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CATCH ATTRIBUTION STUDY REPORT

WCPFC-TCC8-2012/IP07

4 September 2012

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CATCH ATTRIBUTION STUDY

**WCPFC8- 2011/23
23 October 2011**

ISSUES:

1. This paper was presented at TCC7 which noted the report and referred it to WCPFC8 for consideration.

2. There was a concern expressed at TCC7 that the Consultant had not provided a report consistent with the Terms of Reference for Guidelines as per the initial Terms of Reference, but had instead presented Options from which the Commission could choose its final approach. The Consultant raised his concerns with the Secretariat following initial discussions with CCMs where a number of CCMs were of the view that individual arrangements in place were satisfactory and that the Consultancy was not necessary. In order to move forward he proposed an amendment to the Terms of Reference which would allow him to bring forward options for consideration. The Consultant further noted that in order to bring forward guidelines there must be some form of agreement on basic principles, before such guidelines can be formulated. It was noted that a presentation of options on attribution would not only provide a wider view of the issues, but also allow the Commission to further take decisions based on the various options that would clarify those eight areas where difficulties have been experienced, namely:
 - The specificity of attribution principles
 - Attribution of catches by chartered vessels on the high seas
 - Attribution of catches by chartered vessels in a non host zone
 - Concurrent charters
 - Differentiating the fisheries of a territory
 - Control of the attribution process
 - Terminology
 - Some administrative matters

3. Should the Commission establish important policy positions on the areas of attribution difficulty, it would be a straightforward task to transform those positions into attribution guidelines.

DECISIONS:

4. The Commission is invited to review and further discuss the results of the Catch Attribution Paper and decide on a way forward to address the issues.



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WCPFC-TCC7-2011/23

5 August 2011

Paper prepared by Gillett, Preston and Associates

Catch Attribution in the Western and Central Pacific Fisheries Commission



Catch Attribution in the Western and Central Pacific Fisheries Commission

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February 2011

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Executive Summary

Origin of Study	<p>In December 2009 at the 6th Regular Session of the Western and Central Pacific Fisheries Commission there was discussion of catch attribution. The report of the meeting states “The USA highlighted catch attribution under charter arrangements and flag States/chartering member responsibilities over the chartered vessels and offered to produce a paper on this topic for consideration at TCC6”. The work was commissioned in mid-August, with delivery of the draft report in mid-December 2010.</p>
Approach	<p>In this study “catch attribution” is defined as the process of assigning catches to nations, areas, or fleets for various purposes.</p> <p>There is some uncertainty in the WCPFC as to how catches should be attributed. This uncertainty involves many dimensions which are explored in this paper. The net result is that WCPFC members are inconsistent in dealing with catch attribution. This could have major implications on the effectiveness of the management interventions that are based on the concept of national catches.</p> <p>The general theme of this report is that elucidating WCPFC catch attribution practices and clarifying the related uncertainties would improve the effectiveness of WCPFC management measures.</p>
Catch attribution practices	<p>A “practice” is sometimes defined as how something is usually done, but a broader definition (and which is used in this report) is methods, procedures, processes, and rules used in a particular field.</p>
Compendium of current catch attribution practices	<p>The general catch attribution schemes of nations affiliated with WCPFC are given, followed by the schemes of regional fisheries management organisations in other parts of the world. Although the national practices listed under each entity may seem like a heterogeneous collection of facts, most are responses of country representatives to a similar set of questions posed on catch their attribution practices.</p>
Some general observations on catch attribution practices	<p>There are probably more inconsistencies in catch attribution practices across the WCPFC countries than in the RFMOs in other parts of the world. This is not surprising considering how recently the WCPFC was established and the lack of clear WCPFC guidelines on catch attribution.</p> <p>Most of the inconsistencies in catch attribution practices across CCMs in the WCPFC involve chartered vessels. The main type of inconsistency involves how catches on the high seas by chartered vessels are attributed.</p> <p>In the region, considering only Pacific Island Countries (i.e. aside from the distant water fishing nations), the current catch attribution practices are likely to lead to some double counting, or at least to situations that need to be resolved between pairs of countries to eliminate double counting.</p> <p>11 different catch attribution practices among WCPFC CCMs are identified (e.g. how catches by chartered vessels on the high seas are attributed).</p>
Source of catch attribution principles	<p>A search for principles and rules on how catches should be attributed for WCPFC purposes was not very fruitful – it did not result in much clear guidance:</p> <ul style="list-style-type: none"> • While it is true that a few WCPFC measures/rules give some direction, they could not be considered as unambiguous attribution instructions. What seems to be the situation is that for specific management measures of the Commission, logical arguments have been constructed, supported by various Commission decisions and agreed text of Commission meetings, to arrive at an attribution principle. • The recommendations of the Coordinating Working Party on Fishery Statistics (CWP) have inspired attribution principles globally, but it should be noted they were not originally intended for fisheries management purposes – which are where most of the interest related to catch attribution in the WCPFC lies. • The principal international legal instruments in fisheries are mostly silent with respect to assigning nationality to catches.

Source of catch attribution Principles	<p>The above carries some suggestion that deciding the way that catches are attributed for WCPFC management purposes is something to be negotiated by WCPFC participants – with minimal external guidance.</p>
	<p>To some extent, these negotiations may have already occurred in the formulation of Commission measures/rules, but there remains some uncertainty as to the attribution practices to be used in all circumstances.</p>
The evolving role of catch attribution	<p>The involvement of the SPC with catch attribution pre-dates the establishment of the Commission and was originally done for statistical and for stock assessment purposes.</p>
	<p>Currently, the interest in catch attribution in WCPFC is very much driven by allocation. However, attribution to obtain an allocation (i.e. establish a catch history) eventually leads into attribution of catches against a quota. Both of these are now occurring simultaneously in WCPFC.</p>
Purposes and principle	<p>Because certain principles/rules for attribution were convenient and appropriate decades ago for statistical purposes (e.g. catch accounting, consistency of reporting across countries), does not automatically mean that they are today appropriate for management purposes (e.g. allocating available fishery resources) in the WCPFC.</p>
	<p>To some extent, the choice between various principles for attributing catches for management purposes (for example, flag vs. zone) can eventually have an influence on allocation decisions.</p>
	<p>Because there are several different reasons for attributing catch (stock assessment, basis for allocation, etc.), there is some justification for having different ways to attribute – each catering to a different purpose. This concept was expressed in a slightly different form by some of the delegations interviewed during the present study: the way catches should be attributed would depend on the context and for what purpose the catch was being attributed.</p>
Who does the attributing ?	<p>Responses about attribution practices from national representatives contained the suggestion that in many CCMs national authorities are not responsible, or at least not totally responsible, for attribution.</p>
	<p>In some countries attribution could be considered a joint country/SPC exercise as SPC manages the operational data on their behalf. For other CCMs, attribution is by national authorities. The WCPFC Secretariat currently does not have significant responsibilities in catch attribution.</p>
	<p>There appears to be a need for some entity to have a role in oversight of attribution and in resolving conflicts in attributed data (e.g. double counting).</p>
Chartering	<p>It is not difficult to define the term “charter” as used in the conventional commercial sense. What is difficult is to cover in a single definition the large array of arrangements in the fisheries of the central and western Pacific that have been called a “charter”.</p>
	<p>From the usage of “charter” in the fisheries of the WCPO, two broad functional categories of chartering could be constructed: (a) An arrangement in which the owner of a vessels is compensated by another party for some form of use of the vessel, and (b) An arrangement in which the owner of a vessel compensates another party for services related to gaining access.</p>
	<p>Crafting a clever definition of “charter” may not be that useful for examining attribution in the current CMMs because of the wording of the measures. “Vessels operated under charter, lease or other similar mechanisms” expands even further (beyond the already broad “charter”) the array of arrangements/vessels to be included.</p>

The major chartering and attribution difficulties in WCPFC

The major difficulties are:

- Lack of assurance from flag States that catches by chartered vessels in host country zones are not attributed to flag States. This can occur due to the flag States not acting on the charter notifications, or due to host countries not listing vessels they have chartered on the charter notifications.
- Although there appears to be general agreement that catches are to be attributed to the host country while operating in the zone of the host country, catches on the high seas and in the EEZs of countries other than the host country are currently inconsistently attributed.
- Vessels are sometimes chartered concurrently to more than one country.
- There are qualifiers in the CMMs important to chartering which could add potential for alternative interpretations: “an integral part of the domestic fleet” and “...for all intents and purposes, as local vessels of the other State”.

Zone based attribution

An exhaustive examination of the implications of a move to zone-based attribution is beyond the scope of the present study, however in this study three general views on the issue were expressed by the individuals interviewed:

- The move to zone-based attribution is consistent with provisions of UNCLOS which gives coastal States sovereign rights for exploring and exploiting, conserving and managing living marine resources.
- The move to zone based attribution should be scrutinized in light of existing international treaties.
- There is not much, if any, external guidance (i.e. binding conventions) relevant to the issue of assigning catches to zones.

Many of the present difficulties in attribution would cease to exist under zone based attribution, but some would remain and there is at least one additional issue – the attribution of catches made in waters that are disputed, which is important for longline fisheries in the southern part of the Convention area.

Attribution issues related to territories

Conceivably, the catches by a large number of metropolitan vessels could be attributed to an associated territory (which could, for example, undermine CMM 2008-01). The major territorial catch attribution issues arise largely because the territory and the associated metropolitan country share the same flag. Some tightening up of territorial catch attribution practices is required to assure continuity and consistency across all CCMs with territories. Otherwise, CCMs are left to attribute catches it as they see fit.

Comparison of catch attribution practices

11 different attribution practices in the WCPFC have been identified in the present study. Of special interest are the four cases where different practices employed for a single situation.

- Chartered vessels in host zone: host vs. flag
- Chartered vessels on high seas: host vs. flag
- Chartered vessels in non-host zone: host vs. flag
- The more general flag vs. zone attribution

Some insight into the relative desirability of catch attribution practices could be obtained by comparing the advantages/disadvantages and some environmental and economic implications of each of these practices. From these comparisons (Table 2 below) few clear-cut conclusions can be drawn in comparing attribution practices, but some tendencies become evident:

- The attribution practices that have the most favorable environmental implications generally appear to be those that have the least complications, complexities, loopholes, or uncertainties. In other words, tidiness in catch accounting seems to lead to more effective resource management measures.
- Although there are numerous considerations involved, it seems that zone-based attribution may have fewer of the complicating factors than flag-based attribution.
- Chartering, although having economic impacts favorable to Pacific Island Countries, introduces attribution complexities and therefore is likely to be associated with reduced effectiveness of CMMs that rely on limits.

The clarity of catch attribution in WCPFC and need for guidelines

If catch attribution principles, practices, and processes in WCPFC were clear to CCMs, there would be little need to develop attribution guidelines/rules. There are, however, a number of different views on the topic of clarity.

One view is that the attribution situation, including the principles, is quite clear. Alternatively, there is the belief that there is much uncertainty associated with many aspects of attribution in WCPFC.

The results of the present study are consistent with the latter view.

The representatives of many CCMs interviewed expressed the feeling they were confused about attribution and several independently expressed the need for guidelines to clarify the situation. The existence of very different attribution practices (Table 1 below), even among like-minded countries, is not consistent with the idea that attribution principles are clear.

Approach taken on guidelines

That there have been inconsistencies across countries in several attribution practices is a reality. In rectifying such problems the logical option is for CCMs to follow any rules or principles that have already been laid out. *But to do so requires agreement among CCMs that such rules/principles actually exist.* This approach should not be equated with “reopening already agreed provisions”.

The likely alternative is to persist with the current situation of having some CCMs believe there is an applicable rule on a contentious subject, others thinking a near-opposite rule applies, and/or some CCMs believing that no rules are applicable. This report aims to present any existing rules/principles that apply to a problem area as a first of several options – thus provoking some open discussion.

Areas are identified where significant attribution problems have occurred in the past. Options that would rectify the difficulty or clarify the situation are proposed and positive features for each option are given.

Because there are likely to be considerations associated with the various options that go beyond catch attribution, no attempt is made to favor any option, other than pointing out some of the positive aspects.

Guideline areas

The report develops options for clarifying the following areas:

- The specificity of attribution principles
- Attribution of catches by chartered vessels on the high seas
- Attribution of catches by chartered vessels in a non host zone
- Concurrent charters
- Differentiating the fisheries of a territory from those of its associated Contracting Party.
- Control of the attribution process
- Terminology
- Some administrative matters

Recommendation

The Commission should establish positions on the above areas of attribution difficulty. Should this occur, it would be a fairly straightforward task to transform those positions into catch attribution guidelines.



1.0 Introduction

1.1 Background of the study

In this study “catch attribution” is defined as the process of assigning catches to nations, areas, or fleets for various purposes. In the western and central Pacific, the Secretariat of the Pacific Community has been involved for several decades in catch attribution for statistical (i.e. data cataloging) and scientific purposes. In the context of the WCPFC, catch is attributed for additional purposes, including those related to determining catch histories, fulfillment of limits, and contributions to the Commission.

There is some uncertainty as to how catches should be attributed. This uncertainty involves many dimensions which will be explored in this paper. The net result is that WCPFC members are inconsistent in dealing with catch attribution. This could have major implications for the effectiveness of the management interventions and other aspects of the Commission that are based on the concept of national catches.

In December 2009 at the 6th Regular Session of the WCPFC there was discussion of catch attribution. The report of the meeting states “The USA highlighted catch attribution under charter arrangements and flag States/chartering member responsibilities over the chartered vessels and offered to produce a paper on this topic”. The USA decided the most objective approach to such a study would be to work in conjunction with the WCPFC secretariat to employ a consultant via a competitive bidding process.

In May 2010 the WCPFC secretariat solicited proposals for a study of catch attribution, with the intention of having the results ready for discussion at the Sixth WCPFC Technical and Compliance Committee (TCC6) in late September. Due to administrative, the work was not commissioned by the Secretariat until mid-August, with the date for the delivery of the draft report set for mid-December 2010.

The terms of reference for the consultancy are given in Appendix 1.

1.2 Methodology

The general theme of this report is that elucidating WCPFC catch attribution practices and clarifying the related uncertainties would improve the effectiveness of WCPFC management measures.

This study was carried out by an individual who, although familiar with the management of tuna fisheries in the central and western Pacific, has not been an active participant in WCPFC meetings and is not familiar with the multitude of nuanced considerations relating to the subject matter. This report should therefore be viewed as an outside perspective on the issues – to supplement those of the Commission participants.

Work began on this study in late September 2010. Information on catch attribution practices was collected from Commission members, cooperating non-members and participating territories (collectively, CCMs) at TCC6. Follow-up enquiries were made for those CCMs not present at TCC6 (through the list of official WCPFC contacts) and for those CCMs unprepared at that meeting to provide information. Travel was also undertaken to discuss WCPFC catch attribution issues with fishery authorities in Honiara, Noumea, Taipei, Honolulu, and Tokyo. Additional CCM views on catch attribution were obtained during the annual WCPFC meeting in early December 2010.

Available documentation on catch attribution was obtained from regional fisheries management organisations (RFMOs), FAO, the Internet and other sources. Information on specific catch attribution schemes was also obtained from several RFMOs: CCAMLR,

CCSBT, IATTC, ICCAT, IOTC, NAFO, and SPRFMO. As FAO has had a major role in shaping and applying guidelines for one type of catch attribution, considerable attention was focused on that agency. Similarly, because SPC has had a long-term involvement with attribution for various purposes in the WCPO, several discussions were held with the individual responsible for most of that work.

Conceptual aspects of catch attribution were discussed with several knowledgeable fishery specialists including L.Clarke, D.Squires, M.Tsamenyi, R.Clarke, D.Wright, R.Grainger, S.Tsuji, D.Ardill, V.Restrepo, P.Williams, W.Norris, T.Graham, I.Cartwright, and C.Palma. Mike McCoy of Gillett, Preston and Associates collected catch attribution information from authorities in Taipei and Tokyo.

Appendix 2 lists the 93 individuals who provided information for this study.

1.3 Definitions and terminology

It is important to clarify a number of terms. Part of this study deals with examining the catch attribution practices of nations and fishery organisations. A “practice” is sometimes defined as how something is usually done, but a broader definition (and which is used in this report) is methods, procedures, processes, and rules used in a particular field.

Other terms used in this report that require some explanation are:

- The term “charter” as used in the fisheries of the central and western Pacific is difficult to define. This subject is further explored in Section 4.5 below.
- For simplicity, the country where a company/entity that charters a vessel is located is referred to as the “chartering country” or “host country”.
- For simplicity, the term “catch attribution” includes (where appropriate) the attribution of fishing effort.
- “Attribution scheme” vs. “attribution practice”: the former is made up of several of the latter; The scheme is the over-all system of attribution (e.g. how Fiji attributes catches), with the practices referring to how the different situations are attributed (e.g. how Fiji attributes catches by chartered vessels on the high seas).
- The term “flag State” is intended to mean the nationality of the vessel flying a particular flag or the nationality of the registry of the vessel, either permanent or temporary.

2.0 Catch Attribution Schemes of CCMs and Fisheries Agencies

In the following sections, the general catch attribution schemes¹ of nations affiliated with WCPFC are given, followed by the schemes of regional fisheries management organisations in other parts of the world. Although the practices listed under each entity may seem like a heterogeneous collection of facts, most are responses of country representatives to a similar set of questions on catch attribution. In several cases, the respondent requested that the supplied information be presented verbatim in this report. For some CCMs (e.g. Chinese Taipei, Japan) the replies are more complete due to visits to those places by the study team.

2.1 CCMs

2.1.1 Pacific Island Countries

There are several difficulties associated with listing catch attribution practices for Pacific Island Countries. Although some CCM representatives could articulate well their national

¹These are the general attribution schemes. It is recognized that some countries may have attribution practices specific to a CMM, such as CMM 2008-01. Most country representatives interviewed were not able to give the details of the practices that are specific to CMMs.

catch attribution practices, several of those interviewed during the present study at TCC6, were uncertain as to the attribution practices used for their catch data. Some other representatives indicated that, because it is SPC that has responsibility for correctly attributing catches, SPC knows best those practices (“ask Peter”²). In several countries catch attribution has been perceived to be largely a routine data cataloguing exercise. In that situation it is understandable that not much attention has been focused on attribution principles and practices, hence the difficulty of describing those practices. Despite the constraints encountered, an attempt is made here to at least portray the range of practices in how catches are attributed by Pacific Island Countries, and give some examples.

Attributing catch by non-chartered fishing vessels

The usual practice for Pacific Island Countries has been to attribute catches to the flag of the vessel, both in an EEZ and on the high seas. There are some exceptions to this statement:

- The Marshall Islands Annual Report to the Commission Part 1 (MIMRA 2010) contains a statement: “In late 2009, the RMI, through MIMRA, formally wrote to the SPC-OFP to notify of its clear intention to attribute all longline catches in the RMI EEZ to the RMI. This is in line with the recent efforts by FFA Members to shift longline catch attribution from a flag-based to a zone-based arrangement”³.
- According to Fiji officials, all catch in the Fiji zone is attributed to Fiji – with the qualification that there almost no foreign fishing activity in the Fiji zone, except by Fiji-chartered vessels.

Attributing catch by chartered fishing vessels

- For most Pacific Island Countries, catches by chartered vessels in the waters of the host country are attributed to the host country. There are some exceptions to this statement:
 - According to representatives of Vanuatu at TCC6, the catches of Vanuatu-flagged purse seiners anywhere in the WCPFC area are attributed to Vanuatu. This includes the catches in PNG of those Vanuatu-flagged seiners that are chartered to PNG companies (which PNG attributes to PNG).
- Among Pacific Island Countries there are various practices for attribution of catches by chartered vessels on the high seas – some to flag State, some to host country, and some are uncertain. Some examples:
 - In the recent past catches by Cook Island flagged vessels chartered to a company in Niue are attributed by Cook Islands to the flag State.
 - Catches by FSM-flagged vessels chartered to a Chinese company are attributed by FSM to the flag State.
 - According to the latest WCPFC charter notification, companies in the Solomon Islands are chartering 157 vessels. Fisheries Department officials are uncertain how catches by those vessels should be attributed.
 - Catches by vessels chartered by companies in Fiji, PNG and Tonga are considered to be catches of the host country.
- The attribution of catches by chartered vessels in a zone of a non-host country appears to be a grey area. In practice, the host country may not know of the fishing activity in the other zone and, in the absence of an effective charter notification scheme, the non-host zone country may not know of the charter arrangement. The situation is further complicated by a single vessel operating simultaneously under more than one charter. For example, on the latest WCPFC charter notification, two vessels (Yong Xing 2 and Yong Xing 3) are shown as chartered by both Fiji and Solomon Islands. Although there is some uncertainty on the subject, it appears that many Pacific Island Countries take the view that attribution by a chartered vessel in a zone of a non-host country should be the same as the attribution on the high seas

² Meaning Peter Williams of SPC

³ According to SPC, the Marshall Islands has not yet notified SPC that all longline vessels fishing in their zone should be attributed to the Marshall Islands, but have signalled their intention to move in that direction.

(see point above) which, depending on the country, could be to the flag State or to the host country.

2.1.2 Pacific Island Territories

Information on the territorial catch attribution practices of the three metropolitan countries that have territories in the WCPFC area are given in the United States, New Zealand, and EU sections below.

During the present study, enquiries were made on the catch attribution practices of the seven territories in the WCPFC area. Responses were received from three territories:

- Guam – Catch attribution is not a major issue. Because Guam is much more economically advantaged than the other Pacific Island Countries, its dependency on tuna resources is mainly for nutritional rather than economic purposes. Issues related to the limits on bigeye catches, or any chartering of US vessels to take advantage of a Guam quota, are very important to Guam. The importance of the allocation for Guam is more of a case of principle rather than actual possibility of harvest within the realm of the Commission. The low abundance of bigeye in the EEZ around Guam is a reality. Any additional effort by any chartering by Guam could not enhance the exploitation of the Bigeye harvest Pacific wide. (source: M.Duenas)
- New Caledonia – Catch reporting is done by New Caledonia directly to the WCPFC (without passing through France) because this participating territory has authority for resources management in its zone as well as for statistics. In terms of management, all catches by vessels based in the territory are therefore attributed to New Caledonia. Currently there is no foreign fishing activity in the New Caledonia zone and there is no chartering of foreign flagged vessels for operation in the zone. (source: C.Fronfreyde)
- French Polynesia – Tuna catches by vessels registered in French Polynesia are attributed to French Polynesia. The overlap of the WCPFC/IATTC areas is a cause of some uncertainty in catch attribution. For the future, (a) any catches by French purse seiners based in French Polynesia would be attributed to France, and (b) the attribution of any catches by French Polynesia vessels chartered by another country is currently not clear. There are no provisions in French Polynesia policy for foreign-flagged vessels to be chartered to companies in French Polynesia and then fish in the French Polynesia zone. (source: C.Ponsonnet)

2.1.3 Australia

The catches of Australian-flagged vessels (in areas under Australia's jurisdiction and on the high seas) are attributed to Australia. Although there is no "chartering" of foreign fishing vessels for fishing in Australian waters (in the strict sense of the term) there is a scheme whereby a foreign vessel can be "deemed" to be an Australian vessel while operating in the Australian Fishing Zone. Catches of these vessels are attributed to Australia when operating in the Australian Fishing Zone, but not when operating outside the zone.

Australian Fisheries Management Authority (AFMA) has a guide for declaring a foreign boat to be an Australian boat⁴; it reflects Australia's general view on attribution of catches by chartered vessels on the high seas:

If the boat is foreign-flagged and AFMA has declared it to be an Australian boat, the boat will only be authorised to fish in the Australian Fishing Zone. AFMA will not declare a foreign flagged boat to be an Australian boat if it is to operate on the high seas. All fishing on the high seas by a foreign-flagged boat would have to be undertaken under an authority of the flag State.

⁴ Available at <http://www.afma.gov.au/wp-content/uploads/2010/06/boatdeclaration.pdf>

AFMA states that Australia recognizes the importance of ensuring that the arrangements for chartering in the WCPFC, including catch attribution, should not hamper the aspirations of developing States, particularly small island developing States, to develop fisheries on the basis of opportunities made available through chartering. However, care must be taken to ensure that arrangements for chartering do not create loopholes in jurisdiction or control of vessels in the WCPFC Area that may lead to IUU fishing, fishing that undermines the effectiveness of Commission measures, or ‘flag-hopping’.

(source: C.Goodman, A.Willock, F.McEachan)

2.1.4 Canada

All tuna catches by Canada flagged vessels in the WCPFC area (presently restricted to albacore trollers) are attributed to Canada. There is currently no known chartering of Canada flagged vessels in the WCPFC area.

(source: G.Miller)

2.1.5 China

The catch in an EEZ of a coastal state by Chinese-flagged longliners is attributed to that coastal state. However, the catch in an EEZ by Chinese-flagged purse seiners is attributed to China. Because this seems to be a case of double standards, WCPFC guidelines are required. The catch on the high seas by both longliners and purse seiners is attributed to China.

Because China will have formal charting arrangement with small island developing States soon, WCPFC guidelines on catch attribution are needed.

(source: X.Liu)

2.1.6 Chinese Taipei

The normal practice of Chinese Taipei is to attribute all catch by Chinese Taipei-flagged vessels to Chinese Taipei. Chinese Taipei’s policy does not change in the case of vessels chartered to an entity in a host country for the purpose of fishing in that country’s EEZ or for activity in high seas areas under such a charter.

There are domestic regulations that set out the manner in which Chinese Taipei vessel owners or operators may engage in charters and other forms of “external fisheries cooperation”. Such cooperation is very broadly defined, and includes the acquisition of fishing rights through access payments, rental (i.e. charter) or investment. In all cases, including those covering the Chinese Taipei EEZ, the regulations require the submission of specific documentation to the Chinese Taipei government for approval.

There is no specific definition of “charter” in Chinese Taipei’s domestic regulations⁵. The government determines the validity of the documentation submitted for approval on a case-by-case basis of what could be considered a charter. This documentation must include what is termed a “contract of cooperation” containing specific required items.

In bareboat charter⁶ situations whereby a Chinese Taipei-flag vessel acquires the flag of the host country, the vessel’s Chinese Taipei license is suspended. In these cases, the catch of the Chinese Taipei vessel is attributed to the host country.

⁵ The sources interviewed indicate that the term used for “charter” in their usage corresponds to the Chinese word for “rent”.

⁶ Internationally, a bareboat charter is generally taken to be an arrangement for renting/hiring of a vessel, in which no crew or provisions are included.

Chinese Taipei officials make the point that some of their vessel operators may deal with agents who acquire fishery access for them under charter arrangements with entities in coastal States, following the procedures set out by those coastal States. It is recognized that in some cases the need to access two or more zones may result in concurrent charters, but these actions are for access purposes. In all instances, the operators still must seek government approval under Chinese Taipei's regulations and the attribution of the catch does not change.

Other Aspects of Catch Attribution Practices:

- In recognizing the importance of attribution in the WCPFC context, Chinese Taipei's policy links the attribution of a vessel's catch to the flag State with that flag State's responsibility for the activities of the vessel. This applies to catch data acquired for cataloging purposes as well as attribution for management purposes.
- To avoid double-counting of catch in the EEZs of coastal States, Chinese Taipei has arranged with SPC to utilize the logbooks submitted to coastal States by Chinese Taipei vessel operators.
- There are specific regulatory processes governing de-flagging and re-flagging for bareboat charter purposes. Cases of parallel or dual flagging are treated as IUU.

Some observations can be made on the above attribution practices:

- Chinese Taipei's linkage of catch attribution to the responsibilities of the flag State appears consistent in that in cases where the flag is changed, Chinese Taipei suspends the vessel's Chinese Taipei license and does not claim the catch.
- Chinese Taipei does not have a distinct definition of chartering, but does have comprehensive domestic regulatory guidelines to guide the approval/disapproval of such activities.

(source: H.Huang; and "Regulations for External Fisheries Cooperation")

2.1.7 Ecuador

All tuna catches by Ecuador flagged vessels in the WCPFC area are attributed to Ecuador. There is currently no chartering of Ecuador flagged vessels in the WCPFC area and so there is no policy on how catches from such fishing would be attributed.

(source: R.Montano-Cruz)

2.1.8 European Union

The major catch attribution practices of the European Union are:

- In all types of fishing areas (i.e. EEZ or international waters), the catch of any EU-flagged vessel in waters covered by a RFMO to which the EU is a member is attributed to the EU.
- If an EU-flagged vessel is chartered by a contracting party to a RFMO to fish for a quota of that contracting party, the catch taken inside the chartering agreement is attributed to the chartering contracting party, and not to the EU, for all types of fishing areas (i.e. EEZ or international waters). If the EU takes advantage of unused quotas belonging to another RFMO contracting party, this necessitates previous transfer of quota from that contracting party to the EU as a flag state of the vessel.

With respect to territories of EU member States:

- Vessels flagged in overseas territories of EU Member States are not EU-flagged vessels in regards to the RFMO. Their catch is to be attributed to the relevant overseas territory, and not to the EU.
- Under a chartering arrangement between EU member states, the chartered vessel is entitled to catch the Quantities (quotas) agreed by the relevant RFMO and not more.

(source: R.Cesari, P.Nikolova)

2.1.9 Indonesia

Currently, under the national regulation there is no fishing by foreign flag vessels in the Indonesia EEZ . All catches by Indonesian vessels in the Indonesia EEZ are attributed to Indonesia. There are only 6 of Indonesia flagged longliners fishing outside the Indonesia EEZ in the western Pacific. As all fishing by those vessels occurs in the high seas (i.e. there are no access agreements for the zones of Pacific Island Countries), all catch is attributed to Indonesia.

(source: A.Budhiman, F.Satria)

2.1.10 Japan

The catches of Japan-flagged vessels, irrespective of where fishing takes place, are attributed to Japan. An exception is when a Japan flag vessel is chartered and is fishing in the host country's zone.

Examples of Japan's catch attribution by flag are found in fishing undertaken pursuant to bilateral access agreements that Japan has with Korea, China, and Russia. In these cases, the agreements provide for reciprocal fishery access in lieu of access fees. In the Korean situation for example, catch by Japan-flagged vessels in Korea's EEZ are attributed to Japan. The catches of Korean vessels in Japan's EEZ are attributed to Korea and are not included in Japan's catch statistics.

The situation for chartered vessels:

- When a Japan-flagged vessel is chartered to a foreign (host) entity to fish within the host country's EEZ, catch is attributed to the host country. Where a quota system exists, the catch of the Japan-flagged vessel in the host country is attributed to the host country quota. Approval by Japan is for fishing in the host country EEZ only; it is prohibited for the chartered Japan-flagged vessel to fish on the high seas. The domestic license in Japan of the Japan-flagged vessel is suspended for the duration of the charter.
- There are currently two such charter arrangement examples in the WCPO. The first occurs in the New Zealand EEZ involving longline vessel(s) chartered to a New Zealand company and fishing is undertaken in compliance with CCSBT rules. The second is an existing charter arrangement with a Papua New Guinea-based Philippine company for purse seining by one vessel within the Papua New Guinea EEZ. In each case, the catch is attributed to the host country.

Other aspects of catch attribution practices:

- In order to be approved as a charter for fishing activities in a foreign EEZ the vessel operator, either a natural person or company, must change. Under Japan's laws, the operator is the license holder.
- Charter arrangements for Japan-flagged vessels in the Atlantic Ocean follow ICCAT provisions for chartering and catch attribution. It is acknowledged that in the WCPO the situation may be slightly different, in that access by chartered vessels to multiple EEZs may be required for effective fishing.

Some observations can be made on the above attribution practices. Japan makes limited use of chartering in the WCPO, and where such chartering does take place the practice of requiring fishing activity to be undertaken within the host country's EEZ eliminates the chance for ambiguity of attributing catch in high seas areas. Japan's practice appears consistent in that the same rules that govern attribution of Japan-flagged vessels in foreign EEZs apply to foreign vessels fishing in the Japan EEZ.

(source: T.Koya and T.Fukuda)

2.1.11 Korea

All tuna catches by Korean flagged vessels in the WCPFC area are attributed to Korea. There is currently no chartering of Korean flagged vessels in the WCPFC area and so there is no policy on how catches from such fishing would be attributed.⁷

(source: J.Ahn)

2.1.12 New Zealand

The catches of New Zealand flagged vessels (in the New Zealand zone, on the high seas, and in the zone of another country) are attributed to New Zealand.

For chartered vessels:

- For a NZ-flagged vessel chartered to a party located in another country, attribution would depend on who was actually operating and responsible for the vessel and where the vessel was fishing. For fishing on the high seas, NZ would be responsible for the operations of the vessel given NZ flag and would expect catches to be attributed to NZ, unless there was some explicit agreement reached as to an alternative attribution to the chartering party/country. For fishing in another EEZ, it is likely that the catches of the chartered vessel would be attributed to the other country.
- For a foreign-flagged vessel chartered by a party in NZ, catches would be attributed to NZ for fishing in NZ EEZ and to the foreign flag for fishing on the high seas unless explicit agreement to the contrary.

There are no special attribution practices for the New Zealand territory of Tokelau and no plans have been formulated by the NZ Government for NZ-flagged vessels to take advantage of any catch limit exemptions for Tokelau.

With respect to hypothetical attribution practices for situations that may arise in the future:

- There is the concept of different types of attribution: how catch would be attributed would depend on the context and for what purpose the catch was being "attributed".
- Allocation lies at the heart of this issue and when the time comes, explicit decisions need to be made as to whether catch by charter vessels are attributed to the flag State or the coastal State.
- In WCPFC there have been some strong precedents established for attributing all catch/effort within an EEZ to the coastal State for management/allocation purposes regardless of the flag of the fishing vessel or whether it is a charter vessel or not.

(source: D.Marx)

2.1.13 Philippines

Catches by Philippine flagged vessels are generally attributed to the Philippines. This issue is covered by domestic legislation (see below). In situations involving access to another country's waters or involving charters, this can be attributed to the coastal State for WCPFC purposes.

The Philippine Fisheries Code of 1998, Section 32 states that for fishing by Philippine commercial fishing fleet in international waters or waters of other countries which allow such fishing operation is allowed, provided, that they comply with the safety, manning and other requirements of the Philippine Coast Guard, Maritime Industry Authority and other agencies concerned: Provided, however, that they secure an international fishing permit and certificate of clearance from the Department: Provided, further, that the fish caught by such vessels shall be considered as caught in Philippine waters therefore not subject to all import duties

⁷ WCPFC Circular 2010/20 on charter notifications shows eight Korean flagged vessels chartered to the Solomon Islands.

and taxes only when the same is landed in duly designated fish landing and fish ports in the Philippines.

(source: B.Tabios)

2.1.14 United States

Catches made by US-flagged vessels in the WCPFC statistical area are reported by US authorities as per established rules. There is no general policy on catch attribution practices. Attribution of catches (ie assignment of catches to various entities) for WCPFC purposes is done when required – and in various ways depending on the CMM that it is in response to.

As an example, as a response to CMM 2008-01, a US domestic rule on the measure was issued which included a catch attribution scheme:

Once the limit of 3,763 metric tons of bigeye is reached in a year, retaining, transshipping, or landing bigeye tuna caught in the western and central Pacific Ocean will be prohibited for the remainder of the year, with certain exceptions. Catches by the longline vessels of American Samoa, Guam, or the Commonwealth of the Northern Mariana Islands that demonstrate a real connection to the territory (e.g. place of landing, possession of access permit for the territory) are not to be attributed to the US, but to the territory.

(source: C.Boggs, T.Graham, E.Kingma, US Federal Register Vol. 74, No. 233)

2.1.15 Vietnam

Vietnamese tuna vessels usually fish in the Vietnamese EEZ. Tuna catches are rarely made on the high seas. To date, no Vietnamese tuna vessels have been chartered to fish in the waters of other countries.

(source: V.Anh, C.Vinh)

Vietnamese tuna vessels are not permitted by their CNM status to fish on the high seas of the Convention Area.

(source: P.Flewelling)

2.2 Fisheries organisations

2.2.1 WCPFC

The Western and Central Pacific Fisheries Commission has no formal protocols on catch attribution. This is largely because the Commission does not directly receive raw data that requires attribution to the various CCMs.

(source: S.K.Soh, P.Flewelling)

2.2.2 SPC

The involvement of the Secretariat of the Pacific Community with catch attribution pre-dates the establishment of the Commission and was originally done for stock assessment purposes. Some important aspects of that earlier attribution were:

- The attribution of catches was generally based on the recommendations of the Coordinating Working Party on Fishery Statistics (CWP, see Section 3.2.2 and Appendix 4) where the default practice is attribution to flag State except in cases of chartering or joint ventures.
- Because some of the stock assessment models used by SPC involved grouping catch and effort by fleet, the nationality of the catch was important. Accordingly, the catches of some flag of convenience vessels (e.g. Belize longliners) were attributed

by SPC to fleets that were operated/managed by the same fishing company and tended to fish in a similar manner (in the Belize longliner case, to Chinese Taipei).

The attribution practices have evolved somewhat from pre-Commission days in accordance with the increasing complexity and importance of attribution. The practices now involve the following:

- The CWP recommendations which state that catches should be attributed to the flag State of the vessel catching the fish, except when (a) the catching vessel is chartered by the host country to augment its fishing fleet; or (b) the catching vessel fishes for the country by joint venture contracts or similar agreements and the operation of such vessel is an integral part of the economy of the host country.
- Specific instructions and/or guidance contained in Commission management measures or Commission meeting/committee reports.
- The charter notifications indicate that catches are to be attributed to the host country. However, when operational data is not available from the flag State of the chartered vessel, the flag State is required to inform SPC of the charter before SPC will attribute catches to the host country. This requirement does not relate to SPC only acting on charters authorized by the flag State but rather from the perspective of data cataloguing: unless a flag country ceases to report catches of the chartered vessel (and confirms this to SPC), double counting may occur⁸.
- The catches of chartered vessels operating on the high seas are normally attributed to the flag State. The attribution arrangements in the agreement between the Cook Islands and Niue (Cook Islands vessels chartered by a Niue company) established a precedent for this interim practice (pending the provision of additional information to do otherwise).
- There may be requests from SPC member countries to attribute in a specific manner. For this to change an attribution that affects other CCMs, the approval of the affected country(s) is required. If such approval is not forthcoming, the default position is to maintain the past practice.
- If situations arise that are not covered by the above attribution principles, SPC would ask the WCPFC Secretariat and/or the States involved, as appropriate, for direction before action is taken.
- When the catch by CCMs is summarised for review in WCPFC reports, footnotes are usually added to indicate that the catch attribution for charter arrangements has been undertaken by SPC to the best of their abilities using available information, but there remain instances where catch attribution is still a work-in-progress.

Some observations on the above attribution practices:

- SPC current attribution practices have largely evolved from past practices of attributing data to fleets for stock assessment purposes and from CWP guidelines. SPC's current practices are also based on advice provided by SPC member countries and what was thought to be a common-sense approach.
- SPC staff involved in catch attribution indicate that, although some guidance is contained in CMMs and Commission reports, not all circumstances are covered, especially the spatial aspects. A past attempt to obtain such guidance (i.e. the scheme for charters proposed in WCPFC-SC5-2009/ST WP-1) was not accepted due to alternative implications of the scheme.

(source: P.Williams, J.Hampton)

2.2.3 CCAML R

The Commission for the Conservation of Antarctic Marine Living Resources attributes all catches to the flag State. There are no charter arrangements in the southern ocean.

⁸ Most aggregate catch data provided by distant-water Asian fleets are reported by 5 degree squares with no vessel information so it is not possible for SPC to determine from what vessels the catch is from.

(source: A.Wright)

2.2.4 CCSBT

The Commission for the Conservation of Southern Bluefin Tuna attributes catches to the flag State of the catching vessel, except in the case of chartering – when it is attributed to the chartering State. All CCSBT member countries have a bluefin quota and catches are counted against that quota. A country is allowed to catch their quota using a vessel chartered from another country. This has occurred in recent years within the zone of the chartering country. There is some uncertainty on attribution of catches made by a chartered vessel on the high seas.

The experience of CCSBT shows that catch attribution to gain a quota (i.e. establish a catch history) is very different than attributing against a quota:

- To gain the initial national quota allocation/national share of a TAC, including the catch of chartered vessels is an advantage to the chartering country (or the country that is claiming to have chartered) and a disadvantage to everyone else (assuming that the total TAC is limited).
- This is not the case once national shares of the TAC have been allocated to the individual countries. Once national shares have been allocated, the politics of attribution with respect to chartered vessels changes considerably - it is less contentious - assuming that it is attributed to a country with a TAC.

(source: B.Kennedy)

2.2.5 IATTC

The Inter-American Tropical Tuna Commission always attributes the catch to the flag State of the catcher vessel. Chartering of vessels by a country which differs from that of the catcher vessel occurs very infrequently - though it has occurred in the past. The IATTC does not note in its database when a vessel is chartered by another country, so the catch in these situations would still be attributed to the flag State of the catcher vessel.

(source: N.Vogel, M.Hinton)

2.2.6 ICCAT

The catch attribution practices of the International Commission for the Conservation of Atlantic Tunas are similar to those of the CWP recommendations. That is, attribution to the flag State of the catching vessel, except in the case of chartering. The attribution of catches by chartered vessels is given in the “Recommendation by ICCAT on Vessel Chartering”⁹. The parts of that recommendation that are relevant to catch attribution are:

- Catches taken pursuant to the chartering arrangement of vessels that operate under these provisions shall be counted against the quota or fishing possibilities of the chartering Contracting Party.
- All catches taken under the chartering arrangement shall be recorded by both the flag Contracting Parties or Cooperating non-Contracting Parties, Entities or Fishing Entities and the chartering Contracting Party separately from catches taken by other vessels.
- When operating under charter arrangements, the chartered vessels shall not, to the extent possible, be authorized to use the quota or entitlement of the flag Contracting Parties or Cooperating non-Contracting Parties, Entities or Fishing Entities. In no case, shall the vessel be authorized to fish under more than one chartering arrangement at the same time.

Some explanation and clarification was supplied by ICCAT staff on catch attribution:

⁹ Entered into force June 3, 2003; In ICCAT “recommendations” are binding and “resolutions” are voluntary.

- The catch attribution scheme is not strictly followed by all countries associated with ICCAT, and this can result in double counting.
- All catches by chartered vessels, including those on the high seas, are attributed to the chartering (host) country.
- The ICCAT Charter Recommendation states that it is applicable to the “chartering of fishing vessels, other than bareboat chartering”. With respect to how bareboat charters are actually treated, according to ICCAT staff, the secretariat cannot make interpretations of ICCAT recommendations. The secretariat feels that there is some uncertainty on how bareboat charters should be treated.

(source: C.Palma, ICCAT (2010), www.iccat.int)

The example of Brazil (an ICCAT member) is very relevant to WCPFC catch attribution. Brazil does not authorize any fishing operation of foreign fishing vessels in the Brazilian EEZ, except if the foreign-flagged fishing vessels are chartered to Brazilian companies, in which case not only the catches inside the EEZ are considered as Brazilian, and therefore discounted from Brazilian quota, but also the catches of those vessels operating in the high seas, in accordance with the ICCAT recommendation on chartering.

(source: F.Hazin)

2.2.7 IOTC

In the Indian Ocean, since the days of the Indo-Pacific Tuna Program (the predecessor of the IOTC) the principle followed in most instances is flag State reporting, and therefore flag State catch attribution. Chartering of vessels does occur, but this has usually involved the temporary change of flag to the host country flag. For both chartered and non-chartered vessels, the current flag associated with the vessel is entered in the IOTC Record of Authorized Vessels, reinforcing the right to report catches and attribute catches by the current flag.

Some complications exist:

- There is at least one coastal country where, as a condition of access, foreign vessels are required to be temporarily flagged to the country where the fishing occurs. This does not automatically prevent the vessel from reporting the catch to its former/usual flag State, which can result in double reporting.
- There is at least one coastal country that uses the concept of “letter of permit” which is analogous to a hire-purchase (credit purchase) agreement. A company in the coastal country can have an arrangement with a foreign company that owns a vessel, with the objective of taking ownership of the vessel in a gradual manner. The government of the coastal country issues a “letter of permit” to the vessel. Only after the vessel is actually paid for would the flag change, but catches would be attributed to the State of the new owner immediately after the issue of the “letter of permit”.

(source: A.Anganuzzi, G.Domingue)

2.2.8 NAFO

The catch attribution practices of the North Atlantic Fisheries Organization are a slight modification of the CWP recommendations:

The flag of the vessel performing the essential part of the operation catching the fish should be considered the paramount indication of the nationality assigned to the catch data and this indication overridden only when one of the following arrangements between a foreign flag vessel and the host country exists:

- The vessel is chartered by the host country to augment its fishing fleet; and
- The vessel fishes for the country by joint venture or similar agreements, and
- The operation of such vessel is an integral part of the economy of the host country.

Countries involved in cooperative fishing arrangements with coastal States in the Northwest Atlantic have additional reporting responsibilities, including requirements to indicate the nature of the cooperative arrangements.

Article 19 of the NAFO Conservation and Enforcement Measures deals with chartering Arrangements. There are three provisions in the chartering arrangements that are relevant to catch attribution:

- A Contracting Party may utilize partly or wholly quota and fishing days allocated to that Party under Annex I by way of a chartering arrangement with a fishing vessel flying the flag of another Contracting Party.
- When operating under chartering arrangements, the chartered vessels shall not be authorized at the same time to utilize the quota or fishing days of the flag State Contracting Party.
- All catches and by-catches from notified chartering arrangements shall be recorded by the relevant chartering and flag State Contracting Party separate from other national catch data recorded pursuant to Article 24. They shall be reported to the Contracting Party to which the fishing possibilities have been allocated and to the Executive Secretary, separately from other national catch data pursuant to Article 25. The Executive Secretary shall add these catches to the catch statistics of the Contracting Party to which the fishing possibilities were originally allocated.

(source: NAFO (2009))

2.2.9 SPRFMO

The Convention establishing the South Pacific Regional Fisheries Management Organisation has not yet come into force. There are some interim management measures in place, including one on data standards – and those specify flag State reporting. To date, no decisions have been made on how the reported catches should be attributed. There has not really been any serious discussion about charters.

(source: R.Allen, www.southpacificrfmo.org)

2.3 Some observations and comments

Some observations and comments can be made on the current attribution schemes:

- Discussions with individuals involved with RFMOs in other regions of the world suggest there are probably more inconsistencies in catch attribution practices across CCMs in the WCPFC than in the other RFMOs. This is not surprising considering how recently the WCPFC was established and the lack of clear WCPFC guidelines on catch attribution.
- Most of the inconsistencies in catch attribution practices across CCMs in the WCPFC involve chartered vessels. The main type of inconsistency involves how catches on the high seas by chartered vessels are attributed in the situation where the charterer is located in a country (host State) other than the flag State of the chartered vessel (i.e. whether to attribute the catch to the host country or to the flag State).
- Of the tuna RFMOs located in other regions, chartering is only a major feature in ICCAT. In that organisation, catches by chartered vessels on the high seas are attributed to the host country – but in ICCAT there are more controls on chartering than WCPFC (e.g. flag State authorization of all charters).
- In the RFMOs located in other regions, there appears to be some degree of consistency on how catches by chartered vessels on the high seas are attributed within a specific organisation, but there is no consistency across organizations: some RFMOs attribute to the flag, and some to the host country.
- In the WCPO, considering only Pacific Island Countries (i.e. aside from the distant water fishing nations), the catch attribution practices described above are likely to lead to some double counting, or at least to situations that need to be resolved between pairs of countries to eliminate double counting.

- Many of the inconsistencies across Pacific Island Countries arise because some PICs are or have been charter vessel flag States (Vanuatu, FSM, Cook Islands) and have somewhat different interests than those Pacific Island Countries that charter vessels.
- To some extent, the large amount of variation in catch attribution practices across CCMs in the WCPFC could be indicative of the need for guidelines on attribution.

3.0 Identification of Catch Attribution Practices

Following the definition of a “practice” given in Section 1.3 above (“methods, procedures, processes, and rules”), catch attribution practices identified in Section 2 above can be placed in two categories: (1) how attribution is done in particular situations, and (2) the principles and rules used to guide attribution.

3.1 How attribution is done

Using the information in Section 2.1 above, the various ways that catches are attributed are shown in Table 1.

Table 1: Attribution Practices

Attribution Category	Sub-Category	Sub-Category	Practice: how attributed
To flag	Non-chartered vessel		<ul style="list-style-type: none"> • Attribution to flag State
	Chartered vessel	Host country zone	<ul style="list-style-type: none"> • Attribution to host country • Attribution to flag State
		Non-host country zone	<ul style="list-style-type: none"> • Attribution to host country • Attribution to flag State
		High seas	<ul style="list-style-type: none"> • Attribution to host country • Attribution to flag State
To zone	In zone		<ul style="list-style-type: none"> • Attribution to the zone country
	High seas	Non-chartered vessel	<ul style="list-style-type: none"> • Attribution to the flag State
		Chartered vessel	<ul style="list-style-type: none"> • Attribution to host country • Attribution to flag State

Although most of the practices in the table above are presently being carried out by countries, some of the ways that catch is being attributed (i.e. attribution to zone) are hypothetical as implementation by countries is still at an early stage. Nevertheless, those embryonic attribution practices are worthy of consideration in the present study, along with those that have been around for some time.

3.2 The principles and rules

Attribution “practices” could also be considered the principles and rules that guide how catches should be attributed. In the context of WCPFC catch attribution, these principles/rules could come from a variety of sources. In practice the following seem to be important:

- Official WCPFC decisions
- Recommendations from the Coordinating Working Party on Fishery Statistics (CWP)
- International treaties

3.2.1 WCPFC decisions

The following is a listing of the parts of WCPFC decisions that seem to be used most often for guidance on how catches should be attributed:

Scientific data rules: [revision from WCPFC6]

Flag States or entities shall be responsible for providing to the Commission scientific data covering vessels they have flagged, except for vessels operating under joint-venture or charter arrangements with another State such that the vessels operate, for all intents and purposes, as local vessels of the other State, in which case the other State shall be responsible for the provision of data to the Commission.... Scientific data compiled by coastal States shall also be provided to the Commission.

CMM 2008-01: [bigeye and yellowfin]

For the purposes of these measures, vessels operated under charter, lease or other similar mechanisms by developing island States and participating territories, as an integral part of their domestic fleet, shall be considered to be vessels of the host island State or territory. Such charter, lease or other similar mechanism shall be conducted in a manner so as not to charter known illegal, unreported and unregulated (IUU) vessels.

CMM 2009-03: [swordfish]

For the purposes of these measures, vessels operated under charter, lease or other similar mechanisms as an integral part of the domestic fleet of a coastal State, shall be considered to be vessels of the host State or Territory. Such charter, lease or other similar mechanism shall be conducted in a manner so as not to charter known IUU vessels.

During the present study it became apparent that there are a range of views held by the various WCPFC stakeholders on the degree of guidance on attribution provided by the above texts. In any case, the above does not give precise attribution instructions, but rather requires at least some interpretation and/or use of additional principles to arrive at a way to attribute catches.

3.2.2 CWP recommendations

Recommendations from the Coordinating Working Party on Fishery Statistics are often used as a basis for catch attribution by various fishery agencies, including SPC, ICCAT, and NAFO. Even part of the wording of the CMMs in the preceding section comes from the CWP handbook. Because the background and functions of the CWP deserve some additional attention, they are covered in Appendix 4.

The CWP recommends that:

“The flag of the vessel performing the essential part of the fishing operation should be considered the paramount indication of the nationality assigned to the catches. The flag State of the vessel performing the essential part of the fishing operation should be responsible for the provision of catch data. Where a foreign flag vessel is fishing in the waters under the national jurisdiction of another State, the flag State of the vessel should have at all times the responsibility to provide relevant catch and landing data.

The only exceptions to this shall be:

a) where the vessel undertakes fishing under a charter agreement or arrangement to augment the local fishing fleet, and the vessel has become for all practical purposes a local fishing vessel of the host country;

(b) where the vessel undertakes fishing pursuant to a joint venture or similar arrangement in waters under the national jurisdiction of another State and the vessel is operating for all practical purposes as a local vessel, or its operation has become, or is intended to become, an integral part of the economy of the host country.”

An important point should be made on the CWP's recommendations on nationality of catches. The CWP website states “In 1954¹⁰ the United Nations Statistical Commission decided that fish catches should be assigned to the country of the flag flown by the fishing vessel. This concept was adopted by CWP (and hence its member agencies) and, as a result, any change in this concept would have serious adverse effects on the continuity of

¹⁰ It is relevant to note that this date is almost three decades before the UN Convention on the Law of the Sea gave sovereign rights over the marine living resources in EEZs to coastal states.

catch data.” Similarly, the CWP Handbook states “the flag of the fishing vessel is the best available criterion for the assignment of nationality to catch and landings data and it should continue to be so in the foreseeable future, in order to avoid disruption of data continuity.” [emphasis supplied].

CWP’s guidelines on attributing catches to countries were created for statistical purposes, and not intended to be for management purposes, such as establishing historical rights (R.Grainger¹¹, FAO, personal communication). SPC recognizes that CWP guidelines were mainly formulated to assure continuity of catch reporting and consistency of reporting across countries, and that both of these purposes are quite different from catch attribution for fisheries management - which is where most of the current and growing interest in catch attribution lies (P.Williams, SPC, personal communication).

The use of CWP guidelines to justify various attribution practices (e.g. “the international principle of flag State attribution”) should be scrutinized in light of the intended purpose of those guidelines. The fact that catch is attributed for different purposes is important and will be revisited in Section 4.3 below.

3.2.3 International treaties

Edeson (1999) reviews the legal aspects of fisheries data in the context of the principal international legal instruments in fisheries:

The UN Convention on the Law of the Sea is silent with regards to the "nationality" of a catch. All it does is give sovereign rights over the marine living resources to the coastal State, but until the fish are caught, they can hardly be said to have a nationality or indeed, to be owned. Once caught within an EEZ, the fish may well be regarded as belonging to (i.e. having the nationality of) the coastal State for certain purposes under national law. They may well continue, (depending on how the national law has chosen to characterise the matter, if at all) to be fish having the nationality of the coastal State even though caught by another flag State. But, if for statistical purposes, it is thought better to have the information provided by the flag State, even though caught within the EEZ, then that could be acceptable.

The UN Fish Stocks Agreement is sometimes used to justify attribution practices. During the present study, the Agreement’s provisions for (a) flag State control of vessels operating on the high seas, and (b) flag State responsibility for reporting of catches on the high seas, were used by some parties as justification for attributing catches by vessels on the high seas to the flag State of the vessel (and not to a chartering State).

3.2.4 Other sources of guidance on how catches should be attributed

During the present study other sources were cited by country representatives as justification or authority for specific attribution practices:

- One country put forward the principle of “He who provides catch data (i.e. the coastal State), owns that data – and therefore should be attributed that data”.
- One country cited the linkage between onshore processing facilities and the vessels fishing into that facility to justify attributing all catches by those vessels (regardless of fishing zone) to the country where the facility is located.
- Some country representatives stated the catch attribution practices of RFMOs in other parts of the world provided guidance. In this respect, ICCAT was the organization most often cited.

¹¹ Chief, Fishery Information, Data and Statistics Unit, FAO

3.3 Some observations

The above search for principles and rules on how catches should be attributed for WCPFC purposes was not very fruitful – it did not result in much clear guidance.

- While it is true that a few WCPFC measures/rules give some direction, they could not be considered as unambiguous attribution instructions. What seems to be the situation is that logical arguments have been constructed by some CCMs, supported by various Commission decisions and agreed text of Commission meetings, to arrive at attribution principles.
- The CWP rules, which have the default position of flag State attribution, were not intended for management purposes – which are where most of the interest related to catch attribution in the WCPFC lies.
- The principal international legal instruments in fisheries are mostly silent with respect to assigning nationality to catches.
- Senior fishery statisticians at FAO indicate that the literature on catch attribution is scarce. Appendix 5 gives some of the key references and discusses the paucity of documentation on catch attribution.

The above carries some suggestion that deciding the way that catches be attributed for WCPFC management purposes is something to be negotiated by WCPFC participants – with minimal external guidance. To some extent, these negotiations may have already occurred in the formulation of Commission measures/rules cited in Section 3.2.1 above, but there remains some uncertainty as to the attribution practices to be used in all circumstances.

Another observation is that there does not appear much, if any, external guidance on the specific issue of zone based attribution, either for or against.

4.0 Some Important Issues Related to Catch Attribution

Prior to a discussion of the advantages and disadvantages of the various attribution practices cited above, a discussion of important issues related to catch attribution may be helpful. Some of these issues are:

- The evolving role of attribution
- The clarity of catch attribution in WCPFC and any need for guidelines
- Purposes and principles
- Who does the attributing?
- Charter arrangements
- Zone-based attribution
- Attribution issues related to territories
- Parallel registration

4.1 The evolving role of attribution

As mentioned in Section 2.2.2 above, SPC has been involved with attributing catch data for the central and western Pacific since the mid-1980s. In the early years, countries did not focus much attention on attribution practices as they were perceived by many to be largely routine statistical activities.

When negotiations that eventually led to the establishment of the WCPFC began in the 1990s, attribution became a hot issue. Cartwright and Willock (2000) give some background:

In the negotiations for the Convention, two different views on a future allocation process under the Commission emerged. These two views can be broadly characterised as a coastal State view and a distant-water fishing nation view. The fundamental difference between the two views is who 'owns' the catch history taken by distant-water fishing nations within the EEZ of a coastal State. In the distant-water

fishing nations' view, all catch would be attributed to the relevant flag State for the purposes of allocation, regardless of where that catch was taken. The coastal State view is that catches taken within its EEZ should be attributed to it as a major factor in the generation of an allocation.

Currently, the interest in catch attribution in WCPFC is very much driven by allocation. However, attribution to gain a quota (i.e. establish a catch history) eventually leads into attribution of catches against a quota¹². Both of these are now occurring simultaneously in WCPFC. These two reasons for attributing catches are very different, and the incentives for attribution for each reason are in some respects opposite (i.e. some incentive to stretch catches to establish a quota; shrink catches for counting against that quota).

In WCPFC catches are also attributed to countries to partially determine financial contributions to the Commission. The Financial Regulations of the Commission state: "Each member of the Commission shall contribute to the budget in accordance with the following formula determined: (a) a 10 per cent base fee divided in equal shares between all members of the Commission; (b) a 20 per cent national wealth component based upon an equal weighting of proportional gross national income per capita and proportional gross national income; and (c) a 70 per cent fish production component based upon a three-year average of the total catches taken within exclusive economic zones and in areas beyond national jurisdiction in the Convention Area of all the stocks covered by the Convention for which data are available subject to a discount factor of 0.4 being applied to the catches taken within the EEZ of a member of the Commission which is a developing State or territory by vessels flying the flag of that member."

4.2 The clarity of catch attribution in WCPFC and need for guidelines

If catch attribution principles, practices, and processes in WCPFC are clear to CCMs, there would be little need to develop attribution guidelines. There are, however, a number of different views on the topic of clarity. One view is that the attribution situation, including the principles, is quite clear. Alternatively, there is the belief that there is much uncertainty associated with many aspects of attribution in WCPFC. The results of the present study are consistent with the latter view:

- The representatives of many CCMs interviewed expressed the feeling they were confused about attribution and several independently expressed the need for guidelines to clarify the situation.
- Very different attribution practices (Table 1), even among like-minded countries, is not consistent with the idea that attribution principles are clear.
- SPC, which has been involved in the attribution of WCPO tuna catches for several decades, indicates that, although some guidance is contained in CMMs and Commission reports, not all circumstances are covered, especially the spatial aspects. SPC staff indicate that additional guidance on catch attribution would be very useful.
- FFA member countries collectively have expressed the view that the principles for attribution of charter vessel catches are already set out in various Commission rules and measures. This clarity, however, does not extend to SPC's attribution of catches by charter vessels on the high seas - SPC's default position (i.e. interim practice pending the provision of additional information) appears opposite to that of the collective FFA position.

Various reasons can be advanced on why catch attribution in the WCPFC is associated with so much uncertainty. Beside the obvious fact the Commission is new and has not yet had the time to resolve many attribution issues, the following to some extent also contribute to uncertainty:

¹² These two different types of attribution may have been confused in some of the response received on national catch attribution practices in Section 2.0 of this report.

- The guidance on attribution contained in WCPFC measures/rules is not entirely straightforward: the relevant statements in the measures do not clearly specify attribution practices (i.e. precise instructions on how to attribute), but rather require at least some degree of interpretation.
- There are several different purposes for attributing catches, and principles that may be appropriate for one type of attribution (e.g. attribution to the flag State for data cataloguing) may not be appropriate for another purpose (e.g. establishing a catch history for allocation).
- The attribution process is politically charged: aspirations and very large benefits may be affected by how catches are attributed, and this can impact on how countries view the various options for attribution – leading to inconsistent practices across countries.
- Several complicating factors exist, such as charter arrangements and spatial aspects (i.e. EEZs and international waters).

The uncertainties highlighted in the above discussion and CCM comments obtained during the study suggest a need for guidelines on WCPFC catch attribution. In the absence of clear guidelines attribution principles may be confused with wishful thinking, countries are likely to continue to attribute as they see fit, and inconsistencies and double counting of catches are likely to occur. Consequently, it may be difficult or impossible for WCPFC to determine the level of catches and when the catch limits of some Commission members are reached.

4.3 Purposes and principles

In Section 3.2 above there is a discussion of the principles used for attribution. It should be emphasized that because certain principles/rules for attribution (e.g. that of the CWP) were convenient and appropriate decades ago for statistical purposes (e.g. catch accounting, consistency of reporting across countries), does not automatically mean that they are today appropriate for management purposes (e.g. allocating available fishery resources) in the WCPFC.

Attribution is not a trivial matter. To some extent, the choice between various principles in attributing catches for management purposes (e.g. flag vs. zone) equates to identifying those entities that are inclined to obtain many of the benefits and responsibilities associated with the concerned fishery resource.

Because there are several different reasons for attributing (stock assessment, basis for allocation, etc.), there is some justification for having different ways to attribute – each catering to a different purpose. This concept was expressed in a slightly different form by some of the delegations interviewed during the present study (e.g. New Zealand, USA): the way catches should be attributed would depend on the context and for what purpose the catch was being attributed.

Alternatively, during the present study the view was expressed that it would be cumbersome to have one set of catch attribution principles for data and one for management. The counter to that argument is that having simple attribution principles may not be so important when very large benefits and responsibilities are at stake. There is also the view that as long as all the necessary data (e.g., flag of catcher, where caught, and whether vessel was under charter) are collected and put into the WCPFC's database, then the catch can be easily re-attributed for any number of purposes.

In considering these views on principles for attribution, the concept to be discussed in Section 6.2.1 below adds another dimension: whether uniform catch attribution principles should apply to all CMMs or whether specific principles should be associated with each measure.

4.4 Who does the attributing ?

In the general theme of clarifying/elucidating WCPFC attribution practices, a useful topic to examine is who actually does the attribution of catches.

In the present study, many of the responses about attribution practices from national representatives contained the suggestion that some national authorities are not responsible, or at least not totally responsible, for attribution (e.g. “the catch *should* be attributed to...”). On the other hand, the position of the WCPFC Secretariat is that they do not receive raw data that requires attribution to the various CCMs (Section 2.2.1 above).

Discussions with SPC suggests there are different situations:

- Prior to the Commission, the SPC attributed catches for the Pacific Island Countries, occasionally receiving some requests from countries on ways to attribute in specific situations.
- Currently, for many of the Pacific Island Countries, attribution could be considered a joint country/SPC exercise as SPC manages the operational data on their behalf.
- For the Pacific Island Countries that prepare the annual catch estimates themselves, those countries could be considered as doing the attribution, with SPC ensuring it is done in a consistent manner.
- For the other WCPFC CCMs, attribution is by national authorities.
- As a general comment, SPC believes that the data provided to WCPFC is WCPFC data so SPC should be considered as the caretaker of that data. Accordingly, WCPFC should provide precise instructions on how to attribute that data.

Following from the above, some observations can be made.

- There appears to be a need for some entity, probably SPC, to have a role in oversight of attribution and in resolving conflicts in attributed data (e.g. double counting). Alternatively, this could be more accurately expressed as a need to formalize a role that SPC has taken on and to extend that role to all countries.
- In view of the above responsibilities, the definition of attribution given in the introduction to this report could be made more precise: “Catch attribution is the process of assigning catches to nations, areas, or fleets for various purposes *and officially reporting that information to WCPFC*”.

4.5 Charter arrangements and attribution

4.5.1 General

In the context of WCPFC, Pacific Island Countries have focused a significant amount of attention on securing the opportunity to obtain benefits by chartering vessels. Charter arrangements, however, are responsible for several disagreements among CCMs.

With respect to chartering in general:

- The position of Pacific Island Countries collectively is that chartering is important for domestic tuna industry development (for both fleet development and onshore processing) and any attempts to limit or control the opportunities to charter should be resisted on the grounds that they would unfairly constrain their development aspirations. No consent from the flag State should be required as this would be a constraint on legitimate rights to develop fisheries.
- Some fishing States, notably Japan, feel that chartering should not be a permanent arrangement but rather an initial step in the development process. Chartering could undermine quotas and consequently management efforts, and that chartered vessels should be limited only to the national waters of the chartering States. Consent for

each chartering arrangement from the flag State should be required. These positions are largely the same as in the 2003 “Recommendation by ICCAT on Vessel Chartering”¹³.

With respect to attribution of the catches of chartered vessels:

- FFA member countries collectively have indicated that catches and effort of charter vessels shall be attributed to, and counted against, the quota of the chartering (host) member or participating territory. They believe that this concept is adequately reflected in the provisions of several rules/measures (e.g. Scientific Data Rules, CMM 2008-01 on bigeye and yellowfin, and CMM 2009-03 on swordfish). Although there is no spatial aspect to these rules/measures, in practice most FFA countries as a general practice attribute catches on the high seas to the chartering (host) country, but some attribute to the flag State.
- Alternatively, there is the view by some CCMs that the Scientific Data Rules have no relevance to catch attribution.
- Judging by CCM attribution practices described in Section 2.0 above, the fishing States generally feel that within host country waters, catches by chartered vessels should be attributed to the host country. The exception is Chinese Taipei where the attribution of chartered vessels is to the flag, even in the host country zone. Outside of the waters of the host country, some fishing States attribute to the flag, some to the chartering country, and at least one country feels that there should be no fishing by chartered vessels outside of the waters of the chartering country. The WCPFC rules/measure cited in the first bullet point above are generally not mentioned when fishing States justify their attribution views.
- SPC, which plays a major role in attribution of catches in the region, states in a few WCPFC documents¹⁴ “Catches and effort of vessels operating under charters and similar arrangements have been attributed to host island States or territories in accordance with paragraph 5 of CMM 2005-01 using the best information available to SPC-OFP”. Apparently, that practice is restricted to the EEZ of the host country – the catches of chartered vessels operating on the high seas are normally attributed by SPC to the flag State. The attribution arrangements in the agreement between the Cook Islands and Niue established a precedent for this default position. (P.Williams, SPC, personal comm.).
- In ICCAT all catches by chartered vessels, including those on the high seas, are attributed to the host country.
- In the other regional tuna fisheries management organisations, chartering is much less common. IATTC and IOTC generally attribute the catches of chartered vessels to the flag State in all waters, while CCSBT attributes to the host country in host country waters, with some uncertainty of how to attribute the catch of chartered vessels on the high seas.

4.5.2 Defining “charter”

It is not difficult to define the term “charter”. What is difficult is to cover in a single definition the large array of arrangements in the fisheries of the central and western Pacific that have been called a “charter”. From the usage of “charter” in the fisheries of the WCPO, two broad functional categories of chartering could be constructed: (a) An arrangement in which the owner of a vessel is compensated by another party for some form of use of the vessel, and (b) An arrangement in which the owner of a vessel compensates another party for services related to access provided by that party.

The various WCPFC rules, measures, and meeting reports mention “charter” or “chartering” 149 times in 21 documents – without the term being defined. The situation appears similar in

¹³ In ICCAT “recommendations” are binding.

¹⁴ For example, the table on “Baseline Longline Bigeye Tuna Catches, by Flag” in the WCPFC5 Summary Report and in CMM 2008-01.

other tuna RFMOs: ICCAT's "Compendium of Management Recommendations and Resolutions" mentions "charter" 78 times without a definition.

Rather than defining "charter" it is more common to define *types* of charters:

- The New Zealand Maritime Transport Act 1994 defines "demise charter".
- The PNG Fisheries Management Regulations define "substantially chartered".
- The Lloyd's Register Fairplay defines "bareboat/demise charter" and "time charter".
- Licensing policies and tuna management plans of Pacific Island Countries also seem to favor defining types of charters. Fiji's "Cabinet-Approved Charter Conditions" defines "voyage charter" and "bareboat charter". The tuna management plan of the Solomon Island defines "charter agreement".

There is a view that, in order to resolve some of the attribution issues related to chartering, a precise definition of the term is required in order to restrict the types of operations to be included. On reflection, crafting a clever definition of "charter" may not be that useful for examining catch attribution in the current CMMs because of the wording of the measures "vessels operated under charter, lease or other similar mechanisms"¹⁵ expands even further (beyond the already broad "charter") the array of arrangements/vessels to be included.

It appears that in the WCPFC, in order to resolve some of the general difficulties relating to charters (i.e. establish a charter scheme) limits on the types of arrangements to be included may be required. However, for the purpose of addressing attribution aspects of chartering, a definition may not be so necessary.

The approach taken here is to simply identify the problem areas in attribution of catches of chartered vessels and in a later section propose options for resolution.

4.5.3 Difficulties in attributing catches of chartered vessels

The major difficulties associated with attribution of the catches of chartered vessels appear to be:

1. Lack of assurance from flag States that catches by chartered vessels in host country zones are not attributed to flag States. This can occur due to the flag countries not acting on the charter notifications, or due to host countries not listing vessels they have chartered on the charter notifications. (This can result in attribution by both the host country and flag State, "double counting").
2. Although there appears to be general agreement that catches are to be attributed to the host country while operating in the zone of the host country, catches on the high seas and in EEZ of countries other than the host country are inconsistently attributed (This can result in double counting or no counting).
3. Vessels are sometimes chartered concurrently to more than one country (This can result in double (or more) counting).
4. There are qualifiers in the CMMs important to chartering which could add potential for alternative interpretations: "an integral part of the domestic fleet" and "such that the vessels operate, for all intents and purposes, as local vessels of the other State".

There is the view that difficulty #1 arises because of the failure of fishing States to comply with the requirements of the Commission's Scientific Data Rules. Those Rules require the provision of operational catch and effort data and for catch and that effort is to be reported by the chartering State, not the flag State.

A mechanism for mitigating difficulty #1 above was proposed to SC5 by the WCPFC Secretariat:

¹⁵ The range of arrangements included in the Charter Notification Scheme is even broader: "charter, lease, other mechanisms" without any qualifying of those other mechanisms.

The “charter, lease or other similar mechanisms” arrangement will be formally acknowledged by the WCPFC on confirmation/acceptance by both the CCM responsible for the “charter” party and the flag State (CCM) of details above, and the WCPFC will then proceed to correctly allocate catch in their databases to the CCM responsible for the “charter” party. Confirmation is required by the flag State to ensure there is no double counting in the data provided to the WCPFC.

The proposal above was not accepted by Pacific Island Countries, presumably because the “confirmation” by flag States was perceived by Pacific Island parties as being approval for the charter and therefore representing excessive control over legitimate rights of countries to develop their fisheries.

With respect to difficulty #3, it appears that this most often involves vessels from Chinese Taipei. That country acknowledges the existence of those arrangements (Section 2.1.6 above). Chinese Taipei explains that concurrent charters are necessary in order to access two or more zones. Their normal practice is to attribute all catches by their flagged vessels (even those that are chartered) to Chinese Taipei.

Other attempts to mitigate the difficulties in attributing catches by chartered vessels have included:

- Efforts by the WCPFC Secretariat and SPC to clarify with some flag States the status of the reporting of catches by their vessels that have been chartered to other CMMs (i.e. that they have ceased to report so double counting is not occurring).
- The Charter Notification scheme in which CCMs are required to provide a list of the vessels in a “charter, lease or other similar mechanisms”.

Those attempts have not been fully successful. There has been a lack of response from some flag States on request for clarification. Some chartering CCMs may not have notified the Commission Secretariat of vessels that have been chartered.

The difficulties in attributing the catches of chartered vessels outlined above are revisited in Section 6.2 below in the form of options for guidelines.

4.6 Zone based attribution

Recently there has been much discussion about Pacific Island Countries moving from flag-based catch attribution to zone-based attribution. As noted in Section 2.1.1, it appears that the Marshall Islands is the first CCM to make a formal move in that direction. In their report to the Sixth Scientific Committee (MIMRA 2010) there is the statement: “In late 2009, the RMI, through MIMRA, formally wrote to the SPC-OFP to notify of its clear intention to attribute all longline catches in the RMI EEZ to the RMI. This is in line with the recent efforts by FFA Members to shift longline catch attribution from a flag-based to a zone-based arrangement.”

FFA member countries collectively feel that the failure of some of the fishing States to comply with the Commission’s requirements for provision of operational catch and effort data to verify aggregate catch data strengthens the need to move to zone-based effort limits. This contention is apparently based on “Scientific Data to be Provided to the Commission” (as refined and adopted at the Fourth Regular Session of the Commission in 2007) which states:

“Operational level catch and effort data (e.g. individual sets by longliners and purse seiners, and individual days fished by pole-and-line vessels and trollers) shall be provided to the Commission, in accordance with the standards adopted by the Commission at its Second Regular Session.”

In the data rules the statement above is associated with the qualifier: “It is recognized that certain members and cooperating non-members of the Commission may be subject to domestic legal constraints, such that they may not be able to provide operational data to the Commission until such constraints are overcome. Until such

constraints are overcome, aggregated catch and effort data and size composition data....shall be provided.”

According to SPC, many of the fishing States only provide aggregate data and it is not possible to use that data for purposes of identifying double counting.

The position of one fishing State, Chinese Taipei, is that by providing longline data by five-degree squares and purse seine data by one-degree squares, they are in accordance with WCPFC requirements (H.Huang, Taiwan Fisheries Agency, personal comm.). This apparently is based on the above qualifier to the provision requiring operational data.

It should be noted that the United States was among those countries that initially took advantage of the qualifier and furnished only aggregate data. In April 2010 that country's domestic legislation was modified and it is now able to furnish operational data. This case may suggest that the qualifier should not be used in perpetuity as a reason for not supplying operational data – to the detriment of addressing the double-counting of the catches of chartered vessels.

An exhaustive examination of the implications of a move to zone based attribution (i.e. in the context of international agreements) is beyond the scope of the present study. Accordingly, it may suffice to state that in this study three general views on the issue were expressed by the individuals interviewed:

- The move to zone-based attribution is consistent with provisions of the UN Convention on the Law of the Sea which gives coastal States sovereign rights for exploring and exploiting, conserving and managing living marine resources.
- The move to zone based attribution should be scrutinized in light of existing international treaties.
- There is not much, if any, external guidance (i.e. binding conventions) relevant to the issue of assigning catches to zones.

On a different level, a conclusion of Section 4.3 of this report is relevant here: In some respects, the choice between various principles in attributing catches for management purposes (e.g. flag vs. zone attribution) equates to identifying those entities that are inclined to obtain many of the benefits and responsibilities associated with the concerned fishery resource.

As to the practical aspects of zone-based catch attribution, many of the present difficulties in attribution would cease to exist, but some would remain and there is at least one additional issue – the attribution of catches made in waters that are disputed, which is important for longline fisheries in the southern part of the WCPFC area. On the high seas catch attribution would presumably remain as it is now: attribution to flag States for non-chartered vessels, with differing views on how to treat chartered vessels.

The treatment of chartered vessels is simplified in an era of closure of some high seas areas to purse seining. Assuming no chartering of the diminishing pole-and-line and albacore troll fleets, the major difficulty in a zone-based scheme would be in the attribution of catches by chartered longliners.

4.7 Attribution issues related to territories

The convention that established the WCPFC has provisions relating to the participation in the Commission by territories (Box1).

Box 1: Convention Article 43 - Participation by Territories

The Commission and its subsidiary bodies shall be open to participation, with the appropriate authorization of the Contracting Party having responsibility for its international affairs, to each of the following: American Samoa, French Polynesia, Guam, New Caledonia, Northern Mariana Islands, Tokelau, and Wallis and Futuna

The nature and extent of such participation shall be provided for by the Contracting Parties in separate rules of procedure of the Commission, taking into account international law, the distribution of competence on matters covered by this Convention and the evolution in the capacity of such territory to exercise rights and responsibilities under this Convention.

Notwithstanding paragraph 2, all such participants shall be entitled to participate fully in the work of the Commission, including the right to be present and to speak at the meetings of the Commission and its subsidiary bodies. In the performance of its functions, and in taking decisions, the Commission shall take into account the interests of all participants.

Article 43 of the Convention indicates that participation in the Commission is also subject to rules of procedure. The “Rules of Procedure” as adopted by the Inaugural Session of the WCPFC in December 2004 have an annex on nature and extent of participation of territories. An examination of that annex indicates little of special relevance to a discussion of catch attribution, apart from defining a participating territory:

“Territories listed in article 43 of the Convention would be “Participating Territories” once they have the relevant authorization. Such authorization shall be in the form of a declaration, filed with the depositary, by the Contracting Party having responsibility for the international affairs of such Participating Territory.”

The interface between catch attribution and territories appears in several CMMs:

CMM 2008-01: [bigeye and yellowfin]

- For the purposes of these measures, vessels operated under charter, lease or other similar mechanisms by developing islands States and participating territories, as an integral part of their domestic fleet, shall be considered to be vessels of the host island State or territory.
- In accordance with paragraph 6, the limits for bigeye tuna established in paragraphs 31 to 33 above, shall not apply to small island developing State members and participating territories in the Convention Area undertaking responsible development of their domestic fisheries.

CMM 2009-03: [swordfish]

- Recognising that well managed stocks of swordfish in the central south Pacific represent an important source of long-term economic opportunities for the domestic fisheries of small island development States and participating Territories;
- Paragraphs 1 to 4 and paragraph 9 shall not prejudice the legitimate rights and obligations under international law of small island developing State and participating Territory CCMs, in the Convention Area who may wish to pursue a responsible level of development of their own fisheries in the Convention Area.
- For the purposes of these measures, vessels operated under charter, lease or other similar mechanisms as an integral part of the domestic fleet of a coastal State, shall be considered to be vessels of the host State or Territory.

As in the case for independent small island developing States, exemptions to limits have been given to participating territories to promote development.

In Section 2.1.2 above, the attribution practices of three territories are given. For the two French territories (New Caledonia, French Polynesia) current catch attribution practices are similar to those of independent Pacific Island Countries – but without the complications associated with chartered vessels. Tokelau did not respond to enquiries to catch attribution made during the present study. However, New Zealand officials indicate that no plans have been formulated by the NZ government for NZ-flagged vessels to take advantage of any catch limit exemptions for Tokelau. Much of the action/debate on territory catch attribution

issues is playing out between the United States and its territories, specifically between Hawaiian longline vessels and American Samoa (Box 2).

Box 2: Attributing Longline Catches - Hawaii vs. American Samoa

Under U.S. regulations that implement CMM 2008-01, bigeye tuna caught in the longline fisheries of American Samoa, Guam, and the Northern Marianas are not counted against the limit imposed by CMM 2008-01, and vessels participating in those fisheries are not subject to the restrictions triggered by the limit being reached in the given year. Precisely how the three territorial longline fisheries should be differentiated from the other U.S. longline fisheries – that is, how bigeye tuna catches are assigned among fisheries for the purpose of this action and for catch reporting to the WCPFC, is not clear. This has been complicated due to the fact that in recent years between 10 and 12 vessels held U.S. federal permits for fishing in the fisheries of both Hawaii and American Samoa.

Currently the policy is that any bigeye tuna captured by a fishing vessel registered for use under a valid American Samoa Longline Limited Access Permit is assigned to the longline fishery of American Samoa regardless of where the fish are landed, provided that: (1) the fish are not caught in the portion of the EEZ surrounding the Hawaiian Archipelago, and (2) they are landed by a U.S. vessel operated in compliance with the appropriate authorization. There are strict eligibility requirements: only persons with a documented history of fishing for pelagic species with longline gear in the portion of the U.S. EEZ around American Samoa are eligible.

Source: PIRO (2009), Federal Register (2009)

It is important to point out that these territorial catch attribution issues arise largely because the territory and the associated metropolitan country share the same flag.

In the WCPFC the main issues of catch attribution associated with territories are:

- Balancing the development opportunity promoted by the exemption, with the potential for undermining effectiveness of CMMs by attributing to a territory the catches from fleets not associated with that territory and its development.
- The relationship between a territory and the fleets of the associated metropolitan country is unclear with respect to catch attribution. In other words, how can the fisheries of a Commission member be differentiated from those of an associated territory?

The two issues above are related: one is conceptual and the other is practical. Ideally, development in a territory would be encouraged by provisions in the CMMs, but that any transfer of effort into the territory as a development mechanism would be limited so that objectives of CMM 2008-01 would not be negatively impacted. However, without some modifications to the current arrangements, the opposite could occur. Conceivably, the catches of a large number of metropolitan vessels could be attributed to a territory (which could undermine CMM 2008-01) without those vessels contributing to development in the territory. Although this situation could also occur in chartering of vessels to an independent country, the main distinction with territorial attribution is that the territory may have less control over the attribution practices of the metropolitan country.

Currently, efforts are being made by some Commission members to assure that the above unfavorable situation does not occur with their territories, but those efforts are largely self-imposed and voluntary. Some tightening up of territorial catch attribution practices is required to assure continuity and consistency across all CCMs with territories. Otherwise, CCMs are left to do it as they see fit.

This issue of territorial catch attribution is revisited in the guidelines section below.

4.8 Parallel registration

Difficulties in attribution are sometimes associated with features of vessel registration. For example, IOTC (2009) mentions catch/vessel accounting problems due to:

“Parallel registration (a vessel using a single flag, but registered in two countries) and concurrent registration (a vessel temporarily using the flag of a coastal country while within that country’s zone, and subsequently reverting to its own flag when outside the zone).”

In a study of catch attribution the interface between attribution and vessel registration deserves some attention. Background information on parallel registration¹⁶ is given in Box 3.

Box 3: Parallel Registration and Bareboat Chartering

In a bareboat charter (sometime called a “demise charter”) the charterer assumes control over all operations, costs and responsibilities associated with the vessel for an agreed period of time. It is increasingly common for ships to be in parallel registry during the period of a bareboat charter. In this case, the ship is transferred by the bareboat charterer to a new operational flag, while the ownership of the ship (registered owner) continues under the original registry. None of the legal or financial responsibilities of the registered owner are transferred to the bareboat charterer during the period of charter.

A bareboat charter can be advantageous for a charterer who does not have the possibility to buy a ship but still wishes to have as much control over the ship as possible. A bareboat charter does not only facilitate this but also gives foreign charterers the opportunity to operate the vessel under the flag of a State other than the State it was primarily registered in during the time of the charter.

When a ship is bareboat registered, it is only considered to have the nationality of the State of the bareboat registry. Under Article 92(2) of UNCLOS 1982, every ship is to fly the flag of only one State at a time (i.e. it cannot have double nationality). In bareboat chartering and parallel registration of ships, ships suspend the use of their primary register and take up the flag of another State - but only for the period of the charter.

Source: Pourmotamed (2008), Hosanee (2009), Moreno (1996)

It is interesting to note the position of ICCAT on bareboat chartering. As stated in Section 2.2.5, the ICCAT Charter Recommendation states that it is applicable to the “chartering of fishing vessels, other than bareboat chartering”. In terms of how bareboat charters are actually treated, according to ICCAT staff, the secretariat cannot make interpretations of ICCAT recommendations. The secretariat feels that there is some uncertainty on how bareboat charters should be treated.

With respect to WCPFC catch attribution difficulties in the context of vessel registration, the following is relevant:

- In bareboat (demise) chartering, the registration sometimes changes to that of the chartering (host) country. In that case, some of the squabbles over attribution that occur when the host country is not the flag State are eliminated (i.e. attribution of catches by chartered vessels on the high seas).
- In the mid-2000s about five US-registered vessels were demise chartered to the Cook Islands and were based in American Samoa. Because these vessels retained their US registration and US fishing permits, US authorities attributed their catch to the US. Because these vessels had parallel registration in the Cook Islands, authorities in that country attributed the catches to the Cook Islands. In early 2008, this ceased to be a problem with the Cook Islands when the country moved away from vessel chartering (i.e. when US vessels stopped registering themselves under the Cook Islands flag).
- There is apparently a large number of longliners that change registration back and forth between Chinese Taipei and Indonesia (“flag flipping”). During the present study there was no information available to suggest whether this change of registration is done mainly through demise chartering, convention change of registration, or neither. For attribution purposes, constant monitoring these changes

¹⁶ Although the terms of reference for the present study cite “parallel flags”, FAO discourages the use of the term “parallel flag” – a vessel cannot fly two flags as if it had two nationalities (B. Kuemlangan, FAO, personal communication).

of registration is important in order to prevent double or zero counting of catches, especially since the number of vessels involved could be large.

5.0 Comparison of Attribution Practices

5.1 Practices and comparisons

Table 1 of Section 3.1 above (repeated here) shows 11 different attribution practices (shown in far right column).

Table 1: Catch Attribution Practices

Attribution Category	Sub-Category	Sub-Category	Practice: how attributed
To flag	Non-chartered vessel		<ul style="list-style-type: none"> Attribution to flag State
	Chartered vessel	Host country zone	<ul style="list-style-type: none"> Attribution to host country Attribution to flag State
		Non-host country zone	<ul style="list-style-type: none"> Attribution to host country Attribution to flag State
		High seas	<ul style="list-style-type: none"> Attribution to host country Attribution to flag State
To zone	In zone		<ul style="list-style-type: none"> Attribution to the zone country
	High seas	Non-chartered vessel	<ul style="list-style-type: none"> Attribution to the flag State
		Chartered vessel	<ul style="list-style-type: none"> Attribution to host country Attribution to flag State

Of special interest are where there are two different practices employed for a single case (i.e. where there are two bullet points in a single cell of the far right column). There are four of these cases, but two are virtually the same (attribution of catches by chartered vessels on the high seas), plus the general difference of comparing attribution to flag vs. attribution to a zone.

It therefore appears that there are four cases in the WCPFC area where the same conditions are subject to different catch attribution practices:

- Chartered vessels in host zone: host vs. flag
- Chartered vessels on high seas: host vs. flag
- Chartered vessels in non-host zone: host vs. flag
- The more general flag vs. zone attribution

Some insight into the relative desirability of catch attribution practices could be obtained by examining the advantages/disadvantages and some environmental and economic implications of each of these 8 practices. These features are combined into Table 2 below.

Because the table covers many aspects of a complex subject, some explanation is warranted. The table considers both attribution for statistical purposes and for management purposes:

- When dealing with benefits, “advantages/disadvantages” can depend on one’s perspective (i.e. winner or loser when partitioning benefits). For this reason, the table gives “advantages/disadvantages” only for attribution for statistical purposes. That is, the implications of each attribution practice with respect to effectiveness of catch accounting, consistency of reporting across countries, continuity of reporting, etc.
- Attribution can also occur for management purposes – which includes attribution for setting resource allocations and (subsequently) for counting against those allocations. Table 2 attempts to include both setting/counting aspects in the examination of environmental and economic implications.

Table 2: Analysis of Various Attribution Practices

Case	Attribution practice	Attribution for Statistical Purposes		Attribution for Management Purposes	
		Advantage	Disadvantage	Environmental implications	Economic Implications
Flag vs. Zone	Attribution to zone	<ul style="list-style-type: none"> Not subject to inconsistent in-zone attribution practices of fishing States Less double counting 	<ul style="list-style-type: none"> Attribution for catches in waters where boundaries are disputed Problems remain on high seas Continuity of reporting would be affected by introducing this system Global comparability would be affected. Greater complexity and potentially less consistency for fishing in multiple zones 	<ul style="list-style-type: none"> The more effective catch accounting (i.e. lack of double counting, more clarity) promotes more effective management measures that involve catch limits. Current problems with the largely flagged-based practices suggest that zone-based practices would give quicker more accurate data for stock assessment. 	<ul style="list-style-type: none"> In establishing allocations, tends to give more to coastal States Enhancement of development aspirations SPC costs related to attribution are likely to be greater in zone-based attribution. There could be favorable trade implications (i.e. rules of origin). Jobs related to port state verification
	Attribution to flag State	<ul style="list-style-type: none"> Vessel operators are comfortable with status quo. This practice has been dominant historically, so data continuity and quality likely to be good. 	<ul style="list-style-type: none"> Problems of dealing with charters 	<ul style="list-style-type: none"> Attribution to flag States currently is a problem in the restrictions on BET/YFT Several fishing States indicate less IUU fishing is likely to occur 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight on benefit distribution to flag States.
Chartered vessels, host zone	Attribution to host country	<ul style="list-style-type: none"> Because this practice has been dominant historically, data continuity likely to be good. 	<ul style="list-style-type: none"> Subject to inconsistent in-zone attribution practices of fishing States Double counting 	<ul style="list-style-type: none"> As this is the normal practice (only one major flag State does not attribute in this fashion) there is likely to be less confusion, which would tend to increase effectiveness of management measures based on quotas 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight in benefit distribution to coastal States Enhancement of development aspirations of Pacific Island Countries
	Attribution to flag State	<ul style="list-style-type: none"> Consistency in attribution across all waters 	<ul style="list-style-type: none"> Because this practice is followed by only one major fishing State, other countries may not subscribe to the practice leading to double counting. 	<ul style="list-style-type: none"> As this is an anomaly, confusion related to catch attribution is likely and would tend to decrease effectiveness of management measures based on quotas 	<ul style="list-style-type: none"> Could have negative implications for Pacific Island Countries, should the flag State be required to reduce catches.
Chartered vessels, high seas	Attribution to host country	<ul style="list-style-type: none"> Continuity of attribution practice in the geographic transition from in-zone to high seas. 	<ul style="list-style-type: none"> Difficulty of determining whether double counting is occurring Accounting problems created by concurrent charters 	<ul style="list-style-type: none"> The catch attribution problems associated with this practice (e.g. double counting from concurrent charters) would tend to decrease effectiveness of management measures based on quotas 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight in benefit distribution to host States. Enhancement of development aspirations of Pacific Island Countries
	Attribution to flag State	<ul style="list-style-type: none"> Double counting not an issue No accounting problems created by concurrent charters. 	<ul style="list-style-type: none"> Lack of continuity of attribution practice in the geographic transition from in-zone to high seas (in the usual case of in-zone attribution is to the host country for chartered vessels) 	<ul style="list-style-type: none"> (As above) Several fishing States indicate less IUU fishing is likely to occur 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight in benefit distribution to flag States Could have negative implications for Pacific Island Countries should the flag State be required to reduce catches.
Chartered vessels, non-host zone	Attribution to host country	<ul style="list-style-type: none"> Consistency of attribution across zones 	<ul style="list-style-type: none"> Difficulty of determining whether double counting is occurring Accounting problems created by concurrent charters 	<ul style="list-style-type: none"> The catch attribution problems described in the cell to the left would tend to decrease effectiveness of management measures based on quotas 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight in benefit distribution to host States Enhancement of development aspirations of Pacific Island Countries
	Attribution to flag State	<ul style="list-style-type: none"> Double counting not an issue No accounting problems created by concurrent charters. 	<ul style="list-style-type: none"> Lack of consistency across zones 	<ul style="list-style-type: none"> (As above) Several fishing States indicate less IUU fishing is likely to occur 	<ul style="list-style-type: none"> In establishing allocations, tends to give more weight in benefit distribution to flag States Could have negative implications for Pacific Island Countries, should the flag State be required to reduce catches

Other aspects of the table are:

- The table should not be considered an exhaustive listing of advantages/disadvantages and environmental/ economic implications, but rather points that became especially evident during the present study.
- Practices and the implications listed in the table are largely what appear to be occurring now and likely to occur in the foreseeable future. Much less emphasis is placed on the ideal situation in the future (i.e. what should occur if all CCMs embrace the practice, aware of responsibilities, and take all required action).
- In the table “environmental implications” are taken to mean impacts on stocks, habitats, and biodiversity.
- The table does not consider attribution for purpose of Commission contributions.

5.2 Results of the comparisons

On the conceptual level, the impacts of attribution practices on the environment and economics have both indirect and direct aspects: (a) the statistical advantages/disadvantages of practices impact on the effectiveness of management measures that are based on limits (i.e. better accounting of catches against the limit); and (b) practices are likely to have at least some influence on the allocation of fishery resources which would have economic implications. In comparing various management practices, it may also be useful to comment on some features that are not evident in Table 2.

There are costs associated with the various attribution practices. These could include expenses related to data management and compliance/monitoring. Little information is available that would allow some insight into the differences of these costs across practices. However, one aspect can be examined. As can be seen in Section 4.4, the distant water fishing States do most of their own attribution, whereas SPC is heavily involved with attribution for Pacific Island countries. SPC costs related to attribution are likely to be greater in zone-based attribution.

The contention of several fishing States that flag-based attribution results in less IUU fishing deserves additional attention. Discussions during the present study with fishery officials in Asian countries stress the importance of flag State responsibility. That is, if they are to be responsible for a vessel's actions and have catch attributed to them, they will expend more effort at monitoring the activity of the vessel. In this sense, they perceive the catch as being "theirs" and so is the responsibility for the vessel's actions. If the catch is attributed to someone else then that someone else should also be responsible for monitoring vessel actions.

In fisheries management as well as in economic development based on fisheries, those schemes are often more favorable that encourage a long-term relationship between the resources and the exploiter of those resources. In comparing attribution practices, at least some consideration should be given any tendency of a practice to encourage such a long-term relationship. Vessels/fleets can move to different regions and oceans, whereas zones do not have this mobility. To some degree, attribution to zones may better promote the desired resource/exploiter bond.

6.0 Guidelines

6.1 General approach

Section 4.2 above gives some considerations on catch attribution guidelines. There are generally two views on the need for guidelines. One is that the rules for catch attribution (especially for chartered vessels) have been agreed upon and are quite clear. Alternatively, there is the view that there are many difficulties in catch attribution and that guidance in areas of difficulty would improve the effectiveness of CMMs. In considering these perspectives, the following points are relevant:

- These views are not necessarily incompatible. It is possible that agreement has been reached on important areas of catch attribution, but certain problem areas should be covered by guidelines.
- Whether WCPFC should have catch attribution guidelines is obviously the prerogative of WCPFC. The information below has not been formulated to preempt a WCPFC decision, but rather in the spirit that, should the Commission decide that guidelines would be of value, the following areas deserve attention.

The approach taken here is to identify the areas where significant attribution problems have occurred in the past (e.g. double counting, inconsistencies across CCMs), or where they are likely to occur in the future. In addition, those significant procedures related to attribution that are weak, misunderstood, or non-existent are also highlighted. Options that would rectify the difficulty or clarify the situation are proposed and positive features for each option are given.

An important point is that discussing an attribution problem area does not necessarily equate to “reopening already agreed provisions”. The results of the present study indicate there is no consensus among CCMs of what constitute “agreed provisions” for attribution. Section 4.2 above details the various views on this.

That there have been inconsistencies across countries in several attribution practices is a reality. In rectifying the problems (i.e. CCMs attributing in an inconsistent manner) the logical approach is for CCMs to follow any rules or principles that have already been laid out. *But to do so requires agreement among CCMs that such rules/principles actually exist.* The likely alternative is to persist with the current situation of having some CCMs believe there is an applicable rule on a contentious subject, others thinking a near-opposite rule applies, and/or some CCMs think that no rules are applicable. This situation is not conducive to effective management measures.

This report aims to present any existing rules/principles that apply to a problem area as a first of several options – thus provoking some open discussion. This approach is consistent with the general theme of this study: elucidating WCPFC catch attribution practices and clarifying the related uncertainties would improve the effectiveness of WCPFC management measures.

6.2 Areas requiring guidance

In the context of the current scheme of catch attribution in the WCPFC a number of areas could benefit from guidelines. Should a major change be made to the current scheme, such as to zone based attribution, different areas will require guidance (Section 6.3 below).

The results of the present study indicate the following areas of the current scheme deserve some attention when formulating guidelines:

- The specificity of attribution principles
- Attribution of catches by chartered vessels on the high seas
- Attribution of catches by chartered vessels in a non host zone

- Concurrent charters
- Differentiating the fisheries of a territory
- Control of the attribution process
- Terminology
- Some administrative matters

Positive features of the various options are given in the tables. The listing of features is not exhaustive, but rather are those that were especially evident during the present study.

6.2.1 The specificity of attribution principles

Principles of attribution, including the issue of different principles for different purposes (e.g. stock assessment, financial contribution to the Commission, catch history, etc.) were covered in Section 4.3 above. A related issue is whether each Commission decision (where attribution is required) should have specific attribution instructions.

Table 3: The Specificity of Attribution Principles

Options	Some Positive Features of the Option
Uniform attribution scheme to apply to all CMMs	<ul style="list-style-type: none"> • There is inherent simplicity in one attribution scheme that is applicable to all WCPFC decisions. • It would be cumbersome to have, for example, one set of attribution principles for data and one for management. • Many CCMs are comfortable with this concept. • The CWP guidelines are a uniform attribution scheme, and they are widely used by RFMOs.
CMM-specific attribution scheme	<ul style="list-style-type: none"> • Because there are several different reasons for attributing (stock assessment, basis for allocation, etc.), there is some justification for having different ways to each catering to a different purpose. Examples are flag based for Commission contributions, zone based for establishing catch history. • What is convenient for statistical purposes (e.g. flag based) may not be appropriate for a process that has much to do with partitioning the benefits of the resource. • Simple attribution principles may not be so important when very large benefits and responsibilities are at stake. • Considering the current large problems with clarity of attribution, there are advantages of having clear attribution instructions for each CMM. • May be easier to get CCMs to agree on this, relative to agreeing on blanket attribution principles that are universally applicable.
Hybrid scheme	<ul style="list-style-type: none"> • This involves having principle(s) that are generally applicable for all CMMs (e.g. flag based except in charters), with any exceptions or special situations as part of each CMM. • This option could contain some of the advantages of each of the above two options.

6.2.2 Catches by chartered vessels on high seas

This is one of the most contentious issues in WCPFC catch attribution. Development opportunities are pitted against flag State control. Even if the radical change is made to zone based attribution, this will remain a problem area in catch attribution. At least one fishing State has expressed the view that, due to the associated problems, no chartering should be allowed on the high seas.

Table 4: Attribution of Catches by Chartered Vessels on High Seas

Options	Some Positive Features of the Option
Attribution to host country	<ul style="list-style-type: none"> • Many CCMs feel that this issue has been settled; Logical arguments have been constructed, supported by various Commission decisions and agreed text of Commission meetings, to proceed from one of several CCMs and arrive at the principle of host country attribution on the high seas. • Consistent with the Convention, this option enhances development aspirations of Pacific Island Countries, especially those adjacent to high seas. • With respect to international precedent, in ICCAT (the only other tuna RFMO where there is a substantial amount of chartering by developing countries) all catches by chartered vessels, including those on the high seas, are attributed to the host country. • There is continuity of attribution practice in the geographic transition by a chartered vessel from in-zone to high seas. • In the scenario of all Pacific Island Countries requiring charter arrangements rather than access arrangements (e.g. Brazil), a relatively uniform scheme is created. • The alternative (flag State attribution) could have negative implications for Pacific Island Countries, should the flag State be required to reduce catches.
Attribution to flag State	<ul style="list-style-type: none"> • The principle of flag State control of vessels operating on the high seas supports attributing catches by vessels on the high seas to the flag State of the vessel; the attribution of a vessel's catch to the flag State is linked to that flag State's responsibility for the activities of the vessel. • Several fishing States indicate less IUU fishing is likely to occur • Concurrent charters (chartering a vessel simultaneously to several parties in different host States) does not present an attribution problem. • Some Pacific Island Countries that have attributed in this manner have set a precedent for SPC's default attribution practices. • ICCAT (which attributes to host countries on the high seas) has tighter controls on chartering than WCPFC.
Flexible attribution	<ul style="list-style-type: none"> • This involves the attribution arrangements being specified in each charter agreement. • This puts the onus on the two commercial parties involved to secure the agreement of the two States involved.

6.2.3 Catches by chartered vessels in a non-host zone

Catches by chartered vessels in a zone of a country that is not the chartering (host) country are often attributed by specific CCMs in the same way as they are for the high seas, practices that vary across the CCMs. At least one fishing state has expressed the view that, due to the associated problems, no chartering should be allowed outside of the host country zone.

Table 5: Attribution of Catches by Chartered Vessels in a Non-Host Zone

Options	Some Positive Features of the Option
Attribution to host country	<ul style="list-style-type: none"> • Many CCMs feel that this issue has been settled; Logical arguments have been constructed, supported by various Commission decisions and agreed text of Commission meetings, to proceed from one of several CCMs and arrive at the principle of host country attribution in a non-host zone. • There is continuity of attribution practice by chartered vessels in the geographic transition between zones. • Consistent with the Convention, this option enhances development aspirations of Pacific Island Countries. • The alternative (flag State attribution) could have negative implications for Pacific Island Countries, should the flag State be required to reduce catches
Attribution to flag State	<ul style="list-style-type: none"> • Does not require all parties (flag State, host country, zone country) to be aware of the chartering arrangements to avoid problems due to double counting and under-counting. • The alternative (attribution to host country) could result in weak control over vessels

6.2.4 Concurrent charters

Chartering a single vessel simultaneously to entities located in different countries (sometimes in more than two countries) is a practice that appears to be undertaken primarily by Chinese Taipei and primarily for access purposes. It creates problems because several countries could be attributing the catch to themselves: the flag State and each of the host countries.

Table 6: Concurrently charters

Options	Some Positive Features of the Option
WCPFC ban on concurrent charters	<ul style="list-style-type: none"> • Simplicity • Improvement in catch accounting with minimal SPC/WCPFC expense • With respect to international precedent, in ICCAT (the only other tuna RFMO where there is a substantial amount of chartering by developing countries) concurrent charters are banned: "In no case, shall the vessel be authorized to fish under more than one chartering arrangement at the same time".
Any flag State that participates in concurrent charters must notify the Commission	<ul style="list-style-type: none"> • Minimum disruption to Chinese Taipei fleet operations. • Minimum disruption to flow of access to Pacific Island Countries from Chinese Taipei fleet. • Minimum disruption to flow of fish to processing plants supplied by Chinese Taipei fleet.
Acknowledgement of concurrent charter by Commission required before operations of charter can commence	<ul style="list-style-type: none"> • Puts the onus on the flag State to secure authorization • Does not rely on the efficiency of reporting systems of flag State

6.2.5 Territorial catch differentiation

Currently, there are no rules for differentiating the fisheries of a Commission member from those of an associated territory – and CCMs with territories are left to attribute as they see fit. Territories, like small island developing States, have an exemption from catch limits in some CMMs for "a responsible level of development". Without some guidance there is some possibility that this situation could undermine Commission management measures without stimulating development in the territory.

Table 7: Territorial Catch Differentiation

Options	Some Positive Features of the Option
Follow US procedures	<ul style="list-style-type: none"> • This option involves attributing catch to a territory if they are not caught in the zone around the metropolitan country and they are caught by a vessel authorized to fish in the territory. • Follows an established precedent • Restricts to some degree amount of catches attributable to the territory
Require basing and landing in a territory	<ul style="list-style-type: none"> • Assures some degree of development benefits to territory. • The economics would restrict to some degree amount of catches attributable to the territory
Tighten up phrase "responsible level of development"	<ul style="list-style-type: none"> • Restricts to some degree amount of catches attributable to the territory.

6.2.6 Control of the attribution process

Situations are likely to arise in the WCPFC that will require some entity to arbitrate conflicting catch attribution practices between CCMs. Similarly, there will be times when important decisions need to be made on attribution. Currently, SPC (in the role as WCPFC data managers) perceives themselves to be the only caretaker of the catch data – and that attribution instructions should come from the Commission. Presently, there are no established mechanisms in the Commission for providing routine attribution advice, giving instructions to CCMs of greater detail than that in any general guidelines, re-attributing historical catch data, and settling conflicting attribution claims. The WCPFC Secretariat maintains they presently have no formal protocols on catch attribution. The options suggested in Table 8 are not mutually exclusive.

Table 8: Control of the Attribution Process

Options	Some Positive Features of the Option
<i>Ad hoc</i> decisions at the level of the Commission on important attribution issues	<ul style="list-style-type: none"> The authority and credibility of a decision at the level of the Commission gives some degree of assurance that implementation will occur
WCPFC Secretariat to be given authority to interpret any Commission-approved guidelines and settle conflicting CCM attribution claims	<ul style="list-style-type: none"> The Commission would only need to be bothered with major attribution problems. Speed
SPC (in the role as WCPFC data managers) to be formally given an attribution oversight role	<ul style="list-style-type: none"> Formalizes a role that SPC by necessity has taken on
All of the above	<ul style="list-style-type: none"> Based on past experience, this is likely to be needed to rectify attribution problems and effectively attribute catches

6.2.7 Some clarification of terminology

There are a number of terms used in conjunction with attribution that are not precise and could easily lead to inconsistent attribution practices. In any guidelines formulated, the meaning of those terms should be specified more exactly to eliminate ambiguity.

1. “All intents and purposes” This is used in “Scientific Data to be Provided to the Commission”: “Flag States or entities shall be responsible for providing to the Commission scientific data covering vessels they have flagged, except for vessels operating under joint-venture or charter arrangements with another State such that the vessels operate, for all intents and purposes, as local vessels of the other State...”
2. “Integral part” This term is used in several WCPFC meeting reports and CMMs. For example: “vessels operated under charter, lease or other similar mechanisms by developing islands States and participating territories, as an integral part of their domestic fleet, shall be considered to be vessels of the host island State or territory”.
3. “Responsible development” This appears in the bigeye/yellowfin and swordfish CMMs in relation to exemptions for catch limits. CMM 2008-01: “...undertaking responsible development of their domestic fisheries...” and CMM 2008-03: “...who may wish to pursue a responsible level of development of their own fisheries...”.

Although there are likely to be many considerations besides attribution related to the use of these three terms, for the purpose of clarifying catch attribution, it is the elimination of the potential for alternative interpretation that is of key importance.

A proposal from FFA countries for a vessel chartering scheme offered the following:

Vessels operating under charter arrangements shall be considered as an integral part of the chartering Member or participating Territory’s domestic fleet if:

- They are licensed to fish in waters under the jurisdiction of the chartering Member or participating Territory, and
- They are normally unloaded in the ports of the chartering Member or participating Territory or a neighbouring CCM, and
- The commercial entity chartering the vessel is legally established in the chartering Member or participating Territory, except for chartering Members or participating Territories that do not have a system of national company registration or control measures. Such chartering Member or participating Territory shall establish an alternative arrangement for securing control over the charterer.

There are several considerations involved in clarifying terms #1 and #2 above:

- The most important for attribution purposes is that the clarification of the two terms produces uniformity across CCMs to eliminate inconsistent attribution practices.
- There would be advantages of uniformity if “all intents and purposes” is equated to “integral part”.
- The FFA proposal would eliminate most of the ambiguity and potential for alternative interpretations.
- A possible remaining ambiguity is the treatment of chartered vessels in countries where there is no domestic fleet (i.e. an “integral part” of a non-existent fleet). Considering one of the main objectives for chartering is to assist in domestic industry development, there appears to be justification for being especially supportive of those countries that have no fishing fleets.

With respect to “responsible development”, the options are that the Commission could:

- Specify an amount of fish that would be the limit of the responsible development. A US advisory body is considering using 1,000 metric tonnes of bigeye for CMM 2008-01 for each of its participating territories.
- State that specifying a tonnage is unreasonable in that it limits a development aspiration – an unfair constraint on the already limited development opportunities of small island developing states.

6.2.8 Some administrative matters

The Commission’s data rules specify that operational catch and effort data is to be provided. That rule is qualified by: “It is recognized that certain members and cooperating non-members of the Commission may be subject to domestic legal constraints, such that they may not be able to provide operational data to the Commission until such constraints are overcome. Until such constraints are overcome, aggregated catch and effort data and size composition data...shall be provided.” The operational catch and effort data is required to verify certain attribution practices¹⁷. The problem is that, while the exemption from providing the operational data was intended to be temporary, the exemption is without time limit and could conceivably be used in perpetuity – and has been used by some fishing States for several years. To effectively verify attribution practices, some time limit on not supplying the operational data is required.

The WCPFC Charter Notification Scheme (CMM 2009-08) stipulates that each chartering Member or Participating Territory shall notify the Commission of any vessel to be identified as chartered. An important function of the Notification Scheme is to alert flag states to cease reporting on chartered vessels – otherwise there may be catch reporting by both the flag State and the chartering (host) country. To strengthen this understanding:

- the Executive Director in his required correspondence to CCMs giving information on chartered vessels, should include a request to the flag states to cease reporting on those vessels.
- The WCPFC should publish on their web site (in the same way the WCPFC Vessel Record is available), the list of all chartered vessels, the period they were chartered for, the host country and the flag state country.

The WCPFC Charter Notification Scheme is intended to introduce some degree of transparency in the chartering process. In doing so, it helps improve the attribution of catch from chartered vessels. For the Notification to be effective in this role, it is important that all chartered vessels are reported in accordance with the scheme – and that there are provisions for dealing with non-reported chartered vessels.

¹⁷ In addition to identifying possible double counting of chartered vessels (extensively discussed above), operational data could be very useful in attributing catches in the zone where WCPFC and IATTC areas overlap.

6.3 Zone based attribution

Many of the current difficulties in catch attribution may cease to exist should the fundamental change to zone based attribution occur. While the justification of such a move is beyond the scope of the present study, what is relevant is that many of the considerations on guidelines listed above will be irrelevant. Before too much effort is expended on the development and finalizing of any attribution guidelines, it may be worthwhile for CCMs to make a determination of the likelihood that zone based attribution will be the norm in the future in the WCPFC area. It should be noted that the Marshall Islands has already formally declared its intent to attribute all longline catches in the Marshall Islands zone to the Marshall Islands. Other Pacific Islands Countries have indicated informally that they wish to move in the same direction.

Should zone based attribution become the default practice in the region, a number of areas related to attribution still need to be clarified. These include:

- Old issues: Attribution of catches by chartered vessels on the high seas, tightening up of several administrative procedures dealing with chartered vessels
- New issues: Attribution where there are disputed sea boundaries, issues relating to the transitional period, and in the zone where the WCPFC and IATTC areas overlap.

7.0 Concluding Remarks

In the interest of clarifying attribution uncertainties in order to make the Commission's management measures more effective, it is recommended that WCPFC consider the adoption of attribution guidelines to cover those areas where difficulties have been experienced:

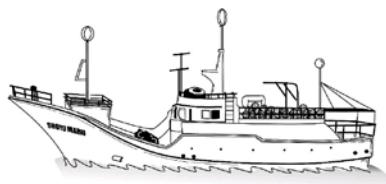
- The specificity of attribution principles
- Attribution of catches by chartered vessels on the high seas
- Attribution of catches by chartered vessels in a non host zone
- Concurrent charters
- Differentiating the fisheries of a territory
- Control of the attribution process
- Terminology
- Some administrative matters

Options for clarifying those areas have been presented in this report. Because there are likely to be considerations associated with the various options that go beyond catch attribution, no attempt is made to favor any option, other than pointing out some of the positive aspects.

Should the Commission establish positions on the areas of attribution difficulty, it would be a straightforward task to transform those positions into attribution guidelines.

In order to complete the task of improving management measures through improvements in attribution, a significant data gap in particular needs to be filled. Operational catch and effort data from fishing States are required to verify that attribution has been done correctly (i.e. no double counting of chartered vessels, sections 4.5.3 and 6.2.8 above). These data would also assist in clarifying attribution in the zone where the WCPFC and IATTC areas overlap.

The results of this study indicate that attribution should not be considered a trivial matter or simply a routine data cataloguing exercise. Aspirations and very large benefits may be affected by how catches are attributed



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Appendix 1: The Terms of Reference for the Consultancy

- a. Research current catch attribution practices used by CCMs and other RFMOs. At a minimum, the research shall include, but not be limited to, the following: detailed review of attribution of fisheries data and associated issues; interviews with experts in CCMs; and a review of existing literature (e.g., reports in published journals, papers developed for tuna RFMO meetings, policy papers published by governmental bodies) regarding catch attribution practices and management implications for fisheries worldwide. Recommendations shall be made on the consistency of attribution schemes used in the various RFMOs as well as within the WCPFC area of application.
- b. Conduct analyses (quantitative, qualitative, or comparative as appropriate) to assess the pros and cons of each of the catch attribution practices identified. The analyses shall assess the long-term environmental and economic implications for each catch attribution practice and should include assessment of whether a uniform catch attribution scheme is needed to apply to all CMMs or whether a particular scheme can be incorporated separately into each WCPFC decision.
- c. Craft recommended guidelines for the development of appropriate catch attribution practices that can be considered for implemented by the WCPFC and CCMs. The recommendations shall identify current data gaps that would need to be filled in order to implement the guidelines, such as specific information about the relevant vessels, including the nature of any charter arrangements (including parallel flags, if any) they are engaged in, and their characteristics and/or activity with respect to the fisheries of Participating Territories versus those of the appropriate Member responsible for its international affairs.
- d. Submit consultancy report to the Secretariat in accord with the schedule. The report shall detail the research and analyses, and set forth the recommended guidelines developed.

Discussions between the WCPFC secretariat and the consultancy firm in early October led to a number of clarifications/modifications of the above TORs:

- For the Pacific Island Countries, the main catch attribution practices should be given for the group, along with an explanation of the uncertainties in many countries.
- The report should include an additional section where the important issues associated with catch attribution are identified and analyzed.
- Instead of the report giving the guidelines, the report should come up with some options for guidelines to be considered by CCMs.

Appendix 2: People Providing Information for this Study

Representatives of CCMs

Australia	Camille Goodman Anna Willock Fraser McEachan
Canada	Gary Miller
China	Xiaobing Liu
Chinese Taipei	Hong-Yen Huang Ding-Rong Lin Ren-Fen Wu Joseph Fu
Cook Islands	Colin Brown Peter Graham
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European Union	Roberto Cesari Pavina Nikolova Mario Alcaide
Federated States of Micronesia	Eugene Pangelinan Rhea Moss-Christian
Fiji	Sanaila Naqali Anare Raiwalui Jone Amoe
French Polynesia	Cedric Ponsonnet
Guam	Manny Duenas
Indonesia	Agus Budhiman Fayakun Satria
Japan	Takashi Koya Takumi Fukuda
Korea	Jong-Kwon Ahn
Marshall Islands	Glen Joseph
Nauru	Ace Capelle
New Caledonia	Christophe Fonfreyde
New Zealand	David Marx Matt Hooper
Niue	James Tafatu
Palau	Nannette Malsol
Papua New Guinea	Philip Polon Ludwig Kumoru Margaret Keheu
Philippines	Benjamin Tabios
Solomon Islands	Christian Ramofafia Ferral Lasi
Tonga	Silivenusi Ha'unga
Tuvalu	Sam Finekaso Falasese Tupau
United States	Ray Clarke Tom Graham Chris Boggs Eric Kingma Dale Squires
Vanuatu	Tony Taleo
Vietnam	V.Anh C.Vinh

Agencies

Commission for the Conservation of Antarctic Marine Living	Andrew Wright
Commission for the Conservation of Southern Bluefin Tuna	Bob Kennedy
Food and Agriculture Organization	Richard Grainger Sachiko Tsuji Jeremy Turner John Fitzpatrick Blaise Kuleumegan Judith Swan
Forum Fisheries Agency	Su'a N.F. Tanielu James Movick Wez Norris, Director Lara Manarangi-Trott Len Rodwell Les Clark
Indian Ocean Tuna Commission	Alejandro Anganuzzi Gerrard Domingue
Inter-American Tropical Tuna Commission	Nick Vogel Mike Hinton
International Commission for the Conservation of Atlantic Tunas	Driss Meski Carlos Palma
International Seafood Sustainability Foundation	Victor Restrepo
National Fisheries Development Ltd	Phil Roberts
OPAGAC	Julio Moron
Parties to the Nauru Agreement	Transform Aqorau Maurice Brownjohn
Secretariat of the Pacific Community	Mike Batty John Hampton Peter Williams Tim Lawson Ian Bertram
South Pacific Regional Fisheries Management Organisation	Robin Allen
Western and Central Pacific Fisheries Commission	Glenn Hurry Peter Flewwelling Sungkwon Soh Martin Tsamenyi
Individuals	Mike McCoy
	Tony Lewis
	David Ardill
	Ian Cartwright
	Gerry Geen
	Fabio Hazin (Brazil)

Appendix 3: Abbreviations Used in this Report

AFMA	Australian Fisheries Management Authority
BET	Bigeye tuna
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCM	Commission members, cooperating non-members and participating territories
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CMM	Conservation and management measure
CWP	Coordinating Working Party on Fishery Statistics
DWFN	Distant water fishing nation
EEZ	Exclusive economic zone
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IUU	Illegal, unreported and unregulated
NAFO	Northwest Atlantic Fisheries Organization
OECD	Organisation for Economic Cooperation and Development
PNA	Parties to the Nauru Agreement
SC	Scientific Committee
SEFO	South East Atlantic Fisheries Organisation
SPC	Secretariat of the Pacific Community
TAC	Total allowable catch
TCC	Technical and Compliance Committee
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific
YFT	Yellowfin tuna

Appendix 4: The Coordinating Working Party on Fishery Statistics

The Coordinating Working Party on Fishery Statistics (CWP) provides a mechanism to coordinate fishery statistical programmes of regional fishery bodies and other inter-governmental organizations with a remit for fishery statistics. It was established by resolution 23/59 of the FAO Conference under Article VI-2 of the Organization's Constitution at its Tenth Session in 1959. The CWP was reconstituted in 1995 to extend its geographic mandate beyond the Atlantic and better respond to the increasing demands for reliable fishery statistics. (FAO 1995)

SPC's participation at meetings of the CWP began with the Fifteenth Session in Dartmouth, Canada in July 1992, when it attended as an observer at the invitation of FAO. SPC has participated in all subsequent sessions: Madrid in July 1995, Hobart in March 1997, Luxembourg in July 1999, Noumea in July 2001 and the Seychelles in January 2003. Following the modification of the CWP statutes in 1995, SPC became the first non-Atlantic member of the CWP at the Seventeenth Session in March 1997, and hosted and chaired the Nineteenth Session in July 2001. In the mid-2000s WCPFC replaced SPC in participating in CWP meetings. (Lawson 2004)

The CWP is composed of experts nominated by intergovernmental organizations which have a competence in fishery statistics. FAO serves as the CWP Secretariat. The CWP meets in full session approximately every two years. The participating organizations in the CWP are:

- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT)
- Food and Agriculture Organization of the United Nations (FAO)
- General Fisheries Commission for the Mediterranean (GFCM)
- Indian Ocean Tuna Commission (IOTC)
- Inter-American Tropical Tuna Commission (IATTC)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- International Council for the Exploration of the Sea (ICES)
- International Whaling Commission (IWC)
- North Atlantic Salmon Conservation Organization (NASCO)
- North East Atlantic Fisheries Commission (NEAFC)
- Network of Aquaculture Centres in Asia-Pacific (NACA)
- Northwest Atlantic Fisheries Organization (NAFO)
- Organisation for Economic Cooperation and Development (OECD)
- South East Atlantic Fisheries Organisation (SEAFO)
- Southeast Asian Fisheries Development Center (SEAFDEC)
- Statistical Office of the European Communities (Commission of the EU/Eurostat)
- Western and Central Pacific Fisheries Commission (WCPFC)

A CWP Handbook of Fishery Statistical Standards was developed to indicate the principles applied by the international agencies. It covers 22 topics, including one dedicated to assigning nationality to catches. The text in italics below is the Handbook's section on nationality, updated by more recent text supplied by FAO¹⁸.

In 1954 the United Nations Statistical Commission decided that fish catches should be assigned to the country of the flag flown by the fishing vessel. This concept was adopted by CWP (and hence its member agencies) and, as a result, any change in this concept would have serious adverse effects on the continuity of catch data. It should be noted that "flag country" generally refers to the country in which the vessel (which may be small and not physically flying a flag) is registered.

However, in recent years national authorities and international agencies have been

¹⁸ R.Grainger, Chief; Fishery Information, Data and Statistics Unit, FAO

experiencing difficulties in certain circumstances in assigning a nationality to catches. At each of its sessions since the Ninth (Dartmouth, Canada, August 1977), the CWP has reviewed the concept of the "flag state" and has identified a number of situations (not exclusive) in which difficulties in assigning a nationality might exist:

- a) when a fishing vessel of the flag country transfers, either at sea or in port, the catch, or part of it, to another vessel of a different flag;*
- b) when a fishing vessel unloads its catch, or part of it, in a foreign port;*
- c) when a vessel flies a flag of convenience, i.e. the country in which the vessel is registered is not the country of the nationality of its owner, or that of the enterprise operating the vessel;*
- d) when there is a joint venture, that is, the vessel fishes under a formal contract or agreement between two countries or people, or enterprises of two or more nationalities. Such a situation may also involve cases (a) and/or (b) above.*

The CWP is of the opinion that, although there are some difficulties, the flag of the fishing vessel is the best available criterion for the assignment of nationality to catch and landings data and it should continue to be so in the foreseeable future, in order to avoid disruption of data continuity.

As a result of its deliberations, the CWP has revised the wording of its recommendations on nationality, maintaining the principle of the flag country, but elaborating on the recommended procedures to cover the situations arising from cases (a) to (d) above. The concept now reads:

The flag of the vessel performing the essential part of the fishing operation should be considered the paramount indication of the nationality assigned to the catches. The flag State of the vessel performing the essential part of the fishing operation should be responsible for the provision of catch data. Where a foreign flag vessel is fishing in the waters under the national jurisdiction of another State, the flag State of the vessel should have at all times the responsibility to provide relevant catch and landing data. The only exceptions to this shall be:

a) where the vessel undertakes fishing under a charter agreement or arrangement to augment the local fishing fleet, and the vessel has become for all practical purposes a local fishing vessel of the host country;

(b) where the vessel undertakes fishing pursuant to a joint venture or similar arrangement in waters under the national jurisdiction of another State and the vessel is operating for all practical purposes as a local vessel, or its operation has become, or is intended to become, an integral part of the economy of the host country.

In any situation where there is uncertainty as to the application of these criteria, any agreement, charter, joint venture or other similar arrangement should contain a provision setting out clearly the responsibility for reporting catch and landing data, which should be reported to the flag State and, where relevant, to any coastal State in whose waters fishing operations are to take place or competent subregional, regional or global fisheries organization or arrangement

Appendix 5: Literature on catch attribution practices

There is only a limited amount of information in the public domain on catch attribution practices and the associated management implications. Specifically for the WCPFC tuna fisheries, the subject appears to have received just casual mention rather than focused attention:

- Cartwright and Willock (2000) in a study of rights-based management in tuna fisheries refer to the different perspectives on catch attribution in the WCPO: the coastal state view and a distant-water fishing nation view.
- Agnew et al. (2006) in a WCPFC-sponsored study of allocation mention that a key issue that the Commission will need to address to establish an allocation system is how much of the historical effort or catch in an EEZ should be credited to the coastal state and how much should be attributed to the flag states that have undertaken the fishing.
- PIRO (2009) contains some discussion of catch attribution schemes in the context of differentiating catches of Hawaii and the participating US territories.

Worldwide, the situation appears similar; the literature contains few works dedicated to aspects of catch attribution that are relevant to tuna fisheries. Fisheries specialists with substantial international experience in allocations and statistics concur that not much has been written about attribution. (R.Granger, FAO; D.Squires, NMFS; personal comm.).

Some of the more useful documents used in the present study were:

- Edeson (1999) reviews the legal aspects of fisheries data in the context of the principal international legal instruments in fisheries. It includes the subjects of catch history, nationality of catches, justification for flag state attribution by the Coordinating Working Party on Fishery Statistics, and the complications introduced by chartering.
- Shotton, R. (2001) is about allocation of fishing rights. It contains 21 country studies on making initial allocations. Most of those allocations were based to some degree on catch history, but few involve international fisheries.
- Fotedar (2005) is a bibliography of resource allocation issues in the marine environment.

One topic well-covered in the international fisheries literature that is related to catch attribution is the increasing dissatisfaction of developing countries of basing allocations on flag state catch history (i.e. past attribution practices):

- Mahon (2004) for the Caribbean: Historical catches and historical use of the resource has featured prominently in negotiations for allocations in several fora, notably NAFO and ICCAT. It has no rational basis and is severely disadvantageous to Caribbean States. There is no reason why any country should accept an inequitable distribution of the benefits of a resource purely because it has been so in the past.
- Butterworth and Penney (2004) for the high seas: The traditional basis for allocating total allowable catches for high seas fisheries has been in proportion to performance in terms of past catches. This basis is coming under increasing pressure in regional fisheries management organizations as new members, particularly developing states, without records of substantial past performance demand shares, citing acknowledgement of their rights to such in legal instruments such as the 1995 UN Fish Stocks Agreement.
- Govt of Brazil (2000) for Brazil: The country is firmly convinced of its right to develop high seas fishery and that the allocation of catching quotas based mainly, if not solely, on historical catches directly harms this right.
- Grafton, et al. (2006) for the Atlantic: historical catch has been the major determinant in past national allocations. Coastal states and parties to the ICCAT without historically large catches argued for a change in the allocation formula — revisions that were instituted in 2001 following a series of allocation disputes in the 1990s.