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**Data Available to the Commission to Address the Implementation and  
Effectiveness of CMM 2010-07 regarding Shark Finning**

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## Abstract

Shark finning is the practice of removing and retaining all or some of a shark's fins and discarding its carcass at sea. WCPFC prohibits this practice under CMM 2010-07 by introducing the concept of a 5% fins-to-carcass ratio, but the measure permits alternative technical approaches and does not prescribe how CCMs should demonstrate compliance. Nevertheless, the measure requires that its implementation and effectiveness be reviewed on the basis of advice from the Scientific Committee, the Technical and Compliance Committee and the Commission. Past sessions of each meeting have discussed this review, and in some cases, have concluded that the information made available to them is an insufficient basis for their review. This paper seeks to provide an inventory of the types of data available to the Secretariat that could inform these committees about the practice of finning. The objective of this paper is to pose some of the questions that arise when considering an implementation and effectiveness review of CMM 2010-07, and to catalogue the information available to the Secretariat and the Commission to address these questions.

## 1 Introduction

Shark finning is the practice of removing and retaining all or some of a shark's fins and discarding its carcass at sea<sup>1</sup>. The Western and Central Pacific Fisheries Commission (WCPFC), noting that finning is inconsistent with full utilization of sharks under the International Plan of Action (IPOA)-Sharks, encouraged retention of all parts of the shark excepting head, guts, and skins, by first adopting CMM 2006-05 and subsequently amended measures CMM 2008-06, CMM 2009-04 and CMM 2010-07 (currently in effect).

These WCPFC conservation and management measures (CMMs) do not prescribe how members and cooperating non-members (CCMs) should demonstrate compliance with the full retention practices. CMM 2010-07 "requires" that the weight of fins and the weight of carcasses must be retained onboard in a ratio of 0.05:1 (5%) up until the first point of landing. However, the measure also allows for transshipment if the ratio is maintained and documented in other unspecified ways. Furthermore, alternative measures such as fins naturally attached or other ways of "exploring, exploiting, conserving and managing sharks" in areas under national jurisdiction are also allowed.

The Commission is tasked with reviewing the implementation and effectiveness of this measure under CMM 2010-07 para. 13, and the Scientific Committee and Technical and Compliance Committee have attempted to do so on several occasions. Most recently, SC11 concluded that "evaluation of the 5% ratio is not currently possible due to insufficient information for all but one of the major fleets". TCC11 agreed, stating that it is "not possible for TCC to assess compliance with the application of the fins to carcass weight ratio". While the SC and TCC statements have focused on the fins-to-carcass ratio, it should be noted that there are other ways in which WCPFC members and cooperating non-members (CCMs) may be implementing the measure.

The purpose of this paper is to pose some of the questions that arise when considering an implementation and effectiveness review of CMM 2010-07, and to catalogue the information available to the Secretariat and the Commission to address these questions. Depending on which questions are to be included in the Commission's review of the measure there may be differing views on the sufficiency of available information. The paper aims to assist the Commission in continuing this discussion and moving toward a consensus view on whether or not the measure requires amendment.

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<sup>1</sup> This definition is in line with standard international usage (see IUCN Shark Specialist Group (<http://www.iucnssg.org/finning> ), United States government (<https://www.congress.gov/106/plaws/publ557/PLAW-106publ557.pdf> (bottom of p. 4)) and Wikipedia ([https://en.wikipedia.org/wiki/Shark\\_finning](https://en.wikipedia.org/wiki/Shark_finning) )

## **2 Aspects of an Implementation and Effectiveness Review of CMM 2010-07**

A number of questions may arise when reviewing the implementation and effectiveness of the WCPFC measure on shark finning. The following sections outline these questions and the type of information required to address them. The approach used in recent compliance reviews conducted by TCC is referenced.

### *2.1 Which CCMs have implemented controls designed to prevent finning?*

This question best represents the focus of compliance reviews previously conducted by TCC in 2012, 2013 and 2014.<sup>2</sup> In those reviews, self-reporting was used to tally the number of CCMs that had implemented the measure. In some cases CCMs provided a simple “yes”, “no” or “N/A” and did not specify how the measure was implemented, for example a reference to the law, regulation, policy, license condition, etc. that was used to implement the measure. A “yes” or “no” response could be considered to meet the requirements for reporting implementation under paragraph 12 of the measure, but it does not allow an evaluation of the degree of implementation or the effectiveness of the measure.

### *2.2 Which control measures have been implemented by CCMs to prevent finning?*

This question also focuses on implementation, rather than effectiveness, but would require greater detail than is currently provided by some CCMs. In order to answer this question, instead of a simple “yes” or “no”, there would need to be information on the specific control measure that has been implemented (e.g. 5% fins-to-carcass ratio up to the first point of landing, fins naturally attached, a complete ban on shark retention, etc.) This kind of detail, along with information on whether the implementation applies to all of the CCM’s flagged vessels, would provide a more complete picture of the implementation of the measure. However, it would not necessarily provide the detail required to evaluate the effectiveness of each kind of control measure and thus of the CMM as a whole.

### *2.3 How effective are the control measures implemented by CCMs in preventing finning?*

This question moves beyond implementation and tries to assess whether the implemented control measures are effective in preventing finning. Answering this question would require different types of information depending on which control measure has been implemented. For example, to evaluate application of the 5% fins-to-carcass ratio, information on the tolerance of the ratio for different species and fin positions versus the potential to allow for high grading should be reviewed. Similarly, to evaluate whether transshipment may be facilitating finning, information on transshipment quantities documentation should be reviewed. As the type of control measure implemented by each CCM is unknown in some cases, and even where known may differ from CCM to CCM, these reviews may need to be done separately for individual CCMs.

### *2.4 What is the current level of finning and is it acceptable?*

From the point of view of directly evaluating the effectiveness of the measure, it could be useful to assess whether the incidence of shark finning has decreased with adoption of the measure, and whether the current level of finning (if still occurring) is sufficiently low. This question would require data on either the percentage of sharks finned (i.e. from a sample) or an estimate of the number of sharks finned across the region (i.e. extrapolated from samples). This question focuses on effectiveness without necessarily addressing implementation issues on an individual CCM basis.

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<sup>2</sup> The Commission agreed a list of obligations to be reviewed by the Compliance Monitoring Review (CMR) in 2015 and the list did not include CMM 2010-07.

### 3 Data Available to Address the Questions

This section introduces all of the known sources of information available to address the four questions above. These data include CCM Annual Reports, observer data, transshipment data, high seas boarding and inspection reports, port sampling data, trade data and independent studies.

#### 3.1 CCM Annual Reports

CCMs submit Annual Reports – Part 1 containing information on catches, vessels, fishery development, research and data collection. These reports may mention controls on finning or describe fin production, but often do not. Annual Reports – Part 2 are submitted by CCMs using online templates in which “yes”, “no” or “N/A” responses are required against three parts of CMM 2010-07:

- Paragraph 7: implemented a control measure to prevent finning?
- Paragraph 9: prohibited retaining, transshipping, landing or trading fins taken in contravention of the measure?
- Paragraph 12: advised the Commission on the implementation of the measure?

There is an option to provide other relevant information in a comment field or by including an attachment but several CCMs choose not to do so. Several CCMs which do include comments are not specific about which control measures have been implemented, or they specify the control measure but do not comment on its effectiveness.

**At present Annual Reports only consistently address questions regarding whether a control measure has been implemented, but not which control measure and whether it is effective.**

#### 3.2 Observer Data

The WCPFC currently requires 100% observer coverage on purse seine vessels fishing in waters between 20°N and 20°S. Most of these data are considered to be part of the WCPFC’s Regional Observer Programme (ROP) dataset, but purse seine vessels fishing entirely within a single national jurisdiction may be not required to submit data to the ROP database.

Observer coverage for longline fisheries in the WCPFC is required at 5% since 2012 but the metric applied by each member varies (e.g. hooks, days fished, trips) and in some cases the required coverage is not achieved (SPC-OFP 2015). ROP data comprise approximately 15% of the total number of longline observer trips in the Western and Central Pacific (WCPO) due to the fact that trips conducted entirely within a single national jurisdiction are not considered to be ROP data.

Observers collect information on the fate of sharks caught and there is a specific code to use when sharks are observed to be finned. SPC recently analysed both ROP and non-ROP observer data held by SPC and found that in aggregate between 1995-2014 finning decreased in the purse seine fishery, whereas in the longline fishery the rate of finning decreased from 2010-2013 to about 10% but rose again in 2014 (Rice et al. 2015). Although these data could be analysed by CCM (flag), observer coverage may not be representative for all CCMs and this type of analysis has not been undertaken.

**Observer data could be used to check on the outcomes of implementation of finning controls (i.e. is finning still occurring?) in the Convention Area as a whole or for individual CCMs, but for longline fisheries the sample size is small and perhaps not adequately representative.**

#### 3.3 Transshipment Data

Under the WCPFC’s transshipment measure (CMM 2009-06) transshipment on the high seas requires submission of a transshipment declaration in a specified format to the WCPFC Executive Director

within 15 days of the transshipment. The measure allows for flexibility in reporting practices and specifies a list of information to be provided in a transshipment declaration. This information includes the species identity of tuna and tuna-like species transhipped and the product form (which is specified in a footnote to include shark fins). Reporting practices on declarations differ amongst CCMs, specifically for shark products. For example, many transshipment declarations report species as “Shark” and this may include shark carcasses and/or fins. It is also possible that shark products are being reported in some declarations within the generic “other species” category.

Paragraph 13 and 14 of CMM 2009-06 says that ROP observers are to monitor implementation of the measure, and to confirm to the extent possible, that high seas transhipped quantities are consistent with the catch reported in the transshipment declarations. Presently this is implemented through 100% ROP observer coverage for all high seas transshipments (regardless of vessel size or gear type) and through the observer being placed on the receiving vessel and signing the declaration that is submitted to the WCPFC by the CCM responsible for the receiving vessel. The Commission has not agreed on reporting requirements for ROP observer data for monitoring of high seas transshipments, and presently some data are being submitted by the relevant observer programmes on a voluntary basis and in a range of different formats.

The reporting requirement under paragraph 11 of the measure requires CCMs to include in Annual Report - Part 1 a report for the previous calendar year summarising all transshipment activities covered by CMM 2009-06 (including transshipment activities that occur in ports and in EEZs). The Secretariat’s most recent report on transshipment activities provided in 2015 for the first time, a summary based on available reporting in Annual Report –Part 1 covering 2014 activities. This report showed that only one CCM reported transshipping shark fins in 2014. In aggregate (not event by event), submitted data show shark fin quantities transhipped were less than 5% of the quantity of shark carcasses transhipped by that CCM (WCPFC 2015a). The same document notes that while reporting by CCMs of high seas transshipment events has improved, gaps in WCPFC holdings remain. These gaps are identified based on cross-checking between transshipment notifications and declarations submitted by fishing and carrier vessels. Systems which will provide for further cross-checks between these transshipment documents and vessel monitoring system (VMS) and ROP data are under development (WCPFC 2015a).

The development and implementation of electronic reporting standards (work underway through the ER and EM Intersessional Working Group) could provide a future opportunity to standardise reporting on transshipment declarations amongst CCMs and high seas transshipment observers, and to ensure that quantities of shark fin are reported in the proper product form.

<p><b>Transshipment data might indicate if finning is occurring but only if fins are transhipped, and only if the transshipment is reported properly.</b></p>
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### 3.4 *High Seas Boarding and Inspection Data*

In accordance with CMM 2006-08, para. 30 CCMs conducting high seas boarding and inspection (HSBI) are required to provide the WCPFC and the flag State authority of the fishing vessel with a full report of each HSBI within three working days. As the Commission has not specified a format for these reports, the information they contain varies from event to event. In the case of alleged violations involving shark fins, the text may simply indicate that the HSBI team was unable to verify the 5% fins-to-carcass ratio.

Follow-up on any possibly alleged violations noted during the HSBI is undertaken by the fishing vessel’s flag State authority. The outcome is required to be reported to the WCPFC. Although such response reports are received by the Commission, they usually contain a basic statement about the outcome of the investigation rather than a detailed explanation of the technical factors involved (e.g. how the 5% ratio was eventually verified or not is often not mentioned).

Where applicable, the Secretariat draws on information from HSBIs reporting when preparing its draft of the Compliance Monitoring Report (CMR) for compliance with the shark finning measure (CMM 2010-07) each year. In 2014, there were 56 HSBIs conducted and 44 of these observed no infringements (WCPFC 2015b). Of the 12 HSBIs in which alleged infringements were observed, none were related to the shark finning measure but there was one alleged infringement where a vessel did not report detailed catch information on shark species.

**High seas boarding and inspection reports usually lack the details necessary to draw conclusions about which finning controls have been implemented and whether they are effective, but they may provide useful anecdotal information in some cases.**

### 3.5 *Port Sampling*

The Pacific Community (SPC) operates a port sampling programme in its member States but the data collected are not Commission data. The Commission-funded Port Coordinator's Programme is operating as a trial during 2015-2016 and provides direct financial assistance to certain national agencies in support of national port activities during 2015-2016; the trial Programme did not specify that recipient countries were to submit data to the Commission. The Commission has not otherwise agreed on data sets to be submitted to the Commission based on port-sampling activities. As these port-sampling data sets are not available to the Commission it is not known whether they may contain any information on shark fin or carcass landings that would be useful in evaluating the WCPFC's shark finning measure.

**The Secretariat does not have access to available port sampling data which might be useful in evaluating the implementation or effectiveness of the shark finning measure.**

### 3.6 *Trade Data*

A recent report on the global market for shark products noted that many countries record trade in shark fins within aggregated commodity categories together with shark meat (Dent and Clarke 2015). Although the World Custom Organization in 2012 called for all of its member countries to use commodity codes for shark fins which are separate to those for shark meat, some countries continue to report frozen fins as frozen shark meat, thus complicating a comparison between fin and meat quantities. Compounding these difficulties, domestic landings would not be expected to appear in trade statistics and traded shark meat products may be processed in ways not anticipated by a 5% fins-to-carcass ratio (e.g. see Senba et al. 2015). Furthermore, information on the source of the product may not represent the flag State of the fishing vessel due to transshipment, country of origin rules, or importing country reporting practices (e.g. listing imports by country of consignment rather than by country of origin). At this time, the Commission does not hold trade data nor use it for any purpose.

**The Secretariat does hold any trade data relevant to shark finning and notes that analysis of such data is likely to be problematic and inconclusive.**

### 3.7 *Independent Studies*

After all of the t-RFMOs introduced the 5% fin-to-carcass ratio as means of controlling finning in 2004-2008 there have been several studies of this issue based on European or global data (Fowler & Séret 2010, Biery & Pauly 2012, Santana-Garcon et al. 2012) all of which have concluded the ratio approach is "inadequate" or "problematic". First, the actual ratio of fins-to-carcass weight will vary by species, the number of fins utilized from each shark, and the type of cut used to remove the fins from the carcass. Second, the ratio will differ depending on whether it is applied to fresh or dried fins, and to what form of the carcass (i.e. whole weight, dressed or partially dressed carcass) the fins are to be compared.

Within the WCPFC, Hindmarsh (2007) was the first paper to identify a number of technical difficulties with fin-to-carcass ratios and to call for a fins naturally attached policy unless issues with ratios can be resolved. More recently, New Zealand conducted a study to help determine official fin ratios for monitoring compliance with its ban on shark finning commencing 1 October 2014. Although New Zealand's fin-to-carcass ratios are species-specific, Francis (2015) still noted high variability in the ratios and the potential for bias due to different fleets processing sharks in different ways (e.g. whether or not fin sets include the entire tail or just the lower lobe). New Zealand implements different control measures for different shark species: while species-specific fin-to-carcass ratios are applied for some sharks, other sharks must be landed with their fins naturally or artificially attached.

**Independent studies have already raised a large number of concerns about the application of a 5% fin-to-carcass ratios across species and fleets. It is possible, though, that some CCMs have individually developed more robust controls using species-specific ratios or other means.**

#### 4 Summary and Conclusions

A summary of the questions which could arise from a review of the WCPFC's shark finning measure versus the relevance and availability of potential data sources to address these questions is shown in Figure 1.

The following conclusions can be drawn from the preceding text and this summary:

- At present the only way the Commission reviews whether CCMs have implemented a control measure to prevent shark finning is based on a self-assessment that each CCM makes and reports through its Annual Report-Part 2, however, some CCM's reports do not specify what control measure has been implemented.
- Several sources of data might indicate, either anecdotally or more quantitatively, the occurrence of finning, but the coverage of these data may not be sufficient to draw definitive conclusions about finning in the WCPO as a whole or within particular fleets.
- Independent studies have noted a number of problems with the application of a 5% fin-to-carcass ratio but it is possible that individual CCMs have developed effective control measures either based on species-specific ratios or other approaches.
- As CCMs generally do not report the details of their control measures or how they are monitored, there is insufficient information available to the Secretariat to evaluate the effectiveness of various ways that CCMs may prevent finning.
- Since the information available to the Secretariat is insufficient, it is also highly unlikely—pending the submission of further independent studies—that the Scientific Committee or the Technical and Compliance Committee will be able to review the effectiveness of the WCPFC shark finning measure.
- Questions about whether the measure is or can be effective as currently written are likely to remain unresolved unless CCMs are required to provide more information on their control measures and how they work for the Commission's review.

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	Which CCMs have implemented controls?	What controls have been implemented by CCMs?	How effective are the controls implemented by CCMs?	What is the current level of finning?
<b>ANNUAL REPORTS</b> (available, but sometimes not sufficiently detailed)	✓	✓ (some)	✓ (few)	✗
<b>OBSERVER DATA</b> (available, but perhaps not adequately representative)	✗	✗	✓ (possibly)	✓
<b>TRANSHIPMENT DATA</b> (available but scant, only covers transhipped fins)	✗	✗	✓ (incomplete)	✓ (incomplete)
<b>HSBI INFORMATION</b> (available, but sometimes not detailed)	✗	✗	✓ (anecdotal)	✓ (anecdotal)
<b>PORT SAMPLING DATA</b> (not currently available, could be inconclusive)	✗	✗	✗	✗
<b>TRADE DATA</b> (not currently available, could be inconclusive)	✗	✗	✗	✗
<b>INDEPENDENT STUDIES</b> (ad hoc, may not be representative of WCPFC fisheries)	✗	✗	✓ (possibly)	✗

Figure 1. Matrix summarizing potential questions arising from a review of the implementation and effectiveness of CMM 2010-07 against the availability and relevance of potential data sources.