a VMS unit prior to leaving port (4)
 - Fail to contact NMFS or follow NMFS instructions when automatic position reporting has been interrupted (2)
 - Failure to maintain an Atlantic HMS in the form specified (2)
 - Fish for, catch, retain or possess an Atlantic HMS at less than its specified minimum size limit (6)
 - Violation of any regulations under ATCA or MSFCMA (1)
 - Possession of ICCAT species contrary to U.S. or foreign law (3)
 - Deploy or fish with any gear from a vessel with pelagic longline onboard in any closed area (1)
 - Deploy or fish a pelagic longline with live bait affixed to hooks, or to possess live bait, or set up a well tank on board a vessel in the Gulf of Mexico (3)
 - Failure to carry the required sea turtle by-catch mitigation gear (1)
- Specific prohibitions for Atlantic tunas:
 - Fish for, catch, retain, or possess a bluefin tuna less than the large medium size class (1)
- Specific prohibitions for billfish:
 - Fail to report a billfish as specified (1)

- Specific prohibitions for sharks:
 - Exceeding a recreational retention limit for shark (1)
 - Exceeding a commercial retention limit for shark (1)
 - Failure to maintain a shark in its proper form (4)
 - Sale or purchase of shark fins inconsistent with carcass weight (2)
 - Retention, possession, sale or purchase of a prohibited shark or parts, or failure to disentangle a prohibited shark with least harm as specified (6)
- Specific prohibitions for swordfish
 - No reported violations

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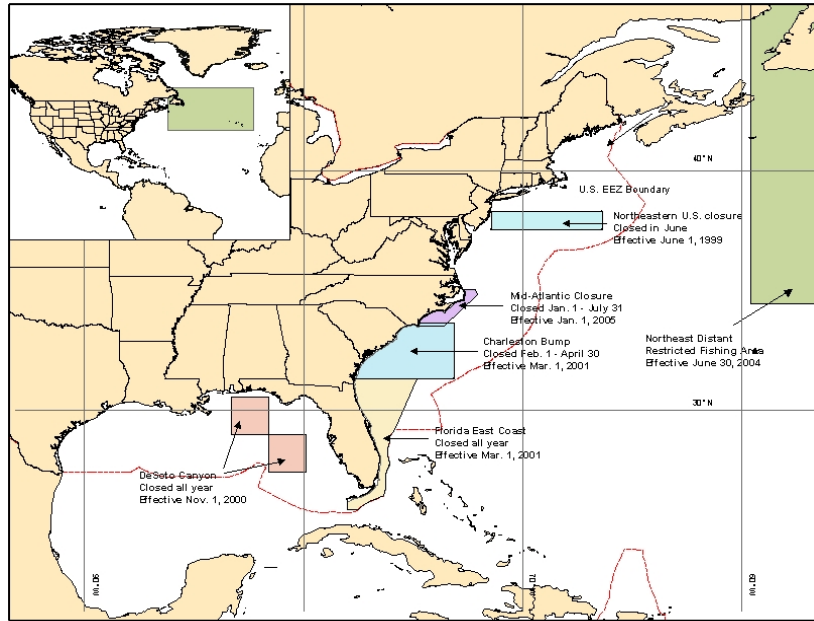


Figure 1. Existing U.S. time/area closures in HMS fisheries. Inset shows extent of the Northeast Distant restricted fishing area. All closures except the Mid-Atlantic are applicable to PLL gear only. The Mid-Atlantic Closure is applicable to bottom longline gear only. Note: the Northeast Distant (NED) was a closed area to all vessels as of 2001. It became the NED Restricted Fishing Area on June 30, 2004, when it was opened to those participating in the NED experiment. Madison-Swanson, Steamboat Lumps, and Caribbean bottom longline closures not included.

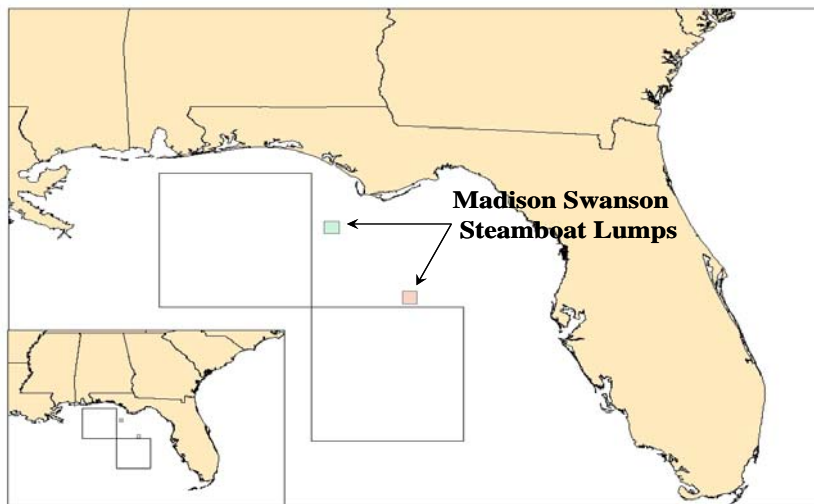


Figure 2. Madison-Swanson (upper left) and Steamboat Lumps (lower right) Marine Reserves. The Desoto Canyon closure is also shown for reference.

**ANNUAL REPORT OF URUGUAY
RAPPORT ANNUEL DE L'URUGUAY
INFORME ANUAL DE URUGUAY**

Andrés Domingo¹

SUMMARY

In 2006, there were 12 Uruguayan vessels in activity, with 35% less effort than the previous year. The total catch amounted to 1,500 t, with swordfish (SWO) and yellowfin tuna (YFT) the predominant species in the catch. The National Observer Program of the Tuna Fleet covered about 20% of the fleet, and an important amount of information was obtained on all the aspects of the fishery and the biology of the species caught. The ICCAT/JDIP/DINANA program, which had started the previous year, and whose objective was to correct Uruguay's historical series of data on catch and effort, has finalized, and the results are given in various documents presented. Uruguay hosted the Data Preparatory M of the Shark Species Group in Punta del Este, June 25 to 29, 2007). Eighteen (18) scientists from six countries and two members of the Secretariat participated in the meeting. In June 2007, the "National Plan of Action to Reduce the Incidental Catch of Sea Birds in Uruguayan Fisheries" was finalized and published, and its implementation has started. A program was initiated by DINAARA to improve monitoring at the Port of Montevideo.

RÉSUMÉ

Douze (12) navires uruguayens étaient en activité en 2006, déployant un effort de pêche inférieur de 35% à celui de l'année antérieure. La prise totale s'est élevée à 1.500 t, l'espadon (SWO) et l'albacore (YFT) étant les espèces prédominantes dans la prise. Le Programme National d'Observateurs de la flottille thonière a couvert près de 20% des activités de la flottille, obtenant une grande quantité d'informations liées à tous les aspects de la pêche et de la biologie des espèces capturées. Le projet destiné à corriger la série historique des données de prise et d'effort de l'Uruguay (ICCAT/JDIP/DINARA), lancé l'année dernière, a été achevé et a donné lieu à la présentation de divers documents. L'Uruguay a accueilli la réunion préparatoire des données du Groupe d'espèces sur les requins, à Punta del Este, du 25 au 29 juin. Cette réunion a rassemblé 18 chercheurs provenant de 6 pays ainsi que 2 membres du Secrétariat. Le « Plan d'Action National visant à réduire la prise accidentelle d'oiseaux de mer dans les pêcheries uruguayennes » a été finalisé et publié en juin 2007 et sa mise en œuvre a commencé. Un programme visant à améliorer le contrôle du Port de Montevideo par la DINARA a été entrepris.

RESUMEN

Durante el año 2006 Uruguay mantuvo 12 barcos operando, con un 35% menos de esfuerzo que en el año anterior y una captura total de 1500 toneladas, siendo el pez espada (SWO) y el rabil (YFT) las especies más capturadas. El Programa Nacional de Observadores de la Flota Atunera, logró una cobertura aproximada del 20% de la actividad de la flota, recabando una importante cantidad de información relacionada con todos los aspectos de la pesquería y la biología de las especies capturadas. Se finalizó el proyecto iniciado el año anterior cuyo objetivo era corregir la serie histórica de datos de esfuerzo y captura de Uruguay (ICCAT/JDIP/DINARA), lo que se vio reflejado en la presentación de diversos documentos. Uruguay recibió en Punta del Este la reunión preparatoria de datos del subcomité de Tiburones, que se realizó entre el 25 y el 29 de junio, en la cual participaron 18 investigadores de 6 países y 2 miembros de la Secretaría. Se finalizó y publicó (junio 2007) el "Plan de Acción Nacional para Reducir la Captura Incidental de Aves Marinas en las Pesquerías Uruguayas", comenzando la implementación del mismo y se dio inicio a un programa para mejorar el control del Puerto de Montevideo por parte de la DINARA.

¹ Dirección Nacional de Recursos Acuáticos (DINARA) Constituyente 1497, Montevideo (Uruguay). Email: adomingo@dinara.gub.uy

Parte I (Información sobre Pesquerías, Investigación y Estadísticas)

Sección 1: Información sobre la pesquería

Durante el año 2006, la flota atunera uruguaya continuó operando con palangre de superficie y mantuvo el mismo número de barcos que en el año 2005 (12 barcos), estos barcos operaron con base a dos puertos (La Paloma y Montevideo). La mayor parte de la flota son barcos menores de 24 m de eslora y tienen menos de 200 TRB. El esfuerzo se realizó principalmente en aguas territoriales uruguayas e internacionales adyacentes, aunque algunos barcos congeladores se desplazaron hacia áreas del noreste (**Figura 1**). Se calaron 1.269.337 anzuelos, un 35% menos que el año anterior, este descenso se debió a conflictos entre algunos actores del sector (armadores, patronos de pesca y marineros), lo cual ocasionó el descenso de las actividades de algunos barcos de la flota durante los últimos meses del año.

La captura total (preliminar) desembarcada y comunicada en el 2006 por dicha flota fue de 1500 t, lo que significó un descenso de 938 t con respecto al año anterior. De este total 620 t correspondieron a pez espada, un 26% menos que en el 2005, correspondiendo al 41% del total de la captura. Los desembarques de tiburón azul fueron del orden de las 234 t y los del rabil de las 218 t. Estas tres especies (SWO, BSH e YFT) significaron el 71% de las capturas de la flota. El otro 29% estuvo conformado por albacora (ALB) 6%, patudo (BET) 5%, moro (SMA) 5%, marrones (CVX) 3%, pinocho (POR) 2%, martillos (SPN) 2%, marlines (BIL) 1% y otros peces de menor importancia comercial (pez aceite, wahoo, dorada, tiburón zorro, etc.) 5% (**Tabla 1, Figura 2**).

A pesar de la disminución en el esfuerzo y las capturas, el rabil (YFT) se mantuvo como la especie principal entre los atunes, lo cual viene sucediendo desde 2004 (**Tabla 1**), correspondiendo al 55% de las capturas de este grupo, igual porcentaje que en el año 2004 y menor que en 2005 (87%). Entre las capturas desembarcadas de tiburones se destacaron dos especies el tiburón azul (*Prionace glauca*, 56%) y el moro (*Isurus oxyrinchus*, 18%).

La flota continúa realizando descartes de tiburones y otros peces pelágicos, así como de tortugas y aves, y de aquellos ejemplares de atunes y pez espada dañados o de tallas chicas capturados vivos.

Sección 2: Investigación y estadísticas

La Dirección Nacional de Recursos Acuáticos (DINARA) del Ministerio de Ganadería, Agricultura y Pesca (MGAP), a través del área de Recursos Pelágicos, 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 2006 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. 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.

2.1 Investigación

La investigación se desarrolló principalmente a partir de la información proveniente del Programa de Observadores, si bien también se utilizaron datos de los partes de pesca.

2.1.1 Programa de observadores

El PNOFA cubrió aproximadamente el 20% de la actividad de la flota durante 2006, valor similar al del año anterior (**Figura 3**). Este programa se desarrolla desde el año 1998 y ha permitido recabar una importante cantidad de información relacionada con todos los aspectos de la pesquería y la biología de las especies capturadas (Mora y Domingo 2006).

Durante 2006 se observaron unos 180 lances (**Figura 3**). 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 área de Recursos Pelágicos; las características de los observadores, sumado a su formación, ha permitido generar una información muy amplia dentro del programa.

Dentro de las actividades del PNOFA se inició un trabajo dirigido a la educación y sensibilización de los trabajadores y armadores pesqueros. Conjuntamente con el "Proyecto Albatros y Petreles" se han editado y

distribuido en los diferentes barcos pesqueros los boletines “Atlántico Sur” 1 y 2, los cuales brindan información relevante sobre diferentes aspectos de la actividad del PNOFA relacionados a las aves marinas. En los próximos números se va a integrar información sobre otros grupos de especies.

2.1.2 Pez espada

Se ejecutó el proyecto “Corrección de la Serie Histórica de Datos de Esfuerzo y Capturas de la Flota Atunera Uruguaya (1981-2004)” (ICCAT/JDIP/DINARA), mediante el cual se pudo corregir todos los datos de esfuerzo y captura de pez espada así como los datos de las boletas de desembarque y del PNOFA. Se pretende en las próximas reuniones del SCRS presentar series estandarizadas de CPUE para esta especie. En el marco del PNOFA se continuó con la recopilación de datos de talla por sexo. Se colectaron muestras de tejido destinadas a estudios genéticos, los cuales se están desarrollando de forma experimental en los laboratorios de la DINARA. Se inició en 2007 el “Programa de Marcado”, utilizando las marcas que provee ICCAT, esta primera etapa estuvo destinada a ajustar las técnicas operativas. Se estima que va a ser posible marcar ejemplares pequeños menores a 1,20 y en menor medida adultos que superen esta talla.

2.1.3 Atunes tropicales

Al igual que en otras especies se continuó con el seguimiento de las estadísticas de captura y esfuerzo. Conjuntamente con el pez espada se actualizó la serie histórica del atún ojo grande de acuerdo a los términos de referencia del proyecto (ICCAT/JDIP/DINARA). Se presentaron dos trabajos, referidos al rabil (YFT), a la reunión de los grupos de especies en Madrid (SCRS/2007/122 y SCRS/2007/123), con información de los cuadernos de pesca, de la flota de palangre de Uruguay y datos del Programa de Observadores. Esta información podrá ser utilizada en la evaluación prevista para el año 2008. Dentro del Programa de Marcado de especies Pelágicas, que se inició a mediados de 2007, se marcaron algunos individuos de rabil, se va a continuar con esta tarea.

2.1.4 Tiburones

Uruguay recibió en Punta del Este la reunión preparatoria de datos que se realizó entre el 25 y el 29 de junio, en la cual participaron 18 investigadores de seis países y dos miembros de la Secretaría. Para dicho evento se presentaron 3 trabajos (SCRS/2007/080, SCRS/2007/081, SCRS/2007/082), dos de los cuales presentaban series estandarizadas de CPUE de *Prionace glauca* e *Isurus oxyrinchus* y uno aspectos del comercio de las aletas de tiburón.

Se colocaron marcas en tiburones azules (aproximadamente 170), las cuales fueron reportadas a la Secretaría. Se han iniciado trabajos en identificación de stock mediante técnicas genéticas.

Se finalizó la elaboración del Plan Nacional para la Conservación de Tiburones de Uruguay, el cual se prevé publicar antes de que finalice el año 2007. Dentro del subcomité de tiburones se presentó un trabajo sobre la captura incidental de la raya *Pteroplatytrygon violacea* (SCRS/2007/125). Se vienen desarrollando diversos trabajos de biología con especies de tiburones pelágicos como recomendó el grupo en la última reunión intersesional.

2.1.5 Aves marinas

Se finalizó y publicó (junio de 2007) el “Plan de Acción Nacional para Reducir la Captura Incidental de Aves Marinas en las Pesquerías Uruguayas” (ISBN: 978-9974-563-35-3). Actualmente se trabaja en la instrumentación del Plan, efectivizando las medidas propuestas en el mismo. Para la elaboración del Plan se llevaron adelante trabajos de análisis de la captura incidental de Albatros y Petreles por especie en la flota de palangre pelágico. Vinculado con este objetivo y con la propuesta que lleva adelante el Subcomité de Ecosistemas, se presentó el trabajo sobre los albatros del género *Diomedea* (SCRS/2007/126). Conjuntamente con el Laboratorio de Bioquímica de Organismos Acuáticos de la DINARA, el área de Recursos Pelágicos viene desarrollando trabajos de identificación de especies a través de técnicas genéticas.

Se han desarrollando algunos trabajos conjuntos con el “Proyecto Albatros y Petreles de Uruguay” y “Birdlife”, vinculados a la investigación y mitigación de la captura incidental de estas especies, los cuales se piensan continuar en los próximos años.

2.1.6 Tortugas marinas

En los últimos años se han desarrollado trabajos conjuntos con investigadores brasileños, los cuales se

continuaron en 2006-2007 presentando el documento SCRS/2007/168. Estos trabajos tienen un enfoque regional y han permitido un abordaje de la problemática de la captura incidental de tortugas marinas en forma conjunta y participativa.

Se han desarrollado análisis moleculares para identificación haplotípica de algunos individuos de tortugas *Caretta caretta* y contribuir al conocimiento de las poblaciones que ocurren en el Atlántico Sur occidental (SCRS/2007/124).

El Departamento de Recursos Pelágicos de la DINARA está colaborando junto a organizaciones de otros países, en el desarrollo de una iniciativa llamada "Movements of Atlantic Leatherback Turtles: Steps Toward Bycatch Reduction and Trans-oceanic Cooperation for Conservation". Dicho proyecto, coordinado por el Programa de Tortugas Marinas para Latinoamérica y el Caribe del WWF, pretende establecer una plataforma para la compilación y diseminación de información sobre rutas migratorias y movimientos transoceánicos de las tortugas laúd, para colaborar con el diseño de medidas para reducir la mortalidad por captura incidental en las pesquerías que operan en el Océano Atlántico.

Observadores especialmente entrenados del Programa Nacional de Observadores a Bordo de la Flota Atunera están colocando transmisores satelitales en tortugas *Dermochelys coriacea*. Hasta la fecha, se ha logrado rastrear exitosamente a tres individuos, a los cuales se les colocaron transmisores SRDL, fabricados por el SMRU de la Universidad de St. Andrews (Escocia).

Más información, imágenes y resultados de este proyecto pueden ser consultados en los siguientes sitios:

- http://www.seaturtle.org/tracking/?project_id=86 – Mapas de las Tortugas Rastreadas desde Uruguay
- http://www.panda.org/about_wwf/where_we_work/latin_america_and_caribbean/our_solutions/marine_turtle_programme/projects/leatherback_tracking_project/tracking_logs/index.cfm - Información general sobre el proyecto
- http://www.panda.org/about_wwf/where_we_work/latin_america_and_caribbean/our_solutions/marine_turtle_programme/projects/leatherback_tracking_project/index.cfm - Mapas de todas las Tortugas Rastreadas

Se están desarrollando experimentos con anzuelos circulares, los cuales podrían finalizar su primera etapa, en palangre de multifilamento, en los primeros meses del año 2008. Este proyecto se realiza en colaboración con la National Oceanographic Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS), Pacific Island Fisheries Science, Honolulu, USA (Testing of Fishing Gear to Reduce Sea Turtle Bycatch, and Training in Turtle-Safe Best Practices in Uruguayan's Longline Fisheries).

2.1.7 Cetáceos

Se continuó con la investigación en este grupo, analizando información de distribución e interacción con la flota de palangre. Se presentó un documento en el grupo de ecosistemas (SCRS/2007/128).

Parte II (Implementación de la Ordenación)

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

Se comenzó a implementar el "Plan de Acción Nacional para Reducir la Captura Incidental de Aves Marinas en las Pesquerías Uruguayas". Ya se han comenzado a utilizar las líneas espantapájaros y se pretende efectivizarlas en toda la flota atunera a más tardar a mediados del 2008.

El Plan Nacional para la Conservación de Tiburones ya se encuentra finalizado y se espera tenerlo publicado antes del inicio del año 2007. Esto traerá como consecuencia la instrumentación de medidas de conservación.

Entre las normas nacionales sobre ordenación continúan vigentes las referidas a tallas mínimas de captura para pez espada (25 k, 15% tolerancia), patudo y rabil (3,2 k). 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 esta área.

Se han iniciado actividades y convocatorias hacia otros organismos estatales (Prefectura Nacional Naval, Administración Nacional de Puertos y Administración Nacional de Aduanas, etc.), a efectos de generar mayores controles en los puertos de Uruguay.

Reference

MORA, A. y A. Domingo. 2006. Informe sobre el programa de observadores a bordo de la flota atunera uruguaya (1998-2004). Collect. Vol. Sci. Pap. ICCAT, 59(2): 599-607.

Tabla 1. Número de buques en actividad de la flota atunera uruguaya y capturas de atunes y especies afines retenidas por especie y comunicadas por Uruguay, período (2002-2006).

<i>Año</i>	<i>Buques</i>	<i>SWO</i>	<i>BET</i>	<i>YFT</i>	<i>ALB</i>	<i>BIL</i>
2002	9	768	56	80	92	1
2003	10	850	59	95	108	19
2004	12	1105	40	204	120	4
2005	12	843	62	644	32	11
2005	12	620	83	218	93	19

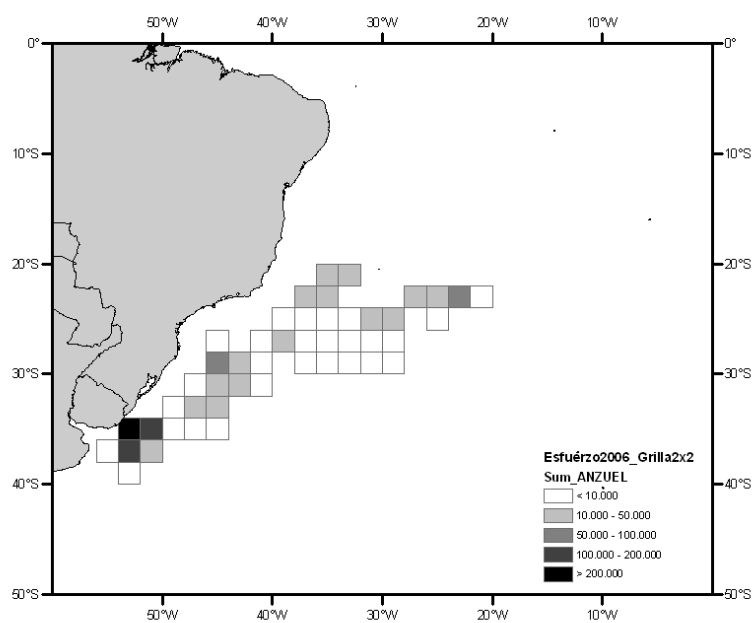


Figura 1. Distribución del esfuerzo de la flota palangrera durante el año 2006 en grillas de 2° x 2°.

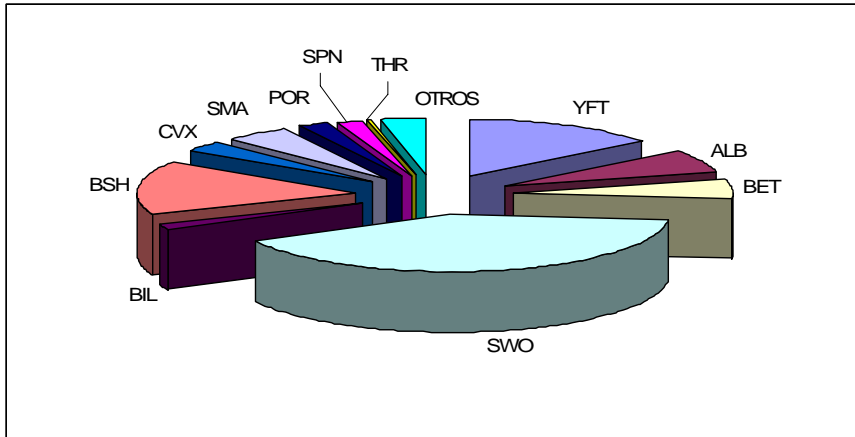


Figura 2. Porcentaje de captura (preliminar) comunicado por especie de la flota uruguaya (2006).

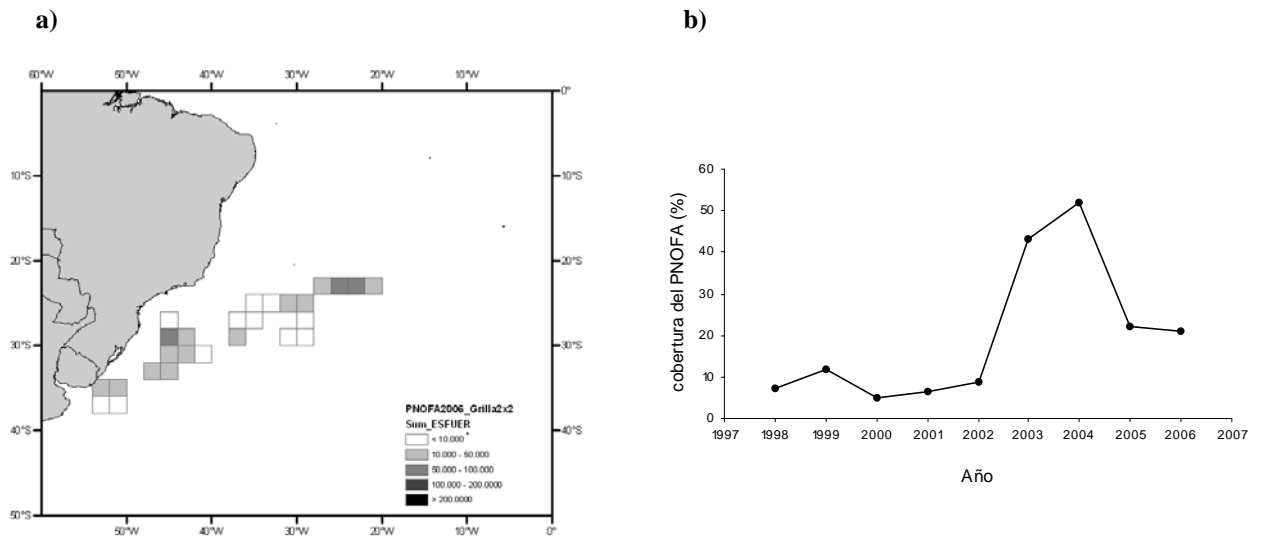


Figura 3. Esfuerzo en 2006 (a) y cobertura (b) del Programa Nacional de Observadores a bordo de la Flota Atunera (PNOFA), 2006.

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

Instituto Nacional de Investigaciones Agrícolas (INIA)
Instituto Nacional de la Pesca y Acuicultura (INAPESCA)

SUMMARY

In Venezuela, the National Institute of Agricultural Research (INIA) is the official research agency in charge of carrying out agricultural research programs, including those of the fishing sector. The National Institute of Fishing and Aquaculture (INAPESCA) is the organism responsible for the management and administration of the fishing resources. The research projects on tunas, billfishes, marlins, and sharks are carried out at the Center for Agriculture and Fishing Research of the States of Sucre and Nueva Esparta (CIAE-Sucre/N. Esparta), with headquarters in the city of Cumaná. This Center works in cooperation with diverse national and international institutions, such as INAPESCA, the University of Oriente, ICCAT and IRD.

RÉSUMÉ

Au Venezuela, l'Institut National de Recherches Agricoles (INIA), qui est l'agence officielle de recherche, est chargé d'exécuter les programmes de recherche agricole, y compris du secteur halieutique. L'Institut National de Pêche et d'Aquaculture (INAPESCA) est l'organisme responsable de la gestion et de l'administration des ressources halieutiques. Les programmes de recherche sur les thonidés, les makaires et les requins sont réalisés au Centre de recherches aquacoles des Etats Sucre et Nueva Esparta (CIAE-Sucre/N. Esparta), dont le siège est situé dans la ville de Cumaná, qui bénéficie de la coopération de diverses institutions nationales et internationales, comme l'INAPESCA, l'Université d'Oriente, l'ICCAT et l'IRD.

RESUMEN

En Venezuela, la agencia oficial de investigación, el Instituto Nacional de Investigaciones Agrícolas (INIA) es la encargada de ejecutar los programas de investigación agrícola, incluyendo el sector pesca. El Instituto Nacional de Pesca y Acuicultura (INAPESCA) es el organismo responsable de la ordenación y administración de los recursos pesqueros. Los proyectos de investigación sobre túnidos, marlines y tiburones se llevan a cabo en el Centro de Investigaciones Agropecuarias de los Estados Sucre y Nueva Esparta (CIAE-Sucre/N. Esparta), con sede en la ciudad de Cumaná, y cuenta con la cooperación de diversas instituciones nacionales e internacionales tales como el INAPESCA, Universidad de Oriente, ICCAT e IRD.

Parte I (Información sobre Pesquerías, Investigación y Estadísticas)

Sección 1: Información anual sobre pesquerías

1.1 Pesquerías de cerco

La flota pesquera venezolana está conformada por 30 embarcaciones de cerco, de las cuales ocho unidades faenaron en el océano Atlántico occidental y el resto en el océano Pacífico oriental (**Tabla 1**). El área de pesca de los cerqueros venezolanos está comprendida entre los 5° y 15° de longitud Norte y 51° y 71° de latitud oeste (**Figura 1**).

La desembarques realizados por la flota cerquera en 2006 fueron de 6.934 t, registrándose un aumento del 82,5% con respecto a 2005. El atún aleta amarilla (*Thunnus albacares*) representó el 64,0% de los desembarques de la flota, y el bonito (*Katsuwonus pelamis*) el 26,0%. Otras especies desembarcadas 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 10,0% de desembarques de la flota de cerco. El esfuerzo ejercido por estas embarcaciones en 2006 fue de 1.043 días de mar (**Tabla 2**).

1.2 Pesquerías de caña

La flota cañera venezolana estuvo conformada en 2006, por 8 unidades de pesca y faenan en las mismas áreas que las de la flota de cerco (**Figura 1**). Los desembarques realizados por esta flota fueron de 1.780,5 t, obteniéndose niveles inferiores en un 13,2% con respecto al año 2005. En esta flota las especies más importantes en la captura fueron el aleta amarilla (*T. albacares*), con 83,2%, y el listado (*K. pelamis*), con 11,3%; mientras que el atún ojo gordo (*T. obesus*) y el atún aleta negra (*T. atlanticus*), contribuyeron con el 5,5% de los desembarques totales de la flota, la cual ejerció un esfuerzo de 987 días de mar (**Tabla 3**).

1.3 Pesquerías de palangre

El número de embarcaciones de palangre pelágico venezolanas que operaron en el océano Atlántico en 2006 fue de 34 unidades. El área de pesca de estas embarcaciones se extiende desde los 11°-17°N y 61°-75°W en el mar Caribe y en la parte occidental del océano Atlántico 5°-17°N y 50°-60°W (**Figura 1**).

Los desembarques realizados por la flota de palangre pelágico fueron de 915,1 t. en 2006 (**Tabla 4**). El atún aleta amarilla (*T. albacares*) fue la especie más importante en los desembarques, representando el 64,8% de los mismos, mientras que para los otros túnidos como el atún albacora (*T. alalunga*) y el atún ojo gordo (*T. obesus*), el porcentaje de captura fue de 15,0%. Los marlines representaron el 7,9% de los desembarques de la flota, de los cuales los mayores porcentajes correspondieron al pez vela (*Istiophorus albicans*), con un 5,4%. Entre los tiburones los principales desembarques por especie fueron de tiburón azul (*Prionace glauca*), seguido de tiburón carite (*Isurus Oxyrinchus*).

Sección 2: Investigación y estadísticas

En Venezuela se llevan a cabo investigaciones sobre la pesquería de los grandes pelágicos; éstos incluyen los atunes, marlines y tiburones. En 2006, se continuó con los muestreos biológicos de las diferentes especies desembarcadas en puertos de los estados Sucre, Anzoátegui y Nueva Esparta, y con la recolección de datos de captura y esfuerzo de las diferentes pesquerías. Se muestrearon 16.636 ejemplares de túnidos y marlines provenientes de la flota de caña, cerco y de la artesanal con redes de enmalle y de los viajes con observador en palangreros pelágicos (**Tabla 5**). Se determinó la composición porcentual de los desembarques mediante muestreos multiespecíficos en puertos con la finalidad de corregir lo registrado en las bitácoras (**Tabla 6**).

Se realizó el control de la captura y el esfuerzo de las embarcaciones industriales que ejercen pesquerías en el Atlántico occidental bajo las modalidades de caña, cerco y palangre pelágico (**Tabla 7**). La flota industrial realizó 388 viajes, el porcentaje de cobertura global fue de 88,1%, mientras que por tipo de pesquería, los porcentajes fueron de: 88,1% en cerco, 86,3% en caña y 88,9% en palangre.

En el Programa de Investigación Intensiva sobre Marlines en Venezuela (PIIM-VZLA), auspiciado por la Comisión Internacional para la Conservación del Atún Atlántico (ICCAT), se continuó con el programa de observadores científicos en embarcaciones de palangre pelágico y con los muestreos en puertos de desembarques de marlines. En 2006 se efectuaron 16 cruceros con observadores científicos en embarcaciones palangreras industriales, con una cobertura de entorno al 7% del total de los viajes realizados por la flota. Se continuó el control de los torneos de pesca deportiva en el Club Playa Grande. Las actividades detalladas del programa se presentan en el documento SCRS/2007/121.

La actividad principal de muestreos en puerto de desembarques de marlines que ejecuta el PIIM-VZLA se realiza en Playa Verde (Litoral Central de Venezuela). La pesquería de marlines, en esta región, se realiza durante todo el año en temporada de luna nueva; la flota que opera en la misma está integrada por 30 embarcaciones con eslora comprendida entre 7 y 10 m, que utilizan como arte de pesca una red de trasmallo a la deriva de hasta 1.000 m de longitud.

Los desembarques totales realizados por esta flota fueron de 358 t, integrados fundamentalmente por peces de la familia Istiophoridae entre los cuales destacan el pez vela (*Istiophorus albicans*), con un 37,7% de los desembarques, y la aguja azul (*Makaira nigricans*), con el 33,0%. En menor proporción se capturan túnidos, mientras que los desembarques de tiburones de varias especies representan el 6,3% (**Tabla 8**).

Parte II (Implementación de la Ordenación)

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

El Instituto Nacional de la Pesca y Acuicultura INAPESCA es el órgano encargado de dictar las normas de conservación de los recursos hidrobiológicos en el país, a fin de asegurar una explotación pesquera sustentable y evitar el colapso de los stocks.

En el año 2003 se actualizó la regulación del año 2000 sobre la pesca y comercialización en todo el territorio nacional de las especies pertenecientes a las familias *Istiophoridae* y *Xiphiidae*, previo permiso expedido por el INAPESCA, a través de la Providencia Administrativa N° 69. Esta Providencia también establece la prohibición de la pesca en la zona de regulación demarcada para todas las embarcaciones distintas a las artesanales procedentes de Playa Verde, señala las características que deben tener las embarcaciones comerciales artesanales que empleen redes de ahorque en la zona bajo regulación e incorpora el registro en INAPESCA de las personas jurídicas que se dediquen a la comercialización de tales especies.

Durante el año 2006, el INAPESCA inició el proceso de convocatoria de empresas especializadas en servicios de control y monitoreo, a fin de proceder, de acuerdo con la normativa nacional, a realizar el proceso de licitación para el montaje de dicho sistema. No obstante lo anterior, debieron efectuarse diferentes rondas de presentaciones, con información variada, las cuales en la actualidad se encuentran en evaluación por parte del INAPESCA.

Tras la formulación del Plan Nacional de Acción para la Conservación de Tiburones en 2005, se han celebrado diferentes reuniones de coordinación con las instituciones nacionales de investigación a fin de avanzar en su implementación, partiendo de su promulgación en la *Gaceta Oficial*. Se estima que este Plan podrá entrar en operatividad durante 2008.

Se ha continuado con la labor de los Comités Locales de Seguimiento (CLOSE) de la pesquería de atún y especies afines, y recientemente entró en operatividad el Grupo de Expertos GERP-Atún, a fin de realizar la discusión de la aplicación de políticas a nivel regional, así como de los planes de desarrollo. En este sentido, se han analizado determinados casos de incorporación a la flota pesquera artesanal polivalente la cual podría, en determinada época del año, participar en la pesquería de atún con palangre. De igual manera, se prosigue con el control de las descargas en puerto, tal como lo dispone la Ley de Pesca y Acuicultura.

Tabla 1. Composicion de la flota industrial venezolana en el océano Atlántico, según la capacidad de carga, en el año 2006.

<i>Tamaño</i>	<i>LL</i>	<i>BB</i>	<i>PS</i>	<i>Total</i>	
0	50	25		25	
51	100	3	3	6	
101	150	5	2	7	
151	200	1	1	2	
201	250				
251	300		2	3	
301	350				
351	400				
401	450				
451	500				
501	550				
551	600		6	6	
601	650				
651	700				
701	750				
751	800				
801	850				
851	900		1	1	
Total		34	8	8	50

Tabla 2. Captura (t) de la flota cerquera venezolana en el océano Atlántico centro occidental durante el año 2006.

<i>Especie</i>	<i>Trimestre</i>				<i>Total</i>	<i>%</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>		
YFT	1.167,1	1.559,1	1.053,4	659,6	4.439,2	64,0
SKJ	431,7	974,9	0,7	398,8	1.806,1	26,0
FRI	84,2	62,9	0,0	4,0	151,1	2,2
ALB	113,6	12,9	0,0	35,1	161,6	2,3
BET	76,7	103,2	0,0	31,5	211,4	3,0
BLF	35,3	83,6	0,0	45,9	164,9	2,4
Total	1.908,6	2.796,6	1.054,1	1.174,9	6.934,2	100,0
Esfuerzo (días de mar)	221	250	231	341	1.043	

YFT = Aleta amarilla
 SKJ = Bonito listado
 FRI = Carachana

ALB = Albacore
 BET = Ojo gordo
 BLF = Aleta negra

Tabla 3. Captura (t) de la flota de caña venezolana en el océano Atlántico centro occidental durante el año 2006.

<i>Especie</i>	<i>Trimestre</i>				<i>Total</i>	<i>%</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>		
YFT	455,7	344,2	277,2	403,6	1.480,7	83,2
SKJ	24,8	105,6	8,9	62,0	201,4	11,3
FRI	0,0	0,0	0,0	0,0	0,0	0,0
ALB	0,0	0,0	0,0	0,0	0,0	0,0
BET	18,1	7,2	1,8	0,0	27,1	1,5
BLF	10,5	59,0	0,0	1,9	71,3	4,0
Total	509,1	516,0	287,9	467,5	1.780,5	100,0
Esfuerzo (días de mar)	267	193	279	248	987	

Tabla 4. Captura (t) de la flota palangrera atunera venezolana en el océano Atlántico durante el año 2006.

<i>Especie</i>	<i>Trimestre</i>				<i>Total</i>	<i>%</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>		
YFT	72	173,7	193,7	153,2	592,6	64,8
ALB	22,1	38,9	56	38,4	155,4	17,0
BET	17,8	1	3,1	1	22,9	2,5
BLF	0,2	0,9	2,1	0	3,2	0,3
WAH	3,1	2,5	2,1	1,5	9,2	1,0
DOL	0,7	0,5	0,8	0,3	2,3	0,3
WHM	3,4	0,7	0,6	0,9	5,6	0,6
BUM	3,4	3,7	3,7	1,7	12,4	1,4
SAI	4,6	5,9	30,7	8,2	49,4	5,4
SWO	5,7	3,6	5	0,5	14,8	1,6
SPF	1,4	1,7	1,5	0,3	4,8	0,5
CCP	0	2,1	1,1	0	3,1	0,3
ALV	0	0	0,2	0	0,2	0,0
BSH	7,4	1,8	0,2	0,5	9,9	1,1
SMA	3,4	2,1	0,4	0,4	6,3	0,7
SHK	6,2	0	0,1	0,2	6,4	0,7
OTH	11,9	2,1	1,8	0,8	16,6	1,8
Total	163,2	241,1	303	207,8	915,1	100,0
Esfuerzo (anzuelos)	521.466	454.882	361.591	270.300	1.608.239	

WAH	Peto	CCP	Tiburón macuira
DOL	Dorado	ALV	Tiburón zorro
WHM	A. blanca	BSH	Tiburón azul
BUM	Aguja azul	SMA	Tiburón carite
SAI	Pez vela	SHK	Tiburones varios
SWO	Pez espada	OTH	Otras especies
SPF	Pez lanza		

Tabla 5. Muestras biológicas de túnidos y especies acompañantes en la pesquería de túnidos en el océano Atlántico occidental, año 2006.

<i>Especie</i>	<i>BB</i>	%	<i>PS</i>	%	<i>LL</i>	%	<i>GN</i>	%	<i>Total</i>	%
YFT	253	71,3	862	24,5	2.330	47,6			3.445	20,7
SKJ	68	19,2	1634	46,5					1.702	10,2
FRI			409	11,6					409	2,5
ALB			46	1,3	1077	22,0			1.123	6,8
BET	15	4,2	402	11,4	304	6,2			721	4,3
BLF	19	5,4	164	4,7					183	1,1
WAH					211	4,3			211	1,3
SAI					188	3,8	4.759	60,5	4.947	29,7
BLF								0,0	0	0,0
BUM					171	3,5	1756	22,3	1.927	11,6
SWO					58	1,2	380	4,8	438	2,6
WHM					134	2,7	977	12,4	1.111	6,7
SPF					269	5,5			269	
DOL					56	1,1			56	0,3
SHK					94	1,9			94	0,6
Total	355	100,0	3517	100,0	4.892	100,0	7.872	100,0	16.636	100,0
%		2,1		21,1		29,4		47,3		100,0

BB = Caña
 PS = Cerco
 GN = Red de enmalle

Tabla 6. Composición porcentual, trimestral, de las capturas de túnidos de la flota atunera de superficie, caña (BB) y cerco (PS) en el océano Atlántico centro occidental. Año 2006.

<i>Especie</i>	<i>PS</i>				<i>BB</i>			
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
YFT	61,15	55,75	99,93	56,14	89,51	66,7		86,33
SKJ	22,62	34,86	0,07	33,94	4,88	20,47		13,27
FRI	4,41	2,25		0,34				
ALB	5,95	0,46		2,99				
BET	4,02	3,69		2,68	3,55	1,4		
BLF	1,85	2,99		3,91	2,06	11,43		0,4

Tabla 7. Campañas de embarcaciones industriales atuneras en el océano Atlántico centro occidental en el año 2006.

<i>Mes</i>	<i>PS</i>		<i>BB</i>		<i>LL</i>		<i>Total</i>	
	<i>TR</i>	<i>C</i>	<i>TR</i>	<i>C</i>	<i>TR</i>	<i>C</i>	<i>TR</i>	<i>C</i>
Enero			6	6	2	1	8	7
Febrero	4	4	10	8	16	15	30	27
Marzo	3	3	12	11	16	16	31	30
Abril	3		6		19	17	28	17
Mayo	3	3	12	11	21	20	36	34
Junio	5	4	11	10	24	24	40	38
Julio	3	2	10	7	25	18	38	27
Agosto	5	5	11	11	23	24	39	40
Septiembre	2	2	11	11	24	22	37	35
Octubre	4	4	10	10	16	15	30	29
Noviembre	3	3	9	9	21	17	33	29
Diciembre	7	7	12	10	19	12	38	29
Total	42	37	120	104	226	201	388	342
% cobertura	88,1		86,7		88,9		88,1	

TR = Total realizadas
C = Controladas.

Tabla 8. Captura (t) y esfuerzo (viajes) en la pesquería artesanal de peces de pico con redes de enmalle en el litoral central en el año 2006.

<i>Especie</i>	<i>Trimestre</i>				<i>Total</i>	<i>%</i>
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>		
BUM	36,3	35,4	12,3	34,1	118,2	33,0
WHM	1,4	2,2	9,2	8,0	20,7	5,8
SAI	11,7	42,6	39,5	41,2	135,0	37,7
SWO	1,5	2,4	1,8	1,0	6,8	1,9
DOL	3,9	4,1	3,8	1,9	13,7	3,8
SHK	5,2	5,8	4,9	6,7	22,7	6,3
YFT	0,3	1,0	0,2	0,3	1,8	0,5
ALB	0,9	1,2	0,8	0,8	3,6	1,0
BON	4,7	4,3	4,3	4,3	17,5	4,9
FRI	4,3	3,1	3,5	3,1	14,0	3,9
WAH	1,0	1,2	0,8	1,1	4,1	1,1
Total	71,2	103,3	81,2	102,4	358,0	100,0
Esfuerzo (viajes)	814	981	991	1.193	3.979	

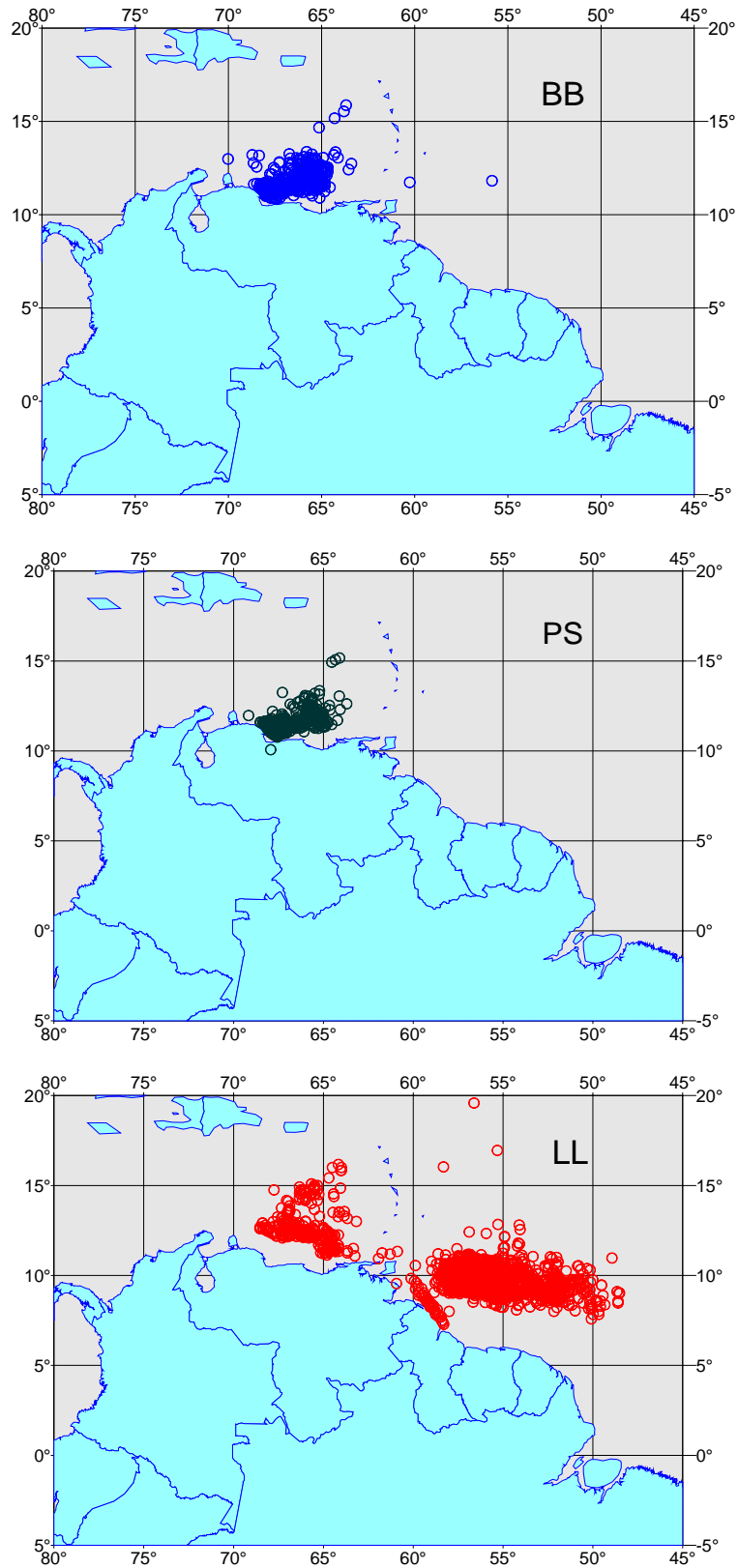


Figura 1. Áreas de pesca de las embarcaciones industriales venezolanas en 2006 (BB = caña, PS = cerco y LL = palangre).

**REPORTS OF OBSERVERS FROM COOPERATING
NON-CONTRACTING PARTIES, ENTITIES OR FISHING ENTITIES /
RAPPORTS DES OBSERVATEURS DES PARTIES, ENTITES OU ENTITES 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 Agriculture¹

SUMMARY

Chinese Taipei started fishing tuna and tuna-like species in the Atlantic Ocean in the early 1960s. The number of longline fishery vessels declined from 201 in 1996 to 142 in 2005. In light of Rec. 05-02, the number of fishing vessels authorized to fish in the Atlantic Ocean in 2006 was set at the level of 75 in total. There was also a decline in the overall catches by the fishery, from approximately 52,631 t in 1997 to 23,686 t in 2006. The fishing fleets targeted mainly albacore, bigeye and yellowfin, which constituted more than four-fifths of the total annual catch of tunas in the recent years. Chinese Taipei took several new measures in 2006 to further improve its statistical data collection system. Some of those improvements were: the establishment of a port sampling inspection system, a daily e-logbook reporting system, and the continuation of the project of dispatching on-board observers. With the implementation of those measures, more data and samples have become available. A number of research studies have been undertaken and financed by the fishery authority of Chinese Taipei. These included stock assessments, DNA studies on bigeye, swordfish, and albacore, shark by-catch estimation, incidental catch rate of seabirds and sea turtles. To fulfill the implementation of ICCAT conservation and management measures, Chinese Taipei firmly put a limit on the number of fishing vessels, fishery catch limits and species minimum sizes into execution. Besides, measures to reduce by-catch species have been applied to ensure its conservation determination and efforts. To inspect and manage fishery activities, Chinese Taipei also implemented the following strategic programs to ensure the effectiveness of ICCAT conservation and management measures and to prohibit IUU fishing, including the management standards for larger-scale tuna longline vessels, VMS system, observer program, restriction on the export of fishing vessels, port inspection in two designated ports (Las Palmas and Cape Town), the continuation of dispatching a patrol boat to the area of the Atlantic Ocean, close cooperation with import or market States, and conducting a program to reduce fishing capacity. Chinese Taipei has also strictly abided by the guidelines and requirements as established in the ICCAT Regional Observers Program for transshipment at sea.

RÉSUMÉ

Le Taïpei chinois a commencé à pêcher des thonidés et des espèces apparentées dans l'océan Atlantique au début des années 1960. Le nombre de palangriers a été ramené de 201 en 1996 à 142 en 2005. Compte tenu de la Rec. 05-02, le nombre de navires de pêche autorisés à pêcher dans l'océan Atlantique en 2006 a été établi au niveau de 75 au total. Une chute a également été observée dans les captures globales de la pêcherie, passant de 52.631 t environ en 1997 à 23.686 t en 2006. Les flottilles de pêche ont essentiellement ciblé le germon, le thon obèse et l'albacore, qui ont constitué plus des quatre-cinquièmes de la prise annuelle totale de thonidés de ces dernières années. En 2006, le Taïpei chinois a pris plusieurs mesures nouvelles destinées à améliorer davantage son système de collecte des données statistiques. Certaines de ces améliorations étaient l'établissement d'un système d'inspection de l'échantillonnage au port, un système de déclaration journalière des carnets de bord électroniques et

¹No. 1, Fishing Harbour North 1st Rd., Kaohsiung.

poursuite du projet d'envoi d'observateurs à bord des navires. Avec la mise en œuvre de ces mesures, davantage de données et d'échantillons sont devenus disponibles. Un certain nombre de programmes de recherche ont été entrepris et financés par l'Autorité de la pêche du Taïpei chinois. Il s'agit, entre autres, d'évaluations de stocks, d'études sur l'ADN du thon obèse, de l'espadon et du germon, l'estimation des prises accessoires de requins et le taux de capture accessoire des oiseaux de mer et des tortues marines. Afin de respecter la mise en œuvre des mesures de conservation et de gestion de l'ICCAT, le Taïpei chinois a appliqué des limites strictes au nombre de navires de pêche, des limites de capture aux pêcheries et des tailles minimum par espèces. En outre, des mesures visant à réduire la prise accessoire d'espèces ont été appliquées afin de renforcer les efforts de conservation du Taïpei chinois. Afin d'inspecter et de gérer les activités de pêche, le Taïpei chinois a également mis en œuvre les programmes stratégiques suivants visant à garantir l'efficacité des mesures de conservation et de gestion de l'ICCAT et à interdire la pêche IUU, à savoir des normes de gestion pour les grands palangriers thoniers, le système VMS, le programme d'observateurs, la restriction d'exportation des navires de pêche, l'inspection au port dans deux ports désignés (Las Palmas et Le Cap), le maintien de l'envoi d'un patrouilleur dans la zone de l'océan Atlantique, l'étroite coopération avec les Etats d'importation ou de marché et la réalisation d'un programme de réduction de la capacité de pêche. Le Taïpei chinois a, en outre, rigoureusement respecté les instructions et les exigences stipulées dans le Programme régional d'observateurs de l'ICCAT aux fins du transbordement en mer.

RESUMEN

Taipei Chino empezó a pescar túnidos y especies afines en el océano Atlántico a principios de los sesenta. El número de buques de la pesquería de palangre ha ido descendiendo desde 201 en 1996 hasta 142 en 2005. Con arreglo a la Recomendación de ICCAT sobre el control de la pesquería de patudo atlántico de Taipei Chino [Rec. 05-02], en 2006 se estableció en 75 unidades en total el número de buques pesqueros autorizados a pescar en el océano Atlántico. También se produjo un descenso de las capturas globales por parte de la pesquería, desde aproximadamente 52.631 t en 1997 hasta 23.686 t en 2006. Las flotas pesqueras dirigieron su actividad sobre todo al atún blanco, patudo y rabil, especies que en los últimos años han respondido de más de cuatro quintos de las capturas totales anuales de túnidos. Taipei Chino tomó varias medidas nuevas en 2006 para continuar mejorando su sistema de recopilación de datos estadísticos. Algunas de estas mejoras fueron: el establecimiento de un sistema de inspección y muestro en puerto, el sistema de comunicación diaria de los cuadernos de pesca electrónicos y la continuación del proyecto de embarque de observadores. Con la implementación de estas medidas, se dispone ahora de más datos y muestras. Se han emprendido una serie de proyectos de investigación que han sido financiados por las autoridades pesqueras de Taipei Chino. Entre estos proyectos cabe destacar: las evaluaciones de stocks, los estudios de ADN de patudo, pez espada y atún blanco, la estimación de la captura fortuita de tiburones y la tasa de captura incidental de aves marinas y tortugas marinas. Para implementar las medidas de conservación y ordenación de ICCAT, Taipei Chino ha aplicado una limitación estricta en el número de buques pesqueros, límites de captura de las pesquerías y tallas mínimas de las especies. Además, se han aplicado medidas con el objetivo de reducir la captura fortuita y reforzar los esfuerzos de conservación de Taipei Chino. Para inspeccionar y gestionar las actividades pesqueras, Taipei Chino ha implementado también los programas estratégicos siguientes para garantizar la eficacia de las medidas de conservación y ordenación de ICCAT y prohibir la pesca ilegal, no declarada y no reglamentada (IUU), entre ellos normas de ordenación para los palangreros más grandes, sistema de seguimiento de buques (VMS), programa de observadores, restricción para exportar buques de pesca, inspección en puerto en dos puertos designados (Las Palmas y Ciudad del Cabo), continuación del envío de buques patrulla a la zona del océano Atlántico, estrecha cooperación con Estados importadores y de mercado, así como continuación del programa de reducción de la capacidad pesquera. Taipei Chino ha acatado también de forma estricta las directrices y requisitos del Programa Regional de Observadores de ICCAT para los transbordos en el mar.

Part I (Information on fisheries, research and statistics)

Section 1: Annual Fisheries Information

1.1 General overview

Chinese Taipei started fishing tuna and tuna-like species in the Atlantic Ocean in the early 1960s. At that time, the fishery targeted albacore and yellowfin in Atlantic Ocean. Since then, the development of deep longline operations in the late 1980s in the tropical Atlantic Ocean, some of the fishing effort has shifted to target mainly bigeye tuna. Albacore, bigeye and yellowfin comprised more than four-fifths of the annual catch in recent years (**Table 1**).

Bigeye and yellowfin are mainly caught in the area between 15°N and 15°S. Higher concentrations of albacore have been observed in the area North of 15°N and in the area South of 15°S (**Figure 1**). Swordfish is mainly a by-catch species of the fishery.

The number of vessels in the longline fishery has declined from 201 in 1996 to 142 in 2005. As a special measure made in light of ICCAT Recommendation 05-02, 15 vessels were authorized to target bigeye tuna and 60 fishing vessels were authorized to target albacore. In other words, the number of fishing vessels authorized to fish in the Atlantic Ocean in 2006 was 75 in total. Simultaneously, as a result of this derogation of the normal catch limit, there has been a decline in the overall catches by the fishery, there has been a decline in the overall catches by the fishery, from about 52,631 t in 1997 to 23,686 t in 2006 (**Table 1**). More detailed information on the major tuna species is described as follows:

1.2 Albacore

In the Atlantic Ocean, two stocks of albacore, separated by 5°N, are subject to fishery management. Chinese Taipei longliners fish albacore all year round. The annual catch of South Atlantic albacore fluctuated between 10,000 t and 18,000 t in the last decade, while relatively lower catches of 10,730 t in 2005 and 12,293 t in 2006 were observed, due to a decrease in fishing effort. The catch of North Atlantic albacore in 2006 amounted to 2,357 t, similar to the previous year's catch. The total catch of the two stocks combined in 2006 was estimated to be 14,650 t, an increase of 1,380 t from 2005.

1.3 Bluefin tuna

The Chinese Taipei longline fleet has been targeting the eastern Atlantic Ocean and Mediterranean bluefin stock on a seasonal basis since 1993, with little change in the fishing pattern, in terms of seasonal (from April to June every year) and operational mode. The catch of bluefin tuna was 277 t in 2005, and declined dramatically to 9 t in 2006, with only one vessel remaining in seasonal operation in 2006.

1.4 Tropical tunas

The catches of bigeye tuna and yellowfin tuna in 2006 were estimated to be about 2,965 t and 1,260 t, respectively, showing a drastic decrease of 9,019 t and 2,336 t, respectively, from that of the previous year (11,984 t and 3,596 t in 2005). As mentioned above, this is due to the special limit put on the number of fishing vessels authorized to fish for the year 2006, taking into account Rec. 05-02.

1.5 Swordfish

Following the reduction of catch limits under the sharing arrangement as adopted by ICCAT in 1998, the catch of swordfish also reduced. The lesser number of vessels authorized to fish for target species caused a sharp reduction in the catch of swordfish. The preliminary estimated catch of swordfish was 549 t in 2006, comprised of 172 t from the North Atlantic Ocean and 377 t from the South Atlantic Ocean.

1.6 Billfish species

Billfishes are by-catch species in the fishery of Chinese Taipei. The preliminary catch estimates of vessels fishing in the Atlantic Ocean for white marlin, blue marlin and other marlins were 44 t, 99 t and 105 t, respectively, in 2006.

Section 2: Research and Statistics

2.1 Data collection and processing system

Routine collection and compilation of data for tuna and tuna-like species has been conducted for all longline fisheries in the Atlantic Ocean. The Task I and Task II data for all tuna and tuna-like species under the competence of ICCAT, as well as the number of fishing vessels, have been reported to the ICCAT Secretariat in accordance with ICCAT requirements.

For the collection of catch data, in 2006 bigeye fishing vessels were required to submit a daily catch report to the Fisheries Agency in accordance with Recommendation 05-02, which was provided through VMS. Chinese Taipei also required 100% deployment of compliance observers on board and port inspections to verify the data.

Task I data were estimated based on five sources of information: (1) traders' sales records, (2) fishing vessels' sales settlement, (3) certified weight reports of Shin Nihon Kentei Kaisha (New Japan Surveyors and Sworn Measures Association, NJSSMA), (4) data from the tuna association, and (5) Statistical Documents data. Data from traders' sales records and verification of fishing vessels' sales settlement are of particular importance for the estimate of Task I data for albacore. Data sources (3)-(5) are used as the main basis for the estimate of Task I for bigeye, yellowfin and the other major tuna and tuna-like species. Data source (3) was replaced by similar landing records from the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) since 2004.

As for Task II catch and effort data, all the data are compiled based on logbooks, which the fishermen are required to submit to the authorities. In the logbooks, the information required includes daily positions, number of hooks deployed, catch by number, and weight by species. All the logbooks are first verified for accuracy and validity before the data are keying in. The Task I data is then used as reference in the production of the Task II data.

As for Task II size data, 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 Chinese Taipei scientists created the catch-at-size database based on these size data, in conjunction with Task I and II catch data.

2.2 Research

Research results were presented at the regular meetings and inter-sessional working group meetings of the SCRS. Following the implementation of the observer program, more data and biological samples were made available for research. Currently, research relating to tunas includes: stock assessments, DNA studies on bigeye, swordfish, and albacore (and other incidental catch species), shark by-catch re-estimation, and the incidental catch rate of sea birds and sea turtles.

For research work on a global basis, budgets of about US\$910,000 and \$780,000 were allocated for 2003 and 2004, respectively. These were increased to US\$ 940,000 and \$1,400,000 for 2005 and 2006, respectively.

The research results were presented at the regular meetings and inter-sessional working group meetings of the SCRS. Chinese Taipei scientists presented the following scientific papers at recent SCRS meetings:

- Standardized catch per unit effort of bigeye tuna in the Atlantic Ocean for the Taiwanese longline fishery by general additive model. (SCRS/2007/063)
- Summary of bigeye tuna catch status of the Chinese Taipei longline fleet in the Atlantic Ocean. (SCRS/2007/068)
- Preliminary estimation of length-weight relationship of Atlantic bigeye tuna from Taiwanese observer data. (SCRS/2007/088)
- Standardized northern Atlantic albacore (*Thunnus alalunga*) CPUE, from 1967 to 2005, based on Taiwanese longline catch and effort statistics. (SCRS/2007/093)
- Standardized CPUE of South Atlantic albacore (*Thunnus alalunga*) based on Taiwanese longline catch and effort statistics dating from 1967 to 2005. (SCRS/2007/094)
- Assessment of the South Atlantic albacore resource based on 1959-2005 catch and effort statistics from ICCAT. (SCRS/2007/095)
- Factors, predicted by GAM procedures, dominating South Atlantic albacore (*Thunnus alalunga*) distribution revealed by 1982-2005 Taiwanese longline catch and effort data. (SCRS/2007/096)

- Incidental catches of seabirds in the Atlantic Ocean from Taiwanese observer data of 2002-2005. (SCRS/2007/031)
- Abstracts of Taiwan's National Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (NPOA-Seabirds). (SCRS/2007/032)
- Brief introduction to the fisheries data improvement program of Chinese Taipei. (SCRS/2006/168)
- Progress report on review of Taiwanese fisheries data. (SCRS/2006/167)
- Standardization of South Atlantic swordfish by-catch rate for Taiwanese longline fleet. (SCRS/2006/120)
- Age and growth of South Atlantic albacore – a revision after the revelation of otolith daily ring counts. (SCRS/2006/110)
- Morphology of rings on otolith and spine characters from North Atlantic albacore of 40-44 cm fork length. (SCRS/2006/109)
- Updated white marlin and blue marlin catch rates from the Taiwanese longline fishery in the Atlantic. (SCRS/2006/102)
- Preliminary analysis of standardized catch per unit effort of bigeye tuna (*Thunnus obesus*) caught by Taiwanese longline fleets in the Atlantic Ocean by general additive model. (SCRS/2006/050)
- Identification of Atlantic swordfish stock structure inferred by mitochondrial control region DNA sequence characters. (SCRS/2006/026)

2.3 Data improvement programs

For improvement of the statistical system, Chinese Taipei has taken the following measures to collect the fishery-independent data. When more data from various sources are available, crosschecking and reviewing will be made on the Task II catch/effort data and size data to improve the accuracy of scientific information.

2.4 Port sampling

Since most of far seas longliners of Chinese Taipei unload their catches at overseas ports or carry out transshipments at sea, 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 three foreign ports in September 2005 during the fishing seasons. For the Atlantic Ocean, the pilot sampling program was conducted in September 2005 in Cape Town. Since 2006, to enable carrying out regular port samplings, cooperation has been established with canneries in Port of Spain, Trinidad and Tobago, to collect samples and size measurements at the cannery pier side at time of offloading.

2.5 Observer program

The first pilot observer program was launched in 2001 where focus was put in the Indian Ocean. In 2002-2003 the program was extended to cover all three oceans, with deployment of two observers to each ocean, and the number of observers increased to nine in 2004. For the Atlantic Ocean, there were four observers in 2004, which was increased to five in 2005, of which three were placed on board bigeye vessels and the remaining two on board albacore vessels.

In compliance with the requirement of Recommendation [Rec. 05-02], in 2006 there was 100% compliance observer coverage on board the 15 LSTLVs targeting bigeye tuna in the Atlantic and the compliance observer also collected scientific data. Furthermore, four scientific observers were deployed on board vessels targeting albacore to collect scientific data.

The observers were required to collect fishery data and size measurements on target species and by-catch species. Biological samples of bigeye, albacore, swordfish and by-catch/incidental catch species were also collected. The annual budget input for the observer program was increased to about US\$330,000 in 2004, from US\$180,000 in 2003. The budgets for 2005 and 2006 amounted to US\$545,000 and \$750,000, respectively.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

3.1 Limit on the number of fishing vessels

3.1.1 Bigeye tuna [Rec. 04-01]; [Rec. 05-02]

Chinese Taipei limited the number of fishing vessels catching bigeye tuna to 98 in 2005, in compliance with the *Recommendation by ICCAT on the Bigeye Tuna Conservation Measures* [Rec. 04-01]. In order for its fleet size to be commensurate with its fishing possibilities, Chinese Taipei implemented a two-phase vessels reduction program in 2005 and 2006. The number of vessels was reduced to 76 by the end of 2005. In 2006, the number of fishing vessels authorized to fish bigeye tuna was 15, in accordance with Recommendation [Rec. 05-02]. In 2005, 19 albacore fishing vessels were shifted to target bigeye tuna and 42 vessels were called back to stay in homeport for a fishery lay-off.

3.1.2 Northern albacore [Rec. 98-08]

In accordance with the 1998 *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 2006 and the list was submitted to ICCAT on 20 December 2005.

3.2 Catch limits and minimum sizes

In accordance with the relevant ICCAT Recommendations, catch limits on northern and southern albacore, bigeye tuna, eastern bluefin tuna, northern and southern swordfish, blue marlin and white marlin have been set. Measures to prohibit the catch of undersized yellowfin tuna, bigeye tuna, bluefin tuna and swordfish were also enforced.

As for 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 the requirement of the adjustment of underage/overages. Catch estimates, together with the status of overages/underages in 2007, are provided in the Compliance Table.²

3.2.1 Bigeye tuna [Rec. 05-02]

For 2006, the catch of bigeye tuna by Chinese Taipei was limited to 4,600 t in accordance with Recommendation [05-02]. To ensure that the catch limit of bigeye tuna did not exceed the limit, and to minimize the chances of overuse of the catch limit, the Fisheries Agency provided each vessel with an individual non-transferable catch limit. Once the individual vessel catch limit is exhausted, the vessel must return to its home port. In order that the fleet size can be commensurate with the availability of global fishing possibilities, Chinese Taipei implemented a vessels reduction program on its global tuna fishing fleet for a target of scrapping 160 large-scale longline vessels in 2005-2006, including 28 vessels from Atlantic Ocean.

Measures were taken to require fishermen to comply with the minimum size of 3.2 kg for bigeye tuna caught in this region.

3.2.2 Bluefin tuna [Rec. 02-08]; [Rec. 04-07]

According to *Recommendation by ICCAT Concerning a Multi-year Conservation and Management Plan for Bluefin Tuna in the East Atlantic and Mediterranean* [Rec. 02-08], fishing possibilities to Chinese Taipei based on the share of 1.5% (480 t) would only be activated in a given year when the level of underages has been utilized. In addition, the same recommendation has restricted vessels from fishing western Atlantic bluefin tuna. A size limit of 10 kg on the bluefin tuna catch in the Mediterranean Sea [Rec. 04-07] was applied. Appropriate measures have been taken by the Fisheries Agency to ensure compliance with the ICCAT recommendation.

²Available from the Secretariat.

3.2.3 Northern albacore [Rec. 03-06]

According to *Recommendation by ICCAT on North Atlantic Albacore Catch Limits* [Rec. 03-06], a catch limit of 4,453 t was set for Chinese Taipei.

3.2.4 Southern albacore [Rec. 04-04]

According to the *Recommendation by ICCAT on the Southern Albacore Catch Limit for 2005, 2006 and 2007* [Rec. 04-04], a catch limit of 30,915 t of southern albacore was set for all countries fishing for the stock. There was no agreement on the allocation of catch quota for each individual country. As mentioned above, following the decrease of fishing effort in the fishery, the catch of South Atlantic albacore also declined drastically. Overage of the catch limit was not likely to happen.

3.2.5 North swordfish [Rec. 02-02]

According to the *Recommendation by ICCAT Relating to the Rebuilding Program for North Atlantic Swordfish* [Rec. 02-02], Chinese Taipei was allocated a quota of 310 t in 2006. 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.

3.2.6 South swordfish [Rec. 02-03]; [Rec. 03-05]

According to *Recommendation by ICCAT on the South Atlantic Swordfish Catch Limits* [Rec. 02-03], and the *Resolution by ICCAT to Authorize a Temporary Catch Limit Adjustment in the South Atlantic Swordfish Fishery* [Res. 03-05], Chinese Taipei was allocated a quota of 780 t in 2006. Domestic measures were taken to ensure compliance with these recommendations.

3.2.7 Atlantic white marlin and blue marlin [Rec. 00-13]; [Rec. 02-13]

In 2002, ICCAT adopted a recommendation to amend the plan to rebuild Atlantic white marlin and blue marlin populations [Rec. 02-13]. The recommendation requested Chinese Taipei to further reduce its catch of Atlantic white marlin to 186.8 t and its catch of blue marlin to 330 t in 2006. Domestic measures were taken to ensure compliance with these recommendations.

3.3 Measures to reduce incidental catch of sea turtles, sea birds and sharks [Recs. 03-11, 02-14, 95-02, 01-11, 03-10, 04-10, 06-10]

- To disseminate the information of seabird conservation, pamphlets and leaflets were distributed to fishermen, fishery industries and domestic conservation groups for promoting the concept of conservation of sea turtle, seabird and sharks in recently years.
- Data collection: observers were placed on distant water tuna longline vessels to record the length, species and related information of by-catch since 2000.
- In 2006, Chinese Taipei established the National Plan of Actions (NPOA) for reducing catch of seabirds in longline fisheries and management and conservation of sharks.

3.4 Closed seasons [Rec. 93-07]

In accordance with the 1993 ICCAT Recommendation [Rec. 93-07], domestic regulations were implemented to prohibit longline vessels to fish for bluefin tuna in the Mediterranean from June 1 to July 31.

3.5 Ban on imports

According to ICCAT Resolutions/Recommendations [Rec. 02-17, Rec. 03-18], imports of products of bluefin tuna, swordfish, and bigeye tuna caught from those countries under trade restrictive measures were prohibited.

Pursuant to the *Resolution by ICCAT Concerning a Management Standard for the Large-Scale Tuna Fishery* [Res. 01-20], the Report of Implementation of the ICCAT Management Standard for Large-Scale Tuna Longline Vessels is herewith attached as **Table 2**.

Likewise, in accordance with the *Recommendation by ICCAT for the Establishment of an ICCAT Record of Vessels over 24 Meters Authorized to Operate in the Convention Area* [Rec. 02-22], a list of vessels larger than 24 meters length overall that were authorized to fish for tuna and tuna-like species in the ICCAT Convention Area was submitted to ICCAT Secretariat.

3.6 Vessel Monitoring System (VMS) [Rec. 04-11]

According to the *Recommendation by ICCAT Concerning Minimum Standards for the Establishment of a Vessel Monitoring System in the ICCAT Convention Area* [Rec. 03-14] and *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 six hours.

To ensure uninterrupted reporting of their positions and to prevent fishing vessels from making excuse for reason of malfunction of VMS, all fishing vessels and transport vessels operating in the Atlantic have been required to install a spare set of VMS since 2005, to make immediate replacement in case of machine break down. Staff at the land based monitoring center was instructed to closely monitor the activities of vessels through VMS reporting.

3.7 Observer Program

In 2006, 100% compliance observer coverage has been placed onboard the 15 LSTLVs targeting bigeye tuna in accordance with *Recommendation* [Rec. 05-02]. The functions of the compliance observers were to record daily fishing activities and the catch to ensure their activities comply with ICCAT related recommendations, and in addition, the compliance observers served the function of collection of scientific data on the fishery.

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

In accordance with *Resolution by ICCAT Calling for Further Actions Against Illegal, Unregulated, and Unreported Fishing Activities by Large-Scale Tuna Longline Vessels in the Convention Area* [Res. 99-01], and the *Supplemental Resolution by ICCAT to Enhance the Effectiveness of the ICCAT Measures to Eliminate Illegal, Unregulated, and Unreported Fishing Activities by Large-Scale Tuna Longline Vessels in the Convention Area* [Res. 00-19], forty-eight (48) flag of convenience (FOC) vessels that were built in our ship yard completed registration in our registry, thirteen (13) of them were operating in Atlantic Ocean. List of vessels that completed the change of re-registration was reported to the Secretariat on July 7, 2003.

To prevent illicit activities happening again, the Fisheries Agency has been exerting its greatest efforts in cracking down any violation under the applicable legal framework. Despite the challenge to the Fisheries Agency in conducting thorough investigation of past fish laundering activities for appropriate enforcement action, efforts sought by the Agency included analyzing the catches of those vessels which were considered to be abnormal based on the VMS report against the catch of suspected vessels, i.e., those exceeding the normal catch rate. Between 2004 to 2006, from various information sources and based on the findings of the Fisheries Agency, administrative penalty was imposed on some 30 vessels which have been found suspicious of overuse of quota or unauthorized transshipments. For cases of severe offence, in addition to administrative penalties of suspension of fishing license for 6 six months, they were subject to criminal investigation and prosecution.

3.9 Restriction in the export of fishing vessels

Chinese Taipei promulgated "Regulations on Permission for the Export of Fishing Vessels" on June 29, 2005. According to the said Regulations, building of new tuna purse seine fishing vessel or tuna longline fishing vessel in Chinese Taipei for export requires proof that the new vessel is to replace a same type and tonnage vessel on the positive list of vessel in the region. Export of new built fishing vessel in Chinese Taipei will not be permitted where such export will be in contravention to the conservation measures adopted by the RFMOs, or 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 regulation, exports of fishing vessels built in Chinese Taipei will in no way result an increase in the fishing capacity in any region.

3.10 Prior approval for operation of foreign flag vessels by Chinese Taipei nationals

To demonstrate the determination of the government in eliminating IUU fishing activities, a bill has been drafted to prevent nationals to engage in IUU fishing activities. A draft 'Act on Regulating Nationals Who Invest in or Operate Foreign-flagged Fishing Vessels' has been approved by the Cabinet in May 2, 2007 and submitted to the parliament for examination. The draft Act establishes the principle that a Chinese Taipei resident investing in or operating foreign-flagged fishing vessels are required to comply with regulations prescribed by the authority, including those stipulated in light of the conservation measures adopted by relevant international fisheries organizations. The legislation of such a law would be a big step forward in our measures to prevent illegal and regulated fishing activities operated by Chinese Taipei nationals.

3.11 Transshipment

In accordance with Recommendation [Rec. 05-02], no at-sea transshipment was permitted for the 15 bigeye vessels, and transshipments and landings of the catch of these 15 vessels were carried out at the two designated ports (Cape Town and Las Palmas), under the supervision of CT and port state inspectors. In 2006, 88 in-port transshipments were made by bigeye vessels, and in-port and at-sea transshipments made by albacore vessels were 122 and 98, respectively.

3.12 Statistical Document [Recs. 03-19, 03-09, 01-21, 97-04, 94-05]

In accordance with ICCAT Recommendation, regulations on the application of Bluefin Tuna Statistical Document were implemented as from 1994. Furthermore, the system for issuing "ICCAT Bigeye tuna Statistical Document" in accordance with ICCAT recommendation was conducted as from July 1, 2002. In 2006, about 158 Statistical Documents were issued for the trading of bigeye tuna, bluefin tuna and swordfish caught in the Atlantic Ocean. Among which, 61.6% was issued for bigeye tuna, 37.1% for swordfish and 1.3% for bluefin tuna. Most of the catch was exported to Japan (89%).

Section 4 Inspection Scheme and Activities

4.1 Inspections

In accordance with Recommendation 05-02, all 15 bigeye fishing vessels were required to enter two designated ports (Las Palmas and Cape Town) every 3 month for port inspection by officials of port state and Chinese Taipei's Fisheries Agency. Chinese Taipei has sent inspection teams to Las Palmas and Cape Town in January, April, July, October and December 2006 to inspect the bigeye vessels in port.

4.2 Patrol boat

In 2006 Chinese Taipei dispatched a patrol boat to make patrol cruising in the area of the Atlantic Ocean where the presence of our vessels was most frequent and conducted boarding and inspection on a number of vessels.

4.3 Close cooperation with import or market States

As for the market states cooperation, there has been general view that cooperation between the market states and the flag states would be helpful to double check the data. Chinese Taipei has cooperated with a number of market states to verify its catch data. Some of our contacts can be illustrated as the following:

4.3.1 Japan

Japan is the largest market for CT's frozen tuna. Chinese Taipei started to collect trade data through the reports of Shin Nihon Kentei Kaisha (New Japan Surveyors and Sworn Measures Association, NJSSMA) since 1993. In 2004, the landing records provided by the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) were used to replace the weight report from NJSSMA. In addition, regular contacts have been made between Fisheries Agency of Chinese Taipei and Fisheries Agency of Japan to avoid incidents of forgery or misinformation in statistical documents.

4.3.2 United States

As a main fisher for albacore fishery, and one of the important suppliers of albacore to United States, Chinese Taipei has made regular contacts with the authorities of the United States to obtain data of albacore imported by

the US. With the assistance of the US side, these data are in the process of verification by both sides.

4.3.3 Trinidad and Tobago

Port of Spain, Trinidad and Tobago is one of the important landing ports of albacore and other tunas in the North Atlantic Ocean. Chinese Taipei has contacted the government of Trinidad and Tobago requesting landing information of albacore with positive feedback from their fisheries authorities. It is believed that such information will be helpful to the data verification.

4.3.4 Singapore

Singapore is an importer and re-exporter of Chinese Taipei tuna. To verify these data, Chinese Taipei has also contacted the government of Singapore and obtained the relevant information. Their data appear to be consistent with ours, and the process will continue in the future.

Section 5. Others Activities

5.1 Fishing Capacity Reduction Program

In order that the fleet size can be commensurate with the availability of global fishing possibilities, Chinese Taipei implemented a vessel reduction program by two phases. In phase one, which was completed in 2005, 59 LSTLVs were scrapped. Phase two involves demolishing of further 101 LSTLVs in 2006, 51 of which were scrapped and 50 of which sunk in our territorial waters to be used as artificial reefs, serving as nursing grounds for restoring fish stocks for our coastal fisheries.

5.2 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 an important user of the tuna stocks in the Atlantic Ocean, Chinese Taipei has been making voluntary contributions to ICCAT since 1998. From 1998 to 2004, Chinese Taipei had made voluntary contributions of US\$ 461,560 to ICCAT. The amount of US\$130,000 was contributed to the ICCAT in 2006. In 2007, Chinese Taipei made voluntary contribution of €100,000 to ICCAT.

Table 1. Catch estimate (in round weight, t) for Chinese Taipei tuna longline fishery operated in the Atlantic Ocean during 1997-2006.

Year	NALB	SALB	BET	YFT	BFT	SBF**	N	SWO	S	WHM	BUM	BIL	SKJ	OTH	SKX	TOTAL
1997	3,330	18,165	19,242	4,466	506	89	512	2,562	441	1,478	296	47	650	847	52,631	
1998	3,098	16,106	16,314	5,328	456	42	286	1,147	506	578	411	75	121	969	45,437	
1999	5,785	17,377	16,837	4,411	249	30	285	1,168	464	486	332	40	558	2,068	50,090	
2000	5,299	17,221	16,795	5,661	313	24	347	1,303	437	485	165	41	714	1,666	50,471	
2001	4,399	15,833	16,429	4,805	633	223	299	1,149	152	240	49	25	975	675	45,886	
2002	4,330	17,321	18,483	4,659	666	16	310	1,164	178	294	206	39	758	653	49,076	
2003	4,557	17,351	21,563	6,486	445	170	257	1,254	104	319	112	40	931	1,803	55,238	
2004	4,278	13,288	17,717	5,824	51	17	30	745	172	315	59	43	871	1,380	44,790	
2005	2,540	10,730	11,984	3,596	277	2	140	744	56	151	104	38	1,106	1,455	32,923	
2006*	2,357	12,293	2,965	1,260	9	0	172	377	44	99	105	38	1,289	2,678	23,686	

* Preliminary data.

** Catch estimate of SBF has been revised to be consistent with the CCSBT database in 2004.

Table 2. Report of implementation of the ICCAT Management Standard for Large-scale Tuna Longline Vessels in 2006.**a) Management in the fishing grounds**

	<i>Scientific Observer² onboard</i>	<i>Satellite-based vessel monitoring system</i>	<i>Daily or required periodic catch report</i>	<i>Entry/Exit report</i>
Yes, No	Yes	Yes	Yes	Yes
Note	100% observer coverage onboard the 15 bigeye fishing vessels. Four observers onboard albacore vessels.	100%	1. Logbook report (catch record for each operation) for each trip. 2. Monthly/weekly reports via fax for each trip of albacore fishing vessels. 3. Request the bigeye fishing vessel to submit daily catch report by VMS or facsimile to the Fisheries Agency.	1. Entry Certificate is required to enter Atlantic Ocean for fishing operations. 2. Admission is required for changing fishing areas/oceans.

b) Fishing grounds to the landing ports)

	<i>Transshipment report</i>	<i>Port inspection</i>	<i>Statistical document program</i>
Yes, No	Yes	Yes	Yes
Note	Report of transshipment items is required for each transshipment.	1. Vessels on the ICCAT IUU list are prohibited to enter domestic fishing ports. 2. Application and admission are required for foreign fishing vessels that intend to access fishing ports. 3. All 15 bigeye fishing vessels were required to enter two designated ports (Las Palmas and Cape Town) for port inspection by officials of port State and Chinese Taipei's Fisheries Agency in 2006.	1. Bluefin Tuna Statistical Document program has been implemented starting from 1994. 2. Implementation of issuing swordfish Certificate of Eligibility starting from June 1999 and November 2000 for the US and Japan, respectively. Swordfish Statistical Document program has been implemented starting from January 1, 2003. 3. Bigeye Tuna Statistical Document program has been implemented starting from July 1, 2002.

c) Management at landing ports

	<i>Landing inspection</i>	<i>Landing reporting</i>	<i>Cooperation with other Parties</i>
Yes, No	Yes	Yes	Yes
Note	1. Inspecting catch landings according to ICCAT Resolutions/Recommendations at domestic ports if violation is alleged. 2. All catches of bigeye fishing vessels were required to be landed or transshipped in two designated ports (Las Palmas and Cape Town) after port inspection.	1. Collection of landing data from agents. 2. Import/trade data provided by Japan. Collection of landing data at domestic ports	Cooperating with Japan, United States, Singapore and Trinidad and Tobago.

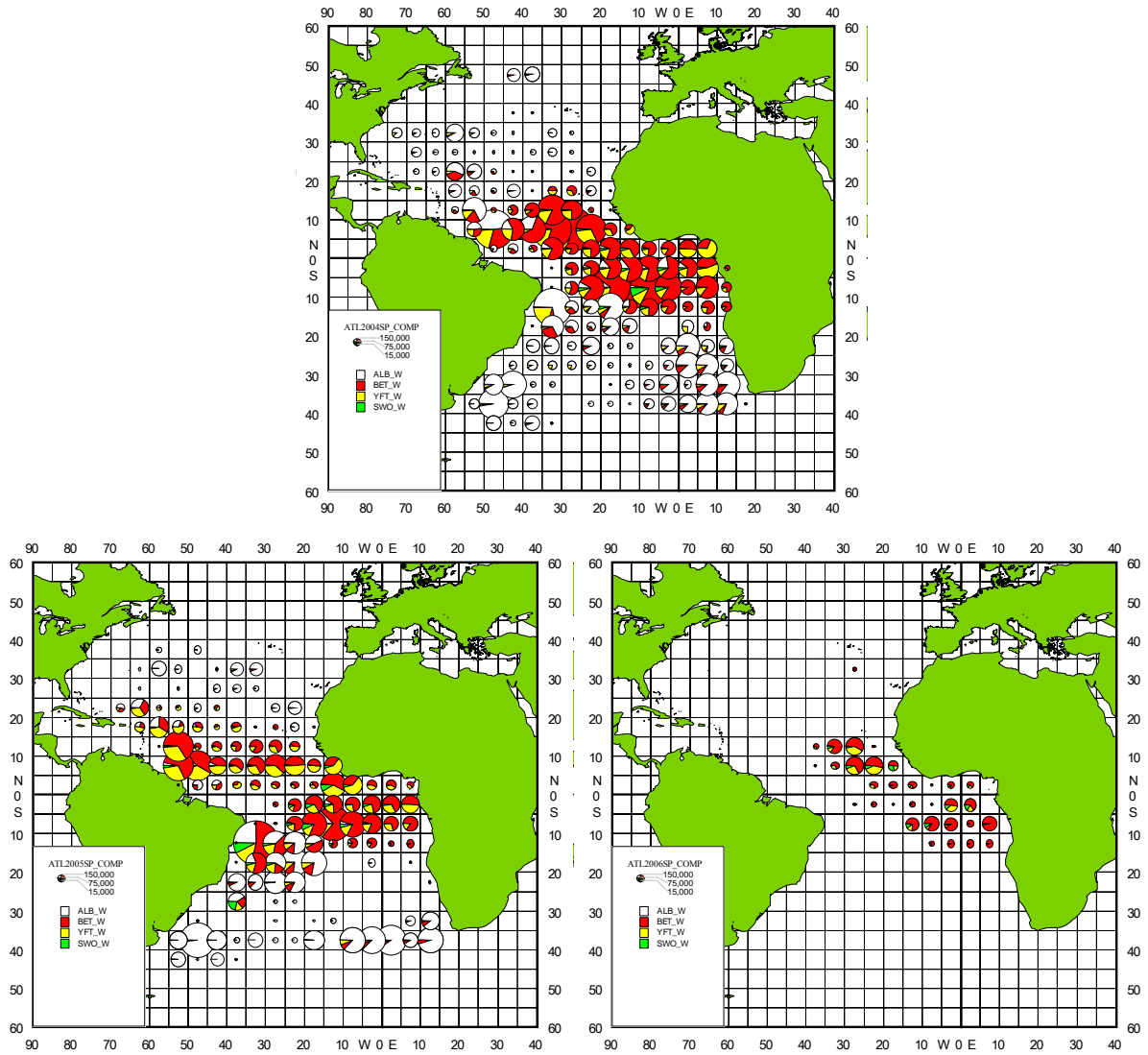


Figure 1. Distribution of catch and catch composition of the main tuna species in the Atlantic Ocean in 2004 (top), 2005 (left, preliminary data), and 2006 (right).

**ANNUAL REPORT OF GUYANA
RAPPORT ANNUEL DE LA GUYANA
INFORME ANUAL DE GUYANA**

Dawn Maison & Ingrid Peters

SUMMARY

Guyana's artisanal fishery is nearshore and targets a number of groundfish species (Sciaenidae, Ariidae, Sparidae, etc). In this fishery, scombrids (mackerels and kingfish), and sharks which are seasonal, are caught as incidentals within the national Exclusive Economic Zone. In 2006, a total of 2,006,642 kg of sharks and 544,989 kg of scombrids were harvested. At present, sharks are landed dressed and this continues to pose a real problem for collection of these data by species.

RÉSUMÉ

La pêche artisanale de la Guyana opère non loin des côtes et cible un certain nombre de poissons de fond (Sciaenidae, Ariidae, Sparidae, etc.). Dans cette pêche, les scombridés (maquereaux et thazard), et les requins sont saisonniers et sont capturés accidentellement à l'intérieur de la zone économique exclusive. En 2006, un total de 2.006.642 kg de requins et 544.989 kg de scombridés ont été capturés. Actuellement, les requins sont débarqués après avoir été manipulés, ce qui continue de poser un véritable problème pour la collecte de ces données par espèce.

RESUMEN

La pesquería artesanal de Guyana es una pesquería costera que se dirige a varias especies bentónicas (Sciaenidae, Ariidae, Sparidae etc). En esta pesquería los escómbridos (caballa y corvina) y tiburones se pescan de forma incidental y estacional dentro de la Zona Económica Exclusiva. En 2006, se capturó un total de 2.006.642 kg de tiburones 544.989 kg de escómbridos. En la actualidad los tiburones se desembarcan eviscerados y esto sigue planteando un problema real para la recopilación de datos por especies.

Part I (Information on Fisheries, Research and Statistics)

Section 1: Annual Fisheries Information

Guyana is no exception to global climatic changes. For the second consecutive year there were flooding and has had some negative impact on the data collection activities. The landing sites along the coast for artisanal vessels were inaccessible to fishers and Data Collectors.

A number of companies both local and foreign have shown interest in deep-sea fishing for tuna and tuna-like species.

However, Guyana does not have the legislation in place nor the capacity to monitor these vessels on the high seas. When these systems have been put in place, Guyana will explore the possibility of opening its pelagic fishery.

Because of national interest in the fishing sector there was the launching of the Fisheries Management Plan for 2007-2011.

1.1 Description of the fishery

In Guyana, there is an inshore artisanal fishery (fishermen use locally made boats exploiting both the demersal and pelagic species found near shore and within the EEZ). In this fishery the fishers utilizes five gear types namely: (i) Chinese seine/fyke net, (ii) pin seine, (iii) caddell, (iv) gillnet (nylon and polyethylene), (v) handline, fish pots.

All the boats are made of wood and are manufactured locally. The boats range from 6 to 18 metres in overall length and are powered by sails, outboard, or inboard engines.

1.2 Fishing gear (Table 1)

Chinese seine, caddell and pin seine vessels are flat-bottom 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 mouth to 1 cm at funnel.

Caddell or demersal longline fishing vessels range in size from 6.71-9.15 m (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.

Gillnet nylon 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 icebox and are usually powered by 48-hp outboard engines. The fishers therefore conduct daily fishing trips. Vessels using the gillnet polyethylene 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 the polyethylene vessels 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 target whatever species of fishes in season for example, snappers and trout, with sharks comprising the main portion of the by-catch. The gillnet polyethylene 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 for the products and by-product (fins, glue (bladder) and bones). 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, however during July-January there is an increase in landings. At the end of the season (July-January) the vessels would land approximately 129,870 kg of dressed sharks per month.

1.3 Composition of the fleet

Sharks and scombrids are exploited in Guyana mainly with the gillnet gears. There are three sizes of gill nets that catch the shark species. These are the two, six and eight inch mesh sizes. This gear type is non-specific and catches all species of fish. The two-inch mesh size catches smaller amounts of sharks and juvenile of the various species since they fish in shallower waters. Their main target, however, is 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 identify the species.

Other gear types that catch sharks are the caddell lines (manual longline), handline, trawl nets and pin seine.

1.4 Plans for expansion

There are no plans to expand the artisanal fishery. The Department of Fisheries is considering a proposal to limit the amount of vessels per gear type as a precautionary approach for conserving the fishery.

The Department is looking at the possibility of developing a pelagic fishery. However, this will take some time, as Guyana is a Developing State with limited resources. The development of a large pelagic fishery will require introduction of new technology and, increased monitoring systems to ensure that the new fisheries comply fully with all of ICCAT's regulations.

Section 2: Research and Statistics

Sharks are landed dressed, i.e. headless and gutted. Only the juvenile sharks (caught either by 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 species. The Fisheries Department has noted the need for continued

special technical assistance to address the issue of identification of dressed sharks, and has finalized a one-year proposal made by Caricom Regional Fisheries Mechanism Secretariat. The Department is seeking funding from FAO and other sources for this project.

All the landings data for sharks and scombrids are reported to ICCAT, together with the numbers of fishing vessels involved in these fisheries. At present effective fishing effort is not recorded, and hence only Task I data have been reported this year (**Table 2**).

The shark fishery is a multi million dollar fishing activity and contributed 3% to the overall export of total fish products from Guyana at a value of US\$ 4,860,171.00 for 2006. The landings of large pelagics for 1998-2006 are shown in **Table 3**.

Part II (Management Implementation)

Section 3: Implementation of ICCAT Conservation and Management Measures

Guyana's Coast Guard is responsible for monitoring all of the fishing activities within Guyana's Exclusive Economic Zone with the assistance from the Fisheries Department. However, in 2006 there was an extension of the duties (re-locating residents from flooded areas, monitoring smuggled fuel and narcotics) for the members of the Coast Guard.

The Guyana Coast Guard was able to conduct 10 fisheries surveillance trips (three aerial reconnaissance and seven at sea). No apprehension was done.

There were constraints for the Coast Guard in that the vessels were in the docks for long period and the cost of fuel prevented them from conduct more extensive surveillance.

Table 1. Artisanal vessels, by gear types, 2006.

<i>Gear Type</i>	<i>#Vessels</i>
Gillnet polyethylene (cabin cruiser) 6-8" mesh size	341
Gillnet polyethylene (inboard) 8" mesh size	80
Gillnet nylon 2" mesh size	342
Caddell # 5-9 hooks	55
Chinese seine 4-5 bundles (25-30 lbs. each)	285
Pin seine	26
Total	1,129

Table 2. Scombrids and shark production, by species (kg), 2006.

<i>Shark species</i>				<i>Scombrids</i>		<i>Total</i>
<i>R. porosus</i>	<i>S. zygaena</i>	<i>C. limbatus</i>	Unidentified shark species	<i>Scomberomorus brasiliensis</i>	<i>Scomberomorus cavalla</i>	
10,018	300,545	15,027	1,681,052	376,784	168,305	2,551,631

Note: Shark species are landed dressed (headless, finless and gutted) and hence the Fisheries Department's Data Collectors were unable to do any identification.

Table 3. Large pelagic landings statistics for 1998-2006 (t).

<i>Species</i>	<i>Landings (t)</i>								
	1998	1999	2000	2001	2002	2003	2004	2005	2006
<i>S. brasiliensis</i>	625	1143	308	329	441	389	493	521	376
<i>S. cavalla</i>	440	398	214	239	267	390	311	245	168
<i>C. hippos</i>	118	78	233	58	99	148	114	45	10
<i>R. porosus</i>	-	-	192	114	306	13	-	130	10
<i>G. cuvier</i>	-	-	-	4	-	-	7	-	-
<i>C. limbatus</i>	-	-	50	14	86	20	7	546	15
<i>S. zygaena</i>	-	-	11	-	4	.1	3	5	300
Shark spp.	2,562	2,175	903	666	842	1,778	3,047	2,360	1,678
Total	3,745	3,794	1,911	1,424	2,045	2,738.1	3,982	3,852	2,557

**REPORTS OF OBSERVERS FROM
INTERGOVERNMENTAL ORGANIZATIONS /
RAPPORTS DE OBSERVATEURS D'ORGANISATIONS
INTER-GOUVERNEMENTALES /
INFORMES DE OBSERVADORES DE ORGANIZACIONES
INTERGUBERNAMENTALES**

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

S. Singh-Renton¹, Paul Phillip², Norman Norris³,
Derrick Theophile³ and Ralph Wilkins⁴

SUMMARY

Available tuna and tuna-like fishery landings for 2006 are reported on behalf of Grenada, the Commonwealth of Dominica, and St. Kitts and Nevis. There were no significant changes in the nature of fishing operations in these islands for 2006, and generally, there were no dramatic fluctuations in reported landings either. In 2007, the CRFM Secretariat held its Third Scientific Meeting during which data were examined and analyzed from wahoo and king mackerel fisheries operating in the southeast Caribbean. These analyses were limited by the quantity and quality of the available data, and recommendations were made for data improvements, as well as for facilitating closer collaboration with neighboring non-CRFM States with which these fisheries are shared.

RÉSUMÉ

Le présent document inclut les données disponibles sur les débarquements de thonidés et d'espèces apparentées, au titre de 2006, au nom de la Grenade, du Commonwealth de Dominique et de St. Kitts and Nevis. En 2006, il ne s'est pas produit de changement notable dans la nature des opérations de pêche de ces îles ni de fortes fluctuations générales des débarquements déclarés. En 2007, le Secrétariat du CRFM a tenu sa Troisième Réunion Scientifique, au cours de laquelle on a examiné et analysé les données des pêcheries de thazard bâtard et de thazard, qui opèrent dans les Caraïbes du Sud-Est. Ces analyses ont été limitées par la quantité et la qualité des données disponibles. Des recommandations ont donc été formulées aux fins de l'amélioration des données et du maintien d'une collaboration plus étroite avec les états avoisinants, qui ne font pas partie du CRFM et qui partagent ces pêcheries.

RESUMEN

Los desembarques disponibles de la pesquería de túnidos y especies afines para 2006 se declaran en representación de Granada, Commonwealth de Dominica y San Kitts y Nevis. No se produjeron cambios significativos en la naturaleza de las operaciones pesqueras en estas islas en 2006, y por lo general, tampoco hubo fluctuaciones dramáticas en los desembarques comunicados. En 2007, la Secretaría del CRFM celebró su Tercera Reunión Científica durante la cual se examinaron y analizaron datos de las pesquerías de peto y carita lucio que operan en el Caribe sudeste. Estos análisis se vieron limitados por la cantidad y calidad de los datos disponibles, y se hicieron recomendaciones para mejorar los datos, así como para facilitar una colaboración más estrecha con los Estados vecinos no pertenecientes al CRFM con los que se comparten estas pesquerías.

¹ Caribbean Regional Fisheries Mechanism (CRFM) Secretariat, Third Floor, Corea's Building, Halifax Street, St. Vincent and the Grenadines, West Indies. E-mail: ssinghrenton@vincysurf.com

² Fisheries Division, St. George's, Grenada, West Indies.

³ Fisheries Division, Roseau, Dominica, West Indies.

⁴ Fisheries Division, Basseterre, St. Kitts and Nevis, West Indies.

Part I (Information on Fisheries, Research and Statistics)

The report provides available 2006 landing statistics and national fisheries information updates on behalf of the following CARICOM territories: Grenada, Commonwealth of Dominica, and St. Kitts and Nevis. Additionally, the report provides an update on sub-regional small tuna fisheries assessment efforts coordinated by the Caribbean Fisheries Regional Fisheries Mechanism (CRFM), an inter-governmental fisheries organization founded by the Caribbean Community (CARICOM).

Section 1: Annual Fisheries Information

The characteristics of tuna and tuna-like fisheries of Grenada, the Commonwealth of Dominica, and St. Kitts and Nevis have been described in previous national reports, and the nature of fishing operations in 2006 were generally similar to that reported for 2005.

Section 2: Research and Statistics

2.1 Statistics

Table 1 provides currently available best estimates of commercial landings of tuna and tuna-like species in 2006 in Grenada, the Commonwealth of Dominica, and St. Kitts and Nevis. The following observations are noteworthy. For 2006, Grenada reported slight increases in the landings of yellowfin tuna, blackfin tuna and Atlantic sailfish, with small decreases being reported in the landings of swordfish and blue marlin. On the other hand, the Commonwealth of Dominica reported slight increases in all species, except for yellowfin tuna the landings of which were reduced by about 45% compared to landings recorded for 2005 (**Table 1**). In Dominica, the increased tuna and billfish landings in recent years appear to be attributed largely to the greater use of anchored FADs that are deployed and managed by the fishers themselves. While the fishery in Dominica is multispecies in nature, the primary target species are currently the tunas, mackerels and dolphinfish.

2.2 CRFM Scientific Meeting - 2007

The Third Annual CRFM Scientific Meeting was held during 17-26 July 2007 in St. Vincent and the Grenadines. During this Meeting, CRFM's Large Pelagic Fish Resource Working Group conducted preliminary analyses of available data on the wahoo and king mackerel fisheries of countries within the southeastern Caribbean. In the case of king mackerel, an assessment of the status of the fishery was attempted, assuming the existence of a separate king mackerel stock in the southern Caribbean. However, the assessment analysis was inconclusive; the main problems identified were high levels of uncertainty in the growth and mortality rates, and also lack of data from certain non-CRFM countries that report significant catches of king mackerel in the region. A number of data improvements were recommended and these would have to be addressed prior to repeating any assessment of the fishery concerned. In respect of the wahoo analysis conducted, it was decided to examine catch and effort data only for certain fleets of Barbados and St. Lucia due to various limitations in the data from other CRFM States. A standardized catch rate time series for the period 1996-2006 was developed, which showed no declining trend. However, as in the case of king mackerel, data on wahoo from non-CRFM countries with major fisheries were not available and were therefore not incorporated into the analysis. The CRFM Working Group noted the need to promote collaboration with non-CRFM countries to facilitate more comprehensive assessments of the relevant fisheries in the future.

Table 1. The 2006 annual tuna and tuna-like fish landings (mt) of Grenada, Commonwealth of Dominica, and St. Kitts and Nevis. The code 'NA' means that the data were not available at the time of preparation of this report.

<i>Country</i>	<i>Common name</i>	<i>Scientific name</i>	<i>2006</i>
Grenada	Yellowfin tuna	<i>Thunnus albacares</i>	502.2
	Skipjack tuna	<i>Katsuwonus pelamis</i>	14.5
	Blackfin tuna	<i>Thunnus atlanticus</i>	371.3
	Bigeye tuna	<i>Thunnus obesus</i>	NA
	King mackerel	<i>Scomberomorus cavalla</i>	NA
	Wahoo	<i>Acanthocybium solandri</i>	NA
	Atlantic bonito	<i>Sarda sarda</i>	NA
	Albacore*	<i>Thunnus alalunga</i>	18.5
	Atlantic sailfish	<i>Istiophorus albicans</i>	158.6
	Blue marlin	<i>Makaira nigricans</i>	33.5
	White marlin		12
	Swordfish	<i>Xiphias gladius</i>	30.3
	Sharks unspecified		NA
Commonwealth of Dominica	Yellowfin tuna	<i>Thunnus albacares</i>	64.7
	Skipjack tuna	<i>Katsuwonus pelamis</i>	27.6
	Blackfin tuna	<i>Thunnus atlanticus</i>	47.3
	Bigeye tuna	<i>Thunnus obesus</i>	NA
	Wahoo	<i>Acanthocybium solandri</i>	14.7
	King mackerel	<i>Scomberomorus cavalla</i>	0.1
	Spanish mackerel	<i>Scomberomorus maculatus</i>	
	Tuna unspecified		3.4
	Atlantic sailfish	<i>Istiophorus albicans</i>	3
	Swordfish	<i>Xiphias gladius</i>	0.4
	Blue marlin	<i>Makaira nigricans</i>	55
	Atlantic bonito	<i>Sarda sarda</i>	15.5
	Cero mackerel	<i>Scomberomorus regalis</i>	0.8
	Atlantic black skipjack	<i>Euthynnus alletteratus</i>	0.4
St. Kitts & Nevis	Tuna and mackerels unspecified		7.4
	Tuna and mackerel unspecified		1.6
	Wahoo		3.7

*Grenada's albacore catch contains a mix of albacore and other tunas.