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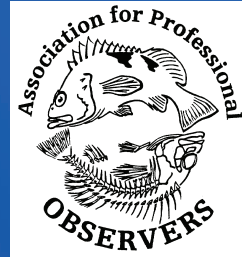
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# APO Mail Buoy



VOLUME 12, ISSUE 1

SPRING 2009



Battle Rock Park, Port Orford, Oregon

If you have a good picture that you would like on the cover of the next Mail Buoy, [submit a picture to us!](#)

## 6th INTERNATIONAL FISHERIES OBSERVER & MONITORING CONFERENCE



Portland, Maine, USA

July 20 - 24, 2009

9 International Fisheries Observer and Monitoring Conference Update



5 How to Reduce Fish Laundering Associated with IUU Fishing

## Updates

### APO Restructuring

At the January 14, 2009 APO Annual Board meeting in Portland, Oregon, it was decided to organize our efforts into 4 focus committees: Education and Outreach, Data, Health/Safety/Welfare, and Observer Labor/Professionalism. The home page of our website will eventually have a link to each committee with resources and descriptions of current projects. If you have any interest in volunteering, watch for the committee pages coming soon ([www.apo-observers.org](http://www.apo-observers.org)) or contact us directly. We welcome and encourage feedback on all of our activities.

#### Education and Outreach

- Publication of the quarterly Mail Buoy
- Development of the APO website.
- Publication of Eyes on the Seas (see Eyes on the Seas Project Plan)
- International outreach and APO Charter formation

APO contacts for this Committee are:

Keith Davis [lblegend@yahoo.com](mailto:lblegend@yahoo.com), Ebol Rojas [ebolred@yahoo.com.ar](mailto:ebolred@yahoo.com.ar), and Dave Wagenheim [davewagenheim@hotmail.com](mailto:davewagenheim@hotmail.com).

#### Observer Health, Safety, and Welfare

- Improved working conditions for Observer at sea
- Safety rules: compliance and enforcement
- Observer welfare at sea
- Insurance ambiguities

APO contacts for this committee are:

Ebol Rojas [ebolred@yahoo.com.ar](mailto:ebolred@yahoo.com.ar) and Mark Wormington [siberio@hotmail.com](mailto:siberio@hotmail.com).

#### Observer Data

- Public access to fisheries observer data
- Data collection protocols
- Training protocols
- Observer program service delivery model comparisons
- Rules that impact the integrity and independence of fishery monitoring
- Implications and trends of Electronic Monitoring

APO Board Contacts for this committee are: Liz Mitchell [emitch@efn.org](mailto:emitch@efn.org) and Alicia Billings [aliciabillings@gmail.com](mailto:aliciabillings@gmail.com).

#### Observer Labor and Professionalism

- Identifying initiatives and issues associated with fostering observer professionalism
- Observer labor unions and issues

APO contacts for this committee are:

Keith Davis [lblegend@yahoo.com](mailto:lblegend@yahoo.com), Liz Mitchell [emitch@efn.org](mailto:emitch@efn.org), or Ebol Rojas [ebolred@yahoo.com.ar](mailto:ebolred@yahoo.com.ar).

### APO Membership, Donations, and Volunteers

#### Membership

For any good non-profit organization, Membership should be the engine that drives the organization. We have come to a general consensus that our membership needs a good tune-up. We hope to work on avenues to better empower members to be a part of the APO from a variety of independent vantages and involvements. There are certain services that the APO has always provided for free to its members and non-members alike. The Mail Buoy newsletter for example, has traditionally been made available to anyone who wishes to receive it. The APO website now hosts a myriad of resources. Just check out our running list of publications associated with Observers and the information they collect! This has grown into quite a library of Observer-related publications. These APO primary services shall continue to be free services to members and to non-members alike.

In defining APO Membership, we hope to pull in as many members as

we can get and are now offering absolutely **Free APO Membership!!!** Rather than having set dues, basic membership will now be free. We do of course encourage those who make use of APO services to become a supporter (Donor) to the APO.

Our plan is to convert our website to one with several pages dedicated to just members. As more advanced services become available, membership 'tiers' will be implemented that require dues to access. The prototype for this new APO Membership page will be ready in May 2009. At that time, members will be asked to update their profiles with current emails and if you have an interest in being more involved with the APO committees. Please, be assured that we will keep this information strictly confidential beyond APO use.

#### A word on Donations...

Until we have our tier structure in place, we will continue to rely

*continued...*

# FROM THE APO

## Membership, Cont.

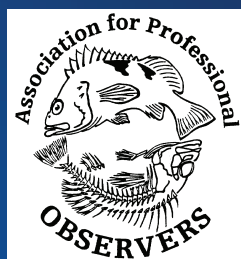
upon donations. These donations help pay for miscellaneous office expenses (mailing official letters, bank fees, web hosting fees, taxes etc.). They also helped pay for housing for observers at the International Fisheries Observer Conference last year and will pay for housing this year as well (see the [article](#) later in the Mail Buoy).

### And now to plea for volunteers

More importantly, we need volunteers and welcome articles for the Mail Buoy. Our goal is to have a few representatives from each region to report on the fishery management decisions and observer issues particular to your region. We need more representatives from Australia, New

Zealand, Africa, South America, and especially in areas where observers face threats, bribery or otherwise have a rough time doing their job. We also need volunteers to follow labor and insurance issues, since this continues to be ambiguous and troublesome for observers.

We would love to publish articles from observers about the creatures they encounter at sea. Surely there is something you can glean from your experience at sea worth sharing. For those of you who have donated your time and efforts to the APO, we would like to say THANK YOU!! Your involvement is extremely important, unique and very much appreciated.



## APO Feedback Survey

The [APO website](#) has been hosting an online survey called the APO Feedback Survey now for several months.

This survey is meant to gather feedback from all current and prospective members of the APO regarding the need, expectations, and desired role of the organization. We encourage feedback from any interested stakeholder. All topics within this survey correlate to either existing objectives or newly charted goals of the APO. This survey is designed so that anyone who has any involvement in the observer profession can respond, and we

encourage feedback from any interested stakeholder.

Link now to the [APO Feedback Survey](#) and help us to evaluate our current role and aid us in shaping a path for our future. If you have any difficulties with completing the APO Feedback Survey online, please contact us [apo@apo-observers.org](mailto:apo@apo-observers.org) Thank you in advance for sharing your time and ideas with us.

## Eyes on the Seas- Observer Short-story Book Progress

*Eyes on the Seas*, the observer short story book project has been moving along rather nicely and we hope to soon have a working manuscript ready for review. Follow this link to the Eyes on the Seas project plan: [http://apo-observers.org/docs/EOS\\_Phase1.pdf](http://apo-observers.org/docs/EOS_Phase1.pdf)

There are currently over 40 people involved in some aspect of this project, guiding it along a long but quite hopeful road. Currently, we have a basic sense of how contributions will fit into chapters, to be grouped by various themes of the Observer profession (i.e. Introduction- description of the observer profession; Health and Safety; Communications and Relations; At-sea life; Avenues towards Professional Advancement). We are open to additional EOS contributors. This project is being conducted through the APO, for the creation of an Observer Professional Development Scholarship fund and as a

general fund-raising project for the APO.

Profiles of all contributors will be featured in an appendix of the book. With these profiles, readers will have the opportunity to appreciate the wealth and diversity of experience that observers have.

Once the manuscript is completed, we will be approaching publishers and inviting support in the production of this project. Please contact us [eyesontheseas@gmail.com](mailto:eyesontheseas@gmail.com) if you have any interest in helping this project to success. The APO would like to take this opportunity to thank all of those who have already contributed their time and creations into this project. Thank you. Let's keep this project rolling along!!!

## FROM THE APO

# Observer Conference Outlook

## 6th INTERNATIONAL FISHERIES OBSERVER & MONITORING CONFERENCE



Portland, Maine, USA

July 20 - 24, 2009

### Fisheries Observer Conference-APO Housing Sponsorships

The APO is sponsoring lodging for up to 6 national and international Observers who are planning to attend the 6th International Fisheries Observer and Monitoring Conference (IFOMC). We've reserved from July 18-25 a 3-bedroom unit of a townhouse located in the Willard Beach district of South Portland, Maine. It's a 5-minute walk to Willard Beach and the immediate location is prime for evening entertainment and outdoor activities. The conference is being held July 20-24, within 3 miles of the APO apartment, at the Holiday Inn, By the Bay. There are many simple means to get to and from the conference-some may wish to rent bicycles for the week, and taxi rides sound cheap- especially when sharing rides.

Although we don't have the means to provide funding for attending the conference itself, we hope that these housing sponsorships may help to alleviate a bit of the financial strain for the six sponsored observers who are either planning to fund themselves or will be funded by other sources. Priority consideration will be given to those observers who are not already funded by any other source and those who plan to present, though we encourage all to apply. Following are our guidelines for consideration for a 6th IFOMC Observer Housing Scholarship:

You must be an active observer (have observed anywhere in the world within 12 calendar months of the 2007 IFOC)

You must be registered to attend the 6th IFOMC, or provide some proof of your intention to attend.

Our deadline for submitted Letters of Interest for sponsorships is also May 29th 2007.

Please include the following 4 paragraphs in your Letter of Interest

- Full name and a brief summary of your observing experience (100-200 words).

- Additional experience pertinent to topics you wish to address (100- 200 words).
- State your intention for attending the IFOMC- how do you plan to be active at the conference (please be thorough here ~ 500 words)
- By what means do you plan to attend the conference, and how certain are you that you will attend (100-200 words)

Please send all submissions (Word or Adobe format are preferred, but e-mail text is fine), with at least two references, to the APO [apo@apo-observers.org](mailto:apo@apo-observers.org). Please address the letter to the "APO Staff" and write "6th IFOMC Housing Sponsorship" in the subject line so we don't mistakenly overlook your submission. Please contact us by any means if you have any problems submitting. We hope to see you in Portland!



# International Spectrum

## How to Reduce Fish Laundering Associated with IUU Fishing

The future role of Monitoring, Control and Surveillance (MCS) observers assuring the traceability of fish products

*Ebol Rojas; International Fisheries Observer/APO; Mexico*

### Introduction

At the Twenty-sixth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) there were extensive discussions on the possible actions to be taken with the countries of non-compliance regarding issues of Illegal, Unregulated and Unreported (IUU) fishing activities. These included diplomatic approaches to their Flag States, patrol actions and trade-related measures against non-compliant states. In addition, the issue of IUU fishing was examined again within the Performance Review of the organization during 2008.

Contributing to CCAMLR's underestimation of IUU fishing are the difficulties in accurately determining the extent of IUU fishing within the Convention area associated with gillnet fishing. CCAMLR's estimates are based on mathematical models, which don't include the new technologies contributing to IUU fishing described below. TRAFFIC's estimates are based on trade information. CCAMLR's estimates of IUU fishing remain underestimated by almost 50% of actual levels.

Gillnet vessels don't require bait and therefore have the ability to fill their holds with toothfish and transport at sea (Figure 3). Gillnet fishing gives the IUU fleet logistics independence, is able to increase the duration of fishing trips, and allows transshipment of their catches to reefer vessels at sea (Figure 1). Assuming this scenario, trade related measures are very difficult to enforce. The IUU vessels are receiving supplies, crew, fishing gear, refueling, and transshipment of their catches while they are on the high seas (Figure 2, 3).



Figure 1.- An illegal toothfish transshipment. The lack of a framework for establishing guidelines for the monitoring of transshipments could be undermining all the efforts to tackle this issue, opening a door for the laundering of IUU caught fish.

IUU fishing is still the main issue within CCAMLR. For the 2006/07 season, CCAMLR estimated that 3615 tons of Patagonia toothfish (*Dissostichus eleginoides*), representing 11% of CCAMLR's estimated total landings, were taken by IUU fishing boats (CCAMLR, 2007). For the year 2007, the wildlife trade-monitoring network, TRAFFIC (<http://www.traffic.org/>), estimated the amount of IUU as 16% of the total toothfish landings.



Figure 3.- The introduction of the IUU gillnet fishery has increased the uncertainty of the levels of IUU catches within the CCAMLR area.

Regional Fisheries Management Organizations (RFMO) and coastal countries are developing strategies to enhance their effectiveness in addressing destructive fishing practices through efforts such as precautionary and ecosystem approaches, the reduction of bycatch and discards, prevention of habitat degradation, the expansion of research programs and the improvement of monitoring and enforcement. However, the issue of tracking illegally caught fish product remains elusive.

The ability to launder IUU catch with legitimately caught fish on sanc-

Figure 4.- Generic boxes, with blank labels that would normally include, on a legal product, the FAO Area, species, Vessel Name, Date and Position. This is still a common method used for companies to launder its illegal catch.

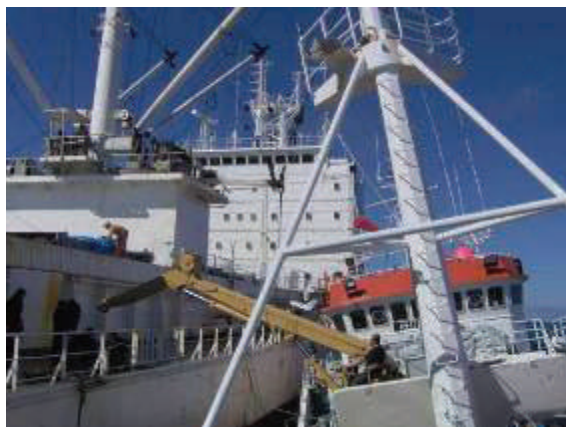


Fig.2.- Toothfish being transferred between two IUU vessels in high seas.

*continued...*

# International Spectrum

## Fish Laundering, cont.

tioned fishing vessels exacerbates the problem (Agnew & Barnes, 2003; Gianni & Simpson, 2005; EJF, 2005 and 2008). The National Environmental Trust (NET) reported that a considerable amount of illegally caught Patagonia toothfish enters the United States mixed with other seafood or are sold under the nondescript label, “frozen



Figure 5.- Bags containing big pieces of toothfish stowed in the hold of an IUU vessel. The absence of labeling identifying the source is evident.

fish fillet” (Figure 4, 5).

A tracking scheme gives the possibility to trace each fish product to its origins. Any product that has an unidentified origin cannot be



Figure 6.- Toothfish in bulk previous to being packed.

documented as legally caught and is labeled a potentially IUU product. (Derrick & Garforth, 2007). The mandatory tracking of each box and bag containing fish could help to reduce the trade of IUU caught fish, thus working together with other measures.

Currently the CCAMLR Scheme of Scientific Observation is an excellent tool to provide scientific, biological and operational information to the Commission. However, a system of Centralized CCAMLR International Observers could be used to certify legally

caught fish product within the Convention Area and for those countries involved in the Catch Documentation Scheme, strengthening the whole system, assuring compliance and improving the measures against the IUU activities.

### The possibilities of RFID tagging.

Radio frequency identification device (RFID) is an emerging technology that makes use of wireless communication, and in recent years it has been increasingly used in logistics and supply chain management. This RFID technology can identify, categorize, and manage the flow of goods and information along a supply chain. RFID offers greater flexibility, higher data storage capacities, increased data collection and accuracy. An increasing number of companies in a variety of markets worldwide are using RFID technology to improve quality and quantity of data collection in an expeditious manner, which is not always possible with barcode systems.

A basic RFID system consists of three main components: 1) a remote and programmable device (the RFID tag); 2) a reader and a host interface (Transcore, 2003; Finkensteller, 2004); and 3) a programmable RFID tag/inlay for storing item data, consisting of an RFID chip for data storage and an antenna to facilitate communication with the RFID chip. The tag is interrogated with a reader/antenna system. The RFID tags are categorized as either passive or active. Passive tags do not have an integrated power source and are powered from the signal carried by the RFID reader. Active tags have a built-in power source and their performance can be compared to a beacon. As a result of the built-in battery, active tags can operate at a greater distance and at higher data rates in return for limited life driven by the longevity of the built in battery and higher costs. RFID has the ability to allow energy to penetrate certain goods and to read a tag that is not visible. It can therefore identify goods without scanning a barcode.

The RFID tags can be integrated with a system like the Enterprise Resource Planning (ERP). The ERP involves the integration of all functions in a single database allowing for tracking. The ERP solutions designed for the fishing industry also have the capacity to incorporate electronic data capture devices as handheld computers, GPS position. Bar-code Scanvaegt International A/S, Aarhus, and Marel manufacturers of processing machinery for the fishing industry have recently incorporated tracking software that simultaneously integrates data in their line of processing equipment to provide tracking capabilities (Thompson et al 2005).

### Incorporation of tracking devices to the CCAMLR scheme.

Although the CCAMLR Scheme of Scientific Observation is based primarily on biological data collection, the trend to incorporate

*continued...*

# International Spectrum

## Fish Laundering, cont.

Monitoring Control and Surveillance is becoming more vital. Observers gather information regarding sightings of suspected illegal fishing vessels in the Convention Area (including vessel identification, position and activity) and collect information about fishing gear loss and garbage disposal by fishing vessels at sea (CCAMLR, 2006; Sabourenkov & Appleyard, 2005). The only reasonable way to improve the monitoring of fisheries regulated by the CCAMLR and IUU fishing is through the scientific observers at sea.

We have found many examples of tracing legally caught fish within the fishing industry, although the projects are focused mostly with issues on compliance within the rules of Hazardous Analysis and Critical Control Points (HACCP). The possible use for validation of legally caught fish is evident. Recently in Uruguay, researchers began the first tests to design and implement a complete tracking system for the fishing industry based on RFID tags with successful results (Arnaud & Peña, 2006). In Thompson et al 2005, the Norwegian Seafood Federation has been operating a tracking solution for pelagic fish species like herring and mackerel. The tracking device is based on Global Traceability Network (GTNet) from Tracetracker (Tracetracker Innovation ASA, 2008) technology. The Marine Stewardship Council has implemented a Chain of Custody certification that guarantees fish buyers that their seafood can be traced back through the supply chain from the point of sale to the fishery of origin. That system was implemented successfully in a toothfish fishery in South Georgia.

The idea to implement a system based on RFID/Barcode is simple in concept, and the system can be comprised for three main steps: Certification of catch, Data storage, and Verification. Boxes or bags containing fish are labeled or tagged by an observer with a unique code. The automatic system links the code with the GPS and electronic scale, backs up all the catch data recorded and can be sent daily to the

CCAMLR headquarters. This would be stored, assuring the inviolability of the whole system. Once the fish is landed or transshipped, the port inspectors or onboard reefer observer use tag readers to inspect and verify the catches. This data is then cross-checked with the data stored in the CCAMLR database (Figure 7).

Although the key benefits of this technology have been certainly proven in many practical situations, a complete and successful RFID development within CCAMLR will depend on security, costs of implementation for legal fishing vessels and enforcement within the countries involved.

### Discussion:

Current compliance requirements such as electronic Catch Documentation Scheme, C-VMS must still be in force, but CCAMLR must implement more regulations to strengthen the whole system. The concept of transshipment within the Catch Documentation Scheme is still a significant loophole for the traffic of illegally caught fish (CCAMLR, 2008). Transshipment Observer Programmes are planned for the Inter-American Tropical Tuna Commission (IATCC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Western and Central Pacific Fisheries Commission (WCPFC) and the Indian Ocean Tuna Commission (IOTC). Thus, mandating successful tracking devices in transshipment operations and integrating compliance monitoring of this into Transshipment Observer Programmes is vital.

Including these measures, CCAMLR would benefit from 100% observer coverage in toothfish fisheries during seasonal toothfish fisheries covering the southern oceans. The implementation of a centralized observer program, as was recommended previously (Rojas, 2008; CCAMLR, 2008), could help to give clarity and flexibility to the whole system with neutral observers.

The majority of the IUU fishing activities are currently related to countries with poor monitoring systems that are non-members of CCAMLR. However, it's essential that observer monitoring occur in any fishery that is linked to member countries, such as non-member countries fishing outside of the Convention Area involved as exporters in the Catch Documentation Scheme. *The majority of the companies involved in IUU fishing are still linked with member countries and the product of IUU fishing is sold mostly to member states.* The change of the system is a vital task not only of those countries whose waters are infected by illegal fishers. All CCAMLR member states and RMFOs must multiply their efforts to deter this form of insidious poaching.

Better controls must start at sea and the integration of the controls within high-seas observer programmes is vital. Policies on fishery observer program management need to be tailored to the specific context of countries and RFMOs involved, taking into account the fisheries in question, the levels of IUU activities, level of by-catch, data needed for stock assessment, and the issues regarding compliance for

*continued.*

SCHEME SUGGESTED TO IMPLEMENT TRACEABILITY THROUGH OBSERVERS AT SEA

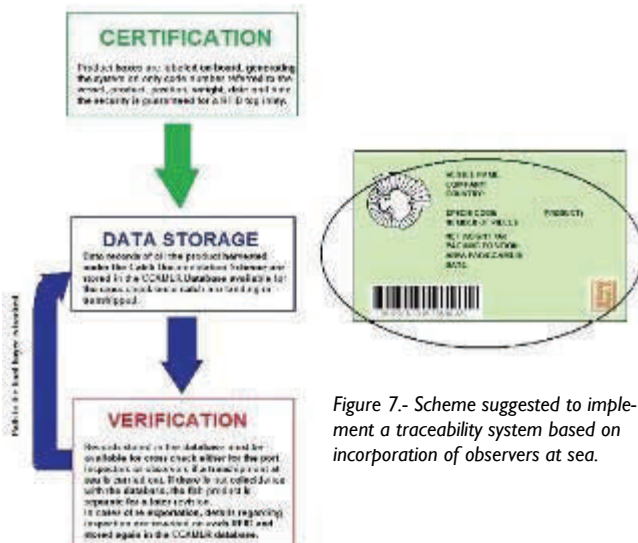


Figure 7.- Scheme suggested to implement a traceability system based on incorporation of observers at sea.

# International Spectrum

## Fish Laundering, cont.

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## The Pathway to Hell is Paved with Good Intentions

### Mandating the Code of Conduct for Responsible Fisheries

Liz Mitchell; Fisheries Observer/APO; North Pacific, USA

The University of British Columbia Fisheries Centre and The World Wildlife Fund published a report, "Safe Conduct? Twelve Years Fishing Under the UN Code", based on the UBC's analysis of countries' implementation of the Food and Agriculture Organization's 1995 voluntary Code of Conduct for Responsible Fisheries. The FAO Code outlines an international consensus on sustainable fishing practices. The UBC analyzed data from 2003-2005 from 53 countries, representing over 95% of the world's fisheries catch. In their analysis, they found that overall compliance was poor. The highest score for just forming regulations in compliance to the FAO Code was only 60%. For enforcement and actual compliance to the regulations the score was even less. Countries scored the worst on the following: implementing ecosystem-based management, controlling illegal fishing, reducing fishing capacity and minimizing bycatch and destructive fishing practices, such as bottom trawling.

Some of the highlights of the report:

\*Over half of the countries had fail grades for compliance to the Codes' reference points

\*Over 80% have bad scores for discards, bycatch and juvenile catch and for using damaging fishing methods

\*75% have failing scores for continuing Illegal, Unregulated and Unreported (IUU) fishing

\*Over half of the countries fail at implementing ecosystem-based management

The United States gets the highest score (below 70%) on good intentions *but is the biggest loser on walking it's talk* with a score of less than 50% compliance to the Code. That is just inexcusable with the amount of money passing through US ports. Percent action compared with stated intentions? First prize goes to North Korea! Hurray! But they're still the third worst fishers in the world, Angola getting first prize in that category and Myanmar coming in second.

The real winners appear to be Namibia and Norway. Not only did they intend to comply, they got the highest score for implementation. Still the score for those two countries was only 60%. The report raises the question of whether to make implementation of the Code mandatory, but the question we should be asking is not if, but when and how.

### Resources:

FAO Code of Conduct for Responsible Fisheries

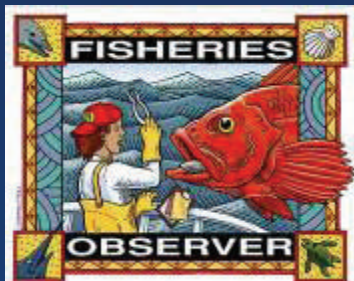
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# National Observer Program Updates



## US NOP and IFOMC Updates

*Dennis Hansford and Richard Kupfer; National Observer Program; USA*

The International Fisheries Observer and Monitoring Conference (IFOMC) Steering Committee met in Portland, Maine January 26-29 and reviewed over 180 abstracts from 26 countries. We had a terrific response to the call for abstracts, with many differing and intriguing insights and aspects to fishery resource monitoring and conservation.

The 12 conference sessions promise to be provoking and rich with lively dialogue.

As the conference sessions continue to be finalized, visit <http://www.ifomc.com> for periodic updates. In the coming weeks, notices of acceptance for oral or poster presentations will be sent out. Those selected for poster and panel presentations will be contacted with guidance on effective presentation.

As in previous years, the NMFS National Observer Program is providing **funding for up to 8 fisheries observers** to attend the 2009 IFOMC from July 20-24. In order to select observers for funding, regional observer programs will notify current and former observers, where possible, about the potential of receiving funding for travel and accommodations at the conference.

Observer program managers will encourage interested observers to submit an abstract. The abstracts must be consistent with the conference themes for 2009, which can be found at <http://www.ifomc.com>. The regional observer program will then review all submitted observer abstracts and select two candidates (a primary, and a secondary).

The primary candidate selected by the region will receive up to \$3,200 in funding from the conference chair to attend the conference. The secondary candidate will be included in a pool of other secondary candidates from each region, and may be selected to also receive up to \$3,200 in funding as an

## 6th INTERNATIONAL FISHERIES OBSERVER & MONITORING CONFERENCE



*Portland, Maine, USA*

*July 20 - 24, 2009*

“at-large” observer. Funding will cover flight, lodging, meals, and conference registration (\$575). The selected names of observer candidates and their designation, primary or secondary, should be submitted to IFOMC Steering Committee by February 27, 2009.

Observer candidates selected for funding will be contacted via email by March 15, 2009, with further instructions on how the funds will be transferred. Selected observers will be expected to attend the entire conference and be available to assist the conference chair and steering committee members if requested.

Now, it's time to register and to make plans to attend the 6<sup>th</sup> IFOMC. We're pleased to offer secure on-line registration for the 2009 IFOMC and special events. Early registration for the conference – through May 31 2009 – is available for US\$575.00. After that, the rate will be US\$675.00. In addition to on-line registration, we offer the options of registering by fax or mail. Also, we've had a high volume of interest regarding our pre-conference workshop on Data Extrapolation, so sign up online soon to ensure that you have a seat. See you in Portland, Maine!

\*\*\*We greatly depend on volunteered news and updates regarding observing in your area of the world. Please, [submit stories and commentaries from any well-established, new, or proposed national, regional or international observer program, from any stakeholder perspective, around the globe.](#)

# Observer Program News and Updates



## Projeto Albatroz

*Patricia Mancini; Projeto Albatroz; Observer Program ; Brazil*

Projeto Albatroz is an NGO dedicated to the reduction of albatross and petrel bycatch in the Brazilian pelagic longline fleets. The partnership between Projeto Albatroz and the fishing companies has enabled several activities, such as the introduction of observers on board pelagic longline vessels to test mitigation measures and the introduction of these measures in fishing operations. The observers accompany the fishing trips in order to support scientific research and collect data about fisheries, seabirds, and other species.

However, over many years, the observers of Projeto Albatroz noticed the possibility to develop educational activities onboard with fishermen. The “observer-educator” became a fundamental tool to accomplish the Projeto Albatroz goals. The observers exchange experiences, talk about marine conservation issues and inform the fishermen about seabird bycatch mitigation (such as torilines, blue dyed bait and night setting). Since 2006, Projeto Albatroz has been part of BirdLife International’s Albatross Task Force (ATF) Program sponsored by BirdLife/Royal Society for the Protection of Birds (RSPB). It is locally represented by Save Brasil.

The main objective of the program is the introduction of mitigation measures in trawl and longline vessels. Nowadays seven

countries are included in this program (Argentina, Brazil, Chile, Ecuador, Namibia, South Africa and Uruguay). The testing and implementation of mitigation measures took force when the Birdlife ATF program started. Since then, the Observer Program of Projeto Albatroz has carried out 55 cruises, 65.5% of which included the testing of mitigation measures, mainly torilines (89%) and blue bait (11%).

Single tori lines were found to reduce seabird capture significantly, while increasing the capture of target species (tuna, swordfish and sharks). This gave considerable economic benefits for the fleet (almost US\$ 10,000 per trip during May-October). The tests and adoption of mitigation measures by fishermen is voluntary, as Brazil still does not have a law that requires it. Thanks to the dedication of these observers, currently almost 40% of longliners in southern Brazil have torilines onboard.

Overall, since the year 2000, Projeto Albatroz carried out 100 cruises with 44 different observers, 16% of which were female and 84% male observers. To assure the good relationship between observers and fishermen, the On-Board Advisory Psychol-



## Chilean Fisheries Observer Dies of Alcohol Poisoning

Grave Intoxicacion sufren 3 tripulantes <http://www.laprensaaustral.cl/lpa/noticia.asp?id=32080>

Jose Luis Diaz Perez, 35 years old, a fisheries observer for the Institute of Fisheries Development, (Instituto de Fomento Pesquero <http://www.ifop.cl/>), Chile, died a few days after his intoxication on the high seas from alcohol poisoning. While on board the F/V *Puerto Williams*, the observer and 2 other crewmembers consumed soft drinks blended with methyl alcohol (methanol). The methanol was assumed to have been taken from the ship’s supply used for the cleaning of fish processing machinery. The captain of the F/V *Puerto Williams* reportedly

contacted the local maritime authority about the presence of 3 intoxicated crewmembers on November 27, 2008. Immediately upon entry, an ambulance was coordinated with the emergency services at the Maritime Police Arturo Prat pier in Punta Arenas, Chile. It is assumed that the methanol was stolen from the ship and then blended with a soft drink. The observer was unconscious upon arrival and required intubation. In spite of medical care given, Mr. Perez passed away on December 1, 2008. The other crewmembers survived but remained in serious condition.

# Observer Program News and Updates



Getting marine turtles off the hook in Central America: A World Wildlife Fund/IATTC Project that includes a voluntary observer program.

[http://www.panda.org/who\\_we\\_are/wwf\\_offices/costa\\_rica/index.cfm?uProjectID=9L0829](http://www.panda.org/who_we_are/wwf_offices/costa_rica/index.cfm?uProjectID=9L0829)



## Ecuador



## Fishermen Refuse to Board Fishery Observers

“Bad Feeling over Fishery Observers”

Otago Daily Times, New Zealand, 26 Jan 2009

<http://www.odt.co.nz/news/dunedin/40742/039bad-feeling039-over-fishery-observers>

## New Zealand

## Efforts to Overcome Overfishing by EU Fisheries in Senegal

NOAA Team to Train Fishery Observers in Senegal [http://www.noaanews.noaa.gov/stories2009/20090128\\_senegal.html](http://www.noaanews.noaa.gov/stories2009/20090128_senegal.html)

Fisheries Sector in Senegal

[http://www.unep.ch/etu/publications/Synth\\_Senegal.PDF](http://www.unep.ch/etu/publications/Synth_Senegal.PDF)

Recursos prsqueros: Los Observadores del Sector Denuncian Corrupción

<http://www.afrol.com/es/articulos/21480>



## Senegal

## Observer Advisory Committee has Available Vacancy

*OAC Recommendations to the Council needs Observer Voice  
Liz Mitchell; Fisheries Observer/ APO; North Pacific, USA*

The Observer Advisory Committee has opened two vacancies. The OAC has been advising the North Pacific Fishery Management Council on North Pacific Groundfish Observer Program issues since the mid-90's. NPGOP restructuring and service delivery model overhaul will possibly be on the table once again. There are no observer representatives on the OAC, so the APO applied to fill one of the vacancies. The OAC meetings are open to the public and are usually held in Seattle annually. For information about Observer Program restructuring please see the Council's Observer Program link:

[http://www.fakr.noaa.gov/npfmc/current\\_issues/observer/observer.htm](http://www.fakr.noaa.gov/npfmc/current_issues/observer/observer.htm)

The NPGOP's current service delivery model has had major implications on the livelihood of observers among other issues. It stands to reason that during this restructuring of the observer program, as well as the major changes in contract negotiations that the OAC should include an observer representation when making recommendations to the council. Please read our letter to NMFS regarding the reasons why observer program service delivery models shouldn't follow in NPGOP footsteps. Visit our website [www.apo-observers.org](http://www.apo-observers.org) and follow the links to Letters > Northeast Groundfish and Shellfish OP > Letter to Patricia Kurkul, Sept. 10, 2007 or follow this direct link:

[http://apo-observers.org/letters/kurkul\\_9-10-07\\_final.pdf](http://apo-observers.org/letters/kurkul_9-10-07_final.pdf)



## US - North Pacific

# Observer Program News and Updates

US -  
West  
Coast

## Pacific Marine Conservation Council (PMCC) Closing Doors

*Liz Mitchell; Fisheries Observer/APO; North Pacific, USA*

Sadly, this is the final month of operation for the [Pacific Marine Conservation Council \(PMCC\)](#). PMCC is a non-profit organization formed in 1997 and has ridden through the turmoil of stock declines and overfishing of the West Coast bottom trawl fisheries. They brought together fishermen, scientists and agencies to address critical fisheries problems on the US West Coast, including the need for science-based fishery information through an at-sea observer program.

Bottom trawlers have been hammering West Coast rockfishes since the 60s. In an effort to "Americanize" the exploitation of this fishery, the U.S. federal loan program financed US fleet expansion in the 70s with vessel purchase and upgrade loans. NMFS made management decisions during this expansion based on absolutely no scientific data from the fishery. What NMFS scientists have known is that most rockfish are long-lived, have low productivity and late maturity, among other complex life history patterns that make them extremely vulnerable to overfishing. The cumulative impact of bottom trawl gear on rockfish habitat seems to not only be a no-brainer suicide mission for the fishery but also has been studied to death in other parts of the world and found to be unsustainable.

The PMCC and other stakeholders, advocated the need for a West Coast at-sea observer program, but the trawl industry was vehemently opposed. A volunteer program was started in 1995 for a few years but was largely unsuccessful because...well...it was voluntary. It was terminated in 1998, with no major conclusions or direction from NMFS, except to report that the downward trajectory was getting steeper.

In 1999, three commercial species were declared overfished, 45 commercial species were of unknown status, and an additional five were approaching overfished condition. Fisheries continued to decline, boats were going bankrupt, and still the fishing industry largely denied the need for an observer program. In spite of what the fishing industry thought of having their fishery monitored, it seems incredulous that NMFS and the Council allowed it all to go down.

In 2000, the West Coast groundfish fishery was declared a failure, due to...(choke)...a "lack of basic scientific data" (Penny Dalton, NMFS).

Peter Huhtala, former PMCC Executive Director and Rockfish Campaign Coordinator, sums it up nicely in his blog (2007):

*"I was amazed to learn (in 2000) that fishery managers were basing many of their decisions on estimates of the total fish killed in the fishery that had no real current data to back them up. PMCC was advocating for an observer program, so scientists could tag along on a percentage of fishing trips to get a better idea of how many fish were discarded. This was vital information. The rockfish have a*

*swim bladder, and when they're hauled up from deep water the bladders burst, their eyes bug out, and they die. If we were to bring these fish back to a healthy population, we needed to count what we killed. Logical. Well, logical and controversial.*

*Apparently there was some resistance in the fishing industry to carrying observers on the boats. Some were offended that this meant that the government didn't trust them, or that it was surveillance that violated their civil rights, an unfair imposition, or potentially in conflict with their business policies, as in, 'My boat does not allow women on board.'*

*At my very first Pacific Fishery Management Council meeting, PMCC's executive director at the time, Bob Eaton, delivered testimony that basically said that the Council should shut down the trawl fishery on the continental shelf off the West Coast, unless they implement an at-sea observer program. Hearing this, the fellow standing next to me in the back of the room stared at me (the new PMCC guy in suit and tie), broke the handle off his coffee mug, threw the handle, which impaled in the sheetrock 12 feet away, and stared at me again. Oh. Then I realized that my new job description had me as the primary spokesperson delivering most of such testimony in the future. I was starting to get an inkling about what it meant when Bob said they were going to paint a target on my back."*

(from <http://peterhuhtala.blogspot.com/2007/04/what-does-huhtala-do-part-two.html>)

Industry finally succumbed to an observer program in 2001 but it was too late. Fisheries continued to drop like flies. Finally the fishery was such a failure that NMFS had to eat their own shoe and buy back 50% of the fleet...with our tax dollars!

Watch for the next *Mail Buoy* for current West Coast fishery issues, what organization(s) are going to fill PMCC's shoes, Council and NMFS steps taken since the fishery collapse and what has resulted from 9 years data collection from the West Coast Groundfish Observer Program.

PMCC Home Page: <http://www.pmcc.org>

West Coast Groundfish Observer Program (WCGOP) Manual. 2006:

<http://www.nwfsc.noaa.gov/research/divisions/fram/observer/observermanual/observermanual.cfm>

PMCC. 1999. Rockfish Report, the Status of West Coast Rockfish: <http://www.pmcc.org/RockfishReport/index.html>

Eagle, J., S. Newkirk, B. H. Thompson, Jr.. 2003. Taking stock of the regional Fishery Management Councils. Pew Science Series on Conservation and the Environment. Island Press.

[http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting\\_ocean\\_life/pew\\_science\\_taking\\_stock.pdf](http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Protecting_ocean_life/pew_science_taking_stock.pdf)

\*\*\*This section focuses on the professional livelihood of observers, employment parameters and standards, professional development opportunities and labor issues. If you would like to share with us an important aspect of observer professionalism, please contact us.

# Observer Professionalism and Labor Issues

## Observer Professionalism Working Group (OPWG) Focused Interviews

*Keith Davis; Fisheries Observer/APO; USA*

In the context of the 6<sup>th</sup> International Fisheries Observer and Monitoring Conference (IFOMC), the Observer Professionalism Working Group (OPWG) in 2009 will be working to construct a more solid foundation in regards to the Group's four areas of study: Wages and Benefits, Support and Opportunities, Employment Standards, and Social Equity. We hope to build off of our prior investigations, and gather more focused, detailed information in regards to certain highlighted Observer Professionalism topics. This stage of information gathering is centered about conducting "Focused Interviews" with the overall theme of: *Outlining Avenues that Foster the Recruitment and Retention of a Professional, Equitably Employed, Workforce of Observers.*

We are focusing primarily on prior and current observers. Other stakeholders, including fisheries managers, observer providers, data end-users, Union representatives, fishing industry representatives, and NGOs, may also be sought and included in this process. Also, the Observer stratum may be segregated by length of experience or multi-program experience criteria.

### Pre-conference Interview Techniques:

Reference 2009 OPWG Committee Plans, now available by way of the [IFOMC website](#) (Working Groups/Observer Professionalism Working Group) or by linking directly to the [OPWG Webview](#) on the APO site. See how and upon what subject matter you would like to participate in an interview.

The primary techniques used for conducting pre-conference interviews are via: in person, on-line correspondence, telephone, or post. In-person and telephone interviews may be digitally recorded.

Pre-conference interviews may be conducted over several separate correspondences.

If you wish to participate in the continued work of the OPWG, though on a more-informal basis than completing an interview, anyone is welcome to provide feedback to us via the [OPWG Public Forums](#), and all general OPWG questions and comments can be directed to Keith Davis [lblegend@yahoo.com](mailto:lblegend@yahoo.com).

### 6<sup>th</sup> IFOMC OPWG Workshop Proceedings:

The OPWG Workshop at the 6<sup>th</sup> IFOMC is scheduled to commence after lunch on Wednesday, July 22<sup>nd</sup>, lasting from 1:00 to 4:30 PM.

1:00 to 2:00 PM: will consist of a brief orientation of the Workshop, followed by a short skit (snit-bits sketch scenarios meant to exemplify certain observer professionalism issues), and ending with an audience-participant discussion.

Committee members from each of these OPWG areas of study will host a presentation of their respective continued work and interview materials specific to their committee. This time is designated for OPWG Workshop participants to walk about to the station(s) of their choice, providing their feedback (via interviews) to the workings of those specific OPWG committees.

If anyone attending the IFOMC does not get a chance to participate in OPWG Workshop interviews and would like to, arrangements will be made to complete interviews either during the remainder of the conference proceedings or soon thereafter (by way of one of the pre-conference interview techniques).

Plans are available on the IFOMC website, and will be made available in IFOMC registration packets and at the OPWG workshop.

2:00 PM to 4:30 PM: The OPWG Workshop room will be arranged with separate stations for each of the four areas of study of the OPWG- Wages and Benefits, Support and Opportunities, Employment Standards, and Social Equity

For this stage of our information gathering, we seek quality rather than quantity. We aim to choose interviewees carefully, in a more-directed (than with a mass survey) sense, based about the specific objectives outlined in 2009 OPWG Committee Plans. We hope to strike a balance among all stakeholder perspectives important to gaining a broadened vantage of each outlined objective. Some interviewees may wish to provide feedback to the entire set of interview questions, while others, may be approached by one committee and asked to complete only a portion of the questions. If any of this strikes your interest and you would like to see how you can become more involved with helping the OPWG with this stage of information gathering, please first navigate to the [OPWG Webview](#) to figure out where your input would be most useful, and then please get in touch with one of us as soon as you can.

<http://apo-observers.org/ifomc/opwg.php>

<http://www.observernet.org/obsforum/showthread.php?t=1808>

# Observer Professionalism and Labor Issues

## Hole in the Net: A U.S. Observer's Occupational Injury Claim (Part II)

*Mark Wormington; Fisheries Observer/APO Board; U.S. North Pacific*



Mark Wormington

To make a long story short: so far, I've been reimbursed a half-year late for \$3,000 out-of-pocket expenses I never should have had to pay in the first place; I have approximately zero remaining cartilage on my outer knee joints, which means I can't do my regular job at sea (I'm lucky if I can find 4 months/year of shoreside monitoring work); I still haven't received a dime of unemployment benefits during 13 years as an observer; I can't apply for further compensa-

tion until sometime after the independent medical exam (IME), now postponed until this March (or 16 months after my knees gave out)...

"You're being sarcastic," said Mr. Goodspeed, the Chief of Operations for Special Claims.

"No, really, I'm being sincere," I insisted of my premise that FECA worker's compensation claims were designed to fail.

I will admit to this: that the many months of inaction on my claim was due to such nonsense as a discrepancy between my doctor's office and the Department of Labor over a "universal" injury code; on the sudden cancellation of an already long-delayed appointment for my IME; on the vast gray area of whom is responsible for initiating what paperwork and when -- I'll admit that these failures are more of an evolutionary nature than they are of the system's initial design.

And Mr. Goodspeed did admit to the system's "complexity" and "inertia" and mentioned a couple of other parameters of non-success, like "frustration" for all involved.

"Special claimants" like contracted observers face the system at its worst. The process is incoherent, and the partial privatization of services seems

only to have further diluted accountability. It's astonishing how many different voicemail menus you can come up against trying to get an answer to your latest question.

My latest unanswered question arises from that conversation I had with the Special Claims CO: Why is it I should NOT count on any occupational rehab benefits? Nobody seems to have removed that item from the Department of Labor's FECA webpage.

I'm pretty sure no two people employed, contracted or ensnared in this fractured insurance scheme would draw the same arrows or arrange the same boxes on their flow charts. Even if they did, you'd never reach them on the same day. Perhaps at least one of the two would be obliged by law to get back to you, or your voicemail, within three business days. E-mail is not an option.

In retrospect, my lengthy argument with the extremely patient and professional Mr. Goodspeed was a contest of competing truths -- neither version could be confirmed without a big dose of irony.

It's ironic that the U.S. has no health insurance system. It's ironic that our high financiers have lately destroyed far more wealth than they've created. It's pathetic that we-duh-people have for the last thirty years allowed our government to steadily surrender its authority to corporate con artists. Our economic metrics are so retro that we can't even properly define wealth. Learning to define "sustainable" would be a great start.

My stand as a board member of the APO has always been that truly sound ocean resource management won't happen unless we first achieve fundamental political reform. Our overarching problem is systemic and rooted in conflict-of-interest.

The political philosophy and policies that eventually lead to ecosystem-

## Seafarers International Union Update for North Pacific Groundfish Observers

*Tracey Mayhew; Seafarers International Union (SIU); Anchorage, Alaska*

As you may be aware all of the North Pacific observer collective bargaining agreements will be open for negotiation in 2009. The Union is looking for feedback and contract suggestions from the membership. We have received a number of emails and phone calls so far and encourage you to keep them coming. We will be sending out contract suggestion forms via email and, with some cooperation from the companies, will try to have them available at the bunkhouses. However feel free to contact me directly, my contact information is below. Your personal information will be kept confidential.

The North Pacific Fisheries Management Council continues to look at the restructuring of the Observer program, particularly a change in the Service Delivery Model, which could greatly affect observers and the contracting process. I would encourage you to check out the Council's website for more information: [http://www.fakr.noaa.gov/npfmc/current\\_issues/observer/observer.htm](http://www.fakr.noaa.gov/npfmc/current_issues/observer/observer.htm)

I am available, if you would like to discuss this topic.

The Council has also produced a very good handbook called, "[Navigating the North Pacific Council Process](http://www.fakr.noaa.gov/npfmc/misc_pub/Navigating_NPFMC.pdf)": ([http://www.fakr.noaa.gov/npfmc/misc\\_pub/Navigating\\_NPFMC.pdf](http://www.fakr.noaa.gov/npfmc/misc_pub/Navigating_NPFMC.pdf))

If you are interested in learning more about fish politics and how decisions are made in the North Pacific this is a good handbook to read.

Be safe.

Best Regards,

Tracey Mayhew

Union Representative

721 Sesame Street Ste 1C

Anchorage, AK 99517

877-471-3425

[tmayhew@seafarers.org](mailto:tmayhew@seafarers.org)

# Observer Professionalism and Labor Issues

## North Pacific Observers! It's Time to Organize

Union Contracts Expire December 31, 2009

We need more transparency in our Union

*Liz Mitchell; Fisheries Observer/ APO; North Pacific, USA*

For the first time since we unionized in 1997, we now have an opportunity to get rid of the staggered Union contract negotiations! All contracts expire December 31, 2009 and observers have to start organizing now to make sure we are part of the negotiation of new contracts. We can't afford to let this opportunity slip through our fingers. The APO would like to start organizing a handful of observer representatives from each contractor to hammer out labor issues and approach our Union as an organized unit representing ALL observers.

The staggering of contract negotiations have worked against us in the past and kept observers from organizing as a single unit. They approached us as specific contractor observers (AOI, NWO, Saltwater), keeping news of one contractor's negotiations secret from the rest of the observers. They treated us as if we don't all share the same labor issues. Observers from all three companies are paying union dues, and we don't always stay with the same contractor. Therefore we should all be approached as a single unit, with transparency of developments throughout the year and involvement in contract negotiations, regardless of our current employer. If we are not going to negotiate a single contract, we should all have access to all the contracts so that we can decide for whom we wish to work.

The staggered negotiations have contributed to a false sense of loyalty to various contractors *who are not loyal to us*: there's no job security, no job advancement, few benefits, ambiguous insurance, and our employment conditions still fall well below standards in comparable fields.

The odds against us are pretty staggering. Contractors will undoubtedly use today's economic recession to their advantage, assuming that observers will fear for their job and be willing to settle for peanuts. We can assume that our contractors will have anti-Union legal representation. Our Union has legal representation also but our contracts are only 3 of dozens that our representative is working on and she doesn't have an assistant. The contractors worked together by insisting on staggered negotiations to minimize our advances. But there's that small fact that everything would collapse in Alaska without observers. That's a powerful bargaining chip. It's time we started working together to take charge of our own advancement. Our Union will not do it. It's up to us.

There have been many changes in recent years that have impacted our livelihood, it can only get worse during these economic hard times when companies will lobby for all they can get as they tighten their belts. If we don't begin organizing now, observer welfare will once again fall to the bottom of a long list of priorities that is typical in U.S. fisheries management.

The APO doesn't want to work against the Union; we wish to transform our Union. We can assist the Union with negotiations by presenting our needs to the Union as an organized unit representing ALL observers. Please contact the APO if you would like to assist us with organizing observers, and negotiating for observer representation at the negotiations to make sure our voice is heard this time: [apo@apo-observers.org](mailto:apo@apo-observers.org).

\*\*\*This section focuses on the end-use (scientific product) of observer data and related fisheries science. If you would like to share an important use of observer data or provide a lead to scientific publications which utilize observer-collected data or exhibit related fisheries science, please [contact us](#).

# Observer Data End Use and Fisheries Science

## Tuna Tagging in the Indian Ocean

Shikami K. Akweyu; Fisheries Department; Mombasa, Kenya

### Abstract

The Regional tuna-tagging project involves tagging of three tuna species: Yellowfin, Bigeye and Skipjack tuna. The process commences by searching and sighting tuna schools at sea and using live or artificial bait rapidly hooking them on to the deck, tagging and returning them back to water in a few seconds. Once fish is captured a small plastic tag (fig 1) is attached to its body just behind the second dorsal fin and thereafter released alive. Each tag is 11 to 15cm long, and bears a unique number that identifies the fish as well as Indian Ocean Tuna Commission's (IOTC) contact details. Early this year the vessels managed to associate with a mixed school of the three species- Yellowfin, Bigeye and Skipjack tunas. Out of sheer lack of bait and with low fuel, one vessel was left with the school as the other, Aita Fraxku, preceded to port. The other vessel, Kermantxo, had to use all possible techniques to fish without live bait, upon which Tikitaka, based on the use of artificial bait/lure was realized as possible and effective. The project anticipated to last 2½ years. Two Spanish pole and line fishing boats were chartered commencing March 05 to September 07 to undertake the project. We had a contractual obligation to tag a minimum of 80,000 tunas. We tagged this number of fish by August 15th 2006. The number of fish tagged as of 16th October 2006 were: Yellowfin tuna-37,115 (35.5%), Bigeye Tuna-18,633 (17.8%), Skipjack tuna-48,464 (46.3%) and others unknown species-366 (.03%) total 104,578.

It is expected that the information gathered from the recaptured tagged fish, by either artisanal and/or industrial fishers, will allow scientists to have a better understanding of tuna fish biology and behaviour and hence assess the status of the tuna stocks in the Indian Ocean. This in turn will greatly improve the certainty of information available for management decisions. Therefore the higher the number of tuna tagged, the more accurate will be the parameters used to estimate and to assess the tuna stocks.

### Introduction

The RTTP-IO is a European Development Fund (EDF) Project that has been adopted by the different regional organizations of the region coordinated through the Inter-Regional Coordination Committee - IRCC (COMESA, IGAD, EAC, SADC and COI). The Commission de l'Océan Indien (COI) is the Contracting Authority of this project, while the Indian Ocean Tuna Commission (IOTC), based in Seychelles, executes its supervision.

### Objectives and expected results

The main objective is to reinforce the scientific knowledge of tropical tuna stocks and their rate of exploitation in the Indian Ocean by

obtaining the crucial model parameters for stock assessment. The specific objectives include:

- To achieve the tagging of a critical mass of fishes (minimum 80,000),
- To achieve a significant percentage of tag recovery,
- To process and interpret the recovered data, and
- To design scientific models for tuna stock assessment and to reinforce the capacity of the Regional Fisheries Organization and participating institutions in stock assessment and management.

### Methodology

#### Target species for tagging

The three tuna species targeted for tagging on this programme are: Yellowfin tuna (*Thunnus albacares*), Bigeye tuna (*Thunnus obesus*), and Skipjack tuna (*Katsuwonus pelamis*). Other species are caught during the capture exercise and are either released without tagging or kept for further biological sampling (i.e. stomach content, fork length, liver weight etc). These are Rainbow runner (*Elagatis bipinnulata*), Longtail tuna (*Thunnus tonggol*), Frigate tuna (*Auxis thazard*), Kawakawa (*Euthynnus affinis*) and Dolphin fish (*Coryphaena* sp.), among others. All these by-catch species are associated with tuna schools that are detected by the presence of birds or by sonar. Kawakawa (*Euthynnus affinis*) are caught along with the three main species, although in very small numbers.

#### Fishing technique of the chartered vessels

The project intends to tag close to 80,000 tuna during 2 ½ years over the whole of Western Indian Ocean. Two fishing vessels were therefore chartered from March 2005 to September 2007. The fishing technique used by these specific vessels was pole and line with live bait. The live bait used was small pelagic or semi-pelagic fish such as sardines, anchovies, sprats, mackerels, etc. The capture of bait was either during daytime, using purse seines or at night with or without lights and with purse seines and lift nets (boke-ami). The bait was small fish of about 10 – 15 cm in length on average. In equatorial and tropical waters, the bait was generally very weak and could not be carried out on board for long periods. Consequently bait were caught in the shallow near shores (bays or lagoons) areas of 10 and 50m depth and proximity to the tuna fishing grounds, to enable the vessels to regularly access the bait fishing grounds to reload the bait tanks.

The boats were to be used exclusively for the purpose of the Project. Their contract forbade them to perform any kind of commercial fishing and to engage in any selling of any fish. The fish caught

*continued...*



# Observer Data End Use and Fisheries Science

## Tuna Tagging, cont.

was used either to catch tuna (as bait) or for scientific purposes (tuna for tagging and collection of biological data and samples).

### The associated school fishing method without using bait

Starting early this year, on April 14th 2006, Aita Fraxku managed to get a mixed school of Yellowfin, Bigeye and Skipjack associated with it. The school was kept under and around the vessels and was passed alternatively from one vessel to the other. The vessels steamed at a low speed generally between 1 to 3 knots with the school underneath. During the day, the bird radar was on and the vessel tried to gather new tuna schools associated to birds or drifting logs in order to increase the school already under the boat. At night with all lights on, the vessel either drifted or kept steaming to gather more and more tunas. The trend then was: one vessel to keep fishing with the school, while during this time the other vessel was either in port (for crew rotation or provision) or at the baiting ground catching bait.

On July 7th the Kermantxo had to take over the school from the Aita Fraxku but it had no bait on board. In order not to remain idle, the Kermantxo was asked to try different techniques to catch tuna without bait. One of these methods, called tikitaka by the fishermen on board, is based on the use of artificial lures on the hooks. The Dakar-Senegal-based bait boats developed this technique in the eighties. With the associated school, this method is known to work sometimes (one day or at most a few days). It was not envisaged that 3 months later the two vessels would still be fishing without bait. Baiting is such a constraint for tuna pole-and-line fishing that the possibility to fish without bait is exceptional.

The average number of fish tagged per fishing day is not as high as the one achieved with bait but the number of days saved in baiting more than compensates this slightly lower tag per fishing day. Consequently at the end, the number of fish tagged per calendar day was higher without bait than with bait (385 instead of 318).

### Conventional Tagging

Conventional tagging is tagging with a dart tag. All large-scale tagging programmes on tropical tuna generally use this type of tagging.



Fig. 1 a yellow Dart tag

To obtain parameters at stock level, it is necessary to tag a large number of tuna, several tens of thousands of tuna and this applies to small-scale tagging, with the number targeted often being in the order of several thousands. The most employed techniques/gears for harvesting tropical tuna include: troll line, handline, rod and reel, longline, pole-and-line, purse seine. It is recommended to use a rapid capture method that is less strenuous in order to achieve a high survival rate after tagging. Tag-

ging from pole-and-line boats or bait-boats is the best way to tag large number of tuna so that when released they are in good condition. However, almost all large-scale tuna tagging programmes successfully con-

Dart tag



Archival tag-inserted in abdomen- store data that is downloadable on computer when fish is recaptured



Pop up tag



Releases itself automatically and transmits stored data by satellite

ducted so far have used bait-boats fishing with live bait and bamboo or fibreglass poles.

### Various types of tags are used

Fig 2 types of tags

### Tagging procedure

Searching commences immediately when enough bait is loaded into the tanks. Once at sea the captain and crew search for schools or Fish Aggregating Devices (FADs) while a member of the scientific team RTTP stays on the bridge to watch and record the changes in activities, the sighted schools, FAD/Logs, and environmental parameters, while recording all the this information on a daily log

Searching employs many activities and instruments in order to spot the tuna. Onboard the boat are two Omni directional sonars, two echosounders for detection of under water tuna and one bird radar –S band 30 KW to detect birds several miles away to about 12 nautical miles. In addition, usually 2 crewmembers, are positioned at the front of the boat to scan the sea surface and the horizon for presence of birds and/or fish splashing/jumping on water. Tuna are almost always associated with birds at sea. Therefore, wherever there are birds there may also be tuna. Other searching equipment includes four long-range binoculars that are often used to observe.

Once the captain ascertains that there are tuna, he directs the bait man to chum the fish with bait. A seawater spray system is also employed to hide the vessel from the tunas. If this succeeds more and more tuna approach the boat and at this moment all systems go into full gear as the crew, using pole and line, start hooking them on to the boat as they are tagged.

### Tagging

continued...

# Observer Data End Use and Fisheries Science

## Tuna Tagging, cont.

The assisting crew receives the fish, unhooks it if necessary and rapidly checks its condition. If unsatisfactory, the fish is thrown on the deck. Otherwise it is passed on to the tagger by letting it slide down the cradle on its left side up and head first. The tagger similarly assesses the fish for suitability before tagging it. He records the species, the size and any other information on the tag and the fish conditions on the digital recorder. The fish is dropped over the side back into the sea headfirst. The process is repeated until the fishing is over.

Many fish are tagged and the tag information is sent to IOTC. When recovered the tag recovery personnel in participating countries similarly send the tag and information to IOTC. The location of tagging and of recapture gives movement and stock structure. The fish are measured when tagged and when recaptured, provide growth information. When tagged fish are injected with a chemical marker, the number of growth rings in the otoliths between tagging and recapture permit ageing. Attrition with time gives an estimate of natural mortality

### Biological Sampling-for fish that fall on the deck

These are fish that accidentally fall onto the deck or are damaged when in the process of pulling them in from the sea. The fish are sorted by species and counted. Data is collected from either all or a subsample. Data include measurements, weight, sex, weight of liver and gonads and samples are labeled and preserved. The data collected is entered on data sheets and later keyed in the computer. This will later serve to further elucidate the biology of this fishes. Of importance while collecting this information is, however, the maturity and the food of tunas. Gonad size, fork length, weight and also the weight and contents of stomachs give indication to the mentioned parameters.

### At the close of the day

Once the data is recorded on spreadsheets, the data are checked visually before they are entered into computers. While keypunched, data are checked by the internal verification software. Once all data have been entered and verified, the digital file on the recorders are downloaded on to the computer for possible future checking and a backup copy of the tagging file is made. Then, the file is erased from the digital recorder. Backup files are regularly sent to the main office when staff leaves the vessel or via E-mail if they are not too large.

### Results and discussion

On October 16<sup>th</sup> 2006, a total of 104,578 of fish had been tagged:

No.	Tuna Species	Number tagged	%
1	Yellowfin	37,115	35.5
2	Bigeye	18,633	17.8
3	Skipjack	48,464	46.3
4	Unknown species	366	0.3
<b>Total</b>		<b>104,578</b>	<b>100</b>

Table 1 (data courtesy IOTC)

Therefore, in terms of number of fish tagged, RTTP-IO is very successful. However, only if the recovery process is working well and if most or all recovered tagged fish are returned will the project qualify as a great success. Large and proper recovery can only be done by:

- Collecting a large number of recoveries with the associated data;
- Developing outreach to inform the different persons and institutions working with tunas of the Indian Ocean (Fisheries and fisheries administrations, fishermen, port authorities and stevedores, cannery workers, etc...);
- Assessing the reporting rate of the different fisheries;
- Having some good quality of tuna catch statistics for the main fisheries.

### What is the best time to catch and tag Tuna?

During the tagging project the best time to catch tuna is best illustrated by the graph below. Plotted, number of tuna per species tagged against different times of the day; early morning, 6:00 to 11:00, morning and early afternoon 11:00 to 15:00 and late afternoon to late evening 15:00 to 18:00. Data collected from both vessels between early may to August 2005.

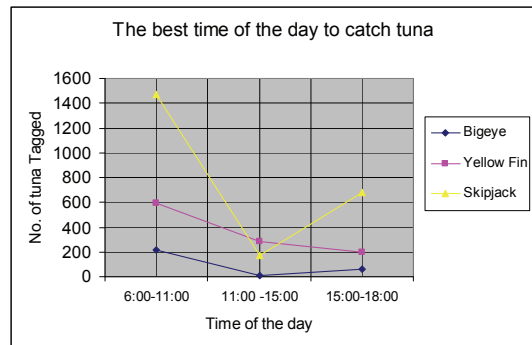


Fig 3 most tuna are caught early in the morning and late afternoon (Data sets from both Aita and Kermantxo)

### Bar graphs showing sizes of tuna frequently caught and tagged;

Note the difference in three species, while Yellowfin has its average fork length at about 60 cm large sizes of up 130cm have been recorded. On the other hand Bigeye has two peaks unlike in Yellowfin and Skipjack however it has the least number of fish tagged

continued...

# Observer Data End Use and Fisheries Science

## Tuna Tagging, cont.

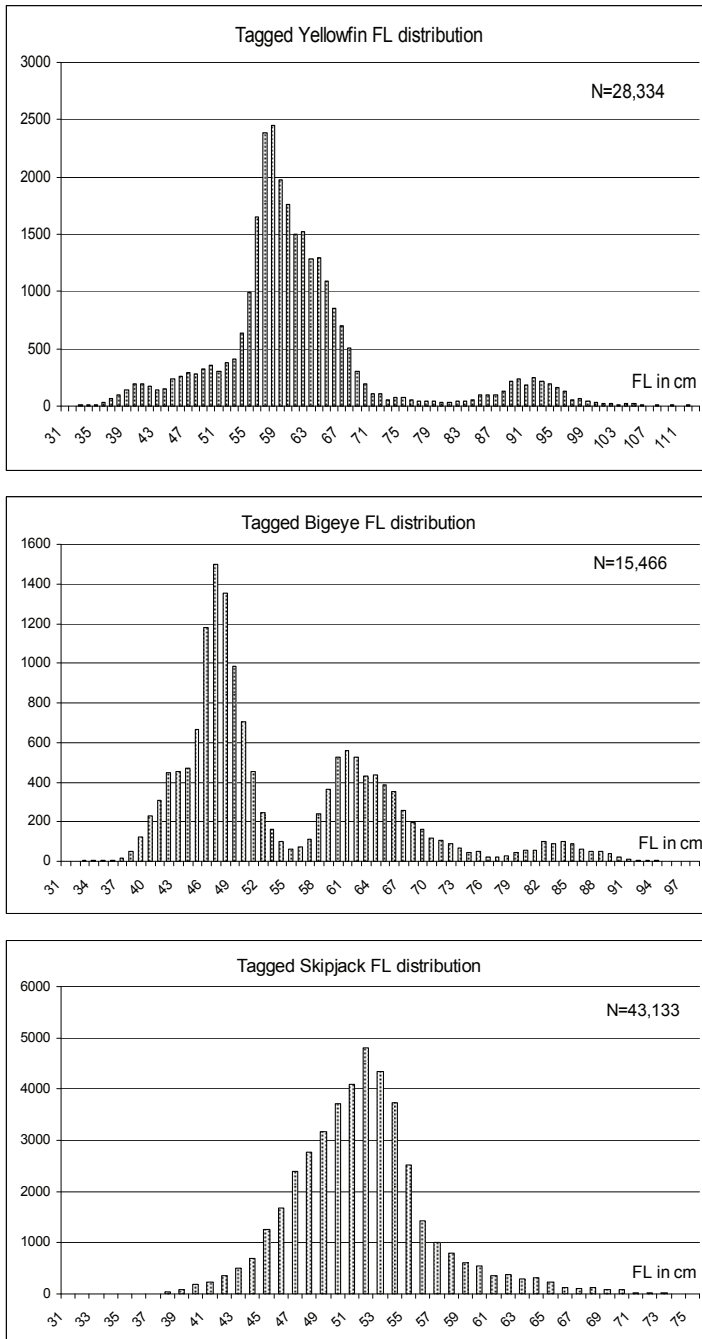


Fig 4 Folk Length (FL) frequency graphs showing distribution of FL among the three tuna species (Data sets from both Aita Fraxku and Kermantxo May 2005 to August 2006 (Total fish tagged 86933))

be congratulated for the achievements so far, given the magnitude of the assignment. However similar studies have been conducted in other oceans such as in the SW Pacific Ocean in early 1990, sponsored by EDF and the result compares favourably with the Indian Ocean figures. In the SW Pacific the percentage tuna tagged per species by the end of the project were: Skipjack 67.1%, Yellowfin 27.3%, and Bigeye 5.5%. (Current RTTP-OI figures are Yellowfin 35.5%, Bigeye 17.8% and Skipjack 46.3% out of 56.7% of tuna tagged)

No doubt the project is successful given the numbers tagged so far. Looking at the number tagged, 104,578, in relation to the recaptures, for instance after 183 days with the associated school (April 14th to October 16th), 64,531 fish were tagged and released and 3,191 were recaptured on the vessels and released. This represents a return rate of 8.1% or 4.9% if only the individual fish are considered whether they were recaptured only one time or several times. This is not so high considering the permanent association of the school with the tuna vessels. Furthermore while the return rate increased from April to June, it decreased a lot since and in October was less than 1%. This demonstrates a high turnover of the fish inside the school and consequently a good dispersion of the fish in the rest of the population. When compared with recoveries from fishing fleets and tuna factories in the WIO region (fig. 5 below) there are good prospects on the health of the stocks, however, this will become clearer once the first phase is concluded and the preliminary analysis is conducted.

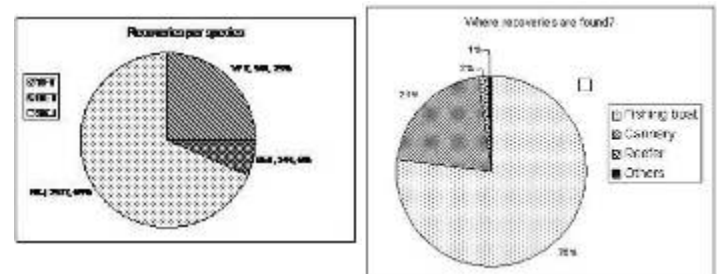


Fig 5 Recoveries by numbers and %

Tuna fish being the most single important group of fish in the world fishery today needs through and continuous study to better understand its science and therefore its stock dynamics. More and more fishing effort is being employed in order to satisfy the world market demand for this fishes, the Japanese and Korean sashimi demands are some of the examples. While all countries in the WIO region need to fully participate in the management and development of the fishery, urgent and efficient monitoring control and surveillance of the Indian Ocean waters to minimize overexploitation and IUU is obligatory.

### Conclusion and recommendation

This is the first study of its kind in the Indian Ocean and RTTP-OT must

continued...

# Observer Data End Use and Fisheries Science

## Tuna Tagging, cont.

### Acknowledgements

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A Regional Tuna Tagging Project - Indian Ocean (RTTP-IO) Programme

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## Public Access to Observer Data

*Liz Mitchell; Fisheries Observer/ APO; North Pacific, USA*

The APO sent a letter to NOAA that was signed on by several organizations and independent researchers. The letter was in response to rules currently under development by NMFS to comply with more restrictive language of the Magnuson Stevens Reauthorization Act (2007) concerning public access to observer data. Through a largely un-debated section of the Magnuson-Stevens Reauthorization Act, it appears that the agency has authority to entirely withhold fisheries observer data from the public.

This sort of secrecy prevents independent evaluation of:

1. The efficacy of observer programs;
2. Impacts of destructive fishing gear on ecosystems and bycatch levels;
3. Fairness of fishery management decisions among stakeholders;
4. Improvements in safety concerns for observers;

There will be a proposed rule through the Federal Register coming soon, which will allow for public comments. NMFS will also be updating NOAA Administrative Order 216-100, which is an internal guideline

that does not require public involvement.

In general the topic has remained in a shroud of secrecy for the last 2 years, regarding just how NMFS will be interpreting the Act through these rules. This has resulted in a backlog of FOIA requests with absolutely no hint from NMFS on how extensive NMFS plans to interpret this portion of the Act. Nor has there been stakeholder participation. Our letter reflected a desire for all stakeholders to be given a fair chance to evaluate carefully what it is we need from our observer programs in order to meet the challenges of monitoring a rapidly changing ocean, as well as allowing public participation in fishery management decisions.

The letter is posted on [www.Observernet.org](http://www.Observernet.org) in the forum, APO News, under "Fisheries Management and Observer Related Discussions" forum.

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**APO website**

[www.apo-observers.org](http://www.apo-observers.org)

**ObserverNet (on-line observer forum)**

[www.observernet.org](http://www.observernet.org)

**National Observer Program**

[www.st.nmfs.gov/st4/nop](http://www.st.nmfs.gov/st4/nop)

**Intl. Fish. Observer and Monitoring Conference**

[www.ifomc.com](http://www.ifomc.com)

**AMSEA (Marine Safety Instruction)**

[www.amsea.org](http://www.amsea.org)

**\*\*\* Submissions for the forthcoming *Summer 2009 Mail Buoy* are due by *May 22<sup>nd</sup>, 2009*. The APO is currently recruiting for observer representatives from national and international observer programs. *Please, contact us if you are interested with helping with the APO!***

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