

UPDATE ON IMPLEMENTATION OF THE BRAZILIAN NATIONAL PLAN OF ACTION FOR THE CONSERVATION OF ALBATROSSES AND PETRELS NPOA-SEABIRD/BRAZIL

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SUMMARY

In 2001, Brazil became a signatory nation of the Agreement on the Conservation of Albatrosses and Petrels-ACAP; however it is the only country that has not yet ratified this agreement. In spite of this, Brazil is already implementing the actions of the NPOA-Seabirds/Brazil, launched by IBAMA (Brazilian Institute of Environment and Natural Renewable Resources) during the second meeting of the ACAP Advisory Committee held in Brasilia in June 2006. The NPOA aims to assure the viability of Procellariiform breeding colonies within Brazilian territorial boundaries and to reduce seabird by-catch. Several actions are already being developed to achieve these goals including research on seabird by-catch and development of new technologies to reduce incidental seabird capture. This paper presents the current updated actions of the Brazil NPOA. Partnerships between SEAP/PR (Special Secretariat of Aquaculture and Fisheries of the Presidency of the Republic) and two non-governmental organizations (Projeto Albatroz and NEMA) to promote tests on mitigation measures and awareness in the fishing sector about how to reduce seabird by-catch were concluded successfully. A report on this work is currently being prepared. The Albatross Task Force, a partnership between Projeto Albatroz, BirdLife International and Save-Brasil (BirdLife's partner in Brazil), which encourages the introduction of mitigation measures (mainly torilines) in the Brazilian longline fleet through an educational approach were also concluded and renewed. Fourteen longline vessels (40% of the national fleet) from Santos and Itajai have the torilines installed and tested as a result of these projects. Another fundamental project sponsored by Petrobras Ambiental and developed by Projeto Albatroz is the monitoring of the longline fleet based in southern Brazil to evaluate the seabird by-catch and mitigation tests. Educating fishermen in order to implement fisheries mitigation measures are also being developed by this project. Mandatory rules obligating the use of mitigation measures by all longliners were proposed, with the fishermen and ship owners collaboration, and are currently available for public comment before being published by the government.

RÉSUMÉ

En 2001, le Brésil est devenu signataire de l'Accord sur la Conservation des Albatros et des Pétrels (ACAP) mais est le seul pays à ne pas avoir encore ratifié cet accord. Toutefois, le Brésil met déjà en œuvre les mesures du NPOA-oiseaux de mer/Brésil, lancé par l'IBAMA (Institut Brésilien pour l'Environnement et les Ressources Naturelles Renouvelables) lors de la deuxième réunion du Comité consultatif de l'ACAP, tenue à Brasilia, au mois de juin 2006. Le NPOA vise à assurer la viabilité des colonies de reproduction des Procellariiformes dans les limites territoriales brésiliennes et à réduire les prises accessoires d'oiseaux de mer. Diverses mesures sont déjà développées pour atteindre ces objectifs, notamment des programmes de recherche sur les prises accessoires d'oiseaux de mer et le développement de nouvelles technologies tendant à réduire la capture accidentelle d'oiseaux de mer. Ce document présente les mesures actuelles du NPOA brésilien. Des partenariats entre le SEAP/PR (Secrétariat spécial de l'Aquaculture et des Pêcheries de la Présidence de la République) et deux organisations non-gouvernementales (Projeto Albatroz et NEMA) destinés à encourager les tests sur les mesures d'atténuation et à sensibiliser le secteur des pêches à la façon de réduire les prises accessoires d'oiseaux de mer ont été couronnés de succès. Un rapport sur ces travaux est en cours de réalisation. Le Groupe de travail Albatros, partenariat entre Projeto Albatroz, BirdLife International et Save-Brasil (partenaire de BirdLife au Brésil), qui encourage l'introduction de mesures d'atténuation (principalement des dispositifs d'effarouchement des oiseaux) dans la flottille palangrière brésilienne par une approche pédagogique a également été conclu et renouvelé. Quatorze palangriers (40% de la flottille nationale) de Santos et Itajaí ont installé et testé des dispositifs d'effarouchement des oiseaux à la suite de ces projets. Un autre projet essentiel, sous les auspices de Petrobras Ambiental et développé par Projeto Albatroz, consiste au suivi de la flottille palangrière basée au sud du Brésil afin d'évaluer

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les prises accessoires d'oiseaux de mer et les tests d'atténuation de celles-ci. Ce projet vise aussi à dispenser une formation aux pêcheurs en ce qui concerne la mise en place de mesures d'atténuation dans les pêcheries. Des réglementations obligatoires visant à l'utilisation obligatoire des mesures d'atténuation par tous les palangriers ont été proposées, avec la collaboration des pêcheurs et des armateurs, et sont actuellement disponibles aux fins de commentaires du public avant leur publication par le gouvernement.

RESUMEN

En 2001, Brasil se convirtió en signatario del Acuerdo para la Conservación de los Albatros y los Petreles-ACAP; sin embargo, es el único país que no ha ratificado aún este acuerdo. A pesar de esto, Brasil está ya implementando las acciones del PAN-Aves marinas/Brasil, lanzado por el IBAMA (Instituto brasileño del medio ambiente y recursos naturales renovables) durante la segunda reunión del Comité Asesor del ACAP celebrada en Brasilia en junio de 2006. El PAN tiene como objetivo asegurar la viabilidad de las colonias de cría de las Procellariiformes dentro de los límites del territorio brasileño y reducir la captura fortuita de aves marinas. Se están desarrollando ya varias acciones para lograr estos objetivos, incluyendo la investigación sobre captura fortuita de aves marinas y el desarrollo de nuevas tecnologías para reducir la captura incidental de aves marinas. Este documento presenta las acciones actualizadas del PAN de Brasil. La asociación entre SEAP/PR (Secretaría especial de acuicultura y pesquerías de la Presidencia de la República) y dos organizaciones no gubernamentales (Projeto Albatroz y NEMA) para fomentar pruebas de las medidas de mitigación y concienciación en el sector pesquero acerca de cómo reducir la captura fortuita de aves marinas fueron concluidas con éxito. Actualmente se está preparando un informe sobre este trabajo. El Grupo de trabajo Albatros, una asociación entre Projeto Albatroz, BirdLife International y Save-Brasil (el socio de BirdLife en Brasil), que insta a la introducción de medidas de mitigación (principalmente líneas espantapájaros) en la flota de palangre brasileño mediante un enfoque educativo fue también concluida y renovada. Catorce palangreros (el 40% de la flota nacional) de Santos e Itajai tienen las líneas espantapájaros instaladas y probadas como resultado de estos proyectos. Otro proyecto fundamental patrocinado por Petrobras Ambiental y desarrollado por Projeto Albatroz es el seguimiento de la flota de palangre con base en el Brasil meridional para evaluar la captura fortuita de aves marinas y las pruebas de mitigación. En este proyecto se está intentando educar a los pescadores para implementar las medidas de mitigación en las pesquerías. Se propusieron normas obligatorias para imponer el uso de las medidas de mitigación por parte de todos los palangreros, con la colaboración de los pescadores y los armadores, y actualmente están disponibles para comentarios públicos antes de ser publicadas por el Gobierno.

1. Introduction

Currently, Brazil it is the only signatory nation of the Agreement on the Conservation of Albatrosses and Petrels - ACAP, which has not yet ratified the agreement. However, Brazil adopted, voluntarily, to develop its own National Plan of Action for the Conservation of Albatrosses and Petrels – NPOA-Seabirds/Brazil. This plan was launched by IBAMA (Brazilian Institute of Environment and Natural Renewable Resources) on 5-8 June 2006, during the Second Meeting of the ACAP Advisory Committee in Brasília. Since then, several sectors have been working to accomplish this important task, which involves governmental areas, private companies and Non-Governmental Organization (NGOs). Supported by FAO, the Projeto Albatroz and BirdLife International - Brazilian Program investigated necessary actions for the conservation of albatross and petrel species within national territorial boundaries and their relationships with fisheries.

The essential NPOA goals are to assure the viability of the Procellariiformes breeding colonies within Brazilian territorial boundaries and to reduce the incidental capture of seabirds by longline fisheries to minimum levels (equal to or lower than 0.001 birds/1,000 hooks). This would make Brazil a significant agent for the conservation of albatrosses and petrels that occur inside and outside its territorial limits. The actions regarding seabird b-catch reduction as described in NPOA are based on four main approaches: establishing rules for the compulsory use of mitigation measures; creating incentives for the adoption of such measures; monitoring their adoption by consistent onboard observer programs and developing educational activities directed at offshore fishermen.

The implementation of these actions was accomplished by partnerships between government and non-government institutions in Brazil. The partnerships between SEAP/PR (Special Secretariat of Aquiculture and

Fisheries of the Presidency of the Republic) and two non-governmental organizations (Projeto Albatroz and NEMA – Núcleo de Educação e Monitoramento Ambiental) to promote the tests on mitigation measures and awareness in the fishing sector about how to reduce seabird by-catch were concluded successfully. A report about this work is being prepared. The Albatross Task Force, a partnership between Projeto Albatroz, BirdLife International and Save-Brasil (BirdLife's partner in Brazil), which aims to encourage the introduction of mitigation measures (mainly torilines) in the Brazilian longline fleet through an educational approach were also concluded and extended for another year. Another fundamental project sponsored by Petrobras Ambiental and developed by Projeto Albatroz is the monitoring of the longline fleet based in southern Brazil to evaluate the seabird by-catch and mitigation tests. Improving fishermen awareness in order to implement fisheries mitigation measures is also being developed by this project.

Mandatory rules obligating the use of mitigation measures by all longliners were proposed, with the fishermen and ship owners' collaboration, and are currently available for public comment before being published by the government.

2. Implemented actions

The NPOA-Seabirds/Brazil consists of two parts: the first is an assessment of albatross and petrel species in Brazil, fisheries techniques that capture birds, incidental capture of seabirds by the domestic longline fleet and the available information on mitigation measures. The second part is the conservation plan which details the goals and actions for the conservation of species that breed in Brazil and of migratory species that interact with fisheries in Brazilian waters. In the second part, specifics objectives and actions were established for each goal. Each action received a priority level and a deadline for completion. The priority scale has four levels: • Essential, when the measure is necessary to avoid the population decline, which may lead to the species' extinction. • High, when it is necessary in order to avoid a decline of >20% of the population in 20 years or less; • Medium, when an objective is necessary to avoid a population decline of up to 20%, in 20 years or less; • Low, when it is necessary to prevent a local population decline or where it is likely to have only a small impact on the population in a larger area.

The deadlines for each specific objective are listed in six categories: • Immediate - must be reached within the next year; • Short - between 1 and 3 years; • Medium - between 1 and 5 years; • Long - between 1 and 10 years; • Continuous - which is being developed and must continue; • Completed - has been reached during the preparation of this NPOA.

Considering the level of priority and deadlines as described above, this report presents an evaluation of the execution and implementation status of NPOA-Brazil. It is important to note that the NPOA-Brazil was launched at June 5th, 2006.

The actions of NPOA-Seabirds are divided into two sections: management and research as outlined below. Here we are considering all actions relating to the migratory species that interact with the fisheries as described in NPOA-Seabirds/Brazil.

3. Management

Objective 1

To provide legal assistance for the mandatory use of mitigation measures aimed at avoiding the incidental capture of seabirds by the longline fishery.

Actions

- a) To develop and promulgate rules regulating the use of mitigation measures by all longline vessels. The legislation must include combined methodologies for vessels that do not use artificial baits. Such measures must be mandatory for both national and leased fleets, and consider the specificity of each fishing method.

Pelagic Longline (swordfish, tuna and sharks) this comprises *torilines* combined with one or more of the following measures: blue dye baits, night setting, side-setting, and configurations of the secondary lines which maximize its sinking and limitation of offal discharges.

Bottom Longline – a combination of two or more of the following measures: thawed bait, configuration of the secondary lines to maximize its sinking, torilines, blue bait, side-setting and limitation of discharges.

Surface Longline for dolphinfish – an evaluation and description of the fishery was carried out and mitigation measure trials must be performed.

Priority: Essential

Deadline: Immediate

Agencies: IBAMA, MMA, SEAP, MRE, fishing industry, research and educational institutions and NGOs.

Status of implementation: in progress

On 6 October 2005, the Normative Instruction No 37 from the Brazilian Ministry of Environment prohibited the fishery for Wreckfish, Polyprion americanus, which were caught by bottom longline, due to the 90% population decrease. Consequently, this particular fleet has been greatly reduced in Brazil (IBAMA, 2005).

Studies on the longline fleet are being developed by two NGOs in Brazil that are addressing seabirds and sea turtle bycatch (Projeto Albatroz and Projeto Tamar). In these studies it was observed that this fleet operates in a very wide area and uses different fishing gears depending on fishing area, season and vessel size. Scientific reports were prepared in order to facilitate future management action, and a draft presented during CCAMLR meeting in 2006.

IBAMA prepared a report compiling information on the legislation required to implement the compulsory use of mitigation measures in longline fisheries. This was discussed by the permanent WG for Bycatch issues that was created under IBAMA auspices. Elaboration of a federal act for the use of mitigation measures to reduce seabird bycatch by all longliners, determining combined methodologies for vessels that do not use artificial baits was carried out. Such measures must be mandatory for all national and leased fleets, considering the specificity of each fishery. This document was written by Projeto Albatroz with the collaboration of fishermen, who have experience in the use of mitigation measures. This federal act was discussed with several researchers from Universidade Federal Rural de Pernambuco - UFRPE, Universidade Federal do Espírito Santo-UFES, Instituto de Pesca de São Paulo, SEAP and Ibama (CEPSUL, CEPENE, TAMAR and Ibama / RN). The text of the mandatory rules was modified and the mitigation measures were better described according to suggestions of scientists. Currently this federal act is available for public consultation until 27 September, before being published by the government.

Action

- b) To incorporate into the policy for constructing new vessels in the national fleet the adoption of underwater setting or side-setting for longline vessels, as well as the construction of a device for the discharge of fish waste at the opposite side to the longline setting.

Priority: Essential

Deadline: Immediate

Agencies: IBAMA, MMA, SEAP, MRE, fishing industry, research and educational institutions and NGOs.

Status of implementation: In progress

SEAP/PR has a National Program for the Improvement of the Brazilian Fishing Fleet (PROFOTA). The Technical and Environmental Manual of PROFROTA establishes the compulsory use of underwater setting devices for any new tuna longline vessel to be built with the support from that program. Moreover, the extent to which methods for the reduction of seabird by-catch are foreseen in the ship building project has been one of the qualifying criteria for the concession of financial support. The mitigation measures required will be explicitly included in the vessel fishing license, once it is built, so that enforcement will be made easier and more efficient. A Technical PROFROTA Guide was published in August 2005, where the requirements to build and operate new fishing vessels is delineated. In this guide there are instructions about the mitigation measures to avoid seabird and sea turtle bycatch. These mitigation measures (circular hooks, torilines and blue-dyed baits) are being tested by several fishing vessels and some of the results will be incorporated. Up to now, 20 projects for

the construction of tuna longliners have been approved. All of them include measures for the reduction of seabirds and/or sea turtle by-catch.

Objective 2

To investigate incentives for the adoption of mitigation measures by certification and possibly increasing the value of fish sold by vessels using mitigation measures.

Actions

- a) As an incentive for certified fisheries using mitigation measures, attributing to them a label with “seabird friendly” or “captured without harming seabirds” stamp.

Priority: High

Deadline: Medium

Agencies: IBAMA, SEAP, fishing industry, research and educational institutions and NGOs.

Status of implementation: Some effort was made in this direction but the action did not really start yet.

A project submitted to GEF (Global Environmental Facility) entitled “Change to Sustainable Fishery: reduction of seabird by-catch species extinction threats in Southern Ocean” is under evaluation. This involves eight fishery nations - Argentina, Brazil, Chile, Ecuador, Namibia, Peru, South Africa and Uruguay. Among these actions is included a study about the requirement to create a “Seabird Friendly” certification and to develop a market to ‘sell’ concept increasing public environmental awareness. Considering the initial process to evaluate the project and considering this is the only effective action addressing implementation of environmental fisheries certification, this is a goal which requires more attention of members involved.

Another action addressed to achieve this goal took place during the 1st South American Fishermen’s Forum to Reduce Seabird Bycatch held from 12 to 14 December, 2006, in Guarujá city, São Paulo State. The event was organized jointly by Projeto Albatroz and IBAMA - Brazilian Institute of Environment and Natural Renewable Resources and Southern Seabird Solutions, sponsored by Care for the Wild International and the Government State Department of the United States. During the meeting, a WG called “Strategies to attain the benefits of sustainable seafood markets for South America”, discussed the possibilities of certification and how the certification processes worked in other countries such as USA.

Objective 3

To implement a national onboard observer program using personnel trained in bycatch issues and with a legal recognition of its function. This provides a mechanism to control and evaluate the use of mitigation measures and their efficiency, according to the Observers on Board National Program – ProBordo, from SEAP/PR.

Actions

- a) To legalize the observer onboard function, defining observer roles, obligations and activities.

Priority: essential

Deadline: Immediate

Agencies: IBAMA, SEAP, MMA.

Status of implementation: Concluded

SEAP/PR, in partnership with IBAMA, developed the Normative Instruction that establishes the National Program of Observers of Fishing Fleets- PROBORDO. This document was published in 27 September 2006, signed by Special Secretary of Aquaculture and Fishery of Republic Presidency, Mr. Altemir Gregolin and by Mrs. Marina Silva, Minister of Environment. The Normative Instruction establishes rules and procedures to be followed by the observer when onboard fishing vessels under the ProBordo Program.

Actions

- b) To develop training courses for onboard observers and an Onboard Observer Manual that incorporates specific topics about the identification and sampling of seabirds and sea turtles, as well as the fishery certification process.

Priority: essential

Deadline: Immediate

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation: Continuous

Observer training courses promoted by SEAP will continue to be carried out, in cooperation with the Projeto Albatroz and Projeto Tamar, and will include aspects related to the by-catch of seabirds and sea turtles. During these courses, observers are trained in sea turtle and seabird species identification, techniques for the collection of biological samples and measures to reduce their incidental catches. It is necessary to develop an Observer Guide, with information regarding identification and methodologies for all species (seabirds, sea turtles, sharks, etc). Also being evaluated is the creation of a Cooperation Term between IBAMA and Instituto Albatroz, which among others activities aims to train observers and define the methodology to be used.

There was also the Brazilian participation in the 5th International Fisheries Observer Conference, May 15-18th 2007, held in Victoria, British Columbia, Canada. This aimed to exchange experiences on observer programs around the world and to get new ideas to improve the National Onboard Observer Program and Projeto Albatroz Observer Program regarding training, safety, management at-sea and sampling of seabirds.

Actions

- c) To promote institutional courses through SEAP/PR and IBAMA, where observers will be trained to accomplish work following the concept "observer/educator". The observer's credentials will be awarded by the SEAP/PR, seeking a legal recognition of its function.

Priority: essential

Deadline: Immediate

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation: Continuous

Since 2004, the institutions dealing with bycatch of seabirds and sea turtles are participating in observer annual courses promoted by SEAP together with executive institutions of Probordo, UNIVALI and UFRPE. In these terms the concept of educator-observer has been implemented not just by SEAP and other institutions, but also by Projeto Tamar and Projeto Albatroz which works with environmental education in their routine activities. This issue needs to have a permanent approach to assure the good and robust understanding of observers in order to promote the implementation of mitigation measures to reduce bycatch in these fisheries.

Actions

- d) To maintain a unified information system about the observers and the monitored fleet, along with the data collected by observers. SEAP/PR, through ProBordo partners and IBAMA, must conduct the management of the system. A unified and integrated information system must be developed.

Priority: high

Deadline: Short

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation: In progress

The Brazilian Observer Program has an Executive Management Board, consisting of the Director of Fisheries Development, of the SEAP, and by the Director of Fauna and Fisheries Research, of the IBAMA. This Management Board has the responsibility of coordinating the collection and dissemination of data collected by

the ProBordo. The dynamic to receive and manage the data from observers is established at the executive's institution UNIVALI and UFRPE. The data are processed and a data base maintained by SEAP. The data about seabird and sea turtle bycatch are forwarded, respectively, to Projeto Albatroz and Tamar and they produce periodic reports to IBAMA and SEAP. Information on seabird bycatch from the leased fleet based in the Northeast region must be processed further and sent to Projeto Albatroz and ProBordo who need to improve the seabird data collection, by promoting better capacitation courses for observers in the Northeast of Brazil.

Actions

- e) To create an obligation by fishermen to provide data on the incidental capture of species listed under 'threatened species official lists' (seabirds, sea turtles, cetaceans and others), including the retention of seabird carcasses, biological data and the dissemination of this material and information to research institutions/museums. The IBAMA, via COFAU, must receive the collected data.

Priority: High

Deadline: Short

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation: Concluded

To accomplish this action SEAP/PR published a legislation on September 27th, 2006, to determine the lines of action for the elaboration and implementation of ProBordo. This foresees the creation of an advisory committee through further legislation.

Actions

- f) To create an intergovernmental body (committee or council) to address the requirements of the ProBordo on the Brazilian fishing fleet (national and leased vessels). This body must have representatives from IBAMA, MMA, SEAP/PR, fishing sectors, the Working Group for the conservation of albatrosses and petrels, Conservation Projects, Scientific Committees for the management of fishery resources, the legally constitute Onboard Observer Association, Research and Educational institutions and NGOs.

The role of such a body would be to help the SEAP/PR on the management of matters related to the ProBordo, with the following objectives:

- To evaluate strategies, priorities and monitoring actions on board and suggest changes when necessary.
- To support the definition of the operational strategies and the observer's qualifications, suggesting selection criteria.
- To analyze the data and information collected and produce technical reports about the program.

Priority: Medium

Deadline: Medium

Agencies: IBAMA, SEAP, MMA.

Status of implementation: Concluded

To accomplish this action SEAP/PR published legislation at 27 September 2006, to determine the guidelines of action for the elaboration and implementation of ProBordo. The creation of an advisory committee through further legislation may be necessary.

Objective 4

To achieve 100% observer coverage of the leased longline fleet, as recommended by ProBordo, immediately after the publication of the NPOA-Seabirds, and a percentage of the national fleet coverage to be defined by the ProBordo Managing Committee.

- a) To develop rules defining the criteria and mechanisms for the selection of the national fishery that must be monitored through on board observers.

Observation: The forecasted actions in this item depend on the implementation of the ProBordo, as mentioned in Objective 3.

Agencies: IBAMA, SEAP, MMA.

Status of implementation: In progress

The Normative Instruction no. 1 of 27 September 2006 made compulsory the presence of an onboard observer on leased vessels and on Octopus and Monkfish fisheries in national fleet, but because fishing industry resistance, this goal was not reach yet, besides the great effort from SEAP to training observers.

Objective 5

To evaluate the interaction between seabirds and fisheries, (other than those already documented above)

Actions

- a) To carry out cruises with onboard observers to evaluate catch rates and determine species composition of seabird by-catch.
- b) To compile the information already obtained by the observers.
- c) Based upon the obtained information, propose management actions.

Priority: High

Deadline: Medium

Agencies: IBAMA, fishing industry, research and educational institutions and NGOs.

Status of implementation: In progress

Trips with Projeto Albatroz observers on board are being developed for fishing operations with different kinds of fishing gear. Identification of the “Itaipava fishery” as an important cause of mortality for seabirds, including endangered species such as Yellow-nosed albatross *Thalassarche chlororhynchos* and Spectacled petrel *Procellaria conspicillata*. A broad study of fishing methods, fleets, fishing grounds, and seabird species interactions was carried out at ports and by onboard observers. A scientific manuscript was produced by Bugoni et al. (submitted). Very high capture rates have been found raising the national concern about the impact caused by trolling fisheries, handline, baitboats (live baits) and different kinds of longline, including the surface longline for dolphinfish. Itaipava has a large fleet and currently is the main concern that must be better evaluated. Projeto Albatroz prepared a project to assess and monitor this fleet regarding its seabird bycatch. In addition, other costal fisheries such as gillnets, trolling and pole and line with live bait, which is historically difficult to manage, must be urgently investigated.

Objective 6

To establish mechanisms to develop educational activities and to raise awareness about the importance of the conservation of seabirds, especially for the longline fishery fishermen.

Actions

- a) To develop environmental educational programs along the following lines:
 - Creation of a specific environmental education methodology for all sectors involved in the longline fishery;
 - Incentives for longline fishermen using mitigation measures;
 - To promote the formal education of the fishermen from the fishing companies based at the main Brazilian ports;
 - Improve skills of people working in fisheries, aiming to develop ethical values toward environmental conservation and citizenship;
 - To promote the maritime mentality within the Brazilian collectiveness, increasing the economical and social environmental potentials, alerting society to the necessity of a responsible and sharing administration of the areas and marine resources.

Priority: high

Deadline: medium (and must be maintained constantly).

Agencies: IBAMA, MMA, SEAP, MEC, fishing industry, research and educational institutions and NGOs.

Status of implementation: In progress

This action was addressed through a Masters Degree thesis entitled “Awareness directed to fishermen for the reduction of seabird incidental capture in longline fisheries in Brazil”, with the collaboration of Aveiro University, Portugal and Projeto Albatroz (a Brazilian Non Governmental Organization). The aim of this study is to characterize several aspects of two Brazilian longline fleets, propose new methods of raising awareness and educating fishermen towards their working environment and also propose the implementation of educational observers on board these vessels. One of the relevant results was the proposal to train observers to work on the educational approach in order to stimulate fishermen to adopt mitigation measures.

SEAP/PR, in partnership with Projeto Albatroz and NEMA aimed to implement the NPOA-Seabirds promoting the voluntary adoption of mitigation measures to reduce seabird by-catch. This was accomplished through tests carried out with fishermen and ship owners. Social diagnosis of fishermen was achieved which helped the NGOs to better understand the target public. The results of this study will be available in a final report that will be published at the end of 2007.

Another major project sponsored by Petrobras Ambiental and developed by Projeto Albatroz is the monitoring of longline fleets based in southern Brazil to evaluate the seabird by-catch and investigate the socio-economic and cultural reality of these fishermen. The project will develop educative material in order to encourage the fishermen to adopt mitigation measures. Projeto Albatroz, together with an expert from the Education Environmental Center of the University of Vale do Itajaí, will develop approach methodologies to understand the perception of fishermen regarding the fisheries and the marine environmental and how they deal with it. A report about the historical aspects of the pelagic longline fishery in Brazil is being prepared through fishermen and researchers interviews and it will be published in 2008. This project is jointly sponsored by Fundação O Boticário de Proteção à Natureza.

Establishment of a partnership between Projeto Albatroz and BirdLife International to develop the Albatross Task Force project in Brazil, which aims to introduce mitigation measures in the Brazilian longline fleet based on an educational approach.

Additionally, the project entitled “On board Library” aims to encourage the industrial longline fishermen to adopt educational reading during their off-duty time onboard. This project will be developed by Projeto Albatroz and supported by SEAP and the Ministry of Culture. A small community library will be created with books, audio and electronic media in order to improve the social and cultural behavior of fishermen.

Holding of the South American Fishermen Forum to Reduce the Seabirds By-catch on 12-14 December 2006, at the Delphin Hotel in Guarujá city, São Paulo State, Brazil. The event was organized by Projeto Albatroz and Southern Seabird Solutions, sponsored by Care for the Wild International and supported by the Government State Department of the United States. The forum’s major goal was to promote the information exchange between fishermen, ship owners, researchers, Governmental and Non Governmental Organizations. The forum aimed to illustrate and talk about the fisheries practices to reduce seabird’s bycatch in South American countries, especially in longline and trawl fisheries. Sixty participants including fishermen and researchers from many different countries including Australia, New Zealand, United States, Argentina, Uruguay, Peru, Chile, Ecuador and Brazil attended this event.

4. Research

Objective 1

To improve knowledge about critical areas related to seabird capture by longline fisheries, in which the use of complementary mitigation measures are required.

Actions

- a) To carry out research on the oceanic distribution of threatened albatrosses and petrels, identifying the preferred feeding areas where seabird concentrations occur, the dynamics involved in the concentration and the overlap with fishing grounds.

Priority: high

Deadline: long.

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation – In progress

Analysis of seabird by/catch and abundance data collected during pelagic longline operations from 2000-2005. Results were presented at the SCRS Plenary meeting of ICCAT, Madrid, 2-6 October and ad hoc WG IMAF of XXV CCAMLR Meeting, Hobart, 9-13 October 2006.

Publication of a volume with the results of studies carried out under the EEZ Live Resources Program (REVIZEE) of the Brazilian Government about seabird distribution and abundance in southern Brazil, interaction of seabirds with pelagic and bottom longline fisheries and foraging behavior of four main species of Procellariiformes in Brazil (the Black-browed and Atlantic yellow-nosed albatross and the White-chinned and Spectacled petrel).

Seabird distribution, abundance and bycatch in longline fisheries off Southern Brazil were presented at the ICCAT Inter-sessional Meeting of the Sub-Committee on Ecosystems, Madrid, Spain, 19-23 February 2007.

Continuation of Spectacled petrel movements tracking started in June 2006, with deployment of satellite transmitters in Brazilian fishing grounds, aiming to determine overlap with fisheries and displacement along the South-western Atlantic Ocean. This study received more funds and deployed four transmitters in August 2007. The results will be presented soon

A project entitled “Richness and diversity of seabirds that interacted with longline fisheries and mapping the priority areas for seabird conservation” by Marine Biology student Loretha Nascimento from Universidade Santa Cecilia and Projeto Albatroz has been developed. The study is supervised by Dr. Luiz Fábio Silveira from the Zoology Department of São Paulo University and associate curator of Ornithology Collections. This project is sponsored by a scholarship program of Scientific Initiation of FAPESP, and the main goal of the project is to measure the richness and diversity of seabird species that interact with longline fisheries and indicate priority areas for conservation of these seabird communities. This study will be concluded in October 2007.

Objective 2

To study biological aspects of seabirds and their vulnerability to fisheries.

Actions

- a) To develop research programs about the ecology and feeding behavior of albatrosses and petrels, identifying, areas and seasons of occurrence and vulnerability to fisheries.

Priority: High

Deadline: Long.

Agencies: IBAMA, SEAP, research and educational institutions and NGOs.

Status of implementation: In progress

A study on the abundance, by/catch and genetics of the spectacled petrel, *Procellaria conspicillata*, was carried out in cooperation with Projeto Albatroz/Brazil, Federal University of Rio Grande/Brazil, RSPB/UK, and University of Cape Town/South Africa.

A study on the trophic structure of the Procellariiformes community off Brazil, based on stable isotope signatures, is being carried out in cooperation with the University of Glasgow and Projeto Albatroz. The study is based on feather and blood samples of several species (*Diomedea exulans*, *D. dabbenena*, *Thalassarche melanophris*, *T. chlororhynchos*, *Procellaria aequinoctialis*, *P. cosnpicillata*, *Puffinus gravis*, *Calonectris diomedea*, *Pterodroma arminjoniana*, *Daption capense*, *Oceanistes oceanicus* and others)

Monitoring of longline fishery fleet in Santos-SP and Itajaí-SC fishing ports (Southern Brazil) to collect information on seabird by-catch, through logbooks filled in by fishing masters. This action is partially sponsored by Petrobras Ambiental and Fundação O Boticário de Proteção à Natureza.

Monitoring of the longline fishery fleet at-sea in Santos-SP and Itajaí-SC (Southern Brazil) through onboard observers. The goal of this monitoring is to collect information on seabird by-catch and distribution, to deploy satellite transmitters for tracking seabirds, and to collect information on target fish species. Observers carry out awareness activities with fishermen during the fishing trips, exchanging experiences and talking about the marine environment, conservation and sustainable fishery issues.

Objective 3

To develop effective mitigation measures (or improve existing ones) evaluating their efficiency.

Actions

- a) To initiate research to develop simple mitigation measures that are easily applicable.

Priority: High

Deadline: Medium.

Agencies: IBAMA, SEAP, fisheries industry, research and educational institutions and NGOs.

Status of implementation: In progress

SEAP/PR in partnership with Projeto Albatroz and NEMA tested mitigation measures on longline fishing vessels during 12 cruises with trained onboard observers with the intention of introducing these measures in fishing operations. Also, scientific cruises were carried out in order to test torilines and blue dye baits in a controlled experiment in order to produce more accurate data. The results of this study will be available in a final report that will be published at the end of 2007.

The Albatross Task Force, a partnership between Projeto Albatroz, BirdLife International and Save-Brasil (BirdLife's partner in Brazil), which aims to encourage the introduction of mitigation measures (mainly torilines) in the Brazilian longline fleet through an educational approach were also concluded and renewed. Fourteen longline vessels (40% of the national fleet) from Santos and Itajaí have the torilines installed and tested as part of results of these projects. The results of this study will be available in a final report that will be published at the end of 2007.

A study on toriline models developed by fishermen of the National longline fleet based in Southern Brazil and their efficiency using different materials in their construction has been developed by Projeto Albatroz team.

A project sponsored by Petrobras Ambiental and developed by Projeto Albatroz is monitoring the longline fleet based in southern Brazil to evaluate the seabird by-catch and improve the mitigation measure tests and equipment.

Action

- b) To research weight configurations of the lines that result in fast submerging rates and minimize seabird capture rates.

Priority: high

Deadline: medium

Agencies: IBAMA, SEAP, fishing industry, research and educational institutions and NGOs.

Action

- c) To research underwater setting devices that can be incorporated on new vessels.

Priority: high

Deadline: medium

Agencies: IBAMA, SEAP, fishing industry, research and educational institutions and NGOs.

Status of implementation: Some discussions are being made but the possibility to implementation of this action must be better evaluated.

This action has not started yet, but it is on a time limit (Medium deadline = 1 to 5 years after publication of NPOA-Seabirds, which means June 2011). The reason these activities have not been developed yet is because of better acceptance of other mitigation tests by the fishermen such as the torilines and blue baits. The research of this mitigation measure could be included in the investigation of vessels from the Profrota Fishery Programm of SEAP/PR.

The actions associated with these objectives must be revised or redone in the future, according to the circumstances. The deadlines must be considered after the publication of this NPOA-Seabirds Brazil.

The NPOA-Seabirds/Brazil was produced in Portuguese and English and is available on:
<http://www.projetoalbatroz.org.br/planacap/PLANACAP%20INGLES.pdf>