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Survey on the Treatment of Support/Supply/Tender Vessels that Service Drifting FADs in Tuna RFMOs

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Introduction

1. The use of man-made floating objects, also known as drifting fish aggregating devices (dFADs), by purse seine vessels has increased in all oceans and the technology to track dFADs (e.g., echo-sounder and satellite buoys, remote locating/tracking instruments) associated with dFADs is evolving rapidly (Lopez et al., 2014)¹. In addition, purse seine vessels often utilize other vessels – called supply, support, auxiliary or tender vessels – to deploy dFADs and service them, such as to repair damage to the dFAD structure itself or replace inoperable buoys, to determine if the dFAD is productive, etc. The use of such vessels and recent technological advances have made purse seine fishing with dFADs increasingly efficient and contributing to effort creep.

2. The purpose of this survey paper is to review how the tuna regional fisheries management organizations (tRFMOs) in the Atlantic, Indian, Western and Central Pacific and Eastern Pacific Oceans treat support/supply/tender vessels (hereafter “support vessels”), including if they are defined as “fishing vessels” under the parent conventions, and whether or not their use is monitored or regulated by the tRFMOs. Four of the tuna RFMOs have established working groups on dFAD management, and the current recommendations from these working groups will also be reviewed.

Use of Support Vessels

3. Support vessels are in some regions used by purse seine vessels fishing with dFADs. These support vessels range from 40 to 50 meters in length and are operated by a crew of around 6 persons. In the 1990s, bait-boat fishing vessels were recycled to be used as support vessels to work with dFADs. However, now, in some fleets, support vessels are built specifically to serve as dFAD maintenance boats with deck characteristics designed to manipulate dFADs. Depending on the company, support vessels can be shared between two or more vessels either simultaneously or with a shift system, or a single purse seine vessel can use one of them. The activities of support vessels are governed by the fishing master of the purse seiner who maintains continuous communication with the captain of the support vessel.

¹ Lopez, J., Moreno, G., Sancristobal, I., and Murua, J. 2014. Evolution and current state of the technology of echosounder buoys use by Spanish tropical tuna purse seiners in the Atlantic, Indian and Pacific Oceans. Fisheries Research 155, 127-137.

4. The main task of the support vessel is maintaining a purse seine vessel's network² of dFADs at sea in good condition and in the appropriate areas. This includes seeding or deploying dFADs, replacing the structure of old or damaged dFADs and geo-locating buoy if needed, moving dFADs from areas that are not productive to areas where fishing may be better, retrieving dFADs from areas far from the authorized fishing zone, etc. While visiting dFAD networks, support vessels also inform purse seiners about the presence of fish by estimating the abundance of fish using acoustic instruments onboard, sampling using trolling or hand-line fishing gears and/or through visual observations. Anecdotal reports suggest that if the support vessel finds a productive dFAD in an area with a high density of purse seiners, they will sometimes try to deter other purse seiners from using the dFAD by waiting near the dFAD until their associated purse seiner arrives. All of these activities related to dFAD network maintenance increase the efficiency of the purse seiner, reducing the time needed by the purse seiner to search for or maintain dFADs, which increases the time available for fishing and therefore contributes to effort creep. The use of support vessels allows a purse seine vessel to use more dFADs at sea. Anecdotal information is that a single vessel, with a support vessel, can work with around 1000 dFADs. However, operating without a support vessel, the maximum number of dFADs that can be worked is 400 (unless a vessel is sharing FADs with another vessel).

5. Support vessels spend most of the time sailing and working for the purse seiner, but also help with performance and logistics, by navigating to port for food, water, equipment or oil for purse seiners. They also help with activities related to the exchange of crew and taking fishermen to port in case of illness. Navigation and travel costs of support vessels are lower compared to those of the purse seiner, so there are economic efficiencies with their use for the purse seiner including for example reduced fuel consumption and a lower carbon footprint. Therefore, when working with support vessels, purse seiners have more time to devote to dedicated fishing activities, and realize increased economic efficiencies with reduced navigation and travel time, again increasing fishing and contributing to effort creep.

6. Finally, there are some support vessels that act as anchored FADs (aFADs), by being positioned above seamounts. Their performance is completely different to the support vessels mentioned above because these vessels remain anchored and do not engage in any other activity. These support vessels aggregate tunas and then inform their purse seiners about the amount of fish beneath their vessel. Purse seiners associated to anchored support vessels benefit from this alternative when fishing is not as good in other areas. Presently, there are two support vessels permanently anchored in a seamount in the Indian Ocean. This activity started in the 1990s. Although it stopped for a period of time due to the risk of piracy, it has resumed in recent years. In the Atlantic Ocean, there is a support vessel that intermittently is anchored above two different seamounts.

Treatment of Support Vessels in Four tRFMOs

IATTC

² A network of dFADs refers to a group of dFADs that were seeded simultaneously and have the potential to drift together towards productive areas.

7. Definition. The 2003 Antigua Convention defines “vessel” in Article 1 as “any vessel used or intended for use for the purpose of fishing, including support vessels, carrier vessels and any other vessels directly involved in such fishing operations.” Therefore, the provisions of the Antigua Convention, and any conservation measures adopted pursuant to it, that refer to “vessels” would apply to support vessels, unless specifically exempted.

8. Applicable conservation and monitoring measures. In 1999, the IATTC adopted Resolution C-99-07 on Fish-Aggregating Devices³ that prohibits the use of tender vessels operating in support of vessels fishing on FADs in the Eastern Pacific Ocean, without prejudice to similar activities in other parts of the world. This Resolution is still active and is included in the compliance questionnaire that CPCs are to complete annually for review during the meeting of the Committee for the Review of Implementation of the Measures Adopted by the Commission. In addition, the IATTC’s Resolution establishing a list of vessels resumed to have carried out illegal, unreported and unregulated (IUU) fishing activities (C-15-01) requires that CPCs shall take all necessary measures, under their applicable legislation and pursuant to paragraphs 56 and 66 of the FAO International Plan of Action to Combat IUU to ensure that fishing vessels, support vessels, mother ships or cargo vessels flying their flag do not participate in any transshipment or joint fishing operations with, support, or re-supply vessels on the IATTC IUU Vessel List.

9. FAD working group recommendations. The IATTC FAD working group will meet twice in 2016, once in May and again in June.

WCPFC

10. Definition. The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC Convention) defines “fishing” in Article 1 as:

- (i) searching for, catching, taking or harvesting fish;
- (ii) attempting to search for, catch, take or harvest fish;
- (iii) engaging in any other activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fish for any purpose;
- (iv) placing, searching for or recovering fish aggregating devices or associated electronic equipment such as radio beacons;
- (v) any operations at sea directly in support of, or in preparation for, any activity described in subparagraphs (i) to (iv), including transshipment;
- (vi) use of any other vessel, vehicle, aircraft or hovercraft, for any activity described in subparagraphs (i) to (v) except for emergencies involving the health and safety of the crew or the safety of a vessel;

The WCPFC Convention further defines “fishing vessel” as “any vessel used or intended for use for the purpose of fishing, including support ships, carrier vessels and any other vessel directly

³ <http://www.iattc.org/PDFFiles/C-99-07%20FAD%20resolution%20Jul%2099.pdf>

involved in such fishing operations.” Therefore, the provisions of the WCPF Convention, and any conservation measures adopted pursuant to it, that refer to “fishing” or “fishing vessels” would apply to support vessels, unless specifically exempted.

11. Applicable conservation and monitoring measures. Conservation Measure (CMM 2013-10) on the WCPFC Record of Fishing Vessels and Authorizations to Fish requires members to take necessary measures to ensure that its fishing vessels, when in the Convention Area, only transship to/from, and provide bunkering for, are bunkered by or otherwise supported by: (a) vessels flagged to members, or (b) other vessels flagged to States not members of the Commission only if such vessels are on the WCPFC Interim Register of non-Member Carrier and Bunker Vessels established under that CMM; or (c) vessels operated under charter, lease, or similar mechanisms as outlined in the CMM. Further, because support vessels are “fishing vessels,” as defined by the WCPF Convention, flag States are obligated, under international law⁴, to authorize their vessels to fish on the high seas, to maintain a record of such vessels, and to share that record with the Commission, where it becomes part of the Commission Record per CMM 2013-10. As a result, at the time of writing, there are nearly 500 support vessels listed on the WCPFC Record of Fishing Vessels. Defining support vessels “fishing vessels” also makes them subject to the WCPFC VMS requirements (CCM 2014-02), high seas boarding and inspection (CMM 2006-08), the marking and identification of fishing vessels (CMM 2004-03), and the requirement for unique vessel identifier, such as an IMO or LR number (if the support vessel is at least 100 GT or 100 GRT in). In addition, the WCPFC’s Conservation Measure establishing a list of vessels resumed to have carried out illegal, unreported and unregulated (IUU) fishing activities (CMM 2010-06) requires that members take all necessary non-discriminatory measures under their applicable legislation, international law and each CCMs’ international obligations, and pursuant to paragraphs 56 and 66 of the FAO International Plan of Action to Combat IUU to ensure that fishing vessels, support vessels, mother ships or cargo vessels flying their flag do not participate in any transshipment or joint fishing operations with, support or re-supply vessels on the WCPFC IUU Vessel List.

12. The current tropical tuna conservation measure (CMM 2015-01) does not appear to require support vessels to carry an observer as the 100% coverage requirement applies specifically to purse seine vessels, fishing in the area bounded by 20 N and 20 S⁵. However if the support vessel is a purse seine vessel, under the WCPFC Convention definition of “fishing,” the CMM observer requirement could be argued to apply to those support vessels. Further, CMM 2007-01, establishing the Commission’s Regional Observer Program (ROP) outlines the scope as follows:

“5. The Commission ROP shall apply to the following categories of fishing vessels authorized to fish in the Convention Area in accordance with the Commission’s Conservation and Management Measures 2004-01:

- i) vessels fishing exclusively on the high seas in the Convention Area, and*
- ii) vessels fishing on the high seas and in waters under the jurisdiction of one or more coastal States and vessels fishing in the waters under the national jurisdiction of two or more coastal States.”*

⁴ See Article 18 of the UN Straddling Fish Stocks and Highly Migratory Fish Stocks Agreement, Article III of the FAO Compliance Agreement, and Article 7.6 of the FAO Code of Conduct for Responsible Fisheries.

⁵ See paragraphs 33-34.

Further, in the section on the implementation program for the ROP, the CMM anticipates possible future measures that would require observers on additional vessel types engaged in other covered fishing activities:

“CCMs shall also be expected to meet any additional ROP observer obligations that may be included in any measure adopted by WCPFC, such as provisions of a catch retention measure, a FAD management measure or a transshipment measure. Such measures may include observer requirements for freezer longliners, purse seiners and/or carriers. “

Finally, the WCPFC ROP Minimum Standard Data Fields⁶ includes “how a FAD is detected” and “origin of FAD” in the FAD data fields. One of the codes for the “Origin of FAD” is “deployed by FAD auxiliary vessel.”

13. FAD working group recommendations. The recommendations from the First Meeting of the WCPFC FAD Management Options Intersessional Working Group (2015)⁷ discussed a proposal to better understand the number of FADs deployed, including through having vessel operators use a logbook to identify the buoy or FAD every time one was retrieved or deployed and a marking scheme for non-electronically buoyed FADs. The importance of collecting data from tender vessels was also raised in the Working Group. Further, a draft research plan on FADs was prepared, which includes an area on fleet behavior.

ICCAT

14. Definition. The International Convention for the Conservation of Atlantic Tunas does not include definitions of “fishing” or “fishing vessels”. However, some in force ICCAT Recommendations do, by their terms, define “large-scale fishing vessels” or “commercial fishing vessels” or “fishing vessels” such that they include auxiliary, supply and support vessels⁸. In addition, the use of the terms “operate” and “authorized to fish,” as opposed to “fishing,” could be interpreted to and, in fact, may extend some measures to auxiliary, support and support vessels.

15. Applicable conservation and monitoring measures. ICCAT Recommendation 13-13 Establishing an ICCAT Record of Vessels 20 meters in Length Overall or Greater Authorized to Operate in the Convention Area requires CPCs to submit a list of fishing vessels that are authorized to operate in the Convention area, there is no requirement to report support, carrier, or other kinds of vessels that may assist fishing vessels in their operations under this measure. However, ICCAT Recommendation 15-01 on a Multi-annual Conservation and Management Programme for Tropical Tunas requires that CPCs authorize vessels 20 meters LOA or greater flying their flag allowed to fish bigeye and/or yellowfin and/or skipjack tunas in the Convention area and vessels flying their flag used for any kind of support of this fishing activity (referred to

⁶ http://www.wcpfc.int/system/files/Table-ROP-minimum%20standard%20data%20fields%20-%202016%20update_0.pdf

⁷ http://www.wcpfc.int/system/files/WCPFC12-2015-22_rev2%20Summary%20Report%20of%20the%201st%20meeting%20of%20FADMgmtOptions_final.pdf

⁸ ICCAT Recommendations use these terms interchangeably.

as "authorized vessels"). Those authorized vessels must be entered in an ICCAT record of authorized tropical tuna vessels. Further, fishing vessels 20 meters LOA or greater not entered into this ICCAT record are deemed not to be authorized to fish, retain on board, transship, transport, transfer, process or land bigeye and/or yellowfin and/or skipjack tunas from the Convention area. Additionally, Recommendation 14-04 Amending the Recommendation 13-07 by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean requires the listing of "catching vessels authorized to fish actively" for bluefin tuna in the eastern Atlantic and Mediterranean Sea and "all other fishing vessels (i.e. catching vessels excluded) authorized to operate for bluefin tuna in the eastern Atlantic and Mediterranean Sea." As a result, the online integrated ICCAT Record of Vessels includes more than 120 auxiliary vessels, which are further broken down into two categories of "support" and "support (BB/PS)" vessels.⁹ Therefore, ICCAT requires the listing of support vessels on the ICCAT Record that are active in the bluefin tuna fishery in the eastern Atlantic and Mediterranean Sea and authorized in bigeye and/or yellowfin and/or skipjack tuna tropical tuna fisheries.

16. ICCAT Recommendation 11-08 establishing a list of vessels presumed to have carried out IUU fishing activities requires that CPCs take all necessary measures, under their applicable legislation so that the fishing vessels, support vessels, refueling vessels, the mother-ships and the cargo vessels flying their flag do not assist in any way, engage in fishing processing operations or participate in any transshipment or joint fishing operations with vessels included on the ICCAT IUU Vessels List.

17. ICCAT Recommendation 14-09 Concerning Minimum Standards for the Establishment of a VMS in the ICCAT Convention Area refers to all vessels, including catching, carrier and support vessels) in the preamble; suggesting that the intent of the Recommendation is that it cover all such vessels that exceed 20 meters between perpendiculars or 24 meters LOA. ICCAT Recommendation 15-01 (paragraph 44), however, does clearly require that supply vessels in the purse seine fishery to carry VMS and report those data to their national scientists. This Recommendation also requires the use of FAD logbooks, including on supply vessels (paragraph 21); reporting obligations specific to support vessels (paragraph 23); VMS reporting for supply vessels (paragraph 44); and, while not explicit, the requirement for FAD management plans could reasonably be interpreted to include support vessel activity (paragraphs 18-20, Annex 5).

18. FAD working group recommendations. ICCAT's FAD Working Group met in 2016 and its final recommendations included several related to support vessels:

"(a) Fishing capacity, including number of FADs. The ICCAT FAD Working Group recommends that relevant data are made available to accurately quantify the total effective effort and fishing capacity associated with this type of fishery, including the contribution of bait-boat and support vessels. The FAD Working Group recommends that the SCRS review that information and provide advice on adapting the fishing capacity in all its components (number of FADs, number of fishing vessels and support vessels) to achieve the management objectives for tropical tuna species.

⁹ <http://www.iccat.int/en/vesselsrecord.asp>

(b) FAD data reporting and scientific collaborations related to reporting obligations. The ICCAT FAD Working Group recommends extending data requirements for CPCs laid down in Rec. 15-01 as follows: Report the number of FADs deployed by support vessels per 1°x1° statistical rectangles and per month.

(c) The ICCAT FAD Working Group also highlights the needs to address and monitor possible changes of fishing strategies, in particular fishing activities of purse seiners in association with bait-boats and/or support vessels.”

IOTC

19. Definition. The Agreement for the Establishment of the Indian Ocean Tuna Commission does not include definitions of “fishing” or “fishing vessels”. However, some in force IOTC Resolutions do, by their terms, define “fishing vessels” to include auxiliary, supply and support vessels.

20. Applicable conservation and monitoring measures. IOTC Resolution 15-04 establishes an IOTC Record of Fishing Vessels. This Resolution states:

“For the purpose of this Resolution, fishing vessels including auxiliary, supply and support vessels that are not entered in the IOTC Record are deemed not to be authorised to fish for, retain on board, tranship or land tuna and tuna-like species or supporting any fishing activity or set drifting fish aggregation devices (DFADs) in the IOTC area of competence. This provision shall not apply to vessels less than 24 m in length overall operating inside the EEZ of the flag state.”

As a result, at the time of writing, there are 22 support vessels listed on the IOTC Record of Authorized Vessels. Also, IOTC Resolution 15/02 on Mandatory Statistical Reporting Requirements mandates CPCs to provide:

“a) The number and characteristics of purse seine supply vessels: (i) operating under their flag, (ii) assisting purse seine vessels operating under their flag, or (iii) licensed to operate in their exclusive economic zones, and that have been present in the IOTC area of competence;

b) Number of days at sea by purse seine and purse seine supply vessels by 1° grid area and month to be reported by the flag state of the supply vessel;

c) The total number set by the purse seine and purse seine supply vessels per quarter, as well as:

i. The positions, dates at the time of setting, FAD identifier and FAD type (i.e. drifting log or debris, drifting raft or fad with a net, drifting raft or FAD without a net, anchored FADs and other FADs e.g. Payao, dead animal etc.;

ii. The FAD design characteristics of each FAD (consistent with Annex 1 to Resolution 15/08

These data would be for the exclusive use of IOTC Scientific Committee and its Working Parties, subject to the approval of the data owners and in accordance with Resolution 12/02 Data confidentiality policy and procedures, and should be provided in a timely fashion.”

Further, it is possible that support vessels must have VMS under Resolution 15/03; however, this depends on if the activities of support or supply (IOTC resolutions appear to use these two terms interchangeably) vessels are considered “fishing” by the Commission.

In 2016, IOTC adopted three specific management measures or provisions related to support vessels. First, IOTC Resolution 16/07 On the Use of Artificial Lights to Attract Fish to Drifting FADs prohibits fishing vessels, including support and supply vessels, flying the flag of a CPC from installing or operating surface or submerged artificial lights for the purpose of aggregating tuna and tuna-like species or non-target, associated or dependent species on dFADs. Second, Resolution 16/08 On the Prohibition of the Use of Aircrafts and Unmanned Aerial Vehicles as Fishing Aids includes support and supply vessels. Third, Resolution 16/01 On Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence that includes this provision:

“Supply vessels: The total number of supply vessels by CPC on the IOTC active list shall not exceed half of the number of Purse seine vessels reported per CPC on the IOTC active list for the same year. Complementary to Resolution 15/08 on “Procedures on FADs Management Plan including a limitation on the number of FADs, more detailed specifications of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species” and to Resolution 15/02 “Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)”, CPC shall report annually which Purse seiners are served by each Supply vessel.”

21. FAD working group recommendations. The IOTC FAD Working Group will meet in 2016. However, the Terms of Reference establishing the Working Group include, as objectives:

“To collect and compile information about past and present numbers of buoys and FADs, changes in FAD-related technology and activities of supply vessels.”

“Through an active exchange of views, to identify management options, including the regulation of deployment limits and characteristics of FADs, and activities of support vessels.”

Conclusions and Recommendations

Registration and monitoring of supply vessels

24. The WCPFC, ICCAT and IOTC require support vessels to be on the RFMO’s regional vessel records, and IOTC requires parties to submit annual statistical data regarding the fishing effort of purse seine supply/support vessels. WCPFC defines support vessels as fishing vessels, and

therefore they are subject to the WCPFC VMS requirements, high seas boarding and inspection, the standards for marking and identification of fishing vessels, and required to have a unique vessel identifier, such as an IMO or LR number. ICCAT also requires support vessels to report to a VMS and report those data to their national scientists, use of FAD logbooks, and has reporting obligations specific to support vessels. Further, it is probable that the ICCAT requirement for CPCs to develop FAD management plans will result in plans that include support vessel activity. However, in none of the tRFMOs surveyed is it clear that these vessels must also carry observers, or use electronic monitoring systems¹⁰, in accordance with existing observer coverage requirements, although in the WCPFC and IOTC this may be possible to mandate in the future under existing management measures due to either clear (such as in the RFMO parent convention) or ad hoc (only in some recommendations or resolutions) definitions of “fishing vessel” or “vessel” and/or “fishing.” The IOTC and ICCAT FAD management options working groups have clear mandates to consider further support vessels and their activities.

Fisheries Conservation and Management Measures and Data Collection

25. A summary of the current treatment of support vessels in ICCAT, WCPFC and IOTC is provided in Table 1.

26. One tRFMO has banned the use of support/tender vessels (the IATTC). ICCAT’s FAD management working group recently made specific recommendations regarding the need to consider support vessels in relation to their impact on the effective fishing effort and fishing capacity, extending data requirements to include reporting the number of FADs deployed by support vessels and addressing and monitor possible changes of fishing strategies, in particular fishing activities of purse seiners in association with bait-boats and/or support vessels. The IOTC has taken the most proactive steps of the other tRFMOs through Resolution 16/01 by limiting the total number of supply vessels by CPC on the IOTC active list to half the number of purse seine vessels reported per CPC on the IOTC active list for the same year, and requiring CPCs to report annually which of their flagged purse seiners are served by each supply vessel.

Recommendations

27. Despite the current patchwork of conservation and monitoring measures that apply, or could apply, to support vessels, it is clear that tRFMOs recognize the contribution of support vessels by purse seine vessels in the global FAD-associated tropical tuna fishery and therefore the need for

¹⁰ Such systems are being trialed in various fleets and oceans as an alternative when conditions make deployment of human observers challenging. For example see:

http://www.spc.int/DigitalLibrary/Doc/FAME/Reports/Hosken_2016_SI_EReport.pdf

<http://iss-foundation.org/download-monitor-demo/download-info/issf-technical-report-2016-07-international-workshop-on-application-of-electronic-monitoring-systems-in-tuna-longline-fisheries/>

<http://iss-foundation.org/taking-fisheries-monitoring-to-the-next-level-electronic-monitoring-in-ghana/>

<http://iss-foundation.org/download-monitor-demo/download-info/issf-technical-report-2014-08-updated-guidance-on-electronic-monitoring-systems-for-tropical-tuna-purse-seine-fisheries/>

management. Based on this survey of the current treatment of support vessels in the four tropical tuna RFMOs, the following are recommendations for further work and action in tRFMOs:

- *FAD Working Groups.* Each tRFMO now has a FAD working group, these groups should:
 - Collect and share data on the number and use of support vessels, including identifying which particular purse seine vessels each support,
 - Determine the number of FADs being deployed and serviced by such vessels,
 - Determine how the activities of support vessels are being monitored by flag States and RFMOs, if at all,
 - Assess the time spent by support vessels in fishing related activities and FAD related activities, among other data elements; and
 - Include consideration of the use of support vessels and their activities in developing FAD management recommendations to their respective RFMO Commissions.
- Review and revise conservation measures and definitions.
 - tRFMOs should review and revise their conservation and management measures to clearly define the universe of vessels to which these measures apply, or whether “fishing vessel” used broadly does include support vessels.
 - The current tRFMO authorized vessel register databases should be clarified regarding what activities “auxiliary” or “support” vessels are engaged in, whether they are working as bait boats, servicing FADs, engaging in fishing, etc.
 - The current tRFMO vessel register listing requirements should be clarified regarding the various vessel types, and the activities they are authorized to engage in.
 - tRFMOs should also determine whether and how MCS tools, such as VMS or observer coverage, apply to these vessels.
 - Observer coverage and VMS requirements should apply to support vessels so data from these fishing activities are collected and reported.

28. A summary of these recommendations for support vessels in ICCAT, WCPFC and IOTC are provided in Table 1.

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Table. 1

RFMO	Use Prohibited?	Required to be on the RFMO Vessel Record?	Applicable MCS measures	Specific data reporting requirements?	Observers required?	Recommendation(s)
IATTC	Yes	N/A	N/A	N/A	N/A	N/A
IOTC	No	Yes	VMS may apply, but it depends on how “fishing” is defined by the Commission.	Yes	No, but possible.	<u>The IOTC FAD WG should:</u> ➤ Determine the number of FADs being deployed and serviced by such vessels, how the activities of support vessels are being monitored by flag States and the IOTC, if at all; and the time spent by support vessels in fishing related activities and FAD related activities, among other data elements. <u>The IOTC Commission should:</u> ➤ Review and revise their conservation and management measures to clearly define the universe of vessels to which these measures apply, or whether “fishing vessel” used broadly does include support vessels. ➤ The current IOTC authorized vessel register databases should be clarified regarding what activities “auxiliary” or “support” vessels are engaged in, whether they are working as bait boats, servicing FADs, engaging in fishing, etc. ➤ IOTC should also determine whether and how MCS tools, such as VMS or observer coverage, apply to these vessels. ➤ Require that observer coverage and VMS requirements apply to support vessels so data from these fishing activities are collected and reported.
ICCAT	No	Yes	VMS, FAD logbooks, FAD management plans should include support vessel activity.	Yes and VMS data is reported to national scientists.	No	<u>The ICCAT FAD WG should:</u> ➤ Collect and share data on the number and use of support vessels, including identifying which particular purse seine vessels each support. ➤ Determine how the activities of support vessels are being monitored by flag States and ICCAT, if at all. ➤ Assess the time spent by support vessels in fishing related activities and FAD related activities, among other data elements. <u>The ICCAT Commission should:</u> ➤ The current ICCAT authorized vessel register databases should be

RFMO	Use Prohibited?	Required to be on the RFMO Vessel Record?	Applicable MCS measures	Specific data reporting requirements?	Observers required?	Recommendation(s)
						clarified regarding what activities “auxiliary” or “support” vessels are engaged in, whether they are working as bait boats, servicing FADs, engaging in fishing, and for what fishery etc. ➤ ICCAT should also determine whether and how various MCS tools, such as observer coverage, apply to these vessels. ➤ Require that observer coverage requirements apply to support vessels so data from these fishing activities are collected and reported
WCPFC	No	Yes	Given the definition of “fishing, these should apply: VMS, HSB&I, marking and identification of fishing vessels, IMO or LR number.	Supply vessels are not explicitly included in the WCPFC provision of scientific data documentation.	No, but possible.	<u>The WCPFC FAD WG should:</u> ➤ Collect and share data on the number and use of support vessels, including identifying which particular purse seine vessels each support. ➤ Determine the number of FADs being deployed and serviced by such vessels. ➤ Determine how the activities of support vessels are being monitored by flag States and the WCPFC, if at all. ➤ Assess the time spent by support vessels in fishing related activities and FAD related activities, among other data elements. ➤ Include consideration of the use of support vessels and their activities in developing FAD management recommendations. <u>The WCPFC Commission should:</u> ➤ The current WCPFC authorized vessel register should be clarified regarding what activities “auxiliary” or “support” vessels are engaged in, whether they are working as bait boats, servicing FADs, engaging in fishing, etc. ➤ The WCPFC should also determine whether and how various MCS tools, such as VMS or observer coverage, apply to these vessels. ➤ If they do not, observer coverage and VMS requirements should apply to support vessels so data from these fishing activities are collected and reported.