
Report of the Technical Meeting on the IOTC Regional Observer Scheme

Seychelles, 19-21 May 2010

IOTC-2010-ROS-R[E]

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OPENING OF THE MEETING

1. The Technical Meeting on the IOTC Regional Observer Scheme (ROS) was held in Seychelles, from 19 to 21 March 2010 and opened by the Executive Secretary of the IOTC, Mr. Alejandro Anganuzzi.
2. Dr. Tom Nishida was elected Chair of the meeting and the agenda was adopted as presented in [Appendix I](#).
3. The list of participants is provided in [Appendix II](#) and a list of the documents presented to the meeting is given in [Appendix III](#).

GOALS AND OBJECTIVES OF THE IOTC REGIONAL OBSERVER SCHEME

4. The ROS has been recommended by the Scientific Community for several years and in 2009, the Commission adopted the Resolution 09/04 *on a Regional Observer Scheme* in order to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area, as well as for bycatch.
5. In 2010, the Resolution 09/04 was superseded by Resolution 10/04 *on a Regional Observer Scheme* ([Appendix IV](#)) that included modifications recommended from the Scientific Committee with regards to the implementation of the ROS in artisanal fleet.
6. According to the Resolution 10/04, the Scheme is based on national implementation and should start on the 1st July 2010, and the Scientific Committee shall elaborate an observer working manual, including minimum data fields, a Trip Template Report and a training program to be used as a guideline by the CPCs. Being nationally implemented, CPCs should develop their own Observer National Plan to employ observers on their own fleets.
7. The IOTC Secretariat worked in collaboration with a consultancy firm, Capricorn Fisheries (South Africa), to prepare draft manuals, and a minimum set of data fields to be collected by onboard observers. These were to be reviewed and agreed during this technical meeting.

REVIEW OF OBSERVER PROJECTS IN THE INDIAN OCEAN AND FROM OTHER TUNA RMFOS

South West Indian Ocean Fisheries Project (SWIOFP)

8. The Executive Secretary of the SWIOFP presented the observer activities that are currently being developed under this project. The project includes nine countries (Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa and Tanzania) of the South West Indian Ocean, with Somalia being a formal observer, and covers two Large Marine Ecosystems (LME), the Agulhas and Somalia LMEs. Its main objectives are to fill existing science gaps in research on fisheries in the region, including issues related to capacity building. Four out of six components of the project (crustaceans, demersal, pelagic and biodiversity) include the deployment of observers, and the project has made provisions for a total of 3,500 observer days, with around 1,000 days dedicated to the pelagic component over a period of two years. Five observers per country will be trained for three weeks under the project and SWIOFP is willing to use forms designed by IOTC as well as the IOTC Reporting Template for the pelagic component.
9. Trained observers should be used by the respective countries for observer activities outside SWIOFP during the period of the project and after, in particular they could be used within the National Programme of the countries in the framework of the IOTC ROS.

Fisheries Regional Monitoring Programme (Plan Régional de Surveillance des Pêches) of the Indian Ocean Commission (IOC)

10. The Indian Ocean Commission based in Mauritius is implementing a project funded by the Directorate General for Maritime Affairs and Fisheries of the European Union (DG-Mare) which will last until 2011. Within its different activities of monitoring and surveillance, a scientific observer component has been designed which will take place in the five IOC countries (*i.e.* Comoros, La Réunion, Madagascar, Mauritius and Seychelles) and will train three observers per country. Observers shall have a regional accreditation in order to be able to observe on any vessel – national or licensed – in all IOC waters. In addition to the training provided, the project will also assist the countries in the management of their observers. The main goal of this component is to help the IOC countries, all members of the IOTC, to comply with the IOTC Resolution and to increase their capacity to develop a coordinated strategy for a sustainable development of the fisheries.

Observateurs des Pêches (OBSPEC) program from the Terre Australes et Antarctiques Françaises (TAAF)

11. The TAAF administration is in charge of the scientific and logistical management of the Tropical Indian Ocean scattered islands (*i.e.* Europa, Tromelin, Juan de Nova, Glorieuses, Bassas de India), the Kerguelen and Crozet archipelagos, the sub-Antarctic islands of St. Paul and Amsterdam and the Terre Adélie in the Antarctic. The TAAF is implementing two observer programs, one in the scattered islands and Mayotte for the tuna and tuna-like species fisheries since 2006 (OBSPEC), and one in the Southern territories for the toothfish fisheries since 1979 (Contrôleur des Pêches – COPEC).
12. The OBSPEC project is a scientific observer project with the goal of recording scientific data on the catch, bycatch and discards, as well as controlling the activities and compliance in the TAAF waters. Observers are deployed onboard licensed vessels with a coverage of around 40%. Observers undertake a three week training course prior to their deployment.

Tuna Observer Programmes of the World

13. During the fact finding project of the global observer programs (2000-2009), funded by the Government of Japan, 82 observer programs were investigated in 5 international organizations, 47 fisheries agencies and observer companies in 17 countries. Based on the collected information, it was concluded that observer programs could be classified into three groups, *i.e.* “Scientific”, “Surveillance(control/compliance)” and “Fisheries”. The first one, “Scientific”, only collects scientific information while the second one, “Surveillance(control/compliance)”, is monitoring legal matters and compliance, however it can also collect basic scientific information. The last one, “Fisheries” indicates programs that are a combination of the other two, in which observers mainly collect scientific information but should also monitor compliance and report illegal activities to the authority in charge.
14. In recent years, a new type of observer system, based on automatic video recordings has been developed. Cost analyses indicate that automatic observer systems are generally cheaper, although the information collected is still limited.
15. Other observer projects on tuna fisheries in the Indian Ocean (*i.e.* in La Réunion, on the EU purse-seine fleet, on South African, Japanese and Taiwanese longliners, in Madagascar) were also described and compared in table ([Appendix V](#)).
16. The two main goals of the different observer programs implemented in the Indian Ocean that were presented during the meeting are *i)* Scientific observer program (*i.e.* the gathering of only scientific data) and *ii)* Surveillance (control/compliance) observer program. The activities leading to these objectives are quite different and difficult to conduct at the same time.

Notably, the perception of the observer from the skippers and crew members would be very different if his role was purely Scientific or Surveillance (control/compliance). In the latter case, the observer could be assimilated as an inspector.

17. The group agreed that the IOTC ROS should have a scientific purpose only, and that the information to be collected should be of scientific nature. However, it was noted that the Observer National Plans could include control and compliance issues at the discretion of the countries.
18. The group noted that several observer projects in the region were overlapping in terms of the countries involved and area of operation (*e.g.* IOC and SWIOFP) and recommended that efforts, and in particular, training, should be coordinated to avoid duplication of efforts.
19. The group noted that, in general, little attention is given to observers when they are not at sea and expressed concerns on the sustainability of observer programs after the end of regional projects. However, it was recalled that observers trained during these projects could and should be involved with the Observer National Plans during and after the period of execution of the projects, to comply with the IOTC resolution. In addition, it was proposed that one or two trained observers could either train more observers or benefit from scholarships to study abroad. This would lead to an increase of the management capacity of their country.
20. In order to ensure that minimum requirements for observers are respected, it was recommended that formal IOTC accreditation should be recognized for the observers participating in the ROS.

REVIEW OF DRAFT OBSERVER MANUAL AND TRAINING MANUAL

21. The group discussed and agreed on a minimum set of scientific data fields to be collected by observers in the framework of the ROS ([Appendix VI](#)). It was recommended that the Secretariat should quickly finalize the observer working and training manuals to be used as guidelines for the Observer National Plans. The Secretariat should also develop a set of forms that could be used by the CPCs according to the agreed minimum data standards.
22. It was emphasized that those data fields are a minimum set and that CPCs could add data to be collected within their Observer National Plan at their own discretion.
23. The minimum set of data fields to be collected, as agreed during the meeting, will be presented to the Scientific Committee of the IOTC for endorsement at its 13th Session in December in Seychelles.
24. CPCs that already have in place an Observer program will have to modify their forms in order to accommodate the minimum set of data field to be collected.
25. The group recommended that in addition to the forms, the Secretariat should develop a simple database that CPCs could use to enter and store their observer data. The possibility of using the SPC database should be investigated in order not to duplicate efforts.
26. It was recommended that the manuals, forms and database should be available on the IOTC website.

NATIONAL IMPLEMENTATION

27. The European Union, France (La Réunion and TAAF), Korea, Madagascar and South Africa are already deploying observers onboard their own fleet or onboard vessels licensed to operate in their EEZ. These CPCs should verify that the information they are collecting is in line with the minimum set of data to be collected that will be endorsed by the Scientific Committee, and, if necessary, adapt their plan and reporting system.

28. Japan has been training 18 observers (3 Japanese and 15 Indonesians) to be deployed onboard their longline fleet operating in the whole Indian Ocean, to cover 5% of the fishing operations.
29. Taiwan,China has been training 60 observers to be deployed on their fleet operating in the three oceans. Over 5% of the fishing operations in the Indian Ocean should be covered.
30. Korea trained 6 new observers in 2010 who were deployed on longliners fishing for tropical tuna and southern bluefin tuna in the Indian and Atlantic oceans. Coverage of the Korean Observer National Plan should increase over several years to comply with the 5% provision of the resolution.
31. Seychelles and Thailand informed that they are preparing their national plans to deploy observers to comply with the resolution. Observer training should start soon for Seychelles and Thailand by SWIOFP and SEAFDEC, respectively.
32. It was noted that since last year, it has not been possible to deploy any observer onboard EU and Seychelles purse-seiners due to the piracy that is occurring in the Indian Ocean. In addition to security concerns, armed guards are now deployed on these vessels, which does not leave space for observers. This situation is not expected to change in the near future.

RULES AND PROCEDURES OF SUBMISSION TO IOTC SECRETARIAT AND OF USE OF THE DATA COLLECTED

33. As stated in the Resolution 10/04 *On a Regional Observer Scheme*, a report should be submitted to the IOTC Secretariat after each trip.
“The observer shall, within 30 days of completion of each trip, provide a report to the CPCs of the vessel. The CPCs shall send within 90 days the report, which is recommended to be provided with 1°x1° format to the Executive Secretary, who shall make the report available to the Scientific Committee upon request. In a case where the vessel is fishing in the EEZ of a coastal state, the report shall equally be submitted to that Coastal State.”
34. The group discussed and agreed on an Observer Trip Template Report to be used by CPCs for submission to IOTC and to the coastal state ([Appendix VII](#)). To avoid the need for costly and time consuming translation before submission to the Secretariat, this template should consist primarily of tables that are simple and easy for the observer to complete.
35. The Observer Trip Template Report as agreed during this meeting, will be presented to the Scientific Committee of the IOTC for endorsement at its 13th Session in December in Seychelles.
36. As per IOTC data requirements, estimation of bycatch is requested from CPCs. When an observer is onboard a licensed vessel, the group recommended that the detailed data collected should be made available to the vessel flag country, in order to help them to estimate bycatch and submit these estimates to the Secretariat.
37. Resolution 10/04 *on a Regional Observer Scheme* requests that only the trip report be submitted to the Secretariat, however it would probably be difficult to use the aggregated data of these report for assessments. The group recommended that, in the near future, the detailed observer data should be sent to a centralized database in the IOTC Secretariat. This would allow scientists of the IOTC community to use all observer data, and not only their own national data to make scientific analysis, *e.g.* on bycatch and discards. Such data could be part of the standard data available from the IOTC Secretariat such as Nominal Catch and Catch and Effort data. The group emphasized that one of the primary users of this data should be the IOTC Working Party on Ecosystem and Bycatch.
38. Regarding the use of the observer data, it was recommended that the IOTC confidentiality rules describe in the *Resolution 98/02 data confidentiality policy and procedures* shall apply.

In addition, the group suggested that rules for use of data such as applied by CCAMLR, where the authorization of the CPCs are requested, could be investigated and discussed during the SC at its next Session.

OTHER BUSINESS

39. In order to ensure minimum standards for the quality and the security of the ROS, the group agreed on minimum specifications that would be required from observers in order to receive IOTC certification. These minimum specifications are described in [Appendix VIII](#).
40. CPCs should provide the IOTC Secretariat with a list of observers fulfilling these requirements and that have been trained for the ROS, and the Secretariat would assign them an IOTC observer number.

APPENDIX I

AGENDA

1. GOALS AND OBJECTIVES OF THE IOTC REGIONAL OBSERVER SCHEME

Resolution 10/04 On a Regional Observer Scheme

2. REVIEW OF OBERVER PROJECTS IN THE INDIAN OCEAN AND FROM OTHER TUNA RMFOs

*Countries or Other initiatives (SWIOFP, IOC) to present ongoing or future observer projects
Presentation of WCPFC and IATTC observer programs*

3. REVIEW OF DRAFT OBSERVER MANUAL AND TRAINING MANUAL

Review of the drafted manuals prepared y the Secretariat through a consultancy. Finalization of the manuals and of the list of data fields to be collected.

4. NATIONAL IMPLEMENTATION

Review of the national plans of implementation for the IOTC Regional Observer Scheme starting on 1st July 2010

5. RULES AND PROCEDURES OF SUBMISSION TO IOTC SECRETARIAT AND OF USE OF THE DATA COLLECTED

How the data collected through the Regional Observer Scheme will be submitted to the IOTC Secretariat, and how they could be used.

6. OTHER BUSINESS

APPENDIX II

LIST OF PARTICIPANTS

Alejandro ANGANUZZI
Executive Secretary
Indian Ocean Tuna Commission
P.O.Box 1011
Victoria
Seychelles
Phone: +248 225494
Fax: +248 224364
Email: aa@iotc.org

Juan José ARESO
Spanish Fisheries Office
P.O.B 497
Victoria
Seychelles
Phone: +248 324578
Fax: +248 324578
Email: jjareso@seychelles.net

Pascal BACH
Fishery Biologist
IRD
UMR 212/SEMIR
16, Rue Claude Chappe
Le Port 97420
Réunion
Phone: +262 262 551522
Email: pascal.bach@ird.fr

Wen-Yu CHIU
Specialist
70-1, Sec.1, Jinshan S. Rd., Taipei,
Taiwan, R.O.C
Phone: + 886-2-3343-6085
Fax: +886 2 3343-6128
Email: wenyu@msl.fa.gov.tw

Gerard DOMINGUE
Compliance Officer
Indian Ocean Tuna Commission
P.O.Box 1011
Victoria
Seychelles
Phone: +248 225494
Fax: +248 224364
Email: gerard.domingue@iotc.org

Ms. Maria Teresa GANHO PEREIRA
ATHAYDE
TAAF a/c
SEAMORE- Marine Organization for Research
and Education
P.O.B 69
Rue le Conte de Lisle
St. Gilles Les Bains 97434
La Réunion- France
Phone: +33 0 262 262 226203
Email: ttathayde@live.co.uk

Christopher HEINECKEN
Capricorn Fisheries Monitoring
P.O.B 10035
15 Forgate Sq.
Table Bay Blvd
Cape Town 8000
South Africa
Phone: +27 21 4256226
Fax: +27 21 4251994
Email: capfish@mweb.co.za

Miguel HERRERA
Data Coordinator
Indian Ocean Tuna Commission
P.O.Box 1011
Victoria
Seychelles
Phone: +248 225494
Fax: +248 224364
Email: miguel.herrera@iotc.org

Vincent LUCAS
Manager For Research & Development
Seychelles Fishing Authority
P.O.B 449
Fishing Port
Victoria
Seychelles
Phone: +248 670314
Fax: +248 224508
Email: vlucas@sfa.sc

Julien MILLION
Tagging Assistant
Indian Ocean Tuna Commission
P.O.Box 1011
Victoria
Seychelles
Phone: +248 225494
Fax: +248 224364

Takeshi MIWA
Assistant Director
Far Seas Fisheries Division
Resource Management Department
Fisheries Agency of Japan
1-2-1 Kasumigaseki, Chiyoda-Ku
Tokyo 100-8950
Japan
Phone: +81 3 6744 2364
Fax: + 81 3 3595 7332
Email: takeshi_miwa@nm.maff.go.jp

Xavier NICOLAS
Coordinateur Technique Régional
Plan Régional de Surveillance des Pêches
Commission de l'Océan Indien
120 Avenue Sir Guy Forget,
BP 7
Quatre Bornes,
Mauritius
Phone: +230 4277281
Fax: +230 4277281
Email: xavier.nicolas@coi-ioc.org

Tom NISHIDA
Scientist
International Marine Fisheries Resources
National Research Institute of Far Seas
Fisheries
5-7-1, Orido. Shimizu-Ward
Shizuoka City
Japan
Phone: +81 0 54 336 6052
Fax: +81 0 54 336 6052
Email: tnishida@affrc.go.jp

Rondolph PAYET
Regional Executive Secretary
Regional Management Unit
South West Indian Ocean Fisheries Project
P.O.B 81651-80100
English Point
Mombasa
Kenya
Phone: +254 721453545
Fax: +254 412001133
Email: rpayet@swiofp.net

Ms. Lucia PIERRE
Data Assistant
Indian Ocean Tuna Commission
P.O.Box 1011
Victoria
Seychelles
Phone: +248 225494
Fax: +248 224364
Email: lp@iotc.org

Jan ROBINSON
Fisheries Research Manager
Seychelles Fishing Authority
P.O.B 449
Fishing Port
Victoria
Seychelles
Phone: + 248 670338
Fax: + 248 224508
Email: jrobinson@sfa.sc

Pornchai SINGHABOON
Kasetsart Campus (DOF)
Senior Fisheries Biologist/Navigator
Deep Sea Fisheries Sector
Department of Fisheries Thailand
Jatujus Street
Bangkok
Thailand
Phone: +66 29406148
Fax: +66 29406148
Email: pornslek@hotmail.com

Ross WANLESS
Africa Coordinator
Birdlife International
P.O.B 7119
Roggebaai
Cape Town,
8012, Western Cape
South Africa
Phone: +27 (0) 214197347
Fax: + 27 (0) 865454319
Email: gsp@birdlife.org.za

Ren-Fen WU
Director
Information Division
19, Lane 113, Roosevelt Road
Sec. 4,
Taipei Taiwan
Republic of China
Phone: +886 2 27381118
Fax: +886 2 27384329
Email: fan@ofdc.org.tw



APPENDIX III LIST OF DOCUMENTS

Document	Title	Availability
IOTC-2010-ROS-01	Draft agenda of the Technical Meeting on the Regional Observer Scheme	✓
IOTC-2010-ROS-02	WS ROS List of documents	✓
IOTC-2010-ROS-03	European Scheme of Observers on Board Purse-Seiners in the Indian Ocean	✓
IOTC-2010-ROS-04	Resolution 10/04 <i>On an Regional Observer Scheme</i>	✓
IOTC-2010-ROS-05	Implementation plan of National Observer Project of Korea	✓
IOTC-2010-ROS-06	Draft Observer Manual	✓
IOTC-2010-ROS-07	Draft Data Sheets Fields	✓
IOTC-2010-ROS-08	Draft Observer Trip Report Template	✓

APPENDIX IV
RESOLUTION 10/04
ON A REGIONAL OBSERVER SCHEME

The Indian Ocean Tuna Commission (IOTC),

TAKING INTO ACCOUNT the need to increase the scientific information, in particular to provide the IOTC Scientific Committee working material in order to improve the management of the tuna and tuna-like species fished in the Indian Ocean;

REITERATING the responsibilities of flag States to ensure that their vessels conduct their fishing activities in a responsible manner, fully respecting IOTC conservation and management measures;

CONSIDERING the need for action to ensure the effectiveness of the IOTC objectives;

CONSIDERING the obligation of all IOTC Members and Co-operating Non-contracting Parties (hereinafter CPCs) to fully comply with the IOTC conservation and management measures;

AWARE of the necessity for sustained efforts by CPCs to ensure the enforcement of IOTC's conservation and management measures, and the need to encourage non-Contracting Parties (NCPs) to abide by these measures;

UNDERLINING that the adoption of this measure is intended to help support the implementation of conservation and management measures as well as scientific research for tuna and tuna-like species;

CONSIDERING the provisions set forth in *Resolution 09/04 on a Regional Observer Scheme*, adopted by the Commission in 2009;

CONSIDERING the deliberations of the 12th Session of the IOTC Scientific Committee held in Victoria, Seychelles from 30 November to 4 December 2009

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement, the following:

Objective

1. The objective of the IOTC observer scheme shall be to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area.

Observer Scheme

2. In order to improve the collection of scientific data, at least 5 % of the number of operations/sets for each gear type by the fleet of each CPC while fishing in the IOTC Area of 24 meters overall length and over, and under 24 meters if they fish outside their EEZs shall be covered by this observer scheme. For vessels under 24 meters if they fish outside their EEZ, the above mentioned coverage should be achieved progressively by January 2013.
3. When purse seiners are carrying an observer¹ as stated in paragraph 1, this observer shall also monitor the catches at unloading to identify the composition of bigeye catches. The requirement for the observer to monitor catches at unloading is not applicable to CPCs already having a sampling scheme, with at least the coverage set out in paragraph 2.

¹ Observer: a person that collects information on board fishing vessels. Observer programmes can be used for quantifying species composition of target species, bycatch, by-products and dead discards, collecting tag returns, etc.

4. The number of the artisanal fishing vessels landings shall also be monitored at the landing place by field samplers². The indicative level of the coverage of the artisanal fishing vessels should progressively increase towards 5% of the total levels of vessel activity (i.e. total number of vessel trips or total number of vessels active).
5. CPCs shall:
 - a) Have the primary responsibility to obtain qualified observers. Each CPC may choose to use either deployed national or non-national of the flag State of the vessel on which they are deployed;
 - b) Endeavour that the minimum level of coverage is met and that the observed vessels are a representative sample of the gear types active in their fleet;
 - c) Take all necessary measures to ensure that observers are able to carry out their duties in a competent and safe manner;
 - d) Endeavour to ensure that the observers alternate vessels between their assignments. Observers are not to perform duties, other than those described in paragraphs 10 and 11 below;
 - e) Ensure that the vessel on which an observer is placed shall provide suitable food and lodging during the observer's deployment at the same level as the officers, where possible. Vessel masters shall ensure that all necessary co-operation is extended to observers in order for them to carry out their duties safely including providing access, as required, to the retained catch, and catch which is intended to be discarded.
6. The cost of the observer scheme in paragraph 2 and 3 shall be met by each CPC.
7. The sampling scheme referred in paragraph 4 will be covered by the Commission's accumulated funds and voluntary contribution on a provisional basis. The Commission will consider at its 14th Annual meeting an alternative for the financing of this scheme.
8. If the coverage referred in paragraphs 2 and 3 is not met by a CPC, any other CPC may, subject to the consent of the CPC who has not met its coverage, place an observer to fulfil the tasks defined in the paragraphs 1 and 2 until that CPC provides a replacement or the target coverage level is met.
9. CPCs shall provide to the Executive Secretary and the Scientific Committee annually a report of the number of vessels monitored and the coverage achieved by gear type in accordance with the provisions of this Resolution.
10. Observers shall:
 - a) Record and report fishing activities, verify positions of the vessel;
 - b) Observe and estimate catches as far as possible with a view to identifying catch composition and monitoring discards, by-catches and size frequency;
 - c) Record the gear type, mesh size and attachments employed by the master;
 - d) Collect information to enable the cross-checking entries made to the logbooks (species composition and quantities, live and processed weight and location, where available); and
 - e) Carry out such scientific work (for example, collecting samples), as requested by the IOTC Scientific Committee.
11. The observer shall, within 30 days of completion of each trip, provide a report to the CPCs of the vessel. The CPCs shall send within 90 days the report, which is recommended to be

² Field sampler: a person that collects information on land during the unloading of fishing vessels. Field sampling programmes can be used for quantifying catch, retained bycatch, collecting tag returns, etc.

- provided with 1°x1° format to the Executive Secretary, who shall make the report available to the Scientific Committee upon request. In a case where the vessel is fishing in the EEZ of a coastal state, the report shall equally be submitted to that Coastal State.
12. The confidentiality rules set out in the resolution 98/02 Data confidentiality policy and procedures for fine-scale data shall apply.
 13. Field samplers shall monitor catches at the landing place with a view to estimating catch-at-size by type of boat, gear and species, or carry out such scientific work as requested by the IOTC Scientific Committee.
 14. The funds available from the IOTC balance of funds may be used to support the implementation of this programme in developing States, notably the training of observers and field samplers.
 15. The entry into force of this Resolution is 1 July 2010.
 16. The elements of the Observer Scheme, notably those regarding its coverage, are subject to review and revision, as appropriate, for application in 2012 and subsequent years. Basing on the experience of other Tuna RFMOs, the Scientific Committee will elaborate an observer working manual, a template to be used for reporting (including minimum data fields) and a training program at its 2009 session.
 17. This Resolution supersedes Resolution 09/04 on a *Regional Observer Scheme*.

APPENDIX V
INDIAN OCEAN OBSERVER PROJECT COMPARISON

	SWIOFP	IOC	TAAF	EU PS	SPAIN LL	REUNION LL	MADAGASCAR	TAIWAN LL	JAPAN LL	SOUTH AFRICA LL	IOTC
Objectives	Capacity building Collect scientific data	Help IOC countries to comply with IOTC Resolutions Assist in observer management	Control in TAAF EEZs Collect scientific data	Collect scientific data	Collect scientific data	Collect scientific data	Collect scientific data and Control	Collect scientific data	Collect scientific data	Collect scientific data and Control	Collect scientific data
Area of operation	9 countries	5 countries + Mozambique	TAAF and Mayotte EEZs	Indian Ocean	Indian Ocean	French and Madagascar EEZs	Indian Ocean	Indian Ocean	Indian Ocean	South Africa EEZ	Indian Ocean
Fleet observed	National	IOC and licensed	Licensed	National	National	National	National and Licensed	National	National	National and licensed	>24m <24m outside EEZ
Number observers	5 per country	3 per country	9-10			3			18		-
Coverage	400+ days (over 2 years)	2 years	450 days /year	9% of fishing operations/sets		5 % of fishing operation/sets		5% of fishing operations/sets			5% of fishing operations/sets 5% of vessel activity
Training period	21days	21 days	3 weeks	1 day		2 days to 2 weeks					
focus pecies	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch	Target, non-target and bycatch

APPENDIX VI

MINIMUM SET OF DATA FIELDS

Onboard Data Capture and Sampling Procedures

During an assignment observers will be required to collect a vast amount of information covering a broad spectrum of data categories that includes; trip logistics, vessel data and fishing activities and catch. In addition to this they will be tasked to collect biological information on specific key species and recording the impact of the fishing activities on other marine fauna. The observers will be required to accurately capture this information on a series of data forms. Observers may also be required to capture the data into an electronic database. When this data is not available or not relevant, the observer will have to supply comments in the trip report.

The basic information covering vessel specifications is similar for most vessels and fisheries and is normally trip specific, however catch and effort data will vary according to the different fisheries, target species and fishing gear and methods used, (for example Purse-seiner, Longliner or Poling). Procedures for biological sampling may cover several fisheries but sampling strategies are often determined by the operational nature of the fishery and the specified data collection requirements. Data collection can be separated into several categories and these can be adapted to the vessel and fishery being monitored. These data categories include:

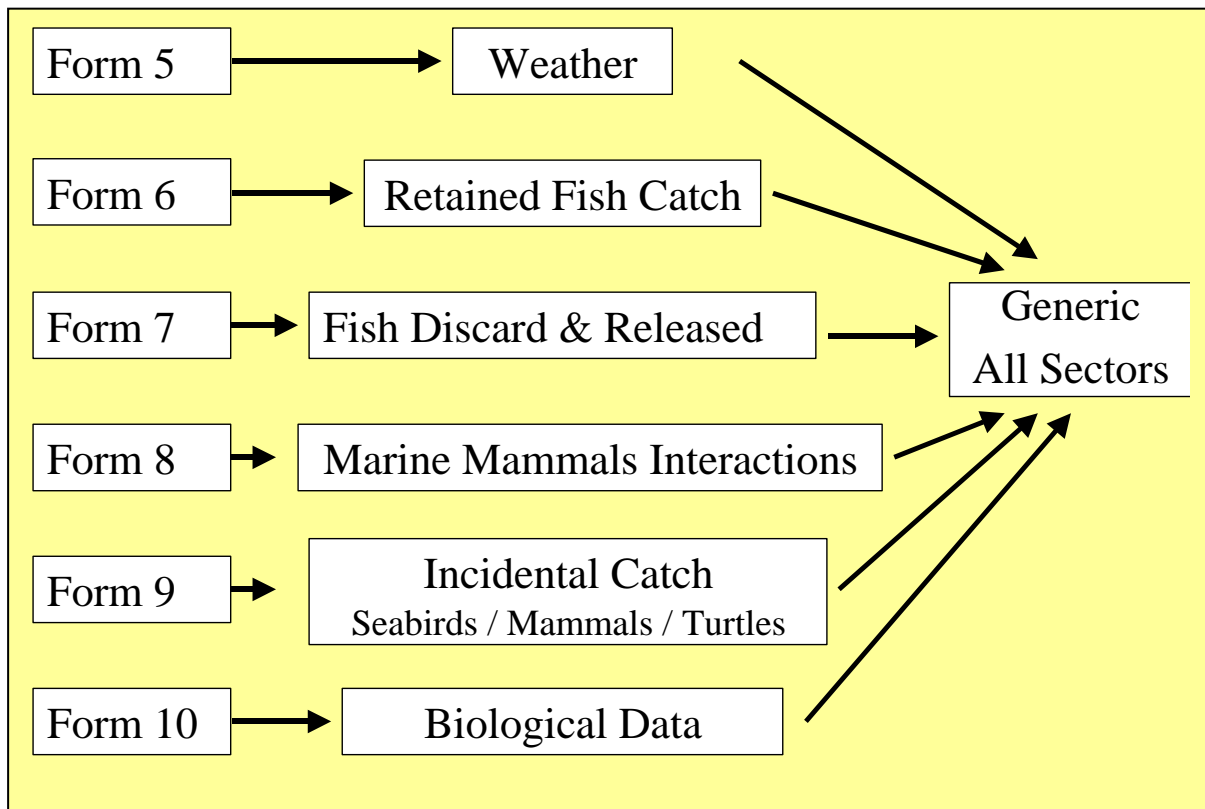
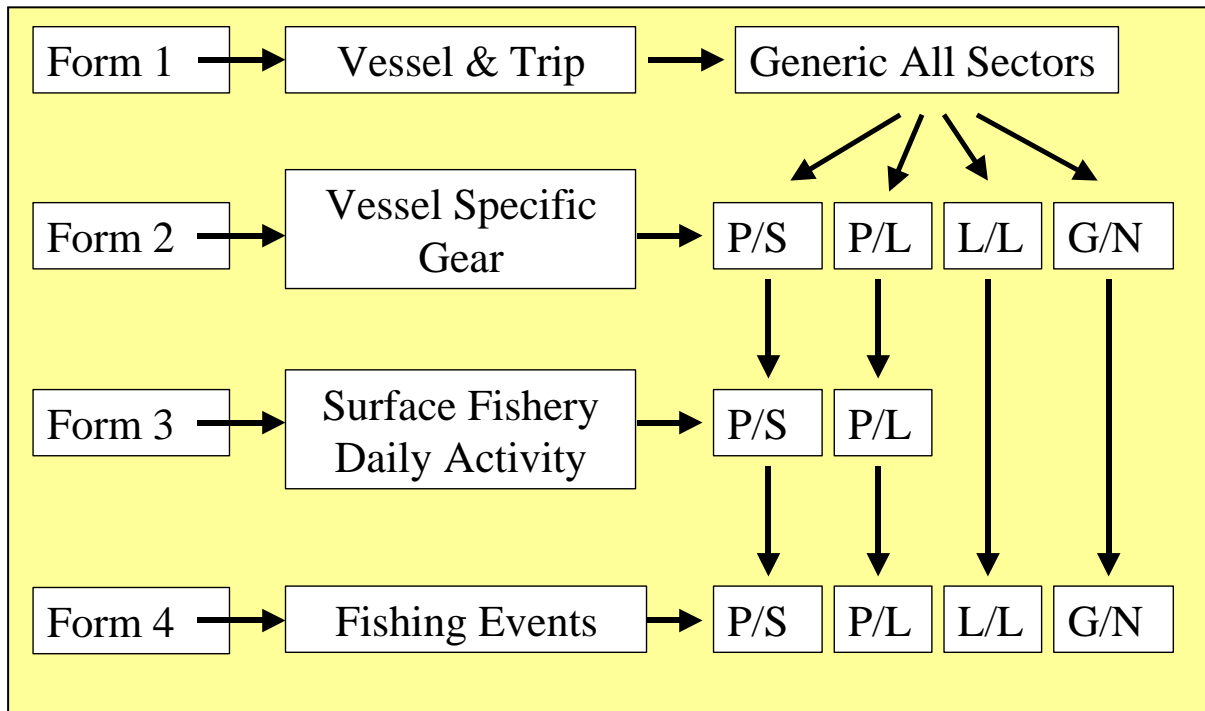
- Generic Data
- Specific Fisheries Vessel & Gear
- Biological Data Collection
- Environmental Monitoring
- Generic data will encompass all vessel types and fisheries; (including artisanal landings). These data are generally trip-specific and headings in this category will include:
 - Observer and Deployment Details
 - Vessel Owners and Compliment
 - Vessel Details
 - Vessel Electronics
 - Trip Information
 - Catch Information

Data field descriptions

Each data field on the data forms needs to be completed to reflect accurately the information required for that field. In some instances a single word or code is all that is required. However where a field requires text to record a name or address these need to be written out in full. When capturing data in an electronic database it is important to distinguish between text and numbers. When recording unit of measurements note clearly in which units the measurement was made. For example, units of distance can be in *kilometres, nautical miles or mile*. If the unit is not specified on the form it must be included with the unit is entered.

The description of the data fields in this section will assist the observer to understand the exact nature of the information to be recorded; the reporting procedure when data is not available; or when the observer wishes to record additional information.

Data Forms Schematic Relationship



FORM1: Vessel and Trip Information

(All observer trips)

Vessel information

Vessel name and Registration number / IOTC number *(if applicable)*
Vessel type and Main gear
(List of) Licensed Target Species (Recommended)

Observer and Deployment Details

Observer name
Observer nationality
Observers certification details (agency and number)
Controlling Organisation
Contact person(s)
Date / time embarkation
Location of embarkation
Date / time disembarkation
Location of disembarkation

Vessel Owners and Compliment

Registered vessel owners
Chartered / operators
Fishing Master name
Fishing Master nationality
Captain name
Captain nationality
Number of crew

Vessel Specific Details

Flag
National register number
IMO number / Lloyd's number *(Recommended)*
International radio call sign (IRCS)
Vessel phone, fax and email
Gross tonnage (GRT or GT)
Length overall (LOA)
Main engines Make/ Power
Vessel cruising / maximum speed *(Recommended)*
Vessel range (days at sea)
Hull material
Total fish carrying capacity (t / m3)
Fish Storage Methods

Vessel Electronics

Radios
Satellite communication systems
Fisheries information services
Vessel Monitoring Systems (VMS)
Global Positioning Systems (GPS)
Track plotters
Radars
Acoustic depth sounder
Acoustic sonar
Weather facsimile.
Sea Surface Temperature (SST)
Expendable bathythermograph (XBT)
Acoustic doppler current meter

Vessel Trip Information

Date / time vessel trip started (departed port, ...)

Date / time vessel trip ended (returned to port,...) (Recommended but not mandatory)

Port of return

Observer Trip Information (move up)

Total days spent in fishing area

Total active fishing days/events

Total days transiting to fishing areas

Total days searching for fish

Total days lost due to weather

Total days lost due to gear or mechanical breakdown

Total days lost to unforeseen events (specify)

Catch Summary Information

Weight/Species/transhipped at sea (IOTC/FAO code)

Carrier Vessel details

Total processed weight of fish onboard at disembarkation

Weight/Species/processed (FAO/IOTC code)

FORM 2: Vessel-specific Gear Details

Form 2: PURSE SEINE VESSELS

Maximum Net length (meters)
Maximum Net depth (meters)
Mesh length (stretched mesh (mm))
Power Block Make & Model
Purse winch Make & Model.
Number of buoys per type (satellite, radio...) in
at sea / onboard at embarkation
Associated Supply vessel name(s)

Form 2: POLE AND LINE VESSELS

Automatic poling (present or absent)
Max number of operational poles
Total volume live bait tanks/ wells (m³)

Form 2: GILLNET VESSELS

Total numbers of net panels onboard
Total length of net panel
Maximum deployable length of net per day
Stretched mesh size(s)
Net Hauler

Form 2: PELAGIC LONGLINE GEAR AND OPERATIONS INFORMATION

Vessel name and IOTC number
Target Species

Longline Gear Specifications

Longline Type
Mainline length
Mainline material and diameter
Optional if available:
Branch line storage (tubs / baskets / coiled)
Branch line material(s) and diameter(s)
Leader material(s) and diameter(s)
Number of hooks / basket or tub
Hook types used & size

Operational Equipment (make/model)

Line setter
Bait casting machine
Mainline hauler
Fish storage
Refrigeration method

Tori lines details

Streamer line length (m)
Attached height above water (m)
Number of streamers attached
Streamers paired or single
Distance between streamers

Length of streamers (min./max.)

Aerial extent from attachment point to water entry (m)

Towed object attached to end of streamer line (yes/no) Include specification of the towed device (dimensions, mass and type of material used in its construction) and a photograph.

Did all streamers reach the sea surface in the absence of wind and swell (All/Some/None) Comment

Attach a diagram of the streamer

FORM 3: Surface Fishery Daily Activity Log (Purse seine and Pole & Line)

Vessel name (include number)

Date

Target Species

Daily Activity Log (*to be filled every time the activity changes*)

Time

Position (latitude & longitude)

Activity code

Other

Total number of fish schools detected for day

Exceptional sightings (comment)

Observers Comments

FORM 4: Fishing Events

Form 4: PURSE SEINE FISHING SET LOG

Target Species
Set Number
Date & Time start set
Position (latitude / Longitude .)

Setting Sequence

Time School detection
School Detection (Cue)
Type of school
Association type
Time start pursing
Time net pursed
Time start brailing
Time end brailing
Average weight of brail
Total number of brails
Time skiff onboard
FAD buoy number / Id
Number of tagged fish recovered.
Retained Catch per species
Side/Well number(s)
Released & Discarded Catch per species (onboard, in the net...)
Total number of fish (per species) sampled for biological parameters
(*sampling method to be described*)

Form 4: POLE & LINE EVENT LOG

*(two fishing events are separated by a break of at least of 10minutes
if on the same school...)*

Vessel name and IOTC number
Date
Target Species
Event Number
Time School detection
School Detection (Cue)
Type of school
Association type
Position (latitude / Longitude)
Date/Time Start
Time End
Number of operational poles
Bait used (no / yes (live or frozen))
Species if frozen bait
Type of lures used
Estimated total catch weight / species
Number of tagged fish recovered.
Total number of fish (per species) sampled for biological parameters
Retained Catch
Released & Discarded Catch

Bait fishing Event Information

Method of catching bait
Date / time

Position
Estimated total weight of bait loaded
Predominant 3 species

Form 4: PELAGIC LONGLINE SET & HAUL INFORMATION

Vessel name and IOTC number
Target Species

Setting Operations

Set Number
Date start setting
Start setting Time
Start Setting Position
Setting speed (knots) (Recommended but not mandatory)
Line- setter speed (m/s)
Clip on time (seconds) (Recommended but not mandatory)
End Setting time
End Setting Position
Total line length
Total number of hooks set
Ratio of Hook type/ size
Total number of Steel wire leaders
Bait species (1 / 2 / 3)
Bait ratios (% / % / %)
Bait dyed (y/n)
Dye colour
Number of hooks per basket
Average branchline lengths (meters)
Total number of radio/dhan buoys set
Mainline weights attached (yes/no)
Weight used (kg)
Branchline weights attached (yes/no)
Distance of weight from hook
Weight used (g) Light-sticks attached (yes / no)
Total Number / Colour of light-sticks
Deck lighting
Tori / Bird scaring streamer line/s' deployed
Number deployed

Line Hauling Information

Start Hauling; Date & Time
Start Hauling Position
End Hauling; Date & Time
End Hauling Position
Number of hook hauled observed
Bird scaring device at hauler (yes / no) (if yes, description)
Offal management
Position of offal disposal

FORM 5: Weather Observations

Wind Force & Direction
Sea Height & Direction
Swell Height & Direction

FORM 6: Retained catches

Species
Processing Code
Number of fish
Total processed weight

FORM 7: Discarded Released By-catches

Species
Number/Est. weight of fish
Fate
Reason for discard
Tagged Yes / No

FORM 8: Depredation

Fishing Event number
Predator Species
Id reliability code

Suspected depredation on bait (yes / no)
Suspected depredation on fish (yes / no)
Mitigation measures

FORM 9: Incidental Catches of Seabird, Turtle and Mammals

Fishing event number
Species
Number caught
Reason for capture
Use of dehooker and line cutter? y/n
Release Fate (dead / alive)
Resuscitation (y/n)
Sample retained (yes/no)
Turtle/Marine Mammal length
Tag/Band number (details)
Id photo for marine turtles and marine mammals

FORM 10: Biological Data Collection

Species
Length (range of length measurements)
Weight
Sex (O)
Maturity (O)
Age & Growth (otoliths) (Recommended but not mandatory)
Other (genetic samples, Id photo)

FORM 11: Tag Recapture Details

Species
Tag numbers/Type
Location
Position recording system Vessel name (flag)
Method caught
Fish State
Length & Length measurement code
Weight
Gender
Sample retained
Finder details

FORM 12: Fishing/Supply Vessels sightings

Date
Time
Number of vessels in the area
Position
Position relative to your position (direction/distance)
Vessel details (name, flag, activity)
Descriptive features
Photo taken (y/n)

FORM 13: Transshipment (if no Observer on transshipment vessel)

Date
Start time
End time
Position
Category
Product transhipped
Name of carrier/fishing vessel

FORM 14: Waste Management (Recommended)

MARPOL agreement annex5

Waste category
Storage/Disposal method

APPENDIX VII OBSERVER TRIP REPORT TEMPLATE

RESOLUTION 10/04 paragraphs 11-12

- | |
|---|
| <p>11 The observer shall, within 30 days of completion of each trip, provide a report to the CPCs of the vessel. The CPCs shall send within 90 days the report, which is recommended to be provided with 1°x1° format to the Executive Secretary, who shall make the report available to the Scientific Committee upon request. In a case where the vessel is fishing in the EEZ of a coastal state, the report shall equally be submitted to that Coastal State.</p> <p>12 The confidentiality rules set out in the resolution 98/02 Data confidentiality policy and procedures for fine-scale data shall apply.</p> |
|---|

The observer's trip report must cover in detail the collective data and events for a trip. The format and headings included below serve as a guide to the layout and content of the report. Additional sections or headings can be added and heading that are not appropriate can be removed.

Observers are encouraged to keep detailed notebooks throughout their trips and include information that is not routinely captured by the data forms into the comments of the report under the relevant headings. Photographs and diagrams are important and observers are encouraged to include these where relevant, either or both in the body of the report or as annexures.

TEMPLATE REPORT HEADINGS

Observer Name:

IOTC Observer number (*if applicable*)

Vessel Name and IOTC Number

Cruise Type (Longline, Purse Seine, Gillnet, Pole & Line):

Cruise Dates

1. TRIP SUMMARY (*to be written at the end*)

A brief outline of the work carried out, including any specific tasks undertaken that are additional to those specified in the Scientific Observers Manual. This should only be completed after the body of the report has been written. It should include a brief summary from each section or highlight points that the observer would like the reader to take special note of.

Operational Issues:

Observer Tasks:

Observers Logbooks / forms (tick boxes)

2. SCIENTIFIC OBSERVER AND VESSEL DETAILS

2.1 Scientific Observer Details

Observer name

Nationality
International or national observer
Employing organisation
Contact address
Location of boarding
Location of disembarkation

2.2 Vessel Details (From Vessel Detail Form)

Vessel name
Call sign
Port of registration
Flag State
Owner
Charterer
Vessel type
Fishing gear
Size (GRT)
Length (LOA):
Blast freezer capacity
Hold capacity / Storage method

Electronic Equipment

On-board acoustic equipment
Position fixing equipment
Vessel monitoring system (present/absent)
VMS unit and transmitter equipment type
Radar
Communications equipment
Plotters

3. CRUISE ITINERARY

Port/position of departure
Date of departure
Arrival on fishing grounds
Start fishing
End fishing
Depart fishing grounds
Port/position of return
Date of return

4. FISHING OPERATIONS

4.1 Summary:

Total number of days in the fishing area
Total number of days fished
Days lost (bad weather, breakdown etc.)
Days spent steaming/searching
Target species
Total number of set /drifts etc.
Number of hooks/panels
Number of hooks/panels lost
Total number of sets/ drifts observed
Number of hooks/panels observed

Bait used (species1, species2, species3)

Bait ratio (species1 %/species2 %)

Comments:

4.2 Gear Description:

Describe the fishing gear used as listed on the fishing forms for the specific fishery observed. Including make, model, mesh size, hook size etc. Attach diagrams or photographs of unique gear as an appendix to this report. Note any detail variations that may not be captured by the data fields in the forms

Comments (O):

4.3 Retained Catch Details (all species) / per month:

Year/Month

Species

Location (1° x 1°)Number

Processing Code

Processed weight(kg)

Comments

4.4 Processing Details:

Specie

Processing Code

Comments

Describe the processing codes and method used for calculating the total green weight and processed weight.

4.5 Fish Discards

Year/Month

Species

Location (1° x 1°)

Number

Reason

5. SUMMARY OF BIOLOGICAL DATA COLLECTED

5.1 Biological Data Collection Summary: List all the species for which biological measurements were taken.

Species Code

Number of Samples Collected

Length Weight Sex

Maturity

Otoliths

Others (detail)

Comments:

5.2 Biological Sample Storage Location:

Sample Type

Species

Number of Samples Collected

Contact Name and Address of where the Samples are to be Stored

5.3 Biological Sub-sampling Methodologies (table /codes)

Provide a description of the sub-sampling methodologies used during the cruise.

5.4 Tagging information.

6. SUMMARY OF METEOROLOGICAL DETAILS

Provide a brief description of the weather and sea conditions, noting any unusual events.

7. SUMMARY OF FISHING STRATEGY

Provide a brief description of the fishing methods and strategy, including methods used to minimise by-catch.

8. SUMMARY OF INCIDENTAL catches

8.1 Mitigation measures

List of mitigation measures used?

Did the vessel operate south of 25S?

If Tori lines used:

What is the number of sets on where the streamer line was used?

Was the streamer line constructed according to guidelines recommended by IOTC?

What was the percentage of sets where the streamer line was used?

8.2 Seabird caught

Year/Month

Location (1x1)

Species

Number

Fate Include totals of birds killed or released alive .

Comments:

8.3 Marine Mammal caught

Year/Month

Location (1x1)

Species

Number

Fate Include totals of mm killed or released alive .

Comments:

8.4 Depredation:

Was fish loss attributed to predator but not directly observed (fish heads being hauled)?

8.9 Marine Turtles caught

Year/Month

Location (1x1)

Species

Number

Fate Include totals of turtles killed or released alive .

Comments:

8.10 Tag recovery information

8.11 Sample retained

Species

Type of Sample

Number of Samples Collected

Photo taken

Reason for collection

Contact Details of where the Samples were sent

9 LOST FISHING GEAR

Include information on lost fishing gear, such as length of line lost, amount of net, and other gear such as floats

10. VESSEL SIGHTINGS

Was vessels sightings been recorded? (y/n)

11 GENERAL COMMENTS

APPENDIX VIII

MINIMUM PRE-REQUISITE FOR IOTC OBSERVER CERTIFICATION

Recruitment

Candidates for observer training should be assessed and ideally have the following specific skills and work experience prior to being accepted for observer training:

- Numeric, literacy and logic skills
- Ability to work alone
- Physical fitness
- Capacity to live in potentially hostile environments, and ability to maintain standards of conduct
- Preferably “at sea” experience

Compulsory pre-requisite training for observers prior to them being registered as IOTC certified observers to include;

- 1 Basic Sea Survival, Familiarization and Personal Safety and Social Responsibility Training (STCW95 A-VI/1-1; A-VI/1-4 & A-VI/1 *IMO requirements*) includes instruction on:
 - Introduction to safety and survival;
 - Emergency situations;
 - Evacuation;
 - Survival craft and rescue boats;
 - Personal life saving appliances;
 - Survival at sea

Prepares observers to react in emergency situations where there is an imminent danger to flooding, fire or having to abandoning the vessel at sea.

- 2 Fitness to Work at Sea
Prior to deployment all observers are required to have an in-date high seas medical certificate as well as inoculations required for tetanus, yellow fever and typhoid, depending on the ports of embarkation and disembarkation.