CATCH DOCUMENTATION SCHEME INTERSESSIONAL WORKING GROUP
Wednesday 24th September 2014
FSM-China Gymnasium, Palikir,
Pohnpei, Federated States of Micronesia

TOWARDS A STANDARD CATCH DOCUMENTATION SCHEME FOR WESTERN AND CENTRAL PACIFIC TUNA FISHERIES

WCPFC-2014-CDSIWG-02_rev1[1]
23 September 2014

1. The Catch Documentation Scheme – Intercessional Working Group (CDS-IWG) was established by the Commission during WCPFC9 (terms of reference at Attachment S to WCPFC9 Summary Report). Mr Alois Kinol (PNG) was elected CDS-IWG Chair. The first meeting was held on 1 October 2013, immediately following TCC9, and the outcome of that meeting was an agreed plan of work to guide the work of the CDS-IWG during 2014.

2. As part of the agreed workplan, the Secretariat was tasked with collating and compiling information into a discussion paper to identify key/core elements that would be needed in a CDS in the WCPFC. Interested CCMs were asked to provide update reports on their implementation of current CDS-related initiatives (domestic tracking schemes, as well as certification schemes for product in the WCPF Convention Area), and information on capacity constraints.[2] Pre-existing information on existing CDS schemes and reviews were also to be reviewed. Electronic reporting and e-monitoring developments were to be considered.

3. The Commission approved a budget of USD20,000 for the hosting of the CDS-IWG meeting immediately prior to TCC10. Papua New Guinea provided a voluntary contribution of USD30,000 towards supporting the intersessional work for the CDS-IWG.

4. In early 2014, the WCPFC Secretariat sent out a request for proposal, which among others would provide for the preparation of the discussion paper on CDS for the 2014 meeting of the CDS-IWG. In mid-2014, Fishwell Consulting was awarded the consultancy, and the consultant's report is attached here.

5. The Lead Consultant Dr Ian Knuckey will be in Pohnpei for CDS-IWG to present this report. CDS-IWG participants are invited to consider and discuss the report and its recommendations, with a view to recommending next steps for development of the WCPFC CDS.

[1] Includes a correction to the meeting date in the header and addition at paragraph 3.
[2] Copies of the submissions which WCPFC received from CCMs are provided on the Catch Documentation Scheme working group page (CCM side of the website - https://www.wcpfc.int/catch-documentation-scheme). Summaries of the information provded are contained in the Consultants report.

Towards a Standard Catch Documentation Scheme for Western and Central Pacific Tuna Fisheries

Discussion Paper

Ian Knuckey and Matt Koopman

2014

Western and Central Pacific Fisheries Commission

fishwell CONSULTING

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Title: Towards a Standard Catch Documentation Scheme for Western and Central Pacific Tuna Fisheries – Discussion Paper

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Executive Summary

A catch documentation scheme (CDS) is defined by FAO (2008) as *a scheme that combines both catch certification and trade documentation, i.e. it documents verifiable information on fish catch from **point of capture** to the final destination*. This is different to a trade documentation scheme (TDS) or statistical document program (SDP) that *documents verifiable information on fish trade from the **point of landing** through the entire export / import chain to the final destination.* Thus, a TDS only deals with the portion of the catch that enters international trade and can therefor exclude a large portion of the fish being targeted by the scheme. A CDS on the other hand should relate to all of the catch and increasingly, RFMOs are using CDS as a critical monitoring, compliance and surveillance (MCS) tool. Examples of where they have been successfully implemented are in the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Toothfish Fishery, the International Commission for the Conservation of Atlantic Tuna (ICCAT) and the Commission on the Conservation of Southern Bluefin Tuna (CCSBT).

The WCPFC have considered implementation of a CDS since 2005, with various proposed purposes of assisting with conservation and management measures, improving control and data gathering as well as scientific research for tropical tunas and swordfish falling under the WCPFC competence. A CDS Intersessional Working Group (CDS-IWG) was formed during 2013 and they developed a Terms of Reference, which provides some key principles to be considered in the development of the strategy for a WCPFC CDS. The CDS-IWG first met in Pohnpei on 1 October 2013, and agreed on a work plan that included the following items:

- drafting a discussion paper to identify key / core elements that would be needed in a CDS in the WCPFC; and
- investigating options to carry out the work needed to align the information with current MCS capacities, and do a gap analysis to identify where MCS capabilities would be enhanced by a CDS (fisheries management needs would also be important).

The current project was commissioned to assist the CDS-IWG in the implementation of their workplan. It included six objectives.

Objective 1: Review all the WCPFC decisions on CDS development, including detailed consideration of the report mentioned above (MRAG 2010).

Objective 2: Gather information on all CDS arrangements that are in use in the region.

Objective 3: Determine if these existing schemes can be aligned with current MCS capacities, and then do a gap analysis to identify where the MCS capabilities could best be enhanced.

Objective 4: Determine if these existing domestic schemes and arrangements currently in place in the region can form the basis for a broader CDS for species in the WCPFC.

Objective 5: If these schemes are not suitable for broader application to species under the management of the WCPFC, describe the key / core elements and the structure and reporting arrangements for a CDS for application in the WCPFC.

Objective 6: Analyse and suggest species or fisheries where it would be most beneficial to start a CDS in the WCPFC, noting existing suggestions that the WCPFC start with skipjack tuna.

In Section 3 of this report, WCPFC decisions on CDS development were compiled and summarised from Regular Session of the Committee, Technical Compliance Committee and CDS-IWG reports. During 2005, a proposal was put forward to implement a statistical documentation scheme (SDS) for bigeye tuna, however some members expressed concerns with this proposal because it only related to traded products, and there was agreement that that work on a more comprehensive scheme covering all catch should be undertaken. Over the following few years, CMMs remained divided as to the need for a CDS or SDS, and to which species it should be applied. Ultimately, development of a CDS was listed as a high priority in the 2009–13 draft workplan and budget. This resulted in four papers being presented at TCC6 that provided a good basis for the development of a CDS: information and updates on the FAO and EU requirements was presented by the EU along with the various forms required; information on other tuna RFMO schemes was presented by Japan; PNG presented their proposal for a CDS that was compatible with the EC IUU regulations; and, the best practice CDS study was presented by MRAG. The IWG–CDS has since been formed with a clear terms of reference and work plan.

Existing CDS-like arrangements in the WCPO region were examined in Section 4. The relative strengths of each was assessed against the various criteria suggested by MRAG (2010) under three main components:

- 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; and,
- Verifiability - the extent to which the scheme is audited by those other than the parties directly responsible for filling out and validating the forms.

It was recognised that each of the existing systems was set up to address specific aspects of the fishery and was not designed for — and should not be judged against — meeting the needs of a robust and inclusive WCPFC CDS. This is reflected in the wide range of levels of inclusivity, impermeability and verifiability shown by each scheme. Nevertheless, each generally met the purposes for which they were designed.

Section 5 explored the potential requirements of a WCPFC CDS and how they aligned with current MCS capabilities. Based on the recommendations of MRAG (2010), we collated the data fields that may be used in a WCPFC CDS (for both a Catch Form and an Export Form), and compared these with information currently being collected in various regional CDS-like systems. Even where there was almost 100% alignment in the data collected by some existing systems, such as the Fijian and PNG schemes, significant changes would be needed to meet inclusivity, impermeability and verifiability requirements of a holistic WCPFC CDS. WCPFC's capacity for MCS activities are described with respect to what may be required to support a CDS. This includes: Licence / Access Control; Register of IUU vessels; Logbook System; Observer Program; Catch Transhipment Monitoring; Catch Landings Monitoring; Port State Measures; VMS System; Cross-checking system; and, Market / Transport / Export Monitoring. A Gap Analysis revealed that many of these systems were up to a standard that would support a WCPFC CDS, but increased human and financial capacity would be needed for CDS port inspectors and cross checking systems, particularly with respect to the coordination across established national systems. Other areas that could be enhanced included observer requirements on fleets other than purse seiners, and training of fishing industry members.

In Section 6 we consider the potential scope of a WCPFC CDS and explore the potential for existing domestic schemes to meet these needs. We support that the objectives of a WCPFC CDS should include catch monitoring, scientific data, and traceability. We discuss the relative merits of which species or fleets should be included in a CDS and conclude that it should be as inclusive as possible with respect to gear and major target and by-product species. Although each of these domestic systems has been implemented with a specific objective in mind, we acknowledge that any of the domestic systems could be expanded or adapted to meet the needs of a broader WCPFC CDS. One major shortfall however, is that each of these systems is paper-based. We believe that only the implementation of an electronic CDS (e-CDS) will meet the user expectations for timely input of data, and easy (though secure) access and distribution of this data to various agencies and fishing entities for validation and verification. The operation and real-time availability of information for a WCPFC e-CDS would be greatly enhanced if it was integrated with current regional database systems and future WCPFC electronic reporting systems for catch and effort data, observer reports and other CMM reports as outlined in Dunn and Knuckey (2013).

Overall, we conclude that the benefits of the current domestic systems operating within the region, and of direct relevance to the species and fisheries of the WCPFC, are outweighed by the level of work required to convert them to an electronic CDS that meets the broader needs of WCPFC objectives. In this respect, we recommend that the most efficient and cost-effective means of developing an e-CDS for the WCPFC is to adapt it from an electronic system that is already operating effectively at the RFMO level, such as the CCAMLR e-CDS developed for Toothfish. A potential design and process for the system is presented.

Although we believe that the *design* of a fully inclusive WCPFC e-CDS system can begin immediately, there are still questions that need to be answered with regard to the best way to *implement* a system in the most cost-effective, strategic and beneficial way. Should it be implemented sequentially by either the gear or species, or should the whole system be implemented at one time? What are the costs, who should pay and what funding model would best suit both the implementation and ongoing management of the system? What level and where are the human resources likely to be required and how will they be trained and maintained? We recommend that a full cost / benefit analysis to determine the most beneficial and constructive implementation pathway and business model for a WCPFC CDS is undertaken to answer these questions.

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1. Introduction

The Western and Central Pacific Fisheries Commission (WCPFC/the Commission) was established under the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (the Convention). The Convention draws on many of the provisions of the UN Fish Stocks Agreement (UNFSA), whilst reflecting the special political, socio-economic, geographical and environmental characteristics of the region.

The objective of the Convention is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean (WCPO) in accordance with the 1982 Convention and UNFSA.

The Commission's members are Australia, China, Canada, Cook Islands, European Union, Federated States of Micronesia, Fiji, France, Indonesia Japan, Kiribati, Republic of Korea, Republic of Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, and Vanuatu. The work of the Commission is supported by its Secretariat who is headquartered in Pohnpei, Federated States of Micronesia, and three subsidiary bodies that each meets annually: the Scientific Committee; Technical and Compliance Committee; and the Northern Committee.

A catch documentation scheme (CDS) has been defined by FAO (2008) as *a scheme that combines both catch certification and trade documentation, i.e. it documents verifiable information on fish catch from* ***point of capture*** *to the final destination*. This is as opposed to a trade documentation scheme (TDS), that *documents verifiable information on fish trade from the* ***point of landing*** *through the entire export/import chain to the final destination (usually point of sale).* There are major concerns about the shortcomings of TDSs in that they monitor only the portion of the catch that enters international trade, leaving a large portion of the catch unaccounted for, making it theoretically impossible to match the quantities of fish reported to the quantities of fish caught. A CDS on the other hand relates to all of the catch and increasingly, RFMOs are using CDS as a critical monitoring, compliance and surveillance (MCS) tool. Examples of where they have been successfully implemented are in the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Toothfish Fishery, the International Commission for the Conservation of Atlantic Tuna (ICCAT) and the Commission on the Conservation of Southern Bluefin Tuna (CCSBT) (MRAG, 2010).

Since 2005, the WCPFC has been considering the implementation of a regional CDS. Proposed purposes of the CDS are to assist with conservation and management measures, improve control and data gathering as well as scientific research for tropical tunas and swordfish falling under the WCPFC convention area (WCPFC-CA; WCPFC, 2010). A CDS

Intersessional Working Group (CDS-IWG) has been formed to develop and propose a strategy for a CDS to document catches taken in the WCPO for key target and by catch species for WCPFC adoption. The terms of reference for the CDS-IWG provides a non-exhaustive list of a number of key principles which are to be considered in the development of the strategy for CDS. The first meeting of the CDS-IWG was held at Pohnpei on 1 October 2013. They agreed on a work plan that included the following items:

- drafting a discussion paper to identify key/core elements that would be needed in a CDS in the WCPFC; and
- investigating options to carry out the work needed to align the information with current MCS capacities, and do a gap analysis to identify where MCS capabilities would be enhanced by a CDS (fisheries management needs would also be important).

The current project was commissioned to assist the CDS-IWG implement their workplan.

2. Project Objectives

The objectives of the project were derived from the workplan of the 2013 CDS-IWG meeting and include the following.

Objective 1: Review all the WCPFC decisions on CDS development, including detailed consideration of the report mentioned above.

Objective 2: Gather information on all CDS arrangements that are in use in the region.

Objective 3: Determine if these existing schemes can be aligned with current MCS capacities, and then do a gap analysis to identify where the MCS capabilities could best be enhanced.

Objective 4: Determine if these existing domestic schemes and arrangements currently in place in the region can form the basis for a broader CDS for species in the WCPFC.

Objective 5: If these schemes are not suitable for broader application to species under the management of the WCPFC, describe the key/core elements and the structure and reporting arrangements for a CDS for application in the WCPFC.

Objective 6: Analyse and suggest species or fisheries where it would be most beneficial to start a CDS in the WCPFC, noting existing suggestions that the WCPFC start with skipjack tuna.

3. Review of WCPFC decisions on CDS development

WCPFC and TCC

Potential for a CDS was first brought up at WCPFC2 during 2005, where a tabled document (WCPFC/Comm2/DP03 Rev.1) proposed adoption and implementation of a statistical documentation scheme for bigeye tuna (*Thunnus obesus*). Some members expressed concerns with this proposal because it only related to traded products and there was agreement that work on a more comprehensive scheme covering all catch should be undertaken intersessionally by concerned members and Japan. At TCC1, eight priority components of the Commission's MCS framework were listed and included catch verification and a catch and statistical documentation scheme. Milestones and budget allocated for the catch and statistical documentation scheme component were provided.

During 2006, TCC2 considered the eight MCS components listed by TCC1, but agreed on only three key issues to progress; these did not include the CDS component and no money was allocated in the budget (2007–2011) for the CDS in the draft implementation plan. TCC2 discussed CDSs with a focus on implementation for bigeye tuna, but noted that catch and/or statistical documentation schemes required considerable work. Japan tabled a paper (WCPFC-TCC2-2006/DP04) that proposed a statistical documentation scheme for bigeye tuna instead of a CDS. Some CCMs supported this proposal but others thought it did not address all aspects of WCPFC2 decision it should be more comprehensive by covering domestic and international markets. FFA States presented a proposal to WCPFC3 that described considerations that should be taken into account when developing the CDS, its purpose, the need for an CDS Intersessional Working Group (IWG) to be formed, the Terms of Reference of the working group, time frame for implementation (1 January 2009) and elements that should comprise the CDS. This proposal was further elaborated by the EC (WCPFC3-2006/DP33). Japan presented a proposal for the Commission for the adoption of a statistical documentation program (SDP) for bigeye tuna instead of the CDS (WCPFC3-2006/DP17), which highlighted potential problems with implementation of a CDS. Japan and some CCMs felt that a CDS was too complex and onerous to implement and a SDP was critical for bigeye tuna to align with other RFMOs and effectively implement compliance measures. Other CCMs were of the opinion that a CDS was necessary to ensure the recording of all fish caught and traded. Overall, no consensus among CCMs for a CDS could be reached.

During 2007, the importance of a comprehensive CDS to address IUU fishing in the region was again highlighted at TCC3, with some CCMs supporting a comprehensive and effective MCS program, and noting some statistical documentation schemes appear to have major flaws. Japan again tabled a paper (WCPFC-TCC3-2007/DP-06), that included WCPFC-TCC2-2006/DP04 outlining concerns about CDSs and further explanation of their proposal. TCC3 noted the importance of trade and catch documentation schemes, particularly the need for harmonization among RFMOs. TCC3 noted that forming a working group on this issue would

be helpful. TCC3 described rules and procedures for the protection, access to and dissemination of data compiled by the commission using a CDS or TDS and associated risks. The TCC3 discussions were presented at WCPFC4. FFA circulated a paper (WCPFC4-2007/DP24) by Canada, the EC and the USA, which contained a proposal on harmonisation and improvement of trade tracking programs including objectives and best practice of such programs. The urgent need for the WCPFC to develop a tuna document programme was highlighted, and slow progress was attributed to lack of a sufficiently comprehensive CDS proposal and how it should be integrated with other essential MCS components. A working group met during WCPFC4 to develop terms of reference for an intersessional working group, but polarised views prevented the terms of reference being adopted during WCPFC4. There remained support for formation of an intersessional working group to design an appropriate CDS for the region that focused on the most critical species, and examine the experience of other RFMOs and how it could be applied to the WCPFC.

The EC presented a draft CDS for the WCPFC to TCC5 during 2008, but acknowledged that the issues were not sufficiently advanced enough to make progress by the next commission meeting. FFA members also described the need for catch tracking system as part of a comprehensive MCS framework, and called for the establishment of an intersessional working group. A report tabled by WWF and Traffic (Lack, 2008) made a case for a CDS in the WCPFC. Development of an SDS and/or CDS was listed as a high priority in the 2009-13 draft workplan and budget. A report of the status of development of a CDS was made to WCPFC5.

During 2009, TCC5 was presented with a paper describing the RFMO's CDS and TDS and introducing the EC IUU catch certification system to be implemented during 2010. Again, there was support for an intersessional working group and advice about the terms of reference was provided and this recommendation was made to WCPFC6. FFA members did not support holding an intersessional working group and suggested applying to the Japan trust fund to obtain funds or CDS development. The need to consider requirements of the EU IUU fishing regulation in development of a CDS was highlighted, there was in principle support for a CDS by WCPFC6.

Four papers were presented at TCC6 during 2010 that they considered provided a good basis for the development of a CDS: information and updates on the FAO and EU requirements was presented by the EU along with the various forms required; information on other tuna RFMO schemes was presented by Japan; PNG presented their proposal for a CDS that was compatible with the EC IUU regulations; and, the best practice study CDS was presented. At WCPFC7, EU proposed a CMM to implement a CDS for tuna, yellowfin tuna (*Thunnus albacares*), skipjack tuna (*Katsuwonus pelamis*) and swordfish (*Xiphias gladius*), consistent with the recommendations from the Kobe II workshop. Potential for a CDS to assist with shark assessment and identification was raised and supported by a number of countries. The need for a CDS to be cost-effective, practical and able to be implemented by PICs was

emphasised. It was agreed that a CDS intersessional working group would be formed under the coordination of PNG.

The draft terms of reference for the CDS working group were presented to TCC7 during 2011. Issues regarding integration of the CDS with national and WCPFC management frameworks and certificate validation in the case of the charter vessels prevented agreement on the terms of reference and further intersessional work was requested. The latter issue (specifically paragraph 3f of the ToR) was taken to WCPFC8 during 2012 but unable to be resolved, the terms of reference were referred back to TCC8.

The terms of reference were again presented to TCC8 during 2012. It was recommended that EU and FFA members work to finalise the catch documentation scheme terms of reference prior to WCPFC9. There was a joint proposal by PNG and the EU that overcame the disputed paragraph 3f and with this change, WCPFC9 adopted the terms of reference for the IWG-CDS. Mr Alois Kinol was appointed by the Commission as Chair for the CDS-IWG.

WCPFC CDS-IWG- agreed terms of reference

Operations and Terms of Reference

1. The working group will be open to all Commission members and Participating Territories.

The principal task of the working group is to develop and propose a strategy for a CDS to document catches taken in the WCPO for key target and by catch species for WCPFC adoption.

2. This strategy shall take account of representations to date within the WCPFC and be mindful of the key principles in Attachment 1. In particular, the strategy and recommendations shall take into account MCS and information collection systems already introduced by WCPFC members.

3. This will include but not be limited to all matters of relevance to the design and operation of a WCPFC CDS including explicit consideration of the following:

a. The Recommendation to Tuna RFMOs on Harmonization and Improvement of Catch Tracking Programs (Raleigh 2007) and the broader consensus on CDS reached at the 2010 Kobe MCS meeting in Barcelona and Kobe 3.

b. Existing and proposed catch documentation schemes in other RFMOs (including ICCAT, CCSBT and CCAMLR) and in Commission members and Participating territories, noting the particular areas of uniqueness within the WCPFC, such as the prevalence of coastal states and Small Island developing states and territories.

c. Existing national and sub-regional catch tracking programs.

d. Operational issues and capacity requirements of data collection, submission, handling, analysis, reconciliation and dissemination.

e. The resources that would be required within CCMs (and particularly small island developing states and territories) to implement and operate a CDS. This will necessarily include consideration of capacity building, training programs and associated costs.

f. The roles and responsibilities for certification and verification of all appropriate stakeholders, within the framework of existing international law

g. the contribution of chartered vessels to sustainable fisheries development and the need to ensure that charter arrangements do not promote IUU fishing activities.

h. Opportunities to utilize emerging technology to increase efficiency and decrease cost with

particular reference to electronic transmission of data and required forms.

i. The integration of CDS within the monitoring, control and surveillance framework of WCPFC.

j. The integration of CDS with the overall management framework of the WCPFC including other data reporting obligations.

k. The specifics of proposed CDS documentation and process including the preparation of draft CDS forms/data reporting options.

Timeframe

The working group shall commence in 2013.

The working group shall report progress to the TCC with a view to presenting a Provisional CDSproposal to WCPFC 10 or 11 (depending on development progress) that would be considered for adoption on a trial basis in the period 2014 – 2015. The trial may focus on certain species.

Pending the trial introduction, WCPFC would then consider incremental adoption of the scheme on a wider basis, by including additional species.

Attachment 1 – WCPFC Catch Documentation Scheme Guiding Principles

1. In establishing the CWG, the group should be guided by the following principles.

2. The objectives of a WCPFC CDS need to be clearly defined and address the following at a minimum:

a. Traceability to final market destination;

b. Catch verification and validation and,

c. Provision of scientific and fisheries management information;

3. CDS should not be viewed as a system in its own right, but rather as a component of an overall fisheries monitoring system.

4. A WCPFC CDS shall take into account the legitimate roles of all appropriate stakeholders, within the framework of existing international law

5. A WCPFC CDS needs to integrate and build on existing systems with the role of the Commission in CDS clearly defined and cost effective.

6. The WCPFC CDS will take into account existing monitoring and reporting systems such as national and sub-regional catch tracking programs including those implemented and being developed by WCPFC members

7. The WCPFC CDS should cater for a range of responses to market requirements and include comprehensive verification of catches in the WCPO.

8. The development of a CDS system needs to take account specific characteristics of the fisheries within the Pacific Islands region, and the special requirements of developing states, particularly small island developing states, in whose waters most of the fishing takes place.

9. A phased approach to CDS introduction, with provision for prioritizing system testing, operational trials and review and an initial focus on key species, should be considered.

CDS-IWG

The inaugural meeting of the IWG–CDS was held in October 2013 and its progress was presented to WCPFC10. PNG had provided funding to support a consultant to prepare a paper on the existing schemes in the region and how they might relate to the commission's

CDS and they were working with the Secretariat to develop the terms of reference for that paper.

A full list of the discussions and decisions by the WCPFC, TCC and CDS-IWG are provided in Appendix 1. They are summarised in Table 1 below.

As mentioned above, the inaugural meeting of the catch documentation scheme intersessional working group (CDS – IWG) took place immediately after TCC9. Views of participants on key priorities for the CDS-IWG were presented and a work plan was developed as a guide to the work of the CGS – IWG. A summary of the work plan is shown below and full details are shown in Appendix 2.

Agreed Plan for CDS-IWG

1. Compile background documents and information on:
   - Existing CDS Programs;
   - Operational, capacity and training requirements;
   - Pre-existing CDS work completed, particularly WCPFC7-2010-IP03;
   - Potential for E-reporting and E-monitoring for CDS.
2. Information collation in a form that can be used by the IWG:
   - Drafting a discussion paper to identify key/core elements WCPFC CDS in the WCPFC;
   - Requirements to align the information with current MCS capacities;
   - Conduct a gap analysis to identify where MCS capabilities would be enhanced by a CDS; and,
   - Organize a second workshop to consider the above discussion papers
3. Next steps
   - Choice of species and fisheries for CDS application
   - Prioritise IWG ToRs
   - Consider Cost-benefit issues
   - Consider vulnerability issues

Joint Tuna RFMOs

In parallel with the ongoing discussions of the WCPFC with regard to implementation of a CDS, there have been various meetings of the joint tuna RFMOs including:

- Commission for the Conservation of Southern Bluefin Tuna (CCSBT)
- Inter-American Tropical Tuna Commission (IATTC)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- Indian Ocean Tuna Commission (IOTC); and,
- Western and Central Pacific Fisheries Commission (WCPFC).

These meetings are held to discuss and evaluate the data collection, scientific monitoring and management of tuna and tuna-like resources. Part of this work has focussed on harmonization and improvement of MCS including the trade tracking programs and development of catch documentation and tagging systems. After reviewing the trade-tracking programs in the various tuna RFMOs, it was noted that traceability from catch to market was a key area for improvement. The recommendations from the Kobe II workshop on MCS (Joint Tuna RFMOs, 2010) with respect to CDS were:

1. Establish or expand the use of CDS to fisheries for tuna and tuna-like species and sharks not currently covered by an existing CDS and to which current conservation and management measures apply, taking into account the specific characteristics and circumstances of each RFMO.
2. Ensure compatibility between new or expanded CDS and existing certification schemes already implemented by coastal, port and importing States.
3. Develop a common/harmonized form for use across RFMOs and the use of electronic systems and tags to enhance the efficiency, effectiveness and utility of a CDS.
4. Take into account fish caught by purse seine fisheries and delivered to processing plants when implementing an expanded CDS.
5. Consider a tagging system for fresh and chilled products to improve the implementation of new or expanded CDS.
6. Develop a simplified CDS form to cover catches by artisanal fisheries that are exported (see Appendix 3, EU form that could serve as an example).
7. Provide technical assistance and capacity building support to assist developing countries in implementing existing CDSs and any expanded CDS, including ensuring that capacity building funds that currently exist in RFMOs can be used for this purpose.

Table 1. Summary of WCPFC decisions and TCC recommendations on CDS.

WCPFC2	2005	TCC1
WCPFC2 agreed to work on comprehensive documentation scheme. $15,000 allocated to "catch documentation" in the budget.		Development of a catch and statistical documentation scheme was listed as a priority at TCC1.
WCPFC3	**2006**	**TCC2**
Proposal for a CDS presented to WCPFC3 by FFA Members. Japan presented proposal for a Statistical Document Program (SDP).		CDS were discussed at TCC2, with a focus on implementation for bigeye tuna. It noted that WCPFC2 had not reached agreement on the CDS, and that interested Members progressed the issue intersessionally.
WCPFC4	**2007**	**TCC3**
Support for CDS intersessional working group. The EC tabled a proposed CDS, while Japan tabled their proposed SDP. A working group met to discuss ToR of a CDS intersessional working group, but these were not adopted by WDPFC4. Working group to report to TCC$.		Noted the importance of trade documentation schemes and their complexity and endorsed the outcomes of the RFMO technical working group in Raleigh, North Carolina, USA noting the importance of harmonization among RFMOs, and the importance of trade and catch documentation schemes. TCC3 noted that forming a working group on this issue would be helpful.
WCPFC5	**2008**	**TCC4**
Development of a CDS was listed as a 2009 priority for the TCC.		Recommended formation of a working group coordinated by the EC to discuss this matter based on the EC's draft CMM and the intervention by Fiji on behalf of FFA.
WCPFC6	**2009**	**TCC5**
There was in principle support for a CDS by WCPFC6. There was a call for a proposal to be brought forward for discussion at TCC6. Development of a CDS was again listed as a priority for the TCC.		Recommended WCPFC6 the creation of an intersessional working group on catch documentation with terms of reference to be developed electronically in advance of WCPFC6, and recommended to the Commission that it decide on a mechanism to advance this issue during 2010.
WCPFC7	**2010**	**TCC6**
Proposal for CDS intersessional working group presented including ToR and guiding principles. It was agreed to form an intersessional CDS Working Group that would be coordinated by PNG. This group would work on an inclusive WCPFC CDS that includes flag, coastal and market States, and enables certification and export. Developing the terms of reference for the group would be their first task.		A working group to be led by FFA members was tasked to progress the CDS using the four tabled papers, and that the report from this working group be considered by WCPFC7.
WCPFC8	**2011 / 12**	**TCC7**
The draft ToR for the WCPFC CDS Working Group was presented to WCPFC8. WCPFC8 agreed that the TOR for the CDS working group (WCPFC-2011-DP/20) be referred back to TCC8.		Acknowledged that further intersessional consultation will be required to forward an agreed ToR to WCPFC8 for endorsement.
WCPFC9	**2012**	**TCC8**
WCPFC9 adopted the ToR for the IWG-CDS.CDS. The date, location and Chair for the first meeting of the IWG-CDS would be agreed intersessionally and asked the Secretariat to assist with finalising this decision.		Recommended that EU and FFA members work to finalize the catch documentation scheme ToR prior to WCPFC9.
WCPFC10	**2013**	**TCC9**
WCPFC10 noted the progress of the IWG-CDS and endorsed its plan to produce an analysis of existing CDS-related initiatives for discussion prior to TCC10.		No progress report from the CDS-IWG was presented as they were due to hold their preliminary meeting immediately after the TCC9.

4. CDS-like arrangements in the WCPO region

At the first meeting of the CDS Intersessional Working Group held in Pohnpei on 1 October 2013, CMMs were asked to provide reports on their implementation of current CDS-related initiatives (domestic tracking schemes, as well as certification schemes for product) in the WCPFC Convention Area (WCP-CA). This section provides a summary of CDS-like arrangements in the WCPO region, as well as additional information received by the Secretariat. Tables of functional review characteristics for CDS-like arrangements are further summarised in Table 4, Table 5 and Table 6. Functional review characteristics are based on the three components (each with several criteria) that MRAG (2010) suggested as a basis for assessing the relative strengths of existing CDSs:

- 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; and,
- Verifiability - the extent to which the scheme is audited by those other than the parties directly responsible for filling out and validating the forms.

In the guiding principles for the CDS-IWG, it was agreed that the objectives for a WCPFC CDS should be clearly defined and address at a minimum: a traceability to final market destination; catch verification and validation and, provision of scientific and fisheries management information. Guiding principles 6 and 7 state that the WCPFC CDS will take into account existing monitoring and reporting systems such as national and sub-regional catch tracking programs including those implemented and being developed by WCPFC members, and it should cater for a range of responses to market requirements in include comprehensive verification of catches in the WCPO.

Catch documentation schemes seek to monitor landed catch, from point of first capture by a flag State through international trade routes to the State of final destination, while TDSs (or SDPs) monitor only the portion of the catch that enters international trade. It is widely recognised that TDSs have major shortcomings in that they can exclude a large portion of the fish being targeted by the scheme, making it theoretically impossible to match the quantities of fish reported to the quantities of fish caught (Lack, 2008; MRAG, 2010). In comparison, by monitoring the entire landed catch, a CDS aims to deter the entry of IUU caught fish onto the markets by providing independent verification of retained catches. Use of a CDS also improves the data available for stock assessment and estimates of fishing mortality.

In providing this review, we acknowledge that some of the systems discussed may not actually meet the formal definition of a CDS, mainly due to shortfalls in inclusivity, however they are all included to provide a well-rounded overview of the domestic systems currently in place. There may also be other national and subregional schemes which WCPFC Members

are involved for which information was not supplied to WCPFC Secretariat for the purpose of this review.

Systems for EU trade

The EU implemented the EU IUU Regulation to improve efficiency of controls and ensure traceability in the whole supply chain — from net to plate — of all fishery products traded with the EU. It applies to all fishing vessels under any flag in all maritime waters, and all processed and unprocessed marine fishery products (excluding products listed in Annex I of the IUU Regulation, revised on a yearly basis). It seeks to prevent, deter and eliminate fishery products derived from IUU activities to be traded to and from the EU, and to hinder EU nationals from conducting IUU activities under any flag, in any waters. One of the main components of the IUU Regulation is a catch certification scheme. Under this scheme, all marine fishery products traded with the EU, including processed products, must be accompanied by validated catch certificates and the appropriate flag State authority of the fishing vessel that made the catches will validate the catch certificate. The validation must certify that the catch was made in accordance with applicable laws, regulations and international conservation and management measures. Further, all EU catches must be validated upon export if the receiving third country requires so (list on EU IUU website) or catches are to be re-exported to the EU. The IUU Regulation makes an exception for small scale fisheries, whereby the certification requirement has been adapted in order to facilitate the request for validation which is always done by the exporter (not the fishermen). To be eligible for the simplified catch certificate, third country fishing vessels must fulfil one of the following criteria:

- have an overall length of less than 12 metres without towed gear; or
- have an overall length of less than 8 metres with towed gear; or
- have no superstructure; or
- be of less than measured 20 GT.

Catches taken by these vessels must be landed in their flag State and together must constitute one consignment.

Former European Union (EU) colonies in the African, Caribbean and Pacific regions (ACP) have had preferential market access for exports to the EU under the Lomé Convention, and more recently, the Cotonou Agreement (Hamilton *et al.*, 2011). The EU states that the offering of preferential market access to ACP countries has been to boost ACP industry competitiveness and promote development.

During mid-2000s, negotiations began to transfer these arrangements under reciprocal Economic Partnership Agreements (EPAs) in order to comply with WTO requirements. Fisheries issues have been a critical component for the 14 Pacific ACP States (PACPs). The PACP's principle fisheries-related demands have been ongoing preferential market access for fisheries products (particularly tuna), and relaxed rules of origin (RoO) that deems fish to be

originating if processed in a PACP-based facility prior to export, regardless of where the fish is caught or vessel ownership. An interim EPA was signed by Papua New Guinea and Fiji in 2009. One of the benefits from these EPAs is that Papua New Guinea and Fiji continue to get duty free access for processed tuna products (cans / loins), while competing exports are subject to an EU 24% most-favoured nation (MFN) tariff.

The derogation of the standard RoO has a one-off and specific exception for PACPs because of their historical lack of RoO compliant fish "due to limited fishing capacity of PACP fishing fleets, reduced processing capability due to physical and economic factors, geographical isolation and distance from the EU market, as well as a low identified risk of destabilising the EU market" (Hamilton *et al.,* 2011). The use of the derogation for processed fishery products was to consider the development effects on PNG economy — long-term income and employment generation; and for sustainable management of fishing resources, compliance with EUs sanitary and phytosanitary (SPS) regulations and support for combating IUU fishing in the Western and Central Pacific Ocean.

To maintain their EU markets and meet the EU IUU regulations both Papua New Guinea and Fiji have implemented CDSs focussed on the export of tuna products to the EU.

Papua New Guinea

The purse seine fishery catch taken from PNG waters represents 20% of the entire WCPFC-CA purse seine catch (Nicol *et al.*, 2009). Most of PNG's catch is taken by foreign-owned vessels operating under access agreements. These include vessels from Korea, the Philippines, Taiwan, and the United States of America (USA). Foreign vessels licensed by other PNA countries can access the PNG EEZ under the terms of the Federated States of Micronesia Agreement (FSMA), and an increasing portion of the catch is taken by locally based foreign vessels, licensed on the basis they land their catch to PNG processing plants. The fishery is heavily dependent on FAD-associated sets. A small locally based longline fleet operates in archipelagic water and the southern part of the EEZ.

The PNG CDS is administered by the National Fisheries Authority (NFA). It has been developed and implemented to meet the requirements of European Commission regulations that are necessary to gain access to European markets for catch by the purse seine fishery. The CDS would also apply to EU exports from longline fishing but this is of relatively low volume and not a priority at this time. Purse seine catches are landed in the PNG ports of Wewak, Madang, Lae and Rabaul. The NFA employs about 35 dedicated CDS staff to monitor, manage and verify the system. This number has been approved to increase to around 80. The goal of the CDS is 100% monitoring of purse seine catches, transhipments, and landings, and exports of processed product to the EU. Monitoring by CDS officers occurs in PNG as well as unloading of CDS catch in foreign ports.

There are four main forms used for the CDS:

- Form 1: Transhipment in Port Form;

- Form 2: Landing in Port Form;
- Form 3: Landed Fish Raw Material Usage Form (Withdrawal Form); and,
- Form 4: Catch Certificate.

Forms 1, 2 and 3 apply to fish regardless of their declaration, however the Catch Certificate applies only to exported product to the EU.

There are a range of other documents that are used to record and verify catch and movement of fish such as the PNG Freezer Vessel Fish Origin Declaration Form (PNG FVFODF), the Catch Certificate Verification Checklist. The PNG CDS is still in development, with future work focussing improving collaboration with Customs and a developing a Traceability Audit Manual.

Inclusivity

The CDS appears to be inclusive for species, gear types (although the longline aspect is negligible and still under development) and product form. It applies to: 1) fish caught by a PNG-Flagged fishing vessels landed in PNG, processed and exported to EU (Direct Export); 2) fish caught by non-PNG-flagged fishing vessels landed in PNG, processed and exported to EU (In-direct Export); and 3) fish landed in another third country by a PNG-flagged fishing vessel, where the fish is subsequently processed and exported to EU. The CDS does not apply for export of fish to another country (outside of the EU) or where fish are landed in another country by a PNG-flagged fishing vessel and that fish is exported to another third country other than EU.

Impermeability

Forms 1, 2 and 3 do not require a unique identifying code. The Catch Certificate does have a Document Number, which is a unique code that is automatically generated by the Catch Certification Registry. The composition of the code includes a country identifier, the year and a sequential numeric code. The system is mostly paper-based, however Forms 1, 2 and 3 are available as E-forms.

The exporter is required to provide the following documents to verify the catch certificate before validating:

1. Freezer Vessel Fish Origin Declaration Form (FVFODF)
2. Catch Log Sheet stamped by the Catcher
3. Bill of Lading (BL) either draft or final if export using ocean liner.
4. Customs Form 15
5. Transhipment Certificate.
6. Buying fish docket copy with FVFODF copy if company buy fish from company/cold storage.
7. Additional information for PNG Flag Vessel Export
8. If and when required; a certification letter from third country authority is required in the event:

a. whole round fish was re-export to EU via a third country without undergoing further processing except unloading and re-loading
b. PNG flag caught fish was re-exported back to PNG after undergoing only transhipment in that third country.

Through the combination of these forms, there is a complete check of catch conditions including the location, gear type and dates of the catches and a complete check of vessel authorisation including vessel name, registration number, IMO number, and valid licence number. Vessel information collected on most forms is only vessel name and PNG licence number, but the Catch Certificate requires all of the above details as well as contact details. There is a check of catch amount by species, but the mix of bigeye tuna and yellowfin tuna in amongst the bulk of skipjack tuna may not be quantified accurately in the logbook records and may only be recorded on Form 2 once grading in the processing facility has occurred. Estimated species composition would also be recorded in the purse seine observer data but this source of information is not mentioned anywhere in the process — probably because it is not available to authorities in a timely manner (See Dunn and Knuckey, 2013).

A competent government authority is required to sign documents. Government validation is required for Forms 1, 2 and 3 by a NFA CDS officer. The credentials of the validating authority for the Catch Certificate is a government-based audit and certification officer. The FVFODF requires validation by a port captain or cold store manager, and it needs to be verified or certified by an NFA approved officer with an approved NFA stamp (note: there is sometimes no labelled field for stamp on some forms, but it is described in the form instructions).

Most forms have pre-filled species names which vary depending on the form (for example the Fish Transhipment in Port Form – Longliner includes yellowfin tuna, bigeye tuna, shark, billfish, dolphinfish (*Coryphaena hippurus*) and barracuda (*Sphyraena sp.*), while most other forms only include tuna species). The Catch Certificate has a space for free entry of species names. Most forms record processed weight, with no option to record process type or conversion factor. The Catch Certificate requires Estimated Live Weight, Estimated Weight to be Landed and Verified Weight landed (where appropriate). Mixing and splitting of fish appears to be allowed, and transhipments are accounted for.

A transport form is required where fish are landed at port but must be transported to an off-site processing facility.

Verifiability

A catch certificate verification checklist has been established for a Verification Officer to check against the range of elements required in each of the 12 sections of the Catch Certificate, as well is half a dozen elements for each of the various attachments, including: additional information for PNG flagged vessel Export; FVFODF; catch logsheet; transhipment

certificate; Bill of lading; and third country certification letter. The verification officer can provide general comments as well as a valuation of compliance.

Fiji

The impetus for adoption of a CDS in Fiji was from national companies wishing to retain EU markets for their product and their need to meet EC 1005/2008. Although some WCPO tuna landed in Fiji are retained locally (15%) a large amount albacore (*Thunnus alalunga*), yellowfin tuna and bigeye tuna is exported to the EU in frozen form. Fiji has a number of companies and vessels that submit CDS on this frozen product exported to the EU. The system has been in use for about a year and is reported by industry to be working well. The requirements and forms are not dissimilar to those used in PNG.

Inclusivity

The Fiji CDS applies to only a very narrow section of the tuna industry. It is inclusive of the main longline tuna species in the various product forms but only applies to fish caught by a Fiji-Flagged fishing vessels landed in Fiji, processed and exported to EU. Although it could be potentially more broadly applied, in reality it only applies to catch from longline vessels from a Fijian companies exporting mainly frozen product (including loins, steak, offcuts) to the EU. It also does not apply to product that has been transhipped.

Impermeability

The Catch Certificate has a unique code that is composed of a country identifier and a sequential numeric code. A year code does not appear to be included. Unlike PNG that has a NFA-produced "Guide to EU IUU catch certificate requirements" Fiji exporters use the standard "Handbook on the practical application of Council Regulation (EC) No. 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing" (Mare A4/PS D(2009) A/12880).

A range of forms are required for the export. These include:

1. Catch Certificate;
2. Transport details as Appendix 1 to the Catch Certificate;
3. Shipment certificate as attachment to the Catch Certificate;
4. Bill of Lading;
5. Customs Certificate C35
6. Export Permit
7. Certificate of Origin issued by Customs Administration in Fiji confirming goods are of Fiji origin in order to qualify for duty free access in the country of import -
8. EU Health Certificate

It is a paper-based system designed during 2013 by a consultant to specifically meet the EU requirements. Of all of their forms required for export, only the Health certificate information has an electronic interface. Industry indicated that they would like the other

forms, particularly the Catch Certificate to be available electronically. The Fiji Department of fisheries indicated they are moving in this direction.

These forms provide information on catch conditions including the location, gear type and dates of the catches. The catch area field just refers to Fiji EEZ and FAO. An extensive list of vessel details are collected including IMO/Lloyd's number: (if issued), vessel name, fishing licence number, flag state, registration number and contact details.

The main document of the Fijian CDS — the Fiji Catch Certificate — is nearly identical to the PNG Catch Certificate, but includes an Appendix 1 which records transport details, and refers to Attachment 1 which records catch by species and fishing vessel. This enables the Catch Certificate to cover numerous vessels in each consignment. The main document has three fields for fish weight, Estimated Live Weight, Estimated Weight to be Landed and Verified Weight Landed (where appropriate), and Attachment 1 also has three fields for fish weight, Total Catch of the Vessel (by species), Catch Processed from Total Catch and Processed Fishery Product for Export. Type of Processing is included in the Attachment 1 document, however this is a free field, and no conversion rates appear on the form.

There is facility for Transhipment details but on the Catch Certificate, but it is our understanding that the CDS does not apply to product that is transhipped because of potential uncertainty in the origin.

Verifiability

The Ministry of Fisheries and Forests is the Competent Authority to sign the CDS forms. Further information on the verification process, how it is administered and conducted and what the penalties are involved for non-compliance were not obtained.

New Zealand's EU IUU Catch Certificate

To fulfil the EU IUU Fishing Regulation, all fish seafood being exported to the EU member States (directly or after processing in a third country) are required to be accompanied by a Ministry for Primary Industries Fisheries Catch Certificate if it was caught by a New Zealand flagged vessel, which at the time of harvesting, was registered and operating under the authority of a valid fishing permit and under the jurisdiction of New Zealand's fisheries management laws (MPI, 2014a). This simple, consignment based catch certificate is in addition to New Zealand's regular catch reporting and verification system, which itself, largely fulfils the EU IUU certification requirements. Many of the catch reporting systems are fisheries specific, and it is beyond the scope of this report to describe them all. In general however, Catch Effort Returns are used to record operational and environmental details of each set, as well as retained and discarded catch (weight and number) by species, while catch landing returns are used to record the vessel details, start and end dates of the trip, fish stock (species / area combination) fish weigh, purchase tax invoice numbers and

purchaser details. Forms can be found in the Fisheries (Reporting) Regulations 2001[1]. Observer programs are also implemented in many of New Zealand's fisheries.

Inclusivity

The Catch Certificate covers any fish seafood caught by New Zealand fisheries that is being exported to the EU. Other than those criteria, it is inclusive of species, fishing method and area caught. The Catch Certificate covers export and re-export, and facilitates reporting of splitting for re-exports.

Impermeability

The Catch Certificate is an electronic traceability and certification system (Official Journal of the European Union, 2010), and has a unique Certificate Number and details about the vessel including vessel name, registration number and IMO number. Catch Certificates can cover consignments that comprise of fish from a number of different vessels, and there is no way of attributing fish weights back to each vessel. Products are described in fields titled Number and Kind of Packages and Description of Product, and a net weight is assigned to each product. No details of what is expected in those fields have been received. Operational details required include catch areas and catch dates.

Verifiability

Credentials for various validators are required depending on the activity, including the initial consignment, customs declaration for import and validation of the European Community Re-export Certificate. The signature and seal of an official inspector of the New Zealand Government is required on the first page of the Catch Certificate.

Australia's EU IUU Catch Certificate

Australia also uses a Catch Certificate to fulfil requirements for European Commission (EC) Regulation 1005/2008, for all exports of wild caught seafood imported into the EU. It is a consignment based system very similar to that used by New Zealand, and was designed to demonstrate that the fish and fisheries products have been obtained in compliance with established conservation and management measures. As for New Zealand's fisheries, Australia's regular catch and effort reporting and verification system largely fulfils the EU IUU certification requirements. Commonwealth fisheries are required to report information on a per shot basis in a daily logbook (electronic or paper), including retained and discarded catch, operational data and effort. Most fisheries are also required to complete a catch disposal record, which documents the weight of each species landed, as well as some trip

[1] (http://www.legislation.co.nz/regulation/public/2001/0188/latest/whole.html#DLM62947).

details. A copy of logbooks used is available from AFMA[2]. Other MCS activities include observer programs, VMS and aerial surveillance.

Inclusivity

The Catch Certificate is inclusive of gear type and area caught, and there is a simplified version that is used by vessels: less than 12 m length without towed gear; or less than 8 m length with towed gear; or without superstructure; or of less than measures 20 GT (AQIS, 2009). It covers most seafood caught by Australian fisheries that is being exported to the EU. Exceptions are:

- *Dissostichus spp*., bluefin tuna and southern bluefin tuna (*Thunnus maccoyii*), providing they are harvested in compliance with regional fisheries management organisation requirements and are accompanied by the appropriate catch documentation prescribed by the relevant regional fisheries management organisation.
- Scallops – live, fresh or chilled
- Oysters – live, fresh, chilled, frozen, dried, salted or in brine
- Mussels – live, fresh, chilled
- Other molluscs – prepared and preserved

Other than those criteria, it is inclusive of species, fishing method and area caught. The Catch Certificate covers export and re-export, and facilitates reporting of splitting for re-exports.

Impermeability

The Catch Certificate has a unique Document Number and details about the vessel including vessel name, flag, registration number, fishing licence number and IMO/Lloyd's number. Unlike the New Zealand Catch Certificate, the Australian form does not cover consignments from multiple vessels, and so fish weights can be tracked back to fishing trips. Species, product code, catch areas and dates, estimated live weight, estimated weight to be landed and verified weight landed (if appropriate) are recorded. The Catch Certificate includes a transport section as an Appendix to record country of exportation, container numbers, destination details and signatures. The form covers transhipment at sea and in port, export and re-export.

Verifiability

Credentials required for export are master of the fishing vessel, the exporter, flag state authority, importer and customs. Additional credentials and information are required for transhipment or re-export. It is the importer's responsibility to submit the completed Catch

[2] http://www.afma.gov.au/services-for-industry/logbooks-and-catch-disposal/current-logbooks-and-catch-disposal-records/.

Certificate to the relevant EU Member State authority. This must be done at least three working days prior to the consignment arriving by sea, or within four hours of it arriving by airfreight. The importer is also responsible for maintaining Catch Certificate records, however exporters are also required to maintain a copy of the Catch Certificate for a minimum of three years.

Tuna RFMO schemes

To assist with the Commission's effort to eliminate IUU fishing operations, the IOTC adopted *Resolution 01/06 Concerning the IOTC Bigeye Tuna Statistical Document Program* during 2001, which directed contracting parties to require that all bigeye tuna, when imported into the territory of a Contracting Party, be accompanied by an IOTC Bigeye Tuna Statistical Document which meets the specifies requirements. Bigeye tuna caught by purse seiners and pole and line (bait) vessels and destined principally for the canneries in the Convention Area were exempt from this requirement. This was to be implemented by July 1, 2002 or as soon as possible thereafter.

The requirements set out in *Resolution 01/06* (Appendix 1 and 2 of that document) included example forms (for the statistical and re-export documents) and instructions for completing and using those forms. Among the requirements are that:

- The documents must be validated by a government official or other authorised individual or institution;
- The Contracting Parties which import bigeye tuna shall report the data collected by the Programme to the IOTC Executive Secretary each year;
- The Contracting Parties which export bigeye tuna shall examine export data upon receiving the import data mentioned above from the IOTC Executive Secretary, and report the results to the Commission annually; and
- The Contracting Parties should exchange copies of statistical documents and re-export certificates to facilitate the accuracy of import and export data.

In response, Contracting Parties (including Australia and New Zealand) have developed statistical documents that meet the requirements of the IOTC, but also comply with the requirements of other Commissions and include species other than bigeye tuna. These are described below.

Australian Fish Export Statistical Document Program

The Australian Fish Export Statistical Document Program (SDP) covers bigeye tuna, swordfish and northern bluefin tuna. Specific aims of the SDP are not explicitly described, however its purposes is to collect more accurate and comprehensive data on tuna and tuna-like species through monitoring trade, facilitate the trade of Australian product by covering the international statistical document requirements for export and provide valuable information on the global catch of species included. The two main fisheries that land these species are

the Eastern Tuna and Billfish Fishery (ETBF) and the Western Tuna and Billfish Fishery (WTBF), of which only the ETBF fishes in the WCPFC area of competence.

The ETBF comprises 44 active longline vessels and 7 minor line vessels to target albacore tuna, bigeye tuna, yellowfin tuna, broadbill swordfish and striped marlin (*Kajikia audax*) (Woodhams *et al*., 2013). Total 2012 catch was 3,939 t and the 2011-12 value was $27.1 million. Primary exports markets for the ETBF are Japan, United States, Europe, America Samoa, Thailand and Indonesia. The ETBF is managed and administered by AFMA, however the status of tuna and billfish caught is derived from regional assessments undertaken for the WCPFC.

Fisheries data is collected from the ETBF primarily through the AL06 Australian Pelagic Longline Daily Fishing Log which is available printed or electronically. The logbook includes a Gear and Boat Details page, a Daily Fishing Log, Listed Marine and Threatened Species Forms and a Tagged Animal Recapture Sheets. The Daily Fishing Log is completed for each shot and includes trip dates, shot times and locations (start and end latitudes and longitudes), effort information and retained and discarded number of fish, retained weight, form code (process type) and discard / retained code. Upon landing, fishers are also required to complete a PT02B Commonwealth Pelagic Fisheries Catch Disposal Record, which is designed to verify catch weights. The PT02B is used to record fishing trip, unloading and transport details, as well as catch number, weight and form code of each species, and requires certification by an authorised agent and signature of driver. Both AL06 and PT02B are to be returned to AFMA within 3 working days of landing, and the penalty for not completing forms or late submission is $27,500, while knowingly providing false information on the forms can result in up to 12 months imprisonment. There is also an observer program that covers about 6.2% of fishing effort. This program collects similar information to the fishing logbook, as well as biological data.

In addition to the SDP, logbook, catch disposal records and observer programs, the ETBF are subject to E-monitoring in the form of onboard video cameras and VMS.

Inclusivity

The SDP covers bigeye tuna, swordfish and northern bluefin tuna, and is inclusive of product (fresh / frozen) and processing types and a wide range of fishing gears. It does not cover all fish caught in the convention areas, as it only applies exports, however all fish landed are accounted for by the logbook and catch disposal records forms.

Impermeability

The SDP is a paper based system and requires a Document Number, which is a unique code allocated by AFMA. Species of fish is recorded, along with area of catch (broad areas including Western Pacific and Pacific Box), gear code, product, processing type, net weight and number of fish (if landed as gilled and gutted, dressed, round or whole). Vessel details collected are flag country, vessel name, registration number, vessel length and IOTC record

number. Each document could include catch from a number of vessels, and there is no way of differentiating between catch from different vessels. The SDP does not record dates of fishing trips, or any other way of reconciling exports with landings.

Verifiability

Validation can be undertaken by Authorised Government Agents, who may be Fish Receiver Permit holders. The Government Agent must confirm the weight of the consignment, and sign and stamp the form with an accredited seal. Exporter and importer certifications are also required. The Australian Government will provide the Secretariats of the relevant RFMOs with bi-annual export and input data summaries, and that information provides a basis for monitoring catches and trade, and also additional data for scientific assessments (this is described in the General Information section of the logbook). The document is in triplicate, with one copy to accompany the consignment of product, one copy to be retained by the Fish Receiver Permit holder who validated the form, and one copy mailed to AFMA. There is no auditing of the SDP.

New Zealand Fish Export Statistical Document

New Zealand's Fish Export Statistical Document (NZ FESD) is similar to the Australian SDP only covers swordfish, bigeye tuna, northern Pacific bluefin tuna (*Thunnus orientalis*) and northern Atlantic bluefin tuna (*Thunnus thynnus*). The main New Zealand fishery that targets those species is the Large Pelagic Species fishery. There are two other main New Zealand fisheries that target highly migratory species; the Purse Seine Fishery for Skipjack Tuna and the Albacore Troll Fishery. The Ministry for Primary Industries states that the NZ FESD was implemented to comply with resolutions of the ICCAT and IATTC statistical document scheme requirements for bigeye tuna, swordfish, northern Pacific bluefin tuna and northern Atlantic bluefin, and that it also serves as an ICCAT Bluefin Tuna Catch Document (MPI, 2014b).

The surface longline fishery mainly targets southern bluefin tuna, bigeye tuna and swordfish, but also albacore tuna, yellowfin tuna and Pacific bluefin tuna (MoF, 2010). The fishery is administered by New Zealand's Ministry if Fisheries, but stock assessments for key species are undertaken for WCPFC and the CCSBT, and New Zealand participates in that process. During 2009 there were 40 New Zealand longline vessels fishing for large pelagic species in the WCPFC convention area. Catches of large pelagic species by New Zealand vessels in both New Zealand fisheries waters and on the high seas were 263 t bigeye tuna, 419 t swordfish and 16 t northern bluefin tuna.

Fishers are required to complete a number of catch reporting forms. The main form is the Tuna Longlining Catch Effort Return. This form is used to record operational (time, date position, effort, gear configuration) and environmental details of each set, as well as retained and discarded catch (weight and number) by species. The catch landing return is used to record the vessel details, start and end dates of the trip, fish stock (species / area

combination) fish weigh, purchase tax invoice number and purchaser details. There is an observer program that covers 17-26% of effort (MoF, 2010).

Inclusivity

The NZ FESD covers all exports of swordfish, bigeye tuna, northern Pacific Bluefin tuna and northern Atlantic Bluefin tuna caught by New Zealand flagged vessels, regardless of where they are caught (MPI, 2014b). The four species are listed at the top of the document, and once circled, it becomes a species-specific document. The NZ FESD appears to be inclusive of gear types, and a range of gear codes are shown in the instruction sheet that includes "OT" for other gear types. It can only be used to validate New Zealand flagged vessels, and catch from charter vessels taken in the New Zealand EEZ are validated by the flag State.

Impermeability

NZ FESD contains a unique Document Number that is allocated by the Ministry for Primary Industries Trade Validator, and is comprised of the first four digits of the Validator's New Zealand Qualifications Authority (NZQA) number, a two digit code for the financial year (for example for 2008/09 would be 89) and then a three digit sequential document number for that year. Six broad areas for Area of Catch are listed which include Western Pacific and Pacific Box. The NZ FESD accepts fresh or frozen product and a range of processing types that are listed. Catch from more than one vessel can be included on each sheet, however there is no way of knowing which portion of the catch comes from each vessel. Vessel information collected is Flag Country, Capture Vessel Name, Registration Number, RFMO Record Number (if applicable) and Vessel Length. Time of Harvest only requires month and year, and net weight and number of fish are recorded, and because Time of Harvest and vessel information are not linked on the form, there is no way of reconciling exports with landings

Verifiability

Validation is undertaken by a Ministry for Primary Industries Trade Validator, and credentials required include NZQA number, name and title, signature, date and official Seal. The Ministry for Primary Industries Trade Validator ensure the exporter has completed all required sections before signing, and that all information is be true and correct to the best of their knowledge. Unlike the Australian version of this form, the Validator is not required to independently record the consignment weight. Exporter and importer certifications are also required, and there is facility for importer certification at and intermediate country if applicable.

MPI receives around 100–150 forms per month, and usually the administration of this systems requires 2–3 days data entry two times each year. Data is stored on an Access database.

Other CDS-like programs

US Tuna Tracking and Verification Program

In order to legally label tuna product as dolphin-safe in the USA, catch is required to be certified that no dolphins were killed or seriously injured in the sets or other gear deployments in which the tuna were caught, and if applicable, no purse seine net was intentionally deployed on or used to encircle dolphins during the fishing trip. To facilitate that certification, the Tuna Tracking and Verification Program (TTVP) was established in 2000 to monitor documentation associated with the dolphin-safe status of the tuna. As the purpose of this program is not related to IUU fishing, these forms in no way validate the weight of tuna products.

Inclusivity

The program monitors both domestic production and the importation of frozen and processed tuna products (not fresh). In addition, the TTVP monitors the importation of certain fishery products from nations identified by the Secretary of Commerce as having large-scale, high-seas driftnet vessels. The main document used is the Fisheries Certificate of Origin (FCO), which is also known as the NOAA Form 370. FCOs are required, regardless of gear type, for the importation into the USA of tuna of the genus *Thunnus* and skipjack tuna.

Impermeability

Each FCO has a unique Customs Entry Number assigned and the Date of Entry (projected). It also requires species description, product form, ocean area fished (broad pre-defined areas including the western Pacific Ocean and south Pacific Ocean), fishing gear used, start and end trip dates, vessel name and vessel flag. Net weight of each product from each vessel is recorded.

Verifiability

It is a paper system, and requires additional certification including a Captain's Statement (a document signed by the captain of the harvesting vessel that contains the vessel details and a statement declaring that no dolphins were killed or seriously injured in the sets or other gear deployments in which the tuna were caught, and if applicable, that no purse seine net was intentionally deployed on or used to encircle dolphins during the fishing trip). An observer statement may also be required if applicable. For tuna harvested in the eastern tropical Pacific Ocean by a large purse seine vessel of more than 400 short tons (362.8 metric tons) carrying capacity, an International Dolphin Conservation Program (IDCP) member nation certification must accompany the FCO. The IDCP member nation certificate must be signed by a representative of the appropriate IDCP-member nation certifying that: 1) there was an IDCP-approved observer on board the vessel during the entire trip; 2) no purse seine net was intentionally deployed on or to encircle dolphins during the fishing trip and no dolphins were killed or seriously injured in the sets in which the tuna were caught; and 3) list the numbers for that associated Tuna Tracking Forms which contain the captain's

and observer's certifications. For fish or fish products harvested by, or exported from, a designated large-scale high seas driftnet nation, credentials are required from a Government Representative to attest that the fish or fish products described therein were not harvested by large-scale driftnet on the high seas.

The TTVP, under the National Oceanic & Atmospheric Administration's National Marine Fisheries Service, is responsible for administration of this program. Information submitted on the form will be used to determine whether or not the listed shipment is eligible for entry into the United States. People found making false statements or endorsements in this program are liable for a civil penalty not exceeding $130,000 (16 U.S.C. § 1385(e) (referencing 16 U.S.C. § 1385(d)(2)(B) and Civil Monetary Penalties; Adjustment for Inflation, 77 Fed. Reg. 72915, 72916 (Dec. 7, 2012))). The Fisheries Certificate of Origin form expires on 30 June 2016, after which it will presumably be reviewed.

US International Trade Documentation and Tracking Programs

The United States has domestic regulations located at 50 CFR Part 300 Subpart M on International Trade Documentation and Tracking Programs for Highly Migratory Species (hereafter referred to as HMS ITP regulations). These regulations, promulgated under the authorities of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801), the Atlantic Tunas Conservation Act (16 U.S.C. 971) and the Tunas Convention Act (16 U.S.C. 951-961), apply to the importing, exporting and re-exporting of Atlantic bluefin tuna, Pacific bluefin tuna, southern bluefin tuna, swordfish, frozen bigeye tuna and shark fins.

Inclusivity

In general, the HMS ITP regulations apply to all importing, exporting and re-exporting of Atlantic bluefin tuna, Pacific bluefin tuna, southern bluefin tuna, swordfish, frozen bigeye tuna and shark fins regardless of area caught and fishing method. However requirements of these regulations varies between species.

Impermeability and Verifiability

The HMS ITP regulations require importers, exporters and re-exporters of those species to hold a HMS ITP Trade Permit. Permits are issued by NMFS, and must be renewed annually. Reporting requirements vary by species, but in general include a catch document or a statistical document, biweekly reports, (with or without landings information) and re-export certificates.

HMS trade regulations for bluefin tuna caught from the Pacific Ocean require importers, exporters and re-exporters to hold a current Trade Permit, and that each consignment be accompanied by a bluefin tuna catch document (BCD). Unlike the requirement for Atlantic bluefin tuna, catch related information is not required on the BCDs for Pacific bluefin tuna. Re-exports from the US must be accompanied by a re-export certificate as well as the original BCD, and must be validated by a government official prior to export. Copies of BCDs and re-export certificates must be provided to NMFS within 24 hours of the trade, and

original BCDs for imports and biweekly reports must be received by NMFS within 10 days after the reporting period ends.

The Pacific BCD includes a unique document number that is comprised of the characters US, the calendar year, ITP number and a sequential number. Vessel details and catch description are recorded which include landing date, number and weight of fish as well as fishing gear used. A government official, who signs and stamps the document, validates these details. For each fish, tag number (if tagged), weight, product type (fresh / frozen and processing type) are recorded. Trade data collected include the exporters details and signature, point of departure, transportation details (eg accompanying airway bill), government validation (for untagged fish only), importer / buyer details and signature and point of import. BCDs may be filled out and completed by hand, or for exports of bluefin tuna, may be completed via a secure online reporting system. Privacy of information submitted with the BCD is described on the form instructions stating that the "… the Agency does not release confidential information submitted in compliance with provisions of the Act, other than in aggregate form and under circumstances required or authorized by law. Whenever data are requested or released to the general public, the Agency ensures that information on the pecuniary business activity of a dealer is not identified."

HMS trade regulations for swordfish and frozen bigeye tuna apply to United States trade of product that originated from any ocean area. Imports, exports and re-export of any of those species must be accompanied by an approved, original, uniquely numbered, completed Statistical Document, issued and validated by the country of the vessel of harvest. The Statistical Document for swordfish includes a unique country coded, document number that is issued by the country / entity / fishing entity. Vessel details, point of export and broad area of catch (including the Pacific) are recorded above the description of fish, which included Product Type (fresh / frozen and processing type), time of harvest (month and year), gear code and net weight. A copy of the completed, signed document must be provided to NMFS within 24 hours of import, and biweekly reports must be submitted to NMFS within 10 days of the end of the reporting period. Export certification includes contact details, signature and licence number (if applicable), and government validation that included total weight of shipment, signature and seal. The import section contains space for intermediate and final import places, each with their own certifications. There are two bigeye tuna forms that are nearly identical to the swordfish form, one for ICCAT and one for IATTC.

Eco-labels, MSC certification and Chain of Custody

Eco-labels provide businesses and consumers with confidence that the seafood they are purchasing comes from sustainable fishing practices. To be effective, however, this confidence requires that the seafood can be traced from the sustainable fishery, through the supply chain to the point of consumption. Marine Stewardship Council (MSC) is one of the most recognised fishery eco-labels that, and has developed comprehensive assessment

standards for sustainable fishing and seafood traceability. In order for a company in the supply chain to display the MSC eco-label, they must become Chain of Custody Certified. Some relevant examples of the application of eco-labelling, particularly MSC are shown below.

- Dolphin Safe Tuna Labelling (1990) prescribed under the American Dolphin Protection Consumer Information Act (16 U.S.C. §1385) and the national tuna tracking and verification program (TTVP) to monitor domestic production and importation of frozen and processed tuna products and authenticate dolphin-safe claims on tuna products and certifies that fishery products were not harvested by a high-seas driftnet vessel.
- Marine stewardship Council (MSC) certification (August 2007) of albacore tuna caught by pole-and-line and troll-and-jig methods in the Pacific Ocean by the members of the American Albacore Fisheries Association (AAFA).
- MSC certification (May 2011) of albacore tuna caught by troll methods of the western coasts of the North and South Islands of New Zealand;
- MSC certification (December 2011) of skipjack tuna caught in Parties to the Nauru Agreement (PNA) waters by purse seine setting on un-associated (FAD-free) schools;
- MSC certification (December 2012) of pelagic longline – caught albacore tuna from Fiji's Exclusive Economic Zone (including Fiji archipelagic waters and Territorial Seas) by the Fiji Tuna Boat Owners Association (FTBOA);
- MSC assessment is also underway for pelagic mid-set longline-caught albacore tuna, yellowfin tuna, swordfish and mahi mahi (*Coryphaena hippurus*) by Walker Seafood Australia.

MSC certification in itself does not necessarily require a CDS, as it is just a certification of the sustainability of a fishery. Linked in with this, however, is the MSC Chain of Custody (CoC) certification standard to provide an assurance that only products originating from an MSC-certified fishery are labelled as MSC. This standard does not cover food safety or quality.

Chain of Custody certification applies to all forms of MSC labelled products and is assessed against the MSC Chain of Custody Standard (MSC, 2011). It is not a traceability system, rather a system that sets a Standard for traceability and auditing of that Standard. The Standard covers four principles. Principle 1 relates to the management system of the organisation. A management system that addresses the principles and criteria in the Standard should be in place, the organisation should ensure that staff responsible for that system are adequately trained, that adequate records are kept and that subcontractors also meet the requirements of the Standard. Principle 2 requires the organisation to operate a traceability system. That system must maintain records to enable certified products to be traced to a certified source and vice versa, and that the organisation only sells as certified, the products covered by its scope of certification. Principle 3 requires that there is no substitution of certified products with non-certified products, and that packaging materials bearing the MSC eco-label cannot be used for non-certified products. Principle 4 requires

that there is a system for ensuring that all certified products are identified. Certified products must be identifiable at all stages of purchasing, and only certified products covered by its scope of certification are identified as such.

Chain of Custody certification is issued for a three year period after accreditation by a MSC auditor. During those three years, businesses are periodically audited about once per year to ensure the Standard is being met. Requirements for MSC certification are reviewed and released periodically.

General comments received by the Secretariat

The following comments have been basically transcribed from the submissions of the various countries that responded to a request to members at the CDS – IWG to provide information on current programs and capacities to the WCPFC Secretariat by November 2013.

Australia

When coupled with other strong MCS measures, Australia believes that CDSs are effective fisheries management tools. They participate in two CDSs (the Commission for the Conservation of Antarctic Marine Living Resources [CCAMLR] and the Commission for the Conservation of Southern Bluefin Tuna [CCSBT]) and the Indian Ocean Tuna Commission (IOTC) statistical document programme for bigeye tuna.

The CCAMLR CDS was implemented in May 2000, with the aims of distinguishing between legal and IUU fishing operations, and preventing IUU fish from entering markets (Sabourenkov and Miller, 2004, cited in MRAG, 2010). It provides a mechanism for tracking landing, transhipment, export of re-export of toothfish, uses a unique documentation number system and requires verification of catch information against the vessel's authorities to fish. This also provides a verified data source for the Scientific Committee and the Commission. Verification can be provided by comparison with other data sources such as VMS. All five Commonwealth vessels operating in the fishery use the CDS, which has used an electronic web-based interface since 2009. The CCMLR CDS is currently undergoing a review, which will be available to assist development of a robust system for the WCPFC. MRAG (2010) reported that the CCAMLR CDS, in combination with several compatible and complimentary CMMs, has been largely successful in achieving both its aims.

The CCSBT CDS was implemented on 1 January 2010 to replace the former Trade Information Scheme. The primary objective for the CCSBT CDS is to reduce the incidence of IUU fishing. It uses a uniquely numbered document, which both exporters and importers use to submit data to the CCSBT Secretariat in order to identify any discrepancies. Further, each fish must be tagged, weighted and measured. It is applied to all SBT sold domestically, imported, transhipped, exported or re-exported, and no SBT can be accepted for trade without the appropriate tag and accompanying completed CDS documentation. Forms to be completed depend on the sector of the fishery, with longline sector being required to complete 3 CDS forms and the farming sector CDS five forms. A summary of the CDS

reporting process is shown in Figure 1. Data collection is currently paper-based, but implementation of electronic CDS is being considered.

The cost of the CCSBT is higher than for CCAMLR for many reasons including, but not limited to:

- the number of operators;
- the number of individual export activities;
- the number of documents required to be completed, checked and processed;
- the use of tags;
- level of auditing;
- requirements to cross check documents; and
- reporting frequency and requirements.

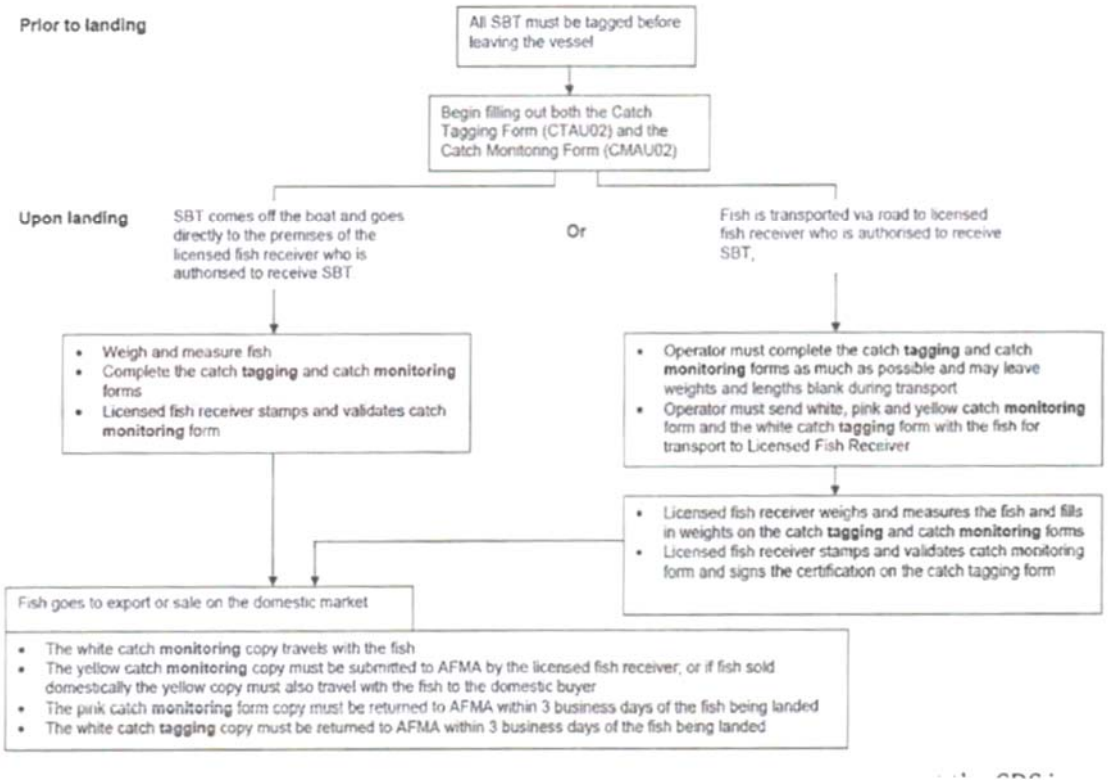

Figure 1. Outline of CDS process for SBT caught by longline on the east coast of Australia.

New Zealand

New Zealand have comprehensive domestic catch reporting, food safety standards and product traceability systems, which provide much of the expertise and infrastructure required for implementation or development of other types of CDS. They described six different existing domestic tracking schemes, CDS related initiatives, and certification schemes for product in the WCPFC Convention Area:

1. New Zealand domestic catch landing reporting

2. EU Certificate of Origin (described above)
3. CCAMLR CDS
4. CCSBT CDS
5. New Zealand fish export statistical document (described above)
6. MSC certification of the New Zealand south Pacific albacore troll fishery (described above)

Domestic catch landing reporting requires that all vessels landing fish in New Zealand ports, or New Zealand flagged vessels landing or transhipping fish outside of the New Zealand EEZ must complete a catch landing return. Fishing returns are customised depending on fishing method, and there are different forms for fishing activities inside and outside of the EEZ. Paper based records are manually entered into a centralised Catch and Effort database.

The EU require imported fish products to be accompanied by a catch certificate issued by the flag State of the vessel, demonstrating that the fish were legally caught. To maintain access the EU market (where ~ 10% of all seafood exports go valued at approximately NZ$146 annually), NZ had to develop a catch certification system. The system is a simplified consignment based catch certificate for vessels registered and landed in New Zealand, and does not allow fish caught in the New Zealand EEZ by charter vessels to be able to be certified by New Zealand Authorities for entry into the EU market. The existing catch reporting and verification system meant that fulfilling the EU's requirements were far less onerous on officials and industry than would be the case if the New Zealand catch reporting system was not already in place and operating effectively. EU IUU certification requires some additional time on top of domestic reporting requirements for Ministry for Primary Industries (MPI) data management staff to verify catch reports, however transhipment can complicate the processes, increasing the time taken to validate the catch data. There are occasional problems with product being held up in EU ports, and this requires capacity to communicate with the EU port in question to understand and resolve the problem, ability to resolve the problem at the New Zealand end (if one exists), and to be able to work with officials internationally to get product moving again as quickly as possible. MPI estimate that around 24 hours per year is spent on problem resolution.

New Zealand also use the CCAMLR catch certification system to track toothfish from the point of capture through the supply chain. Its primary aim is to reduce the incidence of IUU fishing. All members are required to use the web-based systems is required for the catching, landing and / or trade of toothfish caught inside or outside of the Convention Area. Estimates of time taken to undertake different CCAMLR CDS activities are shown in Table 2.

New Zealand also use the paper based CCSBT catch certification system to track SBT from the point of landing through the supply chain. All fish are tagged and reporting requirements in addition to existing domestic forms. An estimated 370 hours of MPI staff time is taken annually to administer the CCSBT CDS, for about 830 t of SBT (Table 3). New

Zealand estimate that commercial operators spend approximately 540 hours per year of administration time to meet their CCSBT CDS obligations.

Table 2. Estimates of time taken for MPI staff to administer the CCAMLR CDS for approximately 1000 t of fish per year.

Activity	Estimated time per year
Issuing catch documents (DCDs) to vessels in Ross Sea and SGSSI	2 hours
Receiving estimated weights for landing and issuing flag State confirmation numbers	3 hours
Checking the landing details and issuing the Landing Certificate (NZ and foreign) including correspondence with industry about discrepancies etc	30 hours
Setting up the cross checking folders for each DCD	5 hours
Issuing blank export documents (DED)	62 hours
Issuing completed DEDs	125 hours
Follow up re mistakes with Secretariat	20 hours
Total	247 hours

Table 3. Estimates of time taken for MPI staff to administer the CCSBT CDS for approximately 830 t of SBT per year.

Activity	Estimated time per year
Physical management of returns and tags including initial mail-outs, dealing with printers, storage, and ad-hoc requests throughout year for additional forms or tags	50 hours
Initial validation of forms, follow-up and corrective actions with fishers and fish receivers	140 hours
Data entry	100 hours
Further follow-up and corrective actions following reconciliation of data entry	50 hours
Photocopying and mailing of CMFs for secretariat	20 hours
Quarterly Reporting	10 hours
Total	370 hours

Summary of CDS-like schemes used WCPFC region

Inclusivity

The inclusivity of CDS-like schemes used in the region varies, reflecting the different aims of the schemes (Table 4). Most schemes included all forms of product but in practice they may only apply to certain products e.g. the Fijian CDS is only really applied to frozen form and the US TTVP which related to frozen and processed tuna. Other schemes accept all forms for most species, but include exceptions such as the US TDTP which includes big eye tuna in the frozen form only. Most schemes are inclusive of tuna species and swordfish, however the

Australian EU IUU Catch Certificate excludes toothfish, bluefin tuna and southern bluefin tuna because they are covered by other forms. The Australian SDP excludes bigeye tuna caught by purse seine or pole and line and destined for canneries in the Convention Area. The four schemes initiated in response to the EU IUU Regulation only apply to exports to the EU, and the US TTVP only applies to tuna entering the USA. The other schemes cover all destinations. There are no exclusions of tagged fish specified in any of the schemes.

Impermeability

All schemes described include forms that use a unique identifying number, often including the country code and year (Table 5) but not always (e.g. Fiji). Most were paper systems, with some forms available as electronic forms, however supporting fisheries data collection systems for some fisheries use electronic reporting (e.g. Australia's Eastern Tuna and Billfish Fishery). Various levels of Government certifications and validation are used, usually stating that the information contained on the form is complete and true to the best of their knowledge. Most forms require data for species caught, but the US TDTP has mostly single species forms. Catch area is included in all schemes, and if defined, requires broad regions such as "Western Pacific" or "Pacific Box". PNG forms are mostly gear specific, while gear type is recorded on Australian and New Zealand SDS forms and US TTVP and TDTP forms. Gear type is not required for Australian or New Zealand EU IUU Catch Certificates. Level of date of capture varies from none at all Australian SDS, to beginning and end trip dates for the US TTVP. The EU IUU Regulation schemes all record "catch dates" of undefined format. All schemes record at least net weight, while live weight, verified weight and number of fish are also recorded by some schemes. EU IUU Regulation schemes are the only ones examined that record vessel name as well as IMO/Lloyd's number. Mixing / splitting is not prohibited by any scheme and is accounted form in each scheme to a certain extent. Forms such as the Australian SDP and New Zealand SDS forms can include catches from multiple vessels, and while each vessel is listed, there is no way of attributing what portion of the consignment came from each vessel.

Verifiability

National fisheries agencies are responsible for oversight of respective schemes, and those agencies delegate verification duties to either employees of the agency, or sometimes external parties (Table 6). For example, some Fish Receiver Permit Holders are endorsed as Authorised Government Agents, and can confirm the weight of a consignment, and sign, date and stamp the Australian SDP with the accredited seal. Data for some schemes that are implemented to fulfil the requirements of RFMOs (the Australian SDP for example) are sent to the RFMOs by the fisheries agencies enable monitoring of catches and trade by the Secretariat. Legislative instruments are in place to penalise the provision of false or misleading data on official forms, and validators are often required to only validate forms that are complete, and accurate to the best of their knowledge.

Table 4. Summary of CDS-like schemes currently used in the area of the WCPFC assessed against the functional review criteria of Inclusivity as described by MRAG (2010).

Measure	PNG CDS	FIJI CDS	NZ EU IUU Catch Certificate	Australia's EU IUU Catch Certificate	Australian SDP	New Zealand SDS	US TTVP	US TDTP
Includes all forms of fish product	No exclusions noted	No exclusions, but only applied to frozen product in reality	All forms and species	Most seafood except toothfish, bluefin tuna, southern bluefin tuna and most forms of molluscs.	Only bigeye tuna, swordfish and northern bluefin tuna. No ;product form exclusions noted.	Accepts fresh and frozen and a range of processing methods for bigeye tuna, swordfish, northern Pacific bluefin tuna and northern Atlantic bluefin tuna.	Frozen and processed tuna	Applies to the importing, exporting and re-exporting of Atlantic bluefin tuna, Pacific bluefin tuna, southern bluefin tuna, swordfish, frozen bigeye tuna and shark fins.
Includes all gears used to catch fish	No exclusions noted	Only Fijian flagged longline caught fish	All gear types	All gear types	No exclusions noted apart from bigeye tuna caught by purse seine or pole and line and destined for canneries in the Convention Area	No exclusions noted	No exclusions noted	No exclusions noted
Includes all fish destinations	Exports to EU	Exports to EU	Exports to EU	Exports to EU	No, but see above.	No exclusions noted	Only tuna entering USA	All imports, exports and re-exports regardless of destination
Inclusion of tagged fish	Fish are not tagged	Fish not tagged	Exclusion not specified.	Exclusion not specified.	Yes.	Yes.	Exclusion not specified.	Exclusion not specified.

Table 5. Summary of CDS-like schemes currently used in the area of the WCPFC assessed against the functional review criteria of Impermeability as described by MRAG (2010).

Measure	PNG CDS	FIJI CDS	NZ EU IUU Catch Certificate	Australia's EU IUU Catch Certificate	Australian SDP	New Zealand SDS	US TTVP	US TDTP
Unique identifying number (Incl. country code and year code)	Yes. Includes country ID and year.	Yes. Includes country ID, but no year code	Unique document number, format uncertain.	Unique document number, format uncertain.	Unique document number, format uncertain.	Unique document number, format uncertain.	Customs entry number and date of entry.	Unique document number, with "US" and year included
Electronic System	Paper and E-forms	Paper system	Paper system	Paper system	Paper system	Paper system	Paper system	Paper system
Government validation	Certifications and validations required	Certifications and validations required	Certifications and validations required	Certifications and validations required	Certifications and validations required	Certifications and validations required	Certifications and validations required	Certifications and validations required
Catch Condition - Species	Species field	Species field	Species field.	Species field.	Species field.	Species specific document once species is circled	Species field.	Mostly species specific documents
Catch Condition - Location (FAO Area and EEZ)	Catch area	Catch area	Catch areas	Catch areas	Catch area	Catch area	Ocean area	Area of catch
Catch Condition - Gear Type	Separate forms for gear types	Longline only	No	No	Gear type recorded	Gear type recorded	Gear type recorded	Gear code
Catch Condition - Dates	Catch dates	Catch dates	Catch dates	Catch dates	Not recorded.	Month of capture recorded	Begin-end trip dates	Month and year of harvest
Catch Condition - Catch weight	Various - live weight, weight landed and verified weight	Various - total catch of vessel, catch processed from total catch, processed fishery product for export	Net weight	Live weight, weight landed and verified weight	Net weight (kg) and number of fish	Net weight and number of fish	Net weight	Net weight and total weight of shipment
Catch Condition - product form/processing	Product form	Type of processing	Description of Product	Description of Product	Processing type	Processing type	Product form	Product Type and From
Catch Condition - Vessel Authorisation (IMO/Lloyd's No.)	Various -including IMO/Lloyd's number	Various -including IMO/Lloyd's number	Various - including IMO number	Various - including IMO number	Various - but not IMO/Lloyd's No.	Various - but not IMO/Lloyd's No.	Vessel name and flag states	Various - but not IMO/Lloyd's number
Fish mixing and splitting	Allowed and accounted for	Allowed and accounted for	Document can include multiple vessels.	Partial catches and facilitates reporting of splitting for re-exports.	Form can include aggregated /split catches which cannot be disaggregated.	Form can include aggregated /split catches which cannot be disaggregated.	Document can include multiple vessels. Weight from each vessels recorded.	Single vessel form, however exclusion of splitting

Table 6. Summary of CDS-like schemes currently used in the area of the WCPFC assessed against the functional review criteria of Verifiability as described by MRAG (2010).

Measure	PNG CDS	FIJI CDS	NZ EU IUU Catch Certificate	Australia's EU IUU Catch Certificate	Australian SDP	New Zealand SDS	US TTVP	US TDTP
Responsibility for oversight	National Fisheries Authority	Department of Fisheries	Ministry for Primary Industries.	Australian Fisheries Management Authority	Authorised Australian Fisheries Management Authority. Data sent to RFMOs. No auditing.	Ministry for Primary Industries.	Forms are sent to NOAA.	NMFS must receive original copy
Penalties for improper documentation	Fisheries Act includes penalties for information which is false, misleading or inaccurate	Information to evaluate this criteria was not provided	There are strict penalties for fish taken in contravention of the Act.	Fisheries Act includes penalties for providing false or misleading information.	Fisheries Act includes penalties for providing false or misleading information.	There are strict penalties for fish taken in contravention of the Act.	There are strict penalties for making false statements or endorsements.	There are strict penalties for making false statements or endorsements.
Performance review and improvement	Improvements to the PNG CDS are still being undertaken	Information to evaluate this criteria was not provided	Information to evaluate this criteria was not provided	Information to evaluate this criteria was not provided	Information to evaluate this criteria was not provided	Information to evaluate this criteria was not provided	Form 370 approval expires on 30 June 2016, after which it will presumably be reviewed.	The form approval expired on 31 January 2014, after which it is presumably supposed to be reviewed.

5. Alignment of CDS requirements and MCS capacities

The 1981 Monitoring, Control and Surveillance (MCS) Conference of Experts in Rome, broadly defined MCS as:

- Monitoring: The continuous requirement for the measurement of fishing effort characteristics and resource yields.
- Control: The regulatory conditions under which the exploitation of the resource may be conducted.
- Surveillance: The degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.

MCS constitutes a broadening of traditional enforcement into an integrated functionality of data collection and information gathering aimed at encouraging and supporting compliance as an outcome, not just an activity.

In terms of fishery data collection, SPC / FFA tuna forms are described in SPC (2011). Forms can be broadly categorised into:

i. catch and effort logsheets,
ii. observer programs,
iii. port sampling programs,
iv. unloading data collection,
v. artisanal forms, and
vi. other forms (e.g. game fishing, fishing trip, port visit, FAD, MCS).

Other data is collected through both the Commission and regional vessel monitoring systems, along with intelligence on fishing and transhipment vessel activities from aerial surveillance and vessel patrols, and in port inspections. The volume of data collected from fishing in the WCPO is truly vast and has immense further potential to contribute to compliance outcomes.

In order for a CDS to meet the objectives of functioning efficiently and effectively it must therefore both support and be well supported by aspects of monitoring, compliance and surveillance (MCS) programs at national, regional and international levels.

In this section we review the alignment of CDS requirements with current and potential WCPO MCS activities.

CDS requirements

The requirements of a CDS — as a scheme that documents verifiable information on fish catch from point of capture to the final destination — are reasonably straight forward.

The information required by a CDS can be generally classified as:

- Catch Information (Table 7) — documentation details, vessel data, catch information; description of fish sold; transhipment [at sea or in port], and certification of landing.
- Export information (Table 8) — documentation details, export information, transport details, exporter certification, export Government authority validation, and import information.

In practice, setting up and operating such a system in a multi-gear, multi-species fishery conducted across such an extensive region as the WCP-CA, with the involvement of many countries at different stages of development, is a very significant undertaking.

Data gaps from the analysis of existing catch declaration forms in relation to a CDS were reported in WCPFC-TCC6-2010 – DP/09 revealing a number of shortfalls (Table 10). The accuracy of the catch record to describe the origin of the catch was considered a shortfall, particularly with respect to transhipments, but that could be resolved by 100% observer coverage. Ensuring that fish is caught in accordance with management arrangements and conditions of fishing licences required increased announced and unannounced audits and inspections. Documents to meet regulatory and market information were required including certification by an approved authority. Uncertainty in the catch of bigeye tuna and yellowfin tuna could be improved with 100% observer coverage and increased port sampling.

Proposed CDS data fields and information collected by existing CDS-like programs

Based on the recommendations of the Table 15 in MRAG (2010), we collated the data fields that may be used in a WCPFC CDS. From our review of the CDS-like programs in the region, we then compared these data fields to those of a potential WCPFC CDS.

Catch form

Of the 44 data fields required by the proposed CDS, existing Fijian and PNG schemes already record most of them (Table 7). Data lacking from those schemes is easily obtained, and includes the flag state issued confirmation number, RFMO registration number, whether fishing was conducted within an EEZ (if required), contact details for fish recipients and flag State of the receiving vessel. Other schemes used in the region were far less comprehensive in relation to the fields required, and this reflects the narrow objectives of those schemes (noting that transhipment might not be applicable to those fisheries). In comparison to the Fijian and PNG schemes, the others lacked credentials of authorities at the time of landing, transhipment data and IMO numbers.

Export / re-export form

Like the catch form, Fijian and PNG CDSs already record most of the data fields specified by the recommended CDS (Table 8), and most of those missing fields are easily attainable. Missing fields relate to export authority issued export codes, date of issue and place of issue of transport bills and licence number of exporter. Apart from not recording transport details

and fishing dates, the Australian SDP and New Zealand SDS collected similar data to the Fijian and PNG CDSs, while the other schemes collected lower levels of data.

Overview of Current Regional MCS activities

The annual total tuna catch in the WCPO over the last two years has been the highest on record, exceeding 2.5 million metric tonnes (Williams and Terawasi, 2014). This catch is caught by vessels from a registered vessel list of over 1,000 licensed vessels that are flagged by nearly 30 countries. There is already a significant (MCS) program associated with such a large and important fishery.

The purpose of the WCPFC Compliance Monitoring Scheme is to ensure that CCMs implement and comply with obligations arising under the Convention and CMMs adopted by the Commission (CMM 2012-06, CMM 2013-02). The CMS is designed to:

a) assess CCMs' compliance with their obligations;
b) identify areas in which technical assistance or capacity building may be needed to assist CCMs to attain compliance;
c) identify aspects of CMMs which may require refinement or amendment for effective implementation;
d) respond to non-compliance through remedial options that include a range of possible responses that take account of the reason for and degree of non-compliance, and include cooperative capacity-building initiatives and, in case of serious non-compliance, such penalties and other actions as may be necessary and appropriate to promote compliance with CMMs and other Commission obligations; and,
e) monitor and resolve outstanding instances of non-compliance.

To achieve this, information from a broad range of areas is required. MCS information of relevance to the introduction of CDS includes:

- Record of Fishing Vessels and Authorizations to Fish (CMM 2013-10, formerly CMM 2009-01)
- Centralised Vessel Monitoring System (Commission VMS, CMM 2011-02)
- High Seas Boarding and Inspection Procedures (CMM 2006-08)
- WCPFC IUU List (CMM 2010-06)
- Regional Observer Programme (CMM 2007-01)
- Regulation on Transhipment (CMM 2009-06)
- Charter Notification Scheme (CMM 2012-05)

With respect to the Commission's area of competence, the FFA provides MCS guidance and technical support within the national waters of the 17 FFA members; whilst the WCPFC provides a MCS framework for the high seas. The WCPFC also has pre-existing framework for members to request access to a range of WCPFC non-public data and information through the two sets of rules and procedures for protection, access to, and dissemination of high seas non-public domain data and information (2007 and 2009).

WCPFC's capacity for major MCS activities are described below, and a summary of gap analysis highlighting areas that need to be enhanced for application of a CDS is provided in Table 11.

Licence / Access Control

Licensing information about registered fishing vessels is a key component of any CDS. It is used to ensure a fishing vessel is legally allowed to fish in any particular region or waters. Typical licensing information collected in a CDS includes Name of catch vessel, Home port, Registration number - Flag State, Flag state/Fishing entity, Registration number –RFMO, Call sign, IMO number, Licence number, Gear code (Table 7).

All commercial vessels fishing in the WCPFC-CA are required to be licenced. This includes local-foreign vessels, who are registered to their Flag State. The WCPFC maintains a Record of Fishing Vessels (RFV) that contains details of fishing vessels that are authorized to fish in the Convention Area beyond the national jurisdiction of the CCM whose flag the vessel is flying. The WCPFC RFV is an electronic database, and information of vessels on this list is publically available through the WCPFC website (CMM 2013-03). This includes electronic photographs of every vessel. FFA maintains a vessel register, for all foreign fishing vessels wishing to obtain a national fishing license from any FFA Member country. There are a number of requirements, including that the vessel must be included on the WCPFC Record of Fishing Vessels (FFA, 2014).

The Licence / Access controls within the WCPFC are sufficient to meet CDS requirements.

Register of IUU vessels

The WCPFC maintain a register of vessels that are presumed to have carried out IUU activities. There is a formal notification process for CCMs to recommend vessels for inclusion onto the WCPFC IUU list, this is considered by the TCC, and WCPFC adopts the WCPFC IUU annually at its annual meetings. Vessels may be considered for WCPFC IUU listing if they have been identified as having engaged in fishing activities for species covered by the Convention, within the Convention Area, in a manner which has undermined the effectiveness of the WCPF Convention and the WCPFC measures in force (CMM 2010-06). IUU activities for which vessels can be recommended for listing are defined in CMM 2010-06.

The FFA also maintains an IUU register as a list of vessels of interest, and the FFA Director General can decide to blacklist vessels on that list. Vessels can be simultaneously on both the WCPFC and FFA lists, as well as those of other RFMOs or States.

To assist in the identification of potential IUU fishing, the FFA administers the Regional Information Management Framework (RIMF) as a cloud-based information management system. The RIMF is an integration of systems and databases to support national and regional MCS functions, activities and initiatives. Its aim is to strengthen and improve

national MCS capacities and maximise the availability, timeliness, quality and usability of secure MCS data and information. Some of the core MCS functions of the RIMF include:

- Find and uniquely identify a vessel in the database
- Based on a location, determine if a specific vessel is authorised to fish
- Review the compliance history for any given vessel
- Review the compliance history for a particular vessel master
- Plan for targeted surveillance based on vessel and/or master compliance index
- Extract information as required by a surveillance operation

The value of the RIMF is that it combines data from various individual sources listed above into a comprehensive database that can be shared between stakeholders to gauge compliance with CMMs and identify potential IUU fishing.

MCS outcomes are supported by the IUU fishing vessels registers and the processes by which potential IUU fishing can be identified, communicated and further investigated. The near real time information that a CDS would provide on catch landings and composition would be a valuable MCS tool especially when used in conjunction with existing data.

Logbook System

A CDS is specifically focused on tracking the catch from its origin to its destination, whilst a catch logbook contains a lot more detail. Typical logbook information (of potential use to a CDS) includes: fishing dates, shot position, species, product type, process type, and weight. The CDS may not use the information to such a fine temporal and spatial scale as available in the logbook, nevertheless, this information is very valuable as a means of validating the landed catch. It is also important to note that catch weights used in the logbooks are only an estimate and will not necessarily represent the accurate, landed weight.

A range of paper-based forms are used by the logbook system for WCPO fisheries. SPC / FFA catch and effort logsheets are gear specific, allowing different information to be collected for each fishing method. There are fishing gear specific catch and effort logsheets that are filled out by the skipper or another ship's officer, which record data on the fishing vessel, current fishing trip, set details and catch by species. At the completion of a fishing trip, logsheets are required to be sent to the coastal State's fishery management agency, and keypunched into the agency's database before forwarding to the SPC. Depending on the requirements of the vessel's owner, however, the paper logbooks are often sent back to the company so that they can be checked by company officials before being sent to the fishery management agency. This can involve significant delays (often months and up to more than a year) in the logsheets reaching the coastal state's fishery management agency (Dunn and Knuckey, 2013). Depending on the resources available at the agency, they may be stored for several months before keypunching into an in-house database, or into the country's TUFMAN database.

Thus, although the information collected by the logbook system is generally of a good quality with respect to the position, catch weight and catch composition (with the possible exception of shark identification from longline vessels), delays in getting this data in near real-time will compromise its value for CDS validation. This is seen as an area for improvement in support of a CDS. A move to E-Reporting of logbook data, as outlined by Dunn and Knuckey (2013) would address this issue; the CDS data would simply be a subset of the overall logbook data.

Observer Program

Observer meta-data provides another source of information to validate CDS information, particularly with regard to position, fishing dates, catch composition and weights. Unlike catch and effort data, observer data also provides observations on a vessel's CMM compliance, hence a potential useful source of information on the IUU fish catch.

Observer programs are administered by most coastal states for fishing in their national waters, the FFA for vessels operating under the US Treaty, and the PNA Office for vessels operating under the FSM Arrangement. There are more than twenty observer programs operating in the Commission's area of competence. The Regional Observer Programme (ROP) was established during 2008 (CMM 2007-01) based on the use of CCM's existing regional, sub-regional and national observer programmes. Its objective is to collect verified catch data, other scientific data, and additional information related to the WCP-CA, and to monitor the implementation of relevant CMMs.

In conjunction with SPC and FFA, the WCPFC have developed standards for the operation and data collection by observers. Observers enter all of their data into various paper-based forms within observer workbooks, and these workbooks contain the required minimum fields to be collected by WCPFC observers. Generic forms include:

- The GEN – 1 form to record vessel and aircraft sightings, bunkering, fish dumping and fish transfers;
- The GEN – 2 form for information on catches or interactions with species of special interest such as marine mammals, turtles or birds; and,
- The GEN – 3 form is a trip record of whether the master or crew of the vessel violated any fishing regulations or hindered the work of the observer.

There are also gear specific forms. Using a purse seiner as an example, these include:

- The PS – 1 form on the trip details, vessel characteristics, fishing gear, vessel electronics, well contents, and crew details;
- The PS – 2 form is a daily information about the position of the vessel, the EEZ in which its operating, the activity code, and any association of a set with FADS;
- The PS – 3 form is set level information on set sequence times, retained and discarded catch of target species and other species, the fate of the catch and whether any tags were recovered;

- The PS – 4 form records the sampling method and length frequencies for the catch of different species;
- The PS – 5 form with well loading information which allows scientists to match vessel logsheet data to observer data and to improve the port sampling strategy.

There is 100% observer coverage of the purse seine fleet, and 5% coverage of the longline and pole and line fleets. Once observers return from a trip, which can be up to 120 days duration, they are debriefed and the observer workbook and all additional data forms are sent to the coastal state fisheries management agency for key punching. Similar to the logsheets, depending on the resources available at the agency, the hard copies of the observer data may be stored for many months prior to keypunching (Dunn and Knuckey, 2013).

From the perspective of a CDS, observers provide independent estimates of the catch composition and weight on a shot-by-shot basis and records of compliance with CMMs. National agency observers and port samplers also monitor transhipments in designated ports and there are WCPFC accredited observers who are monitoring high-seas transhipments often from long liners to carrier vessels (100% coverage with an observer on the receiving vessel – CMM 2009-06). Again, this information would be extremely useful for CDS validation if it could be made available in near-real time, a possibility that could be achieved with electronic reporting of observer data. There are some countries (eg. PNG) progressing down this path and SPC are also trialling electronic observer reporting.

Catch Transhipment Monitoring

The WCPFC CMM for regulation of Transhipment (CMM 2009-06) sets out the rules for transhipment of highly migratory fish stocks taken in and/or transhipped in the Convention Area. Where transhipment takes place in a port or under that national jurisdiction of a CCM, it must be conducted in accordance with applicable national laws. CCMs may advise of designated ports or port for transhipment. Purse seine vessels are not allowed to tranship outside of port, but may tranship in EEZ waters if granted an exemption by the Commission. Where high seas transhipment activities have been authorised by the flag State, it must take place in accordance with the rules and conditions set out on section 3 of CMM 2009-06. These rules include 100% ROP observer coverage on the receiving vessel of all high seas transhipments to verify the quantities and species transhipped, reporting requirements including advance notice of intention to tranship, post-transhipment declaration which are to be sent to the WCPFC Executive Director, and formal notification from the flag State of vessels that are authorised to tranship in the Convention Area (CMM 2009-06).

Monitoring of port-based and high seas transhipment by observers can provide information on the integrity of the catch prior to landing, including information on whether catch splitting or mixing is occurring. This is essential information for a CDS.

Catch Landings Monitoring

Unloading forms are used for longline, purse seine and pole and line fishing methods, with the latter two sharing a single form. There are two forms for longline, the Longline Unloading Form and Regional Unloading Destination Form. As their names suggest, the Longline Unloading Form records how much fish of each species is unloaded from longliners at end of each trip (caters for multiple vessels and / or trips), while the Regional Unloading Destination Form records the amount of fish unloaded from a longline vessel as well as the final destination of the unloaded fish. The unloading form for purse seine and pole and line vessels records the amount of fish delivered to canneries, cold stores and carrier vessel, with a separate page or pages used for each canneries, cold stores or carrier vessel in each month.

Port sampling is used to record information on the length distribution of the catch unloaded. Each fishing method has a gear specific form, however they all include fields for vessel and trip information, species and length, and some record the weight of either individual fish or the catch.

Port State Measures

The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing was adopted in 2009 by the U.N. Food and Agriculture Organization (FAO). The FAO Port State Measures Agreement (PSMA) endeavours to keep IUU fish out of the world's markets by requiring parties to exert greater port controls on foreign-flagged vessels. This includes refusal of port entry or access to port services, including landing and transhipment of fish to foreign-flagged vessels known to have engaged in IUU fishing.

The PSMA outlines a useful framework for the monitoring of fishing vessel movements into ports, and the inspection of those vessels, their gear and catches. It should be noted the PSMA does not apply to vessels flagged by the port State, or to the vessels of neighbouring States engaged in artisanal fishing, or to container vessels not carrying fish (Article 3).

The PSMA part 2 deals with notification by the State of designated ports (Article 7). Any vessel wishing to access a designated port must give advance notice of entry into port and provide prescribed vessel and catch information (Article 8). The PSMA describes the procedure for port entry authorisation or denial (Article 9). Part 3 deals with the use of ports and covers issues such as denying access to port services and offloading for example where the vessel is not licensed, or there is evidence the catch was not taken lawfully. Part 4 deals with inspections and follow up action, including the conduct of inspections including ensuring the use of properly qualified inspectors, inspection of the vessel and gear, and minimising interference and inconvenience (Article 13). The requirements for the results of the inspection to be transmitted (to other States, flag States, RFMO's) are laid out (Article 15). Part 5 lays out the role of flag States such as to require its vessels to cooperate, and to take certain action where there is evidence of IUU fishing by one of its vessels (Article 21). The remaining parts 6 to 10 cover the requirements of developing States, dispute

settlement, non-Parties, monitoring review and assessment, and final matters largely of an administrative nature. The PSMA annexes provide useful forms, procedures, and guidelines for training inspectors.

Twenty-seven States or regional economic integration organisations are signatories to the PSMA[3]. The PSMA will come into force once twenty-five States have submitted their ratification, acceptance, approval or accession. As at March 2014 (the most recent public update) ten States have done so.

The WCPFC has previously considered the adoption of a Port State Measures CMM that in essence would reflect the principles of the PSMA. Whilst a PSM CMM has yet to be adopted, it is understood it is likely this matter will be further considered at future meetings.

If a CDS is implemented, it is desirable for administrators and industry alike that a consistent and comparable system be adopted by CCMs to ensure streamlined and efficient procedures across the region.

It should be noted that a CDS would include inspection level requirements for catch offloading. The PSMA requires inspection levels "*sufficient to achieve the objectives of the agreement*" (Article 12). The operational inspection procedures and underpinning principles of the PSMA are equally applicable to a CDS. The PSMA does not specify which department or authority should undertake inspections. The obligation, for those who are bound by the Agreement, is on the State.

In the event a CDS is adopted by the Commission, it would appear sensible and efficient to develop an inspection procedure under a CDS that recognised the potential for a PSM CMM, and to accommodate those requirements.

Regardless of the alignment with PSM, it is likely that monitoring and validation of landings to meet CDS needs will involve considerable human and financial resources. As mentioned in Section 2, PNG has 35 inspectors involved in port-based monitoring for the CDS and will be increasing this to 80 within a year — monitoring landings in country as well as for PNG flagged vessels landing overseas. At the present time, this is being funded by the NFA, but whether this is the most practical and efficient business model for the administration of a CDS is already being questioned. The capacity for SIDS to support such financial and human resources is a real issue. Whether observers can be used to conduct CDS landings monitoring (for purse seine) may be an option. Alternatively, a system similar to the ROP could be established for CDS inspectors. Further work needs to be undertaken to determine the best model for implementation of WCPFC CDS throughout the region.

[3] http://www.fao.org/fileadmin/user_upload/legal/docs/5_037s-e.pdf

VMS System

An operational VMS is seen as critical information to support a CDS because it provides independent, secure information on the vessel's position at all times during fishing operations.

Since 2008, all vessels fishing in the WCPFC-CA have been required to have an approved VMS operational and transmitting at all times (CMM2006-06). The purpose of the VMS is to monitor the activities of authorised fishing vessels within the WPC-CA in a cost-effective and timely manner to achieve compliance with CMMs, and support fisheries scientific analysis and sound fisheries management decision-making in the Convention Area.

There have been various amendments to the VMS over time and the current CMM for the Commission VMS was adopted during 2012 (CMM 2011-02). FFA has an agreement with the Commission to provide WCPFC VMS services. The contracted system that provides VMS information to the FFA VMS and the WCPFC VMS systems is referred to as the "Pacific VMS". The WCPFC has approximately 1,500 WCPFC-registered vessels that report to the WCPFC VMS through the Pacific VMS. In addition the WCPFC VMS receives, through the SLA with FFA, VMS information relating to FFA-registered vessels in high seas waters and waters of certain WCPFC members who have agreed to allow the WCPFC VMS to cover their waters.

The VMS system operating within the WCPFC–CA is of a very high standard and suitable to support validation of CDS data.

Cross-checking system

There are a range of cross-checking systems in place throughout the WCPFC data collection and analysis systems.

At the national level, there are various verification, validation and quality assurance procedures in place to check logsheet, observer and landings data and other CMM requirements. Summaries of this national data are provided to the Commission to support the annual stock assessment process. The Oceanic Fisheries Programme of the Secretariat of the Pacific Community (SPC) is the Pacific Community's regional centre for tuna fisheries research, fishery monitoring, stock assessment and data management. They receive each country's annual catch estimates, operational (logsheet) data, aggregated catch and effort data, aggregated size composition data; as well as observer data. These data undergo a management process that includes: receipt and acknowledgement of data submissions; quality control checking of data; importing data into the Commission databases; and, transmission of Commission databases to the WCPFC Secretariat on a quarterly basis. This cross-checking of information is specifically tailored towards improving stock assessments and although rigorous at an aggregated national level, it is not designed to validate catches at the individual shipment level as would be required in a CDS.

As mentioned previously, the RIMF is used as a cross-checking system of national licensing systems and key regional systems for compliance purposes. Although this cross-checking

system does get down to the vessel level, it does not consider catch information so again, in its current form is not suitable for CDS requirements.

Based on the reviews herein, and except in specific circumstances where validation and cross-checking systems have been put in place to meet trade requirements for the EU IUU, there would be a lot of work required before the individual government-based systems of data cross-checking would meet the requirements of an integrated WCPFC CDS.

If implemented as a paper-based CDS, this shortfall in MCS capacity could require significant human and financial resources both in the development and ongoing running of the CDS. This may be a significant issue for SIDS. Whilst development of an electronic CDS system could have significant implementation costs, it could significantly reduce the human and financial resources required to maintain the system.

Market / Transport / Export Monitoring

Similar to the section above on crosschecking, there are a variety of national level government programmes that monitor the marketing, transport and export of tuna product. At the market level, however, there are some very elaborate systems to track and monitor tuna exports throughout the supply chain, including the tagging of individual tuna for the sashimi market in Japan.

Again, except in specific circumstances where monitoring systems have been put in place to meet trade requirements for the EU IUU or specific markets, there is no coordinated government-based system of monitoring tuna shipments throughout the supply chain that would meet the requirements of a CDS.

Table 7. Fields required by catch form of proposed CDS that are recorded by CDS-like programs currently used in the WCPFC region. Shaded cells indicate that the field is recorded on one of the forms supplied. See Table 9 for annotation code descriptions. Note that missing fields bay be collected by MCS activities.

Sub-section	Field	FIJI CDS	PNG CDS	Australian SDP	New Zealand SDS	US TTVP	NZ EU IUU Catch Certificate	US TDTP - swordfish	US TDTP - bigeye	Australian Fisheries Australia's EU IUU Catch Certificate
Document	Document number					6				
	Flag State confirmation number									
	Issuing authority of document									
	Authority address									
	Authority telephone									
	Authority fax									
Vessel data	Name of catch vessel									
	Home port									
	Registration number - Flag State									
	Flag state/Fishing entity					7	10			
	Registration number -RFMO			4			11			11
	Call sign									
	IMO number									
	Licence number									
	Gear code	1	1							
Catch / harvest	Fishing date from									
	Fishing date to								18	
	Species									
	Product					8				16
	Process Type					8				16
	EEZ									
	Statistical catch area								19	
	Net weight									
	Validated weight									
Description of fish sold	Net weight sold	20		20	20		20	20	20	
	Name of recipient	20	20	20	20	20	20	20	20	20
	Signature of recipient	20	20	20	20	20	20	20	20	20
	Address	20		20	20		20	20	20	20
	Telephone									20
	Fax									
Transhipment	Name of receiving vessel master									
	Signature of receiving vessel master									
	Name of receiving vessel									
	Flag state / fishing entity									
	Call sign of receiving vessel									
	IMO / Lloyd's number of receiving vessel									
Transhipment within port area	Authority within port									
	Authority signature									
	Authority date									
	Authority official seal									
Certification of landing	Authority name and title									
	Authority signature									
	Authority date									
	Authority official seal									

Table 8. Fields required by export/re-export form of proposed CDS that are recorded by CDS-like programs currently used in the WCPFC region. Shaded cells indicate that the field is recorded on one of the forms supplied. See Table 9 for annotation code descriptions.

Sub-section	Field	FIJI CDS	PNG CDS	Australian SDP	New Zealand SDS	US TTVP	NZ EU IUU Catch Certificate	US TDTP - swordfish	US TDTP - bigeye	Australian Fisheries Australia's EU IUU Catch Certificate
General document	Document number					6	14	15	15	14
	Export code									
	Fishing date from									
	Fishing date to								18	
	Fishing vessel name									
	Original export ID									
Exported	Species									
	Product					8	16			16
	Type					8	16			16
	Weight (kg)									
Transport details	Sea transport - Vessel name	2	2				17		15	
	Sea transport - Container number	2	2				17		15	
	Sea transport - Bill of landing number	2	2				17		15	
	Road - Truck registration number	2	2				17		15	
	Road - Nationality of truck	2	2				17		15	
	Air - Flight number	2	2				17		15	
	Air - Airway bill number	2	2				17		15	
	Rail - Railway transport number	2	2				17		15	
	Rail - Bill of landing number	2	2				17		15	
	Date of Issue	2								
	Place of Issue	2								
Exporter certification	Name of Exporter									
	Address of exporter									
	Signature of Exporter									
	Date									
	Licence number / Company name of Exporter									
Export Government Authority Validation	Name and Title of Authority					9				
	Signature of Title of Authority					9				
	Date					9				
	Official seal of Authority									
	Name of Importer									
	Address of Importer									
Import section	Final Point of Import - City	3	3							
	Final Point of Import - State or Province	3	3							
	Final Point of Import - State/Fishing Entity	3	3							

Table 9. Annotation code descriptions for three tables.

1 Could be entered in Type of Processing Authorised Onboard
2 In Appendix
3 Place of import control and customs declaration
4 Only for IOTC vessels
5 Not in SDS, but in other catch returns
6 Customs ID number
7 On Captain's statement template
8 Product form
9 Only for designated large-scale driftnet nations
10 Only used for NZ vessels
11 Permit/licence number
12 Port of Loading
13 Import Control Place
14 Certificate number
15 Not in form but to be attached
16 Product code / description
17 Means of transport on catch certificate
18 Landing date only
19 No, but form is only for Pacific Ocean
20 Exporter details

Table 10. Data gaps from the analysis of existing catch declaration forms (from WCPFC-TCC6-2010 – DP/09)

Scheme	Objective	Existing Form/System	Rational	Short fall	Check
IUU	- Origin of the catch	- VMS & log-sheet - Freezer Vessels and Fish Origin Declaration Form - Fish origin form/transshipment	- Info in the log sheets are verified and sign-off by the observer or fishery officer on board or in port	- Accuracy of catch record - Responsibility of flag state	- 100% observer coverage on all fishing vessels will verify and sign off transshipment forms
	- Catch caught in a manner consistent with the rules	- Licensing Req. - Observer report - SPS -food safety std-compliance - Port sampling	- Compliance – to condition of license which are verified – at random/or upon renewal of license - Ongoing sampling in major landing port	- Responsibility of flag state - Responsibility of port state	- Compulsory Inspection - announced and unannounced audits/ inspections
	- To meet Regulatory and Market information and documentation requirements	- Certificate of Fitness - EU health Certificate - PNG Bank form - Customs form - Commercial Invoice - Catch Certificate - Export Approval & Certification Protocol	- Certified by CA. - Certified by PNGBANK - Certified by Customs - Certified by Approved Authority.	- Lack of feedback from market	- 100% Export Certification Number
Scientific Data	- Address the uncertainty in the catch of BET/YFT	- Retention of by catch - Tagging - Port Sampling - Observer sampling	- BET is been overfished and any expansion in the fisheries need to consider the status of the BET	- Catch by artisanal fish for domestic	- 100% Observer sampling, Port sampling and others including landing data.
	- Improve the reliability of stat infor on catch of BET & YFT	- Tagging Program - Port sampling - Retention of by-catch - measures by the commission - Observer sampling - logsheets	- Both BET & YFT are fully exploited, SKJ catch can still be increased, however increase in catch of skj should not further deplete BET & YFT stocks.	- Program such as tagging & port sampling are expensive and may not be consistent.	- 100% Observer sampling, port sampling, landings data.

Table 11. Analysis of gaps in current MCS arrangements in the WCPFC to highlight areas that need to be enhanced for application of CDS (Green – no gaps, Orange significant gaps).

	Purse seine fishery		Pole and Line Fishery		Longline Fishery			South-Pacific Troll Fishery (and other)
2013 Vessels	297		~130					
2013 Total Catch	1,898,090 (73%)		221,022 (8%)		218,942 (8%)			283,457 (9%)
2013 Skipjack	1,445,786 (82%)		156,579 (9%)		(<1%)			166,315 (9%)
2013 Yellowfin	355,960 (66%)		21,610 (4%)		65,499 (12%)			~92,000 (17%)
2013 Bigeye	82,151 (52%)		(3%)		62,641 (40%)			(5%)
2013 Albacore					~80,000 (95%)			(<5%)
Fleet	Distant water (JP,KO,CT,USA)	Domestic (Pacific Is)	Distant/Offshore (JP)	Domestic (Pacific Is)	Foreign (DW & Offshore)	Domestic (non-Pacific Is)	Domestic (Pacific Is)	New Zealand & US Troll
Vessels	202	95	79	~50	~350 & ~ 250	~2000	~450	174
Institutional capacity								
Fishing vessel licence/access control system in place and functioning	All vessels licenced		All vessels licenced		All vessels licenced	Local-foreign vessel licenced to flag country	All vessels licenced	All vessels licenced
Register of IUU vessels	Covered by WCPFC and FFA IUU lists		Covered by WCPFC and FFA IUU lists		Covered by WCPFC and FFA IUU lists			Covered by WCPFC and FFA IUU lists
Register of Fish Carrier and Bunker vessels	On same register as fishing vessels		On same register as fishing vessels		On same register as fishing vesels			On same register as fishing vessels
Catch and effort logbook system in place and functioning	100% coverage Paper-based system - delayed availabiliy may compromise value to CDS		100% coverage Paper-based system - delayed availabiliy may compromise value to CDS		100% coverage Paper-based system - delayed availabiliy may compromise value to CDS			100% coverage Paper-based system - delayed availabiliy may compromise value to CDS
Onboard observer program in place and functioning	100% Observer Coverage Paper-based system - delays in data availabiliy may compromise value to CDS		5% Observer Coverage Paper-based system - delays in data availabiliy may compromise value to CDS		5% Observer Coverage Paper-based system - delays in data availabiliy may compromise value to CDS			46 troll days observed in 2013
Landings monitoring in place and functioning	Systems in place, but requires capacity building and coordination between CCMs		Systems in place, but requires capacity building and coordination between CCMs		Systems in place, but requires capacity building and coordination between CCMs			Systems in place, but requires capacity building and coordination between CCMs
Transshipment monitoring in place and functioning	100% monitored -in port only		100% monitored -in port only		100% monitored -in port. See note #1	100% monitored -in port only		Not applicable?
Market/transport/Export monitoring systems in place and functioning	Markets ensure these systems are in place		Markets ensure these systems are in place		Markets ensure these systems are in place			Markets ensure these systems are in place
VMS in place and functioning	WCPFC VMS on High Seas vessels	FFA VMS	WCPFC VMS on High Seas vessels	FFA VMS	WCPFC VMS on High Seas vessels	FFA VMS	FFA VMS	WCPFC VMS
Port state measures in place and functioning	Alignment of CDS landing requirements with a potential PSM CMM		Alignment of CDS landing requirements with a potential PSM CMM		Alignment of CDS landing requirements with a potential PSM CMM			~4% of the landing
Cross checking system to verify catch and landings data in place and functioning	Possible by observers data (including Gen 3 form), VMS logbook and landings		Possible by observers data (including Gen 3 form), VMS logbook and landings		Possible by observers data (including Gen 3 form), VMS logbook and landings			MPI cross-check monthly licenced fish receiver reports with data from permit holders
Human capacity								
Adequate trained MCS inspectors - Port	Different national systems in place. Lack of human and financial capacity for SIDS to meet CDS requirements		Different national systems in place. Lack of human and financial capacity for SIDS to meet CDS requirements		Different national systems in place. Lack of human and financial capacity for SIDS to meet CDS requirements			National systems in place. Possible lack capacity to meet CDS requirements
Adequate trained MCS inspectors - Transhipment	100% Coverage through observers		100% observer coverage if applicable		100% observer coverage if applicable			100% observer coverage if applicable
Adequate trained MCS observers	100% Observer Coverage		5% Observer Coverage		5% Observer Coverage			46 troll days observed in 2013
Adequate trained MCS VMS operators	WCPFC VMS on High Seas vessels	FFA VMS	WCPFC VMS on High Seas vessels	FFA VMS	WCPFC VMS on High Seas vessels	FFA VMS	FFA VMS	WCPFC VMS
Adequately trained fishers/industry to participate in comanagement	Industry training in CDS will assist compliance		Industry training in CDS will assist compliance		Industry training in CDS will assist compliance			Industry training in CDS will assist compliance

6. Towards a WCPFC CDS

Prior to determining whether any of the existing domestic schemes and arrangements currently in place in the region can form a basis for a broader WCPFC CDS, it is necessary to consider the potential scope of the broader WCPDC CDS. This is discussed below.

Objectives

MRAG (2010) highlight that the structure and core elements of a CDS will be ultimately defined by the objectives proposed by the WCPFC with respect to the relative importance of a CDS for catch monitoring, scientific data, and/or traceability. MRAG (2010) recommended that all three areas should be covered as per the following WCPFC CDS objectives:

1. To identify, quantify and/or validate the catch of WCPFC CCMs thereby confirming compliance with CMMs and facilitating market access through traceability for these catches;
2. To provide a mechanism to identify and account for fish caught in the Convention Area through IUU fishing activities and to provide a means of preventing the products of such activities from entering markets; and
3. To supplement and reinforce catch reporting thereby strengthening scientific stock assessment activities.

The first objective arises from the need to respond to national certification schemes such as the EU IUU regulation, whereas the latter two objectives follow the COFI (2008) standardised objectives for all CDSs. We consider these objectives are appropriate and achievable for a WCPFC CDS and recommend they be adopted. These three objectives seem to encompass the three minimum objectives outlined as principle 2 of the CDS-IWG guiding principles: traceability to final market destination; catch verification and validation and provision of scientific and fisheries management information. We have used these objectives to frame the remainder of the report.

Recommendation 1: The following objectives for a WCPFC CDS be adopted:
— Identify, quantify and/or validate the catch of WCPFC CCMs to confirm compliance with CMMs and facilitate market access through catch traceability;
— Provide a mechanism to identify and account for IUU fish caught in the WCPFC-CA and provide a means of preventing such product from entering markets; and,
— Supplement and reinforce catch reporting to strengthen scientific stock assessment activities.

Major drivers

It would be fair to say that one of the major current drivers for the actual implementation of WCPFC CDS-based initiatives has been the need for companies to either retain or gain

market access for WCPO tuna species (see objective 1 below, from page 71 of MRAG, 2010). The EU IUU regulation has been an important factor in this, but increasing use of eco-labels and fishery certification programs — to demonstrate sustainable fishing practices in order to influence choices of the consumer when buying seafood — has also played an important role.

Drivers also exist for CDS to meet objectives 2 and 3 below, but it appears to date that these have had less traction in driving actual CDS implementation in the WCPFC-CA than trade requirements for traceability. As highlighted in Section 3, CDS and TDS were first brought up by the WCPFC2 during 2005, where a tabled document proposed adoption and implementation of a statistical documentation scheme for bigeye tuna, largely driven by concerns about stock status and the threat and impact of IUU fishing. Similar concerns underpinned Lack's (2008) argument for the WCPFC to implement a CDS for bigeye tuna (rather than a TDS) that required electronic documentation "….to accompany all catch of harvested, landed, transhipped, traded domestically, exported, imported and re-exported…" and for the WCPFC to acknowledge the need to implement CDS for other tunas and billfish, particularly swordfish. Lack (2008) also noted some concern about the quality of data available for stock assessment, which together with a level of IUU fishing can complicate the development of appropriate advice for conservation and management measures.

Beneficial application to WCPFC–CA species or fisheries

In an assessment of the MCS risks across the WCPFC tuna fisheries (MRAG, 2009), it was contended that a significant IUU risk in the FFA region was associated with inadequate reporting (under-reporting and misreporting) of target species by licensed vessels. This continues to undermine CMMs and the integrity of data provided to scientists and highlights the need to strengthen catch monitoring and validation throughout the supply chain. Further, the present risk of unlicensed fishing amongst some fleets and areas may increase as fisheries become increasingly regulated; potentially leading to displacement of IUU activity into adjacent high seas or other regions as MCS arrangements are strengthened. This underlines the need to promote complementary and supportive regional and high seas MCS arrangements through the WCPFC.

Noting the above, in considering which WCPFC species of fisheries could most benefit from a CDS, it is very important to remember that if a WCPFC CDS is not fully inclusive with respect to geographical extent, fishing gears, fish product / form types, and dispositions, it will be severely compromised in terms of its effectiveness and defensibility.

Main tuna species

There has been considerable pressure over many years for the WCPFC to focus on the potential for a CDS for bigeye tuna (WCPFC, 2009 and Appendix 1), fuelled by concerns about IUU impacts on stock sustainability and to align with other RFMO CDS implementation. Although some of this focus has been towards development of a TDS restricted to exported product, there is general acceptance that a scheme that does not

encompass all catches of the species, (regardless of catching method, product form or product destination) would render it ineffective in meeting most IUU objectives (eg. Lack, 2008; MRAG, 2010).

The 2011 bigeye tuna assessment (Harley *et al.,* 2011) showed an increase of fishing mortality over time, particularly in recent years, to a point where it now far exceeds F_{MSY} – over fishing is occurring. They stated that spawning biomass has declined over time and is now approaching SB_{MSY}, and there is a possibility that bigeye tuna is already in an overfished state. The need for a significant reduction of fishing mortality levels was recommended by the WCPFC Scientific Committee.

Williams and Terawasi (2014) indicate that the WCPO catch of bigeye tuna during 2013 was 158,662 mt, representing 6% of the overall catch. Of this, the purse seine catch of bigeye tuna during 2013 was estimated to be 82,151 mt (52% of the total WCPO catch), which is clearly the highest on record and for the first time, exceeded the longline catch. The increasing trend in the catch of bigeye tuna by purse seiners over the last three decades is linked with the introduction of purse seine sets targeting skipjack tuna associated with drifting FADs. These bigeye tuna (and yellowfin tuna) are generally small (40 – 80 cm) juvenile fish mixed with the skipjack tuna, which often remain unsorted prior to delivery to processing facilities. The 2013 record catch by purse seiners reflects a continuation of high effort levels and elevated bigeye tuna catch rates for all set types, not just associated sets. Exacerbating this is that recent studies have shown that logsheet-reported catch, particularly for associated sets, underestimates the quantities of yellowfin and bigeye tuna, which are misreported as skipjack tuna (e.g. Lawson, 2010; Hampton and Williams, 2011). The statistical procedures for sampling and estimating the purse seine catches of bigeye tuna and yellowfin tuna are continuing to be reviewed and refined (Lawson, 2010). Although market records and sampling assisted in the estimation of bigeye tuna and yellowfin tuna catches from purse seiners, the information on catch composition that could be provided by a CDS would be a great benefit to estimating the total catch.

Based on the above, if a CDS was to focus on bigeye tuna in WCPO and be inclusive of all landed catches, it would need to be implemented in both the longline and purse seine sectors of the fishery.

Another suggestion for the focus of the CDS was skipjack tuna; put forward by the delegation from Papua New Guinea at the CDS – IWG meeting in October 2013. The WCPO catch of skipjack tuna was 1,784,091 mt during 2013 (Williams and Terawasi, 2014); representing 58% of the total WCPO catch. This was the highest ever recorded catch of skipjack tuna — and effort and catches continue to rise. The WCPO tuna catch during 2013 represents 80% of the total Pacific Ocean catch and 57% of the global tuna catch. As one of the biggest global fisheries (and increasing) — and the significance of this fishery to the small island developing States (SIDS) in whose waters these fish are harvested — it is critical that this fishery continues to be harvested in a sustainable manner.

Skipjack tuna in the WCPO is not overfished and overfishing is not occurring. The 2014 assessment of skipjack tuna (Rice *et al.*, 2014) revealed estimates of fishing mortality for skipjack have increased over time and latest catches slightly exceed maximum sustainable yield. Biomass has declined over time to about 40 – 60% virgin biomass, the SB_{MSY} level is above the newly adopted reference point and within levels currently under consideration for possible target reference points. The WCPFC Scientific Committee advised the WCPFC that there is concern that high catches in the equatorial region could result in range contractions of the stocks, thus reducing skipjack tuna availability to high latitude fisheries. Fishing is having a significant impact on stock size, especially in the western equatorial region and can be expected to affect catch rates. They recommended the Commission take action to avoid further increases in fishing mortality and keep the skipjack tuna stock around the current levels, with tighter purse seine control rules and advocates for the adoption of target reference point and harvest control rules. Under such a situation, it is imperative that any potential for ongoing or increased IUU fishing is addressed. Implementation of a CDS for skipjack tuna would represent world's best practice for addressing this issue.

Considering the above, regardless of whether a WCPFC CDS is targeted at bigeye tuna (or skipjack tuna, there will be a need to implement a CDS in the WCPFC purse seine fishery. There are now various examples of CDSs having been implemented by RFMOs for fisheries in which the majority of the catch is by longline fishing (eg. CCSBT CDS, CCAMLR, ICCAT CDP), generally targeting one main species; but precedents for establishing a CDS for a purse seine fishery that encompasses such large catches from so many countries over such a broad geographic area do not exist. The principles, structure and functions of a CDS for the WCPFC purse seine fishery will be fundamentally the same as other fisheries, but the logistics, infrastructure and human and financial resources required to implement and operated it will be an order of magnitude larger than any other CDS undertaking. Most of these resources will be required regardless of whether the CDS is implemented for one or more species, and there is unlikely to be any significant cost savings or benefits from a phased implementation of a CDS from a single tuna species to multiple tuna species. In fact, it is more likely that this will be detrimental due to an extremely drawn-out period of changing CMMs, training and new regulations.

It is therefore our recommendation that the WCPFC CDS should encompass all gear types involved in the fishery — specifically purse seine, pole-and-line, longline and troll, and initially include all of the main target tuna species— specifically skipjack, yellowfin, bigeye and albacore tuna.

Byproduct species

Swordfish, billfish and shark species are a major by-products of longline fishing in the WCPFC – CA. There is significant concern regarding the sustainability of these species groups on a global scale.

Sharks

Sharks are common bycatch of fishing for tunas, particularly for longline fisheries. There are increasing concerns about the global status of shark stocks, fisheries targeting sharks and about continued growth in the shark fin trade. In the WCP-CA, two species of sharks are on the IUCN Red List as globally endangered and another sixteen as classed as globally vulnerable.

WCPFC's shark CMM (CMM 2010-07) discourages waste and discards of sharks, encourages live release, and controls finning (i.e. cutting off a shark's fins and discarding its carcass at sea), but it does not put a limit on shark catches. There is some concern by WCPFC CCMs that more needs to be done to address shark issues. Of the 72 species of oceanic sharks, the blue shark (*Prionace glauca*), silky shark (*Carcharhinus falciformis*), oceanic whitetip (*Carcharhinus longimanus*), shortfin mako (*Isurus oxyrinchus*), longfin mako (*Isurus paucus*), bigeye thresher (*Alopias superciliosus*), common thresher (*Alopias vulpinus*) and pelagic thresher (*Alopias pelagicus*) are considered as key species by the WCPFC. These species were selected because they are considered to be at high risk from fishing, readily identified and reported on logsheets, observer datasets and CCM annual catch data. A Shark Research Plan has been introduced by the WCPFC to evaluate the status of these shark species in the WCPFC–CA and to establish better datasets to support future assessments.

In discussing the need for further information for scientific purposes, Dunn and Knuckey (2013) highlighted that one issue of specific concern to scientists was the quality of information available on the bycatch of sharks taken by longline vessels. Due to the general lack of observer coverage on longline vessels, there is a high degree of uncertainty about the species composition of non-target catch taken by the longline fleet and, more specifically, the species composition of the shark catches. This is an area that could particularly benefit from application of a CDS to longline catches. A number of CMMs have focused on the bycatch of sharks by longlines (CMM 2010-07, CMM 2011-04); implementation of a CDS would not replace the need for these CMMs.

Swordfish

Swordfish is an important bycatch species in many WCPFC–CA domestic and distant water fisheries. Target fisheries have been developing in the waters of New Zealand, Australia, and in the high seas of the south Pacific by Spanish flagged longline vessels (Davies *et al.* 2013). While stock assessments are uncertain, the 2013 assessment concluded that the stock was above the level supporting MSY, and is not in an overfished state but, depending on the data used in the model parameters, overfishing may be occurring (Davies *et al.* 2013). Swordfish is another species where there are concerns about high levels of fishing mortality and potential impacts of IUU fishing. This has led people to suggest the need for a CDS (eg. WCPFC9-2012-DP24_rev1 and Lack 2008).

Recommendation 2: The WCPFC CDS should be designed to be as inclusive as possible:
— applied to all major gear types (purse seine, longline, pole and line and troll);
— initially established to include all main tuna target species (skipjack, yellowfin, bigeye and albacore tuna) during implementation;
— include all landed catches, regardless of disposition (domestic or export), with the possible exception of artisanal catches that are not exported;
— include all major product forms and processes (whole, headed and gutted, loins, steaks…chilled, frozen, canned, fishmeal) but offal (heads, eyes roes guts and tails) may be exempted; and,
— once a CDS is established, it should have the capacity to be expanded to include swordfish, sharks and other priority species.

Potential to broaden existing domestic schemes

As far as practically possible, a WCPFC CDS should aim to meet the criteria of being fully inclusive, impermeable and independently verifiable as detailed in Section 4.

In discussing this issue, we are not referring to the various RFMO CDS (or TDS) systems that have been implemented by ICCAT, CCSBT or CCAMLR nor the EU IUU regulation. These already have been well and comprehensively reviewed as to their operational performance and achievement of inclusivity, impermeability and verifiability (MRAG 2010). This study has focussed on the range of domestic tuna-based CDS-like schemes operating within the region.

Each of these domestic systems has been implemented with a specific objective in mind. Often it is a trade-based objective, but there are also examples of domestic CDS set up to meet various RFMO obligations. As such, they have been generally effective in achieving their objectives, acknowledging that this has required ongoing improvements and modifications. If we consider the potential objectives of a WCPFC CDS, however, most of these domestic schemes would have only partially met the requirements of Objective 1 "Identify, quantify and/or validate the catch of WCPFC CCMs to confirm compliance with CMMs and facilitate market access through catch traceability" because their inclusivity would not achieve that required by a broad WCPFC CDS. They would have also only achieved narrow aspects of the second objective of accounting for IUU fishing and preventing IUU product from entering the market, or the third objective of improving catch reporting to strengthen scientific stock assessment activities. Note, this is not a negative assessment of the systems — they were not intended or designed to meet these broader WCPFC objectives.

Potentially, any of the domestic systems related to tuna could be expanded or adapted to meet the needs of a broader WCPFC CDS. Although there will be some benefits of the current domestic systems being operational within the WCPFC–CA and of direct relevance to the species and fisheries of the WCPFC, we believe these benefits are overshadowed by two issues: 1) the level of work required for them to be converted to a CDS that meets the

broader needs of WCPFC objectives; and 2) the systems would need to be converted to electronic systems as discussed below.

Paper-based or electronic CDS

Of greater significance to this report regarding the potential of existing domestic schemes to be used for broader WCPFC CDS is that, despite some forms being electronically available, nearly all of the CDS systems are paper-based and many of the processes that they use are governed by the need for a paper-based information trail. Many of the managers of these systems recognise shortfalls associated with being paper-based and it is often stated that they intend moving towards electronic systems.

At present, all of the RFMO CDS systems are paper-based except for the CCAMLR toothfish CDS, which is the only truly electronic CDS used by RFMOs. More details of this system are described below, but interestingly, there are a number of issues causing problems in the current e-CDS system that are a direct "hangover" of it having been first implemented as a paper system (S. Lenel Pers. Comm. CCAMLR Fishery Monitoring and Compliance Manager).

The potential of e-CDS to improve management efficiency, information sharing and fraud prevention has been previously recognised (FAO 2002; Joint Tuna RFMOs 2007a,b) and is suggested as a need for the WCPFC by MRAG (2010).

The case for moving towards electronic reporting and monitoring within the WCPFC–CA was made strongly by Dunn and Knuckey (2013). Nearly all WCPO fisheries information is entered manually into a range of paper logbooks and reporting forms. They highlighted a situation in the WCPFC in which "the current paper-based system is groaning under the weight of tens of thousands of logsheets and observer workbooks that have been either stored after keypunching or are waiting to be keypunched. Keypunching of paper-based data is the greatest bottleneck in the entire data acquisition and transition process, and one of the major factors in the inefficiency of the current system". They stated that "Some of the most inefficient aspects of the current information regime reported by many countries and agencies is the double handling of data, multiple data entry points and the considerable (and differing) time lags between data collection and data input into databases. These inefficiencies at the initial stage of the data management process have a flow-on effect that cause further inefficiencies for many of the Commission's research, compliance and management activities". As highlighted in Table 12 and Table 13, much of the data required in a CDS is already collected on a range of different paper-based forms. To introduce a paper-based CDS would only exacerbate all of these issues.

A well-functioning CDS requires timely input of a wide range of data and easy (though secure) access and distribution of this data to various agencies and fishing entities for validation and verification. This can best be achieved through an electronic CDS (e-CDS).

Recommendation 3: The WCPFC CDS should be designed as an electronic system with the capability to meet all of the requirements of Recommendation 2.

The availability of near real-time information for an e-CDS (in timeframes relevant to tuna processing and export) is critical for a CDS to meet its objectives. Currently, the administrative, data entry, and validation processes associated with paper-based logsheets, observer reports and other relevant CMMs do not meet such timeframes (Dunn and Knuckey 2013), thereby undermining their value for MCS and as verification tools for an e-CDS.

The operation and real-time availability of information for a WCPFC e-CDS would be greatly enhanced if it was integrated with current regional database systems and future WCPFC electronic reporting systems for catch and effort data (E-R Logsheets), observer reports (E-R observer reports) and other CMM reports (E-R CMMs) as outlined in Dunn and Knuckey (2013). They highlighted that MCS stakeholders currently have access to near real-time information on VMS, licensing and registrations, but timely information on catch data (species composition and weight) and this was a significant shortfall in their office-based assessment of compliance. Implemented electronically, there would be mutual benefits of an e-CDS towards MCS as there would be benefits of MCS towards e-CDS. An integrated electronic reporting system that includes e-CDS would convey greater benefits to the fishery than either system separately. Many of the databases, protocols, and processes to support such electronic integration of data are already available (and in some cases operational) at national and regional levels.

Recommendation 4: To maximise the benefits of e-CDS to MCS and vice versa, e-CDS should be part of an integrated system that includes E-R Logsheets, E-R observer reports, and E-R CMMs.

Strengthening the case for an e-CDS in the WCPFC–CA is that the current CCAMLR e-CDS, despite being the largest both in terms of the number of participating parties and the number of documents, appears to be one of the most efficient, effective and transparent CDS systems available (MRAG 2010).

The CCAMLR CDS was implemented in 2000 to distinguish between legal and IUU *Dissostichus* spp. by identifying the origins of toothfish entering the markets of Contracting Parties, therefore preventing trade of IUU product. An electronic version of the CDS was piloted during 2004 and full implementation of the e-CDS occurred during 2010, monitoring catches of about 15000 mt and involving 29 Contracting Parties and one non-Contracting Party. There have been a variety of enhancements and updates to the system since its introduction, and it is currently undergoing an extensive evaluation of its performance and

review of its objectives, procedures and processes. The results of this review are expected to be available in October 2014.

Details of the structure, reporting and process of the CCAMLR e-CDS are provided below.

Overall, we conclude that the benefits of the current domestic systems being operational within the region and of direct relevance to the species and fisheries of the WCPFC, are overshadowed by the level of work required for them to be converted to an electronic CDS that meets the broader needs of WCPFC objectives. In this respect, the most efficient and cost-effective means of developing an e-CDS for the WCPFC would be to adapt it from that developed that developed by CCAMLR.

Recommendation 5: Rather than broadening and/or adapting any of the paper-based domestic systems, we recommend adapting the e-CDS system currently used by CCAMLR to meet the needs of a WCPFC CDS.

Tagging as a CDS option

The tagging of individual tuna is a special provision in some of the RFMO CDS systems and in some cases tagged fish are exempt from the CDS system. MRAG (2010) reports that 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), which suggests that reporting arrangements for tag fish are considerably less detail and transparent than for untagged fish recorded on validated BCD. In contrast, in the CCSBT CDS, it is mandatory that each whole tuna be tagged at the time of kill and a Catch Tagging Form to be filled in as soon as practicable after the time of kill with length and weight measurements taken before the tuna is frozen or at the time of landing or transhipment. Catch Tagging Form(s) must have been completed for all tuna on the Catch Monitoring Form. This is a significant requirement of the crew, and there are anecdotal reports from fishers working with the tagging program in the CCSBT about the difficulties of correctly administering and reporting the tagging of individual fish.

In contrast, there are commercial tuna processing companies that depend on a robust tagging and documentation process operating throughout the supply chain to meet market demands for sashimi grade tuna.

In the WCPFC, the case for tagging of individual tuna to be included as part of the CDS has yet to be made. Obviously, if it is included, it will only apply to the longline, pole and line fleet or troll fishing methods, but with thousands of registered vessels, the practical and administrative burden of designing and implementing a tagging system for individual fish caught by these methods would be immense. MRAG (2010) suggest that any WCPFC CDS tagging activities should supplement rather than replace the necessary catch and export /re-export documents. We agree with this suggestion, but would recommend that mandatory

tagging of individual fish not be included as part of the initial design of an e-CDS. Given the huge amount of resources that would be required to implement and run a CDS tagging programme, a positive result from a full cost/benefit study on the value of tagging individual fish to a WCPFC CDS would need to be achieved before this is considered.

Recommendation 6: Mandatory tagging of individual fish should not be included as part of the initial design of the WCPFC e-CDS. Consider an analysis of the value of tagging individual fish to a WCPFC CDS.

Examples of reporting arrangements

The section below summarises the reporting arrangements and processes of the CCAMLR, CCSBT and proposed EU CDS (WCPFC9-2012-DP24_rev1).

CCAMLR

The CCAMLR system provides a clear example of the potential roles of the different user types (from CCAMLR Secretariat e-CDS presentation). Use of the system is restricted to Government users and each CDS Party is given four different Account-Manager usernames and passwords: 1) Flag State Issuing Authority; 2) Port State Authority; 3) Export Authority; and, 4) Import Authority. The secretariat issues the initial logins to each party. The Account-Manager password allows the user to create and manage individual users for their country under each category. Their individual roles are outlined below.

Flag State Issuing Authority

- issues catch documents to own-flagged vessels;
- adds or amends vessel information;
- completes anticipated landing information;
- issues Flag State Confirmation Numbers;
- can complete sales information; and
- can view full report for all own-issued documents

Port State Authority

- can access those documents for which it can provide a Document Identification Number AND Flag State Confirmation Number;
- completes verified weights landed;
- completes sales (recipient) information if necessary;
- issues transhipment or landing certificate.

Export Government Authority

- issues export or re-export documents (each with a unique Export Identification Number);
- enters export and import information (weights, dates, companies, destinations);
- issues Export Government Authority (export certification).

Import Authority

- can view export documents for which it can provide a Document Identification Number AND Export Identification Number;
- receives notification from the Secretariat when an export is reported to be on its way
  - Document Number; Export Number; Date authorised; Product type(s); Weight of fish exported under this document; Unlading city; and Name of importing company.

Process

The process for transfer of documents and information in the CCAMLR DCS is described in Conservation Measure 10-05 (2013). We briefly describe the process below:

1. The Flag State Authority generates the *Dissostichus* catch document (DCD) using the electronic CDS and includes a unique document ID number and the vessel details. A printout of DCD is made available to the vessel / fishing company.
2. The vessel master or authorised representative (referred to in this processes as "the vessel") checks the details of the DCD received and records catch information (including dates, species, product type, EEZ, area caught and estimated weights) prior to unloading. A copy of the DCD is returned that to the Flag State electronically.
3. The Flag State checks DCD against VMS data and the vessel's licence conditions. If compliant, a confirmation number is issued to the CDS, the DCD is reprinted and sent to the vessel with the confirmation number displayed.
4. Immediately after landing, a completed copy of the DCD is given to the port authority, who verifies the information on the DCD, completes the verified weights landed section and signs the form (not required for transhipments).
5. The port authority enters verified information into the CDS website, and issues an online Certificate of Landing. If there is no web access, this step can be done using paper forms, with a copy being sent to the Secretariat for data entry.
6. The vessel shall obtain the signature of the fish receiver on the DCD.
7. In the case of spilt catches, the vessel shall obtain from the Flag State and present to each individual that receives a part of the catch a copy of the DCD, and the amount and origin of the catch received by each individual shall be conveyed to the Flag State along with the signature of that individual.
8. The vessel shall sign the DCD and send to the Flag State and each fish receiver.
9. The Flag State shall immediately complete the section of the DCD describing the fish sale.
10. In the case of transhipment, the Vessel shall get a confirmation signature of the receiving vessel's master, sign the DCD and send copies to the receiving vessel and to the Flag State for entry into the CDS.
11. In the case of transhipment, upon landing, the master of the receiving vessel shall undertake activities describe in process 4 – 7 above.

12. For export / re-export, the CDS officer of the exporting / re-exporting State shall create an export or re-export document that includes its own unique export ID number, and reference the corresponding DCD document ID number and record the amount of each species from that document included in the shipment.
13. The exporter / re-exporter reports the contact details of the importer and point of import to the CDS officer of the exporting / re-exporting State, and shall complete their own details and sign the document.
14. The exporter / re-exporter shall obtain a signed and stamped validation of the electronically generated export document by a responsible official of the exporting / re-exporting state.
15. The exporter / re-exporter shall provide transport details including transport type, registration numbers and bill numbers.

CCSBT

The CCSBT require that all Members and Cooperating Non-Members shall implement the CCSBT CDS for SBT to document the movement of all SBT as outlined in the *Resolution on the Implementation of a CCSBT Catch Documentation Scheme*. The CCSBT CDS is a paper based system managed by the Members, Cooperating Non-Members and OSECs fisheries agency that generates a paper trail, which traces SBT from point of kill to the final point of landing. The system caters for wild caught and farmed fish, however because the WCPFC is not concerned with tuna farming, details pertaining to those activities will not be described.

The Members, Cooperating Non-Members and OSECs fisheries authority issues forms to the fishers, whose responsibility it is to record the required information (including tagging whole SBT) upon landing, where it is validated by a Government official or authorised person. In Australia, some Fish Receiver Permit holders are authorised persons for the purpose of the CCSBT CDS, and can validate forms. Members, Cooperating Non-Members and OSECs must keep a list of authorised persons, and that up-to-date information must be sent to the Executive Secretary prior to that person exercising their authority.

Members, Cooperating Non-Members and OSECs should undertake auditing activities to validate information contained in CDS forms, and must retain original or scanned copies of forms for three years. In addition, copies of CDS forms should be sent to the Executive Secretary quarterly, who compiles the raw data into an electronic database and check for discrepancies.

Process

Tagging is integral to the CCSBT CDS, and while it may not be relevant to the WCPFC, it is retained in this description for completeness.

The process for completion of the forms by Australian vessels is briefly described below:

1. Catch monitoring forms (CMFs) that include a unique document number are printed (each sheet with four copies) by AFMA and distributed to fishing vessels.

2. Prior to going to sea, vessels are required to be on the CCSBT register and to ensure they have enough approved SBT tags, catch tagging forms (CTFs) and CMFs onboard.
3. Unless processed to a form that does not require tagging, tag each SBT at the point of kill.
4. Upon landing, fishers weigh, measure and recorded each tagged fish on the CTF, and complete the catch / harvest section of the CMF.
5. The catch is validated by the Fish Receiver Permit (FRP) holder (registered by AFMA to receive SBT), who stamps each copy of the FRP separately. Prior to validating, the FRP must ensure that all dead whole fish are tagged with an appropriate tag, that the fisher has completed the CMF correctly and for all SBT landed and that the validator is not the same person as the certifier.
6. The fisher gives the white and yellow copies given to the FRP and sends the pink copy to AFMA along with a copy of the CTF. The green copy is retained by the fisher, and.
7. The FRP must ensure that either the intermediate or final product destination sections are completed at the time of export / domestic sale.
8. The yellow copy of the form is sent to AFMA, and the white original copy stays with the fish whether it is sold domestically or exported. Where the catch goes to two or more destinations, separate CMFs must be completed for each destination.
9. All re-exports / exports must accompanied by a re-export / export form (REEF). One REEF form must be issued for each CMF that was previously landed as domestic product but is now being exported (only a CMF is required for fish landed for the sole purpose of exporting), or for each REEF shipment that was imported and is being re-exported, together with a copy of its previously associated REEFs and CMFs. REEF forms must also be accompanied by associated REEFs and CMFs.
10. REEF forms record exporter details, description of fish from previous CDS documents, document numbers of associated CMFs and CTFs and details of the final point of import. Certification is required by the exporter, and validation by an authority who is not the same individual as the exporter.

EU CDS submissions

In response to discussion by the WCPFC regarding development of a CDS, the EU presented a scheme at WCPFC7 (WCPFC7-2010-DP-18) and again at WCPFC9 (WCPFC9-2012-DP24_rev1). The CDS covered bigeye tuna, yellowfin tuna, skipjack tuna and swordfish catches in the WCPFC area of competence. The CDS is comprised of two main forms, the catch certificate (TTSCC) and the re-export certificate (TTSRC).

The CDS relied on the fisher and exporter / re-exporter to complete the forms, with a government representative validating their completion and accuracy. The forms are linked by the TTSCC document number, and a copy of the form must remain with the consignment until the final point of import. A list of validating authorities is to be provided to the WCPFC by CCMs. The WCPFC will maintain an online database of validating authorities, which can be accessed by CCMs to help verify and validate forms.

Process

1. CCMs shall provide TTSCC forms to authorised fishing vessels that are non-transferable, and contain unique document numbers that are specific to the flag CCM and the fishing vessel.
2. Fishers complete (electronically if possible) the TTSCC which includes information on the fishing vessel, species, product code, catch areas and dates, estimated live weights and estimated weights to be landed.
3. Transhipments, export and transport details are also recorded on the TTSCC.
4. A simplified catch certificate is supplied for vessels
    a. with an overall length of less than 12 meters without towed gear; or
    b. with an overall length of less than 8 meters with towed gear; or
    c. without a superstructure; or
    d. of less than measured 20 GT.
5. An authorised government official or representative checks that the information contained on the TTSCC is accurate, and that the catch was taken in accordance with relevant CMMs, and if so, validates the TTSCC.
6. Copies of TTSCCs shall follow each part of split consignments or processed product.
7. Re-exported consignments are to be accompanied by a validated TTSCR.
8. TTSCRs are to be completed by the re-exporter, and include product details, corresponding TTSCC document number, re-exporter and importer contact details.
9. The TTSCR is checked by a government authority to ensure completeness, accuracy against the TTSCC and that the TTSCC is attached. If it complies, the TTSCR is validated.

Proposed WCPFC CDS design and process

The proposed WCPFC CDS is based largely on the CCAMLR CDS with consideration of the processes and requirements suggested in the other system and by MRAG (2010). MRAG recommended that the WCPFC CDS forms be based on the CCSBT CDS forms, however even without the farming and tagging forms, the CCSBT forms are unnecessarily complicated and do not include fields for recording transport details. Further, as we are recommending basing the WCPFC CDS on the CCAMLR CDS system and process, it makes sense that the structure of the forms follows those used by the CCAMLR CDS, a system that has worked well since May 2000 (as has been demonstrated by the high level of compliance observed for this CDS). Data fields that would need to be added onto the existing CCAMLR forms include vessel details include flag state, gear type, product (fresh or frozen) and flag state of transhipment receiving vessel.

The proposed WCPFC CDS uses two different forms, a Catch Document and an Export / Re-export Document. Catch Documents and exports using the Export / Re-export Document are linked by the Catch Document Number, Fishing Vessel Name and fishing dates, while re-exports are linked to exports and previous re-exports by the Catch Document Number, Original Export ID and fishing dates. The proposed WCPFC CDS would track fish from the

point of capture, right through the final point of unlading. The CCAMLR CDS has tracked as many as eight different movements of a single product (MRAG, 2010).

The proposed WCPFC CDS makes landings and trade data available to all parties for verification through the online interface, facilitating timely and accurate checking and analysis. This also enables simple reporting of landings and trade data summaries that could be made publically available online, further increasing transparency.

The one weakness of the CCAMLR CDS identified by MRAG (2010) was the lack of implementation by some flag, port and trade States, and this is a potential problem with the proposed WCPFC CDS. This is discussed below.

Reporting

The proposed WCPFC CDS system is based on the CCAMLR CDS system, but includes additional data fields described by MRAG (2010). There are clear roles of different user types to record and validate information. While it is an electronic system, the data recorded by fishers, exporters and re-exporters can be on printed paper forms provided by the fisheries agency that carry unique ID numbers.

Roles required are as follows. Use of the system is restricted to Government users and each CDS Party is given four different Account-Manager usernames and passwords: 1) Flag State Issuing Authority; 2) Port State Authority; 3) Export Authority; and, 4) Import Authority. The secretariat issues the initial logins to each party. The Account-Manager password allows the user to create and manage individual users for their country under each category. Their individual roles are outlined below.

Flag State Issuing Authority

- issues catch documents to own-flagged vessels;
- adds or amends vessel information;
- completes anticipated landing information;
- issues Flag State Confirmation Numbers;
- can complete sales information; and
- can view full report for all own-issued documents

Port State Authority

- can access those documents for which it can provide a Document Identification Number AND Flag State Confirmation Number;
- completes verified weights landed;
- completes sales (recipient) information if necessary;
- issues transhipment or landing certificate.

Export Government Authority

- issues export or re-export documents (each with a unique Export Identification Number);

- enters export and import information (weights, dates, companies, destinations);
- issues Export Government Authority (export certification).

Import Authority

- can view export documents for which it can provide a Document Identification Number AND Export Identification Number;
- receives notification from the Secretariat when an export is reported to be on its way
  - Document Number; Export Number; Date authorised; Product type(s); Weight of fish exported under this document; Unlading city; and Name of importing company.

Process

1. The Flag State Authority generates the Catch Document using the electronic CDS and includes a unique document ID number (comprised of the country code, two digit year code and sequential allocation number) and the vessel details including vessel name, flag state, flag state registration number, RFMO registration number, fishing gear type and IMO number. A printout of the Catch Document is made available to the vessel / fishing company by the fastest electronic means possible (eg email of PDF).
2. The vessel master or authorised representative (referred to in this process as "the Vessel") checks the details of the Catch Document received and prior to unloading completes the catch information (including dates, area, species, product type and estimated net weights) and returns a copy of that to the Flag State Authority electronically.
3. The Flag (Charter?) State Authority checks data against other MCS data (VMS, Logsheet, Observer, Transhipment and the vessels licence conditions). If compliant, a confirmation number is issued to the Catch Document by the Flag (Charter?) State Authority via the electronic CDS, the Catch Document is reprinted and sent to the Vessel with the confirmation number displayed by the fastest electronic means possible (eg email of PDF).
4. Immediately after landing, the Vessel gives a completed copy of the Catch Document to the Port Authority, who verifies the information, completes the verified weights landed section and signs (not required for transhipments) the Catch Document.
5. The Port Authority enters verified information into the CDS website, and issues an online Certificate of Landing. If there is no web access, this step can be done using paper forms, with a copy being sent to the Secretariat for data entry.
6. The Vessel shall obtain the signature of the fish receiver on the Catch Document.
7. In the case of spilt catches, the Vessel shall obtain a copy of the Catch Document from the Flag State and present one to each individual that receives a part of the catch, and the amount and origin of the catch received by each individual shall be conveyed to the Flag State along with the signature of that individual.

8. The Vessel shall sign the Catch Document and send copies to the Flag State and each fish receiver.
9. The Flag State shall immediately complete the section of the Catch Document in the CDS describing the fish sale.
10. In the case of transhipment, the catching Vessel shall get a confirmation signature of the receiving vessel's master, sign the Catch Document and provide a copy to the receiving vessel and send copies to the Flag State for entry into the CDS.
11. In the case of transhipment, upon landing, the master of the receiving vessel shall undertake activities describe in process 4 – 7 above.
12. For export / re-export, the CDS officer of the exporting / re-exporting State shall create an export or re-export document that includes its own unique export ID number, and reference the corresponding Catch Document ID number and record the amount of each species from that document included in the shipment. For the case of exports, the "vessel name" is recorded on this form, for re-exports, vessel name is replaced by "original export ID".
13. The exporter / re-exporter reports the contact details of the importer and point of import to the CDS officer of the exporting / re-exporting State, and shall complete their own details and sign the document.
14. The exporter / re-exporter shall obtain a signed and stamped validation of the electronically generated export document by a responsible official of the exporting / re-exporting state.
15. The exporter / re-exporter shall provide transport details including transport type, registration numbers and bill numbers.

Overlaps between existing data collection and with proposed WCPFC CDS

Much of the operational and catch data required by the proposed WCPFC CDS is currently collected by at least one of the data collection forms used routinely in the WCPFC and described in SPC (2011). This means that much of the information required on CDS documents can be recorded by transcribing information from an existing completed form. The overlap between existing data collection and proposed CDS is particularly strong for information on vessel registration, catch / harvest, transhipment and descriptions of fish transported (Table 12 and Table 13). Resolution of catch area is usually at a finer scale than required by most CDS, and are more than adequate to enable reporting at the FOA Major Fishing Area level. Gear code is not usually recorded on forms, as most are single gear forms. There are shortfalls however, and these are discussed below.

None of the forms record product (fresh or frozen), and process type is recorded for all gears on observer forms (as Fate), but not on logsheets. While not recorded on logsheets however, associated instructions describe which process type should be included in weight of catch recorded for some fishing methods. Process type and associated conversion factors

are important to enable total catch weight to be calculated, which is an EU requirement (MRAG, 2010).

Existing forms (mostly unloading and observer forms) cater for transhipment, and some information is recorded regarding destination country and local, cannery or other markets, particularly in the unloading destination forms. Export, re-export, import and transport data are largely missing from existing data collection programs. These details are presumably already recorded on existing customs and / or transport documents maintained by participants in the supply chain, and so little additional effort would be required to report those data.

The other area lacking is in Government validation of the catch. Observer coverage could be used to validate all transhipments. Observers could also monitor landings (particularly for purse seine where there is 100% observer coverage), but this will not be adequate for other fisheries such as the longline fishery, which only has about 5% observer coverage. Further, the current observer program does not require official government credentials such as signature of an authorised Government official or official seal. The cost/benefits between using observers for CDS validation functions compared government CDS inspectors should be considered.

Best Practice CDS for the WCPFC

MRAG (2010) conducted an extensive study on best practice for fish CDS in which the final section outlined a framework for a CDS to be applied to the WCPFC. They summarised their proposed scheme as follows:

- Scheme objectives should include catch monitoring, scientific information and traceability.
- Two documents should be required: a catch document required when fish are transhipped, landed, imported, exported and re-exported; and an export / re-export document required when fish are traded internationally after landing.
- Documents should be required for all catches of bigeye and yellowfin tunas (can be recorded as a mixture, if necessary) with the possible exception of artisanal catches which are not exported (for which annual reporting of exempted quantities should be required).
- Any tagging activities should supplement, rather than replace, the necessary catch and export / re-export documents.
- All CDS documents should be validated by a government authority.
- In order to be compatible with the EU IUU regulation, catch documents should be validated by the flag State; otherwise special arrangements for Charter State validation will need be agreed before the WCPFC CDS catch documents will be recognised by the EU.
- All catch and export / re-export documents should be validated and all validated documents issued and received should be copied to the Secretariat.

- The Secretariat should enter all data into a database and prepare six-monthly reports which summarise, reconcile and monitor the data and the scheme.
- Raw data in the database should be confidential to the Secretariat and the member which validated the document, unless permission is granted by that member for the data to be released.
- The Secretariat should prepare and publish public summaries of CDS catch and import / export data by country / entity on an annual basis.
- The need for an electronic system should be agreed and a schedule proposed for its development and implementation.

MRAG (2010) also identified the following special considerations in for a WCPFC CDS:

1. High proportion of mixed species catches;
2. Landings of Fish in States which are not Party to the CDS;
3. Control of Charter Vessels by Coastal States;
4. Capacity for Implementation by Pacific Island Countries;
5. Handling of Fresh and Chilled Products; and,
6. Potential Exemptions for Artisanal Catch.

These aspects of the fishery had been identified as potentially requiring unique treatment under a WCPFC CDS, however MRAG (2010) found that none of these issues required treatment that might undermine the effectiveness of a CDS.

The high proportion of mixed species catches referred to by MRAG (2010) relates to purse seine catches on associated schools of skipjack tuna in which significant amounts of small bigeye or yellowfin tuna may be captured. Generally, these catches are not sorted prior to the fish being stored in the holds or landed in port until they are graded for processing at the factory. For this reason, MRAG (2010) recommended that the WCPFC initially consider a CDS in which purse seine catch of both bigeye and yellowfin tuna can be combined. This is a reasonable option, which would then require observer data or market data to separate the species' weights. An alternative could be for the port inspector to enter the species split information once the catch is sorted at the processing site.

With regard to landing of fish in States that are not Party to the CDS, MRAG (2010) found that, with the exception of Thailand, processing capacity in the region is located in States which are already WCPFC members or cooperating non-members. MRAG (2010) noted that Thailand has attended WCPFC Commission meetings as an observer, is participating in a cannery sampling programme led by Japan, and has distributed the WCPFC IUU Vessel List to traders with a request to avoid purchases from these vessels (WCPFC 2010). On this basis MRAG found that scheme participation issues appear to pose no greater problem for the WCPFC than for other RFMOs. Since 2011, Thailand has maintained its request to be a cooperating non-member with the WCPFC, and so has been considered a CCM (Lara Manarangi-Trott, WCPFC, pers. Comm.).

Pacific Island Countries (PICs) often manage foreign-flagged vessels operating in their coastal waters under charter. The issue as to whether the Charter states can validate catches from these foreign flagged vessels has been a point of contention in CDS discussions, with the EU holding the firm position that documents can only be validated by the vessel's Flag state to comply with EU IUU regulations (European Commission 2009a, 2009b; Joint Tuna RFMOs 2010). MRAG (2010) rightly suggests that all efforts should be made to avoid duplication between a WCPFC CDS and EU requirements. They point out that the special arrangement negotiated between New Zealand and the EU — whereby the EU accepts the New Zealand catch certificate in lieu of the EU catch certificate (European Union, 2010) — may provide a potential solution. Importantly, however, for the purpose of a CDS in the Flag state would Charter State validation could be incorporated with minimal requirements to the CDS design.

With regard to concerns of the capacity for implementation of a CDS by Pacific Island Countries, it is clear that some assistance and coordination may be required to assist some countries participate in the CDS. MRAG (2010) noted the role FFA has played in the region in assisting countries improve MCS capacity, and that further assistance coordinated by the FFA could be a means to help implement the CDS. Further, MRAG noted that, as in other RFMOs, the WCPFC Secretariat might also be expected to play a critical role in supporting the operation of the CDS. In these ways, the implementation of a WCPFC CDS might be easier than the implementation of the EU catch certification scheme. Administrative and technical capacity burdens associated with the WCPFC CDS can be substantially reduced by maximising compatibility between the two schemes, both in terms of EU recognition of the equivalency of the WCPFC CDS documents, and by designing WCPFC CDS procedures to build on systems being developed in response to the EU IUU regulation implemented earlier this year.

With regard to issues associated with the handling of fresh and chilled products, MRAG (2010) noted that concerns have been raised that possible delays resulting from CDS may impact on the quality and value of fresh and chilled products, particularly in the WCPFC case of chilled bigeye tuna. However, MRAG has noted that other RFMOs that deal with similar products have not exempted this trade or these species from their catch documentation schemes. We believe that the implementation of an electronic WCPFC CDS will address any potential delays on this issue, and will not be a problem that requires any exemptions for fresh or chilled product.

With regard to potential exemptions for artisanal catch, MRAG (2010) suggested further investigations should be conducted to determine whether any exemption is necessary, the amount of the total catch which would fall under this exemption, and whether it would adversely affect the inclusivity of the scheme. MRAG (2010) noted that the ICCAT bluefin CDP does not make any special provisions for artisanal catch and the CCSBT CDS only

exempts recreational catches which are prohibited from sale. We have suggested that artisanal catches that are not exported may be exempt.

Implementation of a WCPFC e-CDS

Once there is agreement on the objectives of a WCPFC CDS (Recommendation 1), that the design should be as inclusive as possible with respect to species, gear and product (Recommendation 2) and that it should be an electronic CDS (recommendation 3), there should be no significant impediments to getting the CDS designed and functionally operational. There is nothing that is conceptually or technologically difficult in this and there are good examples of where this has been achieved in other RFMOs.

One of the greatest risks to the successful establishment of a WCPFC e-CDS, however, is that the CCM's consider that the human, financial and infrastructure resources required for implementation and ongoing administration of the system are either too daunting or beyond their capacity. This is particularly an issue for the SIDS. The Commission needs to deal with this as a high priority for CDS implementation.

Section 5 highlighted some of the gaps between current MCS capabilities and the requirements of the CDS. Many of the MCS systems that would lend support to a CDS are in place and operational. The major gaps lay in the coordination and human capacity required for governments to monitor and verify landings, and the development of robust cross-checking system to validate CDS information. A significant portion of this work will need to occur in the SIDS but there will be implications for all CCM's. There will of course be significant resource implication for the Secretariat as well.

We believe that the *design* of a fully inclusive WCPFC e-CDS system can begin immediately but there are questions that need to be answered with regard to the best way to *implement* a system in the most strategic and beneficial way. Should it be implemented sequentially by either the gear or species, or should the whole system be implemented at one time? What are the costs, who should pay and what funding model would best suit both the implementation and ongoing management of the system? What level and where are the human resources likely to be required and how will they be trained and maintained? These issues point to the next unit of work that needs to be done towards implementation of a WCPFC CDS – to conduct a cost/benefit analysis to determine the most beneficial and constructive implementation pathway and business model.

Recommendation 7: Once the entire scope of a WCPFC e-CDS is agreed, conduct a cost benefit/analysis to determine the most beneficial and constructive implementation pathway and business model.

Table 12. Fields required on catch form for proposed WCPFC CDS compared to existing data collection programs. Entries in column titled "Existing data collected by the WCPFC" related to data collection from current MCS activities that currently record that (or a similar) field. This table excludes the Fijian CDS and PNG CDS described in this report.

Section	Field name	Description	Existing data collection by the WCPFC
General document			
	Document number	A unique document number that is allocated by the State/Fishing Entity of origin for this form. The CCAMLR document code is made up of a two character country code, a two digit year code and a four digit, unique sequence number. ICCAT Bluefin CDP use a similar code. We recommend the CCAMLR code be followed (see MRAG 2010, section 4.3.1)	
	Flag State confirmation Number	A number allocated by the Flag State Authority after checking catch reported on the catch document against VMS data and licence conditions prior to landing.	
	Issuing authority of document	Flag State authority name	
	Authority address	Address of Flag State authority	
	Authority telephone	Telephone number of Flag State authority	
	Authority fax	Fax number of Flag State authority	
Vessel details			
	Name of catch vessel	Name of vessel that caught the fish	Logsheet, unloading, destination, observer and port
	Home port	Catch vessel's home port	
	Flag state/Fishing entity	Flag State or fishing entity of catching vessel	Logsheet, unloading, destination, observer and port
	Flag State registration number	State issued registration number of vessel that caught the fish	Logsheet, unloading, destination, observer and port
	WCPFC registration number	WCPFC issued registration number of vessel that caught the fish	Logsheet, unloading, destination and port
	Call sign	Call sign of catch vessel	Logsheet
	IMO / Lloyd's number.	The only unique number that is attached to the vessel permanently	
	Licence number	Fishing licence number	Observer
	Gear code	Gear type used to harvest fish (from list of codes). EU regulations do not require this information, but all of the tuna schemes do.	Usually single gear forms
Catch / harvest			
	Fishing date from	dd/mm/yyyy – This earliest date for catch under this document	Logsheet, unloading, observer and port. Destination form for longline
	Fishing date to	dd/mm/yyyy – This latest date for catch under this document	Logsheet, unloading, observer and port. Destination form for longline

Section	Field name	Description	Existing data collection by the WCPFC
	Species	Common name of fish caught. Provide list of required species with three character species code.	Logsheet, unloading, destination, observer and port
	Product	Is the product Fresh or Frozen?	
	Process Type	Two or three character process type code with pre-defined list including "other". Descriptions of codes and conversions to live weight should be included as instructions on document. This will enable calculation of live weights. If processing type is "other", provide description and conversion rate. Conversion rates for each process type recoded on instruction sheet.	Observer and on unloading, destination, and port for longlines. Process type is specified in the instructions for recording weights in logsheet
	EEZ	Did the fishing take place inside a CMMs's EEZ.	EEZ code on observer form and fishing area code on port form
	Statistical catch area	The WCPFC reporting zone/area in which the fish was caught. The EU does not specify level of detail for catch location, but does require FAO area and subdivision on some forms, and that might be appropriate for the WCPFC. There are no FAO subdivisions for the major fishing areas in the WCPFC.	Latitude and longitude on logsheet, observer and port forms. EEZ code on observer form and fishing area code on port form
	Net weight	Net product weight (kg).	Logsheet, unloading, destination and observer, but gear dependent for port where only sample weights are recorded for longline
	Verified weight landed	Net weight verified by the port authority.	
Description of fish sold			
	Net weight sold	Weight of fish sold to each buyer. Separate form required for each buyer.	
	Name of recipient	Certification by recipient.	
	Signature of recipient	Signature by recipient.	
	Address	Recipient's address.	
	Telephone	Recipient's telephone.	
	Fax	Recipient's fax.	
Certificate of Transhipment			
	Name of receiving vessel master	Certification by Master of Receiving Vessel:	Unloading and destination for purse seine and pole and line
	Signature of receiving vessel master	Certification by Master of Receiving Vessel	Logsheet for purse seine
	Name of receiving vessel	Receiving vessel name	Unloading, destination, observer, and logsheet for purse seine
	Flag State / Fishing entity of receiving vessel	Flag State of receiving vessel	Unloading, destination and observer

Section	Field name	Description	Existing data collection by the WCPFC
	Call sign of receiving vessel	Call sign of receiving vessel	
	IMO/Lloyd's number of receiving vessel	IMO/Lloyd's number of receiving vessel	
Transhipment within a port area			
	Name and Title of Authority	Certification by port authority.	
	Authority	Position and Flag State Authority	
	Signature of Authority	Certification by port authority	
	Official seal of Authority	Official seal of port authority	
Certification of landing			
	Authority name and title	Certification by port authority.	
	Authority date	Certification by port authority	
	Official seal	Official seal of port authority	

Table 13. Fields required on re export / re-export form for proposed WCPFC CDS. Entries in column titled "Existing data collected by the WCPFC" related to data collection from current MCS activities that currently record that (or a similar) field. This table excludes the Fijian CDS and PNG CDS described in this report.

Section	Field name	Description	Existing data collection by the WCPFC
General document			
	Document number	A unique document number that is allocated by the State/Fishing Entity of origin for this form, comprised of a two character country code, a two digit year code and a four digit, unique sequence number. We recommend the CCAMLR code be followed (see MRAG 2010, section 4.3.1)	
	Export code	A random code automatically generated by the export authority.	
	Fishing date from	dd/mm/yyyy – This earliest date for catch under this document	Logsheet, unloading, observer and port. Destination form for longline
	Fishing date to	dd/mm/yyyy – This latest date for catch under this document	Logsheet, unloading, observer and port. Destination form for longline
	Fishing vessel name / original export ID	If export, name of fishing vessel. If re-export, original export code generated by the export authority.	Logsheet, unloading, destination, observer and port
Description of fish exported			
	Species	Common name of fish caught	Unloading form and unloading destination
	Product	Is the product Fresh of Frozen	Unloading destination
	Type	Processing type (RD/GGO/GGT/DRO/DRT/FL/OT) If processing type is OT (other), provide description and conversion code.	Weight code on unloading destination
	Net weight exported (kg)	Net product weight being exported (kg)	Unloading form and unloading destination
Transport details			
	Sea transport - Vessel name		Unloading form and unloading destination
	Sea transport - Container number		
	Sea transport - Bill of landing number		
	Road - Truck registration number		
	Road - Nationality of truck		
	Air - Flight number		
	Air - Airway bill number		
	Rail - Railway transport number		

Section	Field name	Description	Existing data collection by the WCPFC
	Rail - Bill of landing number		
	Date of Issue		Unloading form and unloading destination
	Place of Issue		Unloading form and unloading destination
Exporter certification			
	Name of Exporter	Certification by Exporter	
	Exporter address	Address of exporter	
	Signature of Exporter		
	Date	dd/mm/yyyy	
	Licence number / Company name of Exporter		
Export Government Authority Validation			
	Name and Title of Authority	Certification by Authority.	
	Signature of Title of Authority	Certification by Authority	
	Date	Certification by Authority	
	Official seal of Authority	Certification by Authority	
Import section			
	Name of Importer	Certification of Importer	
	Address of Importer	Certification of Importer	
	Final Point of Import - City	Location of final import	
	Final Point of Import - State or Province	Location of final import	
	Final Point of Import - State/Fishing Entity	Location of final import	

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Appendix 1 – Review of CDS discussions and decisions

WCPFC decisions

Table A14. Summary of CDS discussion and decisions by WCPFC[4]

Meeting	Location	Dated
Inaugural session of the Commission	Pohnpei, Federated States of Micronesia	9 Dec 2004 to 10 Dec 2004
There was no mention of a CDS in the report of the Inaugural session of the Commission.		
2nd Regular Session of the Commission	Pohnpei, Federated States of Micronesia	11 Dec 2005 to 16 Dec 2005
CDSs were first brought up by the WCPFC at the 2nd Regular Session of the Commission. A tabled document (WCPFC/Comm2/DP03 Rev.1) proposed adoption and implementation of a statistical documentation scheme for bigeye tuna. However, a number of Members expressed concerns with the proposal because it only required documentation of traded products rather than of all catch. The Commission agreed that work on a more comprehensive scheme covering all catch should be undertaken intersessionally by concerned members and Japan, and that this would be considered at the Third Regular Session of the Commission. Provisions were made in the WCPFC 2006 approved budget for "Catch Documentation [if required] of $15,000. The source of these funds was to be assessed contributions.		
3rd Regular Session of the Commission	Apia, Samoa	11 Dec 2006 to 15 Dec 2006
At 3rd Regular Session of the Commission, the FFA States presented a proposal to the Commission to adopt a CDS (WCPFC3-2006/DP07 Rev.1). This proposal described considerations that should be taken into account when developing the CDS, its purpose, the need for an intersessional working group to be formed to develop the CDS, the Terms of Reference of the working group, time frame for implementation (1 January 2009) and elements that should comprise the CDS. Those elements were: • A list of agreed species and their processed form to be covered in the Convention Area. • Each shipment of listed species caught in the Convention Area imported, exported, re-exported or domestically landed shall be accompanied by a catch document that has been verified by the CCM as being complete and valid. • An ability to track the catch, landings and trade flows, including transfer, transhipment, import, export, re-export, and landings of domestic production, of listed species caught in the Convention Area. This may incorporate existing mechanisms in place such as trade schemes. • The CDS shall include specification of what information is to be provided to the Secretariat for independent collation and analysis. • The CDS will include standards for CCMs to verify documentation of landings and domestic consumption and a system to verify the nation/ocean/vessel of origin for all		

[4] Documents can be accessed at http://www.wcpfc.int/meeting-folders/regular-sessions-commission

trade (including import/export/re-export).

- Shipments of listed highly migratory species caught in the Convention Area without completed and validated catch documents shall be considered as catch taken in contravention of the WCPFC conservation and management measures and shall not be permitted to be imported, exported, re-exported or landed to the domestic market. The CDS will be linked to other relevant conservation measures for listed species, to be determined by the working group.
- The CDS shall be complementary with the schemes of other regional fisheries management organisations.
- Appropriate training and capacity building shall be provided for small island developing States to aid implementation of the CDS.
- The CDS should take account of small island developing State domestic fisheries with small total annual catches.

This proposal was further elaborated by the EC (WCPFC3-2006/DP33). Japan presented a proposal for the Commission for the adoption of a Statistical Document Program (SDP) instead of the CDS (WCPFC3-2006/DP17). That paper highlighted that the SDP had been proposed at the 2nd Session of the Technical and Compliance Committee, and that sufficient technical discussion or consideration of that proposal had taken place (especially given the lack of counter arguments against specific points raised by the paper). WCPFC3-2006/DP17 highlighted potential problems with implementation of a CDS, and differences between the WCPO fishery for bigeye tuna the CCAMLR Toothfish fishery which had implemented a CDS. The main issues highlighted are policy implications, significant transaction cost and unnecessary burden to fishers and the financial and administrative implications for the Commission. In response, 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. This view was opposed by Japan (supported by some CCMs), who did not support that 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. While 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.

4th Regular Session of the Commission	Hyatt Regency Hotel, Tumon, Guam, USA	3 Dec 2007 to 7 Dec 2007

At the 4th Regular Session of the Commission, it was mentioned that CDSs were discussed by TCC3. In support the FFA circulated a paper (WCPFC4- 2007/DP24) by Canada, the EC and the USA (from the RFMO technical working group in Raleigh, North Carolina), which contained a proposal on harmonisation and improvement of trade tracking programs including objectives and best practice of such programs. Canada highlighted that WCPFC is the only RFMO with no tuna document programme. Australia, on behalf of FFA noted that previous CDS proposals submitted to the WCPFC had not been sufficiently comprehensive nor integrated with other essential MCS components. There was support for formation of an intersessional working group to examine the experience of other RFMOs and how it can be applied to the WCPFC. The EC offered to develop a CDS for bigeye tuna based on WCPFC4- 2007/DP24. Japan asked that the concerns about implementation of a CDS raised TCC3-2007/DP-06 be considered further and again voiced its doubt regarding the need for and effectiveness of CDSs in the WCPO.

During WCPFC4 a working group met to develop terms of reference for an intersessional working group to examine the idea of a CDS for fisheries in the Convention Area. There were polarised views on the practicality of a CDS and the ability of CCMs to cope with the increased workload. The Commission was not able to adopt terms of reference for this work during WCPFC4. The EC volunteered to lead an intersessional working group (operating electronically) to work toward designing an appropriate CDS for the region that focuses on the most critical species. This working group would work independently of

the TCC, but table a report at TCC4 for review, refinement and adopting before forwarding it to WCPFC5. During discussion about work programmes and budgets, the EC suggested that development of a CDS be considered as a priority for the coming year, but Japan expressed reservations on the priority of developing a CDS, although it noted its willingness to cooperate in discussion on this issue.		
5th Regular Session of the Commission	Busan, Republic of Korea	8 Dec 2008 to 12 Dec 2008
The EC provided a verbal report on progress with developing a CDS for WCPFC Big-eye Tuna at the WCPFC5. They reported that they attempted to progress a draft CMM intersessionally and discussed it at TCC4. They also committed to continuing their work on CDSs in 2009, with the possibility of convening an intersessional workshop. Development of a CDS was listed as a 2009 priority for the TCC.		
6th Regular Session of the Commission	Papeete, Tahiti	7 Dec 2009 to 11 Dec 2009
FFA members described plans to apply to the Japan Trust Fund to obtain funding to develop a CDS prior to TCC6, however they did not support holding an intersessional workshop on developing a CDS. They also noted that CDSs may be discusses at the upcoming Kobe2 workshop on monitoring, control and surveillance to be held in the EU in June 2010. It was highlighted that the EU had submitted a proposal for CDS in 2006 and recommended that any other proposed CDS be developed with an awareness of the data requirements of catch certificates associated with the EU IUU fishing regulation being implemented on 1 January 2010 and the new FAO Port State Measures Agreement. **There was in principle support for a CDS by WPCFC6. The FFA Chair offered to lead the process. There was a call for a proposal to be brought forward for discussion at TCC6**. Development of a CDS was again listed as a priority for the TCC.		
7th Regular Session of the Commission	Honolulu, Hawaii, USA	6 Dec 2010 to 10 Dec 2010
During discussion of the Shark Assessment and Research Plan at WCPFC7, Japan encouraged the Commission to adopt a CDS to assist with issues in relation to concern over unreported shark catch. This was supported by China, who noted that there was a need to properly identify different shark species. Korea also urged careful consideration of whether a CDS would be applied to all shark species, and how it could be made cost effective. A paper (WCPFC7-2010-DP-18) was tabled by the EU proposing a CMM to implement a CDS for bigeye tuna, yellowfin tuna, skipjack tuna and swordfish. The proposal is consistent with recommendations from the KOBE2 workshop, including ensuring compatibility with already existing certification schemes being implemented consistency across RFMOs and use of electronic systems to enhance efficiency, effectiveness and utility. It covered general provisions for a CDS, catch certificates, re-export certificates, communication and verification and communication of the data. The proposal was intended to support implementation of CMMs, and reflected the scheme applied in the EU. While applicable to the main target species, it was noted that it could be expanded to additional species in the future. Small vessels ere also catered for in the proposal by including a simplified catch certificate. The validating authority in the proposal is the flag State, and that is considered non-negotiable by the EU. The effectiveness of such a CDS in fighting IUU fishing was stressed by the EU. Japan noted the proposal for a CDS that it presented to the TCC6 that addressed Skipjack Tuna caught by the purse seine fishery that authorised Port States to issue certificates. They requested that that proposal remained under consideration. PNG, speaking on behalf of FFA members, described that the outcome of the discussions around CDS at TCC6 was that FAA agreed to lead a working group to progress development of a WCPFC CDS, and that work would be guided by four reports tabled at TCC6 by the EU, Japan, PNG and the WCPFC Secretariat. The proposal for the working group (WCPFC7-2010 DP-22) included a draft terms of reference with an outline of the operations of an intersessional working group,		

and a set of proposed guiding principles for the establishment of a WCPFC CDS. The process aims to develop a CDS that meets the aims of the four papers presented to TCC, and the interests of all Commission Members.

Korea stated that it supported development of a CDS, but stressed the need to consider its cost effectiveness and practicality, and that the system should be applied to major target species before extending to other species. They also supported the EU on issuance and validation in the CDS, which should be responsibility of the flag State rather than the coastal State. Chinese Taipei supported the development of the CDS and the approach outlined in WCPFC7-2010 DP-22, and highlighted that it had voluntarily applied a CDS on Bluefin Tuna from 2010.

On behalf of FFA members, the Cook Islands expressed their view that they see a CDS as a component of an overall fisheries monitoring system, one that builds on, and adds value to existing monitoring systems including existing documentation schemes. They suggested that a WCPFC CDS could broadly serve the three objectives in the MRAG paper provided to TCC6. Those objectives were:

1. provide information to improve understanding of resources and fisheries,
2. verify and validate catches to assist monitoring of compliance and deter IUU fishing, and
3. trace from vessel to market in a way that serves the needs and interests of all those involved in the catching, trading, marketing and management processes

The EU introduced a statement (Attachment EE of WCPFC7) stating that "As a major market State, the EU believes that a system (CDS) that is compatible with the EU IUU Regulation is preferable as:

• Countries in this RFMO already have implemented and comply with the EU IUU Regulation or are presently in discussions with the EU seeking to implement and comply with this regulation in order to be able to export to EU;
• This will not duplicate the work of authorities that already perform this exercise for the EU."

The EU also expresses its availability to further detail our proposal and explain/answer any potential questions or concerns intersessionally. They reiterated that flag States were under its legislation as well as under international legislation, the only entities able to control a vessel; provision for control by coastal or chartering States were not acceptable.

China supported the Japan and EU proposals, but noted difficulties in including shark species because of identification problems, and the need for a DNA bank.

There was general in principle support for CDSs by several CCMs, but they indicated that a CDS was just one aspect of broader monitoring and control measures. They also stressed the need to primarily focus on species with sig IUU fishing and data problems and supported the proposal in WCPFC7-2010- DP-22.

The Marshal Islands, speaking on behalf of FFA members indicated that the proposed approach sought to develop a CDS from first principles, as was done in development of the transhipment CMM, using a decentralized model that could cater for a range of different coastal State responses to market requirements. It would also rely on some form of summary reporting from CCMs on catches in national waters covered by national CDSs, and the effectiveness of such a de- centralised CDS scheme would be in having a strong component of end-use reporting, to enable coastal States and the Commission to reconcile catches with market consumption.

France added support for the CDS, but noted the importance of taking into account regional characteristics, and ensuring consistency between systems used in various RFMOs. Other CCMs noted that:

- while desirable, extension of a CDS to shark species should not be seen as a substitute for CMMs on sharks
- that any CDS which does not cover all catches, including domestic landings, would not be acceptable

- there is a need for an open and transparent process, and compatibility with measures taken by other RFMOs

It was agreed to form an intersessional CDS Working Group that would be coordinated by PNG. This group would work on an inclusive WCPFC CDS that includes flag, coastal and market States, and enables certification and export. Developing the terms of reference for the group would be their first task.

8th Regular Session of the Commission	Hyatt Regency Hotel, Guam, United States of America	26 Mar 2012 to 30 Mar 2012

In discussion of the work program for the TCC for 2012–14, the USA suggested that the Commission should identify priority tasks on which to base TCC work plans, and that among others, work on the catch documentation scheme (among others) was a priority. The FFA also considered the implementation of a CDS to be a priority project specific task (WCPFC8- 2011-DP/08). It was noted that at the time, there was not funding allocated in the budget for a CDS Working Group, and if the Working Group was approved by the Commission, an additional $100,000 would need to be added to the budget.

The draft Terms of Reference for the WCPFC CDS Working Group were presented by the coordinator (PNG) of that group (WCPFC-2011-DP/20 Rev.1), and the WCPFC8 were asked to endorse those TORs in order to allow the working group to hold a meeting and commence its work prior to TCC8. The EU noted that it could not accept paragraph 3f of the TOR, because it was "a question of consistency with the revision of Attachment A of the TOR." Paragraph 3f states "The roles and responsibilities for certification and verification by states, with particular emphasis on port and market States, noting the ongoing roles of flag, chartering and coastal states and the WCPFC secretariat to implement and manage a CDS". In response, some CCMs suggested that the EU concerns should be noted for the record, but the CDS Working Group could still be formed and begin addressing this issue as well as all other issues relevant to development of a WCPFC CDS. PNG state their intent to retain paragraph 3f as written, and FFA members commented that they would develop a regional CDS independently of the Commission, that they welcomed involvement of all members of the Commission in the process and that they intended to hold a workshop in the mid 2012 to progress a regionally agreed CDS. The FFA also expressed support for the TOR and that they did not want any further delay for a WCPFC CDS (WCPFC8- 2011- DP/04).

The EU put forward their own proposal for a CDS which included the following sections (WCPFC8- 2011-DP/28): General provisions; yellowfin, bigeye and skipjack and swordfish - catch certificates; yellowfin, bigeye and skipjack and swordfish – simplified catch certificate; yellowfin, bigeye And skipjack and Swordfish re-export certificates; Communication and verification; and Communication of data. Data sheets were also included in the paper. The EU also submitted an explanatory note for their proposal (WCPFC8- 2011-DP/29).

WCPFC8 agreed that the TOR for the CDS working group (WCPFC-2011-DP/20) be referred back to TCC8.

WCPFC9	Philippines International Convention Center, Manila, Philippines	2 Dec 2012 to 6 Dec 2012

A revised TOR for an Intersessional Working Group (IWG) on a WCPFC CDS was presented at WCPFC9 by PNG (WCPFC9- 2012/DP-14). This was a joint proposal from PNG and the EU, and previous issues relating to catch certificates for chartered vessels were taken into account. The disputed paragraph 3f from WCPFC-2011-DP/20 (Rev.1) was expanded to two paragraphs:

f. The roles and responsibilities for certification and verification of all appropriate stakeholders, within the framework of existing international law

g. The contribution of chartered vessels to sustainable fisheries development and the need to ensure that charter arrangements do not promote IUU fishing activities.

All CCMs that expressed opinion were in support of the proposed ToR and CDS development, and **WCPFC9 adopted the ToR for the IWG-CDS. It was proposed that the first meeting of the IWG-CDS be held in Nouméa, New Caledonia in the first half of 2013** with Alois Kinol of PNG as Chair, however the EU stated that it would need to consult with its member States before agreeing to the proposal, and the Chair noted that the date, location and Chair for the first meeting of the IWG-CDS would be agreed intersessionally and asked the Secretariat to assist with finalising this decision. Details of the proposed dates for the IWG-CDS would be circulated intersessionally. Funding for the IWG-CDS was not included in the budget (WCPFC9-2012-22) It was also noted that additional funds would be needed to support a physical meeting of the IWG-CDS. The Executive Director estimated the cost of an IWG-CDS meeting at $140,000. This additional cost (as well as others) were accepted and added to the budget.

As during WCPFC8, the EU again tabled their own proposal for a CDS (WCPFC9- 2012/DP-24 (rev 1)), but deferred presentation of the proposal to the IWG-CDS.

WCPFC10	Convention Centre, Cairns, AUSTRALIA	2 Dec 2013 to 6 Dec 2013

At WCPFC10, the Executive Director presented a report on the work of the IWG-CDS (WCPFC10-2013/23). The first IWG-CDS meeting was held shortly after the close of TCC9. Briefly, the meeting was attended by 21 Members and Participating Territories, three Cooperating Non-Member participants and observers from numerous the FFA, PNA, Pew Charitable Trusts and WWF. One of the key outcomes was the call for CCMs to provide background documents and information on current CDS-related current programmes and capacities by November 2013. It was suggested that Skipjack might be a suitable candidate species and the purse seine fishery a suitable priority candidate fishery/species for WCPFC CDS development. A work plan was also developed to guide the IWG-CDS.

PNG stated they had provided $30,000 US to support a consultant to prepare a paper on these existing schemes and how they might relate to the Commission's CDS, while the Secretariat was working with the Chair of the IWG-CDS to develop terms of reference for the paper.

FFA members supported the proposal for the consulting paper, but expressed concern that the deadline of November 2012 for providing information on current CDS-related current programmes was unrealistic, and suggested that the deadline be extended to the end of March 2014.

WCPFC10 adopted a revised CMM for Pacific Bluefin Tuna (Attachment F: CMM 2013-09) which included the following statement: "The CCMs shall cooperate to establish Catch Documentation Scheme (CDS) to be applied to Pacific bluefin tuna as a matter of priority."

WCPFC10 noted the progress of the IWG-CDS and endorsed its plan to produce an analysis of existing CDS-related initiatives for discussion prior to TCC10.

Technical and Compliance Committee

Table A15. Summary of CDS discussion by Technical and Compliance Committee[5].

Meeting	Location	Dated
1st Regular Session of the Technical and Compliance Committee	Pohnpei, Federated States of Micronesia	5 Dec 2005 to 9 Dec 2005
At WCPFC-TCC1, priority components of the Commission's monitoring, control and surveillance framework for the following two years were listed. These were: Member's and Commission's list of fishing vessels; vessel monitoring system; regional observer program; port state scheme and transhipment; high seas boarding and inspection scheme; catch verification; catch and statistical documentation scheme; and gear marking. A work program and budget for each of these items was reported as Attachment I. Milestones and budget allocated for the catch and statistical documentation scheme component are as follows: December 2005 - request for background material to assist Commission; March 2006 - if required, review of catch and trade documentation options (other RFMOs e.g. ICCAT) with focus on BE and draft report/forms templates ($15,000); and December 2006 - TCC2 considers papers and discuses requirements for subsequent formal establishment of CDS.		
2nd Regular Session of the Technical and Compliance Committee	Brisbane, Australia	28 Sep 2006 to 3 Oct 2006
TCC2 reported that the eight priority MCS components listed by TCC1 were the basis for a draft implementation plan (WCPFC-TCC2-2006/23). While TCC2 agreed on three key issues to progress at that meeting that didn't include the CDS component, they did report that catch and/or statistical documentation scheme required considerable work. No money was allocated in the budget (2007–2011) for the CDS in the draft implementation plan (WCPFC-TCC2-2006/23). CDS were discussed at TCC2, with a focus on implementation for bigeye tuna. It noted that WCPFC2 had not reached agreement on the CDS, and that interested Members progressed the issue intersessionally. Japan tabled a paper (WCPFC-TCC2-2006/DP04) that proposed a statistical documentation scheme for bigeye tuna instead of a CDS. The justification was that a SDS would address the area of concern (IUU fishing), but would require less transaction costs and burden for fishermen and Government authority than a CDS. There was some support for this proposal from some CCMs in terms of its consistency and coverage, but others noted that it should be more comprehensive by covering domestic and international markets. FFA members considered that the proposed SDS did not address all aspects of WCPFC2's decision, and that they were preparing a proposal of their own for a CDS. This would be submitted for consideration at WCPFC3.		
WCPFC-TCC3	Pohnpei, Federated States of Micronesia	27 Sep 2007 to 2 Oct 2007
The importance of a CDS was highlighted in the opening remarks of TCC3 by the Honorable Alik l. Alik who in regard to IUU fishing in the region, stated "I also see the urgent need to finalize the proposed measure on harmonized port State standards and the development of a catch documentation scheme		

[5] Documents can be downloaded from http://www.wcpfc.int/meeting-folders/technical-and-compliance-committee

along with the satellite-based vessel monitoring system and the Regional Observer Programme."

Japan again tabled a paper (WCPFC-TCC3-2007/DP-06) addressing CDSs that included WCPFC-TCC2-2006/DP04, and included further explanation of their proposal. Some CCMs, on behalf of FFA, commented that they were supporting of a comprehensive and effective monitoring, control and surveillance (MCS) programme, some statistical documentation schemes appear to have major flaws. They also suggested that a working group should be formed to address these issues.

TCC3 noted the importance of trade documentation schemes and their complexity and endorsed the outcomes of the RFMO technical working group in Raleigh, North Carolina, USA noting the importance of harmonization among RFMOs, and the importance of trade and catch documentation schemes. TCC3 noted that forming a working group on this issue would be helpful.

In Attachment I of TCC3 described rules and procedures for the protection, access to and dissemination of data compiled by the commission. Risk assessment the damage done to the operations or creditability of the Commission as a consequence of the unauthorized disclosure or modification of raw data from any CDS or TDS was rated as Medium. The attachment also described raw data from any CDS or TDS in examples of non-public domain data.

WCPFC-TCC4	Pohnpei, Federated States of Micronesia	2 Oct 2008 to 7 Oct 2008

At TCC4, the EC presented a draft CDS for the WCPFC (WCPFC-TCC4-2008/27) that was based largely on the ICCAT Catch Documentation Programme for Atlantic bluefin tuna. The EC acknowledged that the issue of a WCPFC CDSs was not sufficiently advanced enough to make useful progress by WCPFC5, they encouraged a strong commitment to adopt a CDS before WCPFC 6. The EC noted that by January 2010, all fish exports into the EC will require catch certification documents.

Fiji, on behalf of FFA members made a detailed statement (Attachment N) describing the need for a an integrated and comprehensive framework of monitoring, control and surveillance within the WCPFC, and that FFA members had endeavoured to establish a formal working group that could prepare objectives and develop an agreed design framework for a Catch Tracking Scheme at WCPFC4. Their statement again called for establishment of a formal Catch Tracking Scheme Intercessional Working Group (CTS-IWG), and describe some consideration should be taken into account when establishing the group. They suggested that the second option in the Secretariat's working paper TCC4-2008/27 be adopted and that the CTS-IWG be tasked with working to developing a catch documentation scheme to receive further consideration at TCC5.

The FSM supported the development of a CDS but expressed concerns about the potential impacts on small island developing States (SIDS) that may lack capacity to administer or comply with such schemes.

A report titled "The Case for a Catch Documentation Scheme in the Western and Central Pacific" (WCPFC-TCC4-2008/OP- 01) was tabled by of WWF/TRAFFIC. That report described the differences between a CDS and a TDS, reviewed experience of other RFMOs in implementing a CDS, and made recommendations for implementation of a CDS and complementary MCS measures by the WCPFC.

Statistical Documentation Schemes (SDS) and Catch Documentation Schemes (CDS) was listed as a priority in the 2009–2013 draft work plan and budget. Milestones listed were: December 2009 - CDS or SDS Scheme adopted; and March 2010 - CDS or SDS Scheme implemented. No funding for SDS or CDS projects were in included in the provisional estimated budget.

TCC4 recommended formation of a working group coordinated by the EC to discuss this matter based on the EC's draft CMM and the intervention by Fiji on behalf of FFA.

WCPFC-TCC5	Pohnpei, Federated States of Micronesia	1 Oct 2009 to 6 Oct 2009

A paper (WPCFC-TCC5-2009/24, Rev. 2) was presented by the Secretariat that described the background to RFMO catch and trade documentation schemes, introducing the EC IUU catch certification system to be implemented in January 2010 and discussing and comparing best practice elements in existing schemes. The paper included advice and recommendations which included the need for an agreed terms of reference (ToR) for an inter-sessional working group.

Some CCMs, including FFA members considered that the best approach would be to build on existing national catch or trade documentation programmes, while using the Secretariat to perform an audit function. They also supported formation of a CDS working group.

Other CCMs suggested that a practical approach was required in defining the scope of the species and product forms to be included under the scheme. The EC expressed its continuing support for a WCPFC CDS, and noted that the only schemes that were likely to be acknowledged as being equivalent to the EC catch certification wee the ICCAT bluefin CDS, the CCAMLR CDS, and possibly the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) CDS.

TCC5 recommended WCPFC6 the creation of an intersessional working group on catch documentation with terms of reference to be developed electronically in advance of WCPFC6, and recommended to the Commission that it decide on a mechanism to advance this issue during 2010.

WCPFC-TCC6	Pohnpei, Federated States of Micronesia	30 Sep 2010 to 5 Oct 2010

TCC6 heard that the WCPFC6 agreed on the need for a CDS, and the Chair of the FFC agreed to take the lead on the initiative. The EU also indicated a desire to open discussions its revised CDS presented in 2008. Four papers on CDSs were tabled, and TCC6 agreed that they provided a good basis for the development of a CDS.

The EU submitted its proposal for a WCPFC CDS (WCPFC-TCC6-2010-DP-06) that was based on a similar proposal tabled at WCPFC5, updated to reflect the latest FAO and EU requirements. The proposal included general provisions, catch certificates, simplified catch certificates (for small vessels), re-export certificates, communication and verification and communication of data. They described their proposal as important tool against IUU fishing, intended to help support implementation of CMMs, improve data gathering, and assist scientific research, and the impact market factors have on these resources.

Japan submitted a proposal (WCPFC-TCC6-2010-DP-08) that was based on discussions with tuna RFMOs. It included general provisions, catch documents, species destined to processing plants, sharks, re-export certificates, tagging, communication and verification and communication of data.

PNG also submitted a proposal for a CDS that was compatible with the requirements of the EC Regulation No 1005/2008 on IUU fishing being implemented by PNG and other complimentary MCS protocols. It proposed the adoption of the PNG Freezer Vessels Fish Origin Declaration Form (PNG FVFODF) Catch Declaration Form as the basis from which commission members could suggest additional elements to develop a WCPFC CDS.

The re “Best Practice Study Of Catch Documentation Schemes” (WCPFC-TCC6-2010-IP-01) was also tabled at TCC6. It included a review of catch and documentation schemes, harminisation, a functional review of RFMO catch and trade schemes and the EU IUU regulation, an operational review of RFMO catch and trade schemes and guidance for development of a scheme for the WCPFC.

Many members expressed support for a CDS in combatting IUU fishing. Briefly, other comments made included:

- China – there may be difficulties with species covered (as their domestic laws only addressed monitoring of frozen bgeye tuna and swordfish), and that they would needed time to implement it internally.
- Korea – all RFMOs should adopt unified forms to reduce complexity and redundancy, that it

should be applied gradually from major to minor species and that it should initially be applied to bigeye tuna.

- Chinese Taipei – should be implemented in a transitional or phased manor to allow adequate preparation. Priority for implementation should be given to overfished or depleted stocks.
- Cook Islands (on behalf of FFA members) – specific characteristics of fisheries in the Pacific Islands region, particularly existing monitoring and reporting systems, must be considered when developing a CDS.
- Fiji (on behalf of FFA members) – suggested focusing on key principles and described the need for a clear understanding of objectives in implementing a CDS. They also noted that a CDS was just one component of an overall fisheries monitoring system.
- The Philippines – agreed that a CDS should be based on clear objectives.
- Australia – highlighted that a weakness that FFA members see in the EU and Japan proposals is that catches landed by national vessels in domestic ports are not covered, leaving the WCPFC with a partial CDS. They also noted that the burden of complying with these proposed schemes would then fall on Pacific Island members that have vessels or fisheries with foreign-flagged vessels, and that a CDS must be able to trace all catches through to market to assist in identifying and differentiating products caught in WCPFC waters in the market, including by fishing method, origin of catch, or particular vessel or vessel groups.
- New Zealand (on behalf of FFA members) – expressed concern that a centralized Commission CDS model would place significant loads on the WCPFC Secretatiat, increasing staff and financial needs. It suggested that an incremental approach would be useful.
- Niue (on behalf of FFA members) – the capacity of SIDS needed to be taken into account when developing a CDS.
- Palau (on behalf of FFA members) – suggested that a WCPFC CDS needed to be compatible with existing MCS documentation systems.
- Nauru (on behalf of FFA members) – noted that fisheries management arrangements in the WCP region are largely zone-based, meaning coastal States or chartering States were often the most appropriate entities to validate catch documents, and that that existing coastal and port State reporting and certification requirements be considered.
- The EU – indicated that a WCPFC CDS that allowed certification by a coastal or charter State would not be recognized by the EU IUU regulation, and would therefore be unacceptable to the EU.
- Japan – believed that a global standard was needed that could take into account regional characteristics. They also noted that sharks were included in their proposal because of their potential listing in Appendix 2 od CITES if RFMOs didn't take positive steps to conserve them.
- RMI – a focus on first principles was needed. Proposed that a decentralized model with a minimum set of standards could cater for a range of different coastal State responses to market requirements. They also supported the PNG CDS proposal.
- USA – agreed with the need to focus on objectives first, and that inclusion of sharks in a CDS should ne be viewed as a replacement of appropriate CMMs.

A working group to be led by FFA members was tasked to progress the CDS using the four tabled papers, and that the report from this working group be considered by WCPFC7.

WCPFC-TCC7	Pohnpei, Federated States of Micronesia	28 Sep 2011 to 4 Oct 2011

The draft Terms of Reference (ToR) for a WCPFC working group (WCPFC-TCC7-2011-DP/13) was presented to TCC7. Several key issues underlying their approach were highlighted including the need to integrate the CDS with national and WCPFC management frameworks and the need to resolve issues of certificate validation in case of chartered vessels. It was also noted that the WCPFC CDS would need to

be more comprehensive than the scope of the EU's current proposal.

Agreement could not be reached on the ToR, specifically due to differences with the EU on the issue of chartered vessels. FFA members could see no reason why TCC7 could not recommend the ToRs to WCPFC8 for endorsement because they were intended to ne neutral and non pre-determining of the working groups outcomes.

The EU again presented a paper describing a proposed CDS (WCPFC-TCC7-2011-DP/05) that was based on papers tabled at previous meetings. They highlighted that flag State validation of catch certificates is an essential component of their proposal but noted that this does not prevent coastal States from providing information to the flag State to facilitate flag State validation. Under the EU proposal, it is left to the flag State to determine the role of the coastal State in the validation procedure. They also drew attention to a) several points of compatibility with PNG's proposed working group terms of reference; b) the provision in the EU proposal for simplified catch certificates for small fishing vessels; and c) the availability of technical assistance funding to inform CCMs of the requirements of the EU IUU regulation.

TCC7 acknowledged that further intersessional consultation will be required to forward an agreed ToR to WCPFC8 for endorsement.

WCPFC-TCC8	Pohnpei, Federated States of Micronesia	27 Sep 2012 to 2 Oct 2012

The ToR for a CDS that had been developed in a consultative manner (TCC8-2012-25) were again presented by FFA members, who also stated that they had begun working on designing an electronic system based on their own CDS objectives. There was discussion surrounding some of the terminology in the ToR, with the EU questioning why it is necessary to mention "chartering States" when "flag States" and "coastal States" are already mentioned. FFA members stated that they could not agree to removing "chartering States" from the TOR, as they considered that the party providing data should not be unduly restricted.

The EU again presented a proposal for a CDS (TCC8-2012-DP-14 and TCC8-2012- DP-15) based on those previously presented, however with minor changes to cater for the needs of SIDS and to better reflect economic realities.

TCC8 recommended that EU and FFA members work to finalize the catch documentation scheme ToR prior to WCPFC9.

Attachment I, the proposed TCC work plan and budget for 2013–2015 listed implement a CDS for key species as a priority project specific task, and proposed that $140,000 be allocated during 2013 for a CDS working group meeting/workshop. Implementation of a CDS was an outcome listed for 2014.

WCPFC-TCC9	Pohnpei, Federated States of Micronesia	26 Sep 2013 to 1 Oct 2013

No progress report from the CDS-IWG was presented as they were due to hold their preliminary meeting immediately after the TCC9.

CDS Intercessional Working Group

Table A16. Summary of CDS discussions and decisions by CDS-IWG[6].

Meeting	Location	Dated
CDS-IWG	Pohnpei, FSM	1 October 2013

The first meeting of the CDS-IWG was held in conjunction with TCC9. At that meeting, members were asked to provide information to the Secretariat on their current programmes and capacities no later that the end of November. Discussion with members resulted in an agreed work plan for the CDS-IWG. The three components for the work plan were:

1. Get together background documents and information sharing on TOR paragraph 3: c, d, e, h
    - a. These might come from members experiences/initiatives
        - i. Interested CCMs to provide intersessionally to the Secretariat update reports on their implementation of current CDS-related initiatives (domestic tracking schemes, as well as certification schemes for product in the WCPFC-CA)
        - ii. The reports might also include operational issues and capacity requirements (as per d) DEADLINE: as soon as possible and no later than the end of Nov 2013
    - b. Pre-existing work be reviewed: WCPFC7-2010-IP03 – background information of CDS schemes and CDS development considerations
    - c. Electronic reporting and e-monitoring developments
    - d. Other information that the Secretariat might be asked to collate/provide
        - i. Other background papers from WCPFC meetings on CDS
        - ii. Put information received on CDS-working group webpage
2. How does the information get collated into a form that can be used by the IWG? Task the Secretariat with
    - a. Drafting a discussion paper to identify key/core elements that would be needed in a CDS in the WCPFC;
    - b. Investigating options to carry out the work needed to align the information with current MCS capacities, and do a gap analysis to identify where MCS capabilities would be enhanced by a CDS (fisheries management needs would also be important); and
    - c. Organizing a second workshop to be held in the margins of another meeting (venue and timing to be confirmed), to consider the above discussion papers and to include presentations by members eg Fiji, PNA, others
3. Next steps
    - a. Choice of species?
    - b. Choice of fisheries?
    - c. Should objectives (Attachment 1 paragraph 3 of TOR) be prioritised?
    - d. Cost-benefit considerations
    - e. Vulnerability considerations

PNG suggestion: skipjack and purse seine fishery Consider as a priority the schemes that are already in the WCPFC Convention Area

[6] Documents can be downloaded from http://www.wcpfc.int/meetings/catch-documentation-scheme-cds-intersessional-working-group-2014

Appendix 2 – Agreed Plan for CDS-IWG Moving Forward

From the Catch Documentation Scheme Intersessional Working Group Summary Report, Tuesday 1st October 2013.

Attachment B: Agreed Plan for CDS-IWG Moving Forward
(as agreed at CDS-IWG1 Tue 1 October 2013)

1) **Get together background documents and information sharing on TOR paragraph 3: c, d, e, h**
    a. These might come from members experiences/initiatives
        i. Interested CCMs to provide intersessionally to the Secretariat update reports on their implementation of current CDS-related initiatives (domestic tracking schemes, as well as certification schemes for product in the WCPFC Convention Area)
        ii. The reports might also include operational issues and capacity requirements (as per d)
        DEADLINE: as soon as possible and no later than the end of November 2013
    b. Pre-existing work be reviewed: WCPFC7-2010-IP03 – background information of CDS schemes and CDS development considerations
    c. Electronic reporting and e-monitoring developments
    d. Other information that the Secretariat might be asked to collate/provide
        i. Other background papers from WCPFC meetings on CDS
        ii. Put information received on CDS-working group webpage

2) **How does the information get collated into a form that can be used by the IWG?**
    Task the Secretariat with
    a. Drafting a discussion paper to identify key/core elements that would be needed in a CDS in the WCPFC;
    b. Investigating options to carry out the work needed to align the information with current MCS capacities, and do a gap analysis to identify where MCS capabilities would be enhanced by a CDS (fisheries management needs would also be important); and
    c. Organizing a second workshop to be held in the margins of another meeting (venue and timing to be confirmed), to consider the above discussion papers and to include presentations by members eg Fiji, PNA, others

3) **Next steps**
    a. Choice of species?
    b. Choice of fisheries?
    c. Should objectives (Attachment 1 paragraph 3 of TOR) be prioritised?
    d. Cost-benefit considerations
    e. Vulnerability considerations

    PNG suggestion: skipjack and purse seine fishery
    Consider as a priority the schemes that are already in the WCPFC Convention Area
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Appendix 3 – Acronyms

Acronym	Full description
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCM	Commission Members, Cooperating non-Members, and participating Territories of the WCPFC
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CI	Compliance Index
CITES	Convention on the International Trade in Endangered Species of Wild Fauna and Flora
CMM	Compliance and Management Measure
CPUE	Catch Per Unit Effort
EEZ	Exclusive Economic Zone
E-R	Electronic Reporting
ETBF	Eastern Tuna and Billfish Fishery
EU	European Union
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization of the United Nations
FFA	Pacific Islands Forum Fisheries Agency
FSM	Federated States of Micronesia
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
IOTC	Indian Ocean Tuna Commission
ISSF	International Sustainable Seafood Foundation
IUCN	The World Conservation Union
IUU	Illegal, Unreported and Unregulated Fishing
MRAG	Marine Resources Assessment Group
MSC	Marine Stewardship Council
NGO	Non-governmental Organisation
NMFS	National Marine Fisheries Service (United States)
NOAA	National Oceanic and Atmospheric Administration
NPOA	National Plan of Action
OFP	Oceanic Fisheries Programme
PICT	Pacific Island Countries and Territories
PNA	Parties to the Nauru Agreement
PTTP	Pacific Tuna Tagging Programme
REG	Regional Register of Fishing Vessels
RFMO	Regional Fisheries Management Organization
RFV	Record of Fishing Vessels
RIMF	Regional Information Management Facility
SPC	Secretariat of the Pacific Community (formerly South Pacific Commission)
TAC	Total Allowable Catch
TUBS	TUFMAN Observer Module
TUFMAN	Tuna Fisheries Database Management System
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	UN Fish Stocks Agreement
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WCPFC–CA	Western and Central Pacific Convention Area
WCPO	Western and Central Pacific Ocean
XML	eXtensible Markup Language

Appendix 4 – Acknowledgments

Specific thanks to Professor Hurry, Dr Manarangi-Trott and Mr Kinol for their support and advice during the project and specific comments on the report. Mr Dunn provided input on port state measures. The valuable time and input from the following were appreciated.

Organisation	Name	Position
Western and Central Pacific Fisheries Commission (WCFPC)	Glenn Hurry Lara Manarangi-Trott	Executive Director Compliance manager
Fiji Fisheries	Jone Amoe Anare Raiwalui	Senior Fisheries Officer Principal Fisheries Officer
Fiji Fish Marketing Group	Grahame Southwick	Executive Chairman
Solander Pacific	Radhika Kumar	General Manager
Secretariat of the Pacific Community (SPC)	Peter Williams Steven Hare Stephen Brouwer Tim Lawson Peter Sharples Deirdre Brogan Mr Bryan Scott	Principal Fisheries Scientist Fisheries Scientist Fisheries Scientist Fisheries Statistician Observer Support and Coordinator Fisheries Monitoring Supervisor Fisheries IUU Liaison Officer
Forum Fisheries Agency (FFA)	Wez Norris Apolosi Turaganivalu	Deputy Director General Operations
National Fisheries Authority - PNG	Alois Kinol Gesling Lulupa Chee Ludwig Komoru	Team Leader, Audit & Certification Audit & Certification Unit Executive, Fish Management
Australian Fisheries Management Authority	Steve Auld Anne Shepherd	Manager Tropical Tuna Fisheries Licensing and Data Services
Department of Agriculture - Australia	Dean Pease	Policy officer, Regional Fisheries and Treaties Section
PNA Office	Maurice Brownjohn	Commercial Manager
	Steve Dunn Neil Hughes	Consultant Consultant
Ministry for Primary Industries – New Zealand	Dominic Vallieres Anna Falloon	Senior Fisheries Analyst Highly Migratory Species Team Senior Policy Analyst, International Fisheries Management
National Marine Fisheries Service - USA	Bill Jacobson	Tuna Tracking & Verification Program