

GLOBAL STUDY ON TRANSSHIPMENT

Regulations, practices, monitoring and control

Food and Agriculture Organization of the United Nations

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Preparation of this Document

The FAO Committee on Fisheries (COFI) has requested at its 32nd meeting from 11-15 July 2016, to “initiate work on transshipments” since it is believed to be a major issue in IUU fishing and not all the attention should be placed in fishing vessels only but also on refrigerated transport vessels and supply vessel. The relevant text in the report of the 32nd meeting of COFI reads as follows:

“Any other matters

164. The United States of America suggested a proposal for FAO to work on transshipments and IUU fishing, covering:

- i) a review of current regulations and at sea transshipment practices, and consider which, if any, at sea transshipment activities should be authorized;
- ii) guidance on specific control mechanisms where transshipments are authorized and regulated;
- iii) review at sea transshipment authorization and notification procedures, reporting and transparency requirements and other tools used to provide independent monitoring and control over transshipment.

165. Many Members affirmed that their legislation prohibits transshipments in waters under their national jurisdiction. The Committee noted the United States of America proposal and provided additional suggestions regarding control mechanisms, the use of the Global Record and collaboration with RFMOs and encouraged FAO to initiate work on transshipments.”

The present document reviews current transshipment practices as well as applicable measures regulating transshipment operations and is based on a Global Survey, a Literature Review, as well as some specific case studies.

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Annex A: Analysis of results of the Global Stakeholder Survey

Acronyms

“AIS”	Automatic Identification System (IMO)
“AL”	Authorized Location
“CC”	Compliance Committee
“CCAMLR”	Commission for the Conservation of Antarctic Marine Living Resources
“CCSBT”	Commission for Conservation of Southern Bluefin Tuna
“COFI”	FAO Committee on Fisheries
“CP”	Contracting Party
“CCM”	Contracting Parties or Members, Cooperating Non-members and Participating Territories
“CCTV”	Closed Circuit Television (based on remote video camera's)
“CDS”	Catch Documentation Scheme
“EEZ”	Exclusive Economic Zone
“EM”	Electronic Monitoring Scheme
“EPO”	Eastern Pacific Ocean
“ERS”	Electronic Reporting System
“EU”	European Union
“FAO”	United Nations Food and Agricultural Organization
“FFA”	Pacific Islands Forum Fisheries Agency
“FMC”	Fishery Monitoring Centre
“FVW”	Flag Fishing Vessels Worldwide
“IATTC”	Inter-American Tropical Tuna Commission
“ICCAT”	International Commission for the Conservation of Atlantic Tuna
“IOTC”	The Indian Ocean Tuna Commission
“IUU”	Illegal, unreported and unregulated
“MCS”	Monitoring, Control and Surveillance
“MTC”	Harmonised Minimum Conditions for Access of by Fishing Vessels (FFA)
“NAFO”	North Atlantic Fisheries Organisation
“NASCO”	North Atlantic Salmon Conservation Organisation
“NEAFC”	North East Atlantic Fisheries Commission
“NGO”	Non-Governmental Organization
“NPFC”	North Pacific Fisheries Commission
“PS”	Port State
“PSM”	Port State Measures
“PSMA”	Port State Measures Agreement
“RA”	Regulatory Area (Geographical Area to which RFMO measures apply, as defined in the Convention)
“RFMO”	Regional Fisheries Management Organisation
“RFV”	Register of Fishing Vessels (WCPFC)
“ROP”	Regional Observer Programme
“SEAFO”	South East Atlantic Fisheries Organisation
“SIOFA”	Southern Indian Ocean Fisheries Agreement
“SPRFMO”	South Pacific Regional Fisheries Management Organisation
“TCN”	Tuna Compliance Network liaising compliance staff of t-RFMO's
“TFA”	Taiwan Fisheries Agency
“ULT”	Ultra Low Temperatures
“UN”	United Nations
“US”	United States of America
“VMS”	Fishing Vessel Monitoring Sysytem
“VTMIS”	Vessel Tracking Management Information Sysytem
“VTS”	Vessel Tracking Systems
“WCPFC”	Western and Central Pacific Fisheries Commission

Abstract

Transshipment operations, particularly those undertaken at sea are frequently critical to the economic viability of some fisheries, such as certain tuna fisheries where high market value of certain species, when conserved on board under very specific conditions, drives the economical performance of the fishing vessels concerned. Indeed, fishing vessels are purpose built and have crew on board to fish, therefore, transshipment of catch over the side to transport vessels and taking on board supplies and fuel from supply vessels at sea maximizes effective fishing time of fishing vessels and thus the economical performance.

There are many different types of transshipment operations, each dictated by fishing area, target species, market and logistics and, thus optimizing economical performance of fishing activities. However there are also transshipment operations conducted for the sole purpose to circumvent existing controls on IUU activities. Many unauthorised and unregulated transshipment operations, including those in artisanal fisheries, have developed into major economic drivers that severely impact on vulnerable coastal communities and the long-term health of fish stocks. For those wishing to avoid scrutiny or open to corruption, transshipping, particularly at sea, could be a fruitful operation.

FAO conducted a Global Survey and a Review of Regulations which together with some case studies shed light on transshipment practices and the efforts by States and RFMOs to ensure regulatory control over transshipment operations. However, it should be noted that this study represents only a snapshot of the overall global picture. The focus of the present study was qualitative and not quantitative. More work will be required to complete the global picture and to reply to the detailed questions set out in the report of COFI's 32nd meeting.

FAO convened an Expert Workshop to provide further inputs to the current study.

The present study recognizes inter alia i) the necessity to revisit the definition of transshipment specifically to consider current types of practices and vessel types; ii) the diversity of operations in different regions and fisheries and the drivers behind them so that each situation should be judged on its own specificities; iii) that transshipment operations are often essential to fishing operations and that if properly monitored and controlled, they should not pose a threat to sound fisheries management; iv) that in general terms, transshipment operations are quite well regulated worldwide whilst there is still room for improvement to adequately monitor and control transshipment to avoid it becoming a gateway for IUU fishing activities; v) the increased interest of the international community to improve regulatory control over transshipment operations to support sound fisheries management and prevent, deter and eliminate IUU fishing.

Further work at global level, possibly leading up to International Guidelines, would facilitate, support and strengthen the work undertaken by State authorities including within the governance framework of RFMO's.

1. *Closing the Net*

Illegal, unreported and unregulated (IUU) fishing constitutes a persistent and pressing problem estimated to subtract from the global economy up to US\$ 23 billion annually.

The effects of IUU fishing can be severe, particularly for coastal and small island developing states heavily dependent on fisheries and include, among others, adverse impact on national economies, on peoples' livelihoods, food security, and the environment. The practice of transshipment is widely recognized as one of the major missing links to understanding where and how illegally caught fish finds its way to the market and thus a key cause of lack of transparency in global fisheries.

Over the last decades, the international Community, through the UN, its specialized organizations such as the Food and Agricultural Organization of the United Nations (FAO), as well as Regional Fisheries Management Organizations (RFMO), has adopted ample legal instruments (treaties, conventions, declarations, codes of conduct, guidelines and so on) to help States to establish or to improve their legal and institutional framework required for the exercise of responsible fisheries and in the formulation and implementation of appropriate measures.

The UN Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, the FAO Agreement to promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the FAO Code of Conduct for Responsible Fisheries, the FAO International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing, the FAO Voluntary Guidelines on Flag State Performance and the FAO Agreement on Port State Measures (PSMA) as well as the measures adopted through RFMO's provide a broad basis for combatting IUU fishing as well as activities in support of IUU fishing such as transshipment of catch from fishing vessels engaged in IUU¹.

The use of port State measures was included as a core element in the International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing adopted in 2001 within the framework of the FAO Code of Conduct for Responsible Fisheries. The Agreement lays down a minimum set of standard measures for port States to apply when foreign vessels seek entry into their ports and while they are in their ports. Port States shall ensure inspections of landings in its port in accordance with the levels and priorities agreed at a regional level while they should deny access to port and deny any port services including refuelling and resupplying, maintenance and drydocking to any fishing vessel having engaged in IUU fishing or fishing related activities in support of IUU fishing (i.e. so-called IUU vessels appearing on a "black" list).

¹ International legal instruments:

United Nations Convention on the Law of the Sea, of 10 December 1982

FAO 1983 Flag State Agreement on the flagging of vessels fishing on the high seas to promote compliance with internationally agreed conservation and management measures.

FAO 1995 Code of Conduct for Responsible Fisheries.

UN 1995 Agreement for the implementation of the provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish stocks and Highly Migratory Fish Stocks

FAO 2002 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

FAO 2009 Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated fishing

FAO 2015 Voluntary Guidelines for Flag State Performance ISBN 978-92-5-008759-7

Transshipment of catch over the side from fishing vessels engaged in IUU activities must be considered as fishing related activities in support of IUU fishing. Therefore, port States should deny access to port and deny any port services to transport vessels engaging in transshipping over the side of catch from fishing vessels engaged in IUU fishing.

2 *Initiated Work on Reviewing Transshipment*

In line with COFI's request to review current regulations and at sea transshipment practices, the present Document summarizes the results from global survey and the literature review, along with the conclusions drawn by the Experts attending the the Expert Workshop on Transshipment and IUU fishing, held in Rome from 21 – 23 February 2018.

The Global Survey was designed to collect information relating to transshipments from a wide range of stakeholders. The objective was to obtain from each group of stakeholder's details of their management and control over transshipments, their opinions on the importance and viability of transshipment operations and the effectiveness from their perspective of any measures put in place to manage and control such operations. The data collected was also used to benchmark the information coming out of the literature review.

The survey was created in the same electronic format and distributed electronically to respondents in the same manner as questionnaires under the Code of Conduct for Responsible Fisheries². Accordingly, the respondents could complete the forms on line and submit the results electronically. The results were compiled on a data base to facilitate effective analysis of the results (see Annex A).

The literature review consisted of a comprehensive review of transshipment, particularly regarding its role and impact on IUU fishing. As such it was required to explore current regulatory frameworks governing the activity, current transshipment practices, particularly at sea practices, including authorisations and notification procedures, reporting and transparency requirements and relevant monitoring and control measures to ensure compliance in transshipment. Therefore, the review was based on a detailed study of the regulatory control measures adopted by 11 RFMO's, 4 coastal States and the European Union. In total approximately 114 Regulations and 197 Articles were reviewed around 7 themes:

- Transshipment;
- Authorization and notification;
- Other MCS measures- VMS/VTs;
- IUU measures;
- Joint boarding and inspection schemes;
- Port State Measures;
- Transparency; and
- Observer Schemes.

The purpose of the Expert Workshop was to collect further information on transshipment practices and regulatory control, from all parts of the world, to expose those experts to the data drawn from the Survey and the Literature Review and to seek their views and opinions on these outcomes. Therefore, a regionally balanced group of 16 experts, having experience in regulatory control of transshipment operations at sea, met and exchanged information and experience concerning transshipment practices and the implementation of regulatory control.

² 1995 FAO Code of Conduct for Responsible Fisheries

3 *Global Survey*

3.1 Survey design

In order to gain as wide a picture as possible of the global situation regarding transshipments, particularly of those occurring at sea, the Global Stakeholder Survey was designed in recognition of the wide variety of stakeholder backgrounds and the difficulties this presented in creating a survey that was as relevant as possible to all potential responders. Therefore, four stakeholder groups were formed with each group being specifically targeted towards a particular sector. This not only allowed the survey to be more inclusive but also provided the opportunity to create questionnaires specifically targeted at the individual groups. The following groups were identified as being representative of a wide range of stakeholders;

Group 1	RFMO's
Group 2	States
Group 3	Owners and Operators
Group 4	NGO's

A specific survey was developed for each group of stakeholders. The questions for Group 1 and 2 were formulated specifically to allow yes/no replies while the questions of the surveys for Group 3 and 4 were formulated more openly to allow each private organization to convey their positions on the different aspects of transshipment.

The questions for Groups 1 and 2 referred to the following themes:

- regulatory framework for transshipment;
- transshipping practices and drivers;
- impact and risks of illicit or irregular transshipment operations and
- MCS measures applied to control transshipments.

The questions for Group 3 and 4 referred to;

- the regulatory framework for transshipments;
- the economy and logistics of transshipments and
- the application of MCS measures.

In addition, owners and operators were requested also to comment on the feasibility of the administrative requirements as applicable to their field of operations.

3.2 Survey Outcomes.

The general response rates for the survey were very encouraging, with 90 States plus the European Union, one associate Member, 14 RFMOs, 3 owners and processors and 4 NGOs submitting responses to the questionnaire. The survey achieved a well-balanced geographical representation amongst the different regions, with submissions from Africa (19), Asia (13), Europe (22), Latin America and the Caribbean (22), Near East (7), North America (2) and the South West Pacific (6). Against this background, it should be noted that fishing fleets registered in these continents operate in more than one maritime region and fleets from some countries operate in all oceans. Therefore, the replies may refer to several maritime regions. An analysis of the Survey outcome is included in Annex A. The responses are summarized as follows:

- States and the EU;
 - Generally, there are sufficient State regulations in place to control “legal” transshipments,
 - Most States permit transshipment operations in “Authorised Locations” while the numbers drop significantly for transshipments at sea either in the EEZ or on the High Seas.
 - Transshipment from fishing vessel to reefer is the most common transshipment operation and also the most important logistically and economically. States also highlighted a comparatively high level of transshipment operations between other fishing vessel types which were not specified in the questionnaire,
 - Transshipments between fishing vessel to canoe and fishing vessel to fishing vessel were identified as carrying the highest risk factor of transshipment type. Transshipments taking place in EEZ’s were identified as carrying the highest risk factor in area of transshipment operations.
 - MCS measures are applied extensively by all States, particularly those measures representing best value for money such as landing and port inspections, issuing licenses and use of paper logbooks. Other costlier systems are less popular.
- RFMO’s;
 - Generally, there are sufficient RFMO regulations in place to control “legal” transshipments,
 - Transshipment is widely permitted throughout the different RFMO’s when it is occurring both within and outside their RA’s. The most commonly stipulated controls relate to specific vessel types and specific target species,
 - Transshipment from fishing vessel to reefer is the most common transshipment operation and the most important logistically and economically followed by fishing vessel to fishing vessel,
 - Transshipments between fishing to fishing vessel carried the highest risk regardless of the area with fishing vessel to reefer being the next highest.
 - Risks were identified as impact on economic development, the marine environment and sustainability of fish stocks.
 - While a wide variety of MCS measures are deployed at RFMO and CP levels, overall most MCS measures are implemented at the CP level. Most RFMO measures surround items such as PS measures, notifications and access to IUU lists while CP measures relate to VMS, AIS and landing inspections,
- Owners and Operators;
 - Generally, Owners and Operators either expressed no opinion, were generally satisfied with the regulations governing their type area of operations or in one case there was concern that the regulations were not controlling the activities of some vessels or protecting crews from exploitation.
 - There was general concern at the economic impact of IUU activity on their operations, they expressed the need for a level playing field.
 - There was support for streamlining and simplifying the administration requirements governing their operation including introduction of CDS, a desire for much improved transparency and an enthusiasm for utilising new technologies in this field, however not all are convinced that transportation documentation and records are collected efficiently,

- Support for MCS measures if they helped establish the level playing field. Should be greater use of 3rd party observers.
- NGO's;
 - The views expressed regarding regulations extended from a desire to see a complete ban on transshipments sea through to a recognition of the case for allowing transshipments but under increased or improved regulations and greater levels of control. Some not convinced about the economic case for continuing with transshipping. A need to increase observer coverage was identified and to improve RFMO transshipment regulations,
 - Recognition of the advantages in streamlining regulations to improve application and controls,
 - An opinion that IUU lists are ineffective and inconsistent in application. Support for Interpol's "Project Scale"
 - Consistent calls for increased transparency and access to information by NGO's.
 - An enthusiasm for use of new technologies including developing alternative surveillance tools and strategies.

4. Regulation Review

4.1 Focus

The Regulation Review focused on the operational role of transshipment in capture fisheries, regulatory frameworks in relation to transshipping over the side of catch and includes some cases studies of transshipments practices in different parts of the World.

The Regulation Review covers transshipment of catch between fishing vessels and fishing vessels and any other vessels both in port, inshore and offshore. The Review includes examination of relevant measures adopted by each of the main RFMO's and a selection of Coastal States, the latter being chosen to give a representative perspective ranging from developing Coastal States through to Coastal States with mature systems in place.

The EU is included on the basis that it represents 20+ Coastal States who are members of the EU. In addition, the EU is a Contracting Party of numerous RFMO's. Each Section examines the individual RFMO or Coastal States position per topic with a reference and outline text of the relevant rule. Each Section concludes with a summary.

4.2 Regulatory Framework

4.2.1 General Regulatory Options

The regulatory position regarding transshipment at sea, three positions are adopted by the RFMO's and coastal states included in this review, either

- a complete ban such as those imposed by SEAFO, Chile and the EU;
- a complete ban with derogations for specific sectors of the fishing fleet and target species adopted by New Zealand, WCPFC and others; and
- transshipments at sea are permitted but with conditions attached or certain types of transshipment are banned as adopted by for example NAFO and Ghana.

RFMO measures may apply only to species regulated by each individual RFMO whether or not within the area to which these regulations apply while coastal state measures may not be species specific and apply to the EEZ. Uniquely SIOFA specifically includes provisions applying to supply and transfer vessels.

Considering the large variations in transshipment practices and drivers, these variations are understandable. It's clear that many of the Rules are created to encompass the logistical difficulties and economic realities of the different fisheries, for example lack of suitable ports for larger vessels around the fishing area, the logistical difficulties of using many different ports which may lack the necessary infrastructure and the need to operate fishing vessels economically by maximizing fishing time. Equally important may be the difficulties faced by coastal states in providing the necessary inspection presence to monitor transshipments in remote ports and indeed the reality of implementing appropriate MCS measures to enforce a ban in transshipping at sea. Conversely the EU position of a blanket ban is understandable given the large number of available ports, a region where generally there are effective MCS measures in place at sea and ashore and the drivers for transshipment are not so apparent, apart from those who do not wish to comply with the rules and regulations.

On the assumption that a proposal to ban all transshipments at sea is not feasible, the focus should lie on having a robust regulated framework in place supported by appropriate and sufficiently resourced MCS provisions to allow properly authorised transshipping, particularly at sea to take place in a controlled manner (MCS measures including inspection and surveillance activities at sea).

4.2.2 Authorization and Notification Requirements

There is a large element of consistency amongst the RFMO's regarding authorization of fishing vessels (authorization to access waters and resources), in essence, CP's and cooperating Non-CP's are required to authorise their fishing vessels to conduct fishing operations in the Area regulated by the relevant RFMO. In doing so the CP is confirming that the fishing vessel is entitled to access the waters and resources concerned and that the vessel complies with all applicable rules and regulations. In most instances, the fishing vessel is required to retain a copy of the authorisation on board for presentation during any inspection.

In most instances, the list of authorized fishing vessels shall be notified to the relevant RFMO on an annual basis.

Some RFMO's require fishing vessels and transport vessels also to be authorised before undertaking specific operations such as transshipping at sea and again the CP is required to notify this decision to the relevant RFMO secretariat accordingly.

There are some differences concerning the use of notifications but generally is used to describe a process relating to a particular operation, for example notification of the intention to enter a designated port or to undertake a transshipment operation, these obligations are very specific in quite a number of situations and frequently require the notification to be submitted 24 to 72 hours in advance. This is an important point from the perspective of a control authority in that it provides them with a reasonable timeframe to arrange for the vessel to be inspected or the proposed activity to be monitored in some form. It may also notify other authorities who may have an interest in the activity of the particular vessel, for example customs and immigration, harbour authorities etc.

Many Coastal States and the EU operate some form of authorisation or licensing system, often on a sectoral basis, this allows varying degrees of control over fishing capacity and effort ranging from simple licenses for artisanal fisheries through to a complete fisheries management system as operated by the EU. For the purposes of this paper its sufficient to understand the importance of authorisations and notifications and the important role they play in applying the principle of transparency.

4.2.3 Other MCS Measures

With one exception (SPRFMO), all the organisations in the review have some form of VMS system requirement. RFMO's place an obligation on their CP's to ensure any vessels authorised to undertake fishing operations with their Regulated Area are fitted with some form of satellite-based vessel tracking or vessel location system which supplies vessel information to the VMS system operated by the Contracting Party.

However only in very few instances (for example NAFO and NEAFC) are the Contracting Parties required to share the information with the RFMO. Therefore, the RFMO and none of its CP's have the ability to monitor the overall fishing activity within the area under RFMO regulation. Each CP can only monitor vessels flying its flag. Of course, this is a matter of understanding the responsibilities and obligation of each party, including concerns regarding ownership of VMS data and the security of the data but as RFMO's move towards a position of adopting Schemes of Joint Inspections and generally trying to improve compliance within their Regulated Area the question of sharing access to VMS data between CP's conducting operations under a Joint Scheme and the RFMO becomes more pressing. A standard agreement format laying out conditions for the exchange of VMS data, including data security arrangements would assist RFMO's and CP's in negotiations regarding the use of VMS as an operational tool to monitor overall fishing activity and when undertaking joint boarding and inspection at sea.

For Coastal States VMS/Vessel tracking provides a powerful tool in their efforts to reduce IUU activity within their EEZ's. Unfortunately, many developing coastal states (example Ghana) have great difficulty in procuring, commissioning and fully implementing a Vessel Tracking system into their MCS plans.

Many Coastal States and the EU have been using VMS for almost two decades and in some cases are now introducing 3rd or 4th generation systems. This has driven the development of low cost systems suitable for use in smaller inshore vessels, frequently using mobile phone technology. This is an important factor for developing coastal states who identify the need for low cost vessel tracking systems but may not have access to the expertise needed to identify an appropriate system or establish the required infrastructure including a Fisheries Monitoring Centre (FMC).

The value of an effective Vessel Tracking system to help combat unauthorised transshipments at sea and in port cannot be over emphasised. However, to be fully effective any VT system must be supported by an appropriate infrastructure such as a Fisheries Monitoring Centre where data can be received, analysed, verified, recorded, store, distributed and crossed checked with other information sources such as Authorisations, Notifications and Catch Certificates. Identifying cost effective solutions and facilitating the implementation of such solutions is a key process in combating IUU activity in general and unauthorised transshipping in particular.

4.2.4 Measures against IUU Activities

Without exception, all the regulatory entities reviewed express a strong commitment to implementing measures aimed at tackling IUU fishing. All have various measures in place designed to define activities considered to be IUU, to identify instances of IUU fishing with an obligation on concerned parties to report any such fishing through properly structured channels. Most entities have some form of IUU list or lists where details of vessels suspected of IUU fishing can be posted and escalated if the suspicion proves to be fact.

It is well known that many IUU operators, particularly those involved in transshipments are skilled at avoiding identification and will routinely take measures to change the identity and country of registration of the vessel or vessels in question. This makes maintaining and updating these numerous IUU lists into a very challenging task but they are an extremely effective tool when used in conjunction with other measures such PST and the FAO vessel list.

Many RFMO's have some form of Compliance Committee whose remit is commonly to gather data regarding the activities of CP vessels on an annual basis and to review compliance with the various rules and regulations of the RFMO concerned. The CC also looks after any rules regarding inspections at sea and in port and again the level of involvement depends on each RFMO's position. Much of the data collected and analysed relates to effort and catches of particular species and may be collected for scientific purposes rather than compliance monitoring, however there are indications that many RFMO's are recognising the need to better monitor compliance, including transshipment activity and are actively involved in developing better monitoring and inspection rules.

4.2.5 Joint Boarding and Inspection Schemes

Each RFMO has different procedures facilitating boarding and inspection of fishing vessels operating within their respective area under regulation and rules regarding the procedures to be followed during any inspection including access to the fishing vessel by inspectors, identification of inspectors, reporting procedures and so on. By necessity some of these schemes are quite extensive in their scope and detail. It is clear there is a general trend towards implementation of some form of Joint boarding and inspection Scheme or High Seas Inspection Scheme, the aims and objectives of current schemes are relatively uniform across RFMO's but introducing a formal agreement such as a Joint Boarding and Inspection Scheme where CP's and the RFMO secretariat agree to operate collectively requires consent by all CP's.

For example, NAFO and NEAFC have a long tradition of operating a joint international boarding and inspection scheme which is compulsory on flag States when more than a certain number of vessels flying their flag are operating in the area under regulation.

4.2.6 Port State Measures

Virtually all RFMO's operate some form of PSM's, only NEAFC refers directly to FAO Port State Measures 2009. Many RFMO's are reviewing or have reviewed their PSM as the PSMA have become binding in 2016. Many schemes are species specific, particularly if the species in question is the subject of a recovery plan. Some form of designated ports is common as is reference to VMS records as a means of authenticating fishing vessel activity prior to entering port. The level of documentation requirement varies quite considerably as does the timescale for transmission prior to entry into port.

There is a common requirement for vessels to be inspected in port although the triggers for an inspection vary.

Ratification of the FAO Port State Measures Agreement encourages Coastal States and RFMO's to adopt an increasingly uniform approach to inspection of fishing vessels, the identification of potential IUU activity and a reduction in the illegal transshipment of fish and fish products

4.2.7 Measures promoting Transparency

It is apparent that measures to bring transparency to the process of catching, recording, identification, processing, transmission of data storage, transshipment of fish and fish products are an essential element in avoiding IUU activity. This position is recognised by RFMO's, Contracting Parties and Coastal States and several RFMO's already have policies in place relating to Catch Documentation Schemes, similarly many others have made commitments to introducing CDS's in some form. This seems to be an area where a consistent approach would be of benefit to RFMO's, Contracting Parties, the fishing industry and possibly Coastal States. A set of common rules on the various components of CDS, supported by a set of basic document templates adaptable to meet individual requirements, would benefit all parties.

Another key element in Transparency is the lack of a common approach to labelling or tagging of catch. Labelling and Tagging requirements vary widely and are very dependent on species and the method of processing undertaken on board the catching vessel. The level of detail recorded on a label or tag may be in part dictated by Catch Certification rules and the suppliers or buyer's requirements. In terms of transshipment, lack of clarity surrounding labelling and tagging standards makes falsification of records on fish transhipped a relatively simple matter.

4.2.8 Observer Schemes

Most RFMO's operate observer schemes requiring fishing vessels to board an observer before engaging in any fishing activities. The observer records all activities of the vessel in an observer report. As required, this information may include information on compliance. Observer reports are transmitted to the flag State of the vessel concerned and sometimes also to the RFMO secretariat. The flag State authorities should review all observer reports and where appropriate, take legal action against vessels when the observer report includes information on non-compliant behavior and, where appropriate, inform the RFMO secretariat on the actions taken.

Regarding transshipments, several tuna RFMO's require observers on board of both vessels involved in a transshipment operation.

4.3 Regulatory Measures Summary

The following table summarises the information drawn together in the Literature Review. The contents of this table reflect the regulatory situation in each of the RFMO's and certain Coastal States selected for the review but there are differing approaches for example to the use of terminology and policy on derogations etc.

(see note 1)	Organisation/State/Union															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Regulated Activity	NAFO	NEAFC	SEAFO	SPRFMO	CCALMR	NPFC	SIOFA	ICCAT	IOTC	WCPFC	CCSBT	EU	Australia	Ghana	New Zealand	Chile
Transshipment																
Prohibition at Sea			X					X	X	X	X	X	X	X	X	X
Conditional Authorisation at Sea	X			X		X	X	X	X	X	X			X	X	
Notification at Sea		X		X	X	X	X	X		X	X					
Authorisation in Port	X		X	X			X	X		X	X	X	X			
Notification in Port		X	X	X	X		X	X		X	X	X	X			
MCS Measures																
Catch Documentation	X	X	X				X	X	X	X	X	X				

Labelling/Tagging/Stowage	x	x	x				x	x		x		x				
Joint Inspection Scheme	x	x		x				x		x		x				
Port State Measures	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
RFMO access to VMS data	x	x	x		x					x						
CP Fishing vessel operations																
• Authorisation (note 2)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
• Notification	x	x	x	x	x	x		x	x							
• VMS (note 2)	x	x	x		x		x	x	x	x	x	x	x	x	x	x
• Observer Scheme	x		x	x	x		x	x								
• IUU List	x	x	x	x	x	x	x	x	x	x	x	x				
Reefer/Carriers																
• Authorisation	x	x	x		x		x	x	x	x	x					
• VMS	x	x						x	x		x					
• Observer Scheme				x			x	x			x					
• IUU List	x	x	x	x	x		x	x	x	x	x					
Supply/Transfer Vessels																
• Authorisation							x			x						
• VMS											x					

Notes;

1. For RFMO's (No's 1-10) controls may apply only to regulated species.
2. Minimum length of vessel usually applies

5. The Expert Workshop

The FAO convened an Expert Workshop³ on Transshipment and IUU which was held from 21 – 23 February 2018 in Rome, Italy and brought together MCS experts from the main fisheries regions in the World. The Experts shared their expertise and experience in the area of transshipment operations at sea and took note of the results

³ COFI/2018/SBD.14. Report of the Expert Workshop on Transshipment and IUU fishing

of the Global Survey and regulation review undertaken by FAO. The experts shared different experiences concerning transshipment operations at sea. A summary of the main discussions is as follows:

- A response to the detailed questions asked by COFI requires that account be taken of regional and fisheries specific characteristics. However, at this stage it is not possible to formulate a simple general reply to these questions as this would require further detailed research and review of the specific circumstances surrounding each topic by regional and fisheries basis.
- It's clear from the outcomes of the survey, the literature review and the workshop that transshipment at sea is a loophole to be exploited by those wishing to avoid regulatory controls with a detrimental impact on the effectiveness of PSMA.
- States and RFMO's over the last years have progressed the introduction of a wide range of regulations and controls and the evidence collected suggest these are having some impact. However, these measures apply to "legal" transshipment operations and, as the full extent of "illegal" transshipments remains very difficult to quantify, identifying changes and trends in transshipment practices overall that can be reasonably attributed to the efforts of States and RFMO's is problematic.
- Responses to the survey by private organisations and the fishing industry combined with discussions during the workshop show a lack of confidence regarding the effectiveness of the current level of controls on transshipments in many cases but that the current level of information and knowledge regarding fishing practices, including transshipments is such that it's not possible to have a full understanding of the global position.
- A perceived lack of transparency regarding access to information, particularly concerning transshipment operations and potential IUU activity was highlighted by the private organisations.

The main conclusions of the expert workshop include the following:

- As the survey was qualitative rather than quantitative in its scope, further work to identify the levels and associated risks of fishing practices and transshipments would be beneficial to gaining a fuller understanding of the global position.
- As the study was representative in nature, it's very likely there are other drivers in addition to those identified by the study.
- Development of minimum standards for control of transshipments might be helpful for States and RFMO's.
- In order to gain a better understanding of developing trends in transshipping practices and controls, it would be advantageous to repeat the survey in a couple of years.

6 Drivers for Transshipment Operations

6.1 Background

Fishing vessels are purpose built and equipped and crewed for fishing operations and not for transporting fish and fish products over long distances. Therefore, it may be more economical to associate other vessels in fishing operations such as transport, provision and support vessels. Indeed, depending on the type of fishery, the fishing area and distance to relevant ports, operators will opt for the most economical deployment of their operations. An individual fishing vessel may stay at sea for many months, fishing over very large areas, regularly transshipping the catch to transport vessels and resupplied with fuel, lubricating oils, food, fresh water, spare parts, mail and crew by dedicated supply vessels.

However, depending on the type of fishing and regional characteristics, traditional fishing operations may also be undertaken by groups of fishing vessels and support vessels. Indeed, in many regions certain type of fisheries are carried out by groups of fishing vessels participating in the same fishing operation or operate jointly such as pair trawlers, groups of fishing vessels with mother ships which are processing and/or freezing the catch as well as freezer trawlers using smaller vessels to search pelagic shoals and the use of tug and support vessels for example in the blue fin tuna fishery.

Although association of vessels to fishing operations may be purely rational based on economic criteria, unauthorized and illegal transshipment enables IUU operators to avoid port controls. Transshipment can also result in labor and human rights violations as it enables fishing vessels to remain at sea for months or even years at a time, trapping crew members on board and leaving them vulnerable to abuse and exploitation.

Transshipment operations at sea can be hazardous and not all transport vessels are capable of safely undertaking this type of operation. Transport vessels transshipping at sea may require special equipment such as suitable cranes, mooring systems and fenders to secure the vessels together. Motherships are equipped with fish processing facilities on board and cold stores. Tuna transport vessels will have special cold stores on board to conserve catch in the best possible conditions.

For the purpose of the present document, transshipment should be clarified against the background of the competences of States to regulate and control the operations. The following situations may be considered.

Table 3. Transshipment locus in relation to State competences; in port

PORT (Areas and waters under port authority)	Control measures
From a foreign fishing vessel to a shore side storage facility	PSMA measures apply and also covered by customs regulations, not part of this review
From storage facility to a foreign fishing vessel	Covered by customs regulations, not part of this review
From a foreign fishing vessel to another fishing vessel or reefer	Authorization, notification, catch documentation, port state measures and custom regulations (transit, import/export)
From a domestic fishing vessel to another foreign fishing vessel or reefer	National rules, where appropriate, in compliance with RFMO requirements and custom regulations (export)

In most States, the term transshipment is also used when quantities caught are transferred between two vessels moored at the same dockside. However, the term transshipment becomes more blurred when using a storage facility located in the dock for transshipping fish and fish products between two vessels. Normally, such operations in port are taking place *in transit* under customs regulations.

Transshipment operations in ports may also take place outside the docks in the bay in front of the port, in an area falling under the authority of the Port.

Areas and waters falling under the authority of the port may be very extensive. Therefore, the practical challenges to monitor and inspect transshipment operations and track quantities caught transshipped, should not be underestimated.

Since transshipments in port fall within the application of the PSMA, the present document focuses mainly on transshipments at sea.

Table 4. Transshipment locus in relation to State competences; at sea

EEZ and coastal State waters	Coastal State and Flag State control measures apply.
RFMO areas (international waters)	RFMO measures are binding on Contracting Parties and cooperating Non-Contracting parties within the limits of the relevant Convention (species, geographical limits) Flag State measures apply to not cooperating non-contracting vessels.
International waters and resources not covered by RFMO's	Flag State measures apply to vessels flying its flag

6.2 Drivers for Transshipment operations

The specifics of transshipment operations are largely dictated by the area of operations, access to markets, the species involved, the method of capture and the level/extent of processing of the catch either onboard the catching vessel or the receiving vessel. For example, the methods used for transshipping Tuna and tuna like species are quite different from those applied to smaller demersal species where the level of processing may be to a “market ready” state. Based on economical parameters and the constraints each operator will seek the optimal operation of its assets.

When operators opt for avoidance of control measures and official scrutiny, economical parameters are no longer a priority. Operators will seek the best opportunities for transshipment avoiding any official scrutiny

a. Economic/Logistics;

- Reduced costs associated with leaving fishing grounds in order to access suitable port facilities;
- logistics, one reefer can service (and possibly resupply) a number of catchers operating in the same area, a single freezer vessel can accept fresh fish from a number of smaller vessels with no freezing capacity;
- lack of ports with suitable infrastructure and facilities within the operating area, including draft limitations, berthage, craneage, onward transportation, costs, diplomatic issues, crew visa's, poor communications and air/sea links;
- access to markets, speed of getting product to market, deterioration in quality of product.

b. Avoidance of control measures and official scrutiny;

- Potential to avoid any monitoring or control measures, opportunity to mis-record, under/over record or not record species and quantities onboard the catching or receiving vessel;
- to circumvent marketing regulations;
- avoidance of inspection by marine surveyors, customs, police, health and hygiene inspectors etc;
- reduce possible sightings if IUU vessels involved (update IUU lists);
- Involvement of criminal organisations participating in criminal activities;

- A consequence of corruption.

6.3 Transshipment practices at sea

From the responses to the Stakeholder Survey, the most illustrative examples are identified below together with the drivers.

Table 5. Artisanal fisheries (inshore fisheries in Coastal State EEZ)

PRACTICE	DRIVER
Transfer fresh product from catching vessel to licensed canoe	No suitable landing locally for catching vessel. Catching vessel may be short of quota for particular species but canoe is OK Speed of access to market. Allows catching vessel to remain fishing.
Transfer fresh or frozen product or by-catch from catching vessel to unlicensed canoe (aka SAIKO fishing)	Catching vessel may have no quota Transfer undersized fish or over quota fish to beach landing (strong driver in West Africa) Speed of access to market. Allows catching vessel to remain at sea Avoidance of MCS, catch controls and other port control measures
Transfer fresh product from catching vessel to another vessel	Quicker access to local market Possible access to alternative markets Allows catching vessel to remain fishing. Possible avoidance of MCS, catch controls and other port control measures

Table 6. Coastal fisheries (offshore fisheries within Coastal State EEZ)

PRACTICE	DRIVER
Transfer fresh product from catching vessel to another vessel, possibly operating outside EEZ	Quicker access to local market Possible access to alternative markets Processing product onboard receiving vessel Possible avoidance of MCS, catch controls and other port control measures Allows catching vessel to remain fishing.

Table 7. Demersal fisheries in EEZ's, international waters including waters falling under RFMO measures.

PRACTICE	DRIVER
Transfer fresh product from catching vessel to another vessel	<p>Quicker access to nearest market</p> <p>Possible access to alternative markets</p> <p>Processing product onboard receiving vessel</p> <p>Possible avoidance of MCS, catch controls and other port control measures</p> <p>Allows catching vessel to remain fishing.</p>
Transfer frozen product from catching vessel to another vessel	<p>Cost effective</p> <p>Possible avoidance of MCS and other port control measures</p> <p>Allows catching vessel to remain fishing.</p>
Transfer frozen product previously received from fishing vessel to another vessel (processing vessel to reefer)	<p>Cost effective</p> <p>Possible avoidance of MCS, catch control and other port control measures</p> <p>Allows processing vessel to remain in vicinity of catchers.</p>

Table 8. Transshipment of tuna and tuna like species in EEZ's international waters including waters falling under RFMO measures

PRACTICE	DRIVER
Longline Transshipment at Sea: Fresh Tuna	<p>Quicker access to nearest market</p> <p>Possible access to alternative markets</p> <p>Conservation and/or processing product onboard receiving vessel</p> <p>Possible avoidance of MCS, catch controls and other port control measures</p> <p>Allows catching vessel to remain fishing.</p> <p>Lack of local processing facilities</p>
Longline Transshipment at Sea: Frozen Tuna	<p>Cost effective</p> <p>Possible avoidance of MCS, catch controls and other port control measures</p> <p>Allows catching vessel to remain fishing.</p>

Purse Seine caught fresh tuna	<p>Quicker access to nearest market</p> <p>Possible access to alternative markets</p> <p>Possible avoidance of MCS, catch controls and other port control measures</p>
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Tuna processing plants may add to the economic drivers for transshipment as processing plants may operate reefers to ensure the provision of their plant with sufficient fresh tuna. Indeed, tuna processing plants compete heavily for the provision of raw materials. Large long liners may, therefore, enter into contractual arrangements with plants including transshipment at sea to specialized reefers operated by the plant. The reefer may enhance the profitability of the trip by offering their services to other nearby tuna vessels.

Table 9. Pelagic fisheries in EEZ's, international waters including waters falling under RFMO measures

PRACTICE	DRIVER
Purse Seine caught fresh pelagic species	<p>Processing product onboard receiving vessel</p> <p>Possible avoidance of MCS, catch controls and other port control measures</p> <p>Allows catching vessel to remain fishing.</p> <p>Lack of local processing facilities</p>
Transfer frozen product previously received from fishing vessel to another vessel (processing vessel to reefer)	<p>Cost effective</p> <p>Possible avoidance of MCS, catch control and other port control measures</p> <p>Allows processing vessel to remain in vicinity of catchers.</p>

Table 10. Incidental unauthorized and/or illegal transshipment of species subject to listing under CITES and other prohibited products such as certain sharks and shark fins in EEZ's, international waters including waters falling under RFMO measures.

Transshipment of Sharks and/or Shark Fins or other prohibited products	Avoidance of port control and inspection.
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The Global Stakeholder Survey did not include specific questions on statistics on transshipment but requested rather to provide indications on the relevance of transshipment practices against the background of sustainable exploitation of living marine resources. Although transshipment seems irrelevant in some areas, it should be concluded that;

- transshipment is an integral element of fishing operations in the north Pacific (notably demersal fisheries) because of remoteness;

- regarding tropical tuna fisheries, notably transshipment between large longliners and specialised transport vessels seems to grow in importance in all Oceans;
- transshipment between large industrial vessels and canoes seems to occur notably in coastal zones of developing countries and is based on provision of food and vegetables for the crew embarked on the industrial vessels in exchange for (illegal) by-catches from the industrial vessels which are landed by the canoes and locally marketed;
- incidental and structural transshipment operations occur in many other fisheries around the World.

7. Case Studies

7.1 Transshipment between Fishing Vessels and Canoes

In Ghana, transshipment is a growing business involving trawlers and artisanal canoes (by-catch collectors) and is popularly referred to as ‘*Saiko*’ or ‘*Lego*’ fishing. It is practiced by almost all the nearly 100 trawlers operating in Ghana in contravention with the fisheries laws. The trawler companies pre-arrange transshipment with the canoes and there is exchange of money prior to fishing expedition. As the trawlers head towards the fishing grounds, they sweep the bottom, mid and surface water with either undersize or modified mesh nets; harvesting and freezing juvenile fish in pallets of 10kg, 12.5kg and 15kg which are transshipped to canoes on the high seas. The by-catch collectors are registered with the trawl companies whose agents relay and direct customers where to meet and collect the consignment on the high seas.



Frozen pallets of bycatch in 10 – 15kg (Hen Mpoano)

Trawlers do not declare the volume of the by-catch to the fisheries authority for management purposes while transshipped fish landed at canoe beaches are not captured in the national statistics as they are considered illegal.

By law, trawlers are allowed to land only 15% of the volume their total catch as by-catch and were compelled to illegally discard the by-catch at sea to meet the 15% target. Fishermen reported that in the early 1970s, Asian crew called the bycatch ‘*Saite*’, a Japanese slang for trash or crappy fish while Ghanaian fishermen considered them good - ‘*Saiko*’ and exchanged by-catch with fruits, vegetables water, and other logistics at sea. Fishermen brought the Saiko fish ashore for sale and a business was born.

In Ghana, the by-catch are landed particularly at the beaches of Apam, Elmina, Axim and Sekondi are juveniles of small pelagic and demersal fish including: large hair-tail cutlass fish, Atlantic bigeye, Chub and Horse mackerel, Sardinella, Puffer fish, Flying gurnard, Needle fish, Red fish, Snapper and Red mullet, among others. On each expedition a trawler harvests between 7000-10,000 pallets of fish and at the minimum weighing 7 metric tons (mt).

A percentage of the proceeds of the bycatch pay the wages of the Ghanaian crew; or some quantity of by-catch is used as compensation in lieu of cash payments.

Ghana is a fish eating (~25 kg/caput) and fisheries dependent country, ranking high among the comity of nations. Eating of juvenile or baby fish is a delicacy, culture or tradition. Juvenile fish are processed for local consumption as well as exported to land-locked neighbouring countries' markets.



Bycatch in women bowls ready for process (Hen Mpoano)

By-catch operations have become a thriving business in some fishing communities as practitioners have identified a business opportunity where cheap fish is patronized and consumed by most people especially the poor for their dietary protein. Saiko has gained roots as full time occupation in some fishing communities and operations are managed by highly recognized executives.

Transshipment of fish to canoes and the monetary gains drive the trawlers to fish for the juveniles hence the bycatch has become the target fish.

It appears the regulator⁴ is ambivalent about the inimical consequences of transshipment as bycatch landed goes unreported or not recorded. Canoes used for the practice are also not recognized as part of country's canoe fleet. Some argue bycatch will be discarded anyway so once there is a market, transshipment is justified. At the beach level, bycatch collectors claim to pay taxes to the district authorities and perceive the practice to be legitimate.

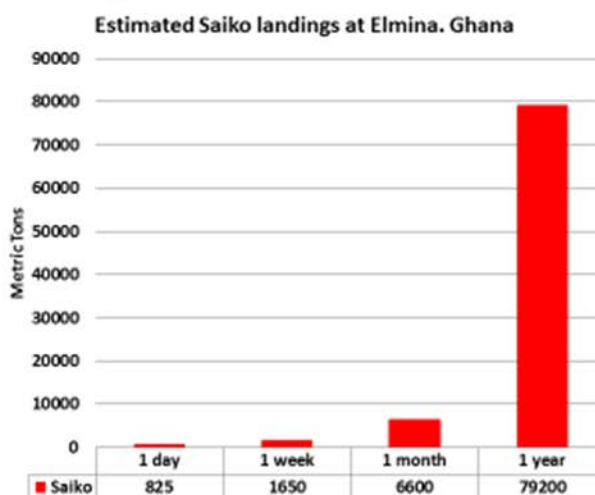
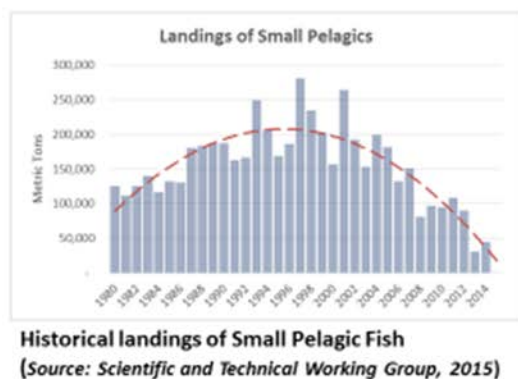
Despite the prescribed sanctions⁵, there appears to be lack of interest and half-hearted commitment at enforcement or ensuring fisher folk education on the ecological justification of the laws or ensuring enforcement to the letter the licensing conditions for the trawlers including the minimum fish size and mesh size regime. It appears trawlers currently operating in the country indulge in the transshipment of bycatch. There are occasional arrests for infractions, however, the financial gain from transshipment operations far outweigh the sanctions hence the incentive to indulge in the practice,

⁴ The fisheries laws of Ghana (Act 625 of 2002, Act 880 (Amendment) of 2014, Regulation, LI 1968 of 2010 and LI 2217 of 2015 have adequate provisions and sanctions to mitigate transshipment. The laws and regulations prescribe the minimum fish size that can be landed (Regulation 14(1), LI 1968 of 2010) or the minimum mesh size to be used; Regulation 12 (60mm for trawl net, 50mm for shrimp net and 100mm for purse seine net). Although artisanal purse seiners harvest juvenile fish, the quantum per trip is miniscule compared to the purposeful or targeted harvesting by the trawlers (>7 mt/trip). The Act 625, 89 (1) and (2) of prescribe ways of protecting juvenile fish at sea.

⁵ The fisheries laws prescribes a minimum of US\$1 million and a maximum of US\$4 million fine with revocation of license and or forfeiture of a vessel arrested for transshipment.. Tet, no offender has been slapped with even the minimum fine. The highest fine in 2015 was US\$250,000. Most offences are settled out of court by a special committee established by the Fisheries Commission and it appears their fines from adjudication of offences are arbitrary and not deterrent enough.

Over the last decade the harvesting of juvenile fish has negatively impacted small pelagic fish stocks. Despite their high fecundity and the robust upwelling marine system offshore Ghana, landings of small pelagics decreased sharply from 2007 reaching in 2014, about 15% of the maximum landings realized in 1996. The decline has resulted from overexploitation and overfishing, particularly juveniles which has compelled traditional canoe fishermen to resort to other forms of illegal practices in fishing particularly the use of fish aggregating devices such as high intensity light to harvest fish. Considering the volume of fish transshipped, the long-term impacts appears to be damaging the fish resource and the impacts are yet to be fully assessed.

Gone unreported



Total Saiko landings for Elmina only is estimated at 2x the total reported landing of Small Pelagics in Ghana 2014

7.2 Transshipment at Sea by Large-Scale Longliners in the Western and Central Pacific Ocean

Large-scale longliners from Korea and Japan target primarily bigeye tuna but yellowfin tuna as well as a few other species with value as sashimi such as mako shark (*Isurus spp.*) and striped marlin (*Kajikia audax*), are also retained on board while high seas transshipment operations are also undertaken by longline fleets from China, Taiwan and Vanuatu. Vessels from Taiwan and Vanuatu as well as some others may switch in the course of the season to targeting albacore depending on the season, fish price, and other factors.

Large-scale longliners targeting bigeye are typically capable of holding the catch at Ultra Low Temperatures (ULT) of minus 55°C to minus 60°C and are serviced by reefer carriers with the same refrigeration capabilities. Fishing activities by these fleets are carried out in a wide geographical range of the WCPO regulatory area and into the Eastern Pacific Ocean (EPO), often far away from ports that might be utilized for transshipment. In most cases, large-scale longliners (>300 gross tons) return the final load of a fishing trip to Asian ports.

Many of the vessels targeting albacore are capable of freezing their catch at minus 35°C to minus 40°C. These temperatures enable the bigeye and yellowfin catch to fetch a higher price than otherwise available for cannery-grade catches. Levels of longliner autonomy at sea and subsequent need for transshipment are determined primarily by the size of vessel and fishing patterns.

Reefer carriers take catch over the side from large-scale longliners. Fishing vessel catch rates in the WCPO, demands of fisheries in other ocean areas, and other factors can determine how many reefer carriers are deployed, at any one time, in the distant water longline fishery. Reefers carriers operating in the WCPO regulatory area may also be servicing fishing vessels operating in the Eastern Pacific Ocean on the same trip.

Japan is the main destination for bigeye/yellowfin catches transshipped at sea, but some catch may also be unloaded in China and/or South Korea. The destination is determined by the buyer, usually large trading companies that are active in this fishery as well as in other tuna fisheries worldwide. The usual schedule of outbound voyages from Japan may include stopovers in ports of Busan, South Korea, Kaohsiung, Taiwan, and occasionally Singapore on their way to rendezvous with fishing vessels on the high seas.

The stops are primarily to load supplies and equipment for fishing vessels to be serviced at sea, as well as to load fuel for transfer to fishing vessels at sea. As regards the provision of fuel at sea, reefer carriers operate in competition with specialized tankers. Since 2010, these stops have also included the boarding of observers from both the WCPFC, IATTC and IOTC when required.

Dedicated reefers have also on occasion collected albacore (and associated bigeye and yellowfin catches) from vessels in the high seas for delivery to American Samoa, Bangkok, and Kaohsiung. Occasionally, reefer carriers also unload in Papeete for re-loading into refrigerated containers for export⁶.

Prohibition of transshipment in the high seas would cause significant economic hardship, which would be assessed in terms of cost that would be incurred to transship or land fish at accessible locations other than on the high seas, as compared to total operating costs, net revenues, or some other meaningful measure of costs and/or revenues. Large-scale longliners would have to make significant and substantial changes to their traditional mode of operation as a result of a prohibition of transshipment in the high seas.

Under specific conditions agreed by the relevant RFMO's (WCPFC⁷, IATTC, IOTC) large-scale longliners may engage in transshipment operations when authorized by the flag State while purse seiners targeting big eye and yellowfin may not be authorized to engage in transshipment operations at sea. For the purpose of this case study the measures described below are not exhaustive and serve only as an example.

In fact, legally the above RFMO's prohibit transshipment as a general principle but open up for well regulated exceptions. As regards large-scale longliners, high seas transshipment is prohibited except where a CCM has determined "that it is impracticable for certain vessels that it is responsible for to operate without being able to transship on the high seas"⁸, has duly informed the relevant RFMO and notified its procedures for authorizing, monitoring and verification of transshipments of catch over the side. The CCM should also submit a plan detailing what steps it is taking to encourage transshipment to occur in port in the future.

An observer from the Commission's Regional Observer Program (ROP) is to be deployed on the receiving vessel in the case of frozen longline caught fish⁹. At least 22 separate CCM national observer programs have been certified as being capable of providing observers to the ROP.

The WCPFC Register of Vessels (RFV) lists a total of 284 reefer carriers authorized by their flag state to engage in transshipping on the high seas, however a large but indeterminate number operate in support of coastal-based fisheries (for example, 29% of the total are smaller Philippine vessels, typically <200 gt, that use ice only and are likely to operate in fisheries other than the ones discussed here). Other reefers on the RFV may operate in other oceans but be authorized for the WCPO or participate in the purse seine fishery where operations take place in port.

⁶Pilling, G. & Williams, P. 2016, Trends in the South Pacific Albacore Longline and Troll Fisheries, WCPFC-SC12-2016/SA-WP-06, SC12, Bali.

⁷ CMM 2009-06 of the Western and Central Pacific Fisheries Commission that became effective July 2, 2010. Annex I of the CMM contains information fields that must be included in the required transshipment report that must be submitted to the WCPFC by the Commission member or cooperating non-member (CCM) within 15 days of the completion of the transshipment. Annex III of the CMM contains information fields that must be included in the required transshipment notification that the CCM must submit to the WCPFC 36 hours prior to transshipment.

⁸ WCPFC (2009) Conservation and Management Measure on the Regulation of Transshipment, CMM 2009-06. Sixth Regular Session of the Commission, Papeete, Tahiti, French Polynesia 7-11 December 2009, paragraph 37.

⁹ Ibid. paragraph 13c.

A rough estimate counts for 15 to 25 reefer carriers servicing large-scale longliners operating in the WCPFC regulatory area. In its 2016 Annual Report, WCPFC reports concerning on transshipments in high seas areas:

- As of 11 July 2016: 2223 of 4468 (49.75%) of vessels on the Commission's Record of Fishing Vessels (RFV) had a positive determination under paragraph 37 of CMM 2009-06. A majority of longline vessels are permitted to transship on the high seas (58.2% of all longline vessels).
- There are also significant proportions of carrier and bunker vessels (42.8%) on the RFV which have positive determinations under paragraph 37 of CMM 2009-06.
- Transshipment events tend to be concentrated in the tropical eastern Pacific, particularly within and around the overlap area with the IATTC.
- Transshipment tends to take place near the edge of an EEZ boundary. This includes in particular the area bounded by the EEZs of Kiribati, Tuvalu and Tokelau. Some transshipment takes place in high seas pockets, in particular high seas pocket 2.¹⁰

The countries of the Pacific Islands Forum Fisheries Agency (FFA) have agreed on Harmonised Minimum Terms and Conditions for Access by Fishing Vessels (MTCs).

As an example of flag state measures to monitor and control transshipment of catch over the side at the high sea may serve the measures applied by the Taiwan Fisheries Agency (TFA). Eligibility for inclusion on the list of vessels authorized to engage in transshipping operations at the high sea is based on past compliance with permitting and reporting requirements. An application for transshipment is required for each operation. The vessel's location is checked by VMS and approval is for a specific transshipment to a specific carrier at a specific location and time. After the transshipment is concluded a declaration of transshipment signed by the vessel captain and captain of the carrier must be submitted. This document is separate from any required by WCPFC and/or the observer(s) onboard.

Fishing vessels and reefer carriers are both subject to authorization and reporting requirements as well as MCS (including VMS and observers). Observers are charged with monitoring implementation of the CMM and to confirm "to the extent possible" that transshipped quantities of fish are consistent with other information available to the observer which may include:

- Catch reported in the WCPFC Transshipment Declaration
- Data in catch and effort logsheets, including catch and effort logsheets reported to coastal States for fish taken in waters of such coastal States
- Vessel position data, and
- The intended port of landing.

An Observer Handbook has been produced by the WCPFC Regional Observer Programme that details observer duties, whether onboard fishing vessels or carriers.

7.3 Korea; Flag State Control and Enforcement of distant water fisheries

¹⁰WCPFC-TCC12-2016-15_rev2, Development of guidelines for high seas transshipment from fishing vessels other than purse seine vessels (CMM 2009-06 Para 37). Technical and Compliance Committee, Twelfth regular session, 21-27 September 2016, Pohnpei, Federated States of Micronesia. 25 August 2016

Fishing vessels flying the flag of Korea engaging in tuna fisheries operate mainly with two types of fishing gear, i.e. purse seine and longline.

- Purse seine; transshipment at sea is prohibited. Purse sein vessels transship their catches in port to reefer carriers which transport the catch to the main tuna markets such as Bangkok, General Santos, Korea, Vietnam, Equador etc.
- Large-scale longliner; Large scale longliners have three options to offload their catches: transshipping catches at sea or in port, or landing in port. Most catches are exported to Japan (sasimi) or consumed in Korea. Transshipment at sea is common practice and it is regulated under the relevant tuna RFMOs (WCPFC, IATTC, IOTC, ICCAT, CCSBT) conservation and management measures as well as under Korean domestic law. It is mandatory to deploy an observer on board to monitor transshipment at sea. Besides, both purse seine and longline vessels flying the flag of Korea require prior authorization from the Government prior to the start of the transshipment operation whether in port or at sea. Breaching relevant conservation and management measures of RFMOs as well as Korean law is addressed as a serious infringement.

In fact, it is impractical to run tuna longline business (distant water fishing) without transshipment at sea. Considering tuna longline business is very vulnerable in terms of operation cost and profit, exchange rate, oil price etc., If longliners are prohibited from transshipping at sea it would cause lots of economic loss. The main fishing grounds of large-scale tuna longliners (Distant Water Fishing) are far away from ports in very remote areas of the Ocean. It is deemed very difficult to make profits due to increases in fuel cost and other operating costs if vessels have to travel back and forth between fishing grounds and ports for transshipment.

Korea took over the past years a series of measures strengthening control over its distant water vessels. It has acted against its vessels reportedly involved in IUU activities and reviewed fishing authorizations to operate in foreign EEZ's. The Korean Distant Water Fisheries Development Act, amended in 2014 to incorporate relevant international rules, such as the provisions under the UN Fish Stocks Agreement. This amendment took effect on 7 July 2015. The following areas are covered by this Act as amended:

1. Stronger Control over IUU Vessels, including confiscation of illegal fish and fishing authorization restrictions in waters of a country without proper fisheries management and control systems.
2. Stronger Control over Korean Nationals; a new provision was introduced to allow the Korean government to exercise control over Korean nationals who have engaged in IUU fishing in waters outside Korea's jurisdiction.
3. Stronger Monitoring, Control and Surveillance including installation of VMS on fish carriers and pre-authorization requirements for transshipment.
4. Stronger Sanctions including classification of IUU activity as a criminal offence with imprisonment up to five years or a fine of at least 500 million Korean Won.

In addition, Korea upgraded drastically its monitoring and control capabilities of distant water fisheries:

- Fisheries Monitoring Centre

The Korean authorities invested heavily in procuring and commissioning a Fisheries Monitoring Centre (FMC) based in new purpose- built premises in Gijang-eup, Gijang-gun, Busan. This state of the art facility is equipped with all the technology necessary to receive VMS and Elog data from the Distant Water Fleet. Fully trained

operators are responsible for verifying data quality and accuracy and for performing a range of cross checks to corroborate the information submitted by individual vessels. The FMC operates on a 24 x 7 schedule.

- **Licensing**

All vessels in the Distant Water Fleet must have a Distant Waters fishing licence issued by the Korean licensing authority. This license cannot be issued unless the vessel concerned has already obtained a licence from the authorities of the coastal state where the vessel intends to operate. The FMC system provides a link to individual vessel licences, so FMC operators can routinely check the licence situation for an individual vessel at any time.

- **Vessel Tracking**

All vessels in the Distant Waters Fleet must now have a satellite-based Vessel Monitoring System fitted on board. The VMS data is received at the FMC in Busan, trained operators monitor signal quality, system alarms, false reports and respond to any issues surrounding non-compliance with the VMS regulations.

- **Electronic Reporting of Catch and Effort**

Electronic Reporting of Catch and Effort (elogs) was introduced for all vessels in the Distant Waters Fleet in September 2015, catch data must be transmitted by each vessel to the FMC where operators check the information for quality, accuracy, entitlement and so on.

- **Authorisations and Notifications**

- **Transshipping**

Transshipping operations must receive prior authorisation from the Korean authorities and the catch to be transhipped must be notified as part of this process.

- **Catch Certificates**

Catch certificates are completed using information from the transshipping report and the coastal state licence.

As a means of independently auditing the quality and effectiveness of the measures being introduced, a vetted expert of the International Monitoring Control and Surveillance Network, a law enforcement official from the U.S. National Oceanic and Atmospheric Administration and a scientist from the New Zealand Institute for Water and Atmosphere visited the FMC in the latter part of 2014 and commented that the Centre had sufficient capabilities, comparable to those of European countries, to monitor and control IUU fishing activities. In addition, officials from the Korean authorities visited a number of European and Scandinavian FMC's in order to learn lessons that could be incorporated into their own FMC operations.

The Korean Fishing Industry believes that IUU fishing is undermining their business and supports measures to deter, prevent and terminate IUU fishing. Any potential IUU problem around transshipment operations should be dealt with but prohibiting at-sea transshipment will affect the economy of legal fishery (it's like prohibiting people from using cars to avoid car accidents).

7.4 The NEAFC Experience in Combatting IUU fishing

The NEAFC Scheme of Control and Enforcement (the "Scheme") includes a comprehensive set of rules on the transshipment of fish and fish products in the Regulatory Area. However, as this case study shows, illegal activities were brought under control through the effective enforcement not only of the rules regarding transshipments but also of Port State control and IUU provisions. The close cooperation between the inspection and control services of the Contracting Parties and the NEAFC secretariat played an essential role in achieving this.

A “transshipment operation” is defined as the transfer, over the side, of any quantity of fisheries resources or products retained on board, from one fishing vessel to another. In 2004 the definition of a “fishing vessel” was broadened to include those involved in fish processing or engaged in transshipment operations. This was a very important step as it ensured that reefers would also be covered.

Fishing vessels of Contracting Parties that are engaged in transshipment operations in the Regulatory Area are required to communicate reports of transshipments by electronic means to their FMC. These reports include the quantities on-loaded and off-loaded for each transshipment as well as the date, time, geographical position of the operation. Furthermore, fishing vessels that have been involved in a transshipment operation must report total catch on board, total weight to be landed, name of port and date and time of landing at least 24 hours in advance of any landing. This allows the Port state to inspect such vessels and verify the information provided in the electronic reports.

The control of transshipments depends on the ability to monitor the reports from donor as well as receiver vessels and thereby reconcile the quantities declared. To enable this to be carried out effectively a master of a fishing vessel engaged in transshipment operations which on-loads quantities on board is not permitted to engage in any other fishing activity, including joint fishing operations, during the same trip. Furthermore a master of a fishing vessel must not engage in transshipment or joint fishing operations with vessels of non-Contracting Parties which have not been granted the status of cooperating non-Contracting Parties.

The rules regarding the control of transshipments are further enhanced by NEAFC’s Port State Control system. This applies to all landings of fish products in the ports of Contracting Parties by vessels from other Contracting Parties. The flag State of the vessel that caught the fish being landed has to certify that the vessel was authorised and had the quota available, before the port State authorises the landing. The port State must also carry out inspections of a minimum proportion of the landings.

Although transshipment operations between Contracting Party and non-Contracting Party vessels were prohibited in 1999 the provisions relating to non-Contracting Party activities were strengthened in 2004. The concept of IUU fishing was firmly established and a series of measures was adopted in order to promote compliance ranging from sightings and inspections at sea through to the establishment of ‘A’ and ‘B’ lists of vessels presumed to be engaged in IUU fishing. The provisional ‘A’ list consists of non-Contracting Party vessels which have been sighted or by other means identified as engaging in fishing activities. If the flag State of a vessel on the ‘A’ list is unable to provide evidence that certain conditions have been met the vessel in question may be transferred to a confirmed IUU list (‘B’ list). The ‘B’ list is transmitted to other RFMO’s.

The improved measures were to be put to the test a few months after their adoption. In late May 2005 an Icelandic patrol aircraft observed Belize flagged SUNNY JANE alongside Dominica flagged vessel OKHOTINO engaged in transshipment activities in the Irminger Sea. This is the location of the fishing grounds for redfish (*Sebastes mentella*) which is a straddling demersal stock that swims both inside the Icelandic EEZ and international waters. It is a high value species which commands high prices in Germany and Japan. The OKHOTINO was one of a group of five trawlers that habitually over-wintered in the German port of Rostock. According to the Icelandic authorities at the time, the illegal catch of redfish was two times higher (30.000 tons) than the legal quota. These vessels, which became known as the “Rostock 5”, were never observed landing fish into any port and the entire illegal fishery was sustained through transshipments on the high seas.

In accordance with the Scheme the SUNNY JANE and the Rostock 5 were put on the IUU list. A few days after having been observed in the Irminger Sea the SUNNY JANE had the discharge of its cargo refused in Eemshaven in the Netherlands. The vessel was never observed again operating in the NEAFC Regulatory Area but was detained in port in Spain in the summer of 2006 and subsequently scrapped. As regards the Rostock 5 a “cat and mouse” chase ensued. The vessels were re-named and changed their flag. They sought refuge in other ports or

refuelled at sea and reappeared on the Irminger Sea fishing grounds in May 2006 where they were observed by Icelandic aerial surveillance transshipping to a Panama flagged reefer.

Instead of heading for Europe with its cargo the reefer sailed for Japan in August 2006. At this point the close cooperation between RFMO's was invaluable. As a Contracting Parties to NAFO Japan and Korea prohibited its entry into port although it did finally succeed in discharging its cargo in Hong Kong. The operators of the vessel did not fully appreciate the implications of the vessel being on the IUU list until the following year when its attempt to land a cargo of Alaskan Pollack into Germany was refused. It then tried to discharge in the Netherlands and was also refused. It was clear that although its cargo was legal the IUU status of the reefer was a great inconvenience and it was detained in Morocco after unloading its cargo in Agadir. This case was an example of a reefer vessel which found itself involved in an illegal operation through ignorance of the rules. The publicity surrounding it alerted other similar bona fide operators to the dangers of transshipping fish at sea.

The rigorous application of the various elements of the Scheme was very successful. In the absence of a receiver vessel to take their catch to market the Rostock 5 ceased to be viable. One by one they followed the SUNNY JANE to the scrapyard. Transshipments continue to take place but are within the framework of the Scheme and involve vessels of contracting Parties or of non-Contracting Parties which have been granted the status of cooperating non-Contracting Parties.

7.5 Thailand; Market State Scrutiny of the Provision of Raw Materials

Thailand, the world's third largest seafood exporter, exported over USD 700 million (10% of total fishery exports) worth of fishery products including fish, shrimp and cuttlefish, and agro-industrial seafood in 2014. Over 58% of the fishery products Thailand exports are canned and prepared seafood; most of which consists of canned tuna and prepared shrimp.

Thailand's fishing industry employs more than 300,000 people, many of them migrant workers from neighbouring countries. Recent allegations of human trafficking to meet manpower demand, forced labour and

In line with new international rules such as PSMA, the Government of Thailand has recently adopted drastic measures. Since the passage of the Royal Ordinance on Fisheries in 2015, Thailand has ordered all overseas fishing vessels to return to port, and 61 vessels have been prosecuted for IUU fishing and violation of employment and labour regulations. Under the new licensing regime, the number of Thai-flagged overseas fishing vessels with valid fishing license has been reduced drastically from 76 to 20. Furthermore, the Department of Fisheries has imposed a temporary ban on the issuance of new overseas fishing license until effective monitoring and control measures, are assured.

During the past two years, Thailand has doubled efforts to control its overseas fishing fleet through various measures including provisional measures (observer on board; strengthening at-port inspection by 32 PIPO Centres; intensifying at-sea inspection by the Thai Maritime Enforcement Coordinating Center (MECC); imposing a temporary ban on at-sea transshipment; install additional monitoring equipment on overseas fishing vessels). Some of the newly introduced MCS Measures include inter alia:

- Prohibition¹¹ of all transshipment activities outside the Thai waters for a period of 90 days, be they transshipment between fishing vessels or with transshipment vessels and storage vessels.
- Notifications regarding requirements for the installation and operation of Electronic Reporting System (ERS) and Electronic Monitoring System (EM) for all Thai overseas fishing vessels, overseas transshipment vessels, and overseas storage vessels. ERS and EM would enable the Fisheries Monitoring Centre (FMC) to better monitor and control overseas vessels through real time recording and reporting of fishing and transshipment activities including the movement of labours.

¹¹ Notification on Fishing Vessel Types, Areas, and Period of Transshipment Prohibition 2017 which came into effect on 10 February 2017,

The 90-day transshipment prohibition period would allow the time for all Thai overseas fishing vessels, transshipment vessels, and storage vessels to complete the requirement for installation of ERS¹² and EM¹³ which must be tested both at port and at sea and certified by FMC before resuming operation outside the Thai waters. This real-time system will help ensure that marine catch from overseas Thai-flagged vessels can be tracked and traced from fishing to fish landing.

The notification requires that the setup of ERS and EM meet standard features to ensure its ability to maintain originality and integrity of the data throughout the process until received by the FMC. The equipment used must be “marine type” to ensure its durability in the marine environment. The system installation must be equipped with reserve batteries to ensure its continuous operation at all times and to prevent lost communication. The installation of ERS and EM would also help make the VMS system more stable and reliable.

For each transshipment, the vessel’s master must submit, through ERS, a request for permission from the FMC 24 hours in advance and must submit transshipment report within 24 hours after. After permission is granted, the FMC must also be given notice 12 hours before the conduct of each transshipment. The types of fish transhipped must be indicated in the transshipment requests and declarations. The fishing logbook reports must include the starting and ending time of fishing, usage of each fishing gear used, and type of preservation and processing of fisheries product on board.

Where the transshipment is from a foreign vessel, the foreign vessel’s registration document and fishing license from the flag state, coastal state or concerned international organisation along with the request for import of fisheries products must also be presented in order to prove that products are not from IUU vessel.

To prevent transshipment of seamen, the fishing logbook report must also include crew list. Where the transshipment of crew is necessary under certain circumstances, the master of ship must seek permission from the FMC. The request for permission must indicate identity card number or seaman book number of each crew member to be transhipped and reasons for transshipment in order to return that crew to port.

Meanwhile, for example, more than 10 Thai reefer carriers have been fully equipped with EM which allows Thai authorities to verify all transshipment operations at sea during the complete trip of the vessel (from port to port) and to ascertain that no illegal and unauthorized transshipment operations have been carried out. The new legislation together with control and enforcement of fishing activities will allow the Thai authorities to certify exports of processed products.

¹² The Electronic Reporting System (ERS) supports communications and transmissions of information regarding requests for permission for transshipment, transshipment declarations, and fishing logbook reports. All communications and information are electronically recorded and integrated with VMS in order to provide real-time data on date and time, navigation speed and direction, and location where fishing and transshipments activities take place.

¹³ The Electronic Monitoring System (EM) is a satellite and information technology-based system for real time remote monitoring of fishing and transshipment activities outside the Thai waters. EM is equipped with Radio Frequency Identification (RFID) electronic sensors capable of detecting the fishing gear usage, the time and type of activity carried out. The sensors are linked to the VMS and 4 CCTVs required by law to be installed on board in order to capture 360 degree images around the vessel. Once a usage of gear is detected, the sensor would then trigger the CCTV to take a real-time snapshot of the video frame. The snapshot and video record are marked with VMS information indicating date and time, location, and navigation speed and direction. The snapshot is immediately transmitted to the FMC via satellite communication and the CCTV record is kept for further inspection.

When the electronic sensor equipment receives a signal which indicates the start and end of using capstans and cranes, the RFID equipment drifting from or returning to the vessel (in case of the fishing vessel) and opening of the hatch of a fish hold on the vessel, which has a direct relationship to fishing activities and transshipment at sea, the following operation shall occur automatically.

The video recorded by the CCTV system being continuously recorded at all time from the time of the vessel leaving until return (as notified to the Port In - Port Out Controlling Center); When the CCTV system receives electronic triggers or from the information system, the CCTV system shall capture snapshot photo frames at a particular time directly from the video being recorded and send them to the FMC via the satellite communications without having taken snapshots separately from the video recording. IOTC-2017-WPDCS13-12 4

When the FMC required to send snapshot photos (polling) via the VMS equipment on the vessel, the information system will send electronic triggers to the CCTV system for capture snapshot photos at a particular time directly from the video being recorded and send them to the FMC via the satellite communications without having taken snapshots separately from the video recording

8. *Conclusions and Recommendations*

The Global Study on Transshipment represents the first stage of work undertaken by FAO to provide Members with a comprehensive overview of transshipping practices, regulations and monitoring and control measures.

Transshipping is a widely practiced fishing activity on a global scale. Recent studies, the global stakeholder survey and the regulation review all support this conclusion. There is a need however to quantify the true extent of transshipping globally. To this end, it is recommended that further work is undertaken with RFMOs and States to gather data on transshipping activity over the last five years.

The responses to the global stakeholder survey and the information collected show the efforts of the international community to control transshipment operations at sea where appropriate by prohibiting such operations or alternatively by the application of measures monitoring and controlling these operations. Where such operations are permitted on the high seas, flag States cooperate also in the framework of RFMO's to ensure proper monitoring of the quantities caught transhipped over the side to other vessels.

The global stakeholder survey and the regulation review both indicate that there is a broad adoption and implementation of specific measures to regulate, monitor and control transshipping. MCS measures are also broadly implemented to support the monitoring and control of transshipping. However, the effectiveness of these measures has not been assessed. It is recommended that further work is undertaken with RFMOs and States to assess the effectiveness measures adopted and implemented to monitor and control transshipping. Specific case studies should be developed that include an overview of a State's or RFMO's experience with transshipping and the response to this issue.

Transshipping is logistically and economically essential for many fishing operations. The transshipping survey indicates that a global prohibition on transshipping would have serious detrimental implications for the fishing industry, which in turn may have damaging implications for fisheries including providing an incentive to undertake IUU fishing activities.

It is clear that in the absence of effective monitoring and control, transshipping poses a serious risk to fisheries by allowing the catching and landing of fish to go unregulated and unreported. A prohibition on transshipping when adequate monitoring and control cannot be achieved is considered appropriate. A prohibition of transshipment at-sea would however require the implementation of effective surveillance and inspection activities to detect, deter and prevent unauthorized or illegal transshipment operations. It is recommended that minimum standards or guidelines be developed that identify and elaborate on specific measures to effectively monitor and control transshipping.

Only a preliminary analysis of the transshipment survey was conducted and additional analysis is recommended. There are obvious linkages between the monitoring and control of transshipping and the implementation of the PSMA, the use of the Global Record and the FAO Voluntary Guidelines on Catch Documentation Schemes. Further work is recommended to clarify and document these linkages.

Enhanced international cooperation notably in the area of transparency and data exchange as well as capacity building, would boost the effectiveness of the implementation of existing measures.

The present study recognizes inter alia

- i) the necessity to revisit the definition of transshipment specifically to consider current types of practices and vessel types;
- ii) the diversity of operations in different regions and fisheries and the drivers behind them so that each situation should be judged on its own specificities;
- iii) that transshipment operations are often essential to fishing operations and that if properly monitored and controlled, they should not pose a threat to sound fisheries management;

- iv) that in general terms, transshipment operations are quite well regulated worldwide whilst there is still room for improvement to adequately monitor and control transshipment to avoid it becoming a gateway for IUU fishing activities;
- v) the increased interest of the international community to improve regulatory control over transshipment operations to support sound fisheries management and prevent, deter and eliminate IUU fishing.

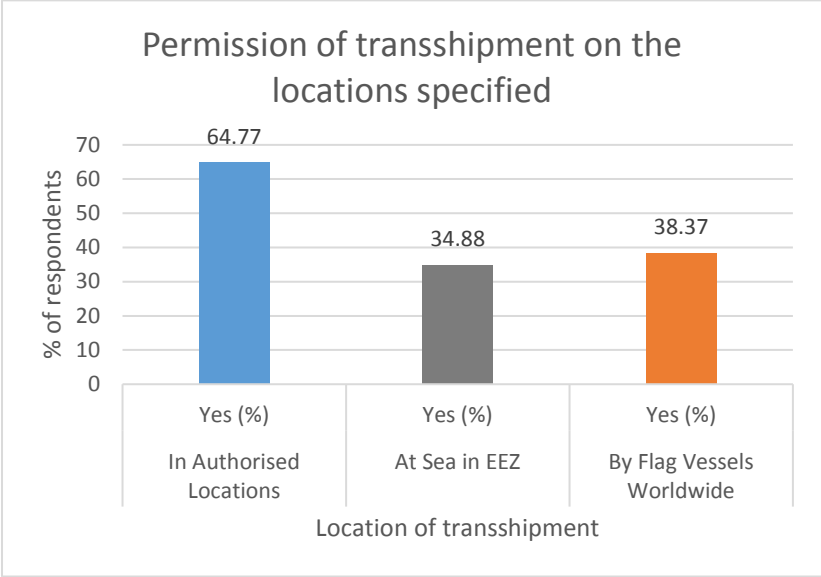
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Annex A: Preliminary results of the analysis from the Global Stakeholder Survey

Group 1: States

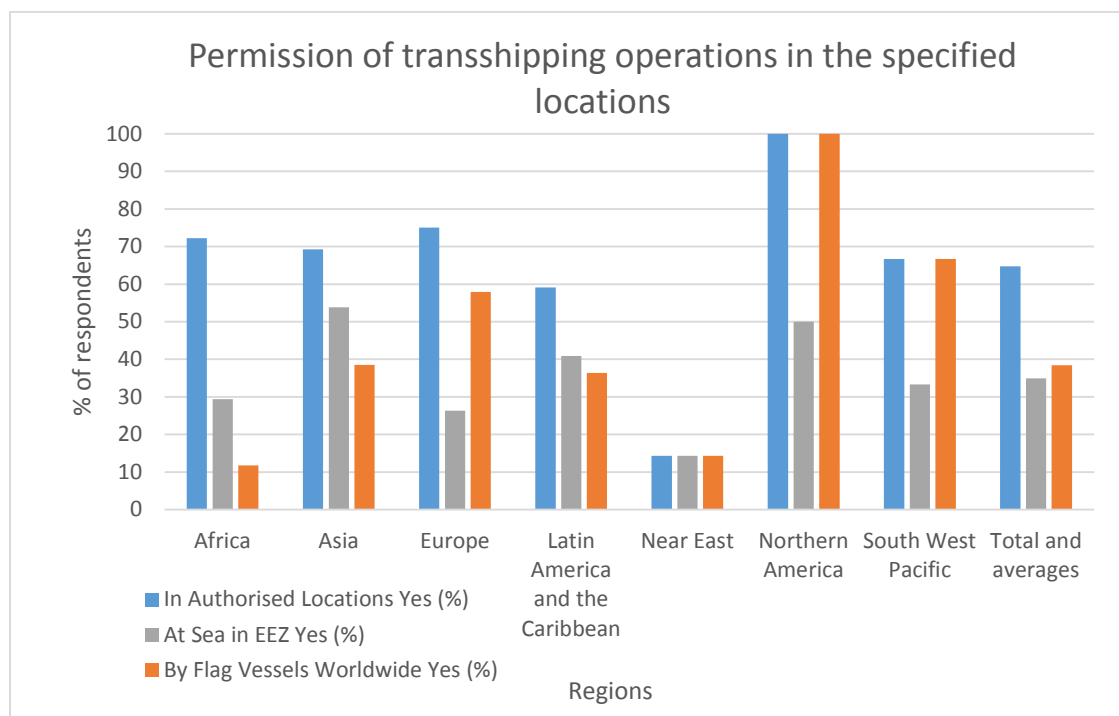
Note: A response of “No” to the first question of section 1 by a respondent automatically set all responses for the rest of section 1 and all of section 2 to “Not applicable” for that respective location. States who were not applicable to a question were not counted within the sample size for percentages or averages derived for that question.

Section 1 - Regulatory Framework



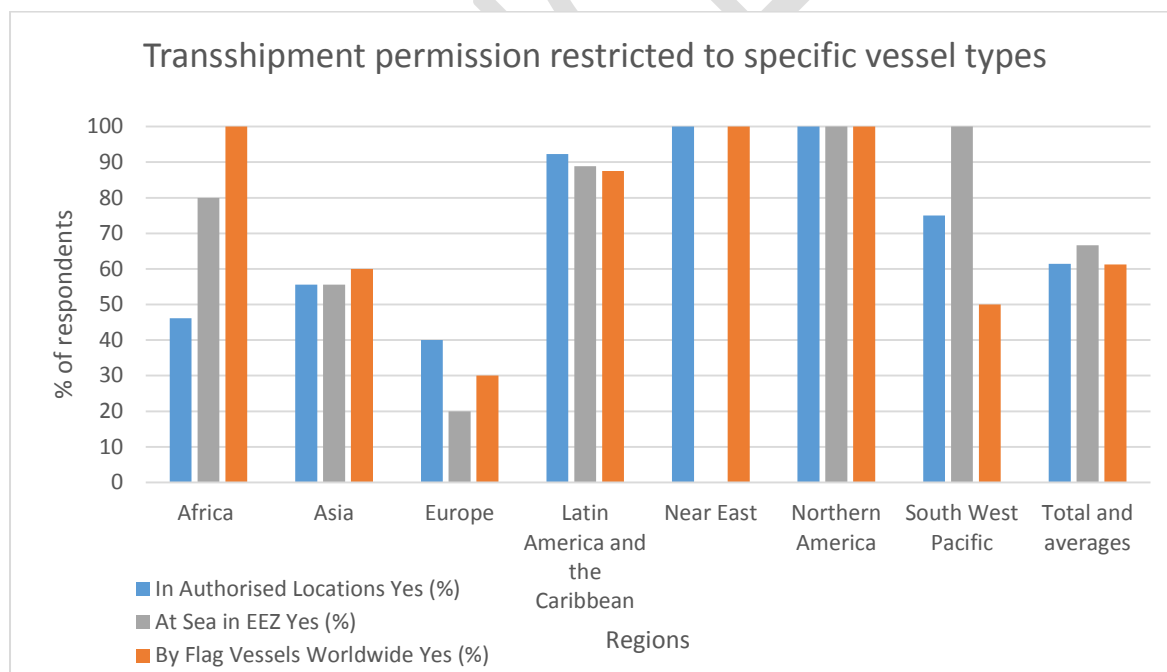
In accordance with the survey results, permitted transshipping operations are significantly widespread at a global scale. This is reflected in the results with the majority of States reporting to permit transshipment operations to occur in “Authorized Locations”¹⁴ (AL) (65 percent). However, these operations were less widespread in other locations, with 35 percent and 38 percent of States reporting to be permitting these operations “At Sea in EEZ”¹⁵ (EEZ) or by their “Flag Vessels Worldwide”¹⁶ (FVW) respectively.

¹⁴ “In authorised locations” a designated port area, an area of water such as a recognized anchorage or an area within harbor authority waters where authorised transshipments may take place.
¹⁵ “At sea in EEZ” the area of sea adjacent to a State and under the jurisdiction of that State.
¹⁶ “Flag vessels worldwide” vessels flying the flag of your country operating in waters beyond the national jurisdiction of your country (including, the high seas and waters within the national jurisdiction of other States).



From the regional aggregation, within AL, regions are largely permitting of Transshipping operations. The one notable exception being Near East, with 14 percent of States reporting to allow transshipment operations within that location.

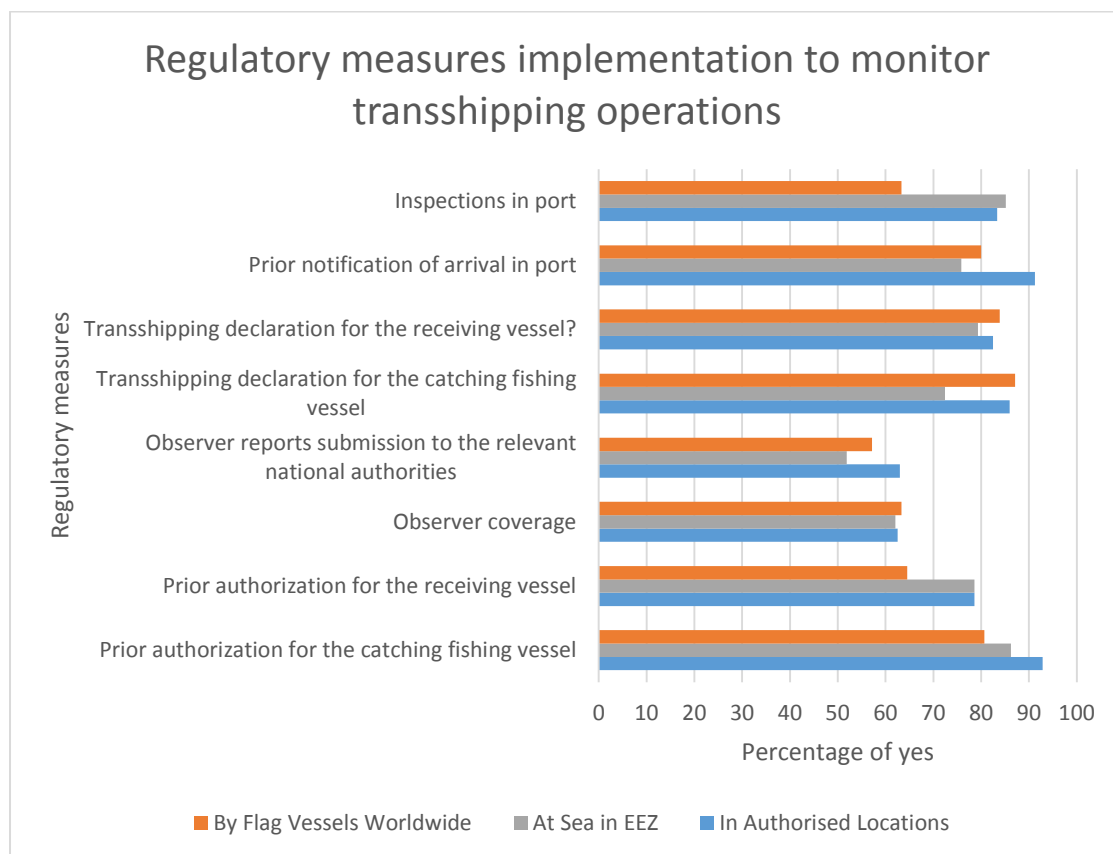
In comparison to AL figures, most regions are less permitting of these operations in EEZs with close to or over 50 percent of States within each region reporting to permit these operations. This downward trend is reversed in certain regions for the FVW location, with Europe, South West Pacific and North America regions reporting aggregate figures of 58, 100 and 67 percent respectively.



Out of the States permitting transshipment operations within each zone, most restricted such activities by specific vessel type. This is reflected with over 60 percent of States reporting to use such restrictions in all three locations. Regional aggregations show a largely similar trend to that of the global averages, with the biggest outlier being Europe with 40, 20 and 30 percent of States reporting to use restriction by vessel type in AL, EEZ and FVW respectively.

In comparison to that of vessel specific restrictions, species specific restrictions appear to be less widespread with 51, 47 and 43 percent of States reporting to use them in AL, EEZ and FVW respectively. With regard to the regional aggregations, there appear to be no obvious trends when compared over the three locations while also taking into consideration the low sample size for certain figures.

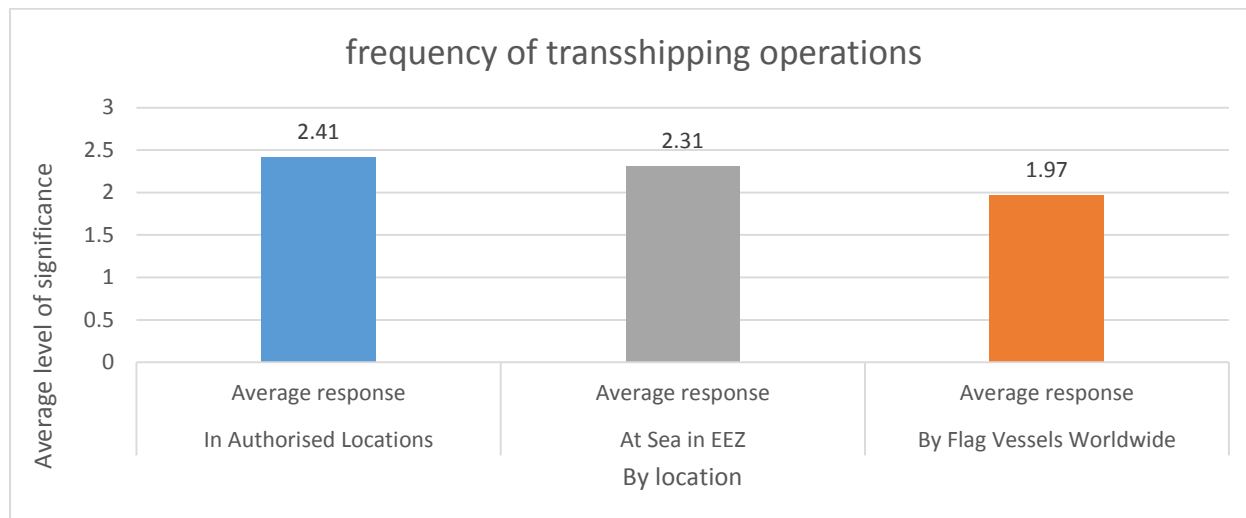
With regard to permitting transshipment operation including vessels of other States, this was widely permitted within AL (79 percent) and FVW (80 percent). However, this was not the case in EEZs with 43 percent of States reporting to permit such operations.



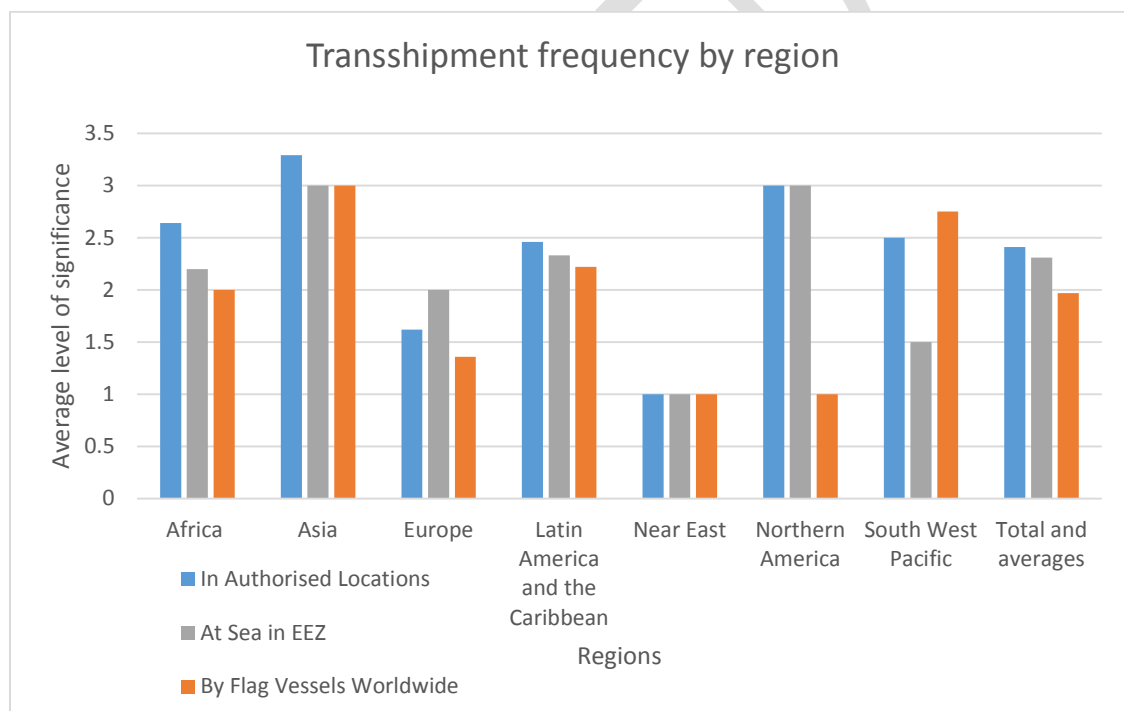
States also reported on a wide variety of other transshipment regulatory measures. Overall these were widely used by most reporting States. Within AL, the most widely used measures were relating to authorisations for the catching vessels (93 percent) and prior notification of arrival (91 percent). Within EEZs, the most widely used were relating to authorisations for the catching vessels (86 percent) and port inspections (86 percent). Within FVW, the most widely used were relating to transshipment declaration by the catching vessel (87 percent) and transshipment declaration by the receiving vessel (83 percent). Overall, in consideration of the three locations, the least used regulatory measures were those relating to observer coverage (62-63 percent) and observer reports (52-63 percent).

Section 2 - Transshipping Practices and Drivers

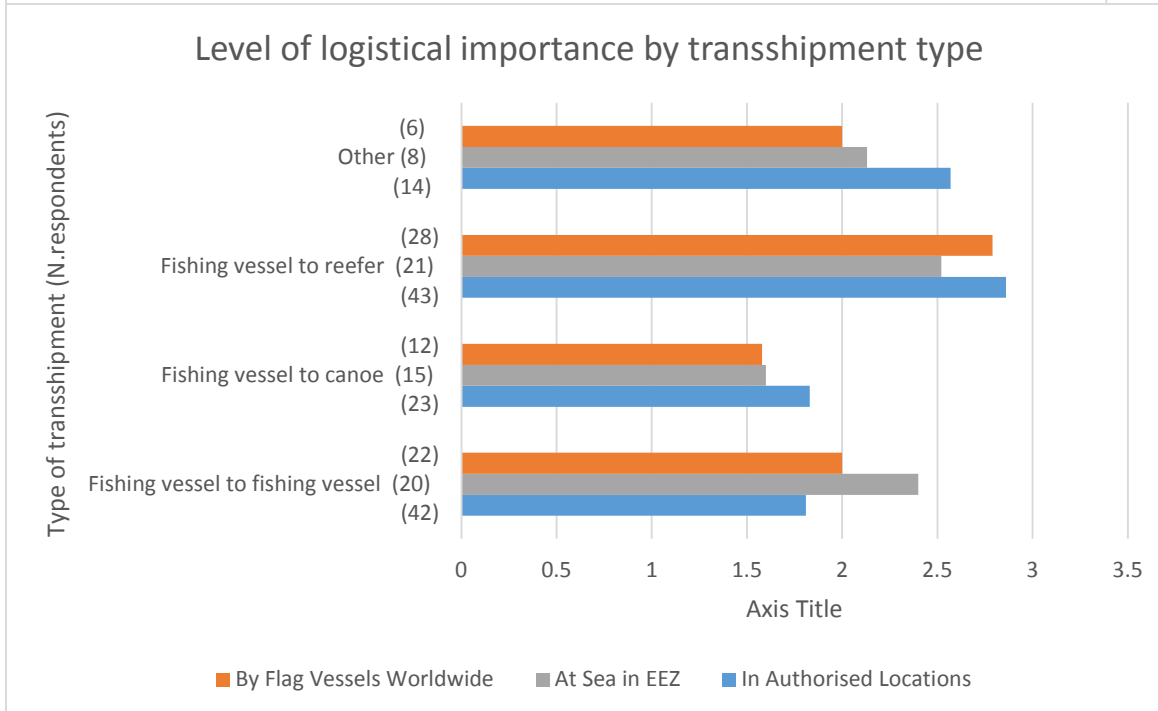
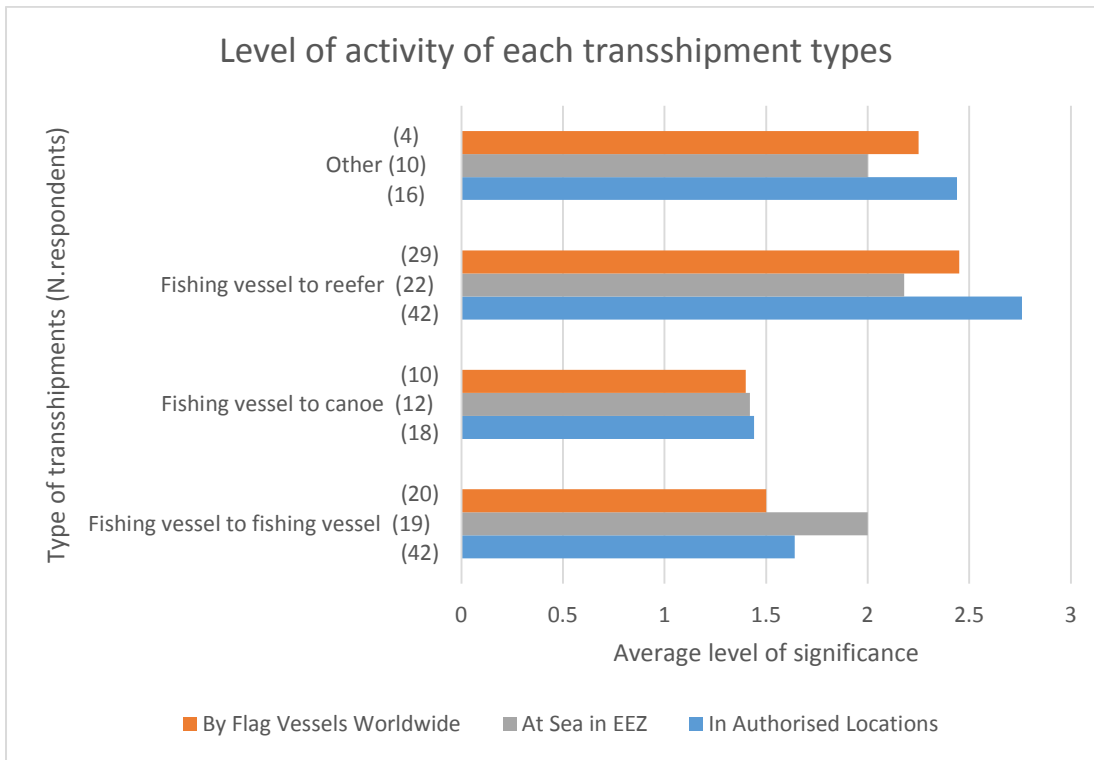
Note: The response type for these questions was a range from 1 (insignificant) to 5 (very significant). Responses were then converted into averages; States that responded not applicable were not included within the average.

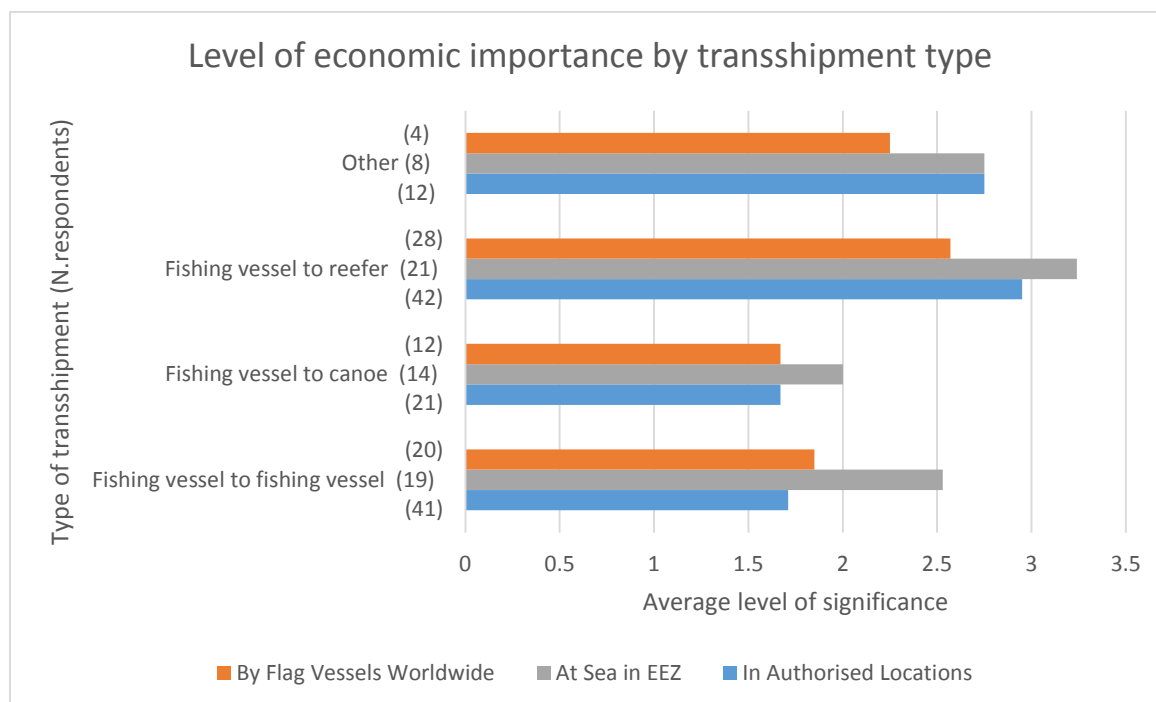


With reference to transshipment frequency, the highest rates were declared in AL (2.41), followed closely by EEZs (2.31) and finally FVW (1.97). Disaggregated by region, the highest frequencies were reported in Asia (3.00-3.29) and North America (3.00) in both AL and EEZs. While in FVW the highest were reported to be in Asia (3.00) and South West Pacific (2.75).



When comparing levels of transshipment activity involving different types of vessels, the most common type was between fishing vessel to reefer reported at 2.76, 2.18 and 2.45 within AL, EEZs and FVW, respectively. While the lowest was between fishing vessel and canoe reported at 1.44, 1.42 and 1.40 within AL, EEZs and FVW.



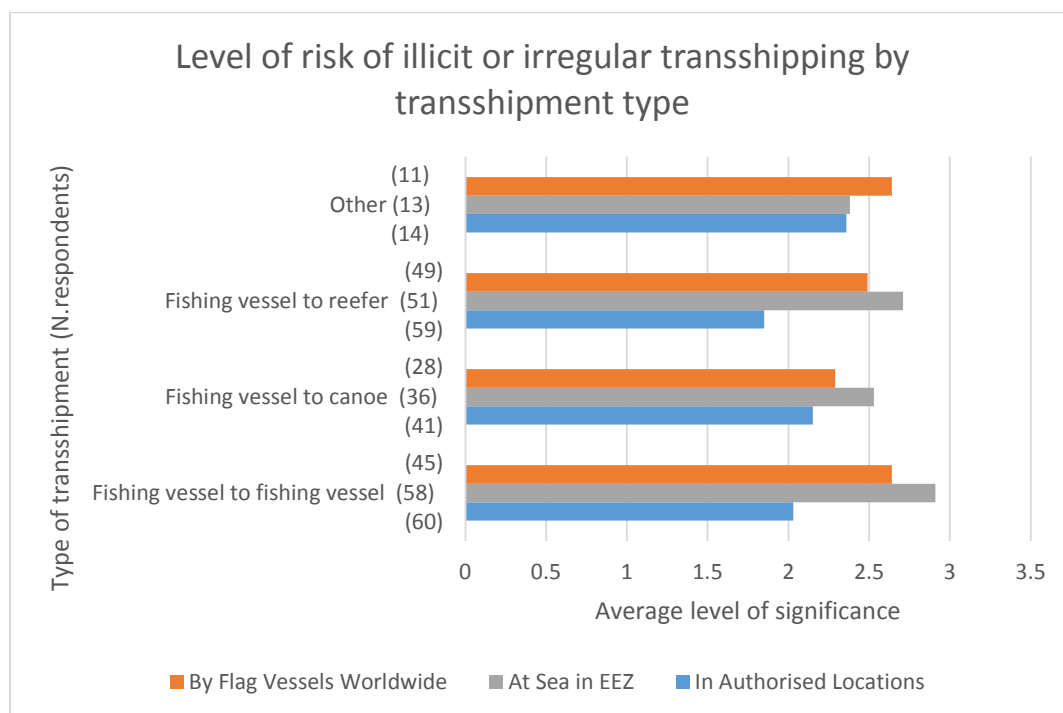


Transshipment from fishing vessel to reefer, together with being the most common operations, it was also reported to be the most important logistically and economically. They were also reported as the likely type to be economically impacted through impediment of fishing opportunities if operations were to be prohibited. On the other side, transshipments amongst fishing vessels and canoes, again reflected the lowest values.

States also reported that there is a comparatively significant amount of transshipment operations happening between other vessel types which were not specified. This included from fishing vessels to motherships or to fish carrier vessels.

Section 3 – Impact and Risks of Illicit or Irregular Transshipping

Note: The response type for these questions was a range from 1 (insignificant) to 5 (very significant). Responses were then converted into averages; States that responded not applicable were not included within the average. Result figures indicate Number of respondents/average.



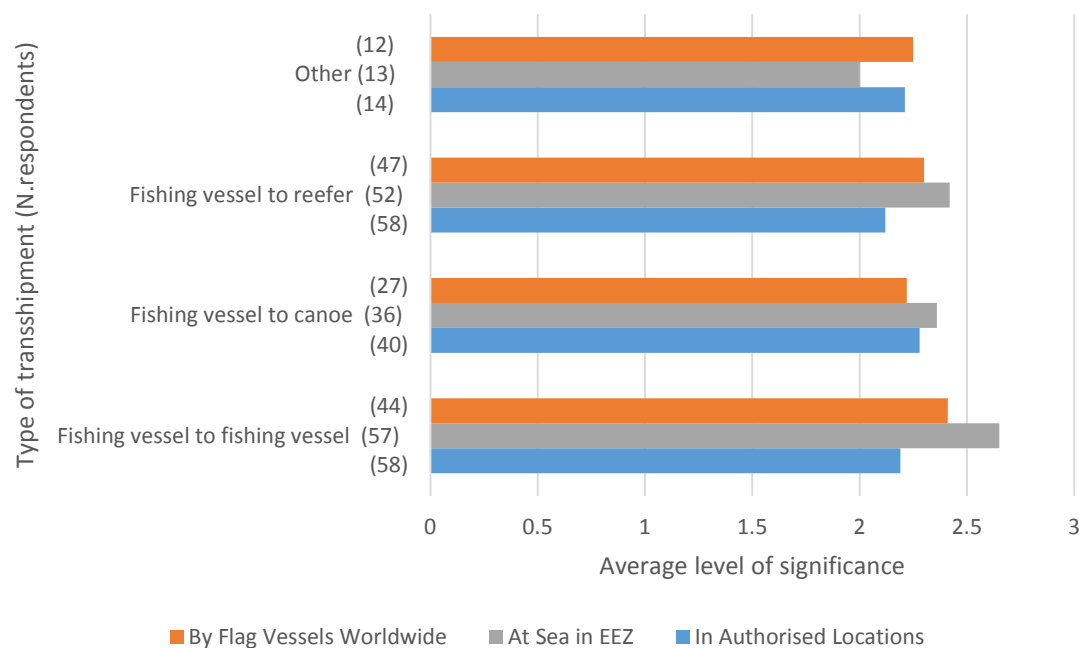
The perceived level of risk of illicit or irregular transshipment operations occurring between all types of vessels was reported by States to be lowest in AL, while EEZs showed the highest average risk across all vessel types. The only exception to this being the “other” group, although it should be noted that the sample size were much lower for these responses.

Comparing risks for different combinations of vessels, while not including “other” vessels, the general trend shows fishing vessel to fishing vessel was reported to be highest. The one exception being in AL where fishing vessel to canoe was reported to of higher risk.

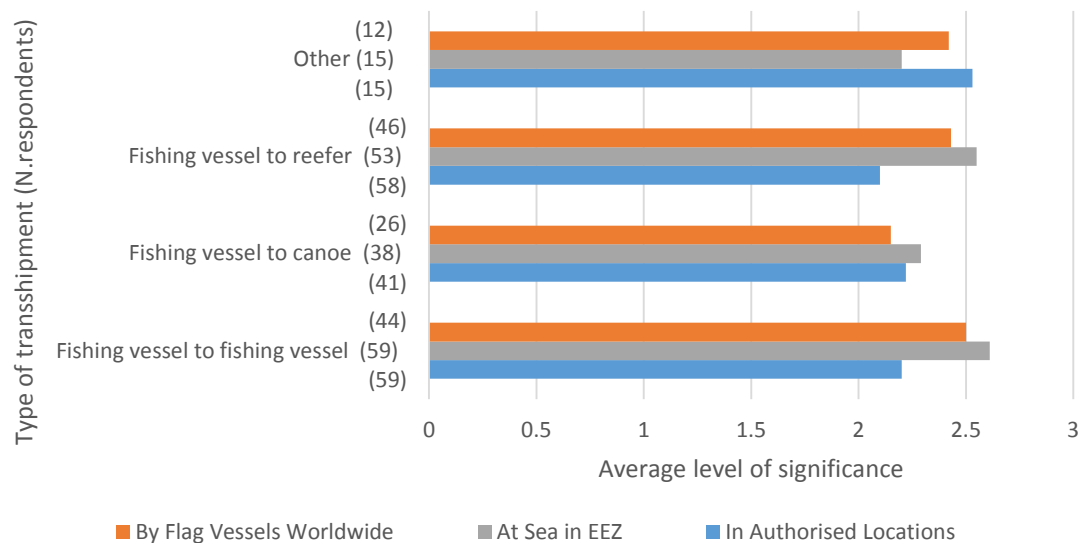
States reporting other types of vessel transshipment mentioned those involving fish carriers.

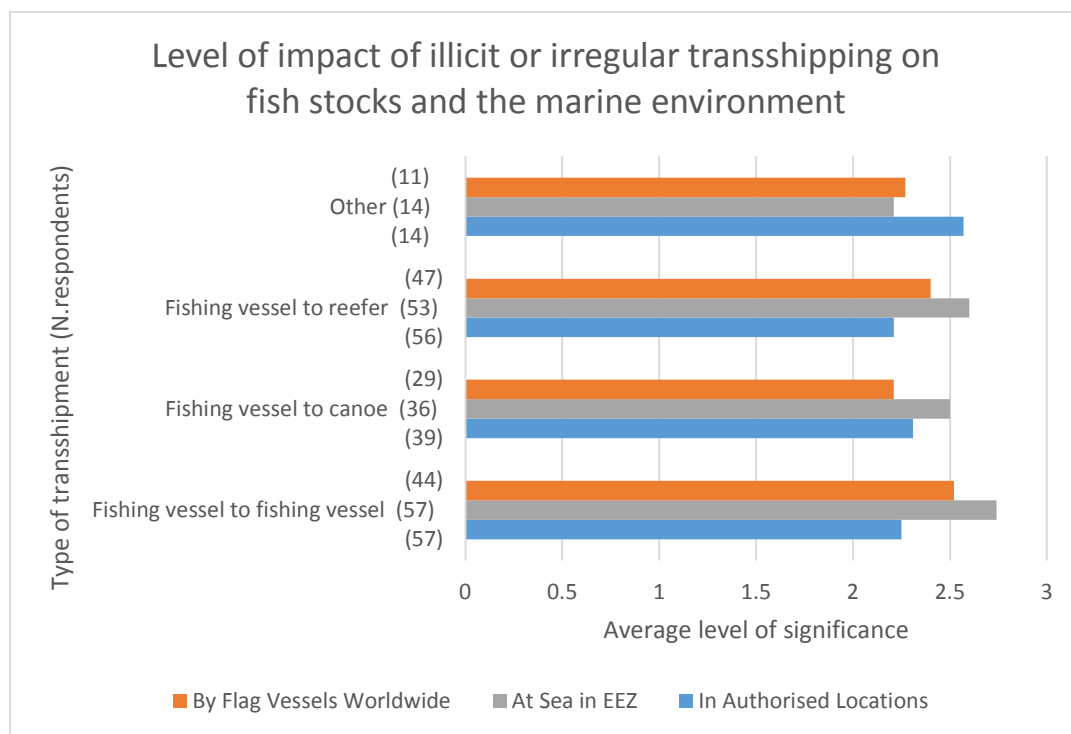
In parallel, at the level of risk presented by illicit or irregular transshipments on the areas mentioned, the impact of these activities on the economic development of the fishing industry, fish stocks and thus, the economic importance attached to illicit or irregular transshipments, is proportional to the risk associated and bigger in the EEZs. This is followed by areas beyond national EEZs, with transshipments from fishing vessels to fishing vessels leading the results. General values associated to their impact are lower and less significant that the likelihood of happening of these activities, what can indicate a low awareness of the real damage transshipments can infringe to national stocks and the social economies of coastal areas.

Level of impact illicit of illicit or irregular transshipping on the economic development of the national fishing industry



Level of economic importance attached to illicit or irregular transshipments by type





Section 4 – MCS Measures

Generally, MCS measures are extensively applied by all Member States possessing marine fishing fleets. Basic for the proper management of national fisheries and to comply with flag State responsibilities, there is a wide range of MCS tools currently in use. The most popular MCS implemented measures to control transshipping activities identified through the survey were: the conduction of landing and port inspections (both 89 percent), the issuance of fishing licenses (86 percent) and the implementation of the paper logbook (84 percent). In contrast, costly measures engaging tele-detection systems by satellites or aerial surveillance are amongst the less frequent MCS Measures in use. Other examples of uncommon MCS measures are related to merchant vessels systems, in particular for maritime traffic safety as the Vessel Traffic Service (VTS and VTMIS), VMS through GSM/GPRS and satellite AIS.

MCS Measures (Ranked by % implementation)	States Implementing Measures (%)	Number of respondents
Landing Inspections	88.64	88
Port Inspections	88.51	87
Fishing License	86.21	87
Paper Logbook	84.09	88
Designated Ports	81.61	87
Sea Inspections	80.68	88
Notification of landing	78.16	87
Catch Certification Scheme	78.16	87
Fisheries Monitoring Centre	77.27	88
Coordination of MCS resources	75.86	87
Access to IUU Fishing Vessels Lists	74.42	86
Catch Documentation Scheme	73.26	86
Satellite VMS	72.73	88
Information Exchange Agreements with other Countries	72.41	87
Authorisations including Transshipments	69.77	86
Port State Control Measures	69.41	85
Notifications including intention to transshipping	68.97	87
Surface Surveillance (Ship)	63.22	87
AIS	58.14	86
Risk Analysis and Management	55.17	87
Joint Inspection Agreements with other Countries	53.49	86
Electronic Logbook	43.53	86
Labelling of catch	43.53	85
Satellite AIS	41.67	84
Aerial Surveillance (Aircraft)	41.38	87
Tagging of catch	35.37	82
GSM/GPRS VMS	32.14	84
VTs	27.06	85
VTMIS	23.81	84
Satellite Sensing	20.24	84
Satellite Imagery	20.00	85

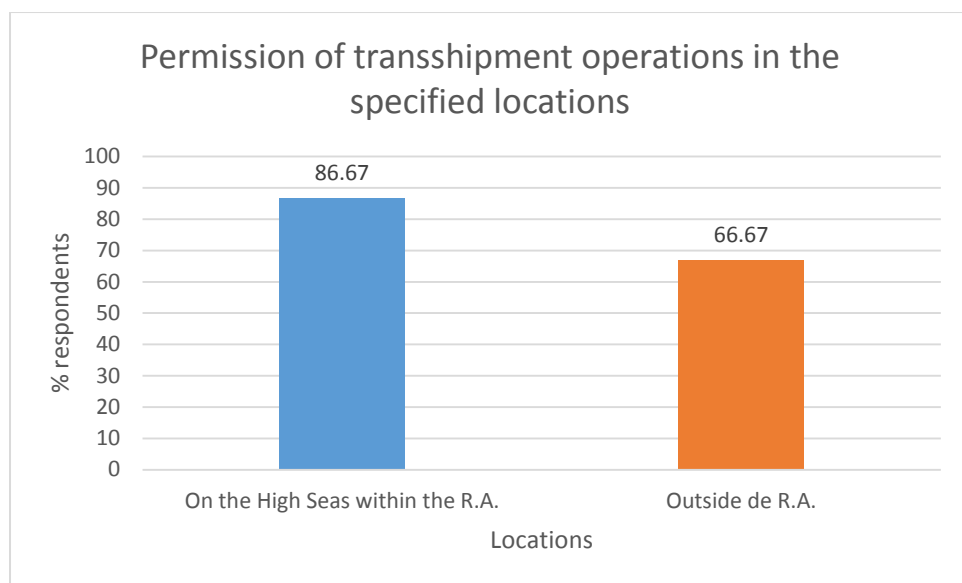
Group 2: RFMO

Q1 - Regulatory Frameworks

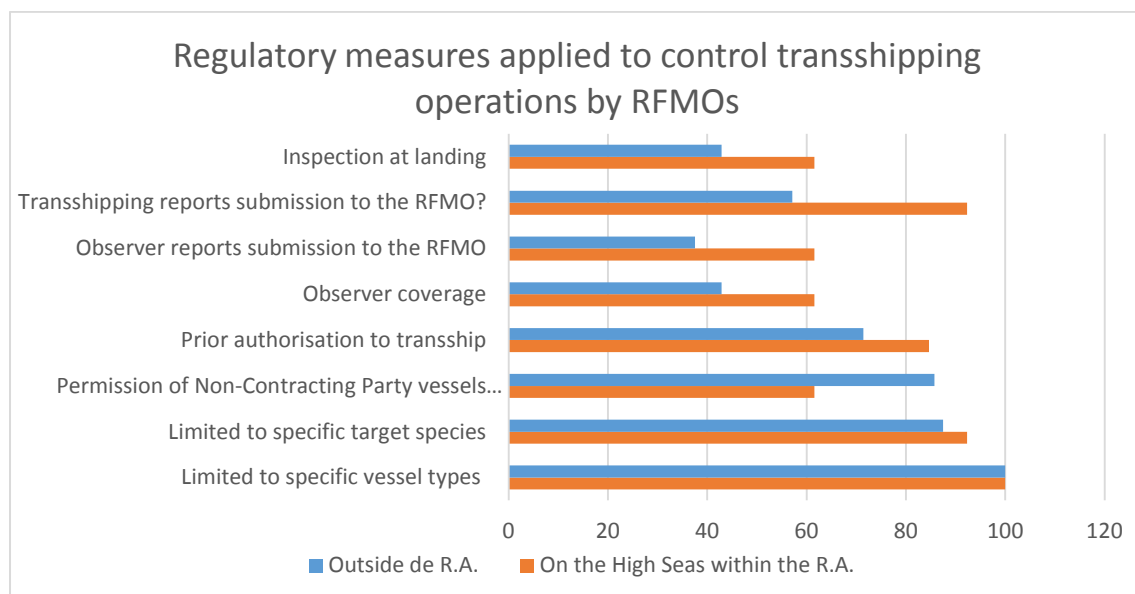
Note: Questions were asked in reference to transshipment fish and fish products caught within the RA of the respective RFMO.

“On the High Seas within the R.A.” transshipping occurring on the High Seas within the Regulatory Area of fish and fish products by vessels of a Contracting Party or Cooperating non-Contracting Parties.

“Outside the R.A.” Transshipping occurring outside the Regulatory Area of fish and fish products captured within the Regulatory Area by vessels of a Contracting Party or Cooperating non-Contracting Parties.



According to the results of the survey, transshipment is widely permitted throughout the different RFMOs when it is occurring both within and outside of their RAs, with this being the case in 87 and 67 percent of RFMOs respectively. These were also asked whether several different types of regulatory measures were being implemented with regard to permitted transshipment operations. The responses showed that the most commonly implemented regulatory measures for transshipment occurring within the RA were those relating to, specific vessel types (87 percent), specific target species (80 percent) and requirements for transshipment reports to be transmitted to the RFMO (80 percent). Meanwhile for transshipment occurring outside the RA, the most commonly implemented measures were those relating to, specific vessel types (67 percent), specific target species (58 percent) and permitting Non-Contracting Parties to conduct transshipment operations (55 percent).



Q2 - Transshipment Practices and Drivers

Note: The response type for these questions was a range from 1 (insignificant) to 5 (very significant). Responses were then converted into averages; RFMOs that responded not applicable were not included within the average.

In reference to the frequency of transshipment operations occurring in the two zones, RFMOs responded that it was more significant within the RA than outside, with an average of 3.3 and 2.1 respectively.

The general pattern for the remaining questions regarding operations occurring within the RA showed that transshipment from fishing vessels to reefer was more significant than that of fishing vessels to fishing vessel. This was the case in terms of, frequency of operations (3.7 and 1.9 respectively), logistical importance (3.9 and 2.6 respectively), economic importance (3.9 and 2.2 respectively) and perceived economic impact should transshipment be prohibited (3.4 and 2.5 respectively). With regard to transshipment occurring outside of the RA, the same pattern was noticed, although overall more significance was given to operations occurring in the RA.

Other types of transshipment operations that were mentioned as occurring by RFMOs are, transshipment at port to containers and bunkering.

Q3 – Impact and risks of illicit or irregular transshipping

Note: The response type for these questions was a range from 1 (insignificant) to 5 (very significant). Responses were then converted into averages; RFMOs that responded not applicable were not included within the average.

The perceived level of risk of illicit or irregular transshipment occurring within and outside the RA was similar, with fishing vessels to fishing vessels being resulting in an average of 2.2 and 2.4 respectively while fishing vessel to reefer resulting in average of 2.1 in both zones. There were no significant variations in the results with regard to the impact of illicit or irregular transshipment occurring both within and outside the RA as well as for between either combination of vessels. These included impacts on economic development (averages of 2.1-2.5), the marine environments (averages of 1.8-2.4) and the sustainability of fish stocks (averages of 2.3-2.5).

Risks of such operations was also brought up in relation to fishing vessels to containers at port. Furthermore, an RFMO commented that responding with opinions on such activities is beyond its mandate.

Q4 – MCS Measures

Note: RFMOs were asked what MCS measures were being implemented as well as if these measures were implemented or coordinated at RFMO level or independently by Contracting Parties (CP).

The results showed that a wide variety of MCS measure are being implemented both at RFMO and at CP level. However, overall MCS measures were more frequently implemented at CP level than at RFMO level.

At RFMO level the most frequently implemented measures were, port state control measures (73 percent), notifications including intention to transshipping (73 percent) and access to illicit or irregular Lists (71 percent). While the least implemented were, AIS (0 percent), satellite AIS (7 percent), VTMIS (7 percent), VTS (7 percent), satellite imagery (7 percent), satellite sensing (7 percent) and tagging of catch (7 percent).

At CP level the most frequently implemented MCS measures were, satellite VMS and landing Inspections (both 93 percent). While the least implemented were, VTS and VTMIS (both at 25 percent).

Global Transshipment Survey Tables

Group 1: States

Section 1

Q1.1) Are any transshipping operations permitted in any of these locations?						
Region	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Yes (%)	Number of respondents	Yes (%)	Number of respondents	Yes (%)	Number of respondents
Africa	72.22	18	29.41	17	11.76	17
Asia	69.23	13	53.85	13	38.46	13
Europe	75.00	20	26.32	19	57.89	19
Latin America and the Caribbean	59.09	22	40.91	22	36.36	22
Near East	14.29	7	14.29	7	14.29	7
Northern America	100.00	2	50.00	2	100.00	2
South West Pacific	66.67	6	33.33	6	66.67	6
Total and averages	64.77	88	34.88	86	38.37	86

Q1.2) Are permissions for transshipping operations restricted to specific vessel types in any of these locations?						
Region	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Yes (%)	Number of respondents	Yes (%)	Number of respondents	Yes (%)	Number of respondents
Africa	46.15	13	80.00	5	100.00	2
Asia	55.56	9	55.56	7	60.00	5
Europe	40.00	15	20.00	5	30.00	10
Latin America and the Caribbean	92.31	13	88.89	9	87.50	8
Near East	100.00	1	0.00	1	100.00	1
Northern America	100.00	2	100.00	1	100.00	1
South West Pacific	75.00	4	100.00	2	50.00	4
Total and averages	61.40	57	66.67	30	61.29	31

Q1.3) Are permissions for transshipping operations restricted to specific species in any of these locations?

Region	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Yes (%)	Number of respondents	Yes (%)	Number of respondents	Yes (%)	Number of respondents
Africa	38.46	13	60.00	5	100.00	2
Asia	55.56	9	42.86	7	60.00	5
Europe	40.00	15	0.00	5	22.22	9
Latin America and the Caribbean	69.23	13	66.67	9	37.50	8
Near East	0.00	1	0.00	1	0.00	1
Northern America	100.00	2	100.00	1	100.00	1
South West Pacific	50.00	4	50.00	2	50.00	4
Total and averages	50.88	57	46.67	30	43.33	30

Question	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Yes (%)	Number of respondents	Yes (%)	Number of respondents	Yes (%)	Number of respondents
Q1.4) Are transshipping operations involving other countries vessels permitted in any of these locations?	78.57	56	42.86	28	80.00	30
Q1.5) Do any permitted transshipping operations require prior authorization for the catching fishing vessel?	92.86	56	86.21	29	80.65	31
Q1.6) Do any permitted transshipping operations require prior authorization for the receiving vessel?	78.57	56	78.57	28	64.52	31
Q1.7) Do any permitted transshipping operations require observer coverage?	62.50	56	62.07	29	63.33	30
Q1.8) Are there any requirements for observer reports of transshipping operations to be made available to the relevant national authorities?	62.96	54	51.85	27	57.14	28
Q1.9) Do any transshipping declaration requirements apply to the catching fishing vessel?	85.96	57	72.41	29	87.10	31
Q1.10) Do any transshipping declaration requirements apply to the receiving vessel?	82.46	57	79.31	29	83.87	31
Q1.11) Are any vessels involved in transshipping operations required to submit any prior notification documents before arriving in port?	91.23	57	75.86	29	80.00	30
Q1.12) Are there any requirements for any fishing vessel landing fish or fish products transshipped from another fishing vessel to be inspected at the time of landing?	83.33	54	85.19	27	63.33	30

Section 2

Q2.0) What is the frequency of transshipping operations taking place in listed areas? Please answer from 1 (insignificant) to 5 (very significant).

Region	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Africa	2.64	14	2.20	5	2.00	3
Asia	3.29	7	3.00	6	3.00	4
Europe	1.62	13	2.00	5	1.36	11
Latin America and the Caribbean	2.46	13	2.33	9	2.22	9
Near East	1.00	1	1.00	1	1.00	1
Northern America	3.00	2	3.00	1	1.00	2
South West Pacific	2.50	4	1.50	2	2.75	4
Total and averages	2.41	54	2.31	29	1.97	34

1) Please grade the level of activity of each of the following type of transshipping operations. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q2.1) Fishing vessel to fishing vessel	1.64	42	2.00	19	1.50	20
Q2.2) Fishing vessel to canoe	1.44	18	1.42	12	1.40	10
Q2.3) Fishing vessel to reefer	2.76	42	2.18	22	2.45	29
Q2.4) Other	2.44	16	2.00	10	2.25	4

2) Please grade the level of logistical importance attached to transshipments in these areas. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q2.5) Fishing vessel to fishing vessel	1.81	42	2.40	20	2.00	22
Q2.6) Fishing vessel to canoe	1.83	23	1.60	15	1.58	12
Q2.7) Fishing vessel to reefer	2.86	43	2.52	21	2.79	28
Q2.8) Other	2.57	14	2.13	8	2.00	6

3) Please grade the level of economic importance attached to transshipments in these areas. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q2.9) Fishing vessel to fishing vessel	1.71	41	2.53	19	1.85	20
Q2.10) Fishing vessel to canoe	1.67	21	2.00	14	1.67	12
Q2.11) Fishing vessel to reefer	2.95	42	3.24	21	2.57	28
Q2.12) Other	2.75	12	2.75	8	2.25	4

4) Please grade the level economic impact on your fishing industry, through the impediment of fishing opportunities, should transshipping operations be prohibited. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q2.13) Fishing vessel to fishing vessel	1.87	39	2.74	19	2.17	18
Q2.14) Fishing vessel to canoe	2.14	21	2.00	13	2.00	12
Q2.15) Fishing vessel to reefer	2.68	41	3.10	20	2.30	23
Q2.16) Other	2.27	15	2.70	10	2.00	5

Section 3

Responses to this question also reflected in the following table

Q3.1) Please grade the perceived level of risk of illicit or irregular transshipping occurring in fishing vessel to fishing vessel transshipping operations. Please answer from 1 (insignificant) to 5 (very significant).						
Region	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Africa	1.79	14	3.09	11	2.63	8
Asia	2.75	8	2.88	8	3.50	4
Europe	1.28	18	2.00	16	1.75	16
Latin America and the Caribbean	3.00	11	3.36	14	3.25	8
Near East	4.00	2	5.00	3	5.00	2
Northern America	2.00	2	3.00	2	3.00	2
South West Pacific	1.40	5	3.00	4	2.80	5
Total and averages	2.03	60	2.91	58	2.64	45

1) Please grade the perceived level of risk of illicit or irregular transshipping occurring in each of the following types of transshipping operations. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q3.1) Fishing vessel to fishing vessel	2.03	60	2.91	58	2.64	45
Q3.2) Fishing vessel to canoe	2.15	41	2.53	36	2.29	28
Q3.3) Fishing vessel to reefer	1.85	59	2.71	51	2.49	49
Q3.4) Other	2.36	14	2.38	13	2.64	11

2) Please grade the perceived level of impact of illicit or irregular transshipping on the economic development of the fishing industry in your country. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q3.5) Fishing vessel to fishing vessel	2.19	58	2.65	57	2.41	44
Q3.6) Fishing vessel to canoe	2.28	40	2.36	36	2.22	27
Q3.7) Fishing vessel to reefer	2.12	58	2.42	52	2.30	47
Q3.8) Other	2.21	14	2.00	13	2.25	12

3) Please grade the level of economic importance attached to illicit or irregular transshipments in these area. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q3.9) Fishing vessel to fishing vessel	2.20	59	2.61	59	2.50	44
Q3.10) Fishing vessel to canoe	2.22	41	2.29	38	2.15	26
Q3.11) Fishing vessel to reefer	2.10	58	2.55	53	2.43	46
Q3.12) Other	2.53	15	2.20	15	2.42	12

4) Please grade the perceived level of impact of illicit or irregular transshipping on fish stocks and the marine environment in your country. Please answer from 1 (insignificant) to 5 (very significant).

Type:	In Authorised Locations		At Sea in EEZ		By Flag Vessels Worldwide	
	Average response	Number of respondents	Average response	Number of respondents	Average response	Number of respondents
Q3.13) Fishing vessel to fishing vessel	2.25	57	2.74	57	2.52	44
Q3.14) Fishing vessel to canoe	2.31	39	2.50	36	2.21	29
Q3.15) Fishing vessel to reefer	2.21	56	2.60	53	2.40	47
Q3.16) Other	2.57	14	2.21	14	2.27	11

Section 4

MCS Measures (Ranked by % implementation)	States Implementing Measures (%)	Number of respondents
Landing Inspections	88.64	88
Port Inspections	88.51	87
Fishing License	86.21	87
Paper Logbook	84.09	88
Designated Ports	81.61	87
Sea Inspections	80.68	88
Notification of landing	78.16	87
Catch Certification Scheme	78.16	87
Fisheries Monitoring Centre	77.27	88
Coordination of MCS resources	75.86	87
Access to IUU Fishing Vessels Lists	74.42	86
Catch Documentation Scheme	73.26	86
Satellite VMS	72.73	88
Information Exchange Agreements with other Countries	72.41	87
Authorisations including Transshipments	69.77	86
Port State Control Measures	69.41	85
Notifications including intention to transshipping	68.97	87
Surface Surveillance (Ship)	63.22	87
AIS	58.14	86
Risk Analysis and Management	55.17	87
Joint Inspection Agreements with other Countries	53.49	86
Electronic Logbook	43.53	86
Labelling of catch	43.53	85
Satellite AIS	41.67	84
Aerial Surveillance (Aircraft)	41.38	87
Tagging of catch	35.37	82
GSM/GPRS VMS	32.14	84
VTS	27.06	85
VTMIS	23.81	84
Satellite Sensing	20.24	84
Satellite Imagery	20.00	85

Group 2: RFMO

Section 1

Question	On the High Seas within the RA ¹⁷		Outside the RA ¹⁸	
	Yes (%)	Number of respondents	Yes (%)	Number of respondents
1.1) Are any transshipment operations permitted in any of these locations?	86.67	15	66.67	12
1.2) Are transshipping operations concerning specific vessel types permitted in any of these locations?	100.00	13	100.00	8
1.3) Are transshipping operations concerning specific target species permitted in any of these locations?	92.31	13	87.50	8
1.4) Are any transshipment operations involving Non-Contracting Party vessels permitted in any of these locations?	61.54	13	85.71	7
1.5) Do any permitted transshipping operations require prior authorisation?	84.62	13	71.43	7
1.6) Do any permitted transshipping operations require observer coverage?	61.54	13	42.86	7
1.7) Are there any requirements for observer reports of transshipping operations to be made available to the RFMO?	61.54	13	37.50	8
1.8) Are there any requirements for transshipping reports to be transmitted to the RFMO?	92.31	13	57.14	7
1.9) Are there any requirements for any fishing vessel landing fish or fish products transshipped from another fishing vessel to be inspected at the time of landing?	61.54	13	42.86	7

¹⁷ Includes transshipping occurring on the High Seas within the Regulatory Area of fish and fish products by vessels of a Contracting Party or Cooperating non-Contracting Parties.

¹⁸ Transshipping occurring outside the Regulatory Area of fish and fish products captured within the Regulatory Area by vessels of a Contracting Party or Cooperating non-Contracting Parties.

Section 2

Question	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q2.0) What is the frequency of transshipping operations taking place in listed areas? Please answer 5 (very significant), 4, 3, 2 or 1 (insignificant).	3.27	11	2.14	7

1) Please grade the level of activity of each of the following type of transshipping operations? Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q2.1) Fishing vessel to fishing vessel	1.86	7	1.00	2
Q2.2) Fishing vessel to reefer	3.67	9	2.75	4
Q2.3) Other	2.00	3	2.00	1

2) Please grade the level of logistical importance attached to transshipments in these areas. Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q2.4) Fishing vessel to fishing vessel	2.57	7	1.67	3
Q2.5) Fishing vessel to reefer	3.89	9	2.75	4
Q2.6) Other	3.33	3	1.00	1

3) Please grade the level of economic importance attached to transshipments in these areas. Please answer from 1 (insignificant) to 5 (very significant).

Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q 2.7) Fishing vessel to fishing vessel	2.20	5	2.00	2
Q 2.8) Fishing vessel to reefer	3.86	7	3.00	3
Q 2.9) Other	3.50	2	1.00	1

4) Please grade the level economic impact on the fishing industry of Contracting Parties and Cooperating non-Contracting Parties, through the impediment of fishing opportunities, should transshipment operations be prohibited. Please answer from 1 (insignificant) to 5 (very significant).

Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q2.10) Fishing vessel to fishing vessel	2.50	6	1.67	3
Q2.11) Fishing vessel to reefer	3.38	8	2.25	4
Q2.12) Other	3.50	2	-	0

Section 3

1) Please grade the perceived level of risk of illicit or irregular transshipping you attach to each of the following type of transshipping operations. Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q3.1) Fishing vessel to fishing vessel	2.20	10	2.38	8
Q3.2) Fishing vessel to reefer	2.09	11	2.11	9
Q3.3) Other	1.33	3	2.00	2

2) Please grade the perceived level of impact of illicit or irregular transshipping on the economic development within your Regulatory Area. Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q3.4) Fishing vessel to fishing vessel	2.29	7	2.50	6
Q3.5) Fishing vessel to reefer	2.50	8	2.13	8
Q3.6) Other	1.50	2	1.50	2

3) Please grade the perceived level of impact of illicit or irregular transshipping on the marine environment in your Regulatory Area. Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q3.7) Fishing vessel to fishing vessel	2.38	8	1.83	6
Q3.8) Fishing vessel to reefer	2.33	9	1.86	7
Q3.9) Other	1.50	2	1.50	2

4) Please grade the perceived level of impact of illicit or irregular transshipping on the sustainability of fish stocks in your Regulatory Area. Please answer from 1 (insignificant) to 5 (very significant).				
Type:	On the High Seas within the RA		Outside the RA	
	Average response	Number of respondents	Average response	Number of respondents
Q3.10) Fishing vessel to fishing vessel	2.45	11	2.40	10
Q3.11) Fishing vessel to reefer	2.33	12	2.45	11
Q3.12) Other	2.00	2	2.00	2

Section 4

MCS Measures (Ranked by % implementation)	RFMO Implementing Measures (%)	Number of respondents
Notifications including intention to transshipping	73.33	15
Port State Control Measures	73.33	15
Access to illicit or irregular Lists	71.43	14
Port Inspections	60.00	15
Information Exchange Agreements with other Countries	60.00	15
Authorisations including Transshipments	60.00	14
Satellite VMS	57.14	15
Sea Inspections	53.33	15
Designated Ports	53.33	15
Notification of landing	50.00	14
Landing Inspections	40.00	15
Joint Inspection Agreements with other Countries	40.00	15
Fishing License	40.00	15
Surface Surveillance (Ship)	35.71	14
Fisheries Monitoring Centre	35.71	14
Catch Documentation Scheme	33.33	15
GSM/GPRS VMS	28.57	14
Aerial Surveillance (Aircraft)	28.57	14
Coordination of MCS resources	26.67	15
Labelling of catch	26.67	15
Catch Certification Scheme	20.00	15
Risk Analysis and Management	13.33	15
Satellite AIS	6.67	15
VTMIS	6.67	15
VTS	6.67	15
Satellite Imagery	6.67	15
Satellite Sensing	6.67	15
Tagging of catch	6.67	15
AIS	0.00	15

MCS Measures (Ranked by % implementation)	CP/Cn-CP Implementing Measures (%)	Number of respondents
Satellite VMS	92.86	14
Port Inspections	92.86	14
Landing Inspections	92.86	14
Fisheries Monitoring Centre	86.67	15
Fishing License	86.67	15
Notifications including intention to transshipping	86.67	15
Sea Inspections	85.71	14
Joint Inspection Agreements with other Countries	85.71	14
Designated Ports	85.71	14
Port State Control Measures	85.71	14
Notification of landing	84.62	13
Surface Surveillance (Ship)	80.00	15
Authorisations including Transshipments	80.00	15
Information Exchange Agreements with other Countries	78.57	14
Aerial Surveillance (Aircraft)	71.43	14
Coordination of MCS resources	69.23	13
Access to illicit or irregular Lists	69.23	13
Catch Documentation Scheme	69.23	13
Labelling of catch	69.23	13
GSM/GPRS VMS	58.33	12
Risk Analysis and Management	58.33	13
Satellite Imagery	50.00	12
AIS	41.67	12
Satellite AIS	41.67	12
Satellite Sensing	41.67	12
Catch Certification Scheme	38.46	13
Tagging of catch	38.46	13
VTMIS	25.00	12
VTS	25.00	12