EUROPEAN UNION

THE EUROPEAN PARLIAMENT **THE COUNCIL**

Strasbourg, 21 October 2026
(OR. en)

2025/0106(COD)
LEX 2549

PE-CONS 28/1/26
REV 1

PECHE 158

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL AMENDING REGULATION (EU) 2017/2107 LAYING DOWN MANAGEMENT, CONSERVATION AND CONTROL MEASURES APPLICABLE IN THE CONVENTION AREA OF THE INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS (ICCAT), REGULATION (EU) 2018/975 LAYING DOWN MANAGEMENT, CONSERVATION AND CONTROL MEASURES APPLICABLE IN THE SOUTH PACIFIC REGIONAL FISHERIES MANAGEMENT ORGANISATION (SPRFMO) CONVENTION AREA, REGULATION (EU) 2019/833 LAYING DOWN CONSERVATION AND ENFORCEMENT MEASURES APPLICABLE IN THE REGULATORY AREA OF THE NORTHWEST ATLANTIC FISHERIES ORGANISATION, REGULATION (EU) 2021/56 LAYING DOWN MANAGEMENT, CONSERVATION AND CONTROL MEASURES APPLICABLE IN THE INTER-AMERICAN TROPICAL TUNA CONVENTION, REGULATION (EU) 2022/2056 LAYING DOWN CONSERVATION AND MANAGEMENT MEASURES APPLICABLE IN THE WESTERN AND CENTRAL PACIFIC FISHERIES CONVENTION AREA, REGULATION (EU) 2022/2343 LAYING DOWN MANAGEMENT, CONSERVATION AND CONTROL MEASURES APPLICABLE IN THE INDIAN OCEAN TUNA COMMISSION (IOTC) AREA OF COMPETENCE, AND REGULATION (EU) 2023/2053 ESTABLISHING A MULTIANNUAL MANAGEMENT PLAN FOR BLUEFIN TUNA IN THE EASTERN ATLANTIC AND THE MEDITERRANEAN

REGULATION (EU) 2026/…
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 21 October 2026

amending Regulation (EU) 2017/2107 laying down management, conservation and control measures applicable in the Convention area of the International Commission for the Conservation of Atlantic Tunas (ICCAT), Regulation (EU) 2018/975 laying down management, conservation and control measures applicable in the South Pacific Regional Fisheries Management Organisation (SPRFMO) Convention Area, Regulation (EU) 2019/833 laying down conservation and enforcement measures applicable in the Regulatory Area of the Northwest Atlantic Fisheries Organisation, Regulation (EU) 2021/56 laying down management, conservation and control measures applicable in the Inter-American Tropical Tuna Convention, Regulation (EU) 2022/2056 laying down conservation and management measures applicable in the Western and Central Pacific Fisheries Convention Area, Regulation (EU) 2022/2343 laying down management, conservation and control measures applicable in the Indian Ocean Tuna Commission (IOTC) Area of Competence, and Regulation (EU) 2023/2053 establishing a multiannual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 43(2) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[1],

Acting in accordance with the ordinary legislative procedure[2],

---

1 OJ C, C/2025/5154, 28.10.2025, ELI: http://data.europa.eu/eli/C/2025/5154/oj.

2 Position of the European Parliament of 15 September 2026 (not yet published in the Official Journal) and decision of the Council of 13 October 2026.

Whereas:

(1) Regulation (EU) 2017/2107 of the European Parliament and of the Council[3] implemented into Union law management, conservation and control measures adopted by the International Commission for the Conservation of Atlantic Tunas (ICCAT) and applicable to the ICCAT Convention Area up to, and including at, its annual meeting in 2015.

[3] Regulation (EU) 2017/2107 of the European Parliament and of the Council of 15 November 2017 laying down management, conservation and control measures applicable in the Convention area of the International Commission for the Conservation of Atlantic Tunas (ICCAT), and amending Council Regulations (EC) No 1936/2001, (EC) No 1984/2003 and (EC) No 520/2007 (OJ L 315, 30.11.2017, p. 1, ELI: http://data.europa.eu/eli/reg/2017/2107/oj).

(2) Regulation (EU) 2017/2107 was subsequently amended by Regulations (EU) 2019/1154[4], (EU) 2023/2053[5] and (EU) 2024/897[6] of the European Parliament and of the Council in order to implement further measures adopted by ICCAT at its 28th Regular Meeting in 2023. Those included measures for the conservation of whale shark and mobulid rays, as well as a geographic limitation for the applicability of sea turtle conservation measures. Moreover, the role of the European Fisheries Control Agency (EFCA) was defined as a sighting entity in relation to sighting of vessels and further communication to the ICCAT Secretariat.

---

4 Regulation (EU) 2019/1154 of the European Parliament and of the Council of 20 June 2019 on a multiannual recovery plan for Mediterranean swordfish and amending Council Regulation (EC) No 1967/2006 and Regulation (EU) 2017/2107 of the European Parliament and of the Council (OJ L 188, 12.7.2019, p. 1, ELI: http://data.europa.eu/eli/reg/2019/1154/oj).

5 Regulation (EU) 2023/2053 of the European Parliament and of the Council of 13 September 2023 establishing a multiannual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean, amending Regulations (EC) No 1936/2001, (EU) 2017/2107, and (EU) 2019/833 and repealing Regulation (EU) 2016/1627 (OJ L 238, 27.9.2023, p. 1, ELI: http://data.europa.eu/eli/reg/2023/2053/oj).

6 Regulation (EU) 2024/897 of the European Parliament and of the Council of 13 March 2024 amending Regulation (EU) 2017/2107 laying down management, conservation and control measures applicable in the Convention area of the International Commission for the Conservation of Atlantic Tunas (ICCAT) and Regulation (EU) 2023/2053 establishing a multiannual management plan for bluefin tuna in the eastern Atlantic and the Mediterranean (OJ L, 2024/897, 19.3.2024, ELI: http://data.europa.eu/eli/reg/2024/897/oj).

(3) Regulation (EU) 2023/2053 implemented into Union law measures adopted by ICCAT for the management of the bluefin tuna.

(4) At its 28th Regular Meeting in 2023, and at its 24th Special Meeting in 2024, ICCAT also adopted control measures for the conservation of fishery resources under its purview relating to the exchange of quotas between Joint Fishing Operations, prior notification of landings, monitoring of bluefin tuna transfer operations by video camera, caging operations, and control activities in the farms after caging.

(5) Regulation (EU) 2018/975 of the European Parliament and of the Council[7] implemented into Union law management, conservation and control measures adopted by the South Pacific Regional Fisheries Management Organisation (SPRFMO) and applicable to the SPRFMO Convention Area up to, and including at, its annual meeting in 2017.

(6) At its 2018, 2019, 2020, 2021, 2022, 2023 and 2024 annual meetings, the SPRFMO Commission adopted further measures for the conservation of fishery resources under its purview relating to bottom fishing, transhipment, gillnets, observer programmes and data, and vessel monitoring systems, as well as new measures such as a new protocol for high seas boarding and inspections, including procedures for alleged infringements, and measures on marine pollution and on the marking and identification of fishing vessels.

---

[7] Regulation (EU) 2018/975 of the European Parliament and of the Council of 4 July 2018 laying down management, conservation and control measures applicable in the South Pacific Regional Fisheries Management Organisation (SPRFMO) Convention Area (OJ L 179, 16.7.2018, p. 30, ELI: http://data.europa.eu/eli/reg/2018/975/oj).

(7) Regulation (EU) 2019/833 of the European Parliament and of the Council[8] implemented into Union law conservation and enforcement measures adopted by the Northwest Atlantic Fisheries Organisation (NAFO) and applicable in the NAFO Regulatory Area up to, and including at, its annual meeting in 2018. In order to implement into Union law further NAFO measures adopted at its annual meetings in 2019, 2020, 2021 and 2022, that Regulation was subsequently amended by Regulations (EU) 2021/1231[9], (EU) 2022/2037[10] and (EU) 2023/2857[11] of the European Parliament and of the Council.

---

[8] Regulation (EU) 2019/833 of the European Parliament and of the Council of 20 May 2019 laying down conservation and enforcement measures applicable in the Regulatory Area of the Northwest Atlantic Fisheries Organisation, amending Regulation (EU) 2016/1627, and repealing Council Regulations (EC) No 2115/2005 and (EC) No 1386/2007 (OJ L 141, 28.5.2019, p. 1, ELI: http://data.europa.eu/eli/reg/2019/833/oj).

[9] Regulation (EU) 2021/1231 of the European Parliament and of the Council 14 July 2021 amending Regulation (EU) 2019/833 laying down conservation and enforcement measures applicable in the Regulatory Area of the Northwest Atlantic Fisheries Organisation (OJ L 274, 30.7.2021, p. 32, ELI: http://data.europa.eu/eli/reg/2021/1231/oj).

[10] Regulation (EU) 2022/2037 of the European Parliament and of the Council of 19 October 2022, amending Regulation (EU) 2019/833 laying down conservation and enforcement measures applicable in the Regulatory Area of the Northwest Atlantic Fisheries Organisation (OJ L 275, 25.10.2022, p. 11, ELI: http://data.europa.eu/eli/reg/2022/2037/oj).

[11] Regulation (EU) 2023/2857 of the European Parliament and of the Council of 13 December 2023 amending Regulation (EU) 2019/833 laying down conservation and enforcement measures applicable in the Regulatory Area of the Northwest Atlantic Fisheries Organisation (OJ L, 2023/2857, 20.12.2023, ELI: http://data.europa.eu/eli/reg/2023/2857/oj).

(8) At its 2023 and 2024 annual meetings, NAFO adopted further measures for the conservation of fishery resources under its purview regarding cod in Divisions 2J3KL including closure, bycatch and retention on board, observers, surveillance, and the relevant additional procedure for serious infringements.

(9) Regulation (EU) 2021/56 of the European Parliament and of the Council[12] implemented into Union law the provisions adopted by the Inter-American Tropical Tuna Commission (IATTC) applicable to the IATTC Convention area up to, and including at, its annual meeting in 2019.

(10) At its 2020, 2021, 2022, 2023 and 2024 annual meetings, the IATTC adopted measures for the conservation of fishery resources under its purview relating to fish aggregating devices (FADs), the activation of buoys, the reduction of FADs entanglement and the use of biodegradable materials, the reporting of catches on Pacific bluefin tuna, minimum vessel data requirements, changes in vessel monitoring systems, the introduction of electronic monitoring systems, including the collection of fisheries data, the protection of silky sharks, the safe release of sharks, the collection of data on shark species, and updates to compliance reports.

---

[12] Regulation (EU) 2021/56 of the European Parliament and of the Council of 20 January 2021 laying down management, conservation and control measures applicable in the Inter-American Tropical Tuna Convention area and amending Council Regulation (EC) No 520/2007 (OJ L 24, 26.1.2021, p. 1, ELI: http://data.europa.eu/eli/reg/2021/56/oj).

(11) Regulation (EU) 2022/2056 of the European Parliament and of the Council[13] implemented into Union law conservation and management measures adopted by the Western and Central Pacific Fisheries Commission (WCPFC) and applicable to the WCPFC Convention area up to, and including at, its 2021 annual meeting.

(12) At its 2022, 2023 and 2024 annual meetings, the WCPFC adopted measures relating to bunkering services, the protection of sharks and the use of branch lines, wire leaders and shark lines by Union longline vessels with the prohibition of shark retention and a duty to release, as well as to surrender or discard, unintentionally caught oceanic whitetip and silky sharks, or cetacean specimens.

(13) Regulation (EU) 2022/2343 of the European Parliament and of the Council[14] implemented into Union law management, conservation and control measures adopted by the Indian Ocean Tuna Commission (IOTC) and applicable in the IOTC area of competence up to, and including at, its annual meeting in 2021.

---

[13] Regulation (EU) 2022/2056 of the European Parliament and of the Council of 19 October 2022 laying down conservation and management measures applicable in the Western and Central Pacific Fisheries Convention Area and amending Council Regulation (EC) No 520/2007 (OJ L 276, 26.10.2022, p. 1, ELI: http://data.europa.eu/eli/reg/2022/2056/oj).

[14] Regulation (EU) 2022/2343 of the European Parliament and of the Council of 23 November 2022 laying down management, conservation and control measures applicable in the Indian Ocean Tuna Commission (IOTC) Area of Competence, amending Council Regulations (EC) No 1936/2001, (EC) No 1984/2003 and (EC) No 520/2007 (OJ L 311, 2.12.2022, p. 1, ELI: http://data.europa.eu/eli/reg/2022/2343/oj).

(14) The IOTC subsequently adopted, at its 2022, 2023 and 2024 annual meetings and 6th special session, measures for the conservation of fishery resources under its purview as regards the management of anchored and drifting fish aggregating devices, voluntary fishery closure, transhipments, conservation measures for cetaceans and seabirds, regional observer schemes, vessel monitoring plans, electronic monitoring standards and port inspections.

(15) IOTC resolution 24/06 implemented a ban on discards of bigeye tuna, skipjack tuna, yellowfin tuna, and non-targeted species caught by vessels listed in the IOTC record of authorisation that operate in the IOTC area of competence. Union fishing vessels using gear types other than those used by purse seine vessels were encouraged to retain on board and then land all fish fit for human consumption, and to take all reasonable steps to ensure the safe release of non-targeted species taken alive, to the extent possible, while taking into consideration the safety of the crew; and to retain on board and then land all dead non-targeted species, except those considered unfit for human consumption or those the retention of which is prohibited.

(16) Those measures, stemming from ICCAT, the SPRFMO, NAFO, the IATTC, the WCPFC and the IOTC, are binding on the Union. They should therefore be implemented into Union law, except where such measures are already fully addressed and covered by existing Union legislation. Regulations (EU) 2017/2107, (EU) 2018/975, (EU) 2019/833, (EU) 2021/56, (EU) 2022/2056, (EU) 2022/2343 and (EU) 2023/2053 should therefore be amended accordingly.

(17) It is necessary to ensure that the recommendations adopted by the various regional fisheries management organisations (RFMOs) are fully implemented into Union law in a timely manner, thereby enabling the Union to fulfil its international obligations as a reliable international partner, and to ensure their uniform and effective implementation within the Union, providing clarity and predictability to operators of Union fishing vessels.

(18) It is imperative for the Union to consider carefully the need to balance the three pillars of sustainability when negotiating international agreements such as conservation and management measures adopted by RFMOs. Such measures are to be based on the best available scientific advice and comply with Article 2 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council[15].

[15] Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354, 28.12.2013, p. 22, ELI: http://data.europa.eu/eli/reg/2013/1380/oj).

(19) Certain SPRFMO, NAFO, IATTC, IOTC and ICCAT provisions are being amended more frequently, and are likely to be amended at future annual meetings of those RFMOs. In order to implement swiftly into Union law such future amendments, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission as follows: (i) with regard to SPRFMO, to amend Regulation (EU) 2018/975 in respect of time limits, distance to the encounter area, distances relating to transhipment notification, data and information requirements, and the provision of record of vessel information; (ii) with regard to NAFO, to amend Regulation (EU) 2019/833 in respect of measures relating to Member State duties relating to the submission of information on changes in by-catch retained, closure periods, observer qualifications, duties and training, observer data validations, observer safety equipment, rights and duties of Union vessel operators and masters, and procedures in the event of an emergency; (iii) with regard to conservation and enforcement measures adopted by NAFO, to amend Regulation (EU) 2019/833 in respect of closure periods, catch retention on board, duties of the master relating to abandoned gear, its retrieval, derogations from the observer programme, and reference to the vessel sighting document to be used by Member States; (iv) with regard to the IATTC, to amend Regulation (EU) 2021/56 in respect of measures relating to IATTC references to guidelines for the safe release of sharks, and the standard questionnaire on compliance to be filled in by Member States; (v) with regard to the IOTC, to amend Regulation (EU) 2022/2343 in respect of measures relating to IOTC FADs reporting obligations; and (vi) with regard to ICCAT, to amend Regulation (EU) 2023/2053 in respect of deadlines for reporting information, time periods for fishing seasons, percentage and reference points, and the information to be submitted to the Commission.

(20) It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making[16]. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.

[16] OJ L 123, 12.5.2016, p. 1, ELI: http://data.europa.eu/eli/agree_interinstit/2016/512/oj.

(21) It should be clarified that data processed in the framework of the Regulations amended by this Regulation are to be treated in accordance with the relevant rules on the protection of personal data and confidentiality as referred to in Articles 112 and 113 of Council Regulation (EC) No 1224/2009[17]. In order to ensure the fulfilment of obligations under Regulations (EU) 2017/2107, (EU) 2018/975, (EU) 2019/833, (EU) 2021/56, (EU) 2022/2056, (EU) 2022/2343, and (EU) 2023/2053, as amended, the personal data should be stored for a period of up to 10 years. In the event that the personal data in question are needed in order to follow up an infringement, inspections or judicial or administrative procedures, it should be possible for those data to be stored for a period exceeding 10 years, but no longer than 20 years.

HAVE ADOPTED THIS REGULATION:

[17] Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006 (OJ L 343, 22.12.2009, p. 1, ELI: http://data.europa.eu/eli/reg/2009/1224/oj).

Article 1

Amendments to Regulation (EU) 2017/2107

Regulation (EU) 2017/2107 is amended as follows:

(1) in Title II, the title of Chapter V is replaced by the following: 'Elasmobranchs';

(2) the following article is inserted:

'*Article 30a*

Whale sharks (Rhincodon typus)

1. It shall be prohibited to:

   (a) retain on board, tranship, or land, any part or whole of the carcass of whale sharks caught in association with ICCAT fisheries;

   (b) set a purse seine on a school of tuna associated with a whale shark after sighting of the shark concerned.

2. Masters of Union fishing vessels shall take all reasonable steps to ensure the safe release of whale sharks that are incidentally encircled in the purse seine net.

3. Member States shall ensure that during purse seine operations their domestic observer programmes record interactions with whale sharks referred to in paragraphs 1 and 2, and that the following information is collected:

(a) details of the circumstances leading to and relating to encirclement;

(b) the number of individuals involved during the interaction;

(c) the geographical position of the interaction;

(d) the steps taken to ensure the safe handling and release of the specimens encircled in the purse seine;

(e) an assessment of the life status of the whale shark specimen(s) upon release (alive/dead/moribund/uncertain).

4. Member States shall report to the Commission, in accordance with ICCAT data reporting requirements, the data and information collected under paragraph 3 in their annual reports. The Commission shall report those data to the ICCAT Secretariat.

5. Paragraphs 1 to 4 shall apply exclusively to fishing vessels operating between 40°N and 40°S.';

(3) in Article 33a, the following paragraphs are added:

‘6. Union fishing vessels that are greater than 12 metres in length overall shall be allowed to retain South Atlantic shortfin mako sharks only when the fish is dead on haul-back, and the vessel has an observer or a functioning electronic monitoring system (EMS) on board to verify the condition of the sharks.

7. In addition to the conditions set out in paragraph 6, for Union fishing vessels equal to or less than 12 metres in length overall, no more than one specimen of South Atlantic shortfin mako shark shall be retained by a vessel for any fishing trip.’;

(4) the following article is inserted:

‘*Article 35a*
Mobulid rays

1. It shall be prohibited to retain onboard, tranship, land or store any part or whole carcass of species of reef manta ray (*Manta alfredi*), giant manta (*Manta birostris*), lesser devil ray (*Mobula hypostoma*), spinetail mobula (*Mobula japanica*), devil fish (*Mobula mobular*), Chilean devil ray (*Mobula tarapacana*) or smoothtail mobula (*Mobula thurstoni*), hereafter referred to as mobulid rays, caught in association with ICCAT fisheries.

2. Union catching vessels shall promptly release unharmed, to the extent practicable, mobulid rays as soon as they are seen in the net, on the hook or on the vessel, in a manner that will result in the least possible harm to the individual specimen.

3. Member States shall ensure that their domestic observer programmes record the number of discards and releases of mobulid rays caught in ICCAT fisheries and, where possible, an indication of their status (dead or alive). Member States shall report that information to the Commission. The Commission shall report those data to the ICCAT secretariat.

4. In the case of mobulid rays that are unintentionally caught and frozen as part of a purse seine vessel's operation, Union catching vessels shall surrender the whole mobulid ray to the competent authorities, or discard it at the point of landing. Mobulid rays so surrendered shall not be sold or bartered, but may be donated for purposes of domestic human consumption.';

(5) in Article 41, the following paragraph is added:

‘7. In the South Atlantic:

(a) paragraphs 2a, 4 and 5 shall neither apply to vessels operating only North of 55°N or only South of 35°S latitude in the eastern South Atlantic, nor to vessels operating only South of 40°S latitude in the western South Atlantic;

(b) the limit for the division between the eastern South Atlantic and the western South Atlantic is 20°W.’;

(6) in Article 66a, paragraph 3 is replaced by the following:

‘3. When a vessel is sighted pursuant to paragraph 1, the Member State concerned or the European Fisheries Control Agency (EFCA) (the “sighting entity”) shall record findings and transmit a report without delay, if possible by electronic means, to the appropriate authorities of the flag Member State or CPC or flag non-CPC of the sighted vessel, with copy to the ICCAT secretariat, the Commission and EFCA. If the sighted vessel is flagged to a Member State, the flag Member state shall, without undue delay, take appropriate action with respect to the vessel concerned. Both the sighting entity and the flag Member State of the sighted vessel shall provide information on the sighting to the Commission and EFCA, including details of any follow-up action taken.’;

(7) Article 72 is replaced by the following:

'*Article 72*

Confidentiality and data protection

1. Data collected and exchanged in the framework of this Regulation shall be treated in accordance with the applicable rules on data protection and on confidentiality pursuant to Articles 112 and 113 of Regulation (EC) No 1224/2009, unless provided otherwise in this Article.

2. Personal data collected under this Regulation shall be processed for the purposes of implementation and enforcement of the management, conservation and control measures as laid down by this Regulation, including any enquiries pertaining to complaints and infringements, and judicial or administrative procedures relating thereto.

3. Personal data processed under this Regulation shall not be stored for a period longer than 10 years, except if those personal data are necessary to enable the follow-up of an infringement, an inspection, or judicial or administrative procedures. In those cases, the personal data may be stored for a maximum of 20 years. If the information is retained for a longer period, the personal data shall be anonymised.'.

Article 2

Amendments to Regulation (EU) 2018/975

Regulation (EU) 2018/975 is amended as follows:

(1) Article 4 is amended as follows:

(a) point (7) is replaced by the following:

‘(7) “bottom fishing” means fishing using any gear type likely to come in contact with the seafloor or benthic organisms during the normal course of operations including bottom trawl, mid-water trawl and bottom line;’;

(b) the following points are inserted:

‘(7a) “bottom trawl fishing” means fishing using a trawl net that is designed to be pulled through the water and to come into contact with the seabed;

(7b) “mid-water trawl fishing” means fishing for bentho-pelagic species using a trawl net that is designed to be pulled through the water near the seabed and designed not to come into extended contact with the seabed;

(7c) “bottom line fishing” means fishing using a line to which a hook or hooks (whether baited or not) are attached and which is rigged to sink and fish on or near the seabed including, longlines, hand lines, drop lines, trot lines, and dahn lines;’;

(c) point (11) is replaced by the following:

‘(11) “exploratory fishery” means a fishery that:

(a) has not been subject to fishing in the previous 10 years, and where such fishing was limited to targeted fisheries authorised by the SPRFMO Commission on the basis of advice from the SPRFMO Scientific Committee, and the target species was defined as the largest percentage in green weight of the total catch in any given haul, tow or set;

(b) for the purposes of fishing with a particular gear type or technique, has not been subject to fishing by that particular gear type or technique in the previous 10 years, and where such fishing was limited to targeted fisheries authorised by the SPRFMO Commission on the basis of advice from the SPRFMO Scientific Committee, and the target species was defined as the largest percentage in green weight of the total catch in any given haul, tow or set;

(c) has been undertaken as an exploratory fishery in the previous 10 years and a decision has not yet been taken by the SPRFMO Commission to either close or manage the fishery as an established fishery;

(d) constitutes bottom fishing activities in accordance with the conditions laid down in Article 12(2); or

(e) has not been reviewed or subjected to scientific monitoring by the Scientific Committee, and the Scientific Committee has not issued harvest advice for the fishing in question or, if the Scientific Committee has issued such harvest advice, the SPRFMO Commission has not considered it;

for the purpose of exploratory fisheries, "green weight" is the weight of the whole fish at the time of capture, before any processing, modification, or removal of any part, such as heading, gutting, drying, or freezing;';

(d) the following points are added:

'(19) "fishing entity" means any entity referred to in Article 305(1), points (c), (d) and (e), of UNCLOS that has expressed its firm commitment to abide by the terms of the SPRFMO Convention and complies with any conservation and management measures adopted pursuant to it, as provided for in Annex IV to the SPRFMO Convention;

(20) "SPRFMO register of authorised inspection vessels and authorities of the inspection vessel" means the list of inspection vessels and authorities authorised to conduct boarding and inspection in the SPRFMO Convention Area, as notified by the Commission or EFCA, Contracting Parties and CNCPs, which is maintained by the SPRFMO Secretariat;

(21) “authorities of the inspection vessel” means the authorities of the Contracting Party under whose flag the inspection vessel is flying;

(22) “authorised inspection vessel” means any vessel included in the SPRFMO register of authorised inspection vessels and authorities of the inspection vessel;

(23) “authorised inspector” means an inspector trained and designated by the authorities responsible for boarding and inspection included in the SPRFMO register of authorised inspection vessels and authorities of the inspection vessel;

(24) “abandoned fishing gear” means fishing gear deliberately left at sea by the vessel due to *force majeure* or other unforeseen reasons;

(25) “lost fishing gear” means fishing gear over which the vessel has accidentally lost control and which cannot be located and/or retrieved;

(26) “discarded fishing gear” means fishing gear released at sea without any attempt by the vessel to further control or recover it;

(27) “plastic” means a solid material which contains as an essential ingredient one or more high molecular mass polymers, and which is formed (shaped) during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure.’;

(2) Article 7 is amended as follows:

(a) the following paragraphs are inserted:

‘1a. The Commission shall notify Member States when total catches have reached 70 % of the limit agreed by the SPRFMO Commission for the stock throughout the range of its distribution.

1b. Notwithstanding paragraph 1, following the notification referred to in paragraph 1a, Member States shall implement 15-day reporting periods. For this purpose, the calendar month shall be divided into two reporting periods, with the first period running from day 1 to day 15, and the second period from day 16 to the end of the month.

1c. For the first 15-day report to be submitted, Member States shall report their catches to the Commission within 15 days of the end of the first period. The Commission shall transmit that information to the SPRFMO Secretariat within 20 days of the end of that period. For the subsequent 15-day periods, the Member States shall report their catches to the Commission within 5 days of the end of each period. The Commission shall transmit that information to the SPRFMO Secretariat within 10 days of the end of each period.’;

(3) the following article is inserted in Chapter I of Title III:

'*Article 11a*

Bottom fishing management areas

1. Bottom fishing in the SPRFMO Convention Area under this Chapter shall take place only in the bottom trawl, mid-water trawl, and bottom line fishing management areas set out in Annex XIV. In those areas:

   (a) bottom trawl fishing shall only take place in a bottom trawl fishing management area;

   (b) mid-water trawl fishing shall only take place in a mid-water trawl fishing management area or a bottom trawl fishing management area; and

   (c) bottom line fishing shall only take place in a bottom line fishing management area.

2. Notwithstanding paragraph 1 of this Article, bottom fishing activities in the SPRFMO Convention area shall take place under the provisions set out in Chapter II for exploratory fisheries if they occur:

   (a) outside a management area;

   (b) inside a management area using bottom fishing methods other than bottom trawl, mid-water trawl or bottom longline fishing;

(c) in a mid-water trawl management area using bottom trawl gear or in a bottom line management area using bottom trawl or mid-water trawl gear; or

(d) inside a management area where the species targeted has not previously been targeted, unless the species has regularly been caught as part of an existing fishery.';

(4) Article 12 is replaced by the following:

'*Article 12*
Bottom fishing authorisation

1. Member States shall not authorise fishing vessels flying their flag to engage in bottom fishing without prior authorisation from the SPRFMO.

2. Member States whose vessels intend to engage in bottom fishing activities in the bottom fishing management areas set out in Annex XIV shall submit a request for authorisation to the Commission not later than 75 days before the SPRFMO Scientific Committee meeting at which they wish the request to be considered. The Commission shall forward the request to the SPRFMO Secretariat not later than 60 days before the SPRFMO Scientific Committee meeting. The request shall contain a bottom fishing impact assessment of the proposed fishing activities.

3. The impact assessment referred to in paragraph 2 of this Article shall be carried out in accordance with the SPRFMO Bottom Fishery Impact Assessment Standard* with the best available data and shall be prepared at a scale no coarser than the fishery management areas set out in Annex XV, taking into account the history of bottom fishing in the areas proposed and the cumulative impacts of past and proposed fishing, including any potential significant adverse impacts on VMEs, and shall include proposed mitigation measures to prevent such impacts.

4. The Commission shall inform the relevant Member State of the SPRFMO decision regarding the authorisation to engage in bottom fishing in the SPRFMO Convention Area for the purpose of which the impact assessment was conducted, including any attached conditions and relevant measures to prevent significant adverse impacts on VMEs.

5. Member States shall ensure that impact assessments referred to in paragraph 2 are updated at least every three years and when a substantial change in the fishery has occurred that is likely to affect the level of risk or impact of the fishing. Member States shall transmit that information to the Commission as soon as it becomes available. The Commission shall forward that information to the SPRFMO Secretariat.

---

* Available here: https://www.sprfmo.int/science/benthic-impact-assessments.';

(5) Article 13 is deleted;

(6) Articles 14, 15 and 16 are replaced by the following:

'*Article 14*

VMEs in bottom fishing

1. Where VME indicator taxa as set out in Annex XVI are encountered in any one tow at or above the weight thresholds in Annex XVII, or three or more different VME indicator taxa at or above the weight thresholds in Annex XVIII, fishing vessels shall immediately cease bottom fishing within an encounter area of 1 nautical mile either side of the trawl track extended by 1 nautical mile at each end.

2. Fishing vessels shall report encounters with VMEs to the flag Member State on the basis of the guidelines set out in Annex IV including a detailed description of the encounter. The flag Member State shall carry out a comparison of the encounter with the existing model prediction, and of suggested management actions to prevent significant adverse impacts on VMEs, in order to verify whether a VME is likely to be present at the encounter area and/or the surrounding area, whether a significant adverse impact has occurred, and the risk of a significant adverse impact occurring in the future. The Member State shall transmit that information to the Commission without delay. The Commission shall forward that information to the SPRFMO Secretariat without delay.

3. The Commission shall inform Member States of any VME encounters notified by other SPRFMO Contracting Parties or CNCPs to the SPRFMO Secretariat.

4. Member States shall ensure that fishing vessels flying their flag do not engage in bottom fishing in VME encounter areas notified under paragraphs 2 and 3 unless and until such time as the SPRFMO Commission determines management actions that would permit the resumption of bottom fishing activities in the area.

Article 15

Observer coverage in bottom fishing

Member States shall ensure that fishing vessels flying their flag that engage in bottom fishing implement the minimum scientific observer coverage levels set out in Annex XIX.

Article 16

Data reporting for bottom fishing

1. By the 15th day of each month, Member States shall report to the Commission on the catches of bottom fishing species from the preceding month, in accordance with Article 33 of Regulation (EC) No 1224/2009.

2. Member States shall prohibit fishing vessels flying their flag from participating in bottom fishing if the minimum required data regarding fishing vessel identification set out in Annex V have not been provided.

3. By derogation from Article 29(2), Member States shall ensure that their fisheries monitoring centres (FMCs) automatically and continuously report the vessel monitoring system (VMS) data of fishing vessels flying their flag engaged in bottom fishing in the SPRFMO Convention Area to the SPRFMO Secretariat at least once every 30 minutes for the duration of each fishing trip, with a fishing trip commencing from the time the vessel departs from port, including all times that it is in the SPRFMO Convention Area, and concluding once it enters port.';

(7) Article 17 is replaced by the following:

'*Article 17*
Exploratory fisheries authorisation

1. Member States intending to authorise a fishing vessel flying their flag to fish in an exploratory fishery shall submit to the Commission the following documentation:

   (a) no later than 130 days in advance of the SPRFMO Scientific Committee meeting, a succinct description of their intended Fisheries Operation Plan for information purposes, using the template for succinct description of Fisheries Operation Plan. The Commission shall forward that information to the SPRFMO Secretariat not later than 120 days in advance of the SPRFMO Scientific Committee meeting;

(b) no later than 80 days in advance of the SPRFMO Scientific Committee meeting, a copy of the following documentation:

(i) a request for authorisation providing the information contained in Annex V;

(ii) a Fisheries Operation Plan in accordance with Annex VI, including a commitment to comply with the SPRFMO Data Collection Plan referred to in Article 18(3), (4) and (5) of this Regulation.

2. The Commission shall forward the request to the SPRFMO Commission, and the Fisheries Operation Plan to the SPRFMO Scientific Committee, no later than 60 days in advance of the SPRFMO Scientific Committee meeting.

3. The Commission shall inform the Member State concerned of the SPRFMO decision regarding the authorisation to fish in an exploratory fishery.';

(8) Article 21 is replaced by the following:

'*Article 21*
Gillnets

Member States whose vessels intend to transit the SPRFMO Convention Area with gillnets on board shall:

(a) give at least 72 hours advance notice to the SPRFMO Secretariat and the Commission prior to the vessel entering the SPRFMO Convention Area, including the expected entry and exit dates and length of gillnet carried on board;

(b) ensure that the vessels flying their flag operate VMS reporting at least once every hour while in the SPRFMO Convention Area;

(c) submit VMS position reports automatically to their FMC while transiting the SPRFMO Convention Area;

(d) ensure that their FMC automatically forwards the VMS reports referred to in point (b) to the SPRFMO Secretariat at least once every hour; and

(e) if gillnets are accidentally lost or abandoned overboard, report the date, time, position, and length (metres) of gillnets lost to the SPRFMO Secretariat and the Commission as soon as possible and in any event within 48 hours of the gear being lost or abandoned.';

(9) Article 22 is amended as follows:

(a) paragraph 2 is replaced by the following:

‘2. Member States shall inform the Commission of the fishing vessels flying their flag authorised to fish in the SPRFMO Convention Area and that have not previously been included in the SPRFMO record of vessels at least 20 days prior to the date of first entry of such vessels in the SPRFMO Convention Area for the purposes of fishing for SPRFMO fishery resources. The Commission shall transmit that information to the SPRFMO Secretariat at least 15 days prior to the date of first entry in the SPRFMO Convention Area.’;

(b) the following paragraph is inserted:

‘4a. For the purposes of paragraph 4, an authorisation entry in the SPRFMO record of vessels shall cease to be a valid entry when there is a change in any of the following details, and until the required information is updated:

(a) vessel flag;

(b) international radio call sign (IRCS) (if any);

(c) authorisation start date;

(d) authorisation end date;

(e) UVI (Unique Vessel Identifier) / IMO number.’;

(10) Article 23 is amended as follows:

(a) paragraphs 2 and 3 are replaced by the following:

‘2. Transhipments at sea and in port shall only be undertaken between authorised fishing vessels included in the SPRFMO record of vessels.

3. At-sea transfer of fuel, crew, gear or any other supplies in the SPRFMO Convention Area shall only be undertaken between authorised fishing vessels included in the SPRFMO record of vessels.’;

(b) the following paragraphs are added:

’5. Union fishing vessels shall be prohibited from operating as both an unloading fishing vessel and a receiving fishing vessel during the same trip, except in the case of a *force majeure* event beyond the control of the vessel. A *force majeure* event shall include serious mechanical breakdown or other events that threaten the safety of the crew or result in a significant financial loss through fish spoilage. In such cases, the fishing vessels shall notify the flag Member States of the transhipment and of the circumstances giving rise to the *force majeure*. The flag Member States shall, within one working day of the completion of the transhipment, transmit all the information received to the SPRFMO Secretariat and to the Commission, or the body designated by it.

6. By 15 January of each year, Member States shall report to the Commission the list of fishing vessels flying their flag that actively fished or engaged in transhipment for species other than jack mackerel in the SPRFMO Convention Area in the preceding year. The Commission shall transmit that information to the SPRFMO Secretariat by 30 January of each year.';

(11) Article 24 is replaced by the following:

'*Article 24*
Notification of transhipment

1. In the case of transhipment of fishery resources caught in the SPRFMO Convention Area, the flag Member State of the receiving Union fishing vessel shall simultaneously transmit to the Commission and the SPRFMO Secretariat, at least 36 hours in advance of the estimated start time of such transhipment, the SPRFMO advanced transhipment notification in accordance with Annex VII. Such notification shall be required regardless of where the transhipment has taken place.

2. If the transhipment referred to in paragraph 1 of this Article does not start within 72 hours from the notified estimated start time of transhipment or within 50 nautical miles of the estimated location notified in the advanced transhipment notification, the flag Member State of the receiving Union fishing vessel shall simultaneously notify the Commission and the SPRFMO Secretariat of the modified SPRFMO advanced transhipment notification information in accordance with Annex VII as soon as possible, and in any event no later than 24 hours after the actual start time of transhipment.

3. If a notified transhipment does not occur, the flag Member State of the receiving Union fishing vessel shall simultaneously notify the Commission and the SPRFMO Secretariat as soon as possible, but in any event no later than five working days after the notified time of the transhipment.';

(12) the following article is inserted:

'*Article 24a*
Storage requirements for receiving Union fishing vessels

If a receiving Union fishing vessel engages in more than one transhipment, it shall store the catch from each transhipment separately so that it is readily identifiable. The receiving Union fishing vessel shall have a stowage plan available on board that provides for such separation of catches from different unloading fishing vessels.';

(13) Articles 25 and 26 are replaced by the following:

'*Article 25*

Monitoring of transhipment

1. Receiving Union fishing vessels that engage in transhipment at sea shall have an observer on board to monitor the transhipment and record the information in the required SPRFMO observer transhipment log sheet in accordance with Annex VIII.

2. In addition to paragraph 1 of this Article, if an unloading Union fishing vessel has an observer onboard during a transhipment, that observer shall also monitor the transhipment and record the information in the required SPRFMO observer transhipment log sheet in accordance with Annex VIII.

3. A receiving Union fishing vessel shall engage in only one transhipment at a time for each observer that is available to monitor and report on the transhipment.

4. For the purpose of verifying the quantity and species of the fishery resources being transhipped, and in order to ensure that proper verification can occur, the observer on board shall have full access to the observed Union fishing vessel, including crew, gear, equipment, records (including in electronic format), and fish holds.

5. The observer shall complete the SPRFMO observer transhipment log sheet in accordance with Annex VIII and provide that information electronically to the competent authorities of the flag Member State of the receiving Union fishing vessel no later than 15 days from debarkation.

6. The flag Member State of the receiving Union fishing vessel shall submit the observer data of the SPRFMO observer transhipment log sheet to the Commission electronically no later than 25 days from debarkation of the observer. The Commission shall forward that information to the SPRFMO Secretariat electronically no later than 30 days from debarkation of the observer.

Article 26

Information to be reported after transhipment

1. Receiving fishing vessels that engage in transhipment shall prepare an SPRFMO transhipment declaration in accordance with Annex IX, and shall submit that declaration to their flag Member State no later than the 5th day of the month following that in which the transhipment is completed. The flag Member State shall submit the declaration to the Commission, no later than the 10th day of the month following that in which the transhipment is completed. The Commission shall transmit this information to the SPRFMO Secretariat no later than the 15th day of the month following that in which the transhipment is completed.

2. Receiving fishing vessels that engage in transhipment shall retain a copy of the SPRFMO transhipment declaration on the vessel for the duration of the fishing trip and provide it as required to any authorised inspector.';

(14) Article 27 is amended as follows:

(a) paragraph 1 is replaced by the following:

'1. In addition to the data reporting requirements set out in Articles 7, 11, 14, 16, 18, 21, 22, 23, 24, 25, 26, 28a, 28u, 29, 35b, 35e, 40 and 41, Member States whose vessels fish in the SPRFMO Convention Area shall provide the data set out in paragraphs 2, 3 and 3a of this Article to the Commission.';

(b) the following paragraph is inserted:

'3a. By 15 January of each year, Member States whose vessel fish in the SPRFMO Convention Area in fisheries other than jack mackerel fisheries shall report to the Commission the list of vessels that actively fished or engaged in transhipment in the Convention Area during the previous calendar year. The Commission shall forward that information to the SPRFMO Secretariat by 30 January of each year.';

(15) in Chapter IV, Article 28 is replaced by the following:

‘SECTION 1

OBSERVER PROGRAMME ACCREDITATION PROCEDURE AND MINIMUM STANDARDS

Article 28

Observer programmes

1. Member States whose vessels fish in the SPRFMO Convention Area shall establish observer programmes to collect the data set out in Annex X.

2. Member States shall ensure that the observer programmes established pursuant to paragraph 1 and any service providers only deploy independent and impartial observers.

3. For fisheries where a minimum level of observer coverage is required, Member States shall ensure that observers on board fishing vessels flying their flag are only deployed from observer programmes and service providers accredited by the SPRFMO Commission.

4. For fisheries where 100 % of observer coverage is not required, Member States shall ensure that the method of assigning observers on fishing vessels flying their flag is representative for the fishery to be monitored and commensurate with the specific data needs of the fishery as a whole.

5. Member States shall document and provide information on the methods used to allocate observers on fishing vessels flying their flag to meet the observer coverage requirements. Member States shall report that information to the Commission in their annual scientific report covering the previous year.

6. Member States intending to deploy observers from the observer programme of another Contracting Party or CNCP shall inform the Commission before such deployment. The Commission shall seek the consent of the Contracting Party or CNCP and inform the relevant Member State.

   Member States intending to deploy observers from the accredited observer programme of another Member State shall inform the Commission before such deployment.

7. Union scientific research vessels fishing for research purposes shall be exempted from the obligation to carry accredited observers on board, unless they are engaged in an exploratory fishery. The flag Member States of scientific research vessels fishing for research purposes, and not engaged in an exploratory fishery, shall comply with the data collection and reporting requirements laid down in Annex X and Article 28a, and shall ensure that scientific personnel on board possess the capacity to perform in full all the observation and reporting responsibilities contained in those requirements.

Article 28a

Observer data reporting

1. By 15 September of each year, Member States whose vessels fish in the SPRFMO Convention Area shall provide the applicable observer data set out in Annex X covering the previous calendar year to the Commission. The Commission shall forward that information to the SPRFMO Secretariat by 30 September of each year.

2. Not later than 45 days before the SPRFMO Scientific Committee meeting, Member States whose vessels fish in the SPRFMO Convention Area shall provide an annual report on the implementation of the observer programme covering their fishing activity in the previous year. The report shall include observer training, programme design and coverage, the type of data collected, details of any service providers used, and any problems encountered during the year. The Commission shall forward that information to the SPRFMO Secretariat not later than 30 days before the SPRFMO Scientific Committee meeting.

Article 28b

Observer programme accreditation

1. Member States seeking to accredit their observer programme shall submit to the Commission, at least seven months in advance of the annual meeting of the SPRFMO Commission at which they wish the accreditation to be considered, all the relevant information and documentation to fulfil the standards provided for in Articles 28c to 28o, including manuals, guides and training materials, and, where relevant, information about national programmes and service providers already accredited by other Regional Fisheries Management Organisations. The Commission shall forward that information to the SPRFMO Secretariat at least six months in advance of the annual meeting of the SPRFMO Commission.

2. Member States shall provide the Commission with additional information and corrections relevant to their observer programme as needed. The Commission shall forward that information to the SPRFMO Secretariat.

3. The Commission shall forward to the Member States the draft preliminary evaluation report of their observer programme for comments, and shall forward any comments to the SPRFMO Secretariat.

4. The Commission shall inform the Member State concerned of the SPRFMO decision regarding the accreditation of its observer programme.

Article 28c

Impartiality, independence, and integrity

1. Member States shall ensure that their observer programmes and service providers only deploy independent and impartial observers. This means that neither the observer programme or service provider, as the case requires, nor the individual observers, have a direct financial interest, ownership or business links with vessels, processors, agents and retailers involved in the catching, taking, harvesting, transporting, processing or selling of fish or fish products.

2. The Member States shall ensure that their observer programmes and service providers, and the individual observers do not:

   (a) have a direct financial interest, other than the provision of observer services, in the fisheries under the purview of SPRFMO, including:

      (i) any ownership, mortgage holder, or other secured interest in a vessel or processor involved in the catching, taking, harvesting or processing of fish;

      (ii) any business selling supplies or services to any vessel or processor in the fishery;

      (iii) any business purchasing raw or processed products from any vessel or processor in the fishery;

(b) solicit or accept, directly or indirectly, any gratuity, gift, favour, entertainment, inordinate accommodation, loan or anything of monetary value from anyone who either conducts activities that are regulated by a Contracting Party or CNCP connected with its services or SPRFMO, or has interests that may be substantially affected by the performance or non-performance of the observer's official duties;

(c) serve as an observer on any vessel or at any processors owned or operated by a person who previously employed the observer in another capacity within the last three years (for example as a crew member); and,

(d) solicit or accept employment as a crew member or an employee of a vessel or processor while employed by the Member State observer programme or service provider.

Article 28d
Observer qualifications

Member States shall ensure that observers that are recruited into their observer programme or deployed by their service providers have:

(a) relevant education or technical training and/or experience for the fleets concerned;

(b) the ability to fulfil the observer duties described in this Section;

(c) no record of convictions calling into question the integrity of the observer or indicating a propensity towards violence; and

(d) the ability to obtain all necessary documentation, including passports and visas.

Article 28e

Observer training

1. Member States shall ensure that observers in their observer programmes or deployed by their service providers are adequately trained before their deployment. Training shall include the following:

   (a) the relationship between fisheries science and fisheries management, and the importance of data collection in this context;

   (b) the relevant provisions of the SPRFMO Convention, this Regulation, and SPRFMO conservation and management measures (hereinafter "SPRFMO CMMs") relevant to the functions and duties of observers;

   (c) the importance of observer programmes, including understanding the duties, rights, authority and responsibilities of observers;

   (d) safety at sea, including emergencies at sea, donning immersion suits, the use of safety equipment, the use of radios, survival at sea, and the management of conflicts, and cold-water survival;

   (e) first aid training, appropriate to working at-sea or in remote situations;

(f) species identification and record of species encountered at sea, including target and non-target species, protected species, seabirds, marine mammals, sea turtles and invertebrates indicating the presence of VMEs;

(g) knowledge of the different types and functioning of bycatch mitigation devices required by SPRFMO CMMs;

(h) safe handling protocols to rehabilitate and release seabirds, marine mammals and sea turtles;

(i) fishing vessel and fishing gear types relevant to SPRFMO;

(j) techniques and procedures for estimating catch and species composition;

(k) the use and maintenance of sampling equipment, including scales and callipers;

(l) sampling methodologies at sea, namely fish sampling, fish sexing, measuring and weighing techniques, specimen collection and storage, and sampling methodologies;

(m) an understanding of potential biases in sampling, how they arise and how they could be avoided;

(n) the preservation of samples for analysis;

(o) data collection codes and data collection formats;

(p) familiarity with catch logbooks and recordkeeping requirements, to aid observers' collection of data as required under SPRFMO CMMs;

(q) the use of digital recorders or electronic notebooks;

(r) electronic equipment used for observer work and understanding its operation;

(s) the use of electronic monitoring systems as a complement to observers' work, when applicable;

(t) verbal debriefing and report writing;

(u) training on relevant aspects of the International Convention for the Prevention of Pollution from Ships (MARPOL).

2. Member States shall ensure that their observer programmes or service providers provide ongoing refresher training relevant to the qualification requirements. Relevant updates to SPRFMO CMMs and observer requirements shall be communicated to observers before each deployment as part of the briefing process, for example in an updated manual.

Article 28f
Observer trainers

Member States shall ensure that observer trainers in their observer programmes or deployed by service providers have the appropriate skills and have been authorised by that programme or service provider to train observers.

Article 28g

Briefing and debriefing

1. Member States shall ensure that there are systems in place in their observer programmes or service providers for briefing and debriefing observers and for communicating at any time with vessel masters.

2. The briefing and debriefing process shall be conducted by properly trained personnel and shall ensure that observers and vessel masters clearly understand their respective roles and duties.

Article 28h

Data validation process

1. Member States shall ensure that their observer programmes or service providers have in place an observer data validation process.

2. The data validation process shall be conducted by properly trained personnel and shall ensure that data and information collected by an observer are checked for discrepancies or inaccuracies, and that discrepancies or inaccuracies are corrected before the information is entered into a database or used for analysis. This includes ensuring that the Member State observer programme or service provider has in place a mechanism to receive data, reports and any other relevant information from an observer in a way that prevents interference in those data from other sources.

3. The data validation process shall ensure that the data meet the following standards:

(a) a mechanism that allows scientific data to be stored and transferred to the Member State observer programme or service provider in a secure and confidential manner;

(b) vessel information that uniquely identifies the actual vessel from which the fishing occurred;

(c) the dates and times of fishing effort are included and internally consistent (for example, that end times are after start times);

(d) the inclusion of a valid location of fishing (for example, logical latitude/longitude combinations), that is internally consistent and is entered using the correct units;

(e) effort data that allows quantification of the amount of effort invested by the vessel, appropriate to the fishing method used, which is also identified;

(f) catch information that identifies the fishery resource (to the species level where possible) and the quantity of that species retained or discarded, and if used, that species codes are used accurately;

(g) where biological or length information is collected for a fish, it is directly linked to the effort in which it was caught, including date and time, location, and fishing method information, and the information includes the methodology of data collection;

(h) if the observer programme extends to transhipment and/or landings, the amount and species of fishery resources transhipped/landed is quantified and recorded according to a standard methodology;

(i) interaction data involving marine mammals, seabirds, reptiles and/or other species of concern that identifies the individual species (where possible), the number of animals, their fate (retained or released/discarded), their life status if released (vigorous, alive, lethargic, dead), and the type of interaction (hook/line entanglement/warpstrike/net capture/other).

Article 28i
Observer identification cards

Member States shall ensure that observers in their observer programmes or deployed by service providers are provided with identification cards that include the following information:

(a) full name of the observer;

(b) date of issue and expiration;

(c) name of the Member State observer programme or service provider;

(d) a unique identifying number (if issued by the observer programme or service provider);

(e) a passport style photo of the observer; and

(f) an emergency phone number.

Article 28j
Coordination of observer placements and observer deployments

1. Member States shall ensure that their observer programmes or service providers have sufficient capacity for the timely deployment of observers and that the selected observers receive all possible assistance during the entire duration of their placements.

2. Member States shall ensure that their observer programmes or service providers have in place a protocol for replacing observers who become unable to perform their duties.

3. Member States shall ensure that their observer programmes or service providers seek, to the extent possible, to avoid deploying the same observer on multiple consecutive trips on the same vessel.

4. Member States shall ensure that their observer programmes or service providers also administer observer placements, to maintain the independence and impartiality of observers in accordance with Article 28c, and also ensure that all observer placements are administratively finalised as soon as practicable after the observers' return to port.

5. Member States shall ensure that their observer programmes or service providers communicate with the observer regarding upcoming deployments, coordinate observer travel, and provide the necessary supplies for observer duties.

Article 28k
Observer safety equipment

1. Member States shall ensure that observers deployed by their observer programmes or service providers are provided with appropriate equipment, including safety equipment, which is in good working order, routinely checked and renewed, to carry out their duties on board a vessel.

2. Essential equipment shall include a lifejacket, independent two-way communication device capable of sending and receiving voice or text communications, personal locator beacons (PLBs), immersion suits, hard hat, proper deck working boots or shoes, gloves, and protective glasses (including sunglasses).

Article 28l

Procedures for allegations of observer misconduct

Member States shall ensure that their observer programmes or service providers establish procedures for preventing, investigating, and reporting on, the misconduct of observers, in coordination with observers, vessel masters, and relevant Contracting Parties and CNCPs.

Artic*le 28m*

Dispute settlement procedure

Member States shall ensure that their observer programmes or service providers have in place a dispute resolution process fair to all parties that provides a process to resolve issues through appropriate means, including through facilitation and mediation.

Article 28n

Observer safety

1. Member States shall ensure that their observer programmes or service providers have in place procedures to support observers in their ability to carry out their duties unimpeded and in a safe working environment, including an established Emergency Action Plan (EAP). The EAP shall provide instructions on sending reports to the provider's designated 24-hour point(s) of contact to report unsafe conditions, including instances of harassment, intimidation or assault.

2. Member States shall ensure that their observer programmes or service providers provide a permanent delegate or supervisor on land to communicate with the observer at any time while at sea.

Article 28o

Insurance and liability

Member States shall ensure that observers deployed by their observer programmes or service providers have health, safety and liability insurance commensurate with the national standards in force in the Member State of the observer programme or service provider for such insurance for the duration of any deployment before placing the observer on a vessel.

SECTION 2

RIGHTS AND DUTIES OF OBSERVERS

Article 28p

Rights of observers

1. Member States shall ensure that observers on board fishing vessels flying their flag enjoy the rights set out in this Article and that a copy of those rights is provided to the crew of such vessels or is prominently displayed on board.

2. In fulfilling their tasks and duties, observers shall have the following rights on board Union fishing vessels:

(a) freedom to carry out their duties without being assaulted, obstructed, delayed, intimidated or interfered with;

(b) access to, and use of, all facilities and equipment of the vessel necessary to carry out the observer's duties, including full access to the bridge, the catch before being sorted, processed catch and any bycatch on board, as well as areas which may be used to hold, process, weigh, and store fish, as the safety permits;

(c) access to the vessel's records, including logbooks, vessel diagrams and documentation, for reviewing records, assessment and copying, as well as access to navigational equipment, charts, and other information relating to fishing activities;

(d) access to, and use of, communications equipment and personnel, upon request, for the entry, transmission, and reception of work-related data or information;

(e) reasonable use of the communication equipment on board to communicate with the observer programme on land at any time, including in emergencies;

(f) access to additional equipment, if present, to facilitate the work of the observer while on board the vessel, such as high-powered binoculars, electronic means of communication, freezer space to store specimens, weighing scales;

(g) safe access to the working deck or hauling station, during net or line retrieval and access to specimens on deck (alive or dead) in order to collect samples;

(h) unrestricted access to food, accommodation and sanitary facilities of a standard equivalent to those normally available to an officer on board the vessel, as well as medical facilities that meet international maritime standards;

(i) access to verify safety equipment on board (through a safety orientation tour provided by officers or crew) before the vessel leaves the dock;

(j) unrestrained permission to record any pertinent information relevant for scientific purposes and data collection;

(k) the right to have a designated contact or supervisor on land to communicate with at any time while at sea;

(l) the right to refuse deployment on board a fishing vessel for justified reasons, including where safety issues have been identified;

(m) the ability to communicate at any time the occurrence of safety issues to the vessel master, the authorities of the observer programme or service provider, the SPRFMO Secretariat and the flag Member State, as appropriate;

(n) upon request by the observer, the right to receive reasonable assistance from the crew to perform the observer's duties, including sampling, handling large specimens, releasing incidental specimens and taking measurements;

(o) privacy in the observer's personal areas;

(p) not performing duties assigned to the crew, such as gear handling (for fishing purposes) or offloading fish;

(q) not to have their data, records, documents, equipment or belongings accessed, harmed, or destroyed.

3. In the event that an observer refuses to be deployed on board a Union fishing vessel, the competent authorities of the Member State of the observer programme or service provider under which the observer was to be deployed shall document the reasons for the refusal and transmit the information to the Commission. The Commission shall transmit that information to the SPRFMO Secretariat.

Article 28q

Duties of observers

1. Member States shall ensure that, before boarding a Union fishing vessel, observers deployed by their observer programmes or service providers:

   (a) carry complete and valid documents, including, where relevant, identification documents, passports, visas and certificates of at-sea safety training;

   (b) submit copies of the documents referred to in point (a) to the programme managers of the observer programme or service provider, as required.

2. Member States shall ensure that observers deployed by their observer programmes or service providers on board Union fishing vessels:

   (a) maintain independence and impartiality at all times while on duty;

   (b) comply with the laws and regulations of the Member State whose flag the vessel is flying;

   (c) observe the hierarchy and general rules of behaviour that apply to the crew of the vessel;

(d) perform duties in a manner that does not unduly interfere with the operations of the vessel and, while carrying out their functions, give due consideration to the operational requirements of the vessel and communicate regularly with the master of the vessel;

(e) be familiar with the emergency procedures aboard the vessel, including the locations of life rafts, fire extinguishers, and first aid kits, and participate regularly in emergency drills for which the observer has received training;

(f) communicate regularly with the vessel master on relevant observer issues and duties;

(g) refrain from actions that could negatively affect the image of the observer programme or service provider;

(h) adhere to any required codes of conduct for observers, including any applicable laws, regulations and procedures;

(i) communicate as regularly as is required with the programme managers or observer programme coordinator on land;

(j) comply with any SPRFMO CMMs the provisions of which are directly applicable to observers;

(k) respect privacy in the master and crew areas of the vessel.

SECTION 3

RIGHTS AND DUTIES OF UNION FISHING VESSEL OPERATORS AND MASTERS

Article 28r

Rights of Union fishing vessel operators and masters

Member States shall ensure that vessel operators and masters of Union fishing vessels flying their flag enjoy the following rights:

(a) to be consulted and either agree with, or otherwise propose alternatives regarding, the timing and placement of observers, when required to take on board one or more observers;

(b) to conduct the vessel's operations without undue interference linked to the observer's presence or the performance of the observer's duties;

(c) to assign, at their discretion, a crew member to accompany the observer when the observer is carrying out duties in hazardous areas;

(d) to be notified in a timely manner by the observer programme or service provider upon completion of the observer's trip of any comments of the observer regarding the vessel's operations. The operator and master shall have the opportunity to review and comment on the observer's report, and shall have the right to include additional information deemed relevant, and to make a personal statement.

Article 28s

Duties of Union fishing vessel operators and masters

Vessel operators and masters of fishing vessels shall respect the rights of observers set out in Article 28p and:

(a) accept on board the vessel one or more persons identified as observers by the observer programme or service provider when so required by their flag Member State;

(b) ensure the vessel's crew is properly briefed, and does not assault, harass, obstruct, resist, intimidate, influence, or interfere with the observer, or impede or delay the observer in the performance of his or her duties;

(c) install and maintain, as a complementary monitoring tool, functioning electronic monitoring systems or devices throughout the fishing trips selected for observation, if required under this Regulation;

(d) ensure the observer has access to the catch before any sorting, grading or other separation of the components of the catch is made;

(e) ensure that vessels operating in the SPRFMO Convention Area include adequate space for the observer to conduct bycatch sampling or other sampling as needed, in a safe manner that limits interference with vessel operations, with a dedicated sample station and other equipment such as weighing scales;

(f) maintain a safe and clean sampling station to be used by the observer;

(g) refrain from altering the sampling station during an observed trip without prior consultation with the observer and subsequent notification to the flag Member State of the vessel;

(h) inform the crew regarding the timing and objectives of the observer programme, and the schedule for observer boarding, as well as the crew's responsibilities when an observer is aboard the vessel;

(i) assist the observer to safely embark and disembark the vessel at an agreed place and time;

(j) allow and assist the observer to carry out his or her duties safely, and ensure the observer is not obstructed in the execution of his or her duties, unless there is a safety issue that requires intervention by the operator or master;

(k) allow and assist the observer to remove and store samples from the catch, and allow the observer access to stored specimens;

(l) provide the observer, while on board the vessel, at no expense to the observer, the observer programme or service provider, with food, accommodation, adequate sanitary amenities and medical facilities of a standard equivalent to those normally available to an officer on board the vessel according to generally accepted international standards;

(m) allow and assist full access to and use of all facilities and equipment of the vessel that are necessary for the observer to carry out his or her duties, including full access to the bridge, the catch before being sorted, processed catch and any bycatch on board, as well as areas which are used to hold, process, weigh and store fish;

(n) follow any established mechanism established by the SPRFMO Commission for solving conflicts that would complement the established dispute settlement processes provided by the observer programme or service provider;

(o) cooperate with the observer when the observer is sampling the catch;

(p) provide notice to the observer at least fifteen minutes before fishing gear hauling or setting procedures, unless the observer specifically requests not to be notified;

(q) provide adequate space for clerical work to the observer on the bridge or in another designated area, as well as adequate space on deck or in the factory to perform the observer's duties;

(r) provide personal protective equipment, and, where appropriate, an immersion suit;

(s) provide to the observer timely medical attention in the event of physical or psychological illness or injury;

(t) develop and maintain an emergency action plan (EAP) regarding the safety of observers.

Article 28t

Safety orientation briefing

The master of a Union fishing vessel, or a crew member designated by the master, shall provide the observer with a safety orientation briefing at the time of boarding the vessel and before it leaves the dock. The orientation briefing shall include information on:

(a) the provision of and location of safety documentation of the vessel;

(b) the location of life rafts, raft capacities, observer's assignment, expiration and installation, and any other relevant safety-related information;

(c) the location of, and instructions for use of, emergency radio beacons indicating position in case of an emergency;

(d) the location of immersion suits and personal flotation devices, their accessibility, and the quantities for everyone aboard;

(e) the location of flares, their types, numbers, and expiration dates;

(f) the location and number of fire extinguishers, their expiration dates and accessibility;

(g) the location of life-rings;

(h) procedures in case of emergencies, and essential actions of the observer during each type of emergency, such as a fire on board or recovering a person overboard;

(i) the location of first aid materials, and familiarity with crew members in charge of first aid;

(j) the location of radios, procedures for making an emergency call, and how to operate a radio during a call;

(k) safety drills;

(l) safe places to work on deck or in the factory, and the safety equipment required;

(m) procedures in case of illness or accident of the observer or any other crew member.

Article 28u

Procedure in the event of an emergency

1. Member States shall ensure that, if an observer dies, is missing or presumed fallen overboard, fishing vessels flying their flag shall:

   (a) immediately cease all fishing operations;

   (b) immediately commence search and rescue operations if the observer is missing or presumed fallen overboard, and carry out searches for at least 72 hours, unless the observer is found sooner, or unless instructed by their flag Member State to continue searching;

   (c) immediately notify their flag Member State;

(d) immediately notify the Member State, Contracting Party or CNCP, or service provider under the observer programme of which the observer was deployed, if applicable;

(e) immediately alert other vessels in the vicinity by using all available means of communication;

(f) cooperate fully in any search and rescue operation;

(g) irrespective of the search results, return for further investigation to the nearest port, as agreed by the flag Member State and the Contracting Party or CNCP, Member State observer programme or service provider under the observer programme of which the observer was deployed;

(h) provide a report on the incident to their flag Member State, which shall transmit it to the Commission, the observer providers and competent authorities, depending on the incident; and

(i) cooperate fully in all official investigations, and preserve any potential evidence, as well as the personal effects and the quarters of the deceased or missing observers.

2. Member States shall take and implement all steps, as a matter of due diligence, to prevent incidents causing serious harm or death to observers on board fishing vessels flying their flag, and to sanction or punish those involved, including through criminal investigation and prosecution. Member States shall cooperate with the Commission, other Member States, Contracting Parties and CNCPs to that end.';

(16) in Title IV, the following Chapter is inserted before Article 29:

'**Chapter IVa**
Identification of fishing vessels and vessel monitoring system';

(17) in Chapter IVa, the following article is inserted:

'*Article 29a*
Marking and identification of fishing vessels above 25 metres in length overall

1. In addition to the rules on the marking of fishing vessels laid down in Article 6 of Commission Implementing Regulation (EU) No 404/2011*, Member States shall require fishing vessels above 25 metres in length overall flying their flag to have their international radio call sign (IRCS) marked to meet the following technical specifications:

(a) block lettering and numbering shall be used throughout;

(b) for the hull, superstructure and/or inclined surfaces, the height (h) of the letters and numbers shall be not less than 1,0 m;

(c) the length of the hyphen shall be half the height of the letters and numbers;

(d) the width of the stroke for all letters, numbers and the hyphen shall be h/6;

(e) spacing:

(i) the space between letters and/or numbers shall neither exceed h/4, nor be less than h/6;

(ii) the space between adjacent letters having sloping sides shall neither exceed h/8, nor be less than h/10;

(f) the background shall extend to provide a border around the mark of not less than h/6;

(g) an additional IRCS marking placed on a deck, which is any horizontal plane including the top of the wheelhouse, with the height of the marking not being less than 0,3 m.

---

* Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the Common Fisheries Policy (OJ L 112, 30.4.2011, p. 1, ELI: http://data.europa.eu/eli/reg_impl/2011/404/oj).';

(18) Article 31 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. Port Member States shall require third country fishing vessels intending to use their ports for any purposes to provide as a minimum, not later than three working days before the estimated time of arrival at the port, the information set out in Annex XI accompanied by the following:

(a) a copy of the fishing authorisation or, where appropriate, any other authorisation held by the fishing vessel to support operations on SPRFMO fishery products, or to tranship such fishery products;

(b) the crew list of the fishing vessel;

(c) the dates of the fishing trip.’;

(b) the following paragraph is inserted:

‘1a. Port Member States shall promptly inform the Commission of any request received pursuant to paragraph 1 to use their ports, which shall forward that information to the SPRFMO Secretariat.’;

(19) in Article 33, the following paragraphs are added:

‘3. Notwithstanding Article 4(2) of Regulation (EC) No 1005/2008, Member States may allow the entry into their ports of a fishing vessel exclusively for the purpose of inspecting it and for taking other appropriate actions in conformity with international law aimed at preventing, deterring, and eliminating IUU fishing and fishing-related activities in support of such fishing.

4. Where a vessel referred to in paragraph 3 is in port for any reason, the port Member State shall deny such vessel the use of its port for the landing, transhipping, packaging, or processing of fish, and for other port services including, inter alia, bunkering, maintenance and dry-docking.’;

(20) in Article 35, paragraph 2 is replaced by the following:

‘2. The competent authorities of the port Member State shall forward a copy of the inspection report and the evidence collected during the inspection to the Commission, or the body designated by it, as soon as possible and in any event within five working days of completion of the inspection, and, to the extent practicable, ensure the safekeeping of the evidence. The Commission, or the body designated by it, shall transmit the inspection report and any evidence to the SPRFMO Secretariat and to the flag Contracting Party or CNCP point of contact without delay.’;

(21) in Title IV, the following Chapters are inserted:

‘Chapter Va

High seas boarding and inspection

Article 35a

General principles

1. Union fishing vessels operating in the SPRFMO Convention Area shall accept boarding and inspection conducted by authorised inspection vessels flying the SPRFMO inspection flag and pennant set out in Annex XX and authorised inspectors of SPRFMO Contracting Parties.

2. The Commission, or the body designated by it, may notify the SPRFMO Commission that the high seas boarding and inspection provisions of the SPRFMO shall apply in their entirety, *mutatis mutandis*, as between the Union and a fishing entity.

3. The Commission, or the body designated by it, shall notify Member States of the authorised inspection vessels and authorities of the inspection vessels included on the SPRFMO register of authorised inspection vessels and authorities of the inspection vessels, and any updates thereto.

4. Member States shall notify the information under paragraph 3 to the fishing vessels flying their flag and operating in the SPRFMO Convention Area.

Article 35b

High seas boarding and inspection procedure aboard Union fishing vessels

1. During the conduct of a boarding and inspection, the masters of Union fishing vessels shall:

   (a) accept and facilitate prompt and safe boarding by the authorised inspectors;

   (b) follow internationally accepted principles of good seamanship so as to avoid risks to the safety of authorised inspection vessels and authorised inspectors;

   (c) cooperate with, and assist in, the inspection of the vessel;

   (d) refrain from assaulting, resisting, intimidating, interfering with, or unduly obstructing or delaying the authorised inspectors in the performance of their duties;

   (e) allow the authorised inspectors to communicate with the crew of the authorised inspection vessel, the authorities of the inspection vessel, any embarked observers, as well as with the crew and the flag Member State of the Union fishing vessel being inspected;

   (f) provide the authorised inspectors onboard with reasonable facilities, including, where appropriate, food and accommodation; and

   (g) facilitate safe disembarkation by the authorised inspectors.

2. If the master of a Union fishing vessel refuses to allow an authorised inspector to conduct a boarding and inspection, such master shall provide an explanation of the reason for such refusal.

3. The flag Member State shall direct the master to accept boarding and inspection except in those cases where relevant international measures, procedures, and practices relating to safety at sea make it necessary to delay the boarding and inspection. If the master does not comply with such direction, the flag Member State shall suspend the vessel's authorisation to fish and order the vessel to return immediately to port.

4. The flag Member State shall immediately notify the Commission, or the body designated by it, of the action it has taken in the circumstances referred to in paragraph 3. The Commission, or the body designated by it, shall send that information to the authorities of the inspection vessel and the SPRFMO Commission without delay.

Article 35c
Serious infringements

1. For the purposes of this Regulation, a serious infringement shall include any of the following infringements of this Regulation or of the SPRFMO Convention:

   (a) fishing without a valid authorisation issued by the flag Member State;

(b) significant failure to maintain records of catch and catch-related data in accordance with the reporting requirements, or significant misreporting of such catch and/or catch-related data;

(c) fishing in a closed area;

(d) fishing during a closed season;

(e) intentional taking or retention of species in contravention of this Regulation or the SPRFMO Convention;

(f) significant infringement of catch limits or quotas in force;

(g) using prohibited fishing gear;

(h) falsifying or intentionally concealing the markings, identity or registration of a fishing vessel;

(i) concealing, tampering with, or disposing of evidence relating to, the investigation of an infringement;

(j) multiple infringements which, taken together, constitute a serious disregard of this Regulation or of the SPRFMO Convention;

(k) refusal to accept a boarding and inspection, provided this refusal is not covered by the situation described in Article 35b(2) and (3);

(l) assaulting, resisting, intimidating, sexually harassing, interfering with, or unduly obstructing or delaying an authorised inspector or observer; or

(m) intentionally tampering with or disabling the vessel monitoring system.

2. Upon receipt of a notification of an alleged serious infringement, the flag Member State of the Union fishing vessel shall without delay:

(a) investigate and, if the evidence warrants, take enforcement action against the vessel in question and notify the Commission, or the body designated by it, accordingly; the Commission or the body designated by it shall notify the authorities of the inspection vessel and the SPRFMO Secretariat; or

(b) authorise the authorities of the inspection vessel to undertake the investigation of the alleged serious infringement and to notify the Commission, or the body designated by it, accordingly; the Commission or the body designated by it shall notify the SPRFMO Secretariat.

3. Flag Member States shall regard any interference with the carrying out of the duties of an observer, an authorised inspector or an authorised inspection vessel by fishing vessels flying their flag, or by the operators, masters or crew of such vessels, in the same manner as any such interference occurring within their exclusive jurisdiction.

Chapter Vb

Marine pollution and retrieval of abandoned, lost or otherwise discarded fishing gear

Article 35d

Marine pollution

1. Fishing vessels shall be prohibited from discharging into the sea all plastics, including synthetic ropes, synthetic fishing nets, plastic refuse bags and incinerator ashes from plastic products.

2. Fishing vessels shall store all plastics on board the vessel until they can be discharged at adequate port reception facilities

3. Paragraphs 1 and 2 shall not apply to the discharge of plastics from a fishing vessel necessary for the purpose of securing the safety of a ship and those on board or saving life at sea or to the accidental loss of plastics, synthetic ropes or fishing nets from a fishing vessel, provided that all reasonable precautions have been taken to prevent such loss.

Article 35e

Retrieval of abandoned, lost or otherwise discarded fishing gear

1. Masters of fishing vessels shall ensure that:

   (a) all reasonable efforts are made to combat, minimise and eliminate abandoned, lost or otherwise discarded fishing gear linked to their vessels;

(b) fishing gear linked to their vessel is not deliberately discarded or abandoned, except for safety reasons, particularly in a situation of distress or danger to life;

(c) as soon as possible, every reasonable attempt to retrieve lost fishing gear is made before abandoning it;

(d) there is, where possible, equipment on board to retrieve any abandoned, lost or otherwise discarded fishing gear linked to the vessel;

(e) when abandoned, lost or otherwise discarded fishing gear of that vessel cannot be retrieved, the flag Member State is notified within 48 hours of the following:

(i) the name, IMO number and call sign of the vessel;

(ii) the type/material of gear;

(iii) the quantity of gear;

(iv) the time when the gear was lost, abandoned or otherwise discarded;

(v) the position (longitude/latitude) where the gear was lost, abandoned or otherwise discarded;

(vi) measures taken by the vessel to retrieve the gear; and

(vii) if known, the circumstances that led to the gear being lost, abandoned, or otherwise discarded for safety reasons;

(f) when abandoned, lost or otherwise discarded fishing gear not linked to that vessel is retrieved, the flag Member State is notified within 48 hours of the following:

(i) the name, IMO number and call sign of the vessel that has retrieved the gear;

(ii) the name, IMO number and call sign of the vessel that lost, abandoned or otherwise discarded the gear (if known);

(iii) the type of gear retrieved;

(iv) the quantity of gear retrieved;

(v) the time when the gear was retrieved;

(vi) the position (longitude/latitude) where the gear was retrieved and, if possible, photographs of the gear retrieved.

2. Member States shall promptly transmit the information received under paragraph 1, points (e) and (f), to the Commission, or the body designated by it. The Commission, or the body designated by it, shall forward that information promptly to the SPRFMO Secretariat.';

(22) Article 40 is replaced by the following:

'*Article 40*

Alleged infringements of SPRFMO conservation and management measures reported by a Contracting Party, fishing entity or CNCP

1. Member States shall designate a point of contact for the purpose of receiving inspection reports from other Member States, Contracting Parties, fishing entities and CNCPs.

2. Member States shall transmit any changes to the designated point of contact to the Commission at least 20 days before the changes take effect. The Commission shall forward that information to the SPRFMO Secretariat at least 14 days before such changes take effect.

3. In the case of port inspections, if the point of contact designated by a Member State receives an inspection report from another Member State, a Contracting Party, fishing entity or CNCP providing evidence that a fishing vessel flying the flag of that Member State has committed an infringement of this Regulation or the SPRFMO CMMs, the flag Member State shall promptly investigate the alleged infringement and notify the Commission, or the body designated by it, of the status of the investigation, and of any enforcement action that has been taken, to enable the Commission, or the body designated by it, to inform the SPRFMO Secretariat within three months of receipt of the notification. If the Member State cannot provide the Commission, or the body designated by it, with a status report within three months of the receipt of the inspection report, it shall notify the Commission, or the body designated by it, within the three-month period of the reasons for the delay and of the date by which the status report will be submitted. The Commission, or the body designated by it, shall transmit the information regarding the status or delay of the investigation to the SPRFMO Secretariat.

4. In the case of high seas boarding and inspection, if the point of contact designated by a Member State receives an inspection report from another Member State, a Contracting Party, fishing entity or CNCP providing evidence that a fishing vessel flying the flag of that Member State has committed an infringement of this Regulation or the SPRFMO CMMs, the flag Member State shall report to the Commission, or the body designated by it, on action it has taken in response to the alleged infringement, including any proceedings instituted and sanctions applied, at least 110 days in advance of the annual meeting of the SPRFMO Commission. The Commission, or the body designated by it, shall forward that information to the SPRFMO Secretariat at least 90 days in advance of the annual meeting.';

(23) in Article 41, the following paragraph is added:

'4. Not later than 110 days before the annual meeting of the SPRFMO Commission, Member States whose vessels fish in the SPRFMO Convention Area shall report to the Commission on the methods used to prevent tampering with the satellite-tracking device by fishing vessels flying their flag. The Commission shall forward that information to the SPRFMO Secretariat at least 90 days in advance of the annual meeting.';

(24) Article 42 is replaced by the following:

'*Article 42*

Confidentiality and data protection

1. Data collected and exchanged in the framework of this Regulation shall be treated in accordance with the applicable rules on data protection and on confidentiality pursuant to Articles 112 and 113 of Regulation (EC) No 1224/2009, unless provided otherwise in this Article.

2. Personal data collected under this Regulation shall be processed for the purposes of implementation and enforcement of the management, conservation and control measures laid down by this Regulation, including any enquiries pertaining to complaints and infringements and judicial or administrative procedures relating to thereto.

3. Personal data processed under this Regulation shall not be stored for a period longer than 10 years, except if those personal data are necessary to enable the follow-up of an infringement, an inspection, or judicial or administrative procedures. In those cases, the personal data may be stored for a maximum of 20 years. If the information is retained for a longer period, the personal data shall be anonymised.';

(25) Article 43 is amended as follows:

(a) points (b) and (c) are replaced by the following:

‘(b) the time limits laid down in Article 7(1), (1b), (1c) and (2), Article 11, Article 12(2) and (5), Article 16(1) and (3), Article 17(1) and (2), Article 21(1) and (2), Article 22(1) to (4), Article 23(6), Article 24(1) to (3), Article 25(5) and (6), Article 26(1), Article 27(2), (3) and (3a), Article 28(2), Article 28a(1) and (2), Article 28b(1), Article 28u(1), Article 29(1) and (2), Article 30(2), Article 31(1) and (1a), Article 34(5) and (6), Article 35(2) and (3), Article 35b(4), Article 35e(1) and (2), Article 36, Article 37(1), Article 39(2), Article 40(2), (3) and (4), and Article 41(1), (2) and (4);

(c) observer coverage laid down in Article 6;’;

(b) point (d) is deleted;

(c) point (f) is replaced by the following:

‘(f) the type of data and information requirements laid down in Article 7(2), Article 11, Article 12(2) and (3), Article 14(1) and (2), Article 16(1), Article 17(1), Article 18(2) and (3), Article 19(1) Article 21, Article 22(1) to (4), Article 23(6), Article 24(1) to (3), Article 25(1), Article 26(1), Article 27(2), (3) and (3a), Article 28(5), Article 28a(1) and (2), Article 28b(1), Article 28i, Article 28n(1), Article 28t, Article 29(1) and (2), Article 29a(1), Article 31(1), Article 35a(3), and Article 35e(1);’;

(d) the following points are added:

‘(g) the threshold laid down in Article 7(1a);

(h) the type of management areas and fishing activities laid down in Article 11a;

(i) the encounter criteria laid down in Article 14(1);

(j) the distances laid down in Article 14(1), Article 24(2), and Article 29(1) and (3);

(k) vessel list information laid down in Article 22(4a);

(l) the observer qualifications criteria laid down in Article 28d;

(m) the list of observer training requirements laid down in Article 28e(1);

(n) the observer data validation standards laid down in Article 28h(3);

(o) the list of essential observer safety equipment laid down in Article 28k(2);

(p) the list of rights of observers laid down in Article 28p(2);

(q) the list of duties of observers laid down in Article 28q(1) and (2);

(r) the list of rights of Union vessel operators and masters laid down in Article 28r;

(s) the list of duties of Union vessel operators and masters laid down in Article 28s;

(t) the procedure to be followed in the event of an emergency laid down in Article 28u;

(u) the vessel identification and marking requirements laid down in Article 29a.';

(26) Annex IV is replaced by the text set out in point 1 of Annex I to this Regulation;

(27) Annex X is amended in accordance with point 2 of Annex I to this Regulation;

(28) Annexes XIV, XV, XVI, XVII, XVIII, XIX, and XX are added in accordance with point 3 of Annex I to this Regulation.

Article 3

Amendments to Regulation (EU) 2019/833

Regulation (EU) 2019/833 is amended as follows:

(1) in Article 5(3), point (a), the words 'all species' are replaced by the word 'catch';

(2) in Article 6, paragraph 1 is amended as follows:

(a) in points (d) and (e), time '24:00' is replaced by '23:59';

(b) the following point is inserted:

‘(ea) close its directed fishery for cod in Division 3L between 00:01 UTC 15 April 2025 and 23:59 UTC 30 June 2025. During that period, Member States shall ensure that their vessels limit the catches retained on board and in any one haul of this stock in line with Article 7(3), point (a), and observe the move-on provisions in Article 8(1) point (b).’;

(3) in Article 7(3), point (a) is replaced by the following:

‘(a) for cod in Divisions 3L and 3M, redfish in Divisions 3LN and witch flounder in Divisions 3NO: 1 250 kg or 5 %, whichever is the greater;’;

(4) Article 15 is amended as follows:

(a) the title is replaced by the following:

‘Lost, abandoned or discarded fishing gear and retrieval of fishing gear’;

(b) in paragraph 1, point (c) is replaced by the following:

‘(c) not deliberately abandon or discard fishing gear, except for safety reasons.’;

(5) in Article 27, paragraph 3 is replaced by the following:

‘3. By way of derogation from paragraph 2, a Member State may allow fishing vessels flying its flag to carry an observer for less than 100 %, but not less than 25 % of the fishing trips conducted by its fleet, or of the days the fishing vessels are present in the Regulatory Area calculated for a period of one calendar year in any of the following cases:

(a) where the vessels are targeting species in areas where negligible by-catch of other species is expected to occur;

(b) where the flag Member State has provided information justifying why a 100 % coverage is not applied;

(c) where extraordinary and unforeseeable circumstances are duly documented and justified by the flag Member State preventing 100 % observer coverage; or

(d) where a vessel deploys an electronic observation programme approved by the flag Member State and:

(i) the flag Member State submits to the NAFO Executive Secretary, with the Commission and EFCA in copy, their electronic observation standards and guidelines; and

(ii) the flag Member State submits a completed copy of the Annex II.M to the CEM referred to in point 35 of the Annex to this Regulation within three months of the electronically observed trip.

For each fishing trip of its vessels without an observer on board, the flag Member State shall physically inspect the landing of the vessel in its ports or otherwise evaluate as appropriate each landing in its ports, following a risk assessment. Inspections shall be documented in the format prescribed in Annex IV.C to the CEM referred to in point 9 of the Annex to this Regulation.';

(6) Article 30 is replaced by the following:

'*Article 30*
Surveillance procedures

1. The inspecting Member State shall ensure that, for each sighting in the Regulatory Area of a fishing vessel entitled to fly the flag of a NAFO Contracting Party, its inspectors are to record in a Sighting Report, the following information:

(a) inspecting Contracting Party and the inspector(s) identification;

(b) identification or call sign of the inspecting platform;

(c) flag State, name, and call sign of the sighted fishing vessel;

(d) sighted fishing vessel's activity as set out in Annex II.I.B to the CEM;

(e) date and time of the sighting;

(f) position of the fishing vessel at the time of the sighting; and

(g) if images or footage were recorded, and any other relevant observations.

2. The inspecting Member State shall ensure that, where an inspector observes in the Regulatory Area a fishing vessel flying the flag of a NAFO Contracting Party for which there are reasons to suspect an apparent infringement of this Regulation, and where an immediate inspection is not practicable, the inspector shall:

(a) fill out the Surveillance Report Form in accordance with Annex IV.A to the CEM referred to in point 38 of the Annex to this Regulation. If the inspector has made a volumetric or catch composition evaluation of the content of a haul, the surveillance report shall include all relevant information regarding the composition of the tow, and refer the method used for the volumetric evaluation;

(b) record images of the vessel and record the position, date and time the image was recorded; and

(c) without delay transmit electronically the surveillance report and images to his or her competent authority.

3. The competent authority of a Member State shall:

(a) transmit the Sighting Report relating to a sighting referred to in paragraph 1 to EFCA which shall submit it to the NAFO Executive Secretary within 15 days of the inspection vessel's return to port;

(b) transmit the surveillance report to EFCA relating to a sighting referred to in paragraph 2 which shall submit it without delay to the NAFO Executive Secretary;

(c) upon request, transmit a copy of images and/or footage recorded, and any other available information relating to a sighting, to EFCA which shall in turn submit them to the flag State Contracting Party of the vessel or the flag Member State if different from the inspecting Member State;

(d) ensure security and continuity of the evidence for subsequent inspections.

4. Each Member State’s competent authority shall, on receipt of a surveillance report relating to a sighting referred to in paragraph 2 concerning a vessel flying its flag, conduct such investigation as may be necessary to determine appropriate follow-up action.

5. Each Member State shall send to EFCA the investigation report referred to in paragraph 4, which shall send it to the NAFO Executive Secretary and to the Commission.’;

(7) in Article 35(3), point (c), the following point is added:

‘(v) directed fishing during a closed time contrary to Article 6(1), point (ea), or fishing with an unauthorised mesh size, grid or grate bar spacing, or without the use of grid or grate, contrary to Article 13(2), point (d), when there is no observer on board and the vessel is directing for cod in Division 3L.’;

(8) Article 49 is replaced by the following:

‘*Article 49*
Confidentiality and data protection

1. Data collected and exchanged in the framework of this Regulation shall be treated in accordance with the applicable rules on data protection and on confidentiality pursuant to Articles 112 and 113 of Regulation (EC) No 1224/2009, unless provided otherwise in this Article.

2. Personal data collected under this Regulation shall be processed for the purposes of implementation and enforcement of the management, conservation and control measures laid down by this Regulation, including any enquiries pertaining to complaints and infringements and judicial or administrative procedures relating to thereto.

3. Personal data processed under this Regulation shall not be stored for a period longer than 10 years, except if those personal data are necessary to enable the follow-up of an infringement, an inspection, or judicial or administrative procedures. In those cases, the personal data may be stored for a maximum of 20 years. If the information is retained for a longer period, the personal data shall be anonymised.

4. In addition to the obligations laid down in Articles 112 and 113 of Regulation (EC) No 1224/2009, Member States shall ensure the confidential treatment of electronic reports and messages transmitted to and received from NAFO pursuant to Article 4(2), point (a), Article 4(6), Article 5(3), point (c), Article 10(2), Article 15(4), Article 22(1), (5) and (6), Article 23(6), Article 25(8), Article 26(9), Article 27(3), (5), (6), (7) and (15), Article 29(1) and (2), Article 34(2), Article 36(4), Article 37(1) and Article 39(8).';

(9) in Article 50(2), the following points are added:

'(o) changes to closure periods as provided in Article 6(1), point (ea);

(p) by-catch retained on board as provided for in Article 7(3);

(q) information for the notification by the master of the fishing vessel and Member States in relation to lost or abandoned fishing gear, and retrieval of fishing gear as provided for in Article 15(1) and (2);

(r) derogations from the observer programme as provided for in Article 27(3);

(s) changes to the reference to NAFO document for vessel activity list used by Member States in accordance with Article 30(1), point (d).';

(10) in the Annex, point (38) is replaced by the following:

'(38) Surveillance Report Form in Annex IV.A to the CEM referred to in Article 30(2), point (a), and Article 45, point (a), to this Regulation;'.

Article 4

Amendments to Regulation (EU) 2021/56

Regulation (EU) 2021/56 is amended as follows:

(1) in Article 3, the following point is added:

'(25) "Electronic Monitoring System" or "EMS" means an integrated system of hardware and software that supports acquisition of video footage of fishing activity, positional and/or sensor data, that allows the analysis and reporting of electronic monitoring records.';

(2) in Article 4, the following paragraphs are inserted:

‘1a. Purse seine vessels that exceed their annual catch limit shall be subject to a longer closure period than those referred to in paragraph 1 during the following year, as follows:

(a) for purse seine vessels that exceeded the annual catch limit of 1 200 metric tonnes of bigeye tuna the closure period shall be increased by 10 days;

(b) for purse seine vessels that exceeded the annual catch limit of 1 500 metric tonnes of bigeye tuna the closure period shall be increased by 13 days;

(c) or purse seine vessels that exceeded the annual catch limit of 1 800 metric tonnes of bigeye tuna, the closure period shall be increased by 16 days;

(d) for purse seine vessels that exceeded the annual catch limit of 2 100 metric tonnes, the closure period shall be increased by 19 days;

(e) for purse seine vessels that exceeded the annual catch limit of 2 400 metric tonnes, the closure period shall be increased by 22 days.

1b. The additional days of closure pursuant to paragraph 1a shall be added, as appropriate, to the beginning of the closure for vessels observing the first period referred to in paragraph 1 and to the end of the closure for vessels observing the second period referred to in paragraph 1, such that the closure of the first period always ends on 8 October of each year, and the second period always begins on 9 November of each year.

1c. In order to apply paragraph 1a, Each Member State shall strengthen the monitoring and control system for tuna catches through, inter alia, using on-board observer data, logbooks, port sampling and information from tuna processing facilities. The Commission shall compile and submit to the IATTC Secretariat the final data on the annual catches of bigeye tuna made by individual vessels flying the flag of a Member State no later than 15 February of the following year.

1d. Member States shall estimate the catch of bigeye tuna of each vessel flying its flag at the end of each trip, in the days immediately after the conclusion of the trip and discharge (for example observer estimates, ship's log data, well sampling, cannery data).';

(3) the following article is inserted:

‘*Article 4a*

Report of annual by-catches of Pacific bluefin tuna

Each Member State shall report to the Commission annually any by-catches of Pacific bluefin tuna, which cannot exceed 10 metric tonnes per year. The Commission shall report this information annually to the IATTC Secretariat.’;

(4) Article 6 is amended as follows:

(a) the following paragraphs are inserted:

‘2a. Union purse seine vessels may deactivate a satellite buoy attached to a FAD only in the following circumstances:

(a) complete loss of signal reception;

(b) beaching;

(c) appropriation of a FAD by a third party;

(d) temporarily during a selected closure period;

(e) when outside of:

(i) the area between the meridians 150°W and 100°W, and the parallels 8°N and 10°S;

(ii) the area between the meridian 100°W and the coast of the American continent and the parallels 5°N and 15°S; or

(f) transfer of ownership.

2b. Union purse seine vessels may remotely reactivate a satellite buoy attached to a FAD at sea in the following circumstances: to assist in the recovery of a beached FAD; after a temporary deactivation during the closure period; or transfer of ownership while the FAD is at sea.

2c. Union purse seine vessels shall report any deactivation or remote reactivation of a satellite buoy attached to a FAD to the flag Member State in conformity with Annexes II and III. The Member State shall send the reports to the Commission at monthly intervals with a time delay of at least 60 days, but no longer than 70 days after the deactivation or remote reactivation. The Commission shall send the reports to the IATTC Secretariat no later than 90 days after the deactivation or remote reactivation of satellite buoys.';

(b) the following paragraph is inserted:

‘4a. Each Member State shall submit to the Commission information concerning the status of implementation of paragraph 4 for each calendar year in a format consistent with the IATTC standards for the provision of catch and effort data, and this information shall be made available for analysis to the IATTC Scientific staff and the Ad Hoc Working Group on FADs.’;

(c) paragraphs 5 and 6 are deleted.;

(5) the following Article is inserted:

‘*Article 6a*
FAD design and recovery

1. To reduce the entanglement of sharks, marine turtles or any other species, Union fishing vessels shall deploy or redeploy only FADs that are not constructed with mesh net or entangling material, in accordance with the specifications set out in Annex IV.

2. To reduce the amount of synthetic marine debris:

(a) as of 1 January 2026, the operators of Union fishing vessels shall only deploy or redeploy drifting FADs of biodegradability category I, II, III or IV, as defined in Annex IV;

(b) as of 1 January 2029, the operators of Union fishing vessels shall only deploy or redeploy drifting FADs of biodegradability category I or II, as defined in Annex IV.

3. Non-biodegradable materials, in particular nylon ropes, shall be used exclusively to strengthen the structure of the floating or underwater component of the FAD of biodegradability categories I and II, as a temporary solution in the absence of the availability of a biodegradable alternative.

4. To prevent drifting loss or stranding, Member States may initiate voluntary recovery programmes for drifting FADs through cooperative initiatives among fishing vessels operating in the Convention Area or vessels implementing projects for the recovery of such FADs. Without restricting regular fishing operations of purse seine vessels fishing with FADs, such recovery activities shall be limited to the collection of drifting FADs for final disposal, and shall not include any type of maintenance or adjustment. Those vessels shall not deploy FADs unless they are authorised purse seine vessels. Drifting FADs collected under the voluntary recovery programme shall be taken on board and brought to port for recycling or disposal.';

(6) the following articles are inserted:

'*Article 7a*

Port State measures

1. A Member State wishing to grant access to its ports to third-country fishing vessels carrying IATTC fishery products caught in the Convention Area or fishery products originating from such resources that have not been previously landed or transhipped at port or at sea shall:

   (a) designate the ports to which third-country fishing vessels may request entry pursuant to Article 5 of Regulation (EC) No 1005/2008;

   (b) designate a point of contact for the purposes of receiving prior notice pursuant to Article 6 of Regulation (EC) No 1005/2008;

   (c) designate a point of contact for the purposes of receiving inspection reports pursuant to Article 11(3) of Regulation (EC) No 1005/2008.

2. Member States shall transmit any changes to the list of designated points of contact and designated ports to the Commission at least 15 days before the changes take effect. The Commission shall forward that information to the IATTC Secretariat at least seven days before the changes take effect.

3. Masters of fishing vessels shall facilitate safe access to the fishing vessel, cooperate with the competent authority of IATTC designated ports, facilitate the inspection and communication, and shall neither obstruct, intimidate or interfere, nor cause other persons to obstruct, intimidate or interfere, with port inspectors in the execution of their duties.

Article 7b

Vessel monitoring system

1. Union fishing vessels shall ensure that the information collected by the vessel monitoring system (VMS) includes:

   (a) the vessel's identification;

   (b) the vessel's geographical position (latitude and longitude), with an error of less than 100 metres at a confidence level of 98 %;

   (c) the date and time (UTC) of the fixing of the vessel's position, and;

   (d) the vessel's speed and course.

2. The information referred in paragraph 1 shall be collected at least every four hours for longliners and every two hours for other vessels by the land-based fisheries monitoring centre (FMC) of the Member States.

3. VMS equipment installed on vessels shall, at a minimum, be tamper-evident (namely any attempts to tamper with the equipment will be detectable to the electronic monitoring service provider and the vessel owner, and reported to the respective vessel flag authority), fully automatic for regular position data reporting, always operational regardless of environmental conditions, and capable of manual transmission of reports and messages.

4. A Union fishing vessel shall not be authorised to commence a fishing trip with a defective satellite tracking device. When a device stops functioning or has a technical failure during a fishing trip lasting more than 30 days, a repair or replacement must take place as soon as the vessel enters a port.

5. In the event of a technical failure or non-functioning of the satellite tracking device fitted on board a fishing vessel that prevents the reception of two consecutive transmissions, the vessel's master shall commence manual transmission in accordance with paragraph 6, and the device shall be repaired or replaced within 30 days. This shall apply only where the competent authorities have exhausted all reasonable steps to ensure transmissions, and where there is no second functioning satellite tracking device on board.

6. A Union fishing vessel with a defective satellite tracking device shall communicate to the FMC or relevant competent authority at a minimum every six hours, reports containing the information in paragraph 1 by appropriate telecommunication means for example radio, web-based reporting, electronic mail, telefax or telex).

Article 7c

Electronic Monitoring Systems and Vessel Monitoring Plans

1. Union fishing vessels shall apply the minimum technical requirements, performance standards and data requirements set out in Annexes VI and VII when implementing an electronic monitoring system (EMS) in the Convention area.

2. The minimum technical requirements, performance standards and data requirements set out in Annex VI shall be periodically reviewed by the Commission to accommodate technological advances and changes in priorities, as well as the particular requirements of vessels of various sizes, gears, and fishing practices.

3. The minimum technical requirements and performance standards, the activities that should be covered under EMS and captured by the camera(s), and general recommendations for configurations of EMS equipment are set out in Annex VI. Vessels or groups of vessels with similar designs observing those minimum technical requirements and performance standards shall have a Vessel Monitoring Plan (VMP) based on the vessel's or vessels' design and specifications.

4. EMS equipment shall automatically and autonomously collect EMS records to generate the required EM data, and shall be tamper-evident (namely any attempts to tamper with the equipment will be detectable to the EM service provider and the vessel owner and reported to the respective vessel flag authority). Both the mandatory minimum data fields that EMS shall collect, as well as optional data fields EMS may collect, for each vessel type are set out in Annex VII.

5. If a Member State intends to achieve fisheries data submission by EMS, it shall develop an EMS Vessel Monitoring Plan (VMP) for each vessel or group of vessels (for example all purse-seine, or all longline, or all longline of a certain size range) fishing for tuna or tuna-like species, on the basis of which EMS equipment is to be operated.

6. Vessels or groups of vessels with similar designs using EMS, observing the minimum standards set out under Annex VI and applying the IATTC minimum standards for EMS shall have a VMP based on the vessel's or vessels' design and specifications under Annex VI.

7. The VMP shall describe the configuration, components and installation of EMS equipment on each vessel, and that configuration shall be capable of collecting EMS records consistent with all relevant mandatory minimum standards and technical specifications in that plan. The requisite contents of the VMP are set out in Annex VIII. Member States may choose another format of VMP, provided it complies with the minimum requirements set out in Annex VIII, point 4.

8. A copy of the Member State approved VMP shall be maintained aboard each vessel at all times when EMS equipment is deployed to monitor the vessel's activities.

9. Any modification to the VMP, including in relation to EMS equipment, shall be reported to the authority of the flag Member State of the vessel for approval.

10. Standards for storage and retention of EMS records, data retrieval and data review and reporting are set out in Annex IX.

11. The master of a Union fishing vessel with a VMP shall ensure that:

    (a) in case the EMS equipment malfunctions, the malfunctioning is reported to the relevant authority of the flag Member State and, where appropriate, the provider as soon as possible;

    (b) on-board physical access to the EMS equipment components is provided if requested by the authority of the flag Member State or any authorised personnel;

    (c) in accordance with the VMP and the camera views capable of collecting the minimum data identified in this Regulation as set out in Annex VI, the cameras have an unobstructed view, and the lenses or lens covers are cleaned, as necessary;

(d) the handling of the catch and bycatch, to the extent practicable, allows electronic monitoring cameras an adequate view of the collection of the relevant data fields set out in Annex VI (for example species identification, catch composition, etc.);

(e) the transmission or retrieval of electronic monitoring records is carried out in accordance with the standards set out in Annex IX;

(f) unless authorised and instructed by the flag Member State or personnel authorised by that Member State, the EMS equipment is not tampered with (for example disconnecting the system, rearranging or obstructing the view of the cameras, disconnecting cameras or sensors, switching off the EMS equipment manually, intentionally breaking the system).

12. Member States that decide to implement EMS to collect fisheries data for submission to the IATTC Secretariat shall ensure that, prior to submitting EMS data to the IATTC Secretariat, vessels flying their flags meet the following mandatory elements of the EMS minimum standards and requirements:

(a) that Member State EM programmes are developed, and designed and implemented in a manner that ensures they are transparent, and the resulting data are verifiable in accordance with Annex IX;

(b) that the analysis of the EMS records in the synthesis of EM data is carried out by companies authorised by a Member State, or by institutions or authorities in Member States, having the necessary training, knowledge, skills and abilities to ensure effective EM records analysis and EMS data generation; this includes sufficiently accurate species identification;

(c) that the health status report of the EMS equipment on board each vessel under its jurisdiction is provided by the EMS service provider or by the EMS equipment itself;

(d) that rules and procedures are established for cases of EMS equipment failure, and that those rules and procedures are followed.

13. Member States shall provide to the Commission an EMS programme description detailing, at a minimum, the following information:

(a) the VMPs used in the programme;

(b) the responsibilities of fishing authorities and vessel owners, masters and crew with respect to installing and maintaining equipment, including routine cleaning of cameras, and responses to mechanical or technical failure of the EMS;

(c) protocols for data storage, retrieval and transfer in line with Annex IX;

(d) protocols for internal reporting and following-up on possible actions inconsistent with EMS standards that are detected, including rules and procedures in case of EMS equipment failure.

14. The Commission shall submit the EMS programme description to the IATTC Secretariat before the EM programme begins to submit data to the IATTC Secretariat. Member States shall report any changes to their EMS domestic programmes to the Commission. The Commission shall inform the IATTC Secretariat whenever such changes occur.

15. Member States that decide to implement EMS to collect fisheries data for submission to IATTC shall report to the IATTC Secretariat EMS data for each year collected in a manner consistent with the minimum standards set out in this Regulation, and in a manner consistent with data reporting deadlines or by the end of the following year, using the formats and guidelines described in Annexes VI, VII and IX.

16. Member States that decide to implement EMS to collect fisheries data for submission to IATTC shall submit by 15 March of each year a fleet-level summary of the VMPs to the Commission describing the implementation of their EM programme(s) in the previous year, including, at a minimum, the number of vessels implementing EMS by gear and fishery type; the range of EMS configurations implemented within the fleet; a general description of EMS requirements placed upon vessel masters and crews by the Member State; the percentage of coverage levels achieved by fishery and gear type; details on how those coverage levels were calculated; and, where appropriate, information on compliance monitoring. The Commission shall submit to the IATTC Secretariat by 30 March of each year the report on the implementation of EM programme(s) in the previous year.';

(7) Article 10 is replaced by the following:

'*Article 10*
Silky sharks

1. It shall be prohibited to retain on board, tranship, land, store, sell or offer for sale any part of or whole carcass of silky sharks (*Carcharhinus falciformis*) caught by purse-seine vessels in the Convention area.

2. Union purse-seine vessels shall release live silky sharks whenever possible.

3. If silky sharks are unintentionally caught and frozen as part of purse-seine vessel operations, and if the governmental authorities are present at the point of landing, the whole silky shark shall be surrendered to them. If the governmental authorities are unavailable, the whole silky shark surrendered shall not be sold or bartered, but may be donated for purposes of domestic human consumption. Silky sharks surrendered in this manner shall be reported to the IATTC Secretariat.

4. Longline vessels that catch sharks incidentally shall limit bycatch of silky sharks to a maximum of 20 % of the total catch by fishing trip in live weight. The multi-species fisheries using surface longlines (in which the majority of hooks fish at depths shallower than 100 metres and target species other than swordfish) shall limit the catch of silky sharks of less than 100 cm total length to 20 % of the total number of silky sharks caught during the trip.

5. For those multi-species fisheries using surface longlines whose bycatch of silky sharks of less than 100 cm total length exceeds 20 % of silky sharks by weight on average in a year, Member States shall prohibit the use of steel leaders during a period of three consecutive months each year. The average proportion of silky sharks in the catch shall be calculated from data of the previous calendar year.

   This paragraph shall also apply to new vessels entering the multi-species fisheries and to vessels for which no data are available from the immediately preceding period.

6. Union fishing vessels of less than 12 metres in length overall using manually operated fishing gear (namely without mechanical or hydraulic winches) and which do not deliver to motherships at any time during the fishing trip are excluded from the application of this Article.

7. Member States shall notify to the Commission, before 15 September of each year, the single period of restricted use of steel leaders referred to in paragraph 5 which shall be observed for the calendar year. The Commission shall, before 1 October of each year, notify the IATTC Secretariat accordingly.

8. Member States shall require the collection and submission of catch data for silky sharks, in accordance with IATTC data reporting requirements. Member States shall also record, through observer programmes and other means, the number and status (dead or alive) of silky sharks caught and released by purse-seine vessels of all capacity classes, and report those data to the IATTC Secretariat.

9. Union fishing vessels shall not fish in silky shark pupping areas identified by the IATTC in accordance with the recommendation of the IATTC scientific staff. The Commission shall transmit the information about silky shark pupping areas to the Member States. The Member States shall make that information available to the operators of fishing vessels flying their flag.';

(8) Article 12 is replaced by the following:

'*Article 12*

Safe release of sharks

1. Union fishing vessels shall promptly release unharmed all live sharks caught that are not retained, to the extent practicable, as soon as they are seen on the line, entangled in the net or brailed on the deck, taking due consideration of the safety of any persons. They shall also discard dead sharks that are not retained as catch or by-catch.

2. Purse seine vessels shall apply the following measures to safeguard the safety of the persons involved in the operation referred to in paragraph 1:

   (a) sharks shall be disentangled and released into the ocean as soon as possible after first seen entangled in the net;

   (b) sharks brailed on deck shall be returned to the water as soon as possible, either using a ramp from the deck connecting to an opening on the side of the vessel, or through escape hatches. If ramps or escape hatches are not available, the sharks shall be lowered with a sling or cargo net, using a crane or similar equipment;

(c) the use of gaffs, hooks, or similar instruments for the handling of sharks shall be prohibited;

(d) the lifting of sharks by the head, tail, gill slits, or spiracles, or by using bind wire against or inserted through the body shall be prohibited. The punching of holes through the bodies of sharks (for example to pass a cable through for lifting the shark) shall be prohibited;

(e) the lifting of whale sharks (*Rhincodon typus*) onboard the vessel shall be prohibited, as shall the towing of whale sharks out of a purse-seine net (for example using towing ropes).

3. Longline vessels shall apply the following measures to safeguard the safety of the persons involved in an operation referred to in paragraph 1:

(a) the sharks shall be released into the ocean as soon as possible after first seen caught on a hook;

(b) sharks brailed on deck shall be returned to the water as soon as possible, either using a ramp from the deck connecting to an opening on the side of the vessel, or through escape hatches. If ramps or escape hatches are not available, the sharks shall be lowered with a sling or cargo net, using a crane or similar equipment;

(c) the use of gaffs, hooks, or similar instruments for the handling of sharks shall be prohibited;

(d) the lifting of sharks by the head, tail, gill slits, or spiracles, or by using bind wire against or inserted through the body shall be prohibited. The punching of holes through the bodies of sharks (for example to pass a cable through for lifting the shark) shall be prohibited;

(e) the lifting of whale sharks (*Rhincodon typus*) onboard the vessel shall be prohibited, as shall the towing of whale sharks (for example using towing ropes);

(f) sharks shall be left in the water where possible;

(g) line cutters shall be used to cut the branch line as close to the hook as possible, and so that less than 1 metre remains on the animal, to the extent practicable.

4. In addition to in paragraph 1 of this Article, Union fishing vessels shall apply best safe handling and release practices for sharks in accordance with the guidelines of Annexes 3 and 3.1 to Resolution C-24-05.';

(9) Article 14 is replaced by the following:

'*Article 14*

Data collection on shark species

1. Masters of Union fishing vessels shall collect and submit catch data for silky and hammerhead sharks to the flag Member State, which shall submit those data to the Commission by 15 June of each year. The Commission shall forward the data to the IATTC Secretariat by 30 June of each year.

2. Each Member State shall annually report data on catches, effort by gear type, landing and trade of sharks, by species where possible, in accordance with IATTC reporting procedures, including available historical data to the Commission by 15 June of each year. The Commission shall forward the data to the IATTC Secretariat by 30 June of each year.

3. Observers on Union fishing vessels shall record the number and life status (dead or alive) of silky sharks and hammerhead sharks caught and released.

4. Member States shall also provide, through observer programmes, electronic monitoring programmes or other means, the species identification, the number and life status (dead or alive) of all sharks caught, in accordance with applicable monitoring requirements, including those caught incidentally and those released by purse seine vessels of all capacity classes and longline vessels.';

(10) in Article 20(1), the following point is added:

‘(q) a valid authorisation to fish and/or tranship in the Convention area.’;

(11) in Article 25, the following paragraph is added:

‘6. The data collected on FADs in accordance with Article 6 shall be submitted by Member States to the Commission no later than 75 days prior to each regular meeting of the SAC. The Commission shall forward that information to the IATTC Secretariat no later than 60 days before the meeting of the SAC.’;

(12) in Article 26, the following paragraph is inserted:

‘-1. Member States shall fill in the standard questionnaire on compliance with IATTC Resolutions referred to in Annex I to Resolution C-22-02 no later than 75 days prior to the annual meeting of the Committee for the Review of Implementation of Measures adopted by the IATTC Commission (“Compliance Committee”). The Commission shall forward that information to the IATTC Secretariat no later than 60 days before the meeting of the Compliance Committee.’;

(13) Article 27 is replaced by the following:

'*Article 27*

Confidentiality and data protection

1. Data collected and exchanged in the framework of this Regulation shall be treated in accordance with the applicable rules on data protection and on confidentiality pursuant to Articles 112 and 113 of Regulation (EC) No 1224/2009, unless provided otherwise in this Article.

2. Personal data collected under this Regulation shall be processed for the purposes of implementation and enforcement of the management, conservation and control measures laid down by this Regulation, including any enquiries pertaining to complaints and infringements and judicial or administrative procedures relating to thereto.

3. Personal data processed under this Regulation shall not be stored for a period longer than 10 years, except if those personal data are necessary to enable the follow-up of an infringement, an inspection, or judicial or administrative procedures. In those cases, the personal data may be stored for a maximum of 20 years. If the information is retained for a longer period, the personal data shall be anonymised.

4. In addition to the obligations laid down in Articles 112 and 113 of Regulation (EC) No 1224/2009, Member States, masters of vessels and observers shall ensure the confidential treatment of electronic reports and messages transmitted to and received from the IATTC Secretariat pursuant to Article 10(3), Article 19(5) and (8) and Article 21(6) of this Regulation.';

(14) the following article is inserted:

'*Article 27a*
Guidelines

The Commission shall provide Member States which have fishing opportunities in the Convention area with any guidelines developed by the IATTC, regarding best safe handling and release practices for sharks.

The Member States concerned shall ensure that those guidelines are provided to the masters of vessels flying their flag engaged in the fisheries concerned. Those masters shall take all necessary or possible steps to apply such guidelines.';

(15) in Article 28, paragraph 1 is amended as follows:

(a) point (o) is replaced by the following:

'(o) the Annexes to this Regulation;';

(b) the following point is added:

‘(p) the reference to the Standard Questionnaire on Compliance with IATTC Resolutions set out in Article 26(-1).’;

(16) the Annex is numbered as ‘Annex I’ and Annexes II, III, IV, V, VI, VII, VIII and IX are added in accordance with Annex II to this Regulation.

Article 5

Amendments to Regulation (EU) 2022/2056

Regulation (EU) 2022/2056 is amended as follows:

(1) Article 14 is replaced by the following:

‘*Article 14*

General measures for the protection of sharks

1. Union longline vessels targeting tuna and billfish between 20°N and 20°S, shall not use wire trace as branch lines or wire leaders, and shall be prohibited from using shark lines or branch lines running directly off the longline floats or droplines, known as shark lines, as depicted in Annex VI. Vessels carrying wire trace as branch lines or leaders shall keep them stowed.

2. Union fishing vessels aboard which there is an observer or electronic monitoring camera shall, taking into consideration the safety of the crew and of the observer, ensure that sharks that are caught and which are not to be retained, are hauled alongside the vessel before being cut free in order to facilitate species identification.

3. Sharks that are caught by Union longline vessels and are not retained, shall be released as soon as possible, taking into consideration the safety of the crew and observer, in the following manner:

(a) leaving the shark in the water, where possible; and

(b) using a line cutter to cut the branch line as close to the hook as possible.';

(2) in Article 15, the following paragraph is added:

'5. Oceanic whitetip shark specimens that are unintentionally caught and frozen as part of a purse seine vessel's operation, shall be surrendered by the fishing vessel to the competent authorities or discarded at the point of landing or transhipment. Oceanic whitetip shark surrendered in this manner may not be sold or bartered by the competent authorities, but may be donated for the purpose of domestic human consumption.';

(3) in Article 17, the following paragraph is added:

‘6. Silky shark specimens that are unintentionally caught and frozen as part of a purse seine vessel's operation, shall be surrendered by the fishing vessel to the competent authorities or discarded at the point of landing or transhipment. Silky shark surrendered in this manner may not be sold or bartered by the competent authorities, but may be donated for purpose of domestic human consumption.’;

(4) in Article 18, the following paragraph is added:

‘4. It shall be prohibited for all longline and purse seine vessels to catch, retain on board, tranship, store, land or offer for sale any cetacean (infraorder Cetacea) in whole or in part.’;

(5) in Article 24, point (c) is replaced by the following:

‘(c) fishing vessels flagged to non-contracting parties and operated by contracting parties under charter, lease or similar arrangements, which comply with the CMMs.’;

(6) in Article 37(1), point (d) is replaced by the following:

‘(d) safe handling and release of cetaceans.’;

(7) in Article 38(3), the following points are added:

‘(j) the progress with the implementation of this Regulation with respect to the conservation of cetaceans, including information collected on interactions with cetaceans in fisheries managed under the Convention;

(k) any by-catch of Pacific bluefin tuna (*Thunnus orientalis*).’.

Article 6

Amendments to Regulation (EU) 2022/2343

Regulation (EU) 2022/2343 is amended as follows:

(1) in Article 3, the following point is added:

‘(18) “Electronic Monitoring System” or “EMS” means an integrated system of hardware and software that supports the acquisition of video footages of fishing activity, positional and/or sensor data, that allows the analysis and reporting of electronic monitoring records.’;

(2) in Article 4, the following paragraphs are inserted:

‘1a. Union purse seine vessels shall not discard tropical tuna after the point in the fishing operation when the net is fully pursed and more than one half of the net has been retrieved. If equipment malfunctioning affects the process of pursing and retrieving the net in such a way that this rule cannot be complied with, the crew must make efforts to release the tuna and the non-targeted species as soon as possible.

1b. Union purse seine vessels shall, to the extent practicable, retain on board and land all catches of tuna other than those referred to in paragraph 1, rainbow runner, dolphinfish, triggerfish, billfish, wahoo, and barracuda, except fish that are unfit for human consumption.';

(3) the following article is inserted:

'*Article 5a*
Voluntary fishing closure

1. Member States may decide to prohibit vessels flying their flag from fishing for bigeye, yellowfin and skipjack tuna in the Area for a minimum period of 31 consecutive days. Member States may exclude from that prohibition vessels of less than 12 metres in overall length fishing inside the EEZ of a Member State.

2. Member States which decide to implement the fishing closure referred to in paragraph 1 shall communicate the period chosen for the fishing closure to the Commission no later than 15 December of each year. The Commission shall send that information to the IOTC Secretariat no later than 31 December of each year.';

(4) the following articles are inserted:

‘*Article 8a*

Management of drifting FADs (DFADs)

1. Only purse seine vessels and associated supply vessels are allowed to deploy DFADs and instrumented buoys.

2. Purse seine vessels and associated supply vessels shall only deploy DFADs with an instrumented buoy that has been activated and registered in the DFAD register once the IOTC has implemented the DFAD register. The use of any other buoys, such as radio buoys, is prohibited.

3. Purse seine vessels and associated supply vessels shall only activate instrumented buoys when the buoys are physically present on board, and shall reactivate instrumented buoys only after they have been brought back to port and have been authorised by their flag Member States.

4. Purse seine vessels and associated supply vessels shall take all reasonable precautions to prevent accidental loss of DFADs and instrumented buoys, and shall be prohibited from deliberately discarding DFADs or associated instrumented buoys, except in cases of *force majeure*.

5. Before reporting the loss of a DFAD, purse seine vessels and associated supply vessels shall, as soon as possible, attempt to locate and retrieve such a lost DFAD.

6. When they retrieve an instrumented buoy attached to a DFAD, purse seine vessels and associated supply vessels shall not leave the DFAD in the sea without an active instrumented buoy.

7. Member States shall draw up a national management plan for the use of DFADs by their fishing vessels. The management plan shall follow the guidelines set out in Annex 2 – A.

8. Member States shall submit to the Commission the management plan referred to in paragraph 7, no later than 75 days before the IOTC annual meeting. This does not apply to Member States that have submitted their plan before … [the date of entry into force of this amending Regulation].

   Any subsequent amendments to the management plans shall be communicated to the Commission no later than 75 days before the IOTC annual meeting.

Article 8b

Design and construction of DFADs

1. Purse seine vessels and associated supply vessels shall only use DFADs the design and construction of which comply with the following specifications as outlined as an example in Annex 3a:

   (a) the use of mesh materials shall be prohibited for any part of a DFAD;

(b) only non-entangling material and designs shall be used; and

(c) the sub-surface structure shall be limited to a length of 50 metres.

2. Purse seine vessels and associated supply vessels shall:

(a) as of 1 January 2026, no longer deploy any DFADs of category V and shall only use DFADs of biodegradability categories I, II, III and IV, as defined in Annex 3b;

(b) as of 1 January 2027, use only DFADs of biodegradability categories I and II, as defined in Annex 3b; and

(c) as of 1 January 2029, use only DFADs of biodegradability category I, as defined in Annex 3b.

3. Instrumented buoys attached to a deployed DFAD shall be permanently and clearly marked with their unique reference number marking (ID provided by the manufacturer of the instrumented buoy) and the IOTC unique vessel identifier number.

4. DFADs shall be permanently marked with a specific IOTC DFAD unique identifier as provided by the IOTC Secretariat. That marking shall be separate from the marking of the instrumented buoy.

5. Purse seine vessels and associated supply vessels encountering DFADs that are not compliant with the requirements of design and construction under this Article shall, as far as practicable, immediately retrieve such DFADs from the water. Purse seine vessels and associated supply vessels shall report such cases to their flag Member States. Member States shall report the information to the Commission which shall in turn report it to the IOTC Secretariat.

6. Member States shall submit information concerning the status of implementation of biodegradable DFADs in accordance with Article 51(5).

Article 8c

Reporting obligations for DFADs

1. Union fishing vessels shall record any fishing activities in association with a floating object (DFAD or log) and/or an instrumented buoy, from the deployment to the end of use, using the specific data elements set out in Annex 3 and the template provided by the IOTC Secretariat*. Member States shall send that information to the Commission in accordance with Article 51(2).

2. Union fishing vessels shall submit annually the number of instrumented buoys assigned to them by the end of each calendar year, including instrumented buoys which have been lost, abandoned or discarded by 1° by 1° grid area and month strata and DFAD type to their flag Member State. That Member State shall send the information to the Commission. The Commission shall stratify the information by fleet, year, month and 1° by 1° grid, and express it as the average daily number of active instrumented buoys in each stratum, in accordance with Article 51(2).

3. Until the Commission notifies the Member States of the entry into force of the DFAD register, Member States shall ensure that their flagged vessels record in the appropriate logbook the date, time and geographical coordinates (decimal degrees) of deployment for each instrumented buoy, associated with its instrumented buoy unique reference number.

4. The owners of IOTC DFAD buoys shall insert the following information concerning the deployment of instrumented buoys, including for buoys deployed before the entry into force of the DFAD register and which are still active:

   (a) the unique instrumented buoy reference number, that allows the identification of the owner of the buoy;

   (b) the name of the owner of the instrumented buoy;

(c) the unique IOTC Record of Authorised Vessels number of the purse seiner that is assigned to the instrumented buoy;

(d) the Member State of the purse seine vessel to which the instrumented buoy is assigned;

(e) the manufacturer of the instrumented buoy;

(f) the model name of the instrumented buoy;

(g) the IOTC DFAD unique identifier, as provided by the IOTC Secretariat;

(h) the biodegradability category of the DFAD, or log when applicable, with which the buoy was deployed;

(i) the date and time of deployment;

(j) the location of deployment.

5. The owner of the instrumented buoy shall notify, through the DFAD register and within 24 hours of activation, the IOTC Secretariat and its flag Member State when an instrumented buoy is activated, together with the IOTC DFAD unique identifier as provided by the IOTC Secretariat.

6. Member States shall verify the information provided by the owners of instrumented buoys to the DFAD register, and validate it at least once a year.

7. The owner of an instrumented buoy shall notify, through the DFAD register and within 72 hours of deactivation, the IOTC Secretariat when an instrumented buoy is deactivated, including whether the DFAD and instrumented buoy were retrieved. If an active instrumented buoy attached to a DFAD is deactivated without being retrieved, the owner of the buoy shall include in the notification through the DFAD register, the date, time, last location of the instrumented buoy and the reasons for deactivating it. The owner of the instrumented buoy shall record in the DFAD register when an instrumented buoy has been decommissioned (namely the buoy was retrieved and cannot be redeployed or reactivated).

8. Member States shall transmit to the Commission the following daily information on all active DFADs:

   (a) the geographical location (degrees, minutes and seconds);

   (b) the date;

   (c) the time;

   (d) unique instrumented buoy reference number;

   (e) the name and IOTC registration number of the vessels to which the instrumented buoy is assigned.

The information shall be compiled at monthly intervals and submitted not earlier than 30 days but no later than 60 days after the monthly compilation of the information concerned. The Commission shall send that information to the IOTC Secretariat.

9. Member States may submit to the Commission a reasoned request for access to the information listed in paragraph 4, points (c), (d) and (j), pertaining to DFADs deployed by other Member States or CPCs.

10. In the event that a Member State or CPC requests access to the information listed in paragraph 4, points (c), (d) and (j), pertaining to DFADs deployed by another Member State, the Commission shall forward that request to the other Member State concerned. In the event that a CPC requests that information, the Commission shall forward the request only after asking the requesting CPC for the reasons for its request. The Member State concerned shall provide to the Commission within 20 days its consent to provide the information referred to in paragraph 4, point (j), or its reasoned refusal.

---

* https://data.iotc.org/reference/latest/guidelines/#DFOB-related_activities.';

(5) Article 9 is replaced by the following:

'*Article 9*

Anchored FADs (AFADs)

1. Union fishing vessels shall record fishing activities in association with AFADs using the specific data elements set out in Annex 3. Member States shall send that information to the Commission in accordance with Article 51(2).

2. Member States shall draw up a national management plan for the use of AFADs by their fishing vessels. The management plan shall follow the guidelines set out in Annex 2 – B.

3. Member States shall ensure that their vessels only use AFADs that are permanently and clearly marked with a unique national identification number that identifies the Member State or the vessel(s) to which the AFAD belongs, as applicable.

4. Member States shall undertake at-sea inspections to ensure that the AFADs deployed are marked and constructed in accordance with Article 9a.

5. Member States shall report to the Commission when a new AFAD is deployed in Union waters, within 15 days of the deployment, with the following information:

   (a) the date of deployment;

(b) the position (GPS coordinates);

(c) unique national identification number, referred to in paragraph 3.

The Commission shall send that information to the IOTC Secretariat without delay, and no later than 21 days after the deployment.

6. No later than 75 days before the IOTC annual meeting, Member States shall submit a progress report on the implementation of the management plan for the use of AFADs and, if necessary, a review of the initially submitted management plan. The progress report shall include a register of deployed, lost, abandoned, and discarded AFADs, and the number and outcome of inspections referred in paragraph 4.

7. The Commission shall send that information to the IOTC Secretariat no later than 60 days before the IOTC annual meeting.';

(6) the following article is inserted:

'*Article 9a*
Design and construction of AFADs

1. Member States and Union fishing vessels shall use only non-entangling designs and materials for the construction of the sub-surface aggregators of the AFADs. Sub-surface aggregators attached to the mooring line shall be constructed from biodegradable materials.

2. Member States and Union fishing vessels are encouraged to construct AFADs from materials that will ensure increased longevity.

3. Member States and Union fishing vessels shall ensure that the nature and profile of the sea bottom is taken into account when choosing a site for deploying or replacing deployed AFADs, and that sites with steep slopes are avoided, where possible, in order to minimise the risk of loss.

4. Member States and Union fishing vessels shall ensure that the upper floatation of AFADs is suitable for offshore, high-current deployments by using designs which are streamlined to reduce drag and resistance to currents and waves.';

(7) in Article 13, the following paragraph is added:

'3. Union carrier vessels authorised to receive transhipments of IOTC species shall separate and stow transhipped fish by fishing vessel and develop a stowage plan to show the locations in the hold of the quantities by vessel and major species and, if possible, by other species. The carrier vessel master shall submit the stowage plan to inspectors, if requested.';

(8) Article 20 is amended as follows:

(a) in paragraph 2, point (b) is replaced by the following:

‘(b) report interactions with cetaceans to the vessel’s flag Member State, with the following information:

(i) the species (if known);

(ii) the number of individuals;

(iii) a short description of the interaction, including details of how and why the interaction occurred, if possible;

(iv) the location of the encirclement;

(v) the steps taken to ensure safe release; and

(vi) an assessment of the life status of the animal on release, including whether the cetacean was released alive but subsequently died.’;

(b) the following paragraph is added:

‘4. Member States shall ensure that Union fishing vessels are aware of and use proper mitigation, identification, handling and releasing techniques and keep on board all necessary equipment for their safe release of cetaceans.’;

(9) in Article 22, paragraph 1 is replaced by the following:

‘1. Union fishing vessels shall use mitigation measures to reduce the levels of seabird bycatch across all fishing areas, seasons and fisheries. In the area south of 25 degrees South latitude, all longline vessels shall use at least two of the three mitigation measures set out in Annex 4 or, alternatively, use only hook-shielding devices, and shall comply with the minimum standards for those measures. The design and deployment of bird scaring lines shall comply with the additional specifications set out in Annex 5.’;

(10) in Article 30, the following paragraphs are added:

‘4. Provided that the minimum mandatory Regional Observer Scheme data reporting standards* are met, Member States may complement or substitute the minimum human observer coverage provided for in paragraph 1 by means of an electronic monitoring system (EMS). EMS shall be complemented by port sampling and/or other data collection methods approved by the IOTC when required.

5. Member States which choose to implement EMS to partially or fully meet the minimum coverage set out in paragraph 1 of this Article shall ensure that their national electronic monitoring programme, their electronic monitoring system and data standards follow the requirements set out in this Regulation, including Annex 11 hereto, for the purpose of IOTC's Regional Electronic Monitoring Programme (REMP).

6. Member States which choose to implement EMS to partially or fully meet the minimum coverage set out in paragraph 1 shall:

   (a) ensure that a Vessel Monitoring Plan (VMP) as set out in Part 3 of Annex 11 is developed for each vessel equipped with EM equipment and delivered to the Member State's competent authorities;

   (b) ensure that EM equipment is installed on those vessels in accordance with the VMP to collect the required data and to comply with the coverage objectives agreed by the Commission;

   (c) ensure that EMS implementation is consistent with IOTC's REMP and its minimum standards;

   (d) collaborate to ensure that National EM Programmes are compatible and harmonised where necessary;

(e) document the roles and responsibilities of competent authorities and vessel owners and crew with respect to inter alia installing and maintaining equipment, routine cleaning of cameras, sending storage devices, access to EM records and EM data, responses to mechanical or technical failure of EMS;

(f) provide the IOTC Secretariat with the contact details of their EM Programme Coordinator(s).

---

* IOTC Regional Observer Scheme Data Collection Fields: https://iotc.org/sites/default/files/documents/2023/05/IOTC-ROS-DataStandards.pdf.';

(11) in Article 31, the following paragraphs are inserted:

‘1a. When carrying out their duties, observers shall use the IOTC Regional Observer Scheme Minimum Standard Data Fields, the IOTC data collection forms, the IOTC Species identification cards, the IOTC Observer Manual and the IOTC Observer Forms as provided by the Commission*.

1b. Observers deployed on purse seine vessels shall collect detailed information on the DFAD design used and its conformity with the requirements set out in Annex 3a prior to the deployment of each DFAD.

---

* https://iotc.org/science/regional-observer-scheme-science.’;

(12) in Article 33, the following paragraph is added:

‘4. Member States which choose to implement EMS shall submit to the Commission the following information:

(a) by 15 June of each year, the vessel monitoring plan for each vessel using EMS, outlining the EMS setup on each vessel, following the guidelines set out in Annex 11;

(b) by 15 June of each year, a Regional Observer Scheme data collection table specifying the following data fields:

(i) the data field name and description;

(ii) the data field reporting requirement level (i.e. mandatory to collect, mandatory to report if collected, not mandatory);

(iii) a brief description of the data collection method used to collect data for each data field.

(iv) in their national scientific report to be submitted in accordance with Article 51(6), a summary of the vessel monitoring plan specifying:

– the number of flagged vessels, by gear and fishery type, implementing EMS.

– the range of EMS configurations implemented within the fleet (including the numbers and placements of cameras for each configuration);

– a general description of EMS requirements imposed by the administration on the crew of the vessels.';

(13) in Article 44, the following paragraphs are added:

‘3. Port Member States should prioritise inspection in port of the following vessels:

(a) carrier vessels the Automatic Identification System (AIS) or VMS signals of which disappear under suspicious circumstances and without explanation, and carrier vessels the signals of which indicate dubious movements;

(b) carrier vessels not entered into the IOTC Record of Carrier Vessels.

4. Inspection of transhipment activities in port should involve the monitoring of the entire transhipment operation, including a review of the prior authorisation to tranship in port issued by the flag CPC to the fishing vessel.’;

(14) Article 51 is amended as follows:

(a) paragraph 2 is amended as follows:

(i) the introductory wording is replaced by the following:

‘In addition to the information referred to in paragraph 1, Member States shall include the following fishing effort data by the purse seiners fleet using supply vessels and FADs and fishing vessels fishing on AFADs:’;

(ii) the following points are added:

‘(d) any fishing activities in association with a floating object (DFAD or log) and/or an instrumented buoy, from the deployment to the end of use, using the specific data elements set out in Annex 3;

(e) any fishing activities in association with AFADs using the specific data elements set out in Annex 3.’;

(b) paragraph 5 is replaced by the following:

‘5. Member States shall submit to the Commission, 75 days before the annual meeting of the IOTC, information for the preceding calendar year containing the information on actions taken to implement their reporting obligations for all IOTC fisheries, including shark species caught in association with IOTC fisheries, in particular the steps taken to improve their data collection for direct and incidental catches, and the implementation of biodegradable DFADs as provided for in Article 8b. The Commission shall compile that information into a Union implementation report and submit it to the IOTC Secretariat no later than 60 days before the annual meeting of the IOTC.’;

(c) in paragraph 6, the following point is added:

‘(e) report on EMS as provided in Article 30 (4).’;

(15) in Article 54, paragraph 1, the following point is added:

‘(k) changes to reporting obligations and notifications for drifting FADs in Article 8c.’;

(16) Annexes 2 and 3 are replaced by the text set out in points 1 and 2 of Annex III to this Regulation;

(17) Annexes 3a and 3b are inserted, as set out in point 3 of Annex III to this Regulation;

(18) Annex 4 is amended in accordance with point 4 of Annex III to this Regulation;

(19) Annex 11 is added, as set out in point 5 of Annex III to this Regulation.

Article 7

Amendments to Regulation (EU) 2023/2053

Regulation (EU) 2023/2053 is amended as follows:

(1) in Article 30, paragraph 6 is replaced by the following:

‘6. In the event of *force majeure* preventing the planned joint fishing operation from taking place, the deadlines set out in paragraph 5 shall not apply as regards the information on the farms of destination. In such cases, the Member State concerned is allowed to transfer the unused quotas of vessels participating in a joint fishing operation to its vessels or to vessels of other Member States participating in another joint fishing operation, provided that such transfer is necessary due to *force majeure*. Member States shall notify the Commission of such transfers as soon as possible, together with a description of the events constituting the *force majeure*. That information shall be transmitted to the Commission prior to the start of the joint fishing operation involving the vessels receiving the unused quota. The Commission shall forward that information to the ICCAT Secretariat.’;

(2) Article 34 is amended as follows:

(a) paragraphs 3, 4 and 5 are replaced by the following:

‘3. By way of derogation from paragraph 1 of this Article, Member States where bluefin tuna is landed may set a shorter period for the prior notification referred to in paragraph 1 of this Article, taking into account the type of fishery products and the distance between the fishing grounds and the port or landing site, and provided that such a shorter period of prior notification does not impair the ability of that Member State to carry out inspections. Member States may apply that derogation only to vessels referred to in Article 26 that catch less than three specimens of bluefin tuna or less than one tonne. Where catches are taken between the time of the prior notification and arrival at port, the estimated quantities of bluefin tuna retained on board may be modified at any time prior to arrival.

4. Member States making use of the derogation provided for in paragraph 3 of this Article shall inform the Commission and provide the details of the potential shortened prior notification period and the reasons therefor, and the remainder of the conditions for the prior notification, prior to its implementation, in their monitoring, control, and inspection plan referred to in Article 14. Any subsequent changes shall be notified to the Commission without delay, and at least 20 days before those changes take effect. The Commission shall transmit that information to the ICCAT Secretariat at least 14 days before the changes take effect and the Commission shall make that information available on a public website of the Commission. Member States shall also make the information on shorter periods for prior notification available on public websites.

5. The authorities of the port Member State shall keep a record of all prior notifications for a period of one year from the date of port entry.';

(b) the following paragraph is inserted:

'5a. All landings in the Union shall be controlled by the relevant control authorities of the port Member State, and a percentage of landings shall be inspected based on a risk assessment system involving quotas, fleet size and fishing effort. Full details of the control system adopted by each Member State shall be set out in the annual monitoring, control and inspection plan referred to in Article 14.';

(c) the following paragraph is added:

‘7. Where bluefin tuna is landed in Member State or CPC ports, or Member State or CPC landing facilities, other than the ports or landing facilities of the notified Member State, the masters of Union catching vessels, whatever the length overall of the vessel, shall submit, within 48 hours after the completion of the landing, a landing declaration to the Member State or CPC where the bluefin tuna is landed which shall contain the information required in Article 17(2), points (a), (b) and (c), of Regulation (EC) No 1224/2009 and the quantities and weight of the bluefin tuna landed.’;

(3) in Article 42, paragraph 3 is replaced by the following:

‘3. The original ITD shall accompany the transfer to the farm of destination where bluefin tuna individuals are to be caged. At first transfer, the original ITD shall be duplicated by the donor operator when a single catch is transferred from the purse seine or the trap to more than one transport cage. In the event of a further transfer, the master of the donor towing vessel shall update the ITD by completing section 3 (further transfers) thereof, and provide the updated ITD to the receiving towing vessel. The updated ITD shall be duplicated by the master of the donor towing vessel if the fish subject to further transfer is divided into more than one transport cage. A copy of the original/updated ITD shall be kept on board the donor catching or towing vessels, or by the operator of the donor trap or donor farm and shall be accessible at any time for control purposes for the duration of the fishing season.’;

(4) in Article 43(1), second subparagraph, point (a) is replaced by the following:

‘(a) for the first transfer and any voluntary or control transfer, to the ICCAT regional observer, to the master of the receiving towing vessel and, at the end of the fishing trip, to the competent authority of the flag or trap Member State of the donor operator;’;

(5) Article 46a is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. On arrival of the towing vessel in the vicinity of the farm, the competent authority of the farm Member State shall ensure that the towing vessel and the cage are maintained at a distance of a minimum of 0,1 nautical miles from any facility of the farm until the competent authority of the farm Member State is physically present. The position and activity of that towing vessel shall be monitored at all times.’;

(b) paragraph 6 is replaced by the following:

’6. Fish shall be caged before 22 August of each year, unless the competent authorities of the Member State responsible for the farm provide valid reasons, including *force majeure*, which shall accompany the caging report when submitted. That deadline shall not apply in the case of inter-farm transfers.’;

(6) in Article 49, the following paragraph is inserted:

‘2a. In the event of persistent turbidity conditions in the farm area, the competent authority of the farm Member State may authorise the control caging to take place outside the farm, in an adjacent area where there is sufficient visibility. The farm Member State shall document the measurement of the turbidity according to standard methods.’;

(7) Article 56b is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. Intra-farm transfer shall not take place without the authorisation of the competent authority of the farm Member State. Each transfer shall be recorded by control cameras to confirm the number of bluefin tuna individuals transferred. The video recording shall comply with the minimum standards for video recording procedures set out in Annex X. The competent authority of the farm Member State shall monitor those transfers, including by verifying the video footage and shall ensure that each intra-farm transfer is recorded in the eBCD system.’;

(b) the following paragraph is inserted:

‘1a. The competent authority of the farm Member State may allow a margin of error of up to 5 % between the number of bluefin tuna individuals resulting from the intra-farm transfer and the number of individuals expected to be present in the cage. When the difference is larger than 5 %, the competent authority of the farm Member State shall order the release of the corresponding number of bluefin tuna individuals. The release operation shall be conducted in accordance with Annex XII. Compensation for differences between different cages in the farm shall not be allowed.’;

(8) Article 65 is replaced by the following:

‘*Article 65*
Confidentiality and data protection

1. Data collected and exchanged in the framework of this Regulation shall be treated in accordance with the applicable rules on data protection and on confidentiality pursuant to Articles 112 and 113 of Regulation (EC) No 1224/2009, unless provided otherwise in this Article.

2. Personal data collected under this Regulation shall be processed for the purposes of implementation and enforcement of the management, conservation and control measures laid down by this Regulation, including any enquiries pertaining to complaints and infringements and judicial or administrative procedures relating to thereto.

3. Personal data processed under this Regulation shall not be stored for a period longer than 10 years, except if those personal data are necessary to enable the follow-up of an infringement, an inspection, or judicial or administrative procedures. In those cases, the personal data may be stored for a maximum of 20 years. If the information is retained for a longer period, the personal data shall be anonymised.';

(9) in Article 66, paragraph 1 is amended as follows:

(a) points (b) and (c) are replaced by the following:

'(b) deadlines for reporting information as laid down in Article 7(2), point (a), Article 9(1), Article 16(1) and (2), Article 24(4), Article 26(1), Article 29(1), Article 32(2) and (3), Article 35(5) and (6), Article 36, Article 41(3), Article 44(2), Article 52(2), Article 57(5), point (b), and Article 58(6);

(c) time periods for fishing seasons as provided in Article 17(1), (2), (3) and (4);';

(b) points (e) and (f) are replaced by the following:

'(e) the percentages and reference parameters laid down in Article 13, Article 15(3) and (4), Article 20(1), Article 21(2), Article 38(1), Article 44(2), Article 46(1), point (a), Article 50 and Article 51(8);

(f) the information to be submitted to the Commission referred to in Article 7(2), point (a), Article 11(1) Article 16(1), Article 24(1), Article 25(3), Article 29(1), Article 30(5), Article 32(1), Article 34(2) and Article 40(1);';

(c) the following point is added:

'(o) the information in the daily catch reports referred to in Article 32(1), the information on prior notification of landings referred to in Article 34(2), the information to be included in a prior transfer notification referred to in Article 40(1).'.

Article 8

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Strasbourg,

For the European Parliament	*For the Council*
The President	*The President*

ANNEX I

The Annexes to Regulation (EU) 2018/975 are amended as follows:

(1) Annex IV is replaced by the following:

‘ANNEX IV

Guidelines for the preparation and submission of notifications of encounters with potential vulnerable marine ecosystems (VMEs)

1. General Information

(a) contact details

(b) flag

(c) vessel name

(d) dates of fishing effort and notification

(e) time of tow start (UTC)

(f) time of tow end (UTC)

(g) fishing gear used

2. Location Information

(a) bottom trawl or mid-water trawl

(b) start and end position of trawl (to nearest 1/100th degree decimal)

3. VME Information

(a) summary information:

(i) number of VME indicator taxa encountered

(ii) total weight of VME indicator taxa encountered

(b) detailed information:

(i) weight of each VME indicator taxon in tow (including any under threshold)';

(2) Annex X is amended as follows:

(a) in Section A.1, point (g) is replaced by the following:

'(g) UVI (Unique Vessel Identifier) / Lloyd's / IMO number';

(b) in Section B.2, points (c) and (d) are replaced by the following:

‘(c) Tow start position (Lat./Long., nearest 1/100th degree for bottom fishing and 1/10th for pelagic trawl – decimal)

(d) Tow end position (Lat./Long., nearest 1/100th degree for bottom fishing and 1/10th for pelagic trawl – decimal)’;

(c) in Section B.2, points (n), (o), (p) and (q) are replaced by the following:

‘(n) If any marine mammals, seabirds, reptiles or other species of concern were caught, report as per requirements described in Section G

(o) If any benthic material, including VME Indicator Taxa*, was caught, record as per the requirements described in Section H

(p) Estimated catch of all species (FAO species code) discarded, split by species, in live weight (to the nearest kg), including all benthic taxa

(q) Record any bycatch mitigation measures employed, as per below:

(i) Tori lines – if so, record details as described in Section L

(ii) Bird baffler(s) – if so, record details as described in Section N

(iii) Offal management – if so, record as per below:

(i) No discharge during shooting and hauling

(ii) Only liquid discharge

(iii) Waste batching ≥ 2 hours/others/none

(iv) Other – if so, record details

---

* VME Indicator Taxa are defined in Annex XVII.';

(d) in Section C.2, point (d) is replaced by the following:

'(d) Set start position (Lat./Long., nearest 1/100th degree resolution)';

(e) in Section C.2, points (j), (k), (l) and (m) are replaced by the following:

'(j) If any marine mammals, seabirds, reptiles or other species of concern were caught, report as per requirements described in Section G

(k) If any benthic material, including VME Indicator Taxa*, was caught record as per the requirements described in Section H

(l) Estimated catch of all species (FAO species code) discarded, split by species, in live weight (to the nearest kg), including all benthic taxa

(m) Record any bycatch mitigation measures employed, using types as described below and providing detail as required:

(i) Tori lines – if so, record details as described in Section L

(ii) Bird baffler(s) – if so, record details as described in Section N

(iii) Offal management – if so, record as per below:

(i) discharge during shooting and hauling

(ii) Only liquid discharge

(iii) Waste batching ≥ 2 hours/others/none

(iv) Night setting (when setting is restricted to between the times of nautical dusk and nautical dawn)

(v) Other – if so, record details

---

* VME Indicator Taxa are defined in Annex XVII.';

(f) in Section D.2, points (c) and (d) are replaced by the following:

'(c) Set start position (Lat./Long., nearest 1/100th degree – decimal format)

(d) Set end position (Lat./Long., nearest 1/100th degree – decimal format)';

(g) in Section D.2, points (k), (l), (m) and (n) are replaced by the following:

‘(k) If any marine mammals, seabirds, reptiles or other species of concern were caught, report as per requirements described in Section G

(l) If any benthic material, including VME Indicator Taxa, was caught record as per the requirements described in Section H

(m) Estimated catch of all species (FAO species code) discarded, split by species, in live weight (to the nearest kg), including all benthic taxa

(n) Record any bycatch mitigation measures employed and bait type, using types as described below and providing detail as required:

(i) Tori lines – if so, record details as described in Section M

(ii) Bird baffler(s) – if so, record details as described in Section O

(iii) Offal management – if so, record as per below:

(i) No discharge during shooting and hauling

(ii) Only liquid discharge

(iii) Waste batching ≥ 2 hours/other/none

(iv) Night setting, (when setting is restricted to between the times of nautical dusk and nautical dawn)

(v) Line weighting – if so, record details as described in Section M

(vi) Bait type – record if fish/squid/mixed; live/dead/mixed; frozen/thawed/mixed; synthetic

(vii) Other – if so, record details';

(h) in Section D.2, points (p), (q) and (r) are deleted;

(i) Section E is replaced by the following:

'E. *Length-frequency data to be collected*

Representative and randomly sampled length-frequency data are to be collected for the target species and, time permitting, for other main by-catch species. Length data shall be collected and recorded at the most precise level appropriate for the species (cm or mm and whether to the nearest unit or unit below) and the type of measurement used (total length, fork length, or standard length) shall also be recorded. If possible, total weight of length-frequency samples for each species shall be recorded, or estimated and the method of estimation recorded, and observers may be required to also determine sex of measured fish to generate length-frequency data stratified by sex.

1. Commercial Sampling Protocol

(a) Fish species other than skates, rays, and sharks:

(i) Fish length shall be measured, consistent with Section P, to the nearest cm for fish which attain a maximum length greater than 40 cm

(ii) Fish length shall be measured, consistent with Section P, to the nearest mm for fish which attain a maximum length less than 40 cm;

(b) Squid:

Mantle length shall be measured to the nearest cm;

(c) Skates and rays:

Maximum disk width shall be measured;

(d) Sharks:

Appropriate length measurement to be used shall be selected for each species (see Section P). As a default, total length shall be measured;

(e) Marine mammals and reptiles (as possible):

Total length shall be measured wherever possible.

2. Scientific Sampling Protocol

For scientific sampling of species, length measurements may need to be made at a finer resolution than specified in point 1.

Measurement standards for invertebrates (such as crabs or lobsters) shall be developed as required in line with the development of the associated exploratory fishery.';

(j) Section F.1 is replaced by the following:

'1. The following biological data shall be collected for representative samples of the main target species and, time permitting, for other main by-catch species contributing to the catch:

(a) Species

(b) Length (mm or cm). Measurement precision and type shall be determined on a species-by-species basis consistent with that defined in Section E above

(c) Type of length measurement used (namely total length, fork length, etc.)

(d) Sex (male, female, immature, unsexed)

(e) Maturity stage (for sharks, report if pregnant, and how many (if any) eggs/pups found)';

(k) in section G.1, point (e) is replaced by the following:

‘(e) If dead, then collect adequate information or samples* for onshore identification in accordance with pre-determined sampling protocols. Where this is not possible, observers may be required to collect sub-samples of identifying parts, as specified in biological sampling protocols.

---

* Options include: return of carcasses for necropsy, photographs taken using appropriate protocols or tissue or feather samples for genetic determination.’;

(l) Sections G.2 and G.3 are replaced by the following:

‘2. Record sex of each individual for taxa where this is feasible from external observation, for example pinnipeds, small cetaceans or *Elasmobranchii* species of concern.

3. Record the length of each individual (cm), with record of the type of length measurement used. Measurement precision and type shall be determined on a species by species basis.’;

(m) in Section G, the following point is added:

‘4. Record the life-history stage of each individual where this is feasible (namely juvenile/adult).’;

(n) Section H is replaced by the following:

‘H. *Detection of fishing in association with VMEs*

1. For all bottom fishing events, including trawl, bottom line, and potting, the following data are to be collected for all benthic taxa caught:

(a) Species (or accompanied by a photograph where identification to genus or species level is difficult);

(b) An estimate of the quantity (to the nearest 0,1 kg) of each listed benthic taxon caught in the fishing event;

(c) The method of weight estimation (for example visual estimate, weighed in full, accurate count of bins multiplied by number of bins) (note this information is not collected by the SPRFMO Secretariat, but shall be available upon request);

(d) Where possible, and particularly for new or scarce benthic species which do not appear in the guides for the identification of species, whole samples shall be collected and suitably preserved for identification on shore;

(e) Wherever possible, observers shall collect samples and images according to pre-determined specific research programmes implemented by the SPRFMO Scientific Committee or national scientific research.

2. For all bottom fishing events, the following data are to be collected for all taxa identified as VME indicators as defined in Annex XVII:

(a) An estimate of the quantity (to the nearest 0,1 kg) of each VME indicator taxon caught in the fishing event;

(b) Wherever possible, a photograph of a representative sample of each VME indicator taxon caught in the fishing event, archived by the flag Member State through its Observer Programme in a way that allows the photograph to be linked to the specific weight record for the fishing event;

(c) Wherever possible, a photograph of the entire quantity of each VME indicator taxon caught in the fishing event, archived by the flag Member State, through its Observer Programme, in a way that allows the photograph to be linked to the specific weight record for the fishing event.

3. For each observed trawl, the following data are to be collected for all taxa identified as VME indicators in Annex XVII using the appropriate VME Encounter template:

(a) A record of whether the weight of any of the VME indicator taxa in the trawl catch exceeded taxa-specific weight thresholds as defined in Annex XVIII;

(b) A record of whether three or more VME indicator taxa in the trawl catch exceeded taxa-specific weight thresholds as defined in Annex XVIII.';

(o) in Section I, point (j) is replaced by the following:

'(j) Location of capture (Lat./Long., to the nearest 1/10th degree)';

(p) in Section J.2, point (d) is replaced by the following:

‘(d) The reporting of catches and biological sampling procedures are to be prioritised among species groups as follows:

Species	Priority (1 highest)
Primary target species (such as jack mackerel, for pelagic fisheries, orange roughy for demersal fisheries, and squid where targeted)	1
Seabirds, mammals, reptiles (turtles) or other species of concern	2
All sharks	3
Other species typically within top 5 in the fishery (such as blue mackerel for pelagic fisheries, and oreos and alfonsino for demersal fisheries)	4
All other species	5

The allocation of observer effort among these activities will depend on the type of operation and setting. The size of sub-samples relative to unobserved quantities (for example number of hooks examined for species composition relative to the number of hooks set) is to be explicitly recorded as per the requirements of the Member State Observer Programme.’;

(q) in Section O.1, point (e) is replaced by the following:

‘(e) Unique Vessel Identifier / IMO number (if allocated)’;

(r) in Section O.3, point (d) is replaced by the following:

‘(d) Indicative fishing area (decimal Lat./Long., nearest 1/10th degree – to the extent possible)’;

(s) the following section is added:

‘P. *Standard for length measurements*

1. Total length shall be used for the following fish species:

(a) Groupers, seabasses (Serranidae)

(b) Oreo dories (Oreosomatidae)

(c) Grenadiers, rattails (Macrouridae)

(d) Hake (Merluccidae)

(e) Hapuka (*Polyprion* spp.)

(f) Cusk eels, brotulas (Ophidiidae)

(g) Moras (Moridae)

(h) Pelagic armourheads (*Pseudopentaceros* spp.)

(i) Rockfishes, rockcods, and thornyheads (Sebastidae)

(j) Scorpionfishes (Scorpaenidae)

(k) Slimeheads (Trachichthyidae)

(l) Antarctic toothfishes (*Dissostichus* spp.)

(m) Any shark or chimaera species not otherwise listed (see FAO fisheries technical paper 474 on measuring sharks)

2. Fork length shall be used for the following fish species:

(a) Amberjacks (*Seriola* spp.)

(b) Barracouta (Gempylidae)

(c) Bluenose warehou (*Hyperoglyphe antarctica*)

(d) Alfonsinos, etc. (Berycidae)

(e) Driftfishes (Nomeidae)

(f) Cardinalfishes, etc. (Apogonidae)

(g) Chilean Jack mackerel (*Trachurus murphyi*)

(h) Chub Mackerel (*Scomber japonicus*)

(i) Morwongs (*Nemadactylus* spp.)

(j) Emperors (Lethrinidae)

(k) Pomfrets, ocean breams (Bramidae)

(l) Snappers (Lutjanidae)

(m) Snake mackerels (Gempylidae)

(n) Other warehous (all)

3. Standard Length shall be used for:

(a) Orange roughy (*Hoplostethus atlanticus*)

4. Mantle length shall be used for:

(a) Squid (all including *Dosidicus gigas*)';

(3) the following annexes are added:

‘ANNEX XIV

Bottom fishing management areas

(a) Bottom Trawl Fishing Management Area coordinates

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°21.000′S	165°13.553′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°21.000′S	165°24.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°36.000′S	165°24.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°36.000′S	165°18.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	36°06.000′S	165°18.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	36°06.000′S	164°46.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°54.000′S	164°46.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°54.000′S	164°54.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°31.000′S	165°54.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Bottom trawl	35°31.000′S	165°13.550′E	
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	35°26.000′S	165°44.000′E	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	35°26.000′S	166°21.915′E	
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	35°47.000′S	165°26.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	35°47.000′S	165°44.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	36°00.500′S	165°26.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Bottom trawl	36°00.500′S	166°21.915′E	
S. Lord Howe	Central Lord Howe Rise	Bottom trawl	36°13.460′S	164°40.830′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Bottom trawl	36°13.460′S	165°06.050′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Bottom trawl	36°26.800′S	164°40.830′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Bottom trawl	36°26.800′S	165°06.050′E	S. Lord Howe
01	South Louisville	Bottom trawl	47°40.000′S	149°27.000′W	
01	South Louisville	Bottom trawl	47°40.000′S	150°00.000′W	
01	South Louisville	Bottom trawl	48°05.000′S	149°27.000′W	
01	South Louisville	Bottom trawl	48°05.000′S	150°00.000′W	
03	South Louisville	Bottom trawl	45°59.000′S	154°07.224′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
03	South Louisville	Bottom trawl	45°59.000′S	154°28.653′W	
03	South Louisville	Bottom trawl	46°15.000′S	154°07.224′W	
03	South Louisville	Bottom trawl	46°15.000′S	154°28.653′W	
04	South Louisville	Bottom trawl	46°01.000′S	155°40.000′W	
04	South Louisville	Bottom trawl	46°01.000′S	156°10.000′W	
04	South Louisville	Bottom trawl	46°24.000′S	155°40.000′W	
04	South Louisville	Bottom trawl	46°24.000′S	156°10.000′W	
05	South Louisville	Bottom trawl	45°26.000′S	156°30.000′W	
05	South Louisville	Bottom trawl	45°26.000′S	156°55.000′W	
05	South Louisville	Bottom trawl	45°42.000′S	156°30.000′W	
05	South Louisville	Bottom trawl	45°42.000′S	156°55.000′W	
06	South Louisville	Bottom trawl	45°19.500′S	157°19.000′W	
06	South Louisville	Bottom trawl	45°19.500′S	157°55.000′W	
06	South Louisville	Bottom trawl	45°30.000′S	157°19.000′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
06	South Louisville	Bottom trawl	45°30.000′S	157°55.000′W	
07	South Louisville	Bottom trawl	44°43.950′S	158°18.000′W	
07	South Louisville	Bottom trawl	44°43.950′S	158°38.000′W	
07	South Louisville	Bottom trawl	44°57.950′S	158°18.000′W	
07	South Louisville	Bottom trawl	44°57.950′S	158°38.000′W	
08	South Louisville	Bottom trawl	44°13.000′S	159°43.000′W	
08	South Louisville	Bottom trawl	44°13.000′S	159°54.000′W	
08	South Louisville	Bottom trawl	44°21.000′S	159°43.000′W	
08	South Louisville	Bottom trawl	44°21.000′S	159°54.000′W	
09	South Louisville	Bottom trawl	43°51.183′S	160°29.235′W	
09	South Louisville	Bottom trawl	43°51.183′S	160°50.820′W	
09	South Louisville	Bottom trawl	44°07.000′S	160°29.235′W	
09	South Louisville	Bottom trawl	44°07.000′S	160°50.820′W	
10	South Louisville	Bottom trawl	43°22.000′S	161°21.770′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
10	South Louisville	Bottom trawl	43°22.000′S	161°39.000′W	
10	South Louisville	Bottom trawl	43°31.370′S	161°10.170′W	
10	South Louisville	Bottom trawl	43°31.370′S	161°21.770′W	
10	South Louisville	Bottom trawl	43°41.440′S	161°10.170′W	
10	South Louisville	Bottom trawl	43°41.440′S	161°39.000′W	
11	South Louisville	Bottom trawl	42°40.000′S	161°48.000′W	
11	South Louisville	Bottom trawl	42°40.000′S	162°07.000′W	
11	South Louisville	Bottom trawl	42°54.500′S	161°48.000′W	
11	South Louisville	Bottom trawl	42°54.500′S	162°07.000′W	
13	Central Louisville	Bottom trawl	41°45.000′S	163°29.500′W	
13	Central Louisville	Bottom trawl	41°45.000′S	163°49.000′W	
13	Central Louisville	Bottom trawl	42°00.000′S	163°29.500′W	
13	Central Louisville	Bottom trawl	42°00.000′S	163°49.000′W	
14	Central Louisville	Bottom trawl	41°17.000′S	164°00.000′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
14	Central Louisville	Bottom trawl	41°17.000′S	164°27.000′W	
14	Central Louisville	Bottom trawl	41°40.000′S	164°00.000′W	
14	Central Louisville	Bottom trawl	41°40.000′S	164°27.000′W	
15	Central Louisville	Bottom trawl	40°32.897′S	165°12.000′W	
15	Central Louisville	Bottom trawl	40°32.897′S	165°30.000′W	
15	Central Louisville	Bottom trawl	40°42.000′S	164°56.400′W	
15	Central Louisville	Bottom trawl	40°42.000′S	165°12.000′W	
15	Central Louisville	Bottom trawl	40°48.000′S	165°24.000′W	
15	Central Louisville	Bottom trawl	40°48.000′S	165°30.000′W	
15	Central Louisville	Bottom trawl	40°54.000′S	165°12.000′W	
15	Central Louisville	Bottom trawl	40°54.000′S	165°24.000′W	
15	Central Louisville	Bottom trawl	41°06.000′S	164°56.400′W	
15	Central Louisville	Bottom trawl	41°06.000′S	165°12.000′W	
17	North Louisville	Bottom trawl	38°20.013′S	167°29.000′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
17	North Louisville	Bottom trawl	38°20.013′S	167°47.067′W	
17	North Louisville	Bottom trawl	38°32.000′S	167°29.000′W	
17	North Louisville	Bottom trawl	38°32.000′S	167°47.067′W	
18	North Louisville	Bottom trawl	38°11.013′S	168°01.785′W	
18	North Louisville	Bottom trawl	38°11.013′S	168°20.000′W	
18	North Louisville	Bottom trawl	38°40.000′S	168°01.785′W	
18	North Louisville	Bottom trawl	38°40.000′S	168°20.000′W	
22	North Louisville	Bottom trawl	36°45.000′S	169°30.000′W	
22	North Louisville	Bottom trawl	36°45.000′S	170°00.000′W	
22	North Louisville	Bottom trawl	37°08.000′S	169°30.000′W	
22	North Louisville	Bottom trawl	37°08.000′S	170°00.000′W	
23	North Louisville	Bottom trawl	36°00.000′S	169°22.000′W	
23	North Louisville	Bottom trawl	36°00.000′S	169°40.000′W	
23	North Louisville	Bottom trawl	36°10.000′S	169°22.000′W	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
23	North Louisville	Bottom trawl	36°10.000′S	169°40.000′W	
N. Lord Howe – South	North Lord Howe Rise	Bottom trawl	34°04.035′S	162°20.000′E	
N. Lord Howe – South	North Lord Howe Rise	Bottom trawl	34°04.035′S	163°00.000′E	
N. Lord Howe – South	North Lord Howe Rise	Bottom trawl	34°40.000′S	162°20.000′E	
N. Lord Howe – South	North Lord Howe Rise	Bottom trawl	34°40.000′S	163°00.000′E	
N. Lord Howe – East	North Lord Howe Rise	Bottom trawl	32°54.650′S	163°16.615′E	
N. Lord Howe – East	North Lord Howe Rise	Bottom trawl	32°54.650′S	163°26.380′E	
N. Lord Howe – East	North Lord Howe Rise	Bottom trawl	33°04.400′S	163°16.615′E	
N. Lord Howe – East	North Lord Howe Rise	Bottom trawl	33°04.400′S	163°26.380′E	
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°16.400′S	162°52.540′E	
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°09.296′S	162°52.540′E	North-east along the Australian EEZ
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°04.400′S	162°54.941′E	
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°04.400′S	163°10.540′E	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°10.400′S	163°10.540′E	
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°10.400′S	163°04.540′E	
N. Lord Howe – West	North Lord Howe Rise	Bottom trawl	33°16.400′S	163°04.540′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	38°00.000′S	169°47.848′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	38°00.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	169°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°42.000′S	169°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°42.000′S	167°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	167°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	39°06.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	39°06.000′S	167°18.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	38°52.000′S	167°18.000′E	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
Northwest Challenger	Northwest Challenger	Bottom trawl	38°52.000′S	167°06.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	167°06.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°48.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°42.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°42.000′S	166°40.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°01.333′S	166°40.000′E	
Northwest Challenger	Northwest Challenger	Bottom trawl	37°01.333′S	169°36.706′E	South-east along the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Bottom trawl	37°29.902′S	170°00.000′E	Due south to a point on the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Bottom trawl	37°41.589′S	170°00.000′E	South-west along the New Zealand EEZ
S. Tasman Rise 1	South Tasman Rise	Bottom trawl	47°08.280′S	147°50.200′E	Start on the Australian EEZ
S. Tasman Rise 1	South Tasman Rise	Bottom trawl	47°17.370′S	147°50.200′E	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
S. Tasman Rise 1	South Tasman Rise	Bottom trawl	47°17.370′S	147°32.300′E	
S. Tasman Rise 1	South Tasman Rise	Bottom trawl	47°10.197′S	147°32.300′E	East along the Australian EEZ to the start point
S. Tasman Rise 1	South Tasman Rise	Bottom trawl	47°05.160′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Bottom trawl	47°05.160′S	148°50.670′E	
S. Tasman Rise 2	South Tasman Rise	Bottom trawl	47°13.780′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Bottom trawl	47°13.780′S	148°50.670′E	
S. Tasman Rise 2	South Tasman Rise	Bottom trawl	47°21.000′S	148°45.610′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°21.000′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°24.015′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°24.015′S	148°45.610′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°24.800′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°30.320′S	148°44.390′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°30.320′S	148°57.650′E	

Block Name	FMA	Method	Latitude	Longitude	EEZ Direction
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°35.205′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Bottom trawl	47°35.205′S	148°44.390′E	
Wanganella	West Norfolk	Bottom trawl	33°28.000′S	167°42.000′E	
Wanganella	West Norfolk	Bottom trawl	33°28.000′S	168°00.000′E	
Wanganella	West Norfolk	Bottom trawl	33°52.000′S	167°13.000′E	
Wanganella	West Norfolk	Bottom trawl	33°52.000′S	167°42.000′E	
Wanganella	West Norfolk	Bottom trawl	34°12.000′S	167°13.000′E	
Wanganella	West Norfolk	Bottom trawl	34°12.000′S	168°00.000′E	
Westpac Bank	Westpac Bank	Bottom trawl	39°39.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Bottom trawl	39°39.000′S	167°21.090′E	
Westpac Bank	Westpac Bank	Bottom trawl	39°55.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Bottom trawl	39°55.000′S	167°21.090′E	

(b) Mid-water Trawl Fishing Management Area coordinates

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	35°26.000′S	165°44.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	35°26.000′S	166°21.915′E	
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	35°47.000′S	165°26.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	35°47.000′S	165°44.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	36°00.500′S	165°26.000′E	
C. Lord Howe – East	Central Lord Howe Rise	Mid-water trawl	36°00.500′S	166°21.915′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°21.000′S	165°13.550′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°21.000′S	165°24.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°31.000′S	164°54.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°31.000′S	165°13.550′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°40.383′S	165°18.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°40.383′S	165°24.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°54.000′S	164°46.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	35°54.000′S	164°54.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	36°06.000′S	164°46.000′E	
C. Lord Howe – West	Central Lord Howe Rise	Mid-water trawl	36°06.000′S	165°18.000′E	
S. Lord Howe	Central Lord Howe Rise	Mid-water trawl	36°13.460′S	164°40.830′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Mid-water trawl	36°13.460′S	165°06.050′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Mid-water trawl	36°26.800′S	164°40.830′E	S. Lord Howe
S. Lord Howe	Central Lord Howe Rise	Mid-water trawl	36°26.800′S	165°06.050′E	S. Lord Howe
1	South Louisville	Mid-water trawl	47°40.000′S	149°27.000′W	
1	South Louisville	Mid-water trawl	47°40.000′S	150°00.000′W	
1	South Louisville	Mid-water trawl	48°05.000′S	149°27.000′W	
1	South Louisville	Mid-water trawl	48°05.000′S	150°00.000′W	
3	South Louisville	Mid-water trawl	45°59.000′S	154°07.224′W	
3	South Louisville	Mid-water trawl	45°59.000′S	154°28.653′W	
3	South Louisville	Mid-water trawl	46°15.000′S	154°07.224′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
3	South Louisville	Mid-water trawl	46°15.000′S	154°28.653′W	
4	South Louisville	Mid-water trawl	46°01.000′S	155°40.000′W	
4	South Louisville	Mid-water trawl	46°01.000′S	156°10.000′W	
4	South Louisville	Mid-water trawl	46°24.000′S	155°40.000′W	
4	South Louisville	Mid-water trawl	46°24.000′S	156°10.000′W	
5	South Louisville	Mid-water trawl	45°26.000′S	156°30.000′W	
5	South Louisville	Mid-water trawl	45°26.000′S	156°55.000′W	
5	South Louisville	Mid-water trawl	45°42.000′S	156°30.000′W	
5	South Louisville	Mid-water trawl	45°42.000′S	156°55.000′W	
6	South Louisville	Mid-water trawl	45°19.500′S	157°19.000′W	
6	South Louisville	Mid-water trawl	45°19.500′S	157°55.000′W	
6	South Louisville	Mid-water trawl	45°30.000′S	157°19.000′W	
6	South Louisville	Mid-water trawl	45°30.000′S	157°55.000′W	
7	South Louisville	Mid-water trawl	44°43.950′S	158°18.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
7	South Louisville	Mid-water trawl	44°43.950′S	158°38.000′W	
7	South Louisville	Mid-water trawl	44°57.950′S	158°18.000′W	
7	South Louisville	Mid-water trawl	44°57.950′S	158°38.000′W	
8	South Louisville	Mid-water trawl	44°13.000′S	159°43.000′W	
8	South Louisville	Mid-water trawl	44°13.000′S	159°54.000′W	
8	South Louisville	Mid-water trawl	44°21.000′S	159°43.000′W	
8	South Louisville	Mid-water trawl	44°21.000′S	159°54.000′W	
9	South Louisville	Mid-water trawl	43°51.183′S	160°29.235′W	
9	South Louisville	Mid-water trawl	43°51.183′S	160°50.820′W	
9	South Louisville	Mid-water trawl	44°07.000′S	160°29.235′W	
9	South Louisville	Mid-water trawl	44°07.000′S	160°50.820′W	
10	South Louisville	Mid-water trawl	43°22.000′S	161°21.770′W	
10	South Louisville	Mid-water trawl	43°22.000′S	161°39.000′W	
10	South Louisville	Mid-water trawl	43°31.370′S	161°10.170′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
10	South Louisville	Mid-water trawl	43°31.370′S	161°21.770′W	
10	South Louisville	Mid-water trawl	43°41.440′S	161°10.170′W	
10	South Louisville	Mid-water trawl	43°41.440′S	161°39.000′W	
11	South Louisville	Mid-water trawl	42°40.000′S	161°48.000′W	
11	South Louisville	Mid-water trawl	42°40.000′S	162°07.000′W	
11	South Louisville	Mid-water trawl	42°54.500′S	161°48.000′W	
11	South Louisville	Mid-water trawl	42°54.500′S	162°07.000′W	
13	Central Louisville	Mid-water trawl	41°45.000′S	163°29.500′W	
13	Central Louisville	Mid-water trawl	41°45.000′S	163°49.000′W	
13	Central Louisville	Mid-water trawl	42°00.000′S	163°29.500′W	
13	Central Louisville	Mid-water trawl	42°00.000′S	163°49.000′W	
14	Central Louisville	Mid-water trawl	41°17.000′S	164°00.000′W	
14	Central Louisville	Mid-water trawl	41°17.000′S	164°27.000′W	
14	Central Louisville	Mid-water trawl	41°40.000′S	164°00.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
14	Central Louisville	Mid-water trawl	41°40.000′S	164°27.000′W	
15	Central Louisville	Mid-water trawl	40°32.897′S	165°12.000′W	
15	Central Louisville	Mid-water trawl	40°32.897′S	165°30.000′W	
15	Central Louisville	Mid-water trawl	40°42.000′S	164°56.400′W	
15	Central Louisville	Mid-water trawl	40°42.000′S	165°12.000′W	
15	Central Louisville	Mid-water trawl	40°48.000′S	165°24.000′W	
15	Central Louisville	Mid-water trawl	40°48.000′S	165°30.000′W	
15	Central Louisville	Mid-water trawl	40°54.000′S	165°12.000′W	
15	Central Louisville	Mid-water trawl	40°54.000′S	165°24.000′W	
15	Central Louisville	Mid-water trawl	41°06.000′S	164°56.400′W	
15	Central Louisville	Mid-water trawl	41°06.000′S	165°12.000′W	
17	North Louisville	Mid-water trawl	38°20.013′S	167°29.000′W	
17	North Louisville	Mid-water trawl	38°20.013′S	167°47.067′W	
17	North Louisville	Mid-water trawl	38°32.000′S	167°29.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
17	North Louisville	Mid-water trawl	38°32.000′S	167°47.067′W	
18	North Louisville	Mid-water trawl	38°11.013′S	168°01.785′W	
18	North Louisville	Mid-water trawl	38°11.013′S	168°20.000′W	
18	North Louisville	Mid-water trawl	38°40.000′S	168°01.785′W	
18	North Louisville	Mid-water trawl	38°40.000′S	168°20.000′W	
22	North Louisville	Mid-water trawl	36°45.000′S	169°30.000′W	
22	North Louisville	Mid-water trawl	36°45.000′S	170°00.000′W	
22	North Louisville	Mid-water trawl	37°08.000′S	169°30.000′W	
22	North Louisville	Mid-water trawl	37°08.000′S	170°00.000′W	
23	North Louisville	Mid-water trawl	36°00.000′S	169°22.000′W	
23	North Louisville	Mid-water trawl	36°00.000′S	169°40.000′W	
23	North Louisville	Mid-water trawl	36°10.000′S	169°22.000′W	
23	North Louisville	Mid-water trawl	36°10.000′S	169°40.000′W	
N. Lord Howe – Central	North Lord Howe Rise	Mid-water trawl	33°49.630′S	162°25.670′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
N. Lord Howe – Central	North Lord Howe Rise	Mid-water trawl	33°48.622′S	162°25.670′E	North-east along the Australian EEZ
N. Lord Howe – Central	North Lord Howe Rise	Mid-water trawl	33°32.530′S	162°38.450′E	
N. Lord Howe – Central	North Lord Howe Rise	Mid-water trawl	33°32.530′S	162°57.770′E	
N. Lord Howe – Central	North Lord Howe Rise	Mid-water trawl	33°49.630′S	162°57.770′E	
N. Lord Howe – East	North Lord Howe Rise	Mid-water trawl	32°54.650′S	163°16.615′E	
N. Lord Howe – East	North Lord Howe Rise	Mid-water trawl	32°54.650′S	163°26.380′E	
N. Lord Howe – East	North Lord Howe Rise	Mid-water trawl	33°04.400′S	163°16.615′E	
N. Lord Howe – East	North Lord Howe Rise	Mid-water trawl	33°04.400′S	163°26.380′E	
N. Lord Howe – South	North Lord Howe Rise	Mid-water trawl	33°58.670′S	162°20.000′E	
N. Lord Howe – South	North Lord Howe Rise	Mid-water trawl	33°58.670′S	163°00.000′E	
N. Lord Howe – South	North Lord Howe Rise	Mid-water trawl	34°40.000′S	162°20.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
N. Lord Howe – South	North Lord Howe Rise	Mid-water trawl	34°40.000′S	163°00.000′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°16.400′S	162°52.540′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°09.296′S	162°52.540′E	North-east along the Australian EEZ
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°04.400′S	162°54.941′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°04.400′S	163°10.540′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°10.400′S	163°04.540′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°10.400′S	163°10.540′E	
N. Lord Howe – West	North Lord Howe Rise	Mid-water trawl	33°16.400′S	163°04.540′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°01.333′S	166°40.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°01.333′S	169°36.706′E	South-east along the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°29.902′S	170°00.000′E	Due south to a point on the New Zealand EEZ

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°41.589′S	170°00.000′E	South-west along the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Mid-water trawl	38°00.000′S	169°47.848′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	38°00.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	169°24.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°42.000′S	169°24.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°42.000′S	167°42.004′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	167°42.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	39°06.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	39°06.000′S	167°18.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	38°52.000′S	167°18.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	38°52.000′S	167°06.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	167°06.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°48.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°42.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Mid-water trawl	37°42.000′S	166°40.000′E	
S. Tasman Rise 1	South Tasman Rise	Mid-water trawl	47°08.280′S	147°50.200′E	Start on the Australian EEZ
S. Tasman Rise 1	South Tasman Rise	Mid-water trawl	47°17.370′S	147°50.200′E	
S. Tasman Rise 1	South Tasman Rise	Mid-water trawl	47°17.370′S	147°32.300′E	
S. Tasman Rise 1	South Tasman Rise	Mid-water trawl	47°10.197′S	147°32.300′E	East along the Australian EEZ to the start point
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°05.160′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°05.160′S	148°50.670′E	
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°13.780′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°13.780′S	148°50.670′E	
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°21.000′S	148°45.610′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
S. Tasman Rise 2	South Tasman Rise	Mid-water trawl	47°21.000′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°24.015′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°24.015′S	148°45.610′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°24.800′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°30.320′S	148°44.390′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°30.320′S	148°57.650′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°35.205′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Mid-water trawl	47°35.205′S	148°44.390′E	
Wanganella	West Norfolk	Mid-water trawl	33°28.000′S	167°42.000′E	
Wanganella	West Norfolk	Mid-water trawl	33°28.000′S	168°00.000′E	
Wanganella	West Norfolk	Mid-water trawl	33°52.000′S	167°13.000′E	
Wanganella	West Norfolk	Mid-water trawl	33°52.000′S	167°42.000′E	
Wanganella	West Norfolk	Mid-water trawl	34°12.000′S	167°13.000′E	
Wanganella	West Norfolk	Mid-water trawl	34°12.000′S	168°00.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Westpac Bank	Westpac Bank	Mid-water trawl	39°39.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Mid-water trawl	39°39.000′S	167°21.090′E	
Westpac Bank	Westpac Bank	Mid-water trawl	39°55.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Mid-water trawl	39°55.000′S	167°21.090′E	

(c) Bottom Line Fishing Management Area coordinates

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Capel bank		Bottom Line	25°14.950′S	159°00.285′E	
Capel bank		Bottom Line	25°14.950′S	160°00.000′E	
Capel bank		Bottom Line	25°59.640′S	159°00.285′E	
Capel bank		Bottom Line	25°59.640′S	160°00.000′E	
Gascoyne		Bottom Line	36°19.950′S	155°53.630′E	
Gascoyne		Bottom Line	36°19.950′S	156°43.770′E	
Gascoyne		Bottom Line	36°59.440′S	155°53.630′E	
Gascoyne		Bottom Line	36°59.440′S	156°43.770′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°20.000′S	165°00.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°20.000′S	166°21.915′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°31.000′S	164°54.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°31.000′S	165°00.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°54.000′S	164°46.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	35°54.000′S	164°54.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°00.500′S	165°18.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°00.500′S	166°21.915′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°06.000′S	164°46.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°06.000′S	165°18.000′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°13.460′S	164°40.830′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°13.460′S	165°06.050′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°26.800′S	164°40.830′E	
S. Lord Howe	Central Lord Howe Rise	Bottom Line	36°26.800′S	165°06.050′E	
Central Challenger	Central Challenger	Bottom Line	37°45.615′S	168°35.830′E	
Central Challenger	Central Challenger	Bottom Line	37°55.230′S	168°35.830′E	
Central Challenger	Central Challenger	Bottom Line	37°55.230′S	169°25.400′E	
Central Challenger	Central Challenger	Bottom Line	38°13.830′S	169°25.400′E	South-west along the New Zealand EEZ
Central Challenger	Central Challenger	Bottom Line	38°23.165′S	169°11.967′E	
Central Challenger	Central Challenger	Bottom Line	38°23.165′S	168°30.780′E	
Central Challenger	Central Challenger	Bottom Line	38°32.750′S	168°30.780′E	
Central Challenger	Central Challenger	Bottom Line	38°32.750′S	167°57.950′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Central Challenger	Central Challenger	Bottom Line	39°17.180′S	167°57.950′E	
Central Challenger	Central Challenger	Bottom Line	39°17.180′S	167°30.500′E	
Central Challenger	Central Challenger	Bottom Line	38°06.430′S	167°30.500′E	
Central Challenger	Central Challenger	Bottom Line	38°06.430′S	168°09.833′E	
Central Challenger	Central Challenger	Bottom Line	37°45.615′S	168°09.833′E	
1	South Louisville	Bottom Line	47°40.000′S	149°27.000′W	
1	South Louisville	Bottom Line	47°40.000′S	150°00.000′W	
1	South Louisville	Bottom Line	48°05.000′S	149°27.000′W	
1	South Louisville	Bottom Line	48°05.000′S	150°00.000′W	
3	South Louisville	Bottom Line	45°59.000′S	154°07.224′W	
3	South Louisville	Bottom Line	45°59.000′S	154°28.653′W	
3	South Louisville	Bottom Line	46°15.000′S	154°07.224′W	
3	South Louisville	Bottom Line	46°15.000′S	154°28.653′W	
4	South Louisville	Bottom Line	46°01.000′S	155°40.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
4	South Louisville	Bottom Line	46°01.000′S	156°10.000′W	
4	South Louisville	Bottom Line	46°24.000′S	155°40.000′W	
4	South Louisville	Bottom Line	46°24.000′S	156°10.000′W	
5	South Louisville	Bottom Line	45°26.000′S	156°30.000′W	
5	South Louisville	Bottom Line	45°26.000′S	156°55.000′W	
5	South Louisville	Bottom Line	45°42.000′S	156°30.000′W	
5	South Louisville	Bottom Line	45°42.000′S	156°55.000′W	
6	South Louisville	Bottom Line	45°19.500′S	157°19.000′W	
6	South Louisville	Bottom Line	45°19.500′S	157°55.000′W	
6	South Louisville	Bottom Line	45°30.000′S	157°19.000′W	
6	South Louisville	Bottom Line	45°30.000′S	157°55.000′W	
7	South Louisville	Bottom Line	44°43.950′S	158°18.000′W	
7	South Louisville	Bottom Line	44°43.950′S	158°38.000′W	
7	South Louisville	Bottom Line	44°57.950′S	158°18.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
7	South Louisville	Bottom Line	44°57.950′S	158°38.000′W	
8	South Louisville	Bottom Line	44°13.000′S	159°43.000′W	
8	South Louisville	Bottom Line	44°13.000′S	159°54.000′W	
8	South Louisville	Bottom Line	44°21.000′S	159°43.000′W	
8	South Louisville	Bottom Line	44°21.000′S	159°54.000′W	
9	South Louisville	Bottom Line	43°51.183′S	160°29.235′W	
9	South Louisville	Bottom Line	43°51.183′S	160°50.820′W	
9	South Louisville	Bottom Line	44°07.000′S	160°29.235′W	
9	South Louisville	Bottom Line	44°07.000′S	160°50.820′W	
10	South Louisville	Bottom Line	43°22.000′S	161°21.770′W	
10	South Louisville	Bottom Line	43°22.000′S	161°39.000′W	
10	South Louisville	Bottom Line	43°31.370′S	161°10.170′W	
10	South Louisville	Bottom Line	43°31.370′S	161°21.770′W	
10	South Louisville	Bottom Line	43°41.440′S	161°10.170′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
10	South Louisville	Bottom Line	43°41.440′S	161°39.000′W	
11	South Louisville	Bottom Line	42°40.000′S	161°48.000′W	
11	South Louisville	Bottom Line	42°40.000′S	162°07.000′W	
11	South Louisville	Bottom Line	42°54.500′S	161°48.000′W	
11	South Louisville	Bottom Line	42°54.500′S	162°07.000′W	
13	Central Louisville	Bottom Line	41°45.000′S	163°29.500′W	
13	Central Louisville	Bottom Line	41°45.000′S	163°49.000′W	
13	Central Louisville	Bottom Line	42°00.000′S	163°29.500′W	
13	Central Louisville	Bottom Line	42°00.000′S	163°49.000′W	
14	Central Louisville	Bottom Line	41°17.000′S	164°00.000′W	
14	Central Louisville	Bottom Line	41°17.000′S	164°27.000′W	
14	Central Louisville	Bottom Line	41°40.000′S	164°00.000′W	
14	Central Louisville	Bottom Line	41°40.000′S	164°27.000′W	
15	Central Louisville	Bottom Line	40°32.897′S	165°12.000′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
15	Central Louisville	Bottom Line	40°32.897′S	165°30.000′W	
15	Central Louisville	Bottom Line	40°42.000′S	164°56.400′W	
15	Central Louisville	Bottom Line	40°42.000′S	165°12.000′W	
15	Central Louisville	Bottom Line	40°48.000′S	165°24.000′W	
15	Central Louisville	Bottom Line	40°48.000′S	165°30.000′W	
15	Central Louisville	Bottom Line	40°54.000′S	165°12.000′W	
15	Central Louisville	Bottom Line	40°54.000′S	165°24.000′W	
15	Central Louisville	Bottom Line	41°06.000′S	164°56.400′W	
15	Central Louisville	Bottom Line	41°06.000′S	165°12.000′W	
17	North Louisville	Bottom Line	38°20.013′S	167°29.000′W	
17	North Louisville	Bottom Line	38°20.013′S	167°47.067′W	
17	North Louisville	Bottom Line	38°32.000′S	167°29.000′W	
17	North Louisville	Bottom Line	38°32.000′S	167°47.067′W	
18	North Louisville	Bottom Line	38°11.013′S	168°01.785′W	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
18	North Louisville	Bottom Line	38°11.013′S	168°20.000′W	
18	North Louisville	Bottom Line	38°40.000′S	168°01.785′W	
18	North Louisville	Bottom Line	38°40.000′S	168°20.000′W	
22	North Louisville	Bottom Line	36°45.000′S	169°30.000′W	
22	North Louisville	Bottom Line	36°45.000′S	170°00.000′W	
22	North Louisville	Bottom Line	37°08.000′S	169°30.000′W	
22	North Louisville	Bottom Line	37°08.000′S	170°00.000′W	
23	North Louisville	Bottom Line	36°00.000′S	169°22.000′W	
23	North Louisville	Bottom Line	36°00.000′S	169°40.000′W	
23	North Louisville	Bottom Line	36°10.000′S	169°22.000′W	
23	North Louisville	Bottom Line	36°10.000′S	169°40.000′W	
N. Lord Howe	North Lord Howe Rise	Bottom Line	32°39.630′S	163°04.415′E	Start on the Australian EEZ
N. Lord Howe	North Lord Howe Rise	Bottom Line	32°39.630′S	163°40.000′E	
N. Lord Howe	North Lord Howe Rise	Bottom Line	33°20.000′S	163°40.000′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
N. Lord Howe	North Lord Howe Rise	Bottom Line	33°20.000′S	163°20.000′E	
N. Lord Howe	North Lord Howe Rise	Bottom Line	34°40.000′S	162°20.000′E	
N. Lord Howe	North Lord Howe Rise	Bottom Line	34°40.000′S	163°20.000′E	
N. Lord Howe	North Lord Howe Rise	Bottom Line	33°54.773′S	162°20.000′E	North-east along the Australian EEZ to the start point
Central Challenger	Northwest Challenger	Bottom Line	37°45.615′S	168°35.830′E	
Central Challenger	Northwest Challenger	Bottom Line	37°55.230′S	168°35.830′E	
Central Challenger	Northwest Challenger	Bottom Line	37°55.230′S	169°25.400′E	
Central Challenger	Northwest Challenger	Bottom Line	38°13.830′S	169°25.400′E	
Central Challenger	Northwest Challenger	Bottom Line	38°23.165′S	169°11.967′E	
Central Challenger	Northwest Challenger	Bottom Line	38°23.165′S	168°30.780′E	
Central Challenger	Northwest Challenger	Bottom Line	38°32.750′S	168°30.780′E	
Central Challenger	Northwest Challenger	Bottom Line	38°32.750′S	167°57.950′E	
Central Challenger	Northwest Challenger	Bottom Line	39°17.180′S	167°57.950′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Central Challenger	Northwest Challenger	Bottom Line	39°17.180′S	167°30.500′E	
Central Challenger	Northwest Challenger	Bottom Line	38°06.430′S	167°30.500′E	
Central Challenger	Northwest Challenger	Bottom Line	38°06.430′S	168°09.833′E	
Central Challenger	Northwest Challenger	Bottom Line	37°45.615′S	168°09.833′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°01.333′S	169°36.706′E	South-east along the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Bottom Line	37°29.902′S	170°00.000′E	Due south to a point on the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Bottom Line	37°41.589′S	170°00.000′E	South-west along the New Zealand EEZ
Northwest Challenger	Northwest Challenger	Bottom Line	38°00.000′S	169°47.848′E	
Northwest Challenger	Northwest Challenger	Bottom Line	38°00.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	169°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	169°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°42.000′S	169°24.000′E	

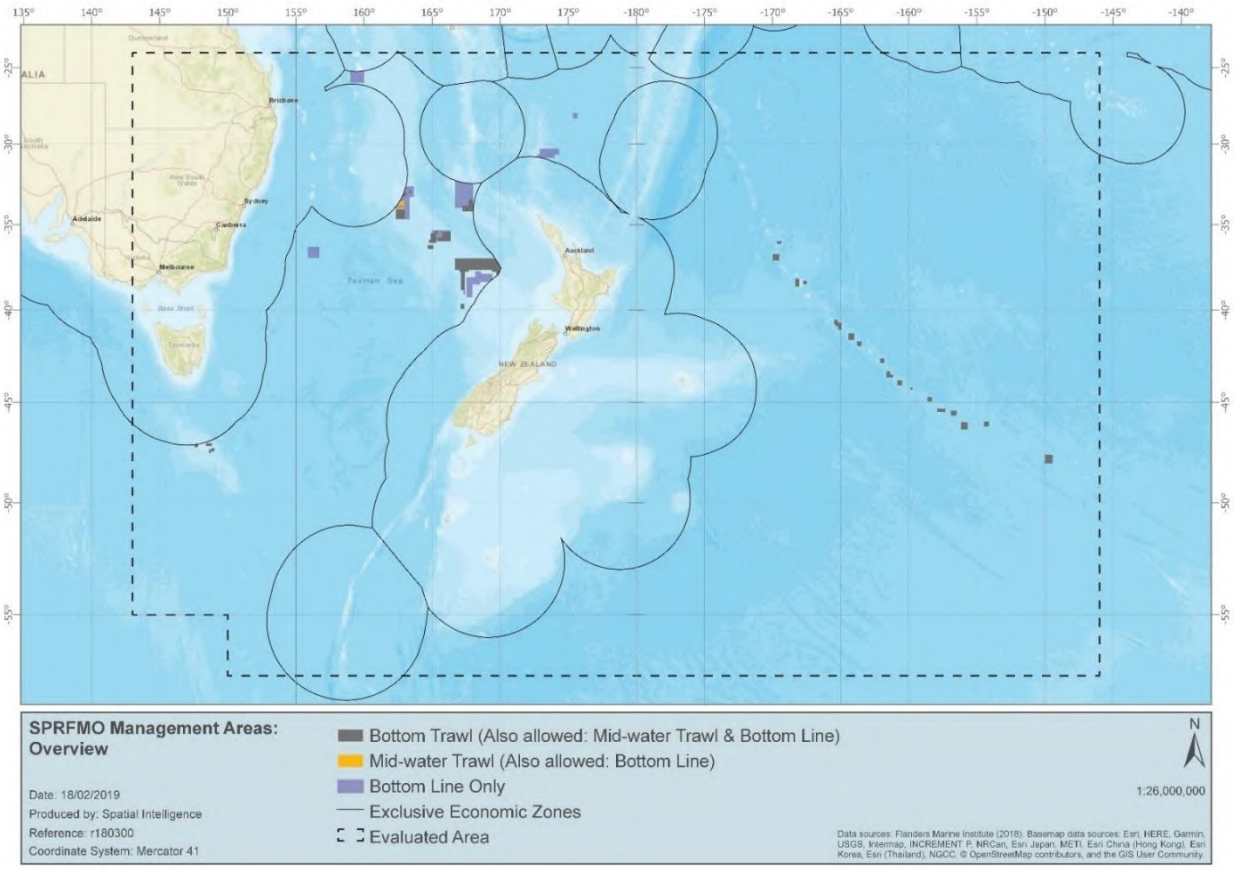
Block name	Locality	Method	Latitude	Longitude	EEZ Direction
Northwest Challenger	Northwest Challenger	Bottom Line	37°42.000′S	167°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	167°42.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	39°06.000′S	167°24.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	39°06.000′S	167°18.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	38°52.000′S	167°18.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	38°52.000′S	167°06.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	167°06.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°48.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°42.000′S	167°00.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°42.000′S	166°40.000′E	
Northwest Challenger	Northwest Challenger	Bottom Line	37°01.333′S	166°40.000′E	
S. Tasman Rise 1	South Tasman Rise	Bottom Line	47°08.280′S	147°50.200′E	Start on the Australian EEZ
S. Tasman Rise 1	South Tasman Rise	Bottom Line	47°17.370′S	147°50.200′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
S. Tasman Rise 1	South Tasman Rise	Bottom Line	47°17.370′S	147°32.300′E	
S. Tasman Rise 1	South Tasman Rise	Bottom Line	47°10.197′S	147°32.300′E	East along the Australian EEZ to the start point
S. Tasman Rise 2	South Tasman Rise	Bottom Line	47°05.160′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Bottom Line	47°05.160′S	148°50.670′E	
S. Tasman Rise 2	South Tasman Rise	Bottom Line	47°13.780′S	148°24.165′E	
S. Tasman Rise 2	South Tasman Rise	Bottom Line	47°13.780′S	148°50.670′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°21.000′S	148°45.610′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°21.000′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°24.015′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°24.015′S	148°45.610′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°24.800′S	149°03.200′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°30.320′S	148°44.390′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°30.320′S	148°57.650′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°35.205′S	148°37.235′E	
S. Tasman Rise 3	South Tasman Rise	Bottom Line	47°35.205′S	148°44.390′E	
Marion	Three Kings	Bottom Line	27°59.155′S	175°19.590′E	
Marion	Three Kings	Bottom Line	27°59.155′S	175°40.370′E	
Marion	Three Kings	Bottom Line	28°19.800′S	175°19.590′E	
Marion	Three Kings	Bottom Line	28°19.800′S	175°40.370′E	
Three Kings	Three Kings	Bottom Line	30°49.324′S	172°42.880′E	Start on the New Zealand EEZ
Three Kings	Three Kings	Bottom Line	30°40.115′S	172°42.880′E	
Three Kings	Three Kings	Bottom Line	30°40.115′S	172°53.295′E	
Three Kings	Three Kings	Bottom Line	30°16.500′S	172°53.295′E	
Three Kings	Three Kings	Bottom Line	30°16.500′S	174°20.000′E	
Three Kings	Three Kings	Bottom Line	30°40.245′S	174°20.000′E	
Three Kings	Three Kings	Bottom Line	30°40.245′S	174°00.200′E	
Three Kings	Three Kings	Bottom Line	30°53.670′S	174°00.200′E	
Three Kings	Three Kings	Bottom Line	30°53.670′S	173°08.819′E	West along the New Zealand EEZ to the start point
West Norfolk Ridge	West Norfolk	Bottom Line	32°17.000′S	166°41.530′E	

Block name	Locality	Method	Latitude	Longitude	EEZ Direction
West Norfolk Ridge	West Norfolk	Bottom Line	32°17.000′S	166°41.921′E	South-east along the Australian EEZ
West Norfolk Ridge	West Norfolk	Bottom Line	32°28.633′S	168°00.000′E	
West Norfolk Ridge	West Norfolk	Bottom Line	34°12.000′S	168°00.000′E	
West Norfolk Ridge	West Norfolk	Bottom Line	34°12.000′S	167°13.000′E	
West Norfolk Ridge	West Norfolk	Bottom Line	34°00.000′S	167°13.000′E	
West Norfolk Ridge	West Norfolk	Bottom Line	34°00.000′S	166°41.530′E	
Westpac Bank	Westpac Bank	Bottom Line	39°39.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Bottom Line	39°39.000′S	167°21.090′E	
Westpac Bank	Westpac Bank	Bottom Line	39°55.000′S	167°05.000′E	
Westpac Bank	Westpac Bank	Bottom Line	39°55.000′S	167°21.090′E	

Figure 1: SPRFMO management area overview



Legend:

– SPRFMO Management Areas: Overview

– Bottom Trawl (Also allowed: Mid-water Trawl and Bottom Line)

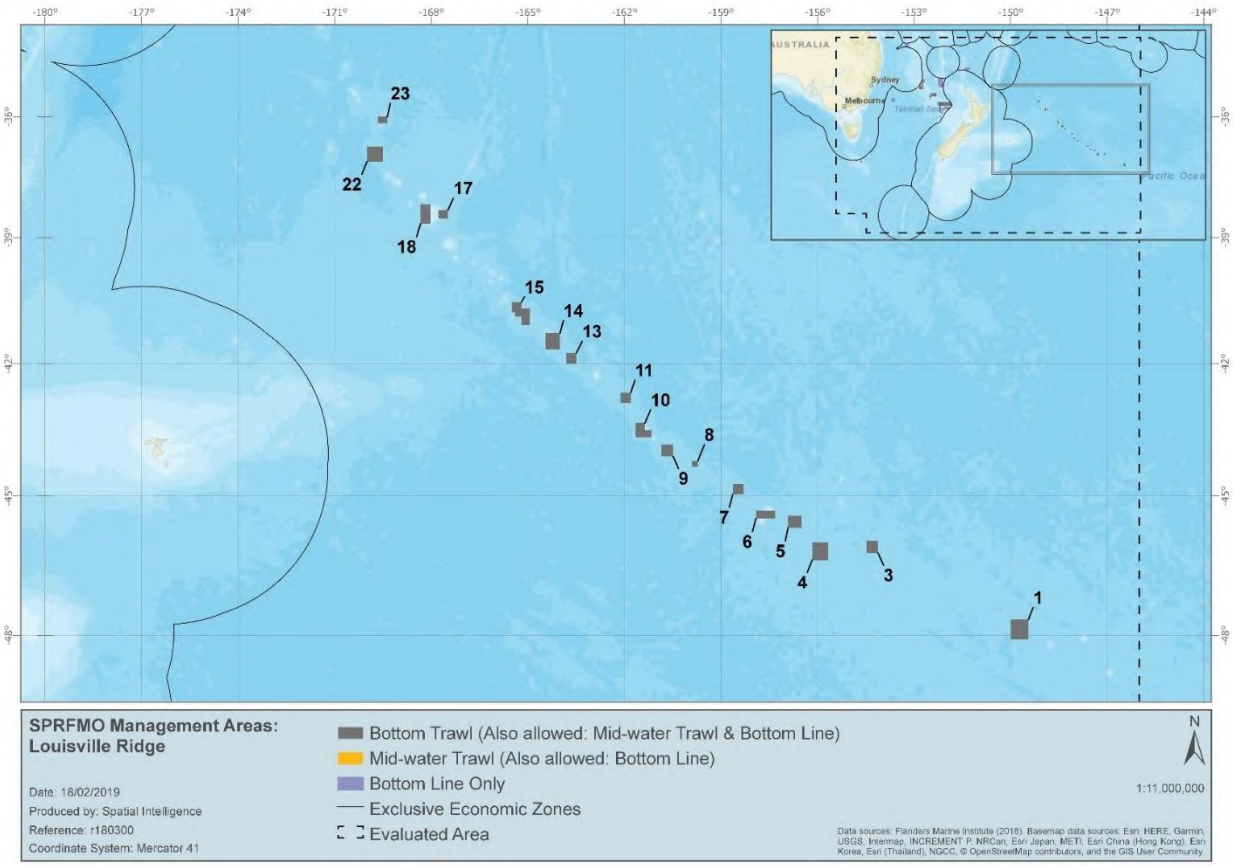
– Bottom Line Only

– Mid-water Trawl (Also allowed: Bottom Line)

– Exclusive Economic Zone

– Evaluated Area

Figure 2: SPRFMO Bottom Fishing Management Areas for the Louisville Ridge



Legend:

– SPRFMO Management Areas: Louisville Ridge

– Bottom Trawl (Also allowed: Mid-water Trawl and Bottom Line)

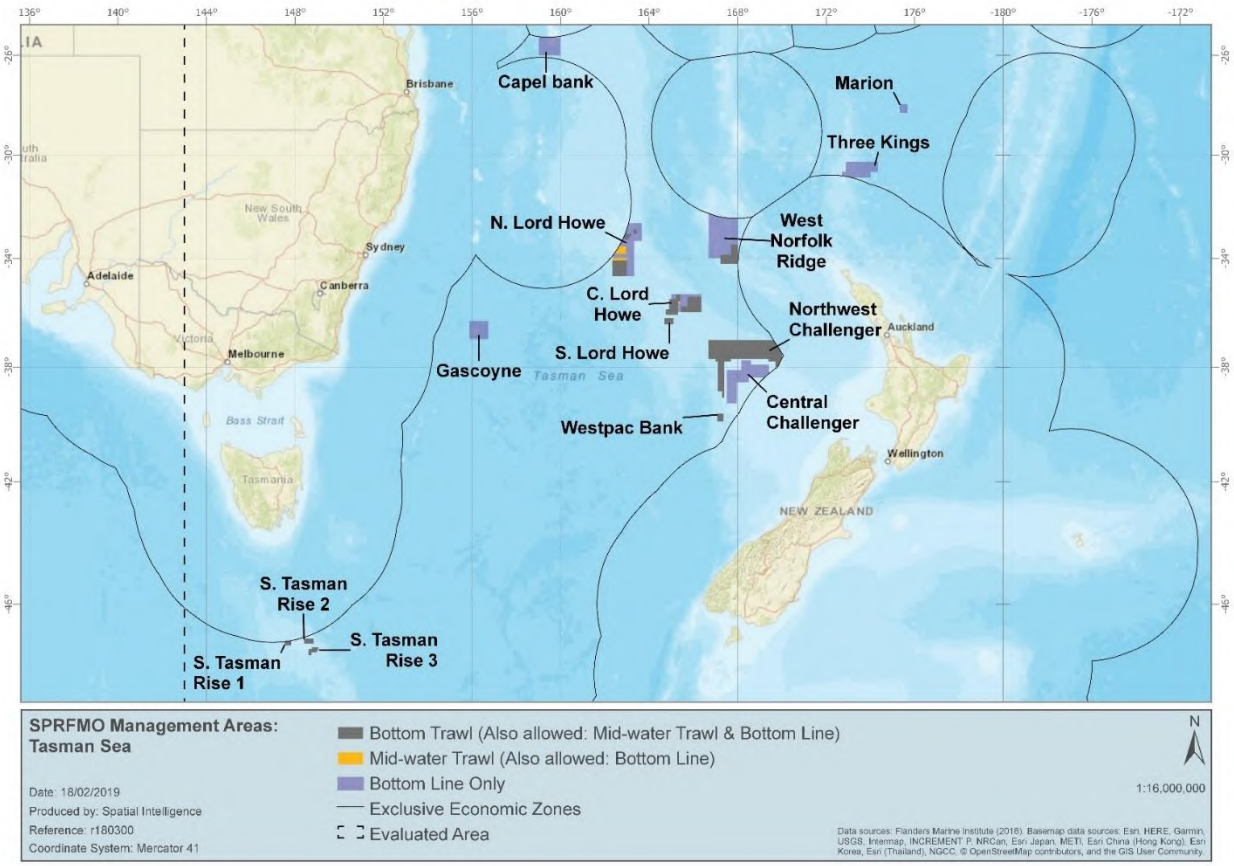
– Bottom Line Only

– Mid-water Trawl (Also allowed: Bottom Line)

– Exclusive Economic Zone

– Evaluated Area

Figure 3: SPRFMO Bottom Fishing Management Areas for the Tasman Sea



Legend:

– SPRFMO Management Areas: Tasman Sea

– Bottom Trawl (Also allowed: Mid-water Trawl and Bottom Line)

– Bottom Line Only

– Mid-water Trawl (Also allowed: Bottom Line)

– Exclusive Economic Zone

– Evaluated Area

ANNEX XV

Fishery management areas

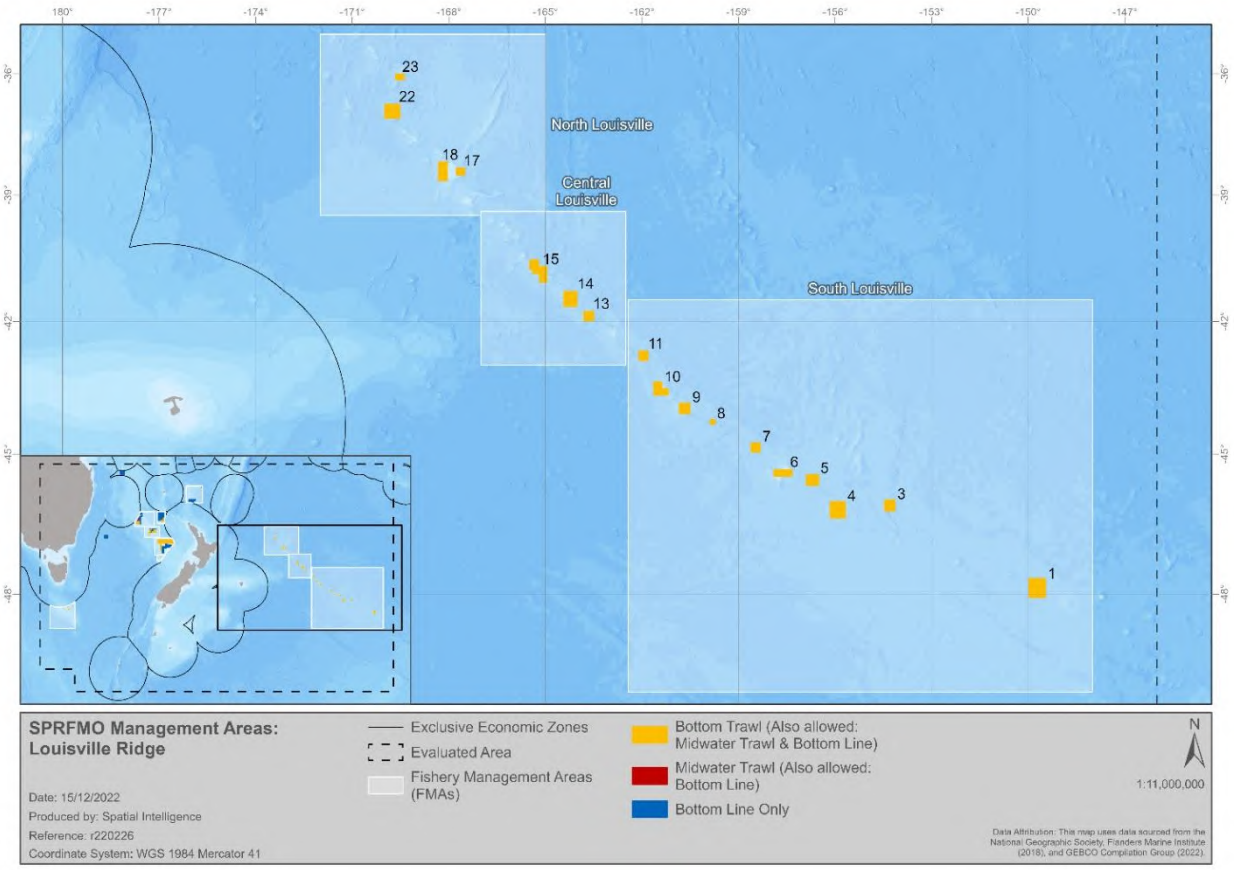
Coordinates for each fishery management area

FMA	Point Order	Latitude	Longitude	EEZ Direction
Central Lord Howe Rise	1	35°00.000′S	164°00.000′E	
Central Lord Howe Rise	2	35°00.000′S	167°00.000′E	
Central Lord Howe Rise	3	36°45.000′S	167°00.000′E	
Central Lord Howe Rise	4	36°45.000′S	164°00.000′E	
Central Louisville	1	39°24.000′S	167°00.000′W	
Central Louisville	2	39°24.000′S	162°30.000′W	
Central Louisville	3	43°00.000′S	162°30.000′W	
Central Louisville	4	43°00.000′S	167°00.000′W	
North Lord Howe Rise	1	32°30.000′S	163°06.980′E	Start on the Australian EEZ
North Lord Howe Rise	2	32°30.000′S	166°00.000′E	
North Lord Howe Rise	3	35°00.000′S	166°00.000′E	
North Lord Howe Rise	4	35°00.000′S	162°00.000′E	

FMA	Point Order	Latitude	Longitude	EEZ Direction
North Lord Howe Rise	5	34°13.064′S	162°00.000′E	North along the Australian EEZ to the start point
North Louisville	1	35°00.000′S	172°00.000′W	
North Louisville	2	35°00.000′S	165°00.000′W	
North Louisville	3	39°24.000′S	165°00.000′W	
North Louisville	4	39°24.000′S	167°00.000′W	
North Louisville	5	39°30.000′S	167°00.000′W	
North Louisville	6	39°30.000′S	172°00.000′W	
Northwest Challenger	1	36°50.000′S	166°00.000′E	
Northwest Challenger	2	36°50.000′S	169°28.474′E	South-east along the New Zealand EEZ
Northwest Challenger	3	37°29.902′S	170°00.000′E	Due south to a point on the New Zealand EEZ
Northwest Challenger	4	37°41.589′S	170°00.000′E	South-west along the New Zealand EEZ
Northwest Challenger	5	39°30.000′S	168°08.799′E	
Northwest Challenger	6	39°30.000′S	166°00.000′E	
South Louisville	1	41°30.000′S	162°26.000′W	
South Louisville	2	41°30.000′S	148°00.000′W	
South Louisville	3	50°00.000′S	148°00.000′W	
South Louisville	4	50°00.000′S	162°26.000′W	
South Tasman Rise	1	46°25.979′S	150°00.000′E	Start on the Australian EEZ

FMA	Point Order	Latitude	Longitude	EEZ Direction
South Tasman Rise	2	50°00.000′S	150°00.000′E	
South Tasman Rise	3	50°00.000′S	145°00.000′E	
South Tasman Rise	4	46°55.906′S	145°00.000′E	East along the Australian EEZ to the start point
Three Kings	1	28°00.000′S	172°20.000′E	
Three Kings	2	28°00.000′S	175°40.000′E	
Three Kings	3	31°00.000′S	175°40.000′E	
Three Kings	4	31°00.000′S	173°32.686′E	West along the New Zealand EEZ
Three Kings	5	30°47.558′S	172°20.000′E	
West Norfolk	1	34°30.000′S	168°01.318′E	Start on the New Zealand EEZ
West Norfolk	2	34°30.000′S	166°30.000′E	
West Norfolk	3	32°30.000′S	166°30.000′E	
West Norfolk	4	32°30.000′S	168°10.000′E	
West Norfolk	5	33°19.412′S	168°10.000′E	South along the New Zealand EEZ to the start point
Westpac Bank	1	39°31.000′S	166°30.000′E	
Westpac Bank	2	39°31.000′S	168°08.176′E	South-west along the New Zealand EEZ
Westpac Bank	3	40°30.000′S	167°21.903′E	
Westpac Bank	4	40°30.000′S	166°30.000′E	

Figure 1: Fishery Management Areas for the Louisville Ridge



Legend:

– SPRFMO Management Areas: Louisville Ridge

– Exclusive Economic Zone

– Evaluated Area

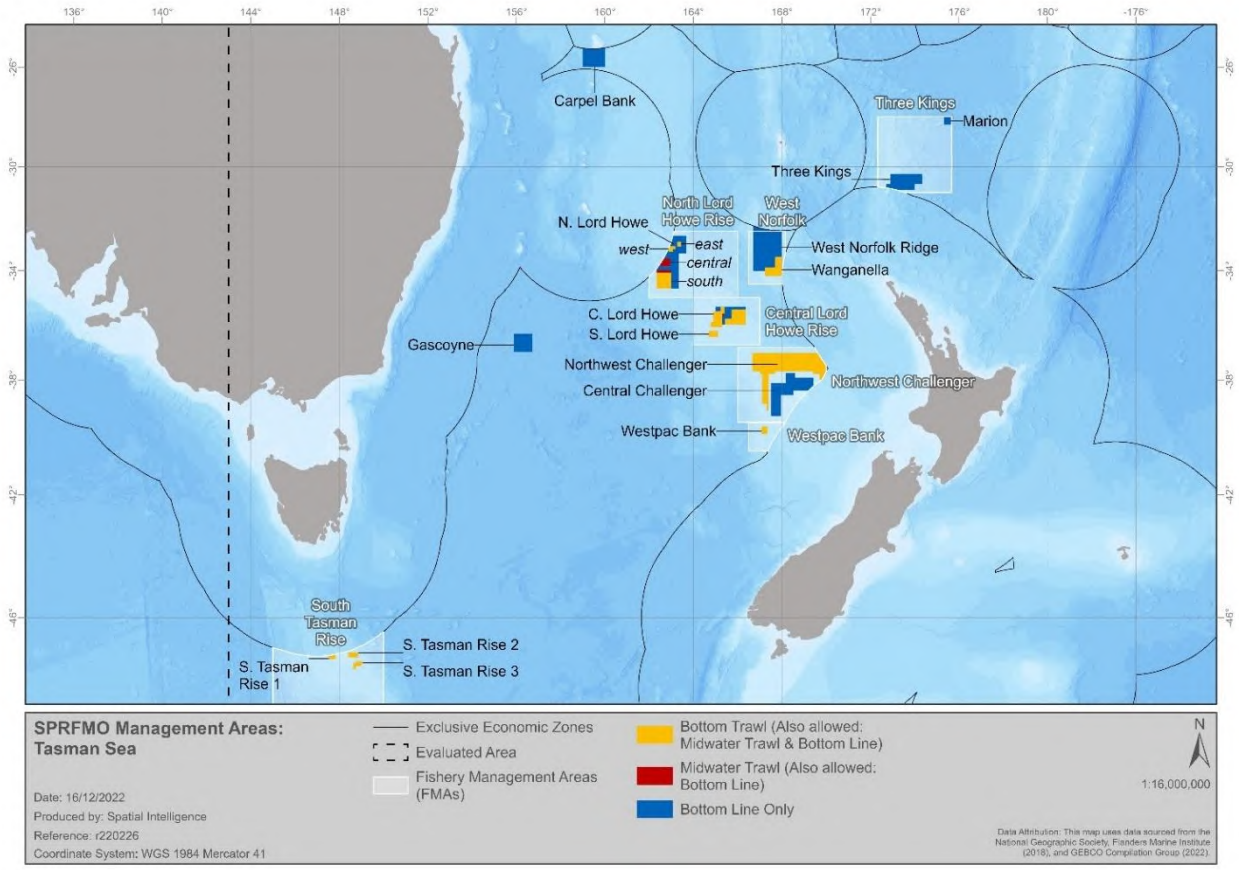
– Fisheries Management Areas (FMAs)

– Bottom Trawl (Also allowed: Mid-water Trawl and Bottom Line)

– Mid-water Trawl (Also allowed: Bottom Line)

– Bottom Line Only

Figure 2: Fishery Management Areas for the Tasman Sea



Legend:

– SPRFMO Management Areas: Tasman Sea

– Exclusive Economic Zone

– Evaluated Area

– Fisheries Management Areas (FMAs)

– Bottom Trawl (Also allowed: Mid-water Trawl and Bottom Line)

– Mid-water Trawl (Also allowed: Bottom Line)

– Bottom Line Only

ANNEX XVI

List of VME Indicator Taxa

Taxonomic Level	Common Name	Qualifying taxa
Vulnerable taxa		
Phylum Porifera	Sponges	All taxa of the classes Demospongiae and Hexactinellidae
Phylum Cnidaria		
Class Anthozoa		
Order Scleractinia	Stony corals	All taxa within the following genera: *Solenosmilia*; *Goniocorella*; *Oculina*; *Enallopsammia*; *Madrepora*; *Lophelia*
Order Antipatharia	Black corals	All taxa
Order Alcyonacea	True soft corals	All taxa excluding Gorgonian Alcyonacea
Informal group Gorgonian Alcyonacea	Sea fans octocorals	All taxa within the following suborders: *Holaxonia*; *Calcaxonia*; *Scleraxonia*
Order Pennatulacea	Sea pens	All taxa
Order Actiniaria	Anemones	All taxa
Order Zoantharia	Hexacorals	All taxa
Class Hydrozoa	Hydrozoans	All taxa within the orders Anthoathecata and Leptothecata, excluding Stylasteridae
Order Anthoathecatae		
Family Stylasteridae	Hydrocorals	All taxa
Phylum Bryozoa	Bryozoans	All taxa within the orders Cheilostomatida and Ctenostomatida
Habitat indicators		
Phylum Echinodermata		
Class Asteroidea		
Order Brisingida	Armless stars	All taxa
Class Crinoidea	Sea lilies	All taxa

ANNEX XVII

Weight threshold for triggering the VME encounter protocol

in any one tow for a single VME Indicator Taxon

Taxonomic Level	Common Name	Weight Threshold (kg)
Vulnerable taxa		
Phylum Porifera	Sponges	25
Phylum Cnidaria		
Class Anthozoa		
Order Scleractinia	Stony corals	60
Order Antipatharia	Black Corals	5
Informal group Gorgonian Alcyonacea	Seafan octocorals	15
Order Actiniaria	Anemones	35
Order Zoantharia	Hexacorals	10

ANNEX XVIII

Weight threshold for triggering the VME encounter protocol

in any one tow for three or more different VME Indicator Taxa

Taxonomic Level	Common Name	Weight Threshold (kg)
Vulnerable taxa		
Phylum Porifera	Sponges	5
Phylum Cnidaria		
Class Anthozoa		
Order Scleractinia	Stony corals	5
Order Antipatharia	Black corals	1
Order Alcyonacea	True soft corals	1
Informal group Gorgonian Alcyonacea	Seafan octocorals	1
Order Pennatulacea	Sea pens	1
Order Actiniaria	Anemones	5
Order Zoantharia	Hexacorals	1
Class Hydrozoa	Hydrozoans	1
Order Anthoathecatae		
Family Stylasteridae	Hydrocorals	1
Phylum Bryozoa	Bryozoans	1
Phylum Echinodermata		
Class Asteroidea		
Order Brisingida	Armless stars	1
Class Crinoidea	Sea lilies	1

ANNEX XIX

Observer coverage levels in bottom fishing

Gear type	Minimum level of observer coverage
Vessels using bottom trawl and mid-water trawl gear	100 % observer coverage
Bottom line gear	At least 10 % observer coverage for the fishing year[1]

[1] Expressed as the percentage of the total number of observed hooks.

ANNEX XX

SPRFMO inspection flag and pennant

Figure 1: SPRFMO inspection flag

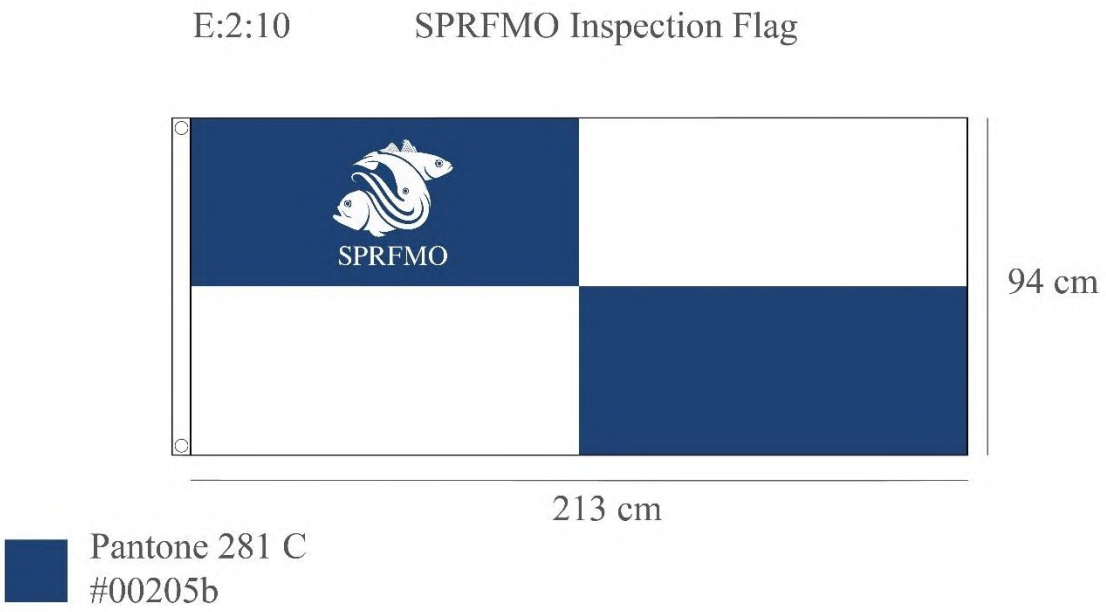
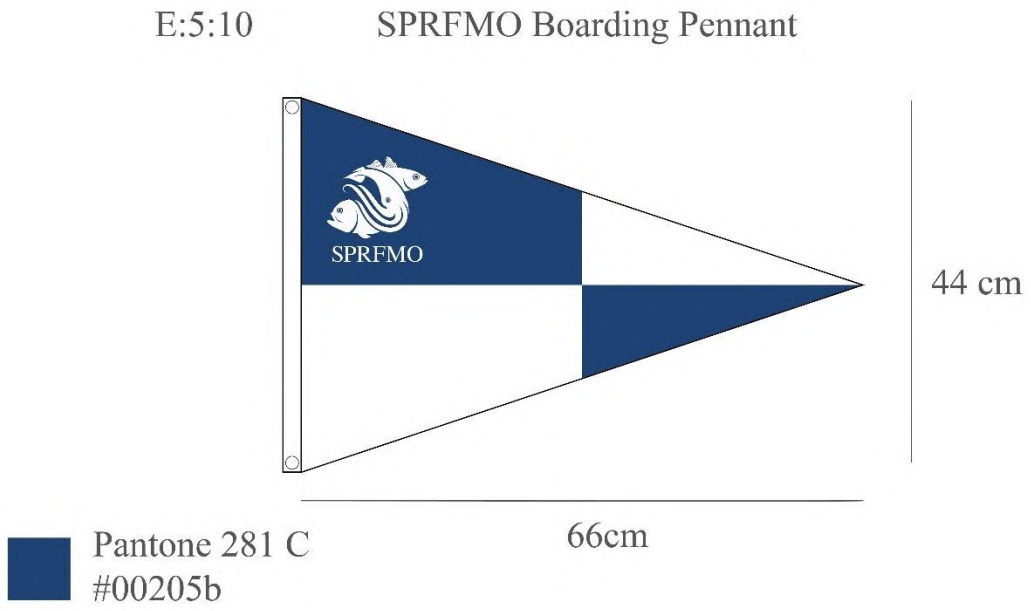


Figure 2: SPRFMO boarding pennant



’.

ANNEX II

The following annexes are added to Regulation (EU) 2021/56:

‘ANNEX II

Satellite buoy deactivation report

Data fields of the first communication of the buoy after being activated to be used in each report:

(i) date [YYYY/MM/DD];

(ii) time [hh:mm];

(iii) buoy identifier code;

(iv) latitude [expressed in degrees and minutes in decimal values];

(v) longitude [expressed in degrees and minutes in decimal values];

(vi) speed [knots]; and

(vii) reason of deactivation: signal loss, stolen FAD, beaching, temporarily during closure periods, transferred ownership, FAD outside the areas specified in paragraph 2a, point (e), of Article 6 of Regulation (EU) 2021/56.

ANNEX III

Satellite buoy remote reactivation report

Data fields of the last communication of the buoy before being deactivated to be used in each report:

(i) date [YYYY/MM/DD];

(ii) time [hh:mm];

(iii) buoy identifier code;

(iv) latitude [expressed in degrees and minutes in decimal values];

(v) longitude [expressed in degrees and minutes in decimal values];

(vi) speed [knots]; and

(vii) reason of remote reactivation: recovery of a signal loss, after a temporary deactivation during the closure period, or transfer of ownership while FAD is at sea, other (specify).

ANNEX IV

Principles for non-entangling and biodegradable designs
of Drifting Fish Aggregating Devices (DFADs)

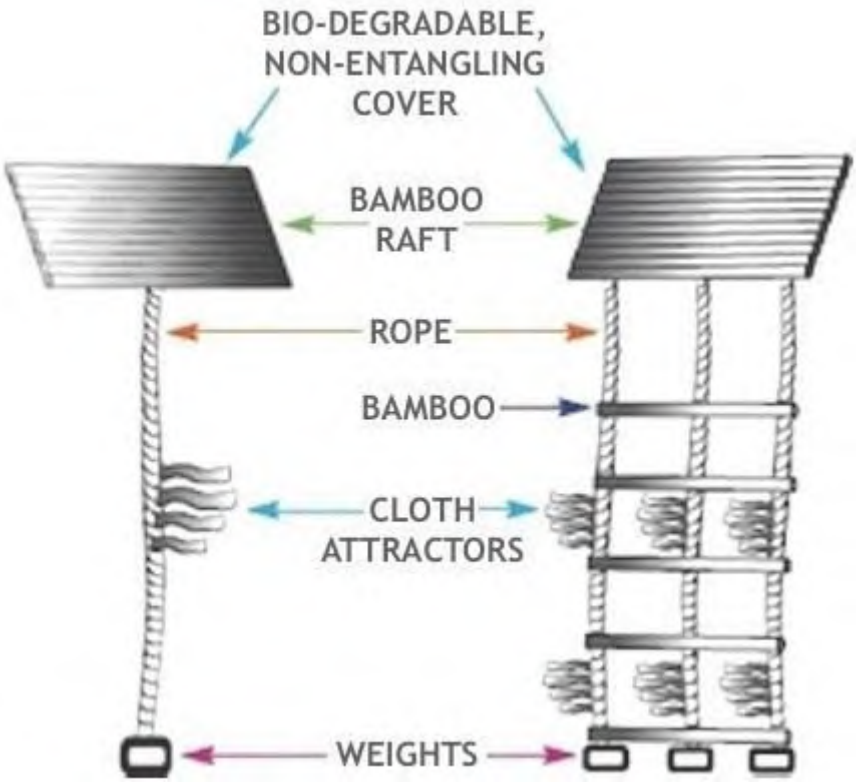


Figure: Example of a non-entangling, biodegradable FAD

Legend:

- Biodegradable non-entangling cover: if it is covered with mesh net, it must have a stretched mesh size less than 7 cm and the mesh net must be well wrapped around the whole raft so that there is no loose netting hanging below the FAD when it is deployed
- Bamboo raft
- Rope: if mesh net is used, it must be tied as tightly as practicable in the form of sausages, or have a stretched mesh size less than 7 cm in a panel
- Bamboo
- Cloth attractors
- Weights

DFADS shall be constructed with no netting or entangling material in either the surface structure (raft) or the submerged structure.

For the purposes of this Regulation, the following DFAD categories are identified, on the basis of their degree of biodegradability (from non-biodegradable to 100 % biodegradable), with the understanding that the respective definitions do not apply to the electronic buoys that are attached to FADs in order to track them:

– Category I: the DFAD is made of fully biodegradable materials;

– Category II: the DFAD is made of fully biodegradable materials except for plastic-based flotation components (for example plastic buoys, foam, purse-seine corks);

– Category III: the subsurface part of the DFAD is made of fully biodegradable materials, whereas the surface part and any flotation components contain non-biodegradable materials (for example synthetic raffia, metallic frame, plastic floats, nylon ropes);

– Category IV: the subsurface part of the FAD contains non-biodegradable materials, whereas the surface part is made of fully biodegradable materials, except for, possibly, flotation components;

– Category V: the surface and subsurface parts of the FAD contain non-biodegradable materials.

ANNEX V

Definitions

(1) EM (electronic monitoring) means the use of EM equipment to record a vessel's activities.

(2) EMS (Electronic Monitoring System) means a system for implementing EM aboard vessels, and for collecting, processing, and analysing the resulting EM records.

(3) EM standards means the agreed standards, rules, and procedures governing the establishment and operation of an EMS, applicable to all components of the system as they may be used for specified vessels in a specific area and/or type of fishing activity.

(4) EMS Programme means a national or regional programme established for implementing an EMS.

(5) EM equipment means a network of electronic cameras, sensors and/or data storage devices installed on vessels and used to record these vessels' activities.

(6) EM records means images and other data recorded by the EM equipment.

(7) EM data means data resulting from analysis of EM records.

(8) EM analysis means the analysis of EM records to produce EM data.

(9) EM analyst means a person qualified to analyse EM records and produce EM data.

(10) EM review centre means a facility where EM records are analysed to produce EM data.

(11) EM coverage means the proportion of the vessels or fishing activities that is effectively covered by the EMS.

(12) EM review rate means the proportion of EM records that are analysed to produce EM data.

(13) EM service provider means a provider of EM equipment and/or technical and logistical services.

ANNEX VI

Minimum technical requirements, performance standards,
camera view of fishing activities under coverage by EMS,
and recommended configurations for EM equipment for each vessel type

(1) EM equipment

– The EM equipment shall be protected against onboard power outage, with a backup power system capable to keep operating until the vessel power is restored (for example 30 minutes). It shall also be capable of saving EM records collected when the vessel power is down for longer periods than the backup system was designed to withstand.

– Digital video is typically preferred for capturing information during the different phases of vessel activity, but still images can also serve as a viable option, especially where storage capacity is limited. An optimal configuration can involve a camera setting, using video for specific areas, cameras, or moments, while utilising still photos for others.

– EM records shall include, at a minimum, location, date, and time stamps, and to the extent possible, vessel ID, and be capable of being integrated with other data collection and monitoring tools (for example sensors).

– The onboard interface shall include an on-board screen, or equivalent interface, to allow verification by the master or crew as regards the correct functioning of the EM equipment.

– The EM provider shall ensure that radio frequency interference from EM equipment with other on-board vessel communication, navigation, safety, geolocation devices or fishing equipment is prevented.

– EM Equipment shall automatically and autonomously collect EM records to generate the required EM data and shall be tamper-evident/resistant and shall record automatic alerts which shall be provided to the appropriate EM Coordinator and EM provider in near-real-time in cases of malfunctions, manual activation/shutdown, manual data input, external data manipulation, or attempts to tamper with the equipment or EM records. If those recorded automatic alerts cannot be sent in near-real-time to the EM programme coordinator and EM provider, they shall be provided as soon as possible, along with other EM records at the end of the corresponding trip. It shall also be possible for data recording to be controlled manually, but only in the event that the EM equipment fails to start or stop automatically, and any manual activation shall trigger an automatic alert. Manual shutdown shall not be permitted.

(2) Cameras

– Cameras shall be sufficient in number and quality to meet the data requirements of the EMS, with high-resolution images that allow the identification of species, specific fishing activities and the vessel's surroundings.

– Onboard EM hardware components shall be sufficiently dust and water resistant and durable enough to operate reliably under the range of conditions expected in their location on vessels.

– Cameras shall be capable of recording video and/or still images, as appropriate to the purpose of the individual camera. For cameras used for species identification, video shall have a resolution no less than 720p, with a minimum frame rate of 5-10 FPS. Still images shall have a minimum capture interval of no more than 1 second, with a resolution of no less than 2MP.

– Placement of cameras shall provide clear and unobstructed views of the areas that are being covered.

– On purse-seine vessels, the cameras shall cover, at a minimum, the working deck (both port and starboard sides), the net sack and the brailer, the foredeck or amidships, and (if applicable) the well deck and conveyor belt. Descriptions and image for an example of camera locations in class 2-6 purse-seiners is provided in Table 1 and Figure 1.

– On longliners, the cameras shall provide, at a minimum, a view of all hooked fauna, both those brought aboard the vessel and, when possible, those discarded or released without first being brought aboard the vessel. Descriptions and an image for an example of camera locations on longliners that would provide these views are provided in Table 2 and Figure 2.

– Cameras shall be able to record activities in low and very bright natural light conditions (low and high contrasts). Nocturnal fishing activities involving species captured shall be illuminated with sufficient lighting (for example longlines). In these cases, the EM service provider shall test the image quality to ensure there is not excessive glare.

(3) Sensors

– EM equipment may also include sensors for recording non-visual data (for example vessel movement, hydraulic pressure, environmental information), and also possibly mechanisms for activating/disactivating cameras so as to focus visual data collection during activities of interest.

– A GPS sensor or equivalent shall be capable of automatically recording the position and, unless the EM equipment uses cameras that will record continuously, the speed and course of the vessel.

(4) Data storage

– EM equipment shall include sufficient capacity to store all required EM records, including GPS (or equivalent) records, position, date, time, vessel name and sensor information where applicable at a minimum, for the duration of a fishing trip.

– Vessels shall have onboard enough blank data storage devices (preferably solid-state drives) in case these must be replaced at sea. A specially trained crew member may need to replace the devices during a fishing trip if the data storage capacity is exhausted, always in coordination with the EM service provider.

– EM equipment shall include separate duplicate backup devices, to ensure that data are not lost if one device fails.

(5) Compatibility

– EM data shall be submitted to the IATTC in a format compatible with IATTC databases and IT resources such as data structure, units, species identification/other fishing activity codes, etc.).

– Recorded imagery shall be recorded in a widely used and accessible video or image file format, such as MP4 or JPEG.

– All EM Records generated by the EM system shall be compatible with EM analysis software being used by the EM Review Centre where EM Records shall be sent to generate EM data.

(6) EM equipment maintenance

– At sea, all maintenance, repairs and replacement activities of EM equipment shall be conducted by a designated trained vessel crew member(s), only in coordination and when remotely instructed to do so by the EM service provider.

– On land, all maintenance, repairs and replacement activities of EM equipment shall be conducted a technician in coordination with the EM service provider.

– Each vessel shall have a designated crew member responsible for routine camera lenses cleansing, to ensure the clarity of EM records, according to a protocol to be developed by IATTC scientific staff. Appropriate cleaning materials must be used to avoid lens damage, and shall always be available onboard.

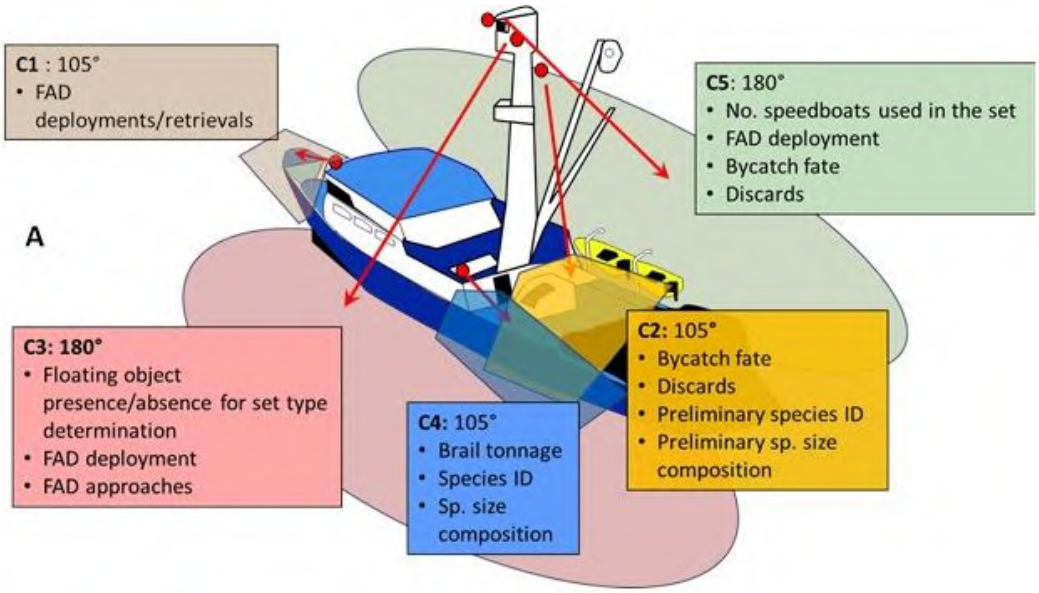
TABLE 1. An example for the location of cameras in class 2-6 purse-seine vessels.

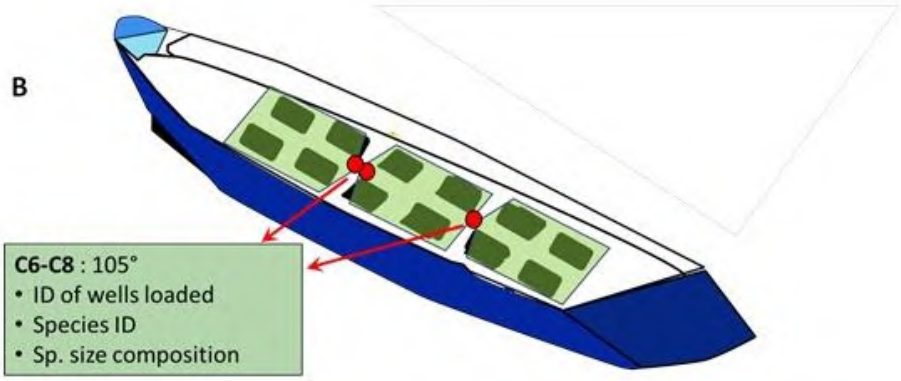
Class-6 vessels with 6 or more rows of wells
– Two panoramic cameras (e.g. 180°) on crow's nest, covering port side (floating object presence/absence for set type determination and FAD interactions with, set times) and starboard side (No. of speedboats used in the set, FAD deployment, large-sized bycatch identification, discards, set times). – One camera (e.g. 105°) on back of crow's nest, covering the main deck and sack area (catch and bycatch species identification, discards). – One camera (e.g. 105°) on bridge roof, covering the bow (FAD deployments, retrievals). – One camera (e.g. 105°) on boom controls roof, covering the brailing area (total catch estimation, bycatch identification, discards). – Three cameras (e.g. 105°), each covering equal numbers of well rows (catch and bycatch identification and estimation by species, discards).
Class-5 vessels with less than 6 rows of wells
– Two panoramic cameras (e.g. 180°) on crow's nest, covering starboard and port sides. – One camera (e.g. 105°) on back of crow's nest, covering the main deck and sack area (FAD deployments, and retrievals). – One camera (e.g. 105°) on boom controls roof, covering the brailing area. – Two cameras (e.g. 105°) covering equal numbers of well rows.
Class-2 vessels with no wet deck access
– One panoramic camera (e.g. 180°) on crow's nest, covering the port side. – One camera (e.g. 105°) on back of crow's nest, covering the main deck. – One camera (e.g. 105°) on bridge roof, covering the bow. – One camera (e.g. 105°) on boom controls roof, covering the brailing area.

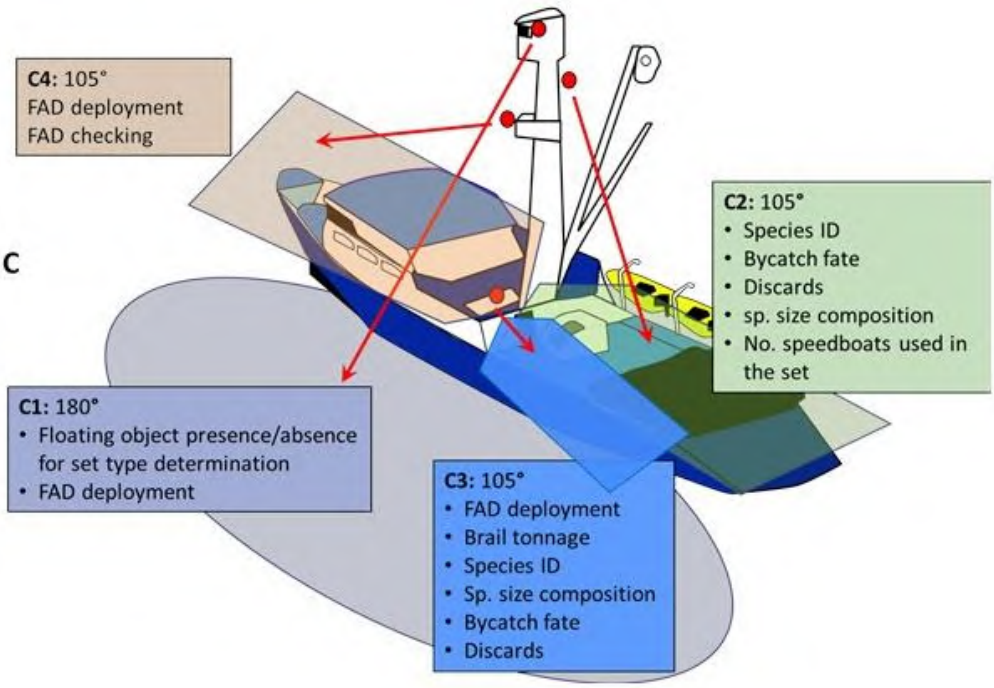
TABLE 2. A first example for location of cameras in longliners.

The following are examples of camera installation design, which are based on information gathered from EM service providers and international initiatives (e.g. Carnes et al. 2019):

Small-sized longline vessels (< 20 m LOA)
– One camera (e.g. 105°) on the work deck to identify species. – One camera (e.g. 105°) mounted outside the side rail to cover the fish door, where the catch is brought aboard.
Medium (20-24 m LOA) and large-sized longline vessels (> 24 m LOA)
– One camera (e.g. 105°) at the stern to record the number of floats, hooks and bait used on the setting. – One camera (e.g. 105°) located amidships, covering the total catch and discards by species, size and fate. – One camera (e.g. 105°) located at the bow, covering the retained catch, by species, size and fate, during the hauling. (Optional, if necessary to achieve the required views) – One camera (e.g. 105°) mounted on boom, outside the rail where the line is hauled, to record catch evasion, line cutting, etc. (optional for 20-24 m)


A
C1 : 105°
• FAD deployments/retrievals
C5: 180°
• No. speedboats used in the set
• FAD deployment
• Bycatch fate
• Discards
C3: 180°
• Floating object presence/absence for set type determination
• FAD deployment
• FAD approaches
C4: 105°
• Brail tonnage
• Species ID
• Sp. size composition
C2: 105°
• Bycatch fate
• Discards
• Preliminary species ID
• Preliminary sp. size composition


B
C6-C8 : 105°
• ID of wells loaded
• Species ID
• Sp. size composition


C
C4: 105°
FAD deployment
FAD checking
C2: 105°
• Species ID
• Bycatch fate
• Discards
• sp. size composition
• No. speedboats used in the set
C1: 180°
• Floating object presence/absence for set type determination
• FAD deployment
C3: 105°
• FAD deployment
• Brail tonnage
• Species ID
• Sp. size composition
• Bycatch fate
• Discards

Legend:

A:

– C1: 105° FAD deployments and retrievals.

– C2: 105° By-catch rate, Discards, Preliminary species identification, Preliminary species size composition.

– C3: 180° Floating object presence/absence for set type determination, FAD deployment, FAD approaches.

– C4: 105° Brail tonnage, Species identification, Species size composition.

– C5: 180° Number of speedboats used in the set, FAD deployment, by-catch fate, discards.

B:

– C6-C8: 105° Identification of wells loaded, Species identification, Species size composition.

– C4: 105° FAD deployment, FAD checking.

C:

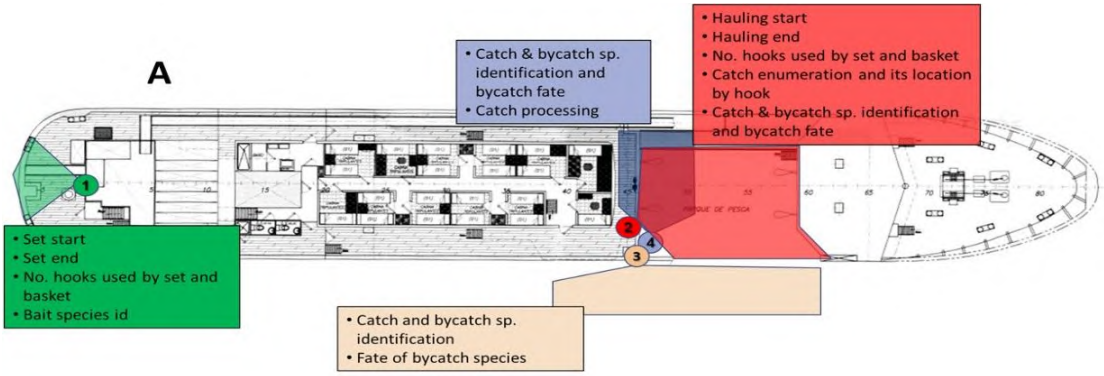
– C1: 180° Floating object presence/absence for set type determination, FAD deployment.

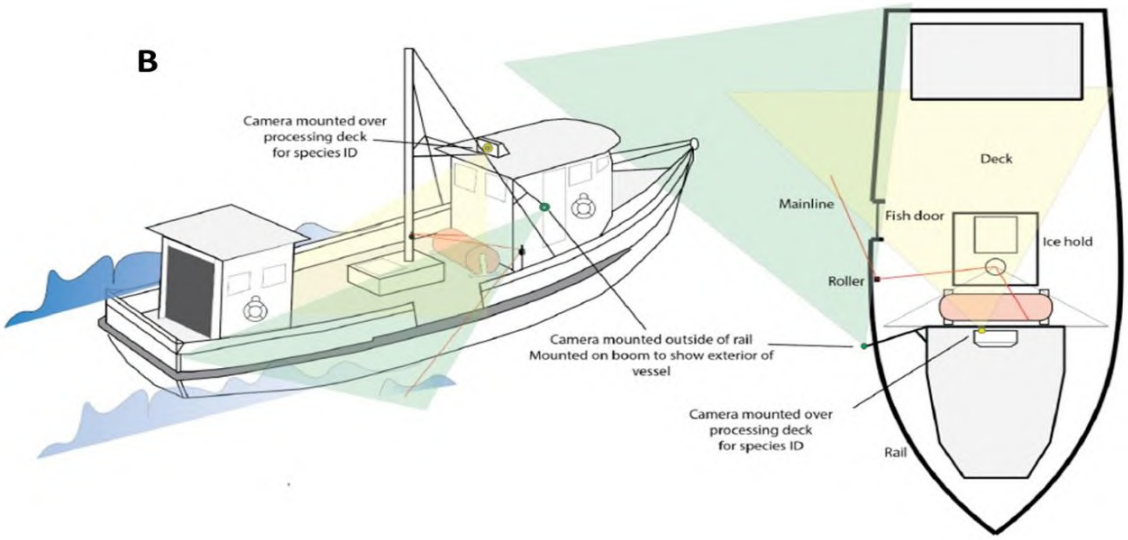
– C2: 105° Species identification, By-catch fate, Discards, Species size composition, Number of speedboats used in the sea.

– C3: 105° FAD deployment, Brail tonnage, Species identification, Species size composition, By-catch fate, Discards.

– C4: 105° FAD deployment, FAD checking.

Figure 1. Cameras' configuration and fishing activities to record on the main deck (A) and the well deck (B) of the Class-6 tuna purse-seine vessels, and on the Class-2 vessel (C).


A
• Catch & bycatch sp. identification and bycatch fate
• Catch processing
• Hauling start
• Hauling end
• No. hooks used by set and basket
• Catch enumeration and its location by hook
• Catch & bycatch sp. identification and bycatch fate
• Set start
• Set end
• No. hooks used by set and basket
• Bait species id
• Catch and bycatch sp. identification
• Fate of bycatch species


B
Camera mounted over processing deck for species ID
Camera mounted outside of rail Mounted on boom to show exterior of vessel
Camera mounted over processing deck for species ID
Deck
Mainline
Fish door
Ice hold
Roller
Rail

Legend:

A:

– 1: Set start, Set end, Number of hooks used by set and basket.

– 2: Hauling start, Hauling end, Number of hooks used by set and basket, Catch enumeration and its location by hook, Catch and by-catch species identification and by-catch fate.

– 3: Catch and by-catch species identification, fate of by-catch species.

– 4: Catch and by-catch species identification and by-catch fate, catch processing.

B:

– Camera mounted over processing deck for species ID

– Camera mounted outside of rail, mounted on boom to show exterior of vessel

– Mainline

– Roller

– Fish door

– Deck

– Ice hold

– Rail

Figure 2. Provisional cameras configuration and fishing activities to record on board a large longline vessel (A), and (B) on a small Hawaii longline vessel EM camera configuration. Bottom picture taken from Carnes et al. (2019).

ANNEX VII

Minimum data requirements for vessel type

– Minimum data fields for purse-seine activities to be collected and submitted, presented in Table 1.

– Minimum data fields for longline activities to be collected and submitted, presented in Table 2.

Table 1. Data fields to be collected, at a minimum, for the purse-seine fishery.

TRIP INFORMATION	
Depart port	Port name and country, date/time, position (latitude and longitude, in decimal degrees).
Arrival port	Port name and country, date/time, position (latitude and longitude, in decimal degrees).
VESSEL ACTIVITY	
Position and speed	Every 2 seconds (based on some EM equipment capability), but no less than every 60 minutes.
SET INFORMATION	
	Set type.
Set start	Date/time, position (latitude and longitude, in decimal degrees).
Rings up	Date/time.
Set end	Date/time, position (latitude and longitude, in decimal degrees).
Wind speed	Recorded in Beaufort scale.
Malfunctions	Date/time, description of any major malfunction that stops or delays the setting manoeuvre.

CATCH AND DISCARD		
	Target species	**Non-target species**
Species Id.	Total catch and discards, as feasible as EM technology allows. Combined catch may be reported where species identification is not possible.	Sharks, lamnid sharks, whale shark, mobulid rays, billfishes, scombrids, carangids, triggerfishes, sea turtles, sea birds, and marine mammals, where each individual shall be identified to the lowest taxonomic resolution possible (i.e., species), as feasible as EM technology allows. In cases where species identification is not possible, the animal may be identified to a broader taxonomic resolution (e.g. genus, family).
Size	Weight categories shall be used whenever possible (e.g. small size 2,5 kg – 15 kg).	Wherever possible, individuals shall be measured to the nearest cm as follows: sharks in total length, billfishes in post-orbital fork length, fishes in fork length, rays in disc width, turtles in curved carapace length. In cases where individual measurement is not possible, the animal may be classified by size category (i.e., small, medium, large) following IATTC observer practices.
Condition		When possible, the estimated condition of the individual when caught, brought on deck and released.
Tag		When possible, the tag recovery information recorded.
Fate	Catch retained and discarded, by species, in metric tonnes.	When possible, the fate of the individual brought on deck (e.g. retained, discarded, etc.)
FLOATING OBJECTS/FADS		
Deployments	Date/time, position (latitude and longitude, in decimal degrees).	
Retrievals	Date/time, position (latitude and longitude, in decimal degrees).	
Visits	When possible – Date/time, position (latitude and longitude, in decimal degrees)	
Buoy ID	When possible – alphanumeric code of the satellite buoy attached	

Table 2. Data fields to be collected, at a minimum, for the longline fishery.

TRIP INFORMATION	
Depart port	Port name and country, date/time, position (latitude and longitude, in decimal degrees).
Arrival port	Port name and country, date/time, position (latitude and longitude, in decimal degrees).
VESSEL ACTIVITY	
Position and speed	Date/time, position (latitude and longitude, in decimal degrees).
Set end	Date/time, position (latitude and longitude, in decimal degrees).
Hauling start	Date/time, position (latitude and longitude, in decimal degrees).
Hauling end	Date/time, position (latitude and longitude, in decimal degrees).
Haul direction	Start to end; end to start
Blue-dyed bait used	Yes – No, as feasible as EM technology allows.
Baskets or floats	Total number used in the set.
Hooks	Total number used in the set.
Wire traces on any branch lines	Yes – No, as feasible as EM technology allows.
Shark lines	Number of branch lines running directly off the longline floats or drop lines, as feasible as EM technology allows.

TRIP INFORMATION	
CATCH AND DISCARD OF TARGET AND NON-TARGET SPECIES	
Species id.	The species identification of each individual caught, where each individual shall be identified to the lowest taxonomic resolution possible (i.e., species), as feasible as EM technology allows.
Size	Size of each individual caught, using the recommended measurement approach and the appropriate measurement code (standard, furcal, post-orbital, width of the disc, etc.) for the species, as feasible as EM technology allows.
Condition	The estimated condition of the individual when caught, brought on deck and released, where possible.
Fate	Fate of the individual brought on deck (e.g. retained, discarded, etc.)
Tag	Tag recovery information recorded, as feasible as EM technology allows.
Catch interaction	The type of catch interaction (e.g. entangled, hooked internally, hooked externally, interaction with vessel only.)

ANNEX VIII

Contents of the EM Vessel Monitoring Plan (VMP)

The VMP shall meet the following conditions:

1. The VMP shall be developed for each vessel or group of vessels on which EM equipment is to be installed and shall be delivered to the flag Member State competent authorities.

2. The VMP shall be developed in collaboration with the EM service provider, vessel owner and relevant flag Member State fishing authorities.

3. A survey of each vessel or example vessel for a group of vessels intended for EM equipment installation shall be conducted by either the EM provider or flag Member State fishing authorities. During this survey, the following aspects shall be considered in the development of the VMP, aimed at ensuring that the system meets the minimum data collection requirements outlined in Annex VII:

   (a) camera placement and settings;

   (b) number of cameras to be installed to ensure optimisation of the view of the catch-handling area;

   (c) key areas to be surveyed are catch handling areas for species identification and storage of the individuals and areas of discards or release.

4. The minimum information to be contained in a VMP shall include:

(a) contact information: current contact information for the vessel owner, vessel operator and EM service provider as long as the contract lasts;

(b) general vessel information: basic information about the vessel and its fishing activities and operations (such as vessel name, registration number, target fishery, fishing areas, fishing gear, length overall);

(c) fishing gear type and configuration;

(d) vessel layout: equipment of the vessel with detailed information, plan of the vessel disposition and different areas (such as deck, processing, storage -including number of wells);

(e) EM equipment set up: description of the settings of the EM equipment, such as time running, number of cameras, settings of the cameras (frame rate and resolution), and areas covered, time recording for each of the cameras, number of sensors, where applicable, software used, control box disposition, etc.;

(f) catch handling procedures: description of the crew and their operations;

(g) an example of a view from each required camera view.

5. Any physical changes to the vessel, modifications in vessel categorisation (fleet segmentation), or adjustments to the catch handling deck, including those resulting in the vessel no longer belonging to its original group, shall be reported to the flag Member State authorities. Subsequently, the VMP shall be updated accordingly before the commencement of the next fishing trip.

6. The VMP shall be signed off by the vessel owner and approved by the flag Member State competent authority or its designated institutions.

7. The EM equipment shall not compromise vessel stability, posing risks to vessel operations, crew safety, or the environment. Additionally, it shall not hinder the vessel's safe navigation.

EM Vessel Monitoring Plan template example

EM Vessel Monitoring Plan

Part A

To be provided by the vessel owner to the competent authority of flag Member State or its designated institutions

1. Information provided by the owner of the vessel

External registration:		Main fishery (or fisheries):	
Vessel name:		Gear type(s):	
IATTC vessel register No.:		Crew size:	
IRCS:		May carry an observer:	
Port base:		Owner(s') representative:	
Vessel length (m):		Phone No.:	
Vessel type:		Email:	
Net length (fathoms):		Mainline length (fathoms):	
Net depth (strips):		Hook type:	
Brail capacity (mt):		Branch line material:	

Description of the crew fish handling and any other useful details

(1) If available, copy or image of the vessel general arrangement plan

(2) General layout and handling (not necessarily to scale)

(3) General remarks

Part B

To be provided and validated by flag Member State competent authority

(4) Vessel image

(5) EM equipment configuration

(6) System Operation – General Description

Sensor recording, where applicable:	Description of the settings:
Video recording:	Description of the settings:

(7) System Components Location

Control box:	User Interface:
Image of location of the control box	
GPS or equivalent:	GPS details:
Image of location of the GPS or equivalent	
Drum Rotation Sensor:	Drum Rotation Sensor details:
Image of location of drum sensor	

Hydraulic Pressure Sensor (HPS):	HPS details:
Image of location of the HPS	
Sensor XX:	XX Sensor details:
Image of location of the XX Sensor	
Sensor XX:	XX Sensor details:
Image of location of the XX Sensor	

Sensor XX:	XX Sensor details:
Image of location of the XX Sensor	
Sensor XX:	XX Sensor details:
Image of location of the XX Sensor	

Camera 1 – Deck Camera	
Image of Location of Camera 1	View and Objectives:
Image of Location of deck camera	Camera settings:
Camera 2 – Retain/General View Camera	
Image of Location of Camera 2	View and Objectives:
Image Retain/General View Camera	Camera settings:
Camera 3 – Sorting Belt Camera	
Image of Location of Camera 3	View and Objectives:
Image Sorting Belt Camera	Camera settings:
Camera 4 – Discard Camera	
Image of Location of Camera 4	View and Objectives:
Image Discard Camera	Camera settings:

Camera XX – XX Camera	
Image of Location of Camera XX	View and Objectives:
Image of XX Camera	Camera settings:
Camera XX – XX Camera	
Image of Location of Camera XX	View and Objectives:
Image of XX Camera	Camera settings:
Camera XX – XX Camera	
Image of Location of Camera XX	View and Objectives:
Image of XX Camera	Camera settings:
Camera XX – XX Camera	
Image of Location of Camera XX	View and Objectives:
Image of XX Camera	Camera settings:

Control Box Setting Summary:	Camera Setting summary:
Main configuration screen	
Sorting Area Measurement Details:	

Part C

(To be completed by the EM service provider)

(8) EM User Guide

(9) Description of how to retrieve memory devices

(10) Description of how to power up the system

(11) Description of how to do a function test

(12) Vessel-specific handling protocols

(13) Description of any special protocols that may apply to the vessel referred in the VMP

(14) Description and diagrams of control points with specific procedures carried out. For each area description, there must be a protocol on how to ensure the catch remains in camera view

Part D

To be completed by the EM service provider

List of EMS service provider's contact information:

Name and Last Name	Phone	Email	Office address

Part E

To be completed by the vessel owner and the EM service provider

This part shall certify that the vessel owner/operators have been trained in and understand the function and operation on the EMS installed on the vessel, and that the operator agrees to comply with the VMP.

Vessel owner/operator	EM service provider
Full name:	Full name:
Signature:	Signature:
Date and time:	Date and time:

ANNEX IX

Logistical and data analysis and reporting standards

Data transfer

– The vessel shall allow for the recovery and secure transmission of EM records at the end of each trip.

– A detailed protocol on how to retrieve the data from the vessel to the authorities or to the EM review centre shall be established and agreed on in the VMP by both the vessel owners and the vessel authority.

– When EMS records are transmitted (via Wi-Fi, mobile data network or satellite, or hard disk delivery), the transmission of the data shall be done at the end of the fishing trip where possible. If not possible, the data shall be securely stored and transmitted without delay and at the earliest opportunity.

– Irrespective of the data transfer method used for EM records, the transmission shall ensure the information is properly encrypted. Additionally, an encrypted storage device containing the same EM records information shall remain on board as backup. The deletion of records from the vessel's backup devices shall occur only once the EM records have been converted to EM data at the EM review centre.

Data review

– EM data shall be generated by the programme that monitored that trip. Provided that standard protocols and procedures are followed, Member State authorities may choose whether to contract the work out through a commercial EM review service provider, authorised contractor, or do it themselves.

– EM equipment shall include separate backup devices, to ensure that data are not lost if one device fails.

Data analysis and reporting standards

Training

– Member States shall design and organise training courses for EM analysts, with input from IATTC staff, EM service providers and other experts, where necessary.

– EM analyses shall be conducted only by qualified EM analysts, ideally possessing some experience in fishing activities, with skills on how to use the dedicated analysis software and observe and record accurately data to be collected under the programme. EM analysts shall not be employees of a fishing vessel company involved in the observed fishery or have other direct conflicts of interest.

Automation

– When feasible, make EM data generation automatic and user-friendly to expedite EM analysis and directly include information in EM data or reports.

– EM records subject to EM analysis shall contain at least the vessel name and vessel ID and trip ID, camera number, geolocation data (date, time (UTC), latitude and longitude), sensor data where applicable, camera recording status and EM equipment system status, where available, and images.

Data quality

– The EM analysis shall involve a dedicated software, which shall permit the analysis of all the stored data, images, and sensor data where applicable, in a synchronised way. Member States shall ensure that data analysis procedures ensure traceability and effective analysis of data, and include routines to flag potential errors, as well as digital measuring tools.

– The EM analysis software shall allow reporting the mandatory minimum data fields requirements established in Tables 1 and 2 of Annex VII. It may also allow reporting of the voluntary data fields.

Conversion factors

– Standardised species-specific length-weight and weight-number conversion factors, based on peer-reviewed research results and/or empirical data, shall be developed by the IATTC Secretariat, endorsed by the SAC and adopted by the Commission, and updated as necessary.

Format

– Standard formats applicable to reports submitted by human observers shall be used for generating EM data fields (e.g. dates as DDMMYY, latitude and longitude in decimal units, speeds in knots, weights in kg, lengths in centimetres) and creating resulting EM data files (e.g. csv, accdb, xlsx).

Reporting procedure

– EM data shall be submitted via a dedicated cloud-based portal which may be developed by the IATTC Secretariat, or other appropriate means. The portal shall be as user-friendly and automated as possible, and shall include quality control procedures (e.g. format checking, error flagging), as well as automatic reminders for the timely submission of EM data.'.

ANNEX III

The Annexes to Regulation (EU) 2022/2343 are amended as follows:

(1) Annex 2 is replaced by the following:

‘ANNEX 2

A – Guidelines for preparation
of drifting fish aggregating device (DFAD) management plans

The DFAD management plan (DFAD–MP) to be submitted to the Commission by Member States with fleets fishing in the IOTC area of competence, associated to DFADs, should include:

1. An objective

2. Scope

Description of its application with respect to:

– vessel-types and support and tender vessels

– DFAD numbers and DFADs beacon numbers to be deployed

– reporting procedures for DFAD deployment

– incidental bycatch reduction and utilisation policy

– consideration of interaction with other gear types

– plans for monitoring and retrieval of lost DFADs

– statement or policy on “DFAD ownership”

3. Institutional arrangements for management of the DFAD Management Plans:

– institutional responsibilities

– application processes for DFAD and /or DFAD beacons deployment approval

– obligations of vessel owners and masters in respect of DFAD and /or DFAD beacons deployment and use

– DFAD and/or DFADs beacons replacement policy

– reporting obligations

4. DFAD construction specifications and requirements:

– DFAD design characteristics (a description)

– DFAD markings and identifiers, including DFADs beacons

– lighting requirements

– radar reflectors

– visible distance

– radio buoys (requirement for serial numbers)

– satellite transceivers (requirement for serial numbers)

– sonars (make and technical specifications)

5. Applicable areas:

– Details of any closed areas or periods e.g. territorial waters, shipping lanes, proximity to artisanal fisheries, etc.

6. Applicable period for the DFAD–MP.

7. Means for monitoring and reviewing implementation of the DFAD–MP.

8. DFAD logbook template (data to be collected specified in Annex 3).

B – Guidelines for preparation
of anchored fish aggregating device (AFAD) management plans

AFAD Management Plans (AFAD-MP) to be submitted to the Commission by Member States with fleets fishing in the IOTC area of competence, associated to AFADs, shall include:

1. An objective

2. Scope:

   Description of its application with respect to:

   – Vessel types

   – AFAD numbers and/or AFAD beacon numbers to be deployed (per AFAD type)

   – reporting and/or recording procedures for AFAD deployments

   – plans for monitoring and retrieval of lost AFADs

   – statement or policy on “AFAD ownership”

3. institutional arrangements for management of the AFAD Management Plans:

   – institutional responsibilities

   – regulations applicable to the setting and use of AFADs

   – at-sea AFAD repairs, maintenance rules and replacement policy

– data collection system

– reporting obligations

4. AFAD construction specifications and requirements:

– AFAD design characteristics (a description)

– AFAD markings and identifiers, including AFAD beacons, if any

– lighting requirements, if any

– radar reflectors, if any

– radio buoys, if any (requirement for serial numbers)

– satellite transceivers, if any (requirement for serial numbers)

– echo sounder, if any

5. Applicable areas:

– details of any closed areas e.g. shipping lanes, marine protected areas, reserves, etc.

6. Means for monitoring and reviewing implementation of the AFAD–MP.

7. Methodologies for recording and reporting data specified in Annex 3.';

(2) Annex 3 is replaced by the following:

‘ANNEX 3

Data collection for drifting fish aggregating devices (DFADs) and their instrumented buoys

(a) For each activity on a DFAD, floating object and/or instrumented buoy, whether followed by a set or not, each fishing, supply vessel shall report the following information:

Category	Element	Element data type	Mandatory	Notes
Vessel	**Vessel IOTC ID**	Vessel identifier	Y	
	Type	Dictionary entry	Y	Can be inferred
Date	**Year**	Integer	Y	
	Month	Integer	Y	
	Day	Integer	Y	
Location of the floating object and/or instrumented buoy at the time of the operation	**Longitude**	Decimal	Y	
	Latitude	Decimal	Y	
Location of the vessel, if different from the floating object or buoy	**Longitude**	Decimal	Y	
	Latitude	Decimal	Y	

Category	Element	Element data type	Mandatory	Notes
Floating object	**Identifier**	Identifier	Y (when present)	In case of DFAD visit this should be provided to the extent possible, namely without having to lift the DFAD out of the water
	Type	Dictionary entry	Y	As defined in point (c) of this Annex
	Biodegradability category (if the floating object is a DFAD)	Dictionary entry	Y	As defined in Annex 3b.
	Activity type	Dictionary entry	Y	As defined in point (d) of this Annex
Emerged part	Is plastic present?	Boolean	Y (if clearly visible)	
	Is metal present?	Boolean		
	Length	Decimal		In cm
	Width	Decimal		In cm
	Height	Decimal		In cm
	Is mesh present?	Boolean		
	Mesh size	Decimal		In mm

Category	Element	Element data type	Mandatory	Notes
Submerged part	Is plastic present?	Boolean	Y (if clearly visible)	
	Is metal present?	Boolean		
	Length	Decimal		In cm
	Width	Decimal		In cm
	Height	Decimal		In cm
	Is mesh present?	Boolean		
	Mesh size	Decimal		In mm
Buoy	Identifier	Identifier	Y (if buoy present)	
	Position known	Boolean		
	Activity type	Dictionary entry		As defined in point (e) of this Annex In the case of buoy deactivation, the cause for deactivation (DFAD is either retrieved from the sea, abandoned or lost) and position of the vessel.

(b) If the visit is followed by a set, the results of the set in terms of catch and bycatch, whether retained or discarded dead or alive shall be recorded according to the table below. Member States shall report these data aggregated per vessel at 1 latitude degree per 1 longitude degree (where applicable) to the Commission.

Category	Element	Element data type	Mandatory	Notes
Vessel	**Vessel IOTC ID**	Vessel identifier	Y	
	Type	Dictionary entry	Y	Can be inferred
Date	**Year**	Integer	Y	
	Month	Integer	Y	
Location	**1x1 grid**	CWP grid identifier	Y	
Floating object	**Type**	Dictionary entry	Y	As defined in point (c) of this Annex
	Activity type	Dictionary entry	Y	As defined in point (d) of this Annex
Effort	**Number of activities**	Integer	Y	
	Number of sets	Integer		Can be 0
	Data raised?	Boolean		
Catches number 1	**Species code**	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	Dictionary entry		Retained / Disc.
	Catches / discards	Decimal		Amount
	Unit	Dictionary entry		weight or number
…	**…**	…	…	…
Catches number N	**Species code**	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	Dictionary entry		Retained / Disc.
	Catches / discards	Decimal		Amount
	Unit	Dictionary entry		weight or number

(c) Classification of floating objects:

Code	English description
ANLOG	Natural log or floating debris of animal origin
DFAD	Drifting FAD
AFAD	Anchored FAD
FALOG	Artificial log or floating debris resulting from human activity (and relating to fishing activities)
HALOG	Artificial log or floating debris resulting from human activity (not relating to fishing activities)
VNLOG	Natural log of plant origin

(d) Classification of activities with floating object:

Code	Activity	Description
DE	Deployment	Deployment of a DFAD at sea
CO	Consolidation	Deployment of a DFAD on a floating object (e.g. to enhance floatability)
VF	Visit with fishing	Visit of a floating object resulting in a set
VI	Visit without fishing	Visit without fishing of a floating object
LO	Loss	Unvoluntary end of use of the floating object (end of transmission of the buoy)
AB	Abandonment	Deliberate end of use of the floating object due to a case of *force majeure* or the floating object is unreachable (buoy still present and able to transmit)
ST	Stranding	Abandonment is due to the floating object being stranded on shallow marine habitats and not drifting anymore
RE	Retrieval	Retrieval of the floating object

(e) Classification of activities with instrumented buoys:

Code	Activity	Description
DE	Deployment	Deployment (tagging) of a buoy on a floating object already drifting at sea without buoy or deployment of a DFAD equipped with a buoy
LO	Loss	Involuntary end of use of the buoy (lost or involuntary end of transmission of the buoy)
AB	Abandonment	Voluntary end of use of the buoy (buoy still able to transmit)
RE	Retrieval	Retrieval of the buoy on a floating object drifting at sea
TR	Transfer	Replacement of the buoy owned by another vessel by a buoy of the vessel

(f) Classification of outcome of DFADs deployed:

	DFAD is deployed + buoy activated					
	Buoy is active					
	Buoy is transmitting and can be located				Buoy is not transmitting and cannot be located	
	DFAD can be retrieved		DFAD cannot be retrieved		DFAD cannot be located, so not retrievable	
Reason to deactivate buoy	DFAD and buoy are taken from the sea	Buoy owner decides not to recover the DFAD	Not reachable (e.g. in the EEZ of another country)	Buoy is robbed but is transmitting	DFAD is robbed	Buoy is broken/technical issue/sunken buoy
Final status of the DFAD	Retrieved FAD	Discarded DFAD	Abandoned DFAD	Lost DFAD		

Data collection for anchored fish aggregating devices (AFADs)

(a) Any fishing activity around an AFAD including catch and bycatch, whether retained or discarded dead or alive.

(b) For each activity on an AFAD (including repair, intervention consolidation, etc.), whether followed or not by a set or other fishing activities, the

(i) Position (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)

(ii) Date (as DD/MM/YYYY, day/month/year)

(iii) AFAD identifier (namely AFAD national identification number, beacon ID or any information allowing to identify the owner).';

(3) the following annexes are inserted:

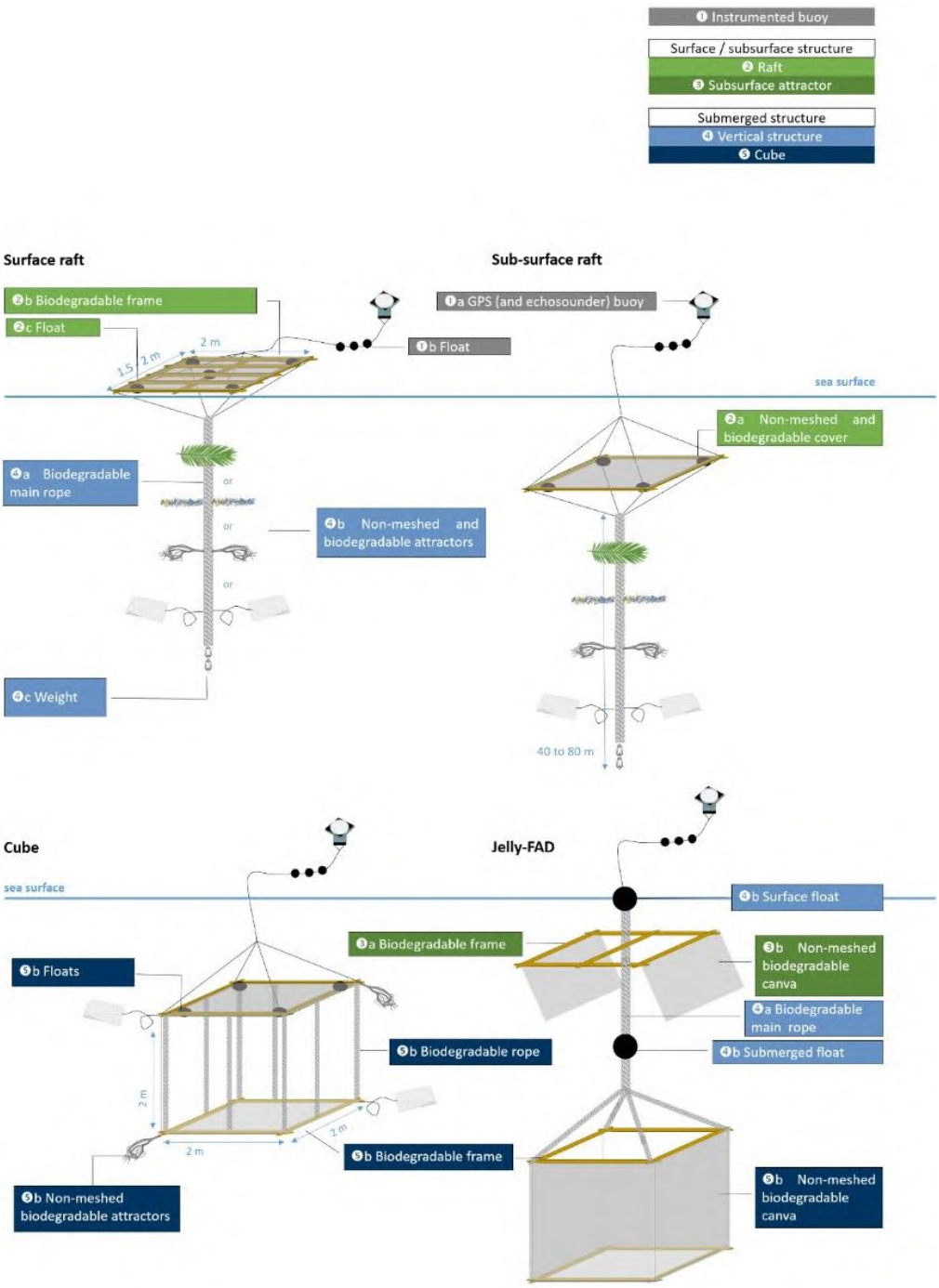
‘ANNEX 3a

Design and construction of drifting FADs

Examples for the design and deployment of DFADs

(a) The surface structure of the DFAD shall not be covered, or shall be covered only with non-meshed material. No shade cloth or other entangling materials such as netting shall be used in the construction of the raft. The sub-surface structure of DFADs shall not exceed a length of 50 metres.

(b) If a sub-surface component is used, it shall not be made from netting, but from non-meshed materials such as ropes or canvas sheets.


❶ Instrumented buoy
Surface / subsurface structure
❷ Raft
❸ Subsurface attractor
Submerged structure
❹ Vertical structure
❺ Cube
Surface raft
❷b Biodegradable frame
❷c Float
1,5
2 m
2 m
❶b Float
❹a Biodegradable main rope
or
or
or
❹b Non-meshed and biodegradable attractors
❹c Weight
Sub-surface raft
❶a GPS (and echosounder) buoy
sea surface
❷a Non-meshed and biodegradable cover
40 to 80 m
Cube
sea surface
❺b Floats
❺b Biodegradable rope
2 m
2 m
2 m
❺b Biodegradable frame
❺b Non-meshed biodegradable attractors
Jelly-FAD
❹b Surface float
❸a Biodegradable frame
❸b Non-meshed biodegradable canva
❹a Biodegradable main rope
❹b Submerged float
❺b Non-meshed biodegradable canva

Legend:

- Instrumented buoy
- Surface Raft
- Biodegradable frame
- Float
- Biodegradable main rope
- Non-meshed and biodegradable attractors
- Weight
- Sub-surface raft
- GPS and echosounder buoy
- Non-meshes and biodegradable cover
- Cube
- Floats
- Biodegradable rope
- Jelly-FAD

– Surface float

– Non-meshed biodegradable canvas

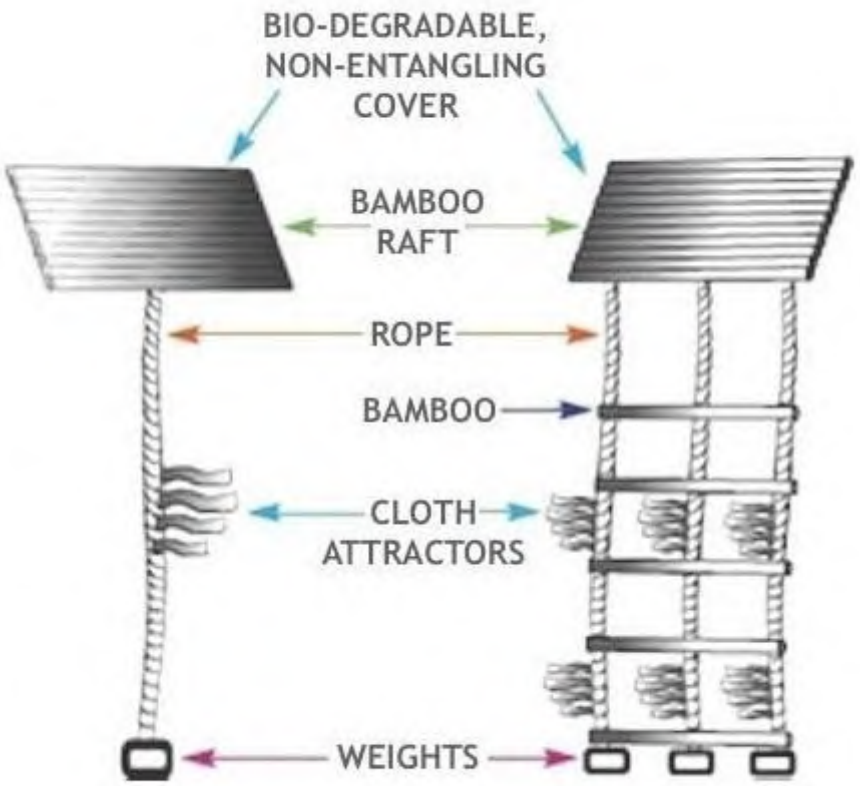
– Submerged float

– Subsurface attractor

– Submerged structure

– Vertical Structure

– Subsurface structure



Legend:

– Biodegradable non-entangling cover

– Bamboo raft

– Rope

– Bamboo

– Cloth Attractors

– Weights

ANNEX 3b

Categorisation of DFAD according to their level of biodegradability

For the purposes of this Regulation, the following DFAD categories are identified, on the basis of their degree of biodegradability (from non-biodegradable to 100 % biodegradable), with the understanding that the respective definitions do not apply to the electronic buoys that are attached to DFADs in order to track them:

– Category I: the DFAD is made of fully biodegradable materials;

– Category II: the DFAD is made of fully biodegradable materials except for flotation components (e.g. buoys, foam, purse-seine corks);

– Category III: the subsurface part of the DFAD is made of fully biodegradable materials, whereas the surface part and any flotation components contain non-biodegradable materials (e.g. synthetic raffia, metallic frame, plastic floats, nylon ropes);

– Category IV: the subsurface part of the DFAD contains non-biodegradable materials, whereas the surface part is made of fully biodegradable materials, except for, possibly, flotation components;

– Category V: the surface and subsurface parts of the DFAD contain non-biodegradable materials.';

(4) in Annex 4, the following line is added in the table:

‘Mitigation	Description	Specification
Hook-shielding devices	Hook-shielding devices, listed by the Parties to the Agreement on the Conservation of Albatross and Petrels as Best Practice Advice, that encase the point and barb of baited hooks to prevent seabird bycatch during setting shall be used.	Hook-shielding devices that comply with the following performance characteristics. Devices must: – encase the point and barb of the hook until it reaches a depth of at least 10 m or has been immersed for at least 10 minutes; – meet current minimum standards for branch line weighting, as follows: greater than a total of 45 g attached within 1 m of the hook or; greater than a total of 60 g attached within 3,5 m of the hook or; greater than a total of 98 g weight attached within 4 m of the hook; – be designed to be retained on the fishing gear rather than lost.’

(5) the following annex is added:

‘ANNEX 11

Electronic monitoring standards for IOTC fisheries

PART 1: IOTC electronic monitoring programme standards

General

National/Regional data collection Programs using Electronic Monitoring Systems (EMS) that are certified by the flag Member State competent authority as meeting the minimum standards of the Electronic Monitoring Program (EMP) as adopted by IOTC may be included within IOTC Regional Electronic Monitoring Program (REMP).

Objectives

The objective of the IOTC REMP is to collect, via EMS, verified catch data and other scientific data relating to the fisheries for tuna and tuna-like species in the IOTC area of competence and achieve the EM observer/review coverage to meet the requirements of IOTC Resolution on Regional Observer Scheme (ROS).

Purpose:

The purpose of IOTC REMP is to allow Member States to utilise EMS to collect data to assist the European Union in meeting the requirements of IOTC Resolution on a Regional Observer Scheme, including in situations where onboard observer coverage is low or non-existent.

The REMP aims to improve the quantity and quality of fishery data and the monitoring of IOTC fisheries and address gaps in the collection and verification of fishery data. The REMP may also in the future help Member States meet the requirements of other obligations.

Scope:

IOTC's REMP provides a framework for the development of EMS in the following IOTC fisheries:

– purse-seine vessels over 24 metres in length overall and under 24 metres in length overall when fishing outside their EEZs;

– longline vessels over 24 metres in length overall and under 24 metres in length overall when fishing outside their EEZs;

– gillnet vessels over 24 metres length overall and under 24 metres in length overall when fishing outside their EEZs;

– pole and line vessels over 24 metres length overall and under 24 metres in length overall when fishing outside their EEZs;

– vessels using other gear types and under 24 metres in length overall (when fishing in the high seas).

IOTC's REMP or any National EMP, under IOTC's REMP, shall ensure that the data collected through EMS are documented and that all ROS minimum data standard requirements (e.g. "Mandatory Reporting"), if necessary complemented with any additional monitoring programme (e.g. port sampling, biological sampling, etc.), are collected by EMS.

Definitions:

(1) Electronic Technologies (ET) means any electronic tool that is used to support fisheries-dependent data collection, both on shore and at sea, including electronic reporting (ER) and electronic monitoring (EM).

(2) Electronic Reporting (ER) means the use of electronic systems (application, software, form or file) to record, store, receive and transmit fisheries data.

(3) Monitoring means the requirement for the continuous collection of fishery-related data.

(4) Electronic Monitoring (EM) means the use of electronic devices to record a fishing vessel's activities using video technology linked to a Global Position System (GPS), which may include sensors.

(5) EM Programme means a process administered by a national or regional administration that regulates the use of EMS on vessels to collect and verify fisheries data and information through an implementation of an EMS in a defined area and/or fishery.

(6) EM Programme standards means the agreed standards, specifications and procedures (SSP) governing the establishment and operation of an EM Programme, applicable to all components of the EMS.

(7) EM data standards means the agreed subset of data requirements by the IOTC Regional Observer Scheme (ROS) that could be collected by the EMS.

(8) EM records means imagery, and possibly sensor, or raw data linked to positional data collected by an EM equipment that can be reviewed to produce EM data.

(9) EM data means processed/analysed data produced through review of EM records that conforms with the EM data standards.

(10) EM equipment means a network of electronic cameras, sensors and data storage devices installed on a vessel and used to record the vessel's activities.

(11) Vessel Monitoring Plan (VMP) means the vessel's EM equipment characteristics and how the vessel's EM equipment is installed and configured to monitor fishing activities and meet the EM Programme and EM Data Standards as required by the IOTC Regional Electronic Monitoring Programme.

(12) EM review means the review of EM records by EM observers/reviewers to produce EM data.

(13) EM observer/reviewer means a person qualified to review EM records, store and produce EM data in accordance with the EM Data standards and analysis procedure.

(14) EM review system means an application software used by the EM observer to review the EM records and produce the processed EM data as per the EM data standards.

(15) EM review centre means a local, national, or regional office facility where EM records are received and reviewed to produce and store EM data.

(16) EM review provider means a third-party provider of EM review services to review EM records to produce EM data. The same third-party organisation can provide both the EM equipment and EM review services, but they can also be supplied by different providers.

(17) EM installation coverage means the proportion of vessels by fleet that has EM equipment installed that is operational.

(18) EM record coverage means the proportion of fishing effort for which EM records are collected by installed EM equipment.

(19) EM observer/review coverage means the proportion of fishing effort for which EM records are reviewed to produce EM data and submitted to the IOTC.

(20) EM service provider means a third-party provider of EM equipment (and/or system), technical and logistical services to maintain the EM equipment and monitor its proper functioning.

EM Systems (EMS)

EMS shall be approved and accredited by an appropriate IOTC body (e.g. IOTC Ad hoc Working Group on the Development of Electronic Monitoring Programme Standards, IOTC Working Party on Data Collection and Statistics (WPDCS)) or Member States to ensure that the minimum standards of the REMP (and ROS) are met, including EM equipment installation (through an EM Vessel Monitoring Plan), collection of data consistent with ROS minimum data standards, EM records reviewed by accredited companies/organisations and independence of EMS are maintained. In case that IOTC approved the EMS, the Member State shall submit to the Commission copies of each vessel's VMP and the Commission will present to the Scientific Committee, as an annex to the EU Reports to the Scientific Committee, a fleet level overview of the EU VMPs.

Data:

EM data submitted by Regional or National EMPs are subject to Resolution 12/02 On data confidentiality policy and procedures concerning the requirements for sharing data in the public domain (e.g. the level of stratification to apply in order to prevent activity from a single vessel to be clearly identified from the published data) and the procedures for the safeguard of records.

EM data collected via EM shall be provided in compliance with the requirements established by the IOTC in Resolution 15/01 On the recording of catch and effort data by fishing vessels in the IOTC area of competence, Resolution 15/02 On mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs) and IOTC Observer Resolution on Regional Observer Scheme.

EM data shall be submitted to IOTC in accordance with the electronic data format specifications provided by the IOTC Secretariat and adopted by the IOTC, in order for data to be incorporated in the IOTC Regional Observer Scheme database. The EM data shall be properly marked in the database to be distinguished from data collected through onboard human observers.

Operationalising IOTC's REMP – Accreditation and Auditing of National EMPs

Member States shall request the Commission to apply to the IOTC Secretariat to have its own National EM Programme recognised as part of IOTC's REMP so as to comply with ROS data minimum standards.

IOTC shall audit the National EM Programmes against the EM minimum standards.

National EM Programmes shall be reviewed and subject to regular and periodic audits as agreed by the IOTC.

IOTC could authorise National EM Programmes approved by other tuna RFMOs.

PART 2: IOTC electronic monitoring system and data standards

(1) EM TECHNICAL MINIMUM STANDARDS

The Technical Minimum Standards shall describe the requirements of the EM. Member States shall ensure all EM equipment installed in their national or subregional programmes are consistent with these technical specifications.

Customised to vessel level: there is no standard configuration that will cover all vessels from fleets operating in the Indian Ocean region, therefore each EM equipment installation must be customised at the vessel level. An EM equipment to be installed on board of a fishing vessel shall consist of a control system connecting a number of cameras, and optionally to a number of different sensors, to collect and record images to address the objectives of the EM Programme. The number of cameras and sensors shall be tailored to each vessel through a Vessel Monitoring Plan to meet overall objectives of the programme rather than being too prescriptive, and shall include a sufficient number of cameras. Although it will depend on the configuration of each particular vessel, as a general setup, cameras shall capture the areas and activities provided in Tables 1 and 2 and Figures 1 to 3 of Part 3 of this Annex[1]. Each vessel shall develop a "Vessel Monitoring Plan" specifying how many and where the cameras are located, and their settings, to collect the required ROS minimum "mandatory" data fields. The collection of some of the required ROS minimum data standards may be complemented by port sampling and/or other data collection methods as described in the IOTC Regional Observer Scheme Data Collection Field[2]. Within a given EM programme, a certain level of harmonisation among vessels may also be necessary (camera placement and settings).

---

1 Annex 3 should be taken as a general guide since it includes examples of existing EMS installations. The EM configuration (number of cameras, position, and monitoring objectives for each) should then be tailored to each fishery/vessel through a Vessel Monitoring Plan.

2 EM capabilities to collect ROS minimum data requirement fields (https://iotc.org/documents/ROS/DataStandards) may vary from fleet to fleet if the catch handling and setting/hauling manoeuvres differ among fleets. Therefore, these values should be taken as a general guide and subject to constant review.

Include sensor/automatic devices: since EM records require large storage capacities, most EMS do not record vessel activities on a full-time basis. The recording by some cameras may be triggered by the detection of gear usage or fishing activity. EMS may therefore include sensors, and other procedures (Computer Vision, Artificial Intelligence), to detect when fishing or other activities of interest occur on board. This will ensure proper EM record acquisition (e.g. trigger video recording when fishing operation starts) and facilitate EM record reviewing.

Include Global Positioning System (GPS): this is required to monitor vessel position, route, speed and provide information on date/time and location of fishing activities. Fishing vessel position and date/time stamps shall be incorporated directly on images or in the metadata of images.

Compatibility: the EMS should ideally be capable of integrating with other Monitoring, Control and Surveillance (MCS) tools (e.g. Vessel Monitoring System).

Robust System: the EM equipment components installed outdoors (such as cameras/camera housing and sensors) shall be capable of resisting rough conditions at-sea and harsh environment on board the vessels.

Secure System: the EM equipment components and data need to be tamper-resistant and tamper-evident, ideally using encrypted data, such that attempts at unauthorised modifications are not possible.

Cameras: digital, high-resolution when possible, cameras covering all areas of interest on the vessel according to the vessel and fishing operations are recommended. Camera placement, settings and recording must assure the detection of vessel activities, catch and bycatch species, and enable accurate species identification (at least for all species under the IOTC mandate). The system shall be able to record activities in low and very bright natural light conditions (low and high contrasts). The cameras must be water resistant and in a self-contained, weather resistant box.

EM records: EM records shall contain the following information: EM record file name including, at a minimum, the vessel name and vessel ID, camera ID, trip ID, geolocation data (date, time (UTC), latitude and longitude), camera recording status, EM health status (when available), images, and sensor data when used.

Independence: the system needs to be self-governing with the exception of minimal maintenance by the crew (e.g. cleaning sensors and cameras). The system may include remote verification of its functionality in real time to collect all information. A designated person shall ensure that the system is working properly before leaving port and at sea, and there shall be a protocol (checklist) for that purpose.

No interference: EM equipment shall not generate or cause radio frequency interference with other on-board vessel communication, navigation, safety, geolocation devices (e.g. VMS) or fishing equipment.

Autonomy: the EM equipment shall have its own uninterruptible power supply or be connected to that of the vessel to ensure that it can work even in the event of a vessel power outage. The EM equipment shall include separate, duplicate backup devices to ensure that data are not lost if a storage device fails.

EM Data storage autonomy: the EM equipment shall have enough storage capacity to store all EM records for a certain period of time, which shall be at minimum a complete trip. The duration will depend on the vessel's operational characteristics that could range from 4 months (in the case of purse-seiners) to 12 months or more (in the case of longliners).

Interoperability: EMS ideally shall generate EM records that are interoperable between different EM service and review providers and, where possible, integrate with other data collection and monitoring tools.

Maintenance: a designated person on board (and/or on land) shall be designated to maintain the equipment (e.g. cleaning of lenses, etc.) and report to the EM equipment provider and the competent authority (e.g. IOTC or flag state) when the system is malfunctioning at port or at sea so the system is fixed as soon as possible, and shall record any failure of the EM equipment in a dedicated form.

(2) EM LOGISTICAL MINIMUM STANDARDS

EM records retrieval: the EM records shall be transmitted via mobile networks, Wi-Fi, or satellite, or storage device (i.e., SSD or HDD) exchange. For the latter, a protocol to recover and send the storage devices to the designated EM review centre shall also be implemented.

EM record storage: EM records shall be stored by the vessel/company/EM service provider/EM review provider/EM programme administrator for at least 1 year or for the period established in the national/regional EM programmes.

EM records backup: if EM records are automatically transmitted electronically, operational procedures for their receipt and backup shall be implemented taking into account any necessary chain of custody arrangements.

Storage device chain of custody: the EMS must ensure traceability of every storage device and of EM records. The chain of custody of the EMS storage devices and EM records shall be assured.

Frequency: EM programmes shall include requirements on the method and frequency (e.g. after each trip) of EM records transmission to EM review centres, that shall be consistent with the minimum standards established by the Member State, the EU or IOTC.

(3) EM DATA REVIEW MINIMUM STANDARDS

EM review software: EMS shall include software to facilitate the review of EM records and to produce EM data that will allow compiling and reporting in an IOTC common output format for exchange/submission to IOTC. Ideally, EM review software can be used to review EM records collected from different EM equipment providers.

EM review and EM data reporting: EM records reviewing and EM data reporting shall be done by institutions, organisations and independent companies with proven expertise and experience (e.g. work experience with onboard observers). These tasks can be centralised in a "regional EM review centre" when implementing a regional programme and/or can be carried out by national or independent organisations.

EM records and EM data quality check: the reviewing process of EM records shall include quality controls through EM records quality check, EM data entry checks, possible automatic error identification in EM data (e.g. incorrect fishing set positions on land, etc), debriefing of EM observers. The produced EM data shall be checked prior to reporting to the IOTC Secretariat.

EM data: EMS shall allow collecting and reporting, at a minimum, the ROS Minimum Standard Data Fields. EM data shall be submitted to the IOTC Secretariat using IOTC standard forms according to the time frame specified in Resolution 22/04, or any Resolution superseding it. Data confidentiality requirements outlined in Resolution 12/02, Data Confidentiality Policy and Procedures, or any Resolution superseding them, shall apply to all EM data submitted to the IOTC Secretariat.

EM observers' training: EM observers must have specific qualifications relating to EM record review, which shall be integrated into the regional or national EM programme standards. The EM observer shall participate in specialised training courses that shall be updated upon modification of the EM review protocol to ensure EM data high-quality standards.

EM observers' qualifications: EM observers must have the ability to review EM records and produce EM data according to IOTC requirements. EM observers shall be familiar with fishing activities and be capable of identifying (i) IOTC species and species of special interest, (ii) IOTC fishing methods, and (iii) IOTC mitigation methods.

Compatibility with ongoing standardised data flow and databases: EM data shall have compatible output format (including usage of standardised, well-established code lists) to allow the exchange of collected information with current IOTC data reporting format and standards, and shall be consistent with IOTC data rules. EM data shall be submitted in an approved electronic data reporting format to the IOTC Secretariat, using IOTC standard codes and units.

Data storage and retention: legal provisions on data protection, storage, and retention by IOTC shall be developed and agreed upon, whether for a REMP or EM National Programmes.

EM records ownership: EM records ownership is of the vessel owner/flag state but shall provide IOTC with the EM data outputs to incorporate in the IOTC database for use, analysis, and disposal as required by the IOTC observers Resolution on Regional Observer Scheme.

Hardware/software ownership: irrespective of the scope of the EM programme, it is recommended that hardware and software license ownership (and maintenance) be of the vessel owner/flag state.

Part 3: Vessel monitoring plans (VMP)

Each vessel shall develop a "Vessel Monitoring Plan" so as to describe the numbers of cameras located to collect the required ROS minimum data fields, position and settings, and key areas to be monitored for fishing activities, catch handling, species identification, fate and storage of the individuals. The VMP shall be developed in collaboration between the EM service provider, vessel owner and fishing authorities.

VMPs shall be signed-off by the vessel owner and finally approved by the flag Member State competent authority, after which they are presented to the WGEMS/WPDCS to ensure they meet IOTC REMP Programme and EM System and Data Standards.

Each VMP shall include information on:

– Contact information: contact information for the vessel owner, vessel operator and EM service provider as long as the contract lasts;

– General vessel information: basic information about the vessel and its fishing activities and operations (e.g. vessel name, registration number, target species, areas, fishing gear, length overall);

– Vessel layout: equipment of the vessel with detailed information, plan of the vessel disposition and different areas (decks, processing area, storage, etc.);

– EM equipment setup: description of the settings of the EM equipment, such as time running, number of cameras and areas covered, time recording for each of the cameras, number and position of sensors (if any), software used, control box location, procedures for checking the proper functioning of the EM equipment installed onboard, etc.

– a snapshot of each camera shall be inserted in the VMP;

– a record on each vessel of the vessel's EM equipment characteristics and how the vessel's EM equipment is optimised to meet the EM System and Data Standards.

On purse-seine vessels, the minimum areas that cameras are recommended to cover:

– the working deck (both port and starboard sides);

– the net sack and the brailer;

– the foredeck or amidships (e.g. FAD activity);

– and the well deck and conveyor belt (Murua et al., 2022; Restrepo et al., 2018): for the conveyor belt, in more than one place (e.g. at the beginning and at the end of the conveyor belt as a minimum); if there is a discard conveyor belt, it shall also be covered;

– cameras must cover the following actions: fishing set, brailing, net hauling, FAD activities, total catch, catch well sorting (process of putting the catch in the hold or wells), bycatch handling and release, and tuna discards (Figure 1 and Table 1);

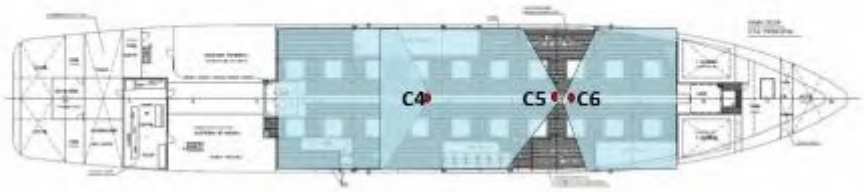
– in large purse-seines, at least 6 cameras are needed to cover fishing and fish-handling operations; however, less fewer cameras (e.g. 4 cameras) could cover the activity to collect the data required of smaller purse-seines (e.g. 300-400 tonnes capacity).

The preferred EM equipment configuration would be one that allows a greater number of images (frames) of higher quality/resolution. Digital video is generally preferred, but still images can also be a viable option to capture information during the various phases of the vessel's activity. However, considering that storage capacity is limited, an optimal configuration may capture video on certain areas/cameras and at certain moments, while capturing still photos on or in others. In the case of photographs, the minimum requirement shall be that a picture is taken by the camera with viewing angle fully covering the fish management areas at least every 2 seconds when fishing action occurs (Restrepo et al., 2018). Image quality shall also be adequate to allow accurate collection of all required data field, such as species ID, FAD materials and design, or bait used and, hence, achieve the monitoring objectives.

Any physical changes on a vessel that will affect EMS shall be reported to the flag Member State competent authorities. The VMP shall be updated and approved again by the competent authority as soon as possible.

Any change on the EM equipment (such as installation of a new generation of cameras) shall be reported to the flag Member State competent authorities. The VMP shall be updated and approved again by the competent authority as soon as possible.

C3
C2
C1


C4
C5
C6

Panoramic camera:
Surounding activity
Crows nest camera:
Fishing deck
Starboard camera:
Bycatch and discards
Bow camera:
Crane activity,
Partial view of seine
Brailing camera:
Brailing and purse.

Legend:

- Panoramic camera: surrounding activity
- Crows nest camera: fishing deck
- Bow camera: crane activity, partial view of seine
- Starboard camera: bycatch and discards
- Brailing camera: brailing and purse
- Bycatch release method
- Discards identification
- Captures and fates
- Good practices verification
- Capture sampling
- Big species measurement
- Capture description and bycatch release from brail
- Release of netted species
- Close view of the purse allows identifying not landed species condition on release and/or discards

Figure 1. (A) An example of a 6-cameras EM system installed in a purse seiner covering main areas of fishing and fish handling operations (from Murua et al., 2020b) and (B) 7-cameras EM system (4 in the upper deck and 3 in the well deck) installed in a purse seine covering main areas of fishing and fishing handling operations including 1 more camera in the conveyor belt: (B1) 360° Panoramic view camera (e.g. port side view), (B2) Crows nest stern view camera, (B3) Working deck crane camera view, (B4) Foredeck view camera, (B5) Conveyor belt stern camera view, (B6) Conveyor belt middle camera, and (B7) Conveyor belt bow camera (source: Digital Observer Services).

Table 1. Minimum areas and actions that shall be monitored.

Area covered	Action covered	Purpose	Minimum data requirements to be monitored
Work deck (port side)	Brailing	Total catch by set Species composition	Number of brails and fullness by brail. Weight, size and species of retained tuna
	Tuna discards	Total tuna discards by set	Weight, size and species of discarded tuna
	Bycatch handling	Bycatch estimation	Number of individuals, handling mode and species ID
Work deck (starboard side)	Bycatch handling	Bycatch estimation	Handling mode
	Bycatch release	Total bycatch by set	Number of individuals and species ID
In-water purse seine area	Brailing	Total catch by set	Number of brails and fullness by brail
	Bycatch handling and safe-release of individual animals (whale sharks, manta rays …)	Total bycatch by set. Application of handling and safe-release best practices	Handling mode
	Bycatch release of big species (whale sharks, manta rays …)	Total bycatch by set Application of handling and safe-release best practices.	Number of individuals and species ID
Foredeck or amidships	FAD activity (deploying, replacement, reparation …)	Total number of FAD deployments, FAD design and FAD activities by trip	Number, material (natural or artificial), and FAD characteristics (entangling or no entangling)
Well deck and conveyor belt	Catch well sorting	Species composition	Weight, size and species of retained tuna.
	Bycatch handling	Best practices	Handling mode
	Estimation of bycatch discards, releases or retention	Total bycatch by set Species composition Application of handling and safe-release best practices.	Number, size or weight of individuals, species ID and fate

On longline vessels, the minimum areas and activities that cameras are recommended to cover (Table, 2, Figure 2):

– the area of setting the longline (usually vessel stern site camera),

– the area of hauling the longline,

– the working deck where catch is handled,

– and the surrounding water area for those discarded species not brought onboard,

– cameras must cover the following actions: setting of the longline, bait type information, whether mitigation techniques are being used (e.g. tori lines for seabirds), hauling of the longline, all hooked species (both retained and discarded), the fate of the catch, and the size of the specimens,

– on most tuna longlines, at least three cameras are needed to cover fishing activities and fish handling operations: one capturing images when setting the longline, one to record the hauling and boarding of the catch, and other mounted over the processing deck to record species, size of specimens and fate. An additional camera to cover the surrounding water area for those discarded species not brought onboard is also recommended.

Legend:

– Cam 3: Retained Captures, species, size and fate

– Cam 2: Captures and discards; species, size and fate

– Cam 1: Floats, hooks and bait setting

– C1: Stern camera

– C2: Fishing deck 1

– C3: Fishing deck 2

Figure 2. An example of 3-camera EM equipment installed on a longline, covering main areas of fishing and fish handling operations. View of the three cameras: (left panel) Stern camera – setting longline providing information on hooks, floats, mitigation techniques and bait; (middle panel) Fishing deck 1 – hauling information, captures and discards, species ID, size and fate; and (right panel) Fishing deck 2 – fate of the species, size, species ID (source: Digital Observer Services).

Table 2 – General configuration and areas/activities covered by the EM system onboard tropical tuna longline vessels

Area covered	Action covered	Minimum data requirements to be monitored
Stern camera of the boat	Start and end setting operation	Position, date, and time
		Total number of hooks set and between floats
		Total number of floats set
		Bait type
		Bait species
		Bait ratio (%)
		Mitigation measures/marine pollution
Work deck	Catch onboard	Length and weight[3] by captured species/individual
		Condition
		Fate
		Predator observed
	Bycatch discarded, released, or retained	Total bycatch by set and species composition
Processing area	Catch	Total catch by set
		Length and weight[3] by captured species/individual
		Sex
		Fate
Surrounding water area	Start and end hauling operation	Position, time and date
	Estimation of bycatch discards, releases or retention	Total bycatch by set and species composition
		Species condition and fate

[3] Estimated through length-weight relationships

On pole and line vessels, the minimum areas that cameras are recommended to cover are the area of bait fishing activity, the area of the fishing set and pole and line fishing activity (vessel stern site camera) and the working deck where catch is handled. On a typical Indian Ocean pole and line vessel, this will require at least two or three cameras to cover main fishing activity areas, fish handling operations and bait fishing.’.