Guideline of the IOTC Tuna fisheries Observer Program (IOTC-TOP)

Prepared by IOTC TOP guideline working group (*)

November, 2005

Résumé

This is a draft of the general guideline of the IOTC-TOP based on the terms of reference below. Specific and concrete plans need to be developed by member countries by referring to this guideline and also adjusting their own situation. The IOTC-TOP is not mandatory but the recommended task for the member countries because each country has different situation such as budget, manpower etc.

Terms of reverences (from 2004 IOTC-SC report)

5.4 Guidelines for observer programmes

24. In response to the recommendation of the Working Party on Data Collection and Statistics in 2003, a review of observer programmes from the EU, USA, Canada and Japan was presented to the SC (IOTC-2004-SC-INF09). The SC commended the author for the work that has gone into the review.

25. Noting that the nature and extent of observer programmes vary widely, the SC noted that the Commission would have to clearly specify its requirements for any future observer programme, but that the above report was a useful starting point should the SC be requested to provide input to the design of such a programme in the future.

26. A small group of SC members, coordinated by Dr T. Nishida (Japan), agreed to correspond intersessionally with a view to proposing standards required for observer programmes in anticipation of any requirements from the Commission.

CONTENTS

Submitted to the IOTC Seventh Scientific Committee (Nov. 7-11, 2005), Victoria, Seychelles.
(*) Nishida (Japan: coordinator), Anganuzzi (IOTC-DG), Chang (invited scientist), Goujon (EC: France), Kirkwood (SC-Chair), Pianet (EC: France), Ariz Telleria (EC: Spain) and McLoughlin for Ward (Australia)

1. Introduction

This is a draft of the general guideline of the IOTC Tuna fisheries Observer Program (IOTC-TOP). Specific plans need to be developed by each country by referring to this basic guideline and also adjusting her own situation. The IOTC-TOP is not mandatory but the recommended task for the member countries because each country has different situation such as budget, manpower etc. With this baseline, the IOTC-TOP guideline is drafted.

For references, three Appendices are provides at the end of this document, i.e., Appendix A: Type of the OP, Appendix B: Comparative tables among the TOP of the world (costs, coverage, observer, training, data etc) and Appendix C: References for member countries to develop their specific IOTC-TOP based on this Guideline.

2. Objectives

Objectives of the IOTC-TOP is mainly to collect accurate tuna fisheries related information such as catch, fishing effort and size to be used for scientific purposes and not intended for the inspection nor surveillance.

3. Guideline of the IOTC-TOP

3.1 Area to cover the IOTC-TOP

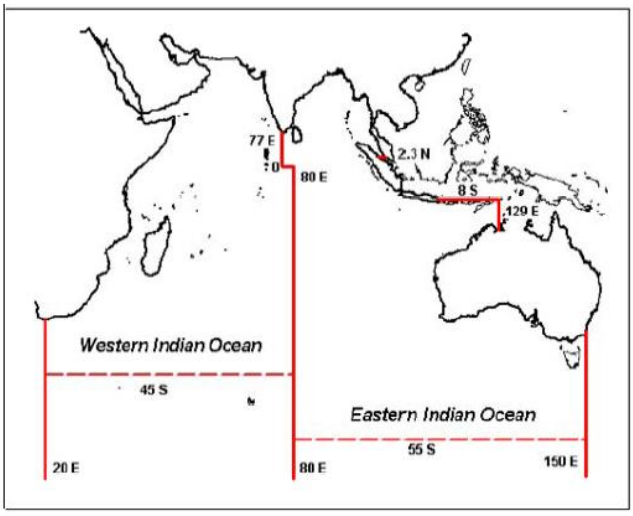

Fig. 1 Area to be covered by the IOTC-TOP (same as for the IOTC area)

3.2 Vessels

Tuna fishing vessels with its LOA is 24m or longer are recommended to conduct the IOTC-TOP. For other vessels, it is desirable to do the IOTC-TOP if the situation is allowed.

3.3 Coverage

It is the ideal to cover 100% of the tuna fishing trips. However it will be not possible for the majority of countries to implement due to the budgetary (man power) constraints. According to the IATTC statistician, there are certain relations among coverage, cost, accuracy (depending on the observer's experiences) and precisions for the concerning parameters to be observed. However 20% of coverage of the (annual) trips is statistically reliable and robust if the observes were well trained.

However in the real situation, 20% is likely heavy burdens for the TOP in other Tuna Commissions such as ICCAT and CCSBT, thus their coverage generally ranges from 5-10%. However for specific cases such as moratorium and surveillance OP in FFA (SPC) and IATTC, their coverage ranges up to 100% for some cases. In such cases, industries and/or Governments pay the extra costs. Appendices A and B show further detail information on these issues.

Under such situation and also concerning the scientific sound objectives for the IOTC-TOP, its realistic coverage is 5-10%. But the final decision will be made by each Government reflecting and adjusting her situation.

3.4 Observers

Note: observes in this section are for human and not for robot (un-manned) observers.

(1) Numbers

- Minimum one observer need to be assigned for each trip. The robot (un-manned) observer system can be replaced if it can collect the basic information stated in 3.6.

(2) Roles and responsibility

- The role of the observers is not to provide advice on laws, or to enforce them, but to ensure that good quality catch and effort data are collected on their host vessel. These data are often the most valuable source of information to assess fish stocks and design management measures, particularly when a long time-series of data is available. Therefore, observers should see their role as part of a quality assurance programmed to ensure that commercial fishing vessels supply high quality catch and effort data.

- Observers are bound to confidentiality and are not allowed to diffuse any documents concerning their observation mission (manual, formulas, reports, pictures, notes etc) to vessels and any other parties.

(3) Status and limitations

- Observers are not enforcement officers. Enforcement of the law is usually the responsibility of Fishery Officers in each country especially employed for the job.

- Observers have no powers to order the master to do anything except to request reasonable co-operation and assistance from the ship's officers and crew to do their observer work successfully.

- Observers must be of the nationality of the vessel flag.

- Observers will be considered as passengers and therefore should not take part in the fishing maneuvers, but must obey the captain to any orders dealing with security.

- Observers are not allowed to take pictures without authorization of the captain

3.5 Trainings and manuals

Each Government to dispatch observes is responsible to conduct the training for observers to collect accurate information including trainings for first aids, sea safety and mental & physical health safety. In this connection, it is recommended to make manuals to be used during the trainings and also in the fields.

3.6 Basic information to be collected

It is recommended to collect following basic information:

(1) Date and location of each operation including its staring and ending time and other relevant information regarding the operation even if null sets in the case of purse seiners (PS) or no catch for the longliners (LL).

(2) Catch (number and weight) including by-catch by species and corresponding fishing effort in each operation.

(3) Number or weight of discard and/or released alive by species.

(4) Number of fish (by species) damaged by predation and its name.

(5) Size and/or weight of catch and by-catch in each operation (10% of each species is desirable).

(6) Observation of IUU vessels : flag, marking, color (picture even)

(7) For PS, information on the FADs, description of logs for PS, i.e., logs type, buoy presence, ID, associated species and daily proportion of vessel activity by main category.

(8) For LL, materials of gear, number of hooks, number of baskets and depth of hooks measured by depth meter (if possible).

3.7 Treatments of the data

(1) Ownership

Observers' records must be entirely independent to those the vessel collects and their data belong to the Government that hires the observers.

(2) Release to the IOTC

Each Government conducting the IOTC-TOP is recommended to release the TOP data to the IOTC annually.

(3) Report and data analyses

Scientists belonging to countries conducting the IOTC-TOP are encouraged to present the report of the IOTC TOP activities and data analyses in the relevant working group meetings and also for their summary at the Scientific Committee.

4. References

Nishida, T. (2002): Report on the current situation of the overseas fisheries observer program (Vol.2). Tuna fisheries in France, Spain and UK. (*in Japanese*). 72pp.

Nishida, T. (2003): Report on the current situation of the overseas fisheries observer program (Vol.3). Tuna fisheries in the USA, IATTC and Canada (i*n Japanese*). 93pp.

Nishida, T. (2004): Recent situation of the regional Tuna Observer Programs (TOP) (IOTC–SC-2004-info 09):24pp.

Appendix A: Type of the Observer Program (OP)

In general, there are three types of the observer programs (OP) as depicted in Fig. 2, i.e., “Scientific OP”, “Fisheries OP” and “Surveillance (Control) OP”. The most basic, essential and fundamental one is the Scientific Observer Program” which collects only scientific information and an essential part for the OP.

The second type is the Fisheries Observer Program, which is the combination of the Scientific OP and Surveillance (Control) OP. This fisheries OP collects mainly the scientific informational but concurrently monitor the legal matters. Although it does not have any enforcement powers, they report illegal acts to the Authorities.

The third type, Surveillance (Control) OP is primarily to monitor the legal matters (e.g. to monitor activities of licensed foreign LL and PS vessels in UK and French territories in the Indian Ocean) but it also collects basic scientific information such as catch by species.

Besides these three types of the OP, there is a special category, ‘Inspection program’, although it is not a part of observer programs. Inspection programs are conducted by fishery inspectors with enforcement powers (e.g. Government port inspections). Fig. 2 depicts their definitions and relations.

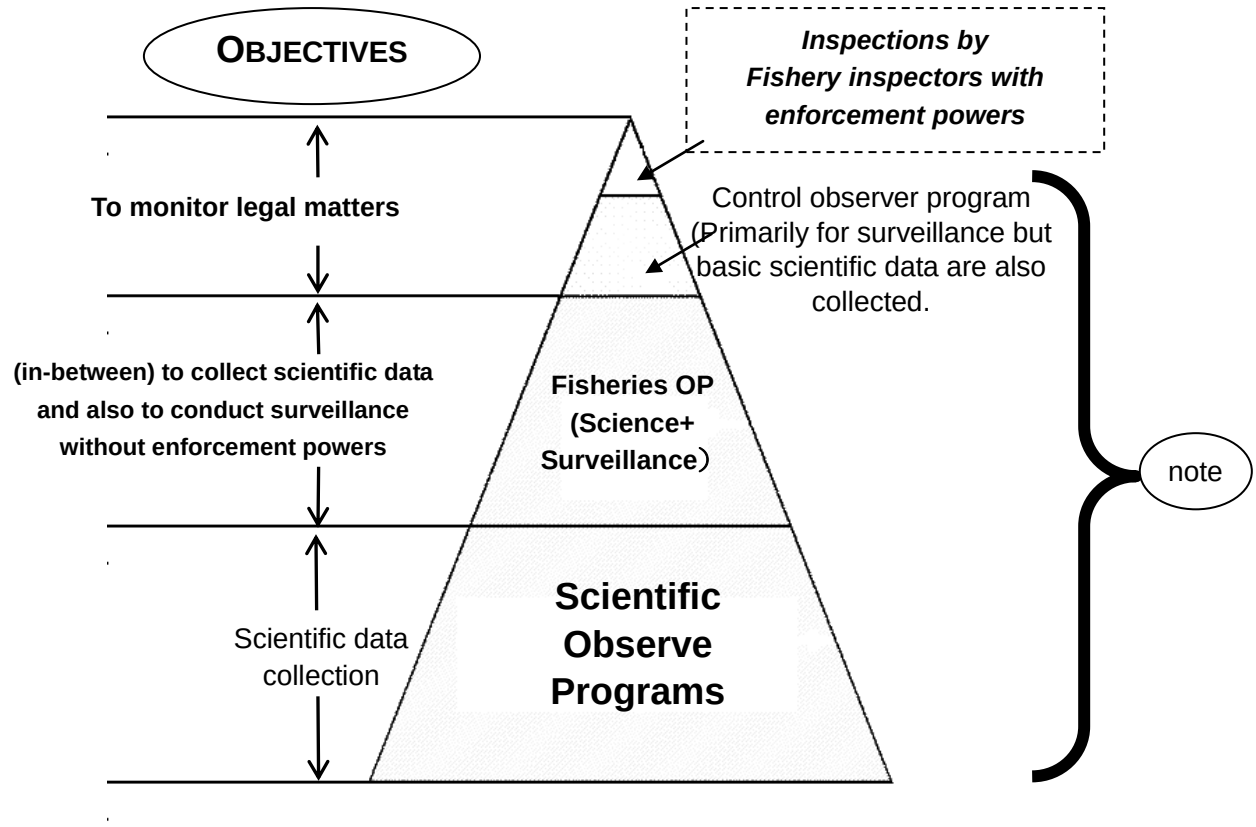

Fig. 2. Definition of various types of the observer programs and their relations.

Table 1 summarizes the types of the recent tuna observer programs (TOP) in the world. According to Table 1, in North America, the major type is the 'Fisheries' TOP. On the other hand, in Europe, scientific TOP take the majority part, although there are also a few 'Fisheries' and 'Surveillance (Control)' TOP. In the Indian Ocean, the TOP by the UK and France and also the moratorium TOP by France and Spain are the 'Control 'program but they collect a considerable amount of the scientific data.

Table 1 Types of the tuna observer programs (TOP) in the past and the present (refer to Fig. 1)

Fisheries	Objectives	Country/organization (Area)	Type		
			Scientific	Fisheries	Surveillance
PS	Collection of information on small bigeye	EU (Atlantic & Indian Ocean)	■		
	collection on incidental catch information and surveillance	Spain & France (Atlantic& Indian Ocean)	■		
	surveillance on moratorium	Spain & France (Atlantic & Indian Ocean)			■
	bigeye year (collection of scientific information)	ICCAT (Atlantic)	■		
	ESTHER (collection of fishing effort information)	Spain & France (Atlantic & Indian Ocean)	■		
	New observer program (collection of scientific information)	EU (EEZ of participating countries)	■		
	collection of incidental catch information and surveillance	IATTC (Eastern Pacific)		■	
LL	Swordfish (collection of scientific information)	Spain (three Oceans)	■		
	Swordfish (surveillance on incidental catch)	U.S.A. (off California)		■	
	collection of incidental catch information and surveillance	U.S.A (off Hawaii)		■	
		U.S. A. (Atlantic Ocean)		■	
		Canada (off eastern coast)		■	
LL&PS	Surveillance on tuna and skipjack fishing vessels in French territorial waters	France (Indian Ocean)			■
	Surveillance on tuna and skipjack fishing vessels in U.K. territorial waters	U.K. (Indian Ocean)			■
	Japan's observer program (LL & PS)	Japan (three oceans)	■		
GILL	collection of incidental catch information and surveillance (albacore driftnet)	France (Bay of Biscay)		■	

Appendix B: Summary & comparative Tables of the TOP of the world (Tables 2-3)

Table 2 Comparisons of the observer program costs (including non-TOP).

Country	Year	Types of observer program (Area)	No. of observers dispatched (per year)	Average boarding months of observers (months)	Average no. dispatches per year: (men*months)	Total annual budget(*) (Million US $)	Ave. cost per observer per month (**) (in 10,000 US $)	Budget source and share (100% if % are not indicated)
Offshore and distant-water fisheries (One cruise lasts from one month to 4 months)								
U.S.A.	2002	tuna LL fisheries off Hawaii	30	4.0(*)	120	2.55	2.09	Government
Spain France	1997 -1999	bigeye year (tuna PS) (Atlantic)	22	1.3	29	0.52	1.79	ICCAT
Japan (***)	2000	tuna/skipjack fisheries (PS & LL) (three oceans)	21	2.0	42	0.73	1.73	Government
Spain France	1999 -2001	ESTHER (fishing effort in PS fishing) (Atlantic& Indian Ocean)	3	3.9	12	0.19	1.59	Government
U.S.A. (non -tuna)	2000	Bottom trawling (mainly in the Gulf of Alaska and North Pacific)	300	3.0	900	14.00	1.55	Industry (79%), Government (21%)
Spain France	1994 -1995	Incidental catch in PS (Atlantic, Indian Ocean)	12	2.0	24	0.37	1.55	ICCAT
Spain	2002 -2006	swordfish LL fisheries (three oceans)	2	3.5	7	0.10	1.43	Government
Japan (***)	2000	tuna/skipjack fisheries (three oceans)	21	2.5	53	0.73	1.38	Government
Spain France	1997 -2000	Moratorium on PS (Atlantic)	18	1.3	54	0.73	1.35	PS fishing industry
Coastal and offshore fisheries (One cruise last less than 2 weeks)								
France	1993 -1994	albacore driftnet (coastal and offshore)	18	1.0(*)	18	0.19	1.06	Government
Canada	2002	Tuna LL fisheries in eastern coast	40	3.5(*)	140	1.45	1.10	Industry (72%), Government (28%)
U.S.	2001	Tuna LL (Atlantic)	9	4.0(*)	36	0.35	0.98	Government
U.S.	2002	swordfish driftnet fisheries off California	20	5.0(*)	100	0.80	0.80	Government
Canada	2000	Salmon fisheries in western coast, bottom trawling	300	1.0(*)	300	2.18	0.73	Industry (67%), Government(33%)
IATTC	2002	Tuna/skipjack PS	130	5.0	650	3.55	0.45	Industry (67%), IATTC(33%)

(*) *Assumed values based on the information obtained in the investigations.*

(**) *All the costs, such as payments to fisheries consulting firms, observer firms, and agents as well as observer salaries, insurance cost, travel expenses and equipment cost, are included.*

(***) *In the case of Japan, travel expenses were estimated on the assumption that the annual boarding months are 2 and 2.5 months.*

Table 3 Comparisons of important factors among the regional TOP investigated (as of 2002 or 2003).

FACTORS (↓)		JAPAN	SPAIN	FRANCE	U.K.
FISHERIES & AREA	**Fisheries**	Distant-water tuna LL, overseas PS	Tuna PS, tuna (swordfish) LL	Tuna PS	Foreign vessel Surveillance (PS & LL)
	area	three oceans	PS: Atlantic & Indian Ocean, LL: three oceans	Atlantic & Indian Ocean	Indian Ocean (Chagos Islands)
OBJECTIVES		Mostly collection of "scientific data"	"Collection of scientific data". However, the main purpose of the observer program is surveillance on "PS moratorium" and for France, "foreign vessels in the French territorial waters in the Indian Ocean."		Surveillance of foreign vessels and collection of scientific data
PROVISIONS, LAWS AND OBSERVER COVERAGE RATE	**Governing regulations and laws**	Recommendations from international fisheries conventions and agreements. No national legislations.	Recommendations from ICCAT, IOTC, EU, etc. Domestic legislations regarding surveillance program for the French territorial waters in the Indian Ocean.		National legislations
	Observer boarding rate (% of the no. of cruises)	From several percents to 10% (Differs from fishery to fishery)	3%: swordfish observer program 5-15%: PS scientific observer program 80-100%:PS moratorium observer program		15%: surveillance observer program
RECRUITMENT	**Recruiting organizations**	JAMARC	Fisheries consultant firms (3 firms) and public fisheries organizations (IEO, AZTI)	Fisheries consultant firms (2 firms)	MRAG (consultant firm for fishery resources)
	Recruitment method	Public offering, introduction	Public offering for universities and fisheries organizations; through internet; introduction (mouth-to-mouth information), etc. Observer data bank is used by U.K.(MRAG).		
	Qualifications for application (Academic and professional career)	Aged 20-65 Those who have experience (in fisheries) are preferable.	University graduates specializing in fisheries science and biology (including those in master's and doctor's courses), and those who have experience as observers		
	Applicants	Mostly retirees from fisheries-related career (over 60 years old)	Mostly those who have completed university (graduate) courses and those who have experience as observers		
	Employment method	Document (Almost all of the applicants are employed.)	Documents and interviews (competition rate is twofold at the highest. However, competition rate for French controllers is six times). Priority is given to those who have experiences.		
EDUCATION AND TRAINING	**Education and training organizations (number of training days)**	JAMARC is in charge of the program, and the National Research Institute of Far Seas Fisheries carries out training seminars. (1-2 days)	IEO (Tenerife:PS), AZTI (PS), IEO (La Corna: swordfish LL) (about 2 days)	ORSTOM (currently IRD) and Oceanic Development Inc. (about 2 days)	MRAG (one week)
	Contents of seminars	Data collection (catch volume, catch effort, species identification, survey on incidental catch, size and weight, biological sampling (otolith and muscles for DNA analysis), marine mammals)。Surveillance program also includes the methods for collection of information on fisheries management" and "surveillance of illegal activities."			
	Education on on-the-sea safety (see Plate 1, Page 13)	Only lectures. No on-the-spot training	AZTI requires one-week training by the government. IEO has no special requirements.	None	The certificate of completion of maritime rescue training course given by the government is required. Lectures are given at MRAG.
	Training fee	Free of charge (Costs are allocated from the budget.)			
	Examination and Evaluation (during the debriefing)	None	Although examinations are given but all the applicants are ensured to pass them. Those who did not take good marks are given additional training.	None	None. Poor evaluation in debriefing will cause no re-employment.

(continued)

(CONTINUED) FACTORS		JAPAN	SPAIN	FRANCE	U.K.
EMPLOYMENT AND DISPATCH	**Employment and dispatch (logistic matters)**	JAMARC	Mainly, fisheries consultant firms		
	Dispatch period	One cruise lasts 1-3 months. In most cases, only one cruise is conducted, but for some cases, more than 2 cruises.			
	Debriefing	JAMARC, the National Research Institute of Far Seas Fisheries, etc. (about 1 day)	PS: (2 days) (+ IEO needs about 5 days for data input.) swordfish LL (7 days)	No debriefing in case of moratorium. About 2 days are needed for scientific programs.	MRAG: 2 days plus data input (one week)
	Rate of establishment (re-employment)	50% on the average	Details are not clear, but it seems to stand at about an average of 50%.		
INFORMATION COLLECTED BY OBSERVERS	**Method of transmission**	Transmitted to the National Research Institute by door-to-door delivery after disembarkation.	Brought at the time of debriefing		
	Data processing (DB management)	National Research Institute of Far Seas Fisheries (Software is developed by a software company.)	AZTI IEO IRD(for joint TOP) And others	IRD, IFREMAR, Marine Fisheries and Aquaculture Commission	MRAG
	Organizations using the data	JAMARC, the National Research Institute of Far Seas Fisheries, Marine Department of Tokai University, etc.	AZTI, IEO, Laguna University (Tenerife), ICCAT, IOTC, EU & others	IRD,IFREMAR,EU, Marine Fisheries and Aquaculture Commission, ICCAT, IOTC, etc.	MRA G and Imperial College (In the future, IOTC will be included.)
	Utilization	Generally, the data are used in the areas of research on the resources, biology and ecology. Surveillance data are used to manage fishing effort, illegal fishing activities, incidental catch and the moratorium.			
VARIOUS STATISTICS REGARDING OBSERVER PROGRAMS	**Fisheries consultant firms engaging in observer duties**	None (JAMARC implements most of the work)	4 firms (one of them is a specialized observer firm as found in the U.S.)	2 firms (One each in Paris and Concano)	One firm (MRAG)
	Average age	60 or over	Mid-20s	25. But the age for controllers was extended to 25-50, with the average of 35.	mid-20s. However, the age of controllers should be 30 or over.
	Sex ratio (Male: female)	Male100%	PS (75%: 25%), PS supply vessels and LL (All males)	PS (75%: 25%),	PS: (female: 2-5%), LL (All males)
	Budget	Refer to Table 2 for detail (Page 10)			
	Number dispatched				
	Per diem during observer dispatch (including all allowances)	US $ 182 (plus travel expenses) Fisheries Agency➔ provided by JAMARC	US$ 118-182 (+travel expenses). Per diem differs depending on the programs and years of experiences.	US$ 164 (+travel expenses). Per diem differs depending on the programs and years of experience.	US$ 136-173 (+travel expenses). Per diem may increase depending on the year of experiences.

Appendix C: References for member countries to develop their specific IOTC-TOP based on this Guideline

Here is the list of the references for each country to develop her own specific IOTC-TOP based on this guideline. They are from 8 Agencies in 4 countries and 5 International Organizations that are currently conducting or organizing the OP. These references can be obtained from Agencies specified or the coordinator of this task (see the front page).

Canada

Archipelago Marine Research Ltd.

(1) Electronic Monitoring Opportunities for Commercial Fisheries
Howard McElderry, M.S. Archipelago Marine Research Ltd. #200-525 Head Street Victoria, British Columbia, Canada V9A 5S1
(2) AT SEA DOMESTIC FISHERIES OBSERVER TRAINING COURSE
(JAN 22 TO FEB 9, 2001), ARCHIPELAGO MARINE RESEARCH
(3) ARCHIPELAGO TRAWL OBSERVER BRIEFING WORKBOOK
(4) ARCHIPELAGO 2001 OFFSHORE OBSERVER TRAINING MANUAL

DFO and PBC （Nanaimo, BC）

(1) At-Sea Fisheries Observer Program: *Conservation and Protection*
For South Coast Commercial Salmon Fisheries: April, 1999.
(2) 1999 Summary Report: Observer & Logbook Monitoring Programs
For South Coast Commercial Salmon Fisheries, April, 2000.
(3) Commercial Salmon Catch Reporting Program 2000
(Logbook/Phone-In Program)
(4) At Sea Fisheries Observer Participant Workbook
Draft Version 1 . 2, Department of Fisheries and Oceans Pacific Region
(5) ONBOARD BY-CATCH MONITORING MANUAL COMMERCIAL SALMON FISHERY
(6) AT-SEA OBSERVER PROGRAM REVIEW AND RECOMMENDATIONS
PREPARED FOR FISHERIES AND OCEANS CANADA (JANUARY, 2000)
(7) At-Sea Observer Program: COURSE TRAINING STANDARD
(8) At-Sea Observer Program: OPERATIONS MANUAL
(9) Observer Program Instructor's Guide NAFO Regulatory Area

Malaspina University

(1) Pacific Region Fisheries Observer Course: Participants Workbook
(2) Schedule Outline for the 10 day Pacific Region Fisheries Observers Training Course
(3) At Sea Fisheries Observer And Creel Survey Course (March 23,2001) :

France

(1) EFFICACITE DES SENNEURS THONIERS ET EFFORTS REELS (ESTHER)
PROGRAMME DE RECHERCHES IRD / IEO

(2) MANUEL DES OBSERVATEURS EMBARQUES A BORD DES SENNEURS OPERANT DANS L'ATLANTIQUE ET DANS L'OCEAN INDIEN

(3) "LES ESPECES ASSOCIEES AUX PECHES THONIERES TROPICALES"
MANUEL DES OBSERVATEURS EMBARQUES A BORD DES SENNEURS
VERSION N^{O} 2.2 Programme : BIOECO/93/05 ORSTOM/IEO
Hélène PETIT et Jean – Michel STRETTA (Juin 1995)

(4) COMMISSION THON TROPICAL 【ICCAT】
dans le cadre du plan de protection des thonidés de l'Atlantique (recommandation ICCAT 99-1). Manuels des observateurs embarqués à bord des thoniers senneurs tropicaux
Michel Goujon Novembre 2001, Comité National des Pêches Maritimes et des Elevages Marins
Michel Goujon Mai 1996 Les Publications du Laboratoire Halieutique n^{o}15

(5) PROGRAMME FILEYEUR GERMONIER 1992 – 1993 (Programme GERDAU)

(6) MANUEL DES OBSERVATEURS EMBARQUES SUR LES GERMONIERS
Version n^{o}2, avril 1993 IFREMER, COFREPECHE, CNEMM

(7) ECHANTILLONNAGE PAR OBSERVATEUR EMBARQUÉ DES CAPTURES DE MERLU RÉALISÉES PAR LES CHALUTIERS FRANÇAIS UTILISANT UN MAILLAGE COMPRIS ENTRE 70 ET 99 MM DANS LA ZONE DE PROTECTION DU MERLU INSTITUÉE PAR LE RÉGLEMENT N^{o} 1162/2001 DE LA COMMISSION EUROPÉENNE
MANUEL DE L'OBSERVATEUR
Septembre 2001 Michel Goujon
Comité National des Pêches Maritimes et des Elevages Marins

(8) Observer's manual for the Atlantic fishing on logs moratorium (*Michel Goujon)*

International

CANADA/USA

(1) Proceedings of the First Biennial Canada/U.S. Observer Program Workshop
Edited by H. McElderry, W. A. Karp, J. Twomey, M. Merklein, V. Cornish, and M. Saunders, U.S. DEPARTMENT OF COMMERCE, NOAA Technical Memorandum NMFS–AFSC– 101. NOAA, National Marine Fisheries Service, Alaska Fisheries Science Center, May, 1999.

(2) THE PROCEEDINGS CANADA-U.S. FISHERIES OBSERVER PROGRAM WORKSHOP
Delta St.John's Hotel and Convention Centre, St.John's, Newfoundland, Canada (June 26-29, 2000)

(3) Official Journal of the European Communities
COMMISSION REGULATION (EC) No 1639/2001 of 25 July 2001
establishing the minimum and extended Community programmes for the collection of date in the fisheries sector and laying down detailed rules for the application of Council Regulation (EC) No 1543-2000

(4) Professional Communication And Conflict Resolution Training for Observers
International Fisheries Observer Conference November 18 – 21, 2002
Joe Chaszar – UAA-North Pacific Fisheries Observer Training Center
Sheryl Corey – NMFS – North Pasific Observer Groundfish Program

(5) INTERNATIONAL FISHERIES OBSERVER CONFERENCE
International Fisheries Observer Conference
November 18 – 21,2002 Astor Crowne Plaza Hotel New Orleans, Louisiana, USA.

(6) INTER – AMERICAN TROPICAL TUNA COMMISSION TUNA – DOLPHIN PROGRAM
FIELD MANUAL 1991 Scripps Institution of Oceanography 8604 La Jolla Shores Drive La Jolla, California 92037, U.S.A.

CCAMLR

(1) SCIENTIFIC OBSERVERS MANUAL (CCAMLR)

IATTC

(1) BYCATCH IN THE TUNA NET FISHERIES
(2) Strategies to Reduce the Incidental Capture of Marine Mammals and Other Species in Fisheries
(3) An Ecological View of the Tuna-dolphin Problem: impacts and trade-offs
(4) Working with Fishers to Reduce Bycatch: The Tuna-Dolphin Problem in the eastern Pacific Ocean
(5) By-Catch: Problems and Solutions
(6) THE INTERNATIONAL CONFERENCE ON INTEGRATED FISHERIES MONITORING
Sydney, Autralia, 1-5 February 1999
(9) On Bycatches
(10) Solving the Tuna-Dolphin Problem in the Eastern Pacific Purse-Seine Fishery
(11) Effects of sample size on bycatch estimation using systematic sampling and spatial post-stratification; Summary of Preliminary results
(12) Effect of sample size on bycatch estimation March 3, 2000

FFA

(1) Purse-Seine Debriefing Form Observer Feedback
(2) South Pacific Regional Longline Observer Catch Monitoring Form LL-4
(3) South Pacific Regional Purse-Seine Observer Length Frequency

SPC

(1) Fork length Newsletter The Observer and Port Sampler Newsletter for the Tuna Fisheries of the Western and Central Pacific Ocean Issue #5 – October 2003
(2) Longlline Debriefing Form
(3) Purse-Seine Debriefing Form
(4) South Pacific Regional observer workbook- Purse-Seine Fisheries
(5) South Pacific Regional observer workbook- Longline Fisheries
(6) South Pacific Regional Longline Observer Catch Monitoring Form LL-4
(7) South Pacific Regional Purse-Seine Observer Length Frequency Form PS-4
(8) Electrical files in CD-Rom
-Sampling techniques
-Training manual
-An Observer Management Guide. doc
-Observer Competencies.doc
-Port sampling manual pdf.
-Sea Safety and navigation. doc
-Sea Safety.doc

Spain

(1) LANCES: SEGUIMIENTO DE LA RECOMENDACIÓN DE ICCAT RESPECTO AL ESTABLECIMIENTO DE VEDA DE ZONA Y TEMPORDA AL USO DE DISPOSITIVOS CONCENTRADORES DE PECES (DCP – s) 2000 – 2001
(2) Documento para Grupo de Trabajo SWO de la IATTC y para el Grupo BSTC entre la U. E –Chille, mayo 2001 DATOS PRELIMINARES A PARTIR DE OBSERVADORES CIENTÍFICOS A BORDO DE PALANGREROS DE SUPERFICIE (U.E.-ESPANA) DURANTE 1998, 1999 y 2000, EN EL OCÉANO PACÍFICO ESTE.

USA

NMFS AFSC(Seattle)

(1) OBSERVER LOGBOOK
(2) MANAGEMENT CONTROL REVIEW OF NATIONAL MARINE FISHERIES SERVICE OBSERVER PROGRAMS/SERVICE DELIVERY MODELS
Headquarters:Office of Science & Technology Regions:Alaska, Northeast, Southeast, and Southwest U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION NATIONAL MARINE FISHERIES SERVICE (SEPTEMBER 2000)
(3) Independent Review of the North Pacific Groundfish Observer Program
MRAG Americas, Prepared by MRAG Americas, Inc. Tampa, Florida. For National Marine Fisheries Service Alaska Fisheries Science Center, Seattle, Washington May 2000
(4) Level 2 Groundfish Observer Supplement to the North Pacific Groundfish Observer Manual 2001 *(December 2000)*
(5) North Pacific Groundfish Observer Manual 2001
United States Department of Commerce National oceanic and Atmospheric Administration National Marine Fisheries Service Alaska Fisheries Science Center, Resource Ecology and Fisheries Management Division, North pacific Groundfish Observer Program (November 26, 2000)
(6) Minutes and Recommendations from a Workshop on NMFS OBSERVER PROGRAMS
(Galveston, Texas, November10-11,1993) Edited by:Victoria R. Credle, Douglas P. DeMaster, Mandy M. Merklein, M. Bradley Hanson, William A. Karp, and Shannon M. Fitzgerald, in collaboration with the Workshop participants. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Protected Resources, Silver Spring, Maryland 20910, NOAA Technical Memorandum NMFS-OPR-94-1 (July 1994).
(7) Observer Program Manual
(8) *For Sampling of Central Bering Sea Pollock Fisheries March 1997, Alaska Fisheries Science Center, National Marine Fisheries Service, 7600 Sand Point Way NE, Seattle, WA 98115-0070*
(9) NPGOP Training Syllabus *August 2000*

NMFS (HAWAII)

(1) No.1 Hawaii Longline Observer Program (CD-R Species ID Final Exam)
(2) No.2 Hawaii Longline Observer Program (CD-R Training ID Material)
(3) No.3 Hawaii Longline Observer Program (CD-R Field Manual)
(4) Quick Reference Safety Equipment and Survival Procedures
(5) Conditions of Employment & Code of Professional Conduct
(6) Native Fishery Observer Program leaflet
(7) FOA Vessel Safety Examination Checklist

NMFS(Long Beach)

(1) Drift Gillnet Observer Training manual
(2) Drift Gillnet Observer Field Manual
(3) Marine Mammals of the Eastern North Pacific
(4) Billfish Identification
(5) Collection Item List
(6) Guideline for Handling Hooked Sea Turtles & Hooked Seabirds Handling Guidelines
(7) A guide for identifying fresh specimen of yellowfin and bigeye tunas
(8) Contract for Observer Company
(9) Drift Gillnet Observer Training Schedule
(10) Drift Gillnet Observer Briefing Schedule

(11) California Drift Net Observer Program 10 Years of Data Collection
(12) Observed Pelagic Shark Catch California Drift Gillnet Fishery
(13) Pacific Drift Gillnet Observer Program Invoice
(14) Draft Fishery Management Plan and Environmental Impact Statement for U.S. West Coast Fisheries for Highly Migratory Species
(15) Marrine Mammal Protection Act of 1972 as Amended-1995
(16) NOAA Fisheries 2001 Report
(17) NMFS Strategic Plan for Fisheries Research-2001
(18) NOAA By Catch-A National concern
(19) NOAA Managing the Nations ByCatch
(20) Notice For Vessel Owners/Operators of the California-Based Pelagic Longline Fishery
(21) Notice for Vessel Owners/Operators of California/Oregon Drift Gillnet Vessels Targeting Thresher

NMFS (MIAMI)

(1) Pelagic Observer Program Longline Field Instruction
(2) NOAA Technical Memorandum NMFS-SEFSC-486
SEFSC Pelagic Observer Program Data Summary for 1992-2000.
Pelagic Longline Observer Program : Field Manual