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PROGRESSING THE DEVELOPMENT OF A DRAFT ELECTRONIC REPORTING STANDARD, INCLUDING FOR ROP DATA

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Paper prepared by the Secretariat

Purpose

1. This paper provides information on the types of reporting formats used internationally for standard fisheries data elements and invites TCC to consider the establishment of a working group to develop standards and specifications for the electronic submission of WCPFC data.

Background

2. At WCPFC10, the Commission noted that progress had been made by some members in trialling electronic reporting, particularly for the submission of observer data (Refer WCPFC10 Summary report paras 165-173). A workshop was help in late March 2014 to discuss the potential for electronic reporting (ER) and electronic monitoring (EM) in the WCPO and to consider next steps in progressing these initiatives (Refer Chair's report WCPFC-TCC10-2014-15). The workshop identified a priority need for the development of ER standards, specifications and procedures to facilitate data exchange between the Secretariat and CCMs, and noted that an EM and ER working group could be established for this purpose. The terms of reference of an EM and ER working group are still to be determined.

3. At SC10, the Chair's report on the EmandEr workshop was presented, and SC10 agreed to recommend to the Commission that the outcomes from the WCPFC E-Reporting and E-monitoring workshop (March 2014) are taken forward to TCC10, in particular the urgent need for developing standards for formats and validation checks of the potential ER and EM data to be submitted to the WCPFC that ensure accordance with agreed WCPFC data standards and take into consideration existing standards.

4. The benefits of standardised reporting formats for data exchange are articulated in the consultant's paper, WCPFC10-2013-16_rev1. Benefits include but are not limited to

a. timely and enhanced data management
b. facilitating data exchange between the Secretariat, CCMs, and regional bodies
c. efficiently managing the increasing amounts of data received by the Secretariat
d. giving effect to t-RFMO recommendations on data harmonisation.

5. Work on developing data standards complements and supports enhancements to WCPFC's Information Management System (IMS) including the implementation of the Record of Fishing Vessels Standards, Specifications and Procedures (RFV SSPs). The RFV SSPs came into effect on 6 June 2014 and allow CCMs to enter data directly into the RFV via a web portal or via a standard template (MS Excel file) which is then uploaded by the Secretariat into the RFV. The RFV SSPs provides a useful starting point when considering the development of standards for e-reporting, including ROP data, as there are many common data elements.

6. It is important to note that a decision by the Commission to develop data standards for ER and EM is separate to a decision by the Commission to require certain data/information or CMM reporting, which are currently accepted on forms, to be submitted electronically. The adoption of ER and EM standards by the Commission will support and accommodate those CCMs that have commenced implementation of a range of EM and ER technologies in their fisheries, and will ensure that the Commissions databases and IMS systems are ready to receive electronic data.

Discussion

7. In addition to the RFV and ROP, many of WCPFC's CMMs require CCMs to collect and report against a number of common data elements. Some of these include:

a. Time, date information (time of shot, time of interaction with protected species, time of sighting of a vessel, authorisation to fish etc)
b. Vessel characteristics (vessel length, vessel type, vessel power etc)
c. Country association (vessel's flag, chartering or host CCM, port of departure, port of landing, observer nationality, master nationality etc)
d. Species information (target species, species of special interest, discarded/retained species)
e. Location information (location of shot, location of haul, location of interaction with protected species, location of sighting of a vessel etc)
f. Quantities or other volume requirements (bait, catch, effort, hold etc).

8. Table 1 provides examples of the definitions and formats used by WCPFC and international bodies for common data elements. Table 2 provides a suggested format that could form the basis of the EM and ER working groups work to develop the draft ER standards.

9. It is suggested that the starting point for the development of a draft ER specification document would be the current CMMs and WCPFC decisions on minimum data fields, current data standards and forms that are currently used by CCMs for their data collection programmes their data eg WCPFC ROP Minimum Data Standards and Instructions, and relevant Standards, Specifications and Procedures documents. It is also suggested that draft ER specifications should take into account approaches at the international level on fisheries data standards and where possible, maintains the WCPFC definition or suggests adoption of an international standard.

10. Some suggested approaches that might be taken by the working group to develop draft ER specifications include:

a. Formats as described in the RFV SSPs could be used for vessel characteristics (vessel length, vessel type, vessel power etc). These were found to be generally consistent

with FAO's *International Standard Statistical Classification of Fishing Gears* (ISSCFG) (RFV SSPs Att 6) and FAO's *International Standard Statistical Classification of Fishery Vessels* (ISSCFV) (RFV SSPs Att 5) (Note Annual Report on RFV WCPFC-TCC10-2014-RP05)

b. ISO 8601 *Data elements and interchange formats* are suggested for elements that capture time, date information (time of shot, time of interaction with species of special interest, time of sighting of a vessel, authorisation to fish etc).

c. ISO 3166 *Codes for the representation of names of countries and their subdivisions* for references to country (vessel's flag, port of departure, port of landing, observer nationality, master nationality etc). The use of ISO 3166 codes is consistent with the RFV SSPs. United Nations *Code for Trade and Transport Locations* (UN/LOCODE) codes could be used, together with ISO 3166 country codes, for port references. UN/LOCODE is used by national governments for trade related activities and provides codes for over 97,000 locations in 249 countries.

d. ISO 6709 *Standard representation of geographic point location by coordinates* formats could be used for location information (location of shot, location of haul, location of interaction with species of special interest, location of sighting of a vessel etc).

e. Species information could use the FAO ASFIS 3-alpha codes. (FAO's ASFIS list of species includes *International Standard Statistical Classification of Aquatic Animals and Plants* (ISSCAAP), taxonomic and a 3-alpha code).

f. Numbers plus characters could typically be used to capture quantities or other volume requirements together with the unit (bait, catch, hold etc).

11. The North Atlantic Fisheries Format (NAF) which is used by some flag States and regional fisheries bodies; the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), North East Atlantic Fisheries Commission (NEAFC), Northwest Atlantic Fisheries Organization (NAFO) and the South East Atlantic Fisheries Organization (SEAFO)), is used for fisheries related data transmission. It uses the ISSCFV, ISSCFG, ISSCAAP and ISO-3166 codes. The Secretariat has been advised that a new policy group formed in 2014, the Joint Advisory Group on Data Management (JAGDM), are currently considering new data exchange formats to replace the NAF.

12. Also relevant is the FAO Port State Measures Agreement where parties are asked to use, to the extent possible, the following international coding system when reporting

a. Countries/territories - ISO-3166 3-alpha Country Code

b. Species - ASFIS 3-alpha code (known as FAO 3-alpha code)

c. Vessel types - ISSCFV code (known as FAO alpha code)

d. Gear types - ISSCFG code (known as FAO alpha code).

13. There are benefits to maintaining a single data dictionary that defines and describes all of the necessary WCPFC data elements. The work by the EM and ER working group should also consider the development of a versioned data dictionary for all WCPFC data elements and could be added to or reviewed as databases are added to the WCPFC IMS and WCPFC databases maintained by the Scientific Services Provider on behalf of WCPFC. This approach minimises

the risk of incompatible or incomplete data sets and would support commitments made by WCPFC to coordinate and cooperate with t-RFMOs in the areas of data collection and data sharing.

Recommendations

14. That TCC10 recommends that the Commission:

    a. establish a combined EM and ER Working Group, with a priority task to develop draft ER SSPs, consistent with discussions at the EmandEr Workshop;

    b. to assist the work of the combined EM and ER Working Group, task the Secretariat to commence work as soon as practicable, to develop a draft set of ER SSPs to be reviewed by the EM and ER Working Group once it is established;

    c. in developing the draft ER SSPs, task the Secretariat to consult interested CCMs, and subregional agencies including the Scientific Services and Data Services Provider (SPC-OFP), the FFA and PNAO; and

    d. task the combined EM and ER Working Group and the Secretariat to further consider the development of a WCPFC data dictionary for all WCPFC data elements.

Table 1 – Examples of data descriptions and formats of interest to WCPFC

DATA FIELD/ELEMENT	DESCRIPTION (Format)			
	ROP Min Data Standards and Instructions	**RFV SSPs**	**North Atlantic Fisheries Format (Definition (format))**	**Other**
Name of vessel	Name must be clearly written, make sure any numbers connected with the name are included. i.e. “Moonlight No 6”.	Name of the fishing vessel as indicated on flag State registration, in UPPER CASE	Vessel name (Char*30)	IMO (Circular 2554/Rev1/Corr.1) – Ship name
Flag State Registration Number	This number will be sourced from the vessel papers. You can normally get this information during the briefing.	Alphanumeric registration identifier assigned by the flag State, as indicated on flag State registration, in UPPER CASE	Contracting Party internal ref number. Unique vessel number attributed by the flag State pursuant to registration. (ISO-3166 +max 9N Format: Char*3 Num*9)	
International Radio Call Sign	The vessel call sign is usually issued to the vessel by the flag State in accordance with IMO regulations and procedures. This can become the WCPFC identification number of the vessel.	International radio call sign assigned to the vessel, in UPPER CASE without spaces - if the vessel has not been assigned an IRCS, enter "NONE"	International Radio Call Sign of the vessel (Char*7)	FAO - the IRCS system is based on the International Telecommunication Union's system for the allocation of call signs to countries for ship stations and the generally accepted design standards for lettering and numbering.
Vessel Owner/Company	Name and contact if possible of the owner of the vessel, if it is owned by a company, then use the company name.	Text. If multiple owners, separate entries with ",". If company, enter full name of company. If personal name, enter last/family name, first/given name(s) (separated by a comma)	Name and address of the vessel owner (Char*60)	IMO – Registered owner is the owner specified on the ships certificate of registry issued by an administration.
Name of fishing master	The fishing master name clearly printed in the format - First name First - Last names Last (Do not use initials) This may be difficult to determine particularly with some Asian vessels so write the name the way the fishing master is named on paperwork or from identification he/she shows you.	Name of the master Text. Enter last/family name, first/given name (s) (separated by a comma). If multiple entries, separate with a ";"	Name of the vessels master (Char*30)	PSMA – no prescribed format. VMS SSPs -
Date and time of departure from port	The day and time the vessel leaves the port to start its fishing campaign. I.e. pulls up its anchor, or throws the ropes free from the wharf	N/A	Date of reported event (UTC)	WCPFC PS and LL Observer Workbooks (DDMMYY hhmm) ISO 8601 Data elements and interchange formats (YYYY-MM-DD Thh:mmTZD (eg 2014-04-16T19:20+01:00))
Port of departure	Name of the port of departure - as a help also include the country	N/A	Port of registration of the vessel/homeport (Char*20)	

Table 2 – Suggested template and sample of a draft E-reporting specification document

DATA FIELD/ELEMENT	SUGGESTED DEFINITION (FORMAT)	EXAMPLE	REFERENCES/ COMMENT
VESSEL IDENTIFICATION			
Name of vessel	Name of the fishing vessel as indicated on flag State registration. (Char*50)	Morning Star	RFV SSPs
Flag State Registration Number	Alphanumeric registration identifier assigned by the flag State (Char*50)	AU1234	RFV SSPs
International Radio Call Sign	International Radio Call Sign of the vessel as issued by the flag State (Char*7)	FDA4321	RFV SSPs
Vessel Owner/Company	Name and address of the vessel owner (If multiple owners, separate with a ";". If company, enter full name of company. If personal name, enter last name, first name, separated by a comma (Char*60))	Smith, Joe C/Morning Star Pty Ltd 123 Dawn Rd Beachville AUSTRALIA	NAF + RFV SSPs
Hull markings consistent with CMM 2004-03	Confirmation that the vessel markings are consistent with CMM2004-03, section 2.1 . Y or N (Char*1). If no, further details are required (Char*300)	Y	CMM2004-03
WIN markings consistent with CMM 2004-03	Confirmation that the vessel markings are consistent with CMM2004-03, section 2.1 . Y or N (Char*1). If no, further details are required (Char*300)	Y	CMM2004-03
WIN format for markings consistent with CMM 2004-03	Confirmation that the vessel's WIN markings are consistent with CMM2004-03, section 2.1. Y or N (Char*1). If no, further details are required (Char*300)	Y	CMM2004-03
IMO number	International Maritime Organization (IMO) or Lloyd's Register (LR) Ship Identification Number (Num*7)	1234567	Subject to being added to RFV SSPs.