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CATCH/TRADE DOCUMENTATION, EC COUNCIL REGULATION (EC) 1005/2008 AND THE WCPFC

WCPFC-TCC5-2009/24 (Rev.2)¹

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Paper prepared by the Secretariat

Background

1. The development of Catch Documentation Schemes (CDS) and Statistical Document Programmes (SDP), as tools to enhance the monitoring of conservation and management measures and to combat illegal, unreported and unregulated (IUU) fishing, have been on the agenda of the WCPFC since 2005. A review of previous consideration of catch documentation schemes (CDS) and statistical/trade document programmes (SDP) in the Commission during the period 2005-2008 is appended at **Attachment A**.

Progress at, and since, WCPFC5

2. At WCPFC5 in 2008 the EC provided a report on progress with developing a WCPFC CDS for bigeye tuna. Noting limited progress during the year the EC committed to continuing their work on this issue in 2009, including the possibility of convening an inter-sessional workshop, perhaps in conjunction with the IWG-ROP and/or the Ad Hoc Task Group [Data]. The Commission identified CDS as a work programme priority for 2009 (para. 138 WCPFC5 Summary Report). In April 2009 the EC advised the Secretariat that, because of resource limitations, it would be unable to facilitate the inter-sessional work in 2009.

3. In June 2009, the United Kingdom Department of Environment, Food and Rural Affairs (DEFRA) commissioned a study of fish catch and trade documentation schemes with a specific view toward facilitating synergies between these schemes and the EC's Council Regulation 1005/2008 to prevent, deter and eliminate illegal, unreported and unregulated fishing. The implementation of this regulation on 1 January 2010 adds additional impetus for the development of a CDS by the WCPFC. The first report (Phase 1) under the DEFRA study provides a comparative, function-based review of the existing RFMO trade and catch documentation schemes and the forthcoming EC IUU regulation. This report is contributed as background information for further consideration of the development of a scheme by the WCPFC at TCC5 (**Attachment B**).

4. The following sections of the DEFRA report (Attachment B) may be useful to CCMs interested in the development of a WCPFC catch or trade documentation scheme:

¹ Revised to reflect changes requested by the EC to paragraph 2.

- The Executive Summary gives an overview of the development of existing schemes and the framework used in the report to identify best practice;
- Section 2.4 provides an introduction to the EC IUU regulation;
- Section 3.2.3 highlights a number of issues that have been raised previously in WCPFC discussions on catch/trade documentation schemes and suggests how these issues can be handled; and
- Section 5.1 lists key considerations when improving existing schemes and developing new schemes based on identified elements of current best practice and recommendations for filling gaps in functional performance.

Advice and recommendations

5. The Technical and Compliance Committee is invited to consider the materials in Attachments A and B with particular reference to the following issues relevant to the development of a scheme for the WCPFC:

- Non-EC WCPFC CCMs intending to export fish to European markets will be required to comply with the EC regulation directly or through a RFMO CDS recognized by the EC.
- From available information it appears that trade documentation schemes such as the ICCAT, IOTC and IATTC bigeye tuna Statistical Document Programmes (SDPs) will not be recognised by the EC.
- Development of a CDS for the WCPFC which can be recognized by the EC will avoid inefficiencies associated with operating two different schemes, and potentially assist individual CCMs with compliance through establishing a regional scheme based within the WCPFC.

6. After consideration of these issues, CCMs are invited to provide advice on the need for a WCPFC CDS and if such a scheme is required, to provide advice and recommendations to the Commission in relation to a strategy for its development and implementation. CCMs may wish to consider formulating a work programme for the development and implementation of a CDS for the WCPFC commencing in 2010 which could include:

- a) The establishment of an inter-sessional working group with agreed terms of reference (ToR) and chairperson;
- b) The ToR for a WCPFC CDS working group could include, *inter alia*;
 - i. confirmation of the purpose and needs;
 - ii. further identification of the requirements of the EC regulation and the adequacy of existing RFMO CDS to provide a template for the development of a WCPFC CDS;
 - iii. roles and responsibilities in respect of the development and implementation;
 - iv. selection of the key elements;
 - v. institutional arrangements;
 - vi. costs and other resource considerations; and
 - vii. implementation plan.

A review of previous consideration of catch documentation schemes (CDS) and statistical document programmes (SDP) or trade schemes in the Commission (2005-2008)

2005

1. The first regular session of the Technical and Compliance Committee (TCC1) in December 2005 agreed catch and statistical schemes to be a priority component of the elaboration of the Commission's monitoring, control and surveillance framework within the next two years (TCC1 Summary Report, para. 47).

2006

2. TCC2 in 2006 noted that the Second Regular Session of the Commission (WCPFC2) had not reached agreement on any aspect of a catch documentation scheme (CDS) and had requested interested Members to progress the issue inter-sessionally (TCC2 Summary Report, paragraph 93-97). At that meeting Japan introduced a delegation paper (WCPFC-TCC2-2006/DP04) that proposed a statistical documentation programme (SDP) accompanied by an explanatory note. This note explained that the immediate need for a SDP, as opposed to a CDS was due to the lack of a catch limit and corresponding allocation system in the WCPO, and the use of a statistical document in targeting IUU fishing activities. Japan also indicated that, at this stage, a catch documentation scheme would be too onerous for CCMs, particularly small island developing States, due to the amount of transaction costs and information required without any concrete basis.

3. Several CCMs supported the introduction of the scheme in terms of its consistency and coverage. Some other CCMs noted that it should be more comprehensive and should cover all catch entering domestic as well as international markets in order to identify all aspects of the market chain. FFA members suggested that the statistical document scheme proposal did not address all aspects of WCPFC2's decision. FFA noted that it was preparing a proposal for a catch documentation scheme and would be submitting that proposal for consideration at WCPFC3.

4. At WCPFC3 in 2006 FFA member States presented a proposal to the Commission to adopt a CDS (WCPFC3-2006/DP07 Rev.1). The EC also presented a proposal (WCPFC3-2006/DP33) and Japan again presented a proposal for the adoption of a SDP (WCPFC3-2006/DP17). On the issue of options for a documentation scheme covering all catch, as called for at WCPFC2, the Chair noted that although there was no consensus among CCMs for a CDS, there was a general feeling that times have moved on and that statistical information schemes had proven to be insufficient in covering all areas of concern. Japan, supported by some CCMs, did not support this view stating that the WCPFC is the only RFMO without an SDP for bigeye tuna and that an SDP was critical for the effective implementation of other compliance measures such as the IUU List. Japan also stated that it believed that a SDP would be less onerous than a complicated CDS that could prove difficult to implement for many CCMs. Other CCMs were of the opinion that a catch document scheme was necessary to ensure the recording of all fish caught and traded

5. The Commission agreed that interested CCMs would continue their dialogue on this matter inter-sessionally and that the matter would be taken up again at the next meeting of the TCC for subsequent consideration by WCPFC4.

2007

6. TCC3 in 2007 received no new proposals for either SDPs or CDPs although Japan again tabled its delegation paper WCPFC-TCC3-2007/DP-06 FFA members again stated that, although they were supportive of a variety of measures supporting a comprehensive and effective monitoring, control and surveillance (MCS) programme, some statistical documentation schemes appear to have major flaws. It was suggested that a working group be formed to address these issues (TCC3 Summary Report para. 91).

7. At WCPFC4 FFA circulated WCPFC4-2007/DP24, which contained a proposal on harmonization and improvement of trade tracking programmes by Canada, the EC and the USA from the RFMO technical working group in Raleigh, North Carolina. Australia, on behalf of FFA, noted that previous proposals submitted to WCPFC on this topic have not been sufficiently comprehensive nor integrated with other essential MCS components.

8. Also at this meeting the EC introduced its new proposals for trade tracking and legal provenance verification of fish products,² stating that the goal of these procedures is not to restrict trade but to discourage IUU fishing (subsequently to become EC Council Regulation 1005/2008 – see below). The EC offered to develop a proposed CDS for bigeye tuna based on the joint proposal submitted to the Raleigh meeting by Canada, the USA and the EU. Japan voiced its doubt regarding the need for and effectiveness of CDSs in the WCPO, adding that the specific points raised in Japan's paper (TCC3-2007/DP-06) need further consideration.

9. A small working group, convened by Australia, developed terms of reference for an inter-sessional working group to examine the idea of a CDS for fisheries in the WCPFC Convention Area. Divergent opinions were expressed by CCMs participating in the small working group. These opinions ranged from strong support to doubts about the practicality of a CDS and about CCM capabilities to cope with the increased workload a CDS would impose. The Commission was not able to adopt terms of reference for this work during WCPFC4.

10. As a result the EC, noting its experience with CDS issues in this and other RFMO forums (e.g. see WCPFC4-2007/DP24), volunteered to lead an inter-sessional working group to work toward designing an appropriate CDS for the region that focuses on the most critical species. The report of the working group was to be tabled at TCC4 for review, possible refinement, and adopting for forwarding to WCPFC5.

2008

11. In April 2008 the EC requested the WCPFC Executive Director to circulate to all CMMs a draft CMM on a WCPFC Bigeye Tuna Catch Documentation Scheme. In 20 September the EC advised the Executive Director that it had not been able to produce a revised text on a CDS for bigeye tuna and suggested that the most recent version of a draft proposal for a CDS, together with all the comments provided by various parties be presented in a document to TCC4 for discussion.

12. At TCC4, the European Community presented WCPFC-TCC4-2008/27, a CDS for the WCPFC drawing heavily upon the ICCAT Catch Documentation Programme for Atlantic bluefin tuna. The EC explained that a wide variety of comments were received ranging from high-level questions regarding purpose and objective to detailed comments on the text. Their conclusion was that this issue was not yet sufficiently advanced within the WCPFC to make useful progress on a CDS before WCPFC5. The EC then briefed the Committee on progress with development and implementation of EC Council Regulation 1005/2008. Several FFA members made detailed statements regarding CDS issues noting general support for the development of a CDS but expressing concerns about the potential impacts on small island developing States who may lack capacity to administer or comply with such schemes. TCC4 recommended formation of a working group coordinated by the European Community to discuss this matter based on the European Community draft CMM.

² See http://ec.europa.eu/fisheries/cfp/external_relations/illegal_fishing_en.htm

Best Practice Study of Fish Catch Documentation Schemes

Phase 1 Report

1 September 2009

prepared by

MRAG Asia Pacific Pty Ltd
Level 30, Central Plaza One
345 Queen St., Brisbane QLD 4000
Australia

On behalf of the

United Kingdom Department of Environment, Food and Rural Affairs

This report is prepared by MRAG Asia Pacific for the UK's Department of Environment, Food and Rural Affairs (DEFRA).
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EXECUTIVE SUMMARY

Trade-based measures are one of a number of monitoring, control and surveillance (MCS) tools, for combating illegal, unreported and unregulated (IUU) fishing activities. One important type of trade-based measure consists of catch and trade documentation schemes developed by Regional Fisheries Management Organizations (RFMOs). As these schemes continue to evolve, they are being supplemented by other nationally- or regionally-based documentation systems such as the European Community (EC) regulation to prevent, deter and eliminate IUU fishing. Upon its implementation in January 2010, the EC IUU regulation will recognise certain RFMO schemes as complying with its requirements, however, fish from unrecognised RFMO schemes will have to provide both RFMO and EC documentation. For this reason, improvements to existing schemes and development of new schemes should take account of and aim to fulfil the requirements of the EC regulation where possible. This report reviews and compares the requirements and procedures of all of the RFMO schemes and the EC IUU regulation to identify current best practice as well as gaps inhibiting effective performance.

A summary of the development and key characteristics of existing schemes is provided in *Section 2*. These schemes include those established by the Commission for the Conservation of Antarctic Marine and Living Resources (CCAMLR) for toothfish; the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) for southern bluefin tuna; the Inter-American Tropical Tuna Commission (IATTC) for bigeye tuna; the International Commission for Conservation of Atlantic Tunas (ICCAT) for bluefin tuna, bigeye tuna and swordfish; and the Indian Ocean Tuna Commission (IOTC) for bigeye tuna. Linkages between the schemes are traced and the implementation of important innovations is highlighted. A concise introduction to the key features of the EC IUU regulation is also presented.

The history of efforts to harmonise existing RFMO trade and catch documentation schemes is reviewed in *Section 3*. Although harmonisation efforts began with attempts at standardisation of forms, the need for format standardisation has been eclipsed by the need for consistency and compatibility of information across schemes. In addition, recent developments emphasise that scheme improvement is the primary objective, and that harmonisation should thus be applied to move schemes toward higher rather than lower standards. Despite minor differences in the wording of their objectives, all the existing schemes have an overall consistency of purpose. However, differing perspectives on the role of the schemes in combating all three elements of IUU fishing, in particular whether or not they should be used to check the compliance of vessels authorized to fish by RFMO members, is expected to be a continuing topic of debate for some schemes. While scientific and compliance objectives of the schemes are compatible they are not necessarily identical. In the pursuit of effective and consistent scheme performance, it is important to note several RFMO-specific issues which may require special attention. These include the difficulties of developing schemes for the mix of species caught by purse seine, the lack of participation or compliance of key flag, port or trade States in the schemes, and deficiencies in flag, port and trade States' implementation of the documentation schemes. Remedies for each issue are proposed.

A framework to compare the schemes and elucidate current best practices and gaps is described and applied in *Section 4*. This framework is comprised of three components, each with several criteria, against which each RFMO scheme and the EC IUU regulation are assessed:

- **Inclusivity** - the extent to which the scheme is designed to provide documentation for all legally-caught fish of the species/fishery in question.
- **Impermeability** - the extent to which the scheme is designed to exclude illegal fish.
- **Verifiability** - the extent to which the scheme is audited by those other than the parties directly responsible for filling out and validating the forms.

The assessment results in over 20 specific recommendations to be considered while reforming existing schemes and developing new ones (*Section 5*). Several areas are identified for which the standards implicit in the design of the EC IUU regulation appear to be higher than those adhered to in some of the RFMO schemes. Potential discrepancies include exemptions for tagged fish, dates of catch, live weight of catch, and control of fish mixing. There are also examples of where the RFMO schemes have set a higher standard than the EC IUU regulation (e.g. unique document numbers, electronic document systems, specification of catch location, and third party audit/oversight). Finally, areas are identified for which both the RFMO schemes and the EC IUU regulation could be better articulated and/or improved. These areas include handling of mixed species catches; checks on a vessel's authorisation to fish and registration number; stricter rules for traceability of split catches and shipments; prohibition against re-directed rejected shipments; mandatory reporting of documentation irregularities and shipment rejections; and periodic, empirically-based programme reviews.

Although this report is based only on publicly available information about the design of the various schemes, the next phase of this study will review data submitted to the existing schemes and analyse how these data are used by the schemes for various scientific and compliance/anti-IUU purposes. The third phase of this study, intended to be complete by January 2010, is designed to provide specific recommendations for the development of new schemes in two different areas.

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1 Introduction

1.1 Trade-based Measures as Tools to Combat Illegal, Unreported and Unregulated (IUU) Fishing

As the status of fish stocks around the world becomes more and more critical, the range of measures applied to combat threats such as illegal, unreported and unregulated (IUU) fishing has expanded. Monitoring, control and surveillance (MCS) tools such as lists of vessels authorized to fish, high seas boarding and inspection programmes, observer programmes, and vessel monitoring systems have recently been bolstered by the creation of a variety of vessel blacklists by Regional Fisheries Management Organisations (RFMOs) and individual countries (Kirkwood and Agnew 2007). Among other objectives, these tools are designed to prevent IUU fishing before or as it occurs. Downstream measures, designed to penalise the perpetrators and products of IUU fishing activities not thwarted at sea, have also been developed in the form of port State and trade-based measures.

Port State measures consist of actions directed toward vessels in port. These may consist of refusing port access and services to individual vessels believed to have violated regulations (Baird 2005) or requiring prior notice and clearance of all landings from a given fishery as a matter of course (NEAFC 2009). Development of an internationally agreed, legally binding instrument on port State measures, as well as moves toward strengthening international standards for flag State responsibility, are currently in progress (FAO 2009).

Trade-based measures consist of actions directed toward the products of IUU fishing and may include banning products from States found to be undermining fishery management or rejecting individual shipments which lack documentation of their legal provenance. Regional Fisheries Management Organizations (RFMOs) have served as the proving ground for both trade bans and the development of catch and trade documentation schemes for some key species. Another major development in documentation systems will occur with implementation of the European Community's (EC) regulation to prevent, deter and eliminate IUU fishing in January 2010 (European Union 2008). This regulation, which requires documentation for imports of all wild-caught, non-ornamental marine fish, will add a nationally-based documentation system to the arsenal of internationally-agreed, RFMO trade-based measures.

1.2 Terminology for Types of Fish Documentation Systems

This study focuses on those trade-based measures which document fisheries products as deriving from authorized fishing activities. The terminology used to describe such measures is often inconsistent and thus can be confusing. Based on a number of definitions including those in COFI (2008) the following classification is proposed for use in this study:

- **Catch documentation schemes** cover all fish from the point of first capture by a flag State through international trade routes (i.e. imports, exports and re-exports) if applicable, and/or farming operations if applicable, to the State of final destination; and
- **Trade documentation schemes**, also referred to as **statistical document programs**, also document provenance from the point of first capture by a flag State to the State of final destination, but only apply to those fish entering international trade.

The key difference between the two types of schemes is that under trade documentation schemes, documentation is not required for fish which are landed (without being imported) and consumed in the country of landing.

A fundamental criticism of trade documentation schemes is that they exclude a large portion of the fish being targeted by the scheme, thereby making it theoretically impossible to match fish quantities documented by trade documentation schemes and actual catch quantities. This has led to a general agreement that current trade documentation schemes have major shortcomings and that movement toward catch documentation schemes is needed (Joint Tuna RFMOs 2007a).

Catch documentation schemes should not be confused with catch certification. For example, under the North East Atlantic Fisheries Commission (NEAFC) regulations, catches must be certified by the flag State as being within quota, properly reported, derived from authorised fishing operations, and originating in an area confirmed through Vessel Monitoring System (VMS) data before they can be landed or transhipped in ports of contracting parties (NEAFC 2009). While these procedures could correctly be referred to as catch certification, they are referred to by NEAFC as port State measures because they pertain to landings and transhipments rather than trade. Although the NEAFC scheme uses documents to prove that catches meet the requirements (European Commission 2009a), these documents do not accompany the fish into onward trade, therefore the NEAFC scheme is not a catch documentation scheme. In contrast, the EC's new IUU regulation requires that a catch certificate be supplied prior to landing (i.e. a port State measure) and that it accompany the landed fish through subsequent trade channels. The EC regulation thus combines elements of both port State-based and trade-based (catch documentation) measures.

Finally, catch documentation schemes are designed to provide evidence that fish have been caught legally and in compliance with applicable regulations and management measures. However, such documentation is not designed to verify that the fish catch is sustainable, nor that it meets health and sanitary requirements. The former issue requires an eco-labelling approach which may encompass IUU fishing issues but would necessarily include other factors not covered by catch documentation schemes such as evaluations of stock status, ecosystem effects and/or management procedures. Health and sanitary issues are covered by existing health and veterinary regulatory systems (see Clarke 2009), and although health and sanitary forms may contain some of the same information, they have no direct connection to catch documentation schemes.

1.3 Purpose and Objectives of this Study

The purpose of this study is to review the current status of RFMO trade and catch documentation schemes in order to assist efforts aimed at improving existing schemes and developing new schemes. This study assumes, as its starting point, that trade or catch documentation schemes are a necessary element in the fight against IUU fishing activities. While a broader review of the efficacy of various types of measures used to combat IUU fishing (e.g. MCS versus port State measures versus trade-based measures) may be useful, addressing all of these topics is beyond the scope of this study. Issues of whether trade or catch documentation schemes can or do provide a price premium for their products are also considered to be beyond the scope of this study.

This study is structured as a series of three reports as follows:

- This first report focuses on comparative, function-based review of the existing RFMO trade and catch documentation schemes and the forthcoming EC IUU regulation. This type of analysis may be particularly useful for initial discussions regarding the development of new schemes aiming to satisfy both RFMO and EC requirements. This first report is based solely on publicly available materials and focuses on the schemes' design rather than submitted data.
- The second report will examine, to the extent possible, the data submissions to each scheme, and the current and potential use of these data. This analysis will aim to illustrate whether the potential functionality identified in the first report is actually being achieved.
- The third report will apply the lessons of the first two reports to specific cases of scheme development. This will involve providing information which could support efforts by the Western and Central Pacific Fisheries Commission (WCPFC) and a private-sector initiative in the Indian Ocean to develop their own schemes. To the extent possible, it will consider the costs and benefits associated with adopting current best practice in the development of these schemes.

1.4 Purpose and Objectives of this Report

As there is already a large volume of literature available on this topic, this report attempts to provide three specific, new contributions:

- It aims to provide a brief, clear, and readable summary of the development and key characteristics of existing schemes;
- It endeavours to provide an up-to-date description of important developments in trade-based measures, including the establishment of new catch documentation schemes in 2008 and the EC IUU regulation to be implemented in January 2010; and

- It seeks to move beyond previous comparisons of formats to a functional review of how the current systems can and do perform against reasonable expectations of what a trade-based scheme can deliver.

This report does not analyse the costs and benefits of each scheme, nor does it attempt to examine whether any of the schemes constitute barriers to trade. Given the lack of evidence to the contrary, it is assumed that all currently implemented schemes are cost-effective and not unfairly trade-restrictive. Cost issues will be discussed in conjunction with specific schemes in the third report in this series.

2 A Short Summary of Catch and Trade Documentation Schemes

There are many sources of information about the various RFMO trade and catch documentation systems currently in place, i.e. those established by the Commission for the Conservation of Antarctic Marine and Living Resources (CCAMLR), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for Conservation of Atlantic Tunas (ICCAT), and the Indian Ocean Tuna Commission (IOTC). A summary of information sources describing details of the schemes themselves, reviews of individual scheme's performance, and comparative reviews among schemes is given in Table 1. The Western and Central Pacific Fisheries Commission (WCPFC) has yet to develop a trade or catch documentation scheme and is therefore not shown.

Table 1. Existing sources of information on the latest RFMO Catch and Trade Documentation Systems and the new EC regulation to prevent, deter and eliminate IUU fishing. Schemes which have been, or soon will be, superseded, e.g. the ICCAT bluefin tuna SDP and the CCSBT TIS, are not shown. (CDP – Catch Documentation Programme; CDS – Catch Documentation Scheme; SDP – Statistical Document Programme; TIS - Trade Information Scheme)

<i>Scheme Name</i>	<i>Date of Implementation</i>	<i>Date of Last Update</i>	<i>Scheme Description</i>	<i>Scheme Analysis/Review</i>
CCAMLR toothfish CDS	May 2000	Nov 2008	CCAMLR (2008a)	Agnew (2000); Lack and Sant (2001); Baird (2005); Sabourenkov and Miller (2004)
CCSBT southern bluefin tuna CDS	Jan 2010	Oct 2008	CCSBT (2008)	Joint Tuna RFMOs (2009a)
IATTC bigeye tuna SDP	Mar 2003	Jun 2003	IATTC (2003)	Joint Tuna RFMOs (2007b, 2009a)
ICCAT bluefin tuna CDP	June 2008	Nov 2008	ICCAT (2007a, 2008)	Joint Tuna RFMOs (2007b, 2009a)
ICCAT bigeye tuna SDP	Sep 2002	Nov 2001	ICCAT (2001a)	Joint Tuna RFMOs (2007b, 2009a)
ICCAT swordfish SDP	Sep 2002	Nov 2001	ICCAT (2001b)	Joint Tuna RFMOs (2007b, 2009a)
IOTC bigeye tuna SDP	July 2002	Dec 2003	IOTC (2001, 2003)	Joint Tuna RFMOs (2007b, 2009a)
EC IUU Regulation	Jan 2010	Sep 2008 (Implementing Regulations in prep)	European Union (2008)	-
(Various)	-	-	-	FAO (2002); COFI (2004, 2006, 2008); Joint Tuna RFMOs (2007b, 2009a); Kirkwood and Agnew (2007); Lack (2007, 2008); Roheim and Sutinen (2006).

In addition to the RFMO schemes, Table 1 also includes the forthcoming EC regulation to prevent, deter and eliminate IUU fishing. However, since the regulation has not yet been implemented, information is currently limited. A programme designed to certify tuna as dolphin-safe under the Agreement on the International Dolphin Conservation Program (AIDCP) was considered by an FAO-led expert consultation to be “significantly different from programmes adopted by the other RFMOs, in that its primary purpose is unrelated to efforts to combat IUU fishing” (FAO 2002). For this reason, the AIDCP certification is not included in this study.

Given the volume of existing literature, there is clearly no need to re-summarise each individual scheme here. Instead, an overall review tracing the establishment of schemes in each of the five RFMOs as well as how new features have been adopted by one scheme and then transferred into others is presented (Figure 1)¹. Since the following discussion describes the major developments and themes, and is not intended to describe every modification to each scheme, please refer to the sources in *Table 1* for more detailed information.

2.1 In the Beginning: the ICCAT bluefin SDP and its offspring

The ICCAT bluefin (*Thunnus thynnus*) SDP was the first of the catch- or trade-based documentation schemes and was implemented in September 1992. This scheme, like all of the SDPs which flowed from it, i.e. the ICCAT swordfish (*Xiphias gladius*) SDP, the ICCAT bigeye tuna (*Thunnus obesus*) SDP, the IOTC bigeye SDP and the IATTC bigeye SDP, only applies to fish which are imported (i.e. domestic landings are excluded) (ICCAT 1992). In addition, imported fish may be exempted from the requirement to show a statistical document when they have been tagged by the exporting State, or recorded in an ICCAT-approved logbook or database (ICCAT 1992; Joint Tuna RFMOs 2007a). When the ICCAT bluefin SDP was first established, it only applied to frozen products, but it was extended to fresh products in 1993 (ICCAT 1993a). An amendment agreed in 1994 required Parties to ICCAT to submit statistical documents for imports of bluefin regardless of whether the bluefin was harvested in the ICCAT Convention Area (ICCAT 1994a, b). Over the years of operation, other modifications were made to the scheme on a regular basis, but one particularly significant amendment was agreed in 1997 requiring documentation of re-exports in addition to imports, and cross-checking of import and re-export documents and quantities (ICCAT 1997).

¹ Even though the terminology varies from one RFMO to another, in the following discussion all citations of RFMO conservation and management measures refer to instruments which are binding on all contracting parties.

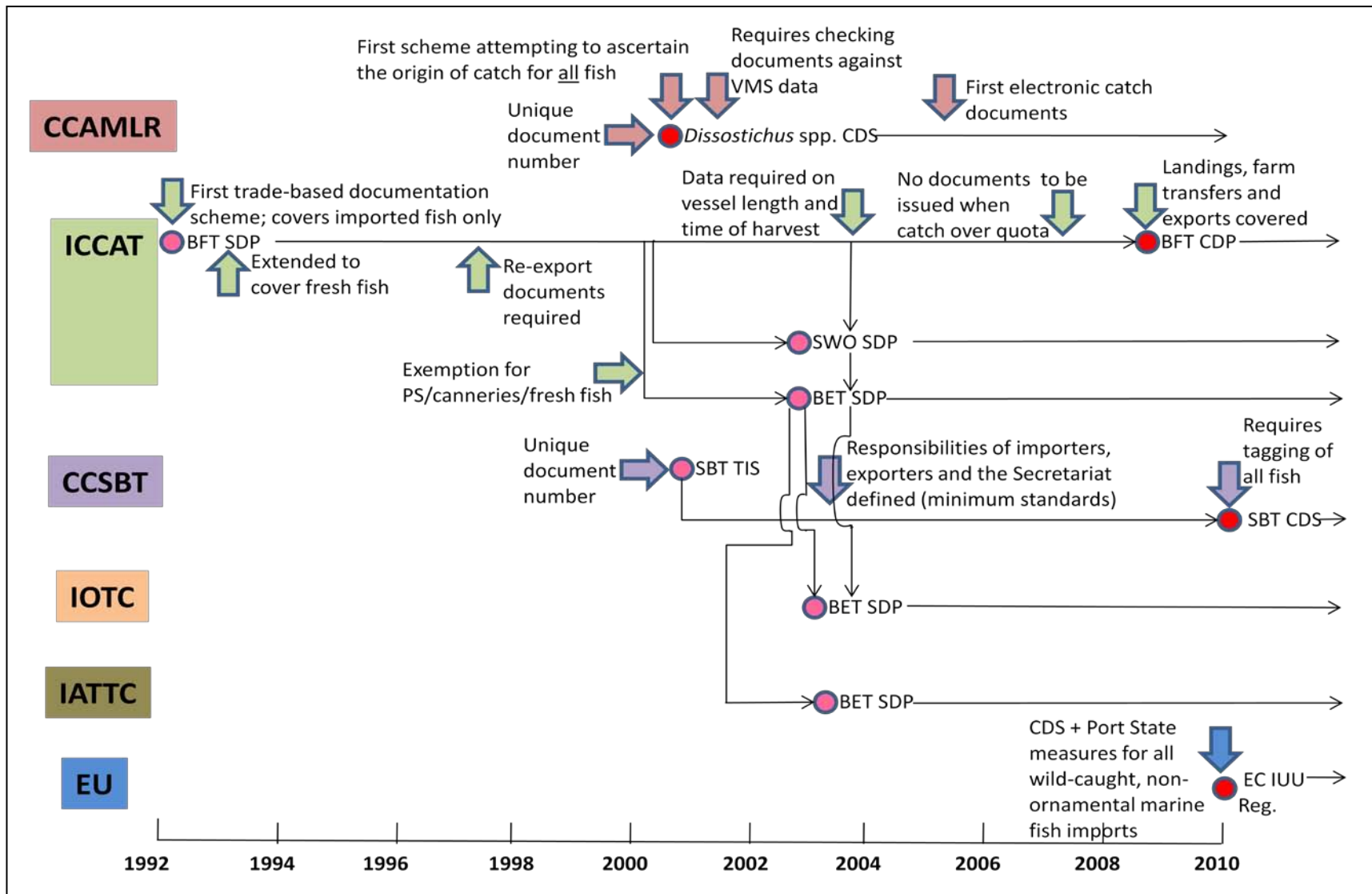


Figure 1. Establishment of trade and catch documentation schemes, and development of their key features, in five Regional Fisheries Management Organizations (RFMOs) and the European Community's Regulation to Prevent, Deter and Eliminate IUU Fishing.

When ICCAT established the swordfish and bigeye SDPs in 2001, the requirements for both import and re-export documentation were included in both schemes (ICCAT 2001a, b). However, fresh fish were excluded from the ICCAT bigeye SDP. In order to expand the coverage and effectiveness of the bigeye SDP, ICCAT asked for IATTC and IOTC to consider adopting compatible schemes (IATTC 2002). This was agreed by IOTC in 2001 (IOTC 2001) and by IATTC in 2003 (IATTC 2003). These two additional bigeye SDPs were in effect identical to the ICCAT bigeye SDP, maintaining the requirements for both import and re-export documents and excluding fresh bigeye. The ICCAT SDPs' data requirements were updated in 2003 to include information on catching vessel length and time of harvest (ICCAT 2003). This was reportedly aimed at avoiding forgery or misinformation, and at facilitating better implementation of the scheme. These changes were subsequently reflected in an amendment to the IOTC bigeye SDP (IOTC 2003) but no change was made to the IATTC bigeye SDP.

Another major amendment was made to the ICCAT bluefin SDP in 2006 (ICCAT 2006a). This amendment requires that flag States issue statistical documents only when “the accumulated export amounts are within their quotas or catch limits of each management year, and comply with other relevant provisions of the conservation and management measures”. This resolution also required that importers only accept statistical documents which have been issued in compliance with this provision. This measure appears to have been carefully worded to address concerns about quota control by some Parties but at the same time overcome objections voiced by other Parties. The objectors insisted that it is the sole responsibility of the flag State to maintain catches within its quota, and that any attempts by other Parties to interfere with or provide oversight to this process could lead to unilateral and discriminatory trade measures. This amendment was not applied to the ICCAT bigeye or swordfish SDP nor was it adopted by IOTC or IATTC.

2.2 Meanwhile in the Southern Ocean: CCSBT and CCAMLR developments

Meanwhile in the southern ocean two other RFMOs were developing trade and catch documentation schemes for different species. CCSBT instituted a Trade Information System (TIS) for southern bluefin tuna (*Thunnus maccoyii*) in June 2000. This system has many elements in common with the ICCAT bluefin SDP including requirements for both import and re-export documentation at a similar level of detail, and coverage of the species regardless of the area of harvest. Despite these general similarities, the CCSBT TIS developed four key features which distinguish it from the ICCAT SDPs. The first of these is the requirement for a unique number on each document as means of preventing fraud. The second feature involves providing specific instructions for handling farmed tuna and requiring that farmed and wild quantities be recorded separately. The third key difference from ICCAT's SDPs is CCSBT's TIS requirement for exporters, as well as importers, to submit data to the Secretariat for comparison and reconciliation. Finally, in an October 2003 amendment to the scheme, CCSBT instituted minimum standards for completion of the documents specifying the responsibilities of the importers, exporters and the Secretariat for ensuring the information on the documents is correct and complete (CCSBT 2006).

In May 2000, just one month prior to implementation of CCSBT's TIS, CCAMLR instituted the world's first catch documentation scheme (CDS) (Agnew 2000, Sabourenkov and Miller 2004, CCAMLR 2008a). Unlike all other schemes up until this point, the CCAMLR CDS for Patagonian toothfish (*Dissostichus eleginoides*) and Antarctic toothfish (*Dissostichus mawsoni*) requires identification and verification of catch information against the vessel's authorisation to fish and, through an amendment in 2001, potentially through its vessel monitoring system (VMS) records (CCAMLR 2001a; Sabourenkov and Miller 2004). The CDS tracks landings and transshipments, and is linked to associated port State measures. It also covers trade by requiring that every import or export/re-export be accompanied by a valid export-validated or re-export validated, uniquely numbered document. After recognising that the scheme was being compromised by the lack of cooperation of some fishing and trading nations (CCAMLR 2000a), CCAMLR expanded the list of parties participating in the CDS to 24 (EC countries counted as 1) by June 2002. Nine other non-participating parties were identified for attention, and by 2004 one of these, Canada, had also implemented the CDS (Sabourenkov and Miller 2004). CCAMLR was the first RFMO to establish a fund to channel the proceeds from the sale of seized toothfish into anti-IUU fishing projects (CCAMLR 2000b, CCAMLR 2001b) and to pilot electronic document submission and data management procedures (CCAMLR 2004a).

2.3 Following CCAMLR's Lead: movement toward CDS in two tuna RFMOs

As implementation of the CCAMLR CDS proceeded, two other RFMOs continued to consider the need for full catch documentation systems. CCSBT was the first to decide to implement a catch documentation scheme for tuna in 2006 but the details were not agreed until 2008 and the scheme will not be implemented until January 2010 (CCSBT 2008). ICCAT established its Catch Document Program (CDP) for bluefin tuna in 2007 which became effective in June 2008 making it the first functioning catch documentation scheme for a tuna species. Both systems are broadly consistent with the CCAMLR CDS but include additional provisions for tracking activities related to fish farming.

The ICCAT bluefin CDP differs from the former ICCAT bluefin SDP by expanding documentation requirements from imports and re-exports to all landings, deliveries to farms and harvests from farms (ICCAT 2007a). However, its application to catch and farming activities is limited to the ICCAT Convention Area. Unique document numbers are now required and Contracting Parties must now report total quantities landed, transferred to/from farms, imported, exported and re-exported, rather than only imports and re-exports, to ICCAT. Similar to the former ICCAT bluefin SDP, electronic document submission is encouraged but not required (ICCAT 2006b), and documents are not required for fish which are tagged (ICCAT 1992, ICCAT 2007a). The CDP, like the SDP, remains based on two forms: the Catch Document and the Re-Export Certificate.

In contrast, the CCSBT Catch Documentation Scheme (CDS), while covering a similar range of points along the supply chain as the ICCAT bluefin CDP, will comprise five forms: a Farm Stocking Form, a Farm Transfer Form, a Catch Monitoring Form (for transshipment, exports, domestic landings and imports), a Re-export or Export after Landing of Domestic Product Form, and a Catch Tagging Form. The latter must be submitted in electronic format but the other

forms may be either paper or electronic submissions. Under the new CCSBT CDS all southern bluefin must be tagged at the time of kill unless exceptional circumstances apply (CCSBT 2008).

2.4 A Far Greater Impact on the Fish Trade: the EC's IUU regulation

Beginning in late 2007, the EC began consultation on a suite of measures designed to prevent, deter and eliminate IUU fishing. These efforts culminated in Council Regulation (EC) 1005/2008 enacted in September 2008 (European Union 2008). The regulation features elements of port State measures such as prior notification of landing, catch certification and vessel blacklists like the NEAFC Port State Control scheme, but also incorporates elements of catch documentation schemes like CCAMLR's and ICCAT's by requiring documents proving the legality of the catch before authorizing its import to the EC. Although its elements are therefore not new, CR 1005/2008 is likely to have a far greater impact on the fish trade than any of the catch or trade documentation schemes currently in place. This is because the EC regulation applies to all wild-caught marine fish, other than ornamental species, imported to the EC— a trade comprising over 7 million mt of fish in 2007 (FISHSTAT 2009)². Some sources have estimated imports of IUU fish into the EC each year are as high as 1 billion Euros (ACP 2009).

Despite the far-reaching scope of the new regulation it does not apply to landings of fish by EC vessels. Furthermore, it would only apply to trade of EC-caught fish if those fish are first landed in a third country and then imported to the EC (e.g. Spanish-caught Indian Ocean tuna landed in Mauritius and exported to the EC). Fishing and fish trade activities within the EC (including national waters), and related activities of EC nationals operating outside of the EC are intended to be regulated under a separate Control Regulation. Consultation on this Control Regulation has begun but it is part of a broader process of reforming the control system of the European Union's Common Fisheries Policy (European Commission 2009b). Changes in current regulations are not expected until sometime after January 2013 (European Commission 2009c). In addition to compliance costs and capabilities, the potential for the regulation to create discriminatory trade barriers is a major concern among developing countries (ACP 2009).

With regard to its proposed fish documentation systems, the EC regulation provides for catch documents issued under certain RFMO catch documentation schemes to be accepted in lieu of the catch certificates required by the regulation (CR 1005/2008, Article 13). The list of RFMO schemes recognized as complying with the requirements of the EC regulation will be released as part of the Implementing Regulation (not yet published as of the time of writing). Given that the EC regulation refers specifically to catch documentation schemes, it may be inferred that only the RFMO CDSs (i.e. CCAMLR CDS for toothfish, CCSBT CDS for southern bluefin, and ICCAT CDS for Atlantic bluefin) will be recognised. If all fish from these fisheries are imported by the EC, this would represent approximately 75,000 mt per annum³, approximately 1% of total EC imports. Even so, a recent report commissioned by the EC raised concerns regarding

² Some of this quantity may be intra-EC trade reported as imports by individual EC members (imports by Italy from Spain) and tallied in the database to present an EC import total.

³ Based on average annual reported catches of Atlantic bluefin tuna, southern bluefin tuna, Patagonian toothfish and Antarctic toothfish for 2005-2007 in FISHSTAT (2009).

transparency, variable standards of implementation and lack of a standardised means of independent audit in most existing RFMO schemes (Megapesca 2009), suggesting the possibility that some of the RFMO CDS schemes may not be recognised by the EC as compliant with the regulation.

3 Harmonisation – History and Outlook

The preceding section has demonstrated that while various RFMOs have developed trade and catch documentation systems separately, many of them contain common features. This section describes past and present attempts at harmonising the schemes. Many of the harmonisation efforts described below were initiated without first defining their purpose or scope. As result, different views on the intent of harmonisation hindered progress. One view held that harmonisation should be primarily focused on standardisation of the document formats. These harmonisation efforts were motivated by a desire to reduce the paperwork burden on fishermen, traders, processors and government officials, as well as promote compliant submissions. As described below, many of the early attempts at harmonisation appeared to aim at this goal. According to another viewpoint, however, harmonisation was less about form and more about content. In this way of thinking, schemes should be compatible in the range of activities they cover and the verification functions they serve. This approach involves much more than a comparison of formats; it is premised on being able to define a set of common objectives for all schemes.

As the following chronology and outlook sections highlight, the second view appears to have emerged only after several years of discussion and still seems fraught with complications. However, as will be argued later in this report, major improvements in catch documentation will not be achieved unless there is a shift away from scheme-by-scheme format reviews and towards identifying the high-level objectives that all schemes seek to achieve. Other potential problems relating to species identification, effective scheme coverage, and flag, port and trade State responsibilities will also need to be addressed.

3.1 A Brief History of Harmonisation Efforts

The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) adopted by FAO's Committee on Fisheries in March 2001 contained two clauses relating to RFMO documentation schemes (**emphasis added**):

*Clause 69. Trade-related measures to reduce or eliminate trade in fish and fish products derived from IUU fishing could include the adoption of multilateral catch documentation and certification requirements, as well as other appropriate multilaterally-agreed measures such as import and export controls or prohibitions. Such measures should be adopted in a fair, transparent and non-discriminatory manner. **When such measures are adopted, States should support their consistent and effective implementation.***

and

Clause 76. **Certification and documentation requirements should be standardized to the extent feasible, and electronic schemes developed where possible, to ensure their effectiveness, reduce opportunities for fraud, and avoid unnecessary burdens on trade** (FAO 2001).

These calls for consistency and standardisation resulted in an FAO-led expert consultation in March 2002 on RFMO catch certification harmonisation. This consultation produced two lists of items (data) to be included in trade and catch documentation forms, respectively, and a recommended standard format, but did not document the rationale for including certain data items on the list (FAO 2002). The results of the expert consultation were discussed at COFI and COFI's Subcommittee on Fish Trade (COFI/FT) meetings in subsequent years but little progress was reported (COFI 2004, COFI 2006). The COFI/FT meeting in 2006 noted that a meeting of Regional Fisheries Bodies held in 2005 "acknowledged that catch documentation harmonization is a complex and highly technical issue and it is also necessary to ensure that schemes are kept simple, achievable and, as far as possible standardized." COFI/FT itself produced a table comparing the data requirements of the six SDP/CDS schemes against the FAO Expert Consultation recommendations and concluded that while the schemes were "broadly similar [...] they cannot, however, be regarded as 'harmonized'" (COFI 2006).

By 2008 the COFI/FT had concluded:

"there was little enthusiasm by RFMOs to modify the formats of the trade documents that are currently operational. [...] Rather than attempt to harmonize the documents themselves, it may be possible to harmonize the information collected in the documentation scheme so that data from all TDS and CDS schemes are compatible. [...] This would enable RFMOs to have consistent data, which could be used for cross-checking." (COFI 2008)

In its last recommendations on this topic (COFI 2009), FAO appeared to be stepping back from the issue and suggesting that its role in the harmonisation of catch documentation schemes should be limited to perhaps developing best practice and integrated traceability guidelines.

As the FAO has relinquished its lead on this issue, it has been taken up by the Joint Tuna RFMOs forum which held its first meeting in Kobe, Japan in January 2007. One of four priority actions agreed at this meeting was "harmonization and improvement of the trade tracking programs and, as appropriate, development of catch documentation including tagging systems as required" (Joint Tuna RFMOs 2007b).

The Kobe agreement led to a Joint Tuna RFMO Working Group on Trade and Catch Documentation Schemes (Joint Tuna RFMOs 2007a) in Raleigh, United States in July of the same

year. In contrast to previous forums which had focused on comparing the existing SDPs, discussion centred on gaps in coverage of SDPs and the slow rate of progress in improving the SDPs. As a result, there was general agreement that “SDPs had major shortcomings and that movement to catch documentation schemes [...] was needed”. However, varying opinions were expressed regarding whether all RFMO-managed species should be covered by CDSs and regarding the pace of migration from SDPs to CDSs. A proposal was submitted to this meeting by Canada, the EC and US identifying eight elements of best practice in trade tracking programmes, presumably referring to the trade-based elements of both trade and catch documentation schemes. Japan submitted a proposal for a harmonized SDP for bigeye tuna applicable to all oceans (Joint Tuna RFMOs 2007a).

Since the 2007 Raleigh meeting, ICCAT discontinued its bluefin SDP, replacing it with a CDP (ICCAT 2007a, 2008) and CCSBT agreed to implement a CDS to replace its TIS (CCSBT 2008). Despite these two major but separate improvements in individual schemes, there was no progress on harmonisation to report at the Second Joint Meeting of Tuna RFMOs in San Sebastian in June 2009. Each RFMO presented a summary of the current state of play of its trade or catch documentation scheme (Joint Tuna RFMOs 2009a) and it was agreed to convene another working group on improvement and harmonisation of monitoring and control measures which will address, *inter alia*, extension of bigeye SDPs to cover fresh products and canneries, and minimum standards or best practices for CDSs (Joint Tuna RFMOs 2009b).

3.2 Outlook for Improvement and Harmonisation

During the process of developing RFMO trade and catch documentation schemes since 1992, and as a result of calls for harmonisation since 2001, three major shifts in thinking have emerged. These are:

- Harmonisation need not be focused on standardisation of forms and must be pursued in parallel with scheme improvements;
- The objectives of the various SDPs and CDSs are sufficiently similar that there already exists a compatibility of purpose between schemes; and
- The ability of a given scheme to provide meaningful data may be determined by whether the species of interest can be easily distinguished; whether the key States involved in the fishery or trade participate in the scheme; and whether the flag, port and trade States effectively implement the scheme.

Each of these is discussed separately below.

3.2.1 Harmonisation, not Standardisation per se, and Improvement

Although harmonisation efforts began with attempts at standardisation of forms, it is now acknowledged that this was not the best approach (COFI 2008). Early attempts were characterised by either producing a standardised format that lacked justification (e.g. FAO 2002) or failing to proceed beyond comparison of data fields across schemes (COFI 2006). These efforts were not particularly welcomed by RFMOs (COFI 2006, COFI 2008), and have

become increasingly anachronistic with the introduction of electronic document systems in many aspects of international trade including some of the RFMO schemes themselves. One of the benefits of electronic document schemes is that if common information standards can be agreed amongst RFMOs, data from a variety of paper formats can be held in a single database format common to all RFMOs (COFI 2008). As a result, the need for format standardisation has been eclipsed by the need for consistency and compatibility of information across schemes.

Another concern inherent in harmonisation (and standardisation) is that it will lead to a lowest common denominator scheme. This danger was recognised by the 2007 Raleigh workshop and reflected in language calling for both harmonisation and improvement. The workshop also achieved consensus on the need to convert SDPs to CDSs, thereby shifting the focus of RFMO coordination in this area to upgrading the existing, problematic SDPs (Joint Tuna RFMOs 2007a). The agreements reached in Raleigh were further reinforced by work priorities agreed at the Second Joint Meeting of Tuna RFMOs in 2009, i.e. extension of SDPs and developing best practice standards for CDSs (Joint Tuna RFMOs 2009b). These latest developments emphasise that scheme improvement is the primary objective, and that harmonisation should thus be applied to move schemes toward higher rather than lower standards.

3.2.2 Fundamental Similarities in RFMO Trade and Catch Documentation Schemes

In parallel with the evolution of the concept of harmonisation, there is a growing recognition that the objectives of the various RFMO trade and catch documentation schemes are more similar than they are different. Early coordination efforts seemed stymied by “[difficulties in developing] a harmonized document from the plethora of documentation schemes that exist, especially if the objectives, scope and history of those schemes are different” (COFI/FT 2002 cited in COFI 2008). However, by 2008, the same FAO body had concluded that “Despite some differences in wording, the main objectives of all RFMO TDS and CDS schemes are 1) to improve catch statistics for stock assessment purposes; and 2) to assist RFMOs in combating Illegal, Unreported and Unregulated (IUU) fishing” (COFI 2008).

Table 2 lists the objectives of the latest versions of each RFMO’s scheme(s) and classifies each objective against the two consolidated objectives given in COFI (2008). Those objectives which relate to obtaining better estimates of catches or which otherwise link to scientific information, are classified under COFI (2008) Objective 1. Those objectives which specifically mention compliance or IUU, or relate to product traceability or trade are classified under COFI (2008) Objective 2. With the exception of one of the objectives of the ICCAT CDP which combines catch data and compliance (i.e. “improve control on catches and ensure compliance with conservation and management measures”), the COFI (2008) consolidated objectives provide a framework which illustrates the strong similarities in the objectives of the various schemes. This analysis thus confirms the conclusion of COFI (2008) that all the existing schemes have an overall consistency of purpose despite minor differences in the wording of their objectives.

Two key points concerning the analysis in *Table 2* require further comment. The first relates to the expansion of COFI (2008) Objective 2 (“assist RFMOs in combating IUU fishing”) to include compliance with RFMO conservation and management measures (CMMs) in general. In fact,

contravention of RFMO CMMs by vessels flagged to States bound to comply with those CMMs through their membership in the RFMO is a form of “illegal” fishing, and thus a form of IUU fishing (FAO 2001). Furthermore, misreporting (under-reporting) of vessels which are authorized by RFMO-member States to fish in the RFMO’s convention area is a form of “unreported” fishing and is thus also a form of IUU fishing (FAO 2001). Therefore, it seems clear that combating IUU fishing and maintaining compliance with CMMs are integrally related.

Despite this, many of the schemes seem primarily interested in curtailing fishing activities by vessels flagged to non-members (potentially “unregulated” fishing (depending on a number of other circumstances)), rather than using the scheme to check the compliance of vessels authorized by RFMO members to fish. For example, it was not until agreement of an amendment of the ICCAT bluefin SDP in 2006, thirteen years after implementation of the scheme, that validation of statistical documents for which the cumulative amount of catch exceeded the flag State’s catch quota (a form of non-compliance with a CMM and thus a form of “illegal” fishing) was expressly prohibited. In fact most, if not all, of the trade documentation schemes (SDPs and the TIS) are targeted at verifying only the catch of non-members on the assumption that members accurately report their own catches. While some RFMO members have begun to question this, other members have insisted that this limited scope is appropriate⁴.

This difference of opinion has been overcome when agreeing the ICCAT bluefin CDP and the CCSBT southern bluefin CDS: these schemes aim to cover all catches, not just those of non-members or those which enter international trade⁵. However, differing perspectives on the role of trade and catch documentation schemes in combating all three elements of IUU fishing are expected to continue to be an issue in the ongoing debate regarding conversion of the remaining SDPs to CDSs, and in the formulation of new schemes.

⁴ Two examples:

1) At CCSBT9 in October 2002 “Australia and New Zealand expressed concerns with the major weakness of the TIS scheme that was mentioned in the review, which is that it is a trade only scheme and does not record catches that are not exported to a CCSBT member, including Japan’s entire catch. [...] Japan pointed out that the original purpose of the TIS was to better account for the catch from non-members and that catch by the Members was already being reported” (CCSBT 2002).

2) At the 2nd Meeting of the ICCAT Working Group to Review Statistical Monitoring Programmes in April 2006 “Several suggestions [for improving the SDPs] were put forward including: using a secure internet site for rapid exchange of information between importing and exporting States; increasing the frequency of reporting to ICCAT; an electronic system to improve access to data; *providing cumulative catch information by flag States and chartering States on the ICCAT website; and monitoring of trade data by the importer or the Secretariat who would notify a flag State when it was approaching its quota limit (emphasis added)*. Many Parties had concerns with these suggestions, particularly the last two items, because they felt it was the sole responsibility of the flag State to maintain catches within its quota and any alleged failure to do so should be brought to the attention of the Commission via the Compliance Committee. There was also concern by some that the issue of catch data reporting was beyond the scope of the working group terms of reference” (ICCAT 2007b).

⁵ The ICCAT bluefin CDP chapeau notes “the need for improved and strict control on all the components involved in the bluefin tuna fisheries” (ICCAT 2007a). The CCSBT agreed “a performance measure that the CDS must be capable of accounting for at least 95% of all sources of fishing mortality of southern bluefin tuna” (CCSBT 2005).

Table 2. Objectives of the latest RFMO trade and catch documentation schemes compared against the COFI (2008) objectives of improving catch statistics for stock assessment purposes (COFI (2008) Objective 1) and assisting in combating IUU fishing (COFI (2008) Objective 2).

Scheme (Date of Implementation)	Objectives	COFI (2008) Objective 1	COFI (2008) Objective 2	Reference
CCAMLR <i>Dissostichus spp.</i> CDS (May 2000)	<ul style="list-style-type: none"> To track landings of, and the world trade in, toothfish caught both inside and outside the Convention Area. To restrict access to international markets of toothfish taken by IUU fishing in the Convention Area. To facilitate the determination of whether toothfish taken in the Convention Area were caught in a manner consistent with CCAMLR conservation measures. 	✓	✓ ✓	Sabourenkov and Miller (2004)
IOTC bigeye tuna SDP (July 2002)	<ul style="list-style-type: none"> To reduce uncertainty in total catch figures of bigeye tuna in the IOTC Convention Area, particularly with regard to “flag of convenience” vessels. To assist the Commission's efforts to eliminate IUU fishing. 	✓	✓	IOTC (2001)
ICCAT bigeye tuna SDP (Sept 2002)	<ul style="list-style-type: none"> To reduce uncertainty in total catch figures of Atlantic bigeye tuna. To assist the Commission's efforts to eliminate IUU fishing. 	✓	✓	ICCAT (2001a)
ICCAT swordfish SDP (Sept 2002)	<ul style="list-style-type: none"> To improve the reliability of statistical information on Atlantic swordfish, particularly with regard to non-Contracting Parties. To assist the Commission's efforts to eliminate IUU fishing. 	✓	✓	ICCAT (2001b)
IATTC bigeye tuna SDP (March 2003)	<ul style="list-style-type: none"> To reduce uncertainty in total catch figures of bigeye tuna in the EPO, particularly with regard to “flag of convenience” vessels. To assist the Commission's efforts to eliminate IUU fishing. 	✓	✓	IATTC (2003)
ICCAT Bluefin Tuna CDP (June 2008)	<ul style="list-style-type: none"> To improve control on catches and ensure compliance with conservation and management measures. To provide strict tracking from the point of capture to the final market. To help support scientific research 	✓ ✓	✓ ✓	ICCAT (2007a)
CCSBT Southern Bluefin Tuna CDS (Jan 2010)	<ul style="list-style-type: none"> To identify, quantify and/or validate the catch of Members, Cooperating Non-members and Non-Cooperating States. To ensure traceability of legitimate product flow to the point of first sale. To provide tools to restrict the trade of non-cooperating non-members. 	✓	✓ ✓	CCSBT (2005)

The second point of clarification regarding *Table 2* pertains to the degree of overlap between the objectives of improving catch statistics and combating IUU fishing. If, as discussed above, the term IUU fishing is used to refer to catches by non-members then it is sufficient to simply determine the identity (flag) of the fishing vessel and whether it was fishing inside the RFMO's convention area. If the objective of combating IUU fishing is more expansive and includes non-compliance with CMMs, potentially by vessels authorized to fish by RFMO members, then the data required to assess compliance may go beyond simple catch statistics to encompass issues such as whether an observer was present, whether transshipment occurred, and/or whether VMS requirements were met. In addition, objectives relating to obtaining better scientific information for stock assessment could be served by a narrower range of data requirements than full compliance monitoring (*Figure 2*). When designing trade and catch documentation programmes the complementarity of scientific and compliance objectives in trade and catch documentation programmes should be explicitly addressed, drawing suggestions for improvement from existing experience with linking catch and trade data (e.g. Restrepo 2004).

It should be noted that the forthcoming EC IUU regulation is purely concerned with combating IUU fishing and does not aspire to improve catch statistics. There are currently no mechanisms proposed by which the large amount of data collected under the EC scheme will be used to improve, or otherwise cross-check, catch statistics and thereby improve the scientific basis for management.

Caught...

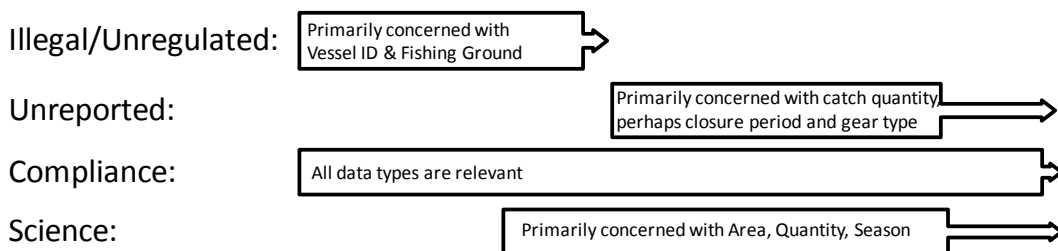
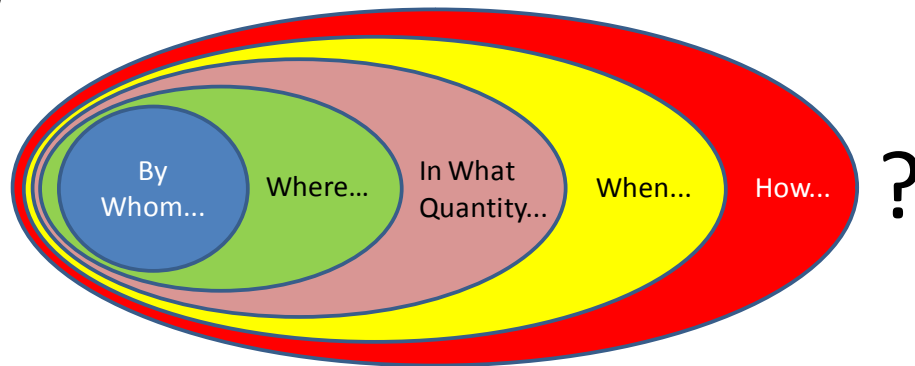


Figure 2. Schematic diagram of data types needed for compliance (illegal/unregulated vs unreported) and science purposes.

3.2.3 Differences in Species Identification, Effective Coverage of the Scheme and Flag/Port/Trade State Responsibilities

The preceding sections have described two emerging trends in thinking about trade and catch documentation schemes: that compatibility of objectives is more important than standardisation of forms; and that all of the existing RFMO schemes' objectives are already more similar than they are different. In combination, these factors suggest that harmonisation efforts should focus on achieving similar levels of functional performance among schemes, perhaps through identifying and applying current best practice, rather than modifying formats or objectives *per se*. Before pursuing this theme further in *Section 4*, it is necessary to first acknowledge that accumulated experience with the existing schemes has highlighted weaknesses which are, at times, highly specific to the RFMO and fishery being covered. This section explores the prospects of overcoming RFMO-specific differences in the pursuit of effective and consistent scheme performance.

SPECIES IDENTIFICATION

One of the major obstacles to improvement of the existing SDPs for bigeye, and to the expansion of trade and catch documentation systems to other species, is the ability to separate and identify the species of interest from mixed catches. This is likely to be a particularly problematic issue when large quantities of the species in question are taken in purse seine fisheries⁶. This is both because purse seine fleets are often servicing canning operations which do not require that catches be precisely sorted to species before processing, and because identification of juvenile tuna, which are often caught by purse seines, is problematic. These difficulties were side-stepped by the bigeye SDPs implemented by ICCAT, IOTC and IATTC by exempting all purse seine and pole and line-caught bigeye destined for canneries from the schemes (ICCAT 2001a, IOTC 2001, IATTC 2003). Unfortunately, experience with other species such as toothfish, Atlantic bluefin tuna and southern bluefin tuna, all of which are or will be soon covered by CDSs, will not assist in solving this problem, as these species are caught in smaller quantities and/or can be reliably identified at the time of capture.

One possible solution lies with ongoing efforts to improve purse seine catch species composition data for scientific purposes. Some studies are underway to develop improved sampling and estimation techniques, but until these methods are confirmed to be both reliable and practical, and until they are widely adopted, it is expected that lack of accurate species-specific catch data will continue to hinder the further development of trade and catch documentation schemes for species caught by purse seine. Another option could be to explore documentation schemes based on gear types rather than species (e.g. a documentation scheme for quantities of mixed tuna (skipjack, yellowfin, juvenile bigeye) caught by purse seiners or pole and line for canneries). This option would sacrifice some of the potential scientific objectives of a documentation scheme but would still fulfil compliance objectives.

⁶ Worldwide approximately 70% of the tuna catch is taken by purse seiners including 45% of the Atlantic catch, 39% of the Indian Ocean catch and 72% of the Pacific catch. Reported species composition of purse seine catches indicates that about 75% of the catch is skipjack tuna (*Katsuwonus pelamis*) with yellowfin tuna (*Thunnus albacares*) and bigeye comprising the remainder (Miyake *et al.* in prep).

EFFECTIVE COVERAGE OF THE SCHEME

Another substantive issue to be faced when improving existing or formulating new schemes is the effective coverage of the scheme. CMMs, including trade-based CMMs, agreed by an RFMO are binding upon its members and cooperating non-members, and may be voluntarily adopted by non-members. Problems may arise when key players are not required to comply, and do not opt to voluntarily comply, with these CMMs. It could be argued that such problems are more likely when RFMOs adopt trade-based measures: most key players in the fishery itself would be expected to already be members of the RFMO, but this is not necessarily the case for key players in the trade⁷. While this certainly is an issue for trade-based CMMs, it is actually also an issue for fishery-based CMMs, particularly with the continuing re-flagging of fishing vessels from member States to non-member States without a history of fishing in the area. In the case of both fisheries and trade, increasing the number of member or cooperating non-member States bound by the CMMs will increase the coverage and should increase the effectiveness of the scheme (see below).

Both CCAMLR and CCSBT have had some success in dealing with these issues. CCAMLR actively persuaded several non-members to either join CCAMLR or to adopt the CDS because of their role in the toothfish trade. This resulted in Namibia and China joining CCAMLR, and Canada, the Seychelles and Singapore agreeing to implement the CDS (Sabourenkov and Miller 2004; N. Slicer, pers. comm). After recognising that the diversity of the market for southern bluefin was expanding beyond its list of six members and three cooperating non-members, CCSBT sought to expand the number of parties participating in the TIS. These efforts resulted in the implementation of regulations in the United States for trade tracking of southern bluefin tuna as of 1 July 2005 (NOAA 2004).

These examples demonstrate that it has been possible to extend coverage of some schemes through RFMO membership expansion and/or through voluntary agreements which are scheme-specific and do not relate to membership. Therefore current member and cooperating non-member States do not necessarily need to include all of the States critical to effective implementation of trade-based measures at the time of establishment.

FLAG, PORT AND TRADE STATE RESPONSIBILITIES

The final issue pertains to the responsibilities of the flag, port and trade States to effectively implement the documentation schemes. Although the RFMO is responsible for designing the scheme, the quality of information provided in the submissions largely depends on the rigour with which the flag, port or trade State implements the scheme. Obviously flag, port and trade State capacity varies and each RFMO arguably has members which provide highly reliable information and those which do not. It is thus useful to examine what steps have been taken by different RFMOs to ensure that data provided by members are of consistently acceptable quality.

⁷ For example, there may be countries with major canneries supplied by the RFMO Convention Area but limited or no fishing operations under their flag in the Convention Area.

One of the most basic features of all the schemes is that they require States to designate specific authorities as responsible for validating documents and to provide the RFMO with their credentials. This does not however necessarily ensure the quality of the submitted information. As a further step, the CCSBT TIS, in recognition of ongoing problems with missing, illegible and incorrect information, adopted minimum standards for document acceptance in 2003 (CCSBT 2003). These standards placed explicit responsibilities on importers, exporters and the Secretariat to verify the accuracy and completeness of certain portions of the documents. Also unique to the CCSBT TIS is designation of the CCSBT Executive Director as responsible for cross-checking submitted import and export documentation (CCSBT 2006)⁸. This TIS feature provides a minimum guarantee that initial discrepancies can be identified by a neutral party, rather than leaving this responsibility with the parties involved in the trade.

The most rigorous verification requirement to date has been instituted by CCAMLR in relation to the catch location. The use of satellite-based VMS on all toothfish vessels licensed by CCAMLR members to fish in the Convention Area has been compulsory since 1998 (Sabourenkov and Miller 2004) and, since 2004 has included centralised VMS reporting of vessel positions to the CCAMLR Secretariat. States receiving toothfish via landings, transshipments or imports are able to seek VMS-based verification from the Secretariat that the catch location shown on the toothfish catch document is accurate (CCAMLR 2004b, Clause 22)⁹. This feature of the CCAMLR CDS represents the potentially most intrusive step an RFMO has yet taken in prescribing how States should fill in and validate their catch documents. The CCSBT TIS and the CCAMLR CDS thus provide examples of both the need to, and the feasibility of, prescribing standards that flag, port and trade States must meet. These examples suggest that improvements in trade-based documentation systems may require that more and higher standards be imposed on participating States¹⁰.

HANDLING OF THESE THREE ISSUES UNDER THE EC IUU REGULATION

These three issues, i.e. species identification, effective coverage of the scheme, and flag, port and trade State responsibilities, have been handled under the new EC IUU regulation in ways which are not particularly helpful when considering RFMO trade-based schemes. Most importantly, by requiring catch certificates for all fish species imported to the EC from any country, the EC IUU regulation largely avoids problems associated with schemes of limited scope (i.e. both species and member States). The approach of the EC IUU regulation with regard to flag, port and trade State responsibilities is to require notification that the flag State “has in place national arrangements [for controlling] fishing vessels” and that its nominated “authorities are empowered to attest the veracity of the information contained in catch

⁸ As described in CCAMLR (2008) the latest version of the toothfish CDS provides for import and export documents to be promptly submitted to the Secretariat but the responsibility for cross-checking the import and export documents remains with the States participating in the scheme. Under the other SDPs and the ICCAT bluefin tuna CDP, import documents are provided via the Secretariat to the export State for cross-checking. The export State is responsible for reporting the results of the cross-check in their annual report.

⁹ As of September 2007, the United States requires use of the CCAMLR VMS as a condition for the import of toothfish into U.S. markets (NOAA 2007).

¹⁰ Internal auditing of documents submitted under each scheme is the subject of more detailed analysis in *Section 4.4*.

certificates” (European Union 2008 (Article 20)). No specific guidance is provided regarding the standards for checking the information on the certificates. However, the EC regulation may provide further guidance for linking trade-based documents with sanctions, should information quality be insufficient, through its provisions for an alert system for suspected non-compliant fishery vessels and products, its Community IUU vessel list, and its list of Non-cooperating Third Countries (European Union 2008 (Articles IV-VI)).

4 Functional Review of RFMO and EC Schemes

As argued above and acknowledged by ongoing efforts, the existing trade and catch documentation schemes have slightly different formats and objectives but are fundamentally similar and compatible. Nevertheless their requirements and procedures vary and this can lead to variations in the effectiveness of their performance. This section presents a framework for comparing the requirements and procedures of the RFMO schemes and the EC IUU regulation. This comparison is used to identify current best practice as well as gaps, both of which will be useful in discussions of improvements to existing schemes and development of new schemes. Evaluation of the actual performance of each scheme, based on submitted data and operational history, will be undertaken in Phase 2 of this study.

The comparison below includes the existing RFMO schemes (the four SDPs (three for bigeye and one for swordfish), the ICCAT bluefin CDP, and the CCAMLR CDS) as well as the CCSBT CDS which will be implemented in January 2010. Superseded schemes or those which will soon be phased out are not covered. The EC regulation is included, even though it is not a trade or catch documentation scheme *per se*, because it serves many of the functions of a CDS. Another important reason for including the EC regulation in the review is that there is a high potential for overlap between it and the RFMO schemes. As described in *Section 2.4*, fish from those RFMO schemes which are not recognised by the EC will have to provide both RFMO and EC documentation. In order to avoid this kind of redundancy and inefficiency, improvements to existing schemes and development of new schemes should take account of and aim to fulfil the requirements of the EC regulation where possible. This analysis provides a starting point for these considerations.

4.1 Description of the Review Framework

The framework used to compare the schemes and elucidate current best practices and gaps has three main components:

- **Inclusivity** – This measures the extent to which the scheme is designed to provide documentation for all legally-caught fish of the species/fishery in question. If the sole objective of the scheme is to prevent the products of IUU fishing from reaching the market, inclusivity is not particularly important as long as all fish which do enter the market are properly documented. However, if there are legally caught fish which do not receive documentation, this greatly compromises the usefulness of the scheme for monitoring compliance, including catch reporting. In particular, under such

circumstances, it could not be expected that the number of fish documented would match the number of fish caught. In addition, the potentially wrongful exclusion of otherwise legal fish on the grounds that they lack documentation could be a problem for fair trade. Inclusivity should therefore be as high as possible for maximum effectiveness and defensibility. Therefore current best practice is considered to be found in the most inclusive of the schemes.

- **Impermeability** – This measures the extent to which the scheme is designed to exclude illegal fish. The scheme’s impermeability directly determines its effectiveness for both combating IUU fishing and for monitoring compliance. It should be noted that a scheme may be highly impermeable but not very inclusive. While high impermeability is desirable, marginal improvements in schemes which are already highly impermeable may incur high costs and diminishing returns. Current best practice is defined as those measures which are likely to be most effective in promoting impermeability under each of seven criteria below.
- **Verifiability** – This measures the extent to which the scheme is audited by those other than the parties directly responsible for filling out and validating the forms. The existence of penalties or sanctions for improper documentation is also taken into account. A third issue is the extent to which any audit results are used not only to accept or reject individual shipments, but also to identify patterns in IUU fish trade and/or systemic weaknesses in the scheme. This report considers verifiability based on the theoretical requirements and procedures of the schemes; verifiability will be assessed again in the second report in this study using actual RFMO data and experience. Those schemes which currently have the most robust checks and balances are considered to represent best practice.

The results of the comparisons between the RFMO schemes and the EC regulation for each of the three components are provided below.

4.2 Inclusivity: Including all legal fish

As described above, issues of inclusivity mainly relate to the types and quantities of fish exempted from the schemes. These exemptions may be based on product form (e.g. fresh versus frozen), type of gear used to catch the fish (e.g. purse seines), the use or destination of the fish (e.g. canneries), and/or whether alternative procedures apply which would result in different documents being produced (e.g. tagging) (*Table 3*).

Table 3. Comparison of RFMO schemes and the EC IUU regulation in terms of inclusivity. Current best practice is identified by thick-bordered boxes.

INCLUSIVITY						
Scheme	Swordfish SDP (ICCAT)	Bigeye SDP (ICCAT, IATTC, IOTC)	Bluefin CDP (ICCAT)	Southern Bluefin Tuna CDS (CCSBT)	Toothfish CDS (CCAMLR)	EC IUU Regulation
<i>Exceptions by product form?</i>	By-products excluded.	By-products excluded. Fresh fish excluded.	By-products excluded.	By-products excluded.	No.	No.
<i>Exceptions by gear type?</i>	No.	Purse seine and pole & line (bait) vessel catches destined principally for canneries in the Convention Area exempted.	No.	No.	Toothfish taken as bycatch ($\leq 5\%$ of total catch and < 50 mt) by trawlers on the high seas outside the Convention Area require catch documents but are exempted from VMS verification.	No.
<i>Exceptions by disposition?</i>	Landings are excluded. (Only fish which are imported or re-exported require documents).	Landings are excluded. (Only fish which are imported or re-exported require documents).	No ¹¹ .	No.	No.	Landings by EC vessels into the EC are excluded (but will be covered under a separate Control Scheme).
<i>Exceptions for tagged fish?</i>	No.	No.	Yes (see text).	No.	No.	No.

4.2.1 Exceptions by Product Form, Gear Type and Disposition

All of the tuna and swordfish schemes exclude by-products such as heads, eyes, roe, guts and tails. The extent of trade in these by-products is unknown but is likely to be negligible. Therefore the exclusion of these by-products probably does not have a large effect on the overall inclusivity of these schemes. It is noted, however, that the CCAMLR toothfish CDS and the EC IUU regulation do not exempt by-products of fish species otherwise covered by the schemes.

The bigeye SDPs implemented by ICCAT, IOTC and IATTC exclude all fresh fish and all catches by purse seine or pole and line (bait) vessels destined principally for canneries in the Convention Area. The resolutions establishing these programmes refer to practical problems, including “guidelines to ensure procedures to handle fresh products at customs”, as the reason for the

¹¹ It is not clear whether the ICCAT bluefin CDP (ICCAT 2008) applies to all bluefin catch and trade, as the ICCAT bluefin SDP did (ICCAT 1994a), or only to Atlantic bluefin.

fresh fish exclusion. No rationale for the purse seine, pole and line and cannery-destined exemptions is given in the resolutions. Fresh products, and products caught by certain gear types or for certain types of processing operations, are not exempted under any of the other schemes.

In addition to the exclusions in the bigeye SDPs, another large exclusion is inherent in all of the SDPs. By exempting all domestic landings the SDP documents, by definition, apply to only a fraction of the total catches. While the actual proportion of the catch covered by each of the SDPs will be explored in the second report for this study, FAO statistics can provide an initial indication of quantities¹². In 2007 the total reported catch of bigeye was 433,000 mt but only 129,000 mt of bigeye was recorded as imports (FISHSTAT 2009). These figures suggest that perhaps only 30% of bigeye catches would be recorded under the SDP. This percentage would be even lower if a substantial portion of the recorded imports (i.e. 30%) qualify for one of the other SDP exemptions (fresh or purse seine/pole and line caught and destined for canneries). A presentation given by Japan at the Second Joint Meeting of Tuna RFMOs (Ota 2009) stated that of the 68,096 mt of bigeye reported to ICCAT in 2007, only 29% was covered by the SDP. In contrast, the FAO figures for swordfish (reported catch of 109,000 mt and total imports of 88,000 mt) suggest that over 80% of the catches would be covered by the SDP documentation. It should be noted that the fresh, gear and cannery exemptions do not apply to swordfish.

Aside from the SDPs, the other RFMO schemes are catch documentation schemes and aim to cover all catches regardless of whether the products enter international trade. The EC IUU regulation aims in theory to cover all catches of fish entering the EC market but as of its implementation in January 2010 it will not apply to catches landed into the EC by EC-flagged vessels. The intent is to regulate these catches under a separate Control Scheme, but as this process is embedded in the reform of the European Union Common Fisheries Policy, establishing these procedures is expected to require several years.

4.2.2 Exceptions for Tagged Fish

The final possible exemption relating to inclusivity involves tagging. Two of the schemes, the CCSBT southern bluefin CDS and the ICCAT bluefin CDP, include special provisions for tagged fish. In the CCSBT CDS tags are mandatory and additional documentation is required for the tagging data, i.e. over and above that required on the mandatory catch document. In the ICCAT CDP tagging is optional, but if fish are tagged by the flag State catching the fish they do not require a validated Bluefin Catch Document (BCD) (ICCAT 2008, Clause 9(c)). Nevertheless, there is a requirement to link tag numbers to the BCD (ICCAT 2008, Clause 17) which suggests that a BCD must be filled out but not necessarily validated. Under these circumstances, the reporting arrangements for tagged fish are considerably less detailed and transparent than for untagged fish recorded on validated BCDs. Specifically, only validated BCDs must be submitted to trading partners and to the ICCAT Secretariat (ICCAT 2008, Clause 15); annual reports by members are required to contain information on validated BCDs only (ICCAT 2008, Annex 5); and only a summary of the implementation of the tagging programme is submitted to ICCAT

¹² As re-imports are not tallied separately, import statistics may represent double-counted fish.

(ICCAT 2008, Clause 17). Therefore, the documentation exemption for tagged fish acts to reduce the inclusivity of the ICCAT bluefin CDP. In particular, the lack of validated BCDs for tagged fish which are actually caught in compliance with ICCAT regulations could conceivably create problems for compliance monitoring in trade, including import to the EC after January 2010 when some form of catch document will be required.

4.3 Impermeability: Keeping all illegal fish out

Impermeability refers to the ability of the design of the scheme to prevent IUU fish from entering markets. There are many design features which could be implemented to achieve this objective but this assessment is based on seven criteria intended to cover an indicative range of such features (*Table 4*).

4.3.1 Document Security

One of the most basic document security features used to prevent fraud is a unique number. This feature facilitates identification of forgeries which use duplicated, cancelled or out-of-sequence numbering. Unique numbering was recommended as a basic item to be included in all catch certificate or trade document forms by FAO (2002). While all the schemes require document numbers, the SDPs appear to have less rigorous standards by requiring only that a country coded document number be assigned. In contrast, the ICCAT bluefin CDP, the CCSBT CDS and the CCAMLR CDS specify that this country coded document number must be unique. The CCAMLR CDS provides even further specification requiring a two-digit country code, a two-digit year code and a three-digit, unique sequence number. The EC IUU regulation is silent on this point: although a document number is required no guidance is provided.

4.3.2 Electronic Document Systems

The usefulness of electronic document systems for increased management efficiency, information sharing and fraud prevention was recognised by FAO (2002) and the Joint Tuna RFMOs (2007b) but at present all but one of the schemes is primarily paper-based. The CCAMLR toothfish CDS initiated a pilot electronic CDS in 2004 and by January 2008 all members were using the electronic format (CCAMLR 2008b). The CCSBT will require that one of its five new documentation forms be submitted electronically on a quarterly basis. The other RFMO schemes have not yet agreed electronic protocols but an ICCAT resolution in 2006 encouraged the development of pilot projects to assess the feasibility of electronic systems (ICCAT 2006b). There are no requirements for electronic systems under the EC IUU regulation although electronic submission will be allowed assuming administrative protocols can be agreed (European Union 2008, Articles 14(3) and 20(4)).

4.3.3 Credentials of Validation Authorities

The schemes differ in the range of officials which can validate forms and requirements for information about these officials. All of the tuna RFMO schemes request that government authorities validate the forms but also allow for these responsibilities to be delegated. For example, under the ICCAT schemes, national Chambers of Commerce may validate documents (ICCAT 1993b). In contrast, under the CCAMLR toothfish CDS and the EC IUU regulation only

government authorities may validate catch certificates. Unless there is a compelling rationale for delegation, restricting validation activities to government authorities would appear to be a better means of assuring impermeability.

Most of the schemes require similar information about the validating authorities to be submitted for the purposes of auditing the validation process. This information generally includes the name and address of the institution, the name and title of the authorized individual, contact details, and the signature or seal sample, although the CCAMLR scheme does not appear to require the latter. The ICCAT bluefin CDP states specifically that it makes the credential information available on a secure website and encourages Contracting Parties to access this information to help verify the validation of import and re-export documents. It is assumed this practice is also followed in the other schemes and if not it should be encouraged.

4.3.4 Check of Catch Conditions

One of the most important functions of the schemes is to certify that the catches were made in compliance with all applicable laws and regulations. Key elements in determining this are the location, gear type and dates of the catch which are considered here, and the vessel authorisations which are considered in the following section.

None of the schemes require precise information about the location of the catch to be presented on the document. At one end of the spectrum, the bigeye SDPs require catch location only to be specified in terms of Atlantic, Pacific or Indian Ocean. At the other end of the spectrum, the CCAMLR toothfish CDS requires catch location to be reported with CCAMLR statistical subarea or division (or FAO Statistical Area/Subarea/Division if outside the convention area)¹³, and whether or not inside an Exclusive Economic Zone (EEZ). In addition, any party to the toothfish CDS can request that the flag State issuing the catch documents provide additional verification using VMS records. CCSBT also requests catch location data be provided according to its own management areas but lacks the VMS mechanism of CCAMLR. The ICCAT bluefin CDP and the EC IUU regulation do not provide specific guidance with respect to the level of detail required for catch location information.

The SDPs and the CCSBT southern bluefin scheme require only the month and year of catch to be specified. All of the other schemes (the ICCAT bluefin CDP, the CCAMLR toothfish CDS, and the EC IUU regulation) require the dates of catch. All of the tuna schemes require that gear type be recorded. The CCAMLR toothfish CDS and the EC IUU regulation do not require this information.

4.3.5 Check of Catch Amount and Species

Another critical aspect of documenting legal catches involves providing accurate estimates of fish weights. If the purpose of the scheme is to document quantities primarily for trade, as in the SDPs, it is not surprising that the net weight only is recorded. However, if the purpose of

¹³ CCAMLR statistical subareas are shown at <http://www.ccamlr.org/Pu/e/conv/maplge.htm> and FAO statistical areas/subareas/divisions are shown at <http://www.fao.org/fishery/area/search/en>

the scheme is also to cross-check catch data then estimates of whole weight or conversion factors from various primary processed forms to whole weight are necessary. It may also be necessary to allow for differences between estimated weights prior to landing and verified weights after landing. As shown in *Table 4*, only two of the schemes explicitly acknowledge conversions to whole/live weight: the CCSBT southern bluefin scheme requires conversion factors for “other” forms (presumably applying agreed conversion factors to standard forms) and the EC IUU regulation requires an estimate of the live weight to be written on the form.

Another interesting feature of the schemes is the degree to which validation of the catch amount on the forms is tied to the flag State’s catch quota. Obviously, this is only relevant for those fisheries which operate under quota systems. In agreeing a resolution in 1996, ICCAT implemented a specific requirement that the accumulated amounts of catches documented on validated BCDs be within the quota or catch limit of the validating flag State for each management year (ICCAT 2006a). This resolution does not apply to the ICCAT swordfish and bigeye SDPs even though these species are also under quota. CCSBT operates under a quota system but has not articulated an explicit requirement for checking catch documents against quotas. The EC IUU regulation, which applies across a wide range of quota- and non-quota managed species requires only that the validating authority attest that the catch is in accordance with all applicable laws, regulations, and international CMMs. While there should be no doubt that documents for catches which are over authorized limits should not be validated, it may be advisable for all of the schemes to make this requirement explicit.

4.3.6 Check of Vessel Authorisation

In theory, none of the schemes permit validation of documents for catches caught by vessels which are not authorised to fish. However, not all of the schemes appear to be designed to compile data that would facilitate monitoring of this important point. All of the schemes require the catching vessel’s “registration number” to be recorded. However, it is sometimes not clear whether it is the flag State registration number or the RFMO registration number that is requested¹⁴. Only two of the schemes (CCAMLR and the EC IUU regulation) specifically request the vessel’s IMO/Lloyd’s number, the only unique number that is attached to the vessel permanently. Also, only these two schemes specifically request information on the vessel’s fishing permit.

Each of the three CDSs requires that documentation/forms be given only to those vessels authorised to fish. Although this is perfectly logical, it is not an explicit requirement of the SDPs. Under the EC IUU regulation, catch certificates should only be granted when fishing operations were conducted in accordance with all applicable laws, regulations, and international CMMs and there is a box on the form where applicable CMMs should be referenced. Once the regulation is implemented it will be interesting to review what information is noted in this box and what standards are applied to determine sufficiency.

¹⁴ The ICCAT bigeye and swordfish SDPs and the IOTC bigeye SDP require both the catching vessel’s “registration number” and the RFMO Record (vessel) number. The ICCAT bluefin CDP specifies that the ICCAT Record (vessel) number is required. The other schemes (i.e. IATTC and CCSBT) do not specify which vessel registration number is required.

Table 4. Comparison of RFMO schemes and the EC IUU regulation in terms of impermeability. Current best practice is identified by thick-bordered boxes.

IMPERMEABILITY						
Scheme	Swordfish SDP (ICCAT)	Bigeye SDP (ICCAT, IATTC, IOTC)	Bluefin CDP (ICCAT)	Southern Bluefin Tuna CDS (CCSBT)	Toothfish CDS (CCAMLR)	EC IUU Regulation
<i>Document security (unique numbering)?</i>	No.	No.	Yes.	Yes.	Yes.	No.
<i>Electronic systems used?</i>	SDP currently paper-based.	SDP currently paper-based.	CDP currently paper-based.	One form (Catch Tagging Form) must be submitted electronically on a quarterly basis.	Yes. All members use the e-CDS format since January 2008.	Allowed if protocols agreed.
<i>Credentials of Validation Authorities?</i>	Competent government authority or designate. Credentials: Organization name, address, sample seal and individual name, title and address.	Competent government authority or designate. Credentials: Organization name, address, sample seal and individual name, title and address.	Competent government authority or designate. Credentials: name, title, address; sample form, stamp, and date of effect.	Competent government authority or designate (e.g. validation of transshipment by observer). Credentials: name, title, organization, signature and seal.	Government authorities only. Credentials: names, addresses, phone and fax numbers and email addresses.	Public authorities only. Credentials: names, addresses and official seal prints.
<i>Check of Catch Conditions?</i>	Area of ocean described as N. Atlantic, S. Atlantic, Med, Indian or Pacific. Month and year of catch recorded. Gear type recorded.	Area of ocean described as Atlantic, Indian or Pacific. Month and year of catch recorded. Gear type recorded.	Area of catch must be recorded but no guidance is given. Dates of catch recorded. Gear type recorded.	Area of catch recorded by CCSBT statistical area. Month and year of catch recorded. Gear type recorded.	Area of catch should be specified by FAO Statistical Area/Subarea/Division if outside the Convention Area or by CCAMLR statistical subarea or division if caught in the Convention Area and indicate whether taken on the high seas or within an EEZ. Additional verification using VMS data can be requested. Dates of catch recorded. Gear type not recorded.	Area of catch required but no guidance is given. Dates of catch recorded. Gear type not recorded.

<i>Check of Catch Amount?</i>	Product form and net weight.	Product form and net weight.	Number of fish, total (round) weight, average weight. Check that the accumulated validated amounts are within quota or catch limit of each management year.	Product form, net weight and number of fish. Conversion factors for “other” forms must be specified.	Product form, estimated landed weight, verified landed weight, net weight sold.	Species and product code, estimated live weight, estimated landed weight and verified landed weight required. Catch required to be in accordance with applicable laws, regulations, & international CMMs.
<i>Check of Vessel Authorization?</i>	Vessel name, registration number, vessel length and ICCAT record (vessel) number (if applicable).	Vessel name, registration number, vessel length (ICCAT and IOTC only) and RFMO record (vessel) number (ICCAT and IOTC only).	Vessel name, flag state and ICCAT record number. Documentation should only be issued to vessels and traps authorized to fish for bluefin tuna in the Convention area.	Vessel name, registration number and flag state. Fish caught by unauthorized vessels cannot be landed, transhipped or traded. Unauthorised farms cannot receive or harvest SBT.	Vessel name, home port, national registry number, call sign, IMO/Lloyd’s registration number, reference number of the licence or permit. Forms provided only to vessels authorised to harvest toothfish.	Vessel name, flag state, home port and vessel registration number, call sign, fishing license number and validity, IMO number (if available) and Inmarsat number (if available). Required to be in accordance with applicable laws, regulations, & international CMMs.
<i>Control of Fish Mixing?</i>	Upon re-export, relevant import documentation must be attached. Exporters must verify (but not attach) documents showing traceability between imported and re-exported fish. (Traceability up to the point of import not accounted for).	Upon re-export, relevant import documentation must be attached. Exporters must verify (but not attach) documents showing traceability between imported and re-exported fish. (Traceability up to the point of import not accounted for).	Unique number of BCD should be used to link split shipments. Re-export certificates may be validated if “the products to be re-exported are wholly or partly the same products” on the validated import form.	A verified copy of the original catch document should be attached to the re-export document for whole or partial shipments. No explanation of how partial shipments are tracked against the whole and against the original document.	Transhipments are accounted for. Total landed catch weight is reported on the catch document and if split, individual export and re-export documents record the total catch weight landed and partial weight of the split. The electronic CDS format does not allow weights in excess of the total catch weight to be exported/re-exported.	Re-exports must be accompanied by the catch certificate (can be a copy) and a statement from the processing plant and endorsed by local authorities attesting traceability.

4.3.7 Control of Fish Mixing

If they are to function effectively, trade and catch documentation schemes must provide traceability from catch to market. This traceability, in combination with certification, ensures that fish which are certified as legally caught are kept segregated from other fish. The various schemes have substantially different requirements with respect to this issue.

The SDPs are only concerned with fish that enter international trade, but even so do not document transshipment operations and thus do not assure traceability from catch to the point of import. The SDPs' traceability standard from import to the point of re-export is also weak. The SDPs require that the import documents be attached to the re-export documents when the fish are re-exported. The officials validating these re-export documents are responsible for verifying that the re-exporting dealer can establish traceability between the imported and re-exported fish. However, this traceability is not formally documented unless the flag State or importing States requests it.

When it established the bluefin CDP, ICCAT tightened the traceability requirements beyond those required in the SDPs. Firstly, transshipment and farming activities are now accounted for in a special section of the form. Once imported, the ICCAT CDP requires that if shipments of bluefin are split they should remain linked to the BCD through the BCD's unique document number. The responsible authority may validate the re-export certificate if "the products to be re-exported are wholly or partly the same products" on the validated import form. The inclusion of the phrase "partly the same products" appears to allow for mixing and to frustrate future attempts to match trade and catch data. Phrasing such as "...wholly the original product, or an unadulterated portion of the original product..." would better ensure traceability.

The CCSBT southern bluefin CDS also explicitly accounts for transshipment but it is less specific than the ICCAT CDP with regard to the handling of split shipments at or after landing. Re-export forms show re-export quantities against the quantity from the original catch document; each re-export document must have a single catch document attached. This procedure would seem to prevent any single export/re-export from exceeding the original catch document quantity. However, it appears there is no clear means of tracking how a number of partial re-exports will eventually be compared against, and shown not to exceed, the quantity on the original catch certificate.

Like the other CDSs, the CCAMLR CDS accounts for transshipment. It also incorporates a useful procedure for tracking split catches at landing: if split, a copy of the catch document is signed over to each consignee showing the original catch amount and the amount of the split portion. In this way each consignee's copy of the catch certificate shows exactly how much certified fish material was transferred. This prevents consignees from adding other material to make up the difference between the amount they received and the full amount of the catch certificate. The same procedure is required when material is passed on as exports or re-exports. The electronic format of the CCAMLR CDS maintains a tally of the quantities of subsidiary material from each catch document and does not accept quantities in excess of the amount shown on the catch

document. Despite this robust feature, the CCAMLR CDS does not account for the loss of material during secondary processing (e.g. reducing “allowable” re-exports based on filleting yields).

The EC IUU regulation, while placing considerable new restrictions on transshipment¹⁵, also accounts for legal transshipment activities on its catch certificate. The EC regulation’s re-export requirements appear to be a stricter version of the ICCAT CDP’s requirements. Upon re-export, fish must be accompanied by the original import (catch) certificate and a statement from the processing plant endorsed by local authorities “giving an exact description of the unprocessed and processed products and their respective quantities indicating that the processed products have been *processed in that third country from catches accompanied by catch certificate(s)* validated by the flag State” (emphasis added). While these requirements provide some measure of traceability, they do not exclude the possibility of mixing. A higher standard would be established by modifying the requirement to read “...*processed in that third country exclusively from catches accompanied by catch certificate(s)...*” (emphasis added).

4.4 Verifiability: Built-in Checks and Balances

Verifiability refers to elements of the scheme which provide a series of checks and balances on the information received from the parties involved in the catching and trading of the species of interest. While the actual performance of the scheme can only be assessed through an audit of the submitted data, this section examines three design factors: responsibility for oversight, penalties for improper documentation, and system learning and improvement (*Table 5*).

4.4.1 Responsibility for Oversight

As discussed above, each RFMO arguably has members which provide highly reliable information and those which do not. Therefore, in order to assure data quality, each scheme should incorporate procedures for cross-checking and/or auditing of trade and catch documents.

In all of the schemes the primary responsibility for checking the veracity of the documents lies with the government authorities (or designate) of the flag State and the trading partner. All of the schemes contain procedures for verifications, i.e. requests from one member or party to another to check the information on the forms. The CDSs, but not the SDPs, require that copies of all forms be sent to the RFMO Secretariat, although submission timeframes and subsequent use of the information varies. Under the EC IUU regulation, there is no provision for a common repository of documents¹⁶. Furthermore, beyond verification by involved parties, there is no

¹⁵ New restrictions prohibit transshipment at sea between two non-EC fishing vessels, and between a non-EC fishing vessel and an EC fishing vessel, while in EC waters. Outside of EC waters, non-EC fishing vessels may only tranship to an EC fishing vessel if the non-EC vessel is registered as a carrier vessel by an RFMO (Article 4). Landing or transshipment in port may only take place in ports designated and listed by EC Member States (Article 5).

¹⁶ The full spectrum of functions to be provided by the EC’s proposed IUU Fishing Information System is not yet clear but from available information it appears that it will serve as an intelligence network rather than a database of catch and re-export certificates.

Table 5. Comparison of RFMO schemes and the EC IUU regulation in terms of verifiability. Current best practice is identified by thick-bordered boxes.

VERIFIABILITY						
Scheme	Swordfish SDP (ICCAT)	Bigeye SDP (ICCAT, IATTC, IOTC)	Bluefin CDP (ICCAT)	Southern Bluefin Tuna CDS (CCSBT)	Toothfish CDS (CCAMLR)	EC IUU Regulation
<i>Responsibility for Oversight?</i>	Importers report to RFMO every 6 months and data are circulated by the RFMO to exporters. Exporters examine circulated data and respond in annual reports. No formal RFMO oversight.	Importers report to RFMO every 6 months and data are circulated by the RFMO to exporters. Exporters examine circulated data and respond in annual reports. No formal RFMO oversight.	All parties must report annually on: number of BCDs validated; number of validated BCDs received; number of verifications requested; number of verification requests received; and number of verifications conducted. No formal RFMO oversight.	All parties provide copies of documents to the Executive Secretary who analyses and notifies parties of discrepancies. Parties are required to cross-check and follow up on discrepancies.	All parties must submit copies of all documents issued or received to the Secretariat promptly and report summaries of all CDS documents handled to the Secretariat annually. No formal RFMO oversight.	No routine reporting by EC member states to the EC, therefore no independent EC oversight.
<i>Penalties for improper documentation?</i>	Improperly documented shipments will be denied entry into the territory of a Contracting Party or subject to “administrative or other sanction”.	Improperly documented shipments will be denied entry into the territory of a Contracting Party or subject to “administrative or other sanction”.	If the documents are invalid, domestic trade, import, export or re-export “shall be prohibited”.	Parties to the scheme may not accept southern bluefin for landing or trade without proper documentation. Verification issues may be brought to the attention of the Compliance Committee.	If the catch document is invalid, the import, export or re-export is prohibited. Some port States may seize or confiscate such shipments. Proceeds from seized fish can be deposited to an anti-IUU fishing fund.	If documentation is improper or the results of verification do not resolve concerns, importation can be refused and products may be confiscated and destroyed, disposed of or sold in accordance with national law.
<i>System learning and improvement?</i>	No standing commitment to programme review specified, however, the ICCAT SCRS may request the Secretariat to undertake basic analyses.	No standing commitment to programme review specified, however, the Commission may request the Secretariat to undertake basic analyses.	No standing commitment to programme review specified, however, the ICCAT SCRS may request the Secretariat to undertake basic comparative analyses.	Implementation issues, strengths, and weaknesses, and options to improve the scheme and its supporting procedures to be reviewed by the Compliance Committee.	No standing commitment to programme review specified, although some analyses appear to be done by the Secretariat.	Based on member state reports, alerts may be issued by the EC, vessels may be placed on the EC IUU vessel list, and countries may be placed on a list of non-cooperating third countries. Systems for intelligence sharing are envisaged.

provision under the EC IUU regulation for any third party audit of catch and trade documents, i.e. only parties involved in the actual trade will ever see the documentation.

Even though all of the RFMO catch documentation schemes require copies of all documents to be submitted to the RFMO Secretariat¹⁷, only the CCSBT southern bluefin CDS provides for an independent audit of the documents. Under the CCSBT CDS, documents are provided on a quarterly basis, and the Executive Secretary analyses the documents and reports on any identified discrepancies¹⁸. Members then cross-check discrepancies raised by the Executive Secretary and “take all necessary steps with relevant authorities, and within domestic law, to review, investigate and resolve any concerns” (CCSBT 2008). CCAMLR publishes annual CDS data summaries in its *Statistical Bulletin*, but it does not have a similar mandated audit mechanism. ICCAT has no such mechanisms under any of its SDP or CDS schemes, although the Secretariat is sometimes asked by the ICCAT Standing Committee on Research and Statistics (SCRS) to undertake comparative reviews of trade/catch documents submitted every six months against member’s annual reports of catch data (Joint Tuna RFMOs 2007a).

4.4.2 Penalties for Improper Documentation

All of the schemes specify that shipments lacking proper documentation shall not be landed or traded. However, the schemes are less specific regarding the potential for penalties or sanctions when shipments are improperly documented. Only the SDPs refer to “administrative or other sanction” in addition to rejecting importation. The CCSBT CDS mentions provisions for the Compliance Committee to consider any identified irregularities and anomalies. This may also be the case for other RFMOs even though it is not made explicit in the specification of their trade or catch documentation scheme. The CCAMLR CDS does not mention any penalties or sanctions imposed by the Commission itself but it notes that members may seize or confiscate improperly documented catches or shipments. The Commission has established provisions for transferring all or part of the proceeds from the sale of seized or confiscated toothfish into a fund for activities which will enhance the capacity of the Commission to combat IUU fishing activities (CCAMLR 2008a). The EC IUU regulation states that member States may confiscate and destroy, dispose of or sell fishery products which do not meet documentation requirements.

Based on this review it appears that penalties or sanctions are generally considered the responsibility of the port State rather than the RFMO/EC. Nevertheless, it would be useful for the schemes to refer to potential actions to be taken by port States at their discretion, and in accordance with national laws, as guidance. For example, the EC IUU regulation gives examples of seven immediate enforcement measures (for example, immediate cessation of fishing activities) and eight sanctions (for example, sequestration of the fishing vessel) which can be

¹⁷ Under the SDPs, the Secretariats receive only data summaries from members; they do not receive the statistical documents themselves.

¹⁸ CCSBT’s minimum standards for completion of the documents specifying the responsibilities of the importers, exporters and the Secretariat for ensuring the information on the documents are correct and complete were not carried over from the TIS to the CDS. Therefore, with the implementation of the CCSBT CDS and the phasing out of the CCSBT TIS in January 2010 no existing scheme will specify such minimum standards.

considered by member States in the case of serious infringements (European Union 2008). It would also be useful for the schemes to explicitly discourage a situation in which refused shipments are bounced to other port States which may have less stringent import requirements. Finally, it would also be useful for incidents of improper documentation, rejection and/or confiscation to be reported to RFMOs so that these issues can be highlighted to other members and/or referred to the RFMO's Compliance Committee.

4.4.3 *System Learning and Improvement*

Most of the schemes do not provide for periodic review of performance. The exception is the CCSBT CDS which sets a specific date and terms of reference for review of the new scheme. Under the ICCAT bluefin CDP only the Secretariat has access to all of the documents, but it is given no responsibility for data analysis or programme review. However, such activities could be, and sometimes are, authorised by the ICCAT SCRS (see *Section 4.4.1*). In all of the RFMO schemes, linkages between trade and catch documentation systems and other tools such as IUU vessel lists are *ad hoc* rather than prescribed.

One major strength of the EC IUU regulation is its linkage between import documentation and other tools for combating IUU fishing. The EC IUU regulation establishes a number of systems including an Alert System for warning of compliance problems with vessels or fishery products from third countries; an IUU vessel list; a list of non-cooperating third countries which fail to discharge their duties to combat IUU fishing; and an IUU Fishing Information System to network the relevant competent authorities in each member State. All of these systems will be informed by member States' reporting against the requirements of the new regulation. It is thus noted that application of the procedures across member States, and their reporting to the EC, may be uneven and thus the EC-wide systems will likely function differently from empirical systems based on analysis of data held in a central database.

5 Conclusions from this Phase 1 Review

5.1 Identification of Elements of Current Best Practice and Gaps

The preceding analysis has identified a set of criteria for evaluating trade and catch documentation schemes, and through comparison of existing and soon to be implemented schemes has identified various elements of current best practice. The following summary is based on *Section 4* and *Tables 3-5* and represents both elements of current best practice and recommendations for filling gaps in functional performance. These elements and the associated recommendations should be considered both when improving existing schemes and developing new schemes.

Inclusivity: Including all legal fish (Section 4.2, Table 3)

- Inclusivity should be as high as possible for maximum effectiveness and defensibility.
- Several schemes successfully cover by-products and fresh products, so exemptions based on these issues appear unwarranted.
- Exemptions for purse seine/pole and line/cannery operations may be avoided through improved catch sampling protocols or by defining some schemes without regard to species.
- Trade documentation schemes appear increasingly anachronistic as they cover only a fraction of the fishery (only those fish which enter international trade), cannot fulfil scientific or compliance/anti-IUU objectives, and are increasingly being replaced with catch documentation schemes.
- Tagged fish should not be exempted from standard documentation as this creates confusion for compliance monitoring and joint recognition of schemes.

Impermeability: Keeping all illegal fish out (Section 4.3, Table 4)

- While high impermeability is desirable, there may be diminishing returns when attempting to attain high levels of impermeability.
- For document security and fraud prevention, a unique document number (e.g. country code, year code and unique sequence number) should be required.
- As one of the CDSs is already using a fully electronic document system, and since electronic systems promote document security and information sharing, other systems should accelerate progress toward and aim to implement electronic protocols as soon as possible.
- Unless there is a compelling rationale for delegation, validation activities should be restricted to government authorities.
- A seal sample should be provided as part of the validation credentials and should be made available to all parties which may need to check validated documents through a secure website.
- The use of VMS data to verify the catch location annotated on catch documentation forms is currently encouraged under some schemes. If VMS is not available, the scheme

should require catch location to be reported by the smallest available FAO Statistical Area, Subarea or Division.

- Dates of catch and gear type used should be recorded on the catch documents.
- When recording fish weights, the net weight as well as the live weight, or an appropriate conversion factor for net weight:live weight should be required.
- Schemes should confirm an explicit requirement that standard catch documents shall not be issued for catches which exceed authorized catch limits.
- Schemes should also include an explicit requirement that no catch documents shall be issued for catches from vessels which are not authorised to fish.
- Vessel registration numbers should be specified as national registry, RFMO registry, and/or IMO/Lloyd's number. The latter should be encouraged as it is the only numbering system which is permanent.
- Traceability components of the schemes should account for transshipment prior to landing, splitting of catch upon landing, and further splitting of split catches through processing.
- Whenever catch or consignment splits occur, measures should be in place to ensure that mixing (e.g. of legal and illegal fish) does not occur and that splits are tallied against, and do not exceed, the original catch document.

Verifiability: Built-in Checks and Balances (Section 4.4, Table 5)

- Schemes should vest responsibility for auditing documents in a neutral third party, such as the RFMO Secretariat, rather than relying on members involved in the trade to report irregularities and discrepancies.
- All documentation should be copied on a quarterly basis to the RFMO Secretariat.
- Although penalties or sanctions for improperly documented landings or shipments are generally considered the responsibility of the port or trade State, schemes should provide guidance for potential actions which could be taken in accordance with national laws.
- Schemes should explicitly discourage bouncing of rejected shipments to other port States with less stringent import controls.
- Schemes should explicitly require that incidents of improper documentation, rejection or confiscation are reported to all members and/or referred to the appropriate compliance monitoring body.
- Schemes should specify timetables for programme review and commission relevant analyses to inform these reviews.

At the time of writing the list of RFMO schemes recognised as complying with the requirements of the EC IUU regulation has not yet been published, however it seems probable that only RFMO CDSs (i.e. CCAMLR CDS for toothfish, CCSBT CDS for southern bluefin, and ICCAT CDP for Atlantic bluefin) will be recognised. Even so, the preceding analysis has identified several areas for which the standards implicit in the design of the EC IUU regulation appear to be higher than those adhered to in some of the RFMO CDSs. Potential discrepancies include exemptions for tagged fish (*Section 4.2*); and dates of catch, live weight of catch, and control of fish mixing (*Section 4.3*). There are also examples of where some of the RFMO CDSs have set a higher

standard than the EC IUU regulation (e.g. unique document numbers, electronic document systems, and specification of catch location (*Section 4.3*); and third party audit/oversight (*Section 4.4*)). Finally, areas have been identified for which both RFMO schemes and the EC IUU regulation could be better articulated and/or improved (e.g. handling of mixed species catches (*Section 4.2*); checks on a vessel's authorisation to fish and registration number, and stricter rules for traceability of split catches and shipments (*Section 4.3*); and prohibition against re-directed rejected shipments, mandatory reporting of documentation irregularities and shipment rejections, and periodic, empirically-based programme reviews (*Section 4.4*)).

5.2 Next Steps

Although this report has been based only on publicly available information about the design of the various schemes, it has identified a number of issues for consideration in the reform of existing schemes and the development of new ones. Further useful information is likely to be gleaned from a review of data submitted to the existing schemes and analysis of how these data were used by the schemes for various scientific and compliance/anti-IUU purposes. This review and analysis will be the subject of the second phase of this study. The depth of the assessment will depend on the extent to which data can be made available to this study. Based on this Phase 1 analysis it appears that the CCAMLR CDS, the ICCAT CDP and the CCSBT TIS (because the CCSBT CDS is not yet operational) hold the greatest potential interest for the Phase 2 analysis.

The third phase of this study, intended to be complete by January 2010, is designed to provide information which could support a) efforts by the Western and Central Pacific Fisheries Commission (WCPFC) to develop an RFMO scheme, and b) efforts by an industry group in the Indian Ocean to build catch documentation capacity sufficient to meet the requirements of the EC IUU regulation. Depending on the extent to which these concepts have been developed by others at the beginning of Phase 3 of this study, the work will focus either on developing specific recommendations or reviewing existing ones. Once these schemes begin to take shape, issues such as cost effectiveness, implications for fair trade, and potential benefits to the fishery can be addressed in the specific context to which they will apply.

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