



Manual for observers on board commercial fishing vessels

ObsMer Programme 2024 – 2027

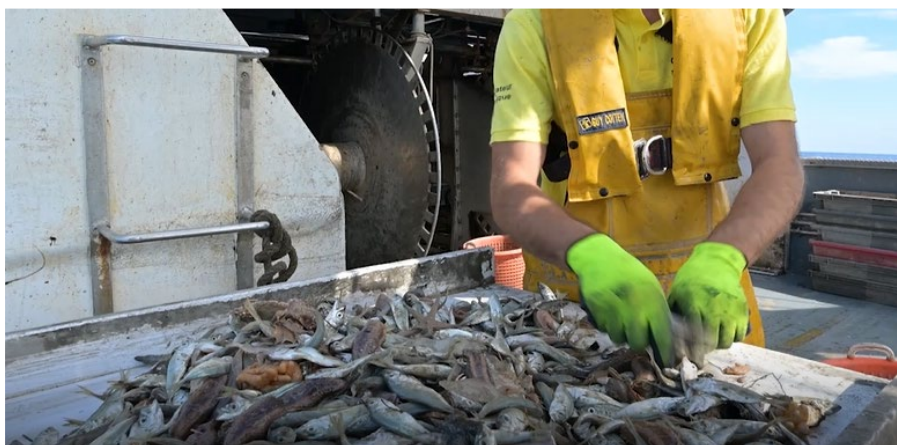
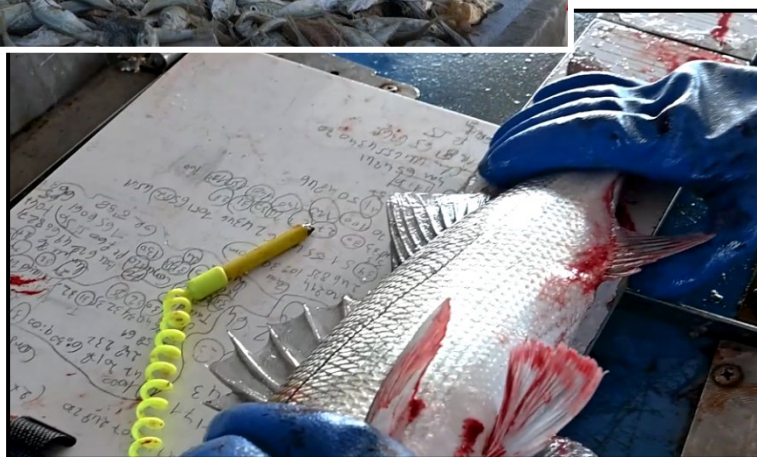


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RBE/HISSEO
ObsMer Team
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The electronic version of this document and all its appendices are available on the SIH website. (<http://sih.ifremer.fr/>).

Regular consultation of this manual and its updates will ensure that on-board observation procedures are properly followed and will help to avoid any divergences.

If you have any questions about this programme, please send a message to harmonie@ifremer.fr with 'OBSMER: *your question*' in the subject line.

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Glossary

Accidental catch: Unintentional catch of protected, endangered or threatened species (see PETS definition).

Active vessel: Vessel that participates in any fishing operation (of one day or more) during a calendar year. A vessel that has not participated in any fishing operations during a calendar year is deemed to be 'inactive' (see EU Decision 2019/910).

AEP: *Autorisation européenne de pêche* – European fishing authorisation. Under the Common Fisheries Policy (CFP), the issue of a fishing authorisation can be an essential prerequisite for access to certain regulated fisheries. An AEP can be set up as part of a European management measure. It is associated with a period, an area and/or a fishery.

Allegro: Allegro software, developed by Ifremer, is used to enter data collected at sea and on land. It is then used to synchronise and archive the data in the Ifremer database.

By-catch: Part of the catch of a fishing unit taken in addition to the target species that the fishing effort is directed towards. Some or all of this catch may be thrown back into the sea, usually dead or dying (source FAO).

Catch: All the animals, plants and inert matter brought on board the vessel at the end of a fishing operation.

CFP: The Common Fisheries Policy (CFP) sets out a series of rules designed to manage the European fishing fleet and preserve fish stocks. It aims to ensure the environmental, economic and social sustainability of fisheries and aquaculture, and to provide EU citizens with a source of healthy food. Although fish stocks can be renewed, they are nevertheless limited, and some are overexploited. EU countries have therefore taken steps to ensure the sustainability of the sector and prevent fishing activities from threatening fish populations and long-term productivity. The CFP was launched in the 1970s. It has undergone several reforms, the most recent taking effect on 1 January 2014, governed by EU Regulation 1280/2013.

CNPMEM: *Comité National des Pêches Maritimes et des Elevages Marins* – National sea fishing and marine aquaculture committee.

DCF: Data Collection Framework Regulations. The DCF regulation on data collection sets out the basic principles and general rules for the collection, management and use of data, in line with the Common Fisheries Policy (CFP). It contains provisions on: the Union's multiannual programme and its implementation by the Member States; communication between the Commission and the Member States via national correspondents; the role of regional coordination groups; data storage and sharing; and support for scientific advice. Further information on these rules and other documents relating to the DCF can be found here: <https://sih.ifremer.fr/Le-SIH/Appui-aux-politiques-publiques>

Day at sea: Any continuous period of 24 hours (or part thereof) during which a vessel is present in an area and absent from port (see EU Decision 2019/910).

Deep sea species: Species listed in Annex I of Regulation (EU) 2016/2336 of the European Parliament and of the Council of 14 December 2016.

DGAMPA: *Direction Générale des Affaires Maritimes, des Pêches et de l'Aquaculture*
(Directorate-General for Maritime Affairs, Fisheries and Aquaculture).

Discarded part: Part of the catch brought on board the vessel, but which is thrown back into the sea once it has been sorted by the crew.

Eligible: Refers to a vessel whose fishing activities in year N-1 correspond to the fishing activities targeted in the sampling stratum in question.

EU-MAP: The European Union's multi-annual programme for data collection, which sets out the requirements for the data to be collected, the list of mandatory surveys in each sea basin and the thresholds for data collection. In accordance with the DCF regulations, it consists of two legal acts:

- Commission Delegated Decision (EU) 2021/1167 of 27 April 2021 establishing the Union's multiannual programme for the collection and management of environmental, technical and socio-economic biological data in the fisheries and aquaculture sectors;
- Commission Implementing Decision (EU) 2021/1168 of 27 April 2021 establishing the list of mandatory research campaigns and thresholds for the purposes of the Union's multiannual programme for the collection and management of data in the fisheries and aquaculture sectors.

Exhaustiveness: The process of sampling all the species present in the fishing operation or fishing trip in question.

FEDOPA: *Fédération des Organisations de Producteurs de la Pêche Artisanale* [federation of artisanal fisheries producers' organisations] is a non-profit-making association that represents and defends the interests of 11 producers' organisations throughout France, from the Channel and North Sea to the Atlantic, at national and community level.

Fish auction: Place where the first sale of a fisheries product takes place, in a port.

Fishing operation: Action that consists in the use of fishing gear to catch marine aquatic species. The operation begins when the gear is put in the water and fishing starts; it ends when the gear is retrieved by the fishing professional and is no longer being used for fishing.

Fishing trip: Action of leaving a port to go to sea on board a fishing vessel, selected according to a sampling plan (a place, a type of gear, a size of vessel) in accordance with the métier indicated by the skipper, and sampling the catches according to a defined sampling protocol until the time of return to land.

Fractioning the catch: Breakdown of the total catch that makes it possible to distinguish between the part landed in which the size of the individuals is greater than the minimum conservation reference size, the part landed where the size of the individuals is below the minimum conservation reference size, the part discarded where the size is less than the minimum conservation reference size, minimis discards or other discards (see EU Regulation no. 2019/910).

ICCAT: International Commission for the Conservation of Atlantic Tunas.

Ifremer: *Institut français de recherche pour l'exploitation de la mer* – French Research Institute for Exploitation of the Sea.

Landing: Fraction of catches brought ashore.

Metier: Group of fishing operations targeting a similar set of species, carried out using similar gear during the same period of the year and/or in the same area and characterised by a similar exploitation profile (see EU Decision 2019/910).

PETS: Protected Endangered and Threatened Species. As part of the EU-MAP and its revision for the period 2022–2027, the list of protected species to be monitored is drawn up in accordance with EU legislation and international agreements.

Retained part: Part of the catch brought on board the vessel, and which is kept on board once sorting has been carried out by the crew.

Sample: Part of a population to be observed, allowing estimation of a characteristic of this population (Thomson, 2002. Sampling, 2nd edition).

Sampling plan: Detailed overview of measurements to be taken per unit of place and time.

Size structure: Number of fish in each size class in all or part of a fishery's catch, obtained by measuring fish sizes in representative samples of that catch.

Species: Available and accessible living marine aquatic organisms, including anadromous and catadromous species during their marine life (EU Regulation 1280/2013).

Sub-fleets: Groups of fishing vessels with relatively homogeneous operating strategies.

VME: Vulnerable Marine Environment Indicator Species considered to be sensitive to potential impacts.

WAO: Web Application for Observation [*Web Applicatif Observations*] for consulting the sampling plan by device and by batch.

- **For ObsMer,** it displays the quarterly sampling effort and the lists of eligible vessels for each stratum of the plan. The strata are subject to a random selection of vessels, except for the offshore strata. The contacts generated are updated in real time after discussions with the fishing professionals.
- **For ObsVentes,** it displays the quarterly sampling effort for each stratum in the plan. It provides a list of the priority species to be sampled and observed per trip.

It also allows each contractor to download a summary of their quarterly achievements and costs to be invoiced. It thus serves as the basis for acceptance of the services and calculation of the contractor's remuneration.

1 Background

This manual describes observation missions on board commercial fishing vessels and is intended as an operational guide for on-board observers. It sets out the tasks to be completed and the results expected.

Observations on board commercial fishing vessels are carried out in accordance with the following regulatory requirements:

- [Regulation \(EU\) 2017/1004](#) of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy, and repealing Council Regulation (EC) No 199/2008 (revised);
- [Commission Implementing Decision \(EU\) 2021/1168](#) of 27 April 2021 laying down the list of mandatory research surveys at sea and the thresholds under the Union's multiannual programme for the collection and management of data in the fisheries and aquaculture sectors, applicable from 2022;
- [Commission Implementing Decision \(EU\) No 2022/39](#) of 12 January 2022 laying down rules on the format and timetables for the submission of national work plans and annual reports on data collection in the fisheries and aquaculture sectors and repealing Implementing Decisions (EU) 2016/1701 and (EU) 2018/1283;
- [Regulation \(EU\) 2019/1241](#) of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures amending Council Regulations (EC) No 2019/2006 and (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005;
- [Regulation \(EU\) 2016/2336](#) of the European Parliament and of the Council of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions relating to fishing in international waters of the north-east Atlantic, and repealing Council Regulation (EC) No 2347/2002;
- [Regulation \(EU\) 2016/1627](#) of the European Parliament and of the Council of 14 September 2016 concerning a multi-annual recovery plan for bluefin tuna in the Eastern Atlantic and Mediterranean and repealing Council Regulation (EC) No 302/2009;
- ICCAT Recommendation amending Recommendation 19-04 establishing a multi-annual management plan for bluefin tuna in the Eastern Atlantic and Mediterranean [Rec. 21-08]
- [Amended Regulation \(EU\) No 1380/2013](#) of the European Parliament and of the Council of 11 December 2013 on the CFP (Common Fisheries Policy);
- [Council Regulation \(EC\) No 1224/2009](#) of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the CFP;
- [Delegated Regulation \(EU\) 2018/190](#) of 24 November 2017 amending Commission Delegated Regulation (EU) No 1393/2014 establishing a discard plan for certain pelagic fisheries in north-western waters;

- [Commission Delegated Regulation \(EU\) 2020/2015](#) of 21 August 2020 specifying detailed rules for the implementation of the landing obligation in certain fisheries in western waters for the period 2021–2023;
- Order of 8 June 2015 laying down detailed rules for implementing the de minimis exemptions from the landing obligation provided for in Article 15(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the CFP.
- Order of 27 December 2022 relating to the obligation to participate in an on-board observation programme for fishing vessels over fifteen metres long flying the French flag: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000046836476>

The partners in this programme are:

The DGAMPA as contracting authority, Directorate-General for Maritime Affairs, Fisheries and Aquaculture,

Secrétariat d'État chargé de la mer, Ministère de la Mer, Tour Séquoia, 92055 LA DÉFENSE Cedex

The CNPMEM, as representative of the fishing industry, *Comité National de la Pêche Maritime et des Elevages Marins*,

134 avenue de Malakoff, 75116 Paris

IFREMER as assistant to the project owner for the DGAMPA,

***Institut Français de Recherche pour l'Exploitation de la Mer* –French Research Institute for Exploitation of the Sea**

Centre de Bretagne, ZI de la pointe du diable, 29280 Plouzané

2 Observations at sea

2.1 The objectives of observations on board fishing vessels

The sampling plan aims to collect and produce data in sufficient quality and quantity to:

- Estimate total catches, retained and discarded, by métier and species, taking into account the characteristics of the vessels and gear used
- Estimate accidental catches of other vertebrates (mammals, turtles, birds) and protected species of fish
- Evaluate the effectiveness of selective devices
- Characterise catches for all scientific projects

Through these objectives, the observer should remember that:

- The choice of vessel to be sampled will be based on the suitability of the sampling plan and the main métier planned for the fishing trip,
- **For all FOs** (fishing operations), the observer will record the conditions under which these were carried out (gear, time, position, target species, etc.),
- **For the sampled FOs**, the observer must analyse both parts of the catch, the retained part and the discarded part, and carry out all the observations requested (recording weights, numbers and sizes per species, etc.),
- **For the FOs not sampled** only the recording of the conditions of the fishing operations will be required. Nevertheless, accidental catches must be properly and fully observed. As a result, the observer will have to certify whether or not they have counted all the by-catches observed during the fishing trip (per fishing operation).

Key Rule

During a fishing trip, **the observer should prioritise the quality of their observations** over the quantity. This rule particularly applies to sampled FOs for which the observer will focus on the quality and exhaustiveness of their measurements on the retained and discarded parts of the catch.

Thus, as soon as an FO is chosen for sampling, the analysis will have to be **carried out in its entirety** (retained and discarded parts, exhaustiveness of species identification, priority measures for accidental catches) even if this must be done at the expense of the overall FO sampling rate in the fishing trip.

2.2 Preparing to embark

2.2.1 On-board security

Medical fitness to embark

Any person embarking on a commercial vessel must be certified as fit to embark at the annual medical examination by the occupational health doctor.

Obligation to inspect safety equipment

Observers are entirely responsible for checking the safety equipment they take on board (PFD life vests, survival suits, safety boots, helmets or hard hats). In the event of a fault or in case of doubt, embarkation will not take place until the equipment has been replaced and/or checked. The equipment must be inspected annually by an approved external body. Observers should ask their supervisor about the procedure in force and the correct way to perform the checks.

Weather-related embarkation rules

The final decision to embark, if granted by the skipper, is left to the discretion of the observer. However, if the wind is too strong or the swell too great, the observer should not embark, both for safety reasons and for the quality of the data collected. The observer will try to arrange another embarkation date with the skipper. If the weather deteriorates during the embarkation, the observer should prioritise their safety over biological observations.

Safety briefing with the skipper

Once on board, the observer(s) should ask for a safety briefing:

- Location of safety equipment (beacon, raft, lifejackets, fire extinguishers);
- What to do in the event of danger.

Emergency numbers:

- 112
- 1616 (at sea)

2.2.2 Facilities on board

Berth: when embarking for more than one day, the skipper must ensure that a berth is provided for the observer.

Catering: for trips taking place within one day, the observer should take their own victuals (food and drink) with them on board. For long fishing trips, the observer is advised to contact the skipper of the vessel or director of the shipping company to check how this is to be organised.

Toilets: please note that for trips taking place within one day, the vessels to be observed may not have toilets (please enquire).

2.2.3 Equipment to be taken on board

A list of the equipment to be taken on board is given in Appendix 1.

The observer is advised to check the list of equipment to be taken on board before each trip and to verify that the equipment is in good working order (lamp, GPS, scales, etc.). The observer must bring the necessary sampling equipment (containers, shovel, etc.) if they are not sure that this equipment is available on board or whether they will be able to use it.

2.2.4 The number of observers on board

The observation protocol is designed to be carried out by a single observer on board. Two-person embarkation is recommended during the training phase, conditions permitting.

2.3 Confidentiality and code of conduct

On board, the observer must:

- Rigorously apply data collection protocols;
- Use tools adapted to the observations to be made (scales, weights, rulers, GPS, etc.);
- Ensure that their presence on board the fishing vessel does not interfere with or hinder the operation of the vessel, fishing activities or manoeuvres;
- Maintain courteous relations with skippers and other crew members and respect the vessel's equipment and cleanliness;
- As a scientific observer, ensure that they present a professional image of the company they represent and of all the programme's partners;
- Comply with safety precautions on board the vessel;
- Ensure that minimum rest periods and maximum daily and weekly working hours are respected during the trip.

We strongly recommend that you show the forms to the skipper at the end of the trip. This ensures transparency about the work carried out on board.

Information and data relating to the ObsMer programme are confidential and may not be communicated in any way whatsoever to third parties (persons other than those involved in the programme). The vessel owner/skipper has a right of access to the recordings made on board but is not invited to influence or modify them.

2.4 Training

Before embarking for the first time, observers must have completed training in the following:

- Safety at sea: a course with a certificate,
- Recognition of the main species encountered during observations,
- The protocol used on board,
- Use of tools: scales, weights, rulers, GPS, etc,
- Filling out forms,
- Use of the WAO (Web Application for Observation) software for tracking embarkations,
- Using the Allegro data entry software.

Ideally, one's first embarkation should be made in the company of an experienced observer.

2.5 Field forms

The observer will use the forms available on the SIH website to take notes.

It is important to use only the recommended forms and to regularly download the updated versions from the SIH website.

The observer is the only person authorised to complete the forms.

The ObsMer forms are the main documents to be completed (information on the fishing trip, the FOs, gears and catches).

Observers should therefore be sure to take enough of these forms on board to be able to handle the different situations they are likely to encounter.

The observer should record the characteristics of the fishing trip, FOs and catches made by completing the:

- Fishing trip form (*fiche sortie en mer*),
- Fishing operations form (*fiche operations de pêche*),
- Gear form (*fiche engin*),
- Sampling form (RP, DP and measurement forms) (*fiches PR, PNR, mensurations*),
- By-catch form (*fiche captures accidentelles*),
- VME form (*fiche EMV*).

Other forms will need to be completed in the case of sampled FOs, observation of accidental catches and, more generally, depending on the context of the embarkation.

For data traceability, some of the forms are mandatory (these are marked '*Usage obligatoire*' at the bottom). For the other forms, a data entry format is proposed, but each observer can adapt this according to the specific conditions encountered in the field. In such cases, the observer must have the form validated by the programme's quality manager so that it can be read by third parties without risk of misinterpretation.

The forms thus completed will be put online on the SIH website so that other observers can also benefit from them.

Please feel free use the comments boxes to note any additional information you feel is necessary, or to report any unusual incidents or circumstances.

All the records of the fishing trip will be digitised and stored in a single file dedicated to this fishing trip.

2.6 Regulatory framework for embarking on a vessel

It is important to inform the fisheries professional that they are administratively covered from a regulatory and safety point of view, provided that they have an up to date navigation permit, an authorisation to embark special personnel and that the necessary administrative procedures have been completed.

The observer must also hold an observer's card issued by the DGAMPA.

This card entitles scientific observers to 'special personnel' status, which means they can land undersized fish or species that are normally prohibited from being landed.

3 The different stages of observation

3.1 Sampling plan and lists of vessels to be sampled

Each year, to comply with all the programmes covered by these observations, a sampling plan is drawn up for observer embarkations. This table shows, for each of the three coastlines (Eastern Channel/North Sea, Atlantic and Mediterranean), the number of fishing trips to be observed per sub-fleet and per quarter.

Lists of vessels eligible for the sampling plan will be drawn up for each sub-fleet. These lists, available on the WAO (Web Application for Observation) site (<https://wao.ifremer.fr>), see Section 3.1.1, are established on the basis of activity schedules and information (effort, fishing grounds, etc.) contained in the declarative data for year n-1.

Each ship is assigned to a stratum, which may change during the year.

It should be noted that for the sampling of strata subject to European fishing authorisations (*Autorisation Européen de Pêche*: AEP) (targeted fisheries: deep-sea species, bluefin tuna), the random selection of vessels used for the other strata is deactivated. The list of eligible vessels on these strata is nonetheless available in the WAO tool. The choice of vessel will be made based on the list of eligible vessels and in consultation with fishing companies according to the vessel rotation plan. Observers can add their fishing trips to the WAO manually.

However, the random selection of vessels for offshore strata not subject to AEP is maintained and subject to a rule for facilitating selection (see WAO guide).

The observer chooses to embark on a fishing trip on the vessel proposed by the WAO and ensures that the métiers carried out during this trip are on the list of those eligible in the stratum.

3.1.1 Sampling plan monitoring

The sampling plan is monitored using the WAO web application (<https://wao.ifremer.fr>).

This site provides:

- The sampling plan assigned to service providers;
- The list of vessels eligible for the sampling plan;
- Vessels to contact by stratum and quarter;
- A table tracking contacts made by the service providers with the vessels;
- Graphs and summary tables and indicators of compliance with the sampling plan;
- The validation status of the fishing trip data at 'company verification' and 'programme validation' levels.

All service providers must regularly record their contacts and embarkations via the application.

3.1.2 Vessel contacts

A vessel's eligibility for a stratum is predefined by the programme.

The observer should then contact the vessels proposed by WAO in each stratum.

The list can be processed in any order. The whole list must be processed.

In the case of a vessel substitution list, however, the entire list does not have to be processed as long as the observation goal for the quarter and stratum is met. If a vessel refuses to participate in the observation programme, the observer will note the reasons for the refusal and contact the next vessel on the list.

In general, observers are required to record the conclusions of their meetings with skippers (impossibility of embarkation, reason for impossibility of embarkation, agreement, etc.) and all stages and difficulties are recorded in the embarkation tracking tool [*outil de suivi des embarquements*].

The document 'Guide to using contact status in WAO' [*Guide d'utilisation des états de contacts dans WAO*] gives a list of the status reports available for a contact. This status can change over the quarter (see document available at this Archimer link: <https://doi.org/10.13155/95950>).

In the case of passive gear (nets, traps, etc.), the observer will check with the skipper that the gear will be lifted during the fishing trip.

It is understood that any deviation from the sampling plan must be justified by the observer and validated by the ObsMer correspondent for the coastline concerned.

3.1.3 Contacting the skipper

For each stratum and each quarter, a list of eligible vessels is programmed into the WAO. At each draw, a number of vessels (corresponding to the sampling effort required by the plan, excluding the targeted AEP strata) will be randomly selected from this list. The observer can therefore update their contacts according to the availability of vessels/skippers. The skipper is free to organise their embarkation schedule as long as it respects the list of vessels in each draw.

Consecutive fishing trips

If a vessel is drawn several times during the quarter, it is possible to do the different fishing trips on that vessel provided that they are spread out over the quarter as much as possible. Consecutive fishing trips are not permitted, with some exceptions (see scenarios below):

3 possible scenarios:

- **There is no landing => the fishing trip continues, it is a single trip; if the skipper does not want an observer for a 2nd trip, the 2nd contact should be reported as a refusal or, if possible, a postponement.**
- **There is an intermediate landing, or partial landing, of less than 6 hours => the observer remains on board for the second part of the fishing trip, it is still only one fishing trip. Likewise, the next contact must be marked as a refusal or postponed if there is another opportunity in the quarter.**
- **There is an intermediate landing of more than 6 hours or a total landing => The fishing trip is over, the observer disembarks, the 2nd contact is marked as a refusal or, if possible, a postponement.**

Other exceptional cases in which consecutive fishing trips are possible, include:
in the event of an early return (damage/weather) without any fishing operation having taken place; or in the event of landing at a remote base (abroad or more than 300 km from the zone corresponding to the batch).

These special cases must be reported as soon as possible to Ifremer and the DGAMPA. Exceptionally, the observer may remain on board for the second trip if there is no other opportunity to come aboard during the quarter. In this case, it will correspond to two fishing trips, and it will be possible to enter the 2nd contact as a completed observation.

The skipper can be contacted directly or by telephone. The observer can also rely on the existing professional structures: producers' organisations and the departmental or regional fisheries committee. The observer should explain their approach (using the communication documents provided) and, after agreement, arrange a date for embarkation. The observer will then need to complete the necessary administrative formalities before embarking.

The observer has access to communication tools available on the SIH website, as well as documents with general information for a lay audience and various others produced in specific contexts. Observers are also advised to keep abreast of fisheries-related news daily.

3.2 The administrative procedure

Observers should refer to the memorandum from the French Secretary of State for the Sea dated 2 November 2022 on the procedure for embarking observers of fisheries or marine life on board fishing vessels (document available in Appendix 2).

3.3 Fishing operations: Sampling rate for fishing operations during a fishing trip

Observing all the FOs on a fishing trip is neither always possible (FOs too close together or insufficient travel time, for example), nor always necessary (long fishing trips and numerous FOs for the same metier), which is why a sample is taken of the FOs done on a fishing trip.

To make the choice easier, the observer should consider the following rules:

- The priority FOs to be sampled will be those whose metier is included in the sampling plan, particularly the metier that was the reason for embarking on the fishing trip,
- All the metiers eligible under the scheme must be observed at least once during the fishing trip,
- Special cases:
 - ⇒ A simultaneous net and line fishing trip: at least one FO must be sampled per metier.
 - ⇒ A fishing trip using nets and another metier not eligible under the scheme: observe only the metier eligible under the scheme,

- At the start of a fishing trip, the observer is strongly encouraged to ask the skipper about the plan for this fishing trip. All the FOs sampled should be spread out over the trip so as to be representative of the conditions observed, with alternating dawn/daylight/dusk/night. In practice, depending on the trip duration, the observer is recommended to sample one FO out of 'x' so that the sample is representative of the trip observed.
- Once an FO is being sampled, it must be carried out as **normal**. A fishing operation is considered abnormal if it is not carried out in such a way as to allow samples to be taken from the entire catch, or if it is carried out in an unusual way (see Appendix 3 for a non-exhaustive list of examples of abnormal fishing operations).
- Special cases of FOs with abnormal courses of events:
 - ⇒ When the incident occurs during the raising of the net, which is damaged:
 - (1) if the net is more than 50% of the way up, the FO will be considered as sampled with usable data.
 - (2) If the net is less than 50% of the way up, the observer will have to stop sampling, the FO will be considered as not sampled and the observer will sample the next FO.
 - (3) If the last FO of the fishing trip is an FO sampled in an abnormal way (with no possibility of resampling on the next FO), Ifremer will be lenient about the data validation.
 - (4) Any abnormal events must be justified and commented upon by the observer.
- When an FO is sampled, the analysis will need to be conducted **in its entirety** (parts of the catch retained and discarded, species completeness, number and weight, priority measures for by-catch) even if this has to be done at the expense of the eventual sampling rate of FOs on the fishing trip.

The number of fishing operations sampled must not be less than:

- **One fishing operation out of three for trips of less than 24 hours that have followed their normal course;**
- **One fishing operation out of five for trips of more than 24 hours that have followed their normal course;**
- **The number of days at sea during the trip, i.e. one fishing operation sampled under normal conditions per day at sea.**

Through these rules, **priority is given to the quality of observations and the sampling of FOs whose métiers are listed in the sampling plan.**

3.4 Catch

3.4.1 Definitions

Following an FO, the gear is brought back on board. The catch is then sorted by the crew into two parts: the retained part (kept on board by the crew) and the discarded part (thrown back into the sea).

$$\text{Catch (C)} = \text{Retained Part (RP)} + \text{Discarded Part (DP)}$$

The retained part is easily identifiable as it is stored on board. It can, however, be made up of two fractions: a commercial part to be sold and a part for which there is an obligation to land (see regulations and decrees in Section 1. Background). These two parts are to be recorded separately on the forms.

Retained Part (RP) = Part of the catch kept on board the vessel = Commercial fraction + Fraction with obligation to land.

The discarded part may be more difficult to estimate. When a net bends, for example, some fish or other catch species fall back into the water, get trapped in the mesh, or are crushed, making them difficult to reach.

By definition, the term 'discard' is reserved for animals (according to the FAO definition). The discarded part is therefore made up of discarded animals, plants and inert matter. The observer will sample the discarded part and sort it into three sub-fractions. An animal fraction, broken down by species, referred to as detailed discards, a non-detailed animal fraction, and the remainder (plants and inert matter).

Discarded part (DP) = detailed discards + non-detailed discards + inert matter and plants.

Detailed discards include all fish and other commercial species (molluscs, crustaceans).

Detailed discards = fish + other commercial species.

Non-detailed discards = non-detailed animals (jellyfish, starfish, etc.).

Inert and plant matter = inert part (sediment, pebbles, shell debris, waste, etc.) + plants.

NB: Taxa considered as indicators of vulnerable marine ecosystems (VMEs) must be clearly differentiated from non-detailed 'animal' discards and identified following a specific protocol.

The observer should stay up to date about the composition of detailed discards by regular consultation of the protocol and forms, as its definition may change according to the regulatory and/or scientific objectives of the programme. So, as part of an ecosystem approach, all discards might need to be detailed.

Important rule

Catch sorting is always to be carried out by a crew member. The observer will not be involved in this phase at any time.

The presence of an observer must not alter on-board sorting practices. They must reflect what is actually done by the profession.

3.4.2 Procedure to be followed for non-sampled FOs

For non-sampled FOs, **the observer should record the general information about the fishing trip with a particular focus on accidental catches of species other than PETS occurring during these FOs, i.e. accidental catches of marine mammals, birds or turtles.**

Remember

Non-sampled FO: Recording of the general conditions of the fishing trip (information collected when filling in the FO field form) and accidental catches apart from PETS.

Accidental catches (see list of accidental catches) must be taken into account by creating an exhaustive non-bulk discard sample. This procedure implies that if a species is registered, all its individuals must be counted.

The recording of sensitive species known as PETS is not compulsory here; this information will be collected in full during the FOs sampled.

Remember

Accidental catches other than PETS: creation of a non-bulk sample.

3.4.3 Procedure to be followed for sampled FOs

This chapter describes the procedure to be followed for FOs for which the observer will analyse the retained and discarded parts.

3.4.3.1 General principal

When the observer decides to sample an FO, they let the crew sort the catch and separate out the retained part.

Then, in the order that seems most appropriate, the observer will:

- Carry out observations on the retained fraction and the 'obligation to land' fraction,

- Take a sample from the discarded part, then separate the detailed discards from the non-detailed discards and the rest, and describe the detailed discards, distinguishing the species. If necessary (accidental capture, sensitive PETS species present in small quantities), an exhaustive non-bulk batch can be created.

In the case of a sampled FO, joint details of the two parts, retained and discarded, are mandatory.

So if a species is observed in one part, it must be observed in the other part. The aim of observation at sea is to go beyond simply quantifying discards and take into account the entire catch process.

3.4.3.2 The retained part

The retained part consists of:

- **The commercial fraction, consisting of species to be landed and sold for human consumption (HCN) (to be entered in an RP-HCN Bulk batch – [lot Vrac PR-HCN]),**
- **The ‘obligation to land’ fraction, consisting of individuals of species subject to total allowable catches, whose size is less than the minimum conservation reference size, which will be landed but not sold (to be entered in a RP-BMS Bulk batch – [lot Vrac PR-BMS] with BMS for Below minimum size).**

In theory, it is easy to analyse the retained part, as it is kept on board. However, the large number of species, use of fish tanks, application of compulsory landing regulations, and/or rapid loading of crates can complicate the task. It is up to the observer, with the help of the crew, to find the best way to analyse each species in terms of weight, number and size. For example, in the case of small trawlers, the observer must separate the catches of the different FOs by inserting empty crates. The information entered by the skipper in the logbook or fishing form [*fiche de pêche*] will be used to check the data.

3.4.3.3 Taking a sample of discards

When analysing discards, it is important to ask for the crew's cooperation in keeping the discarded part on board for the duration of the sampling. The observer must endeavour to estimate the sampled fraction as accurately as possible: the ratio of the volume or weight of the sample of discards to all the discards from the FO. This information is essential for reconstructing the discarded weights and numbers.

The discarded part can be kept on the deck until the end of sorting: in this ideal situation, the observer will be able to weigh or estimate the totality of the discarded part and take a sample (known sampled fraction). The sample of the discarded part consists of a basket of sufficient volume (15 kg) and should preferably be taken with a shovel, after mixing, and/or making sure to take from different places in the pile of discards if this is heterogeneous.

If this is not possible, there are three possible scenarios:

- **The discarded part is temporarily stored in a crate before being thrown overboard:** the observer should regularly take a fraction of the crate contents to constitute their sample.

The observer will have to count the number of discarded crates or weigh them to calculate the total volume or weight.

- **The catch is sorted on a table or conveyor belt and the discarded part is returned to the sea as the sorting process progresses:** if the crew agrees to change the way in which they work, the observer should take regular samples. The observer will stock the largest possible volume to constitute their sample. In this situation, the total weight is difficult to estimate. The sorting time can be an indicator.
- **The crew throws the discarded part directly into the sea:** in this case the observer has no access to the discarded part and will have to take a sample from the total catch. They should ask a member of the crew to sort the sample as they usually do, this time keeping the discarded part. The observer can then record the characteristics of the discards and increase their volume according to the sampling taken. However, the use of this method must be exceptional and clearly justified, as the sorting is not representative (and therefore introduces a risk of bias).

When non-detailed discards predominate in a sampled FO, it is important to comment on the type of discards observed (waste, stones, algae, jellyfish, etc.).

3.4.3.4 The concept of exhaustiveness

The observation of a batch is exhaustive when all the species present in it, identified by their scientific names, are described.

For each fishing operation sampled, there are three field forms to be completed for the scientific names of the species observed:

- The 'Human consumption fraction' form, [*Partie Retenue consommation humaine*]
- The 'Retained part obligation to land fraction' form', [*Partie Retenue obligation de débarquement (LO et BMS)*]
- The 'Discarded part' form [*Partie Non Retenue*].

On each of these forms there is a question about exhaustiveness [*exhaustivité*] (yes or no). In the normal procedure, the 'yes' box must be ticked. The concept of exhaustiveness is essential, as it implies that:

ALL THE SPECIES contained in the OBSERVED FRACTION are IDENTIFIED and then weighed, counted and measured. If the fraction observed is substantial, the observer can carry out a representative sub-sampling of this fraction.

Thus, a ticked 'exhaustiveness' box does not mean that all the individuals in the discarded or retained part were considered, but rather that **ALL THE SPECIES in the sample have been observed**. We should also point out that the sample must be representative of the retained or discarded part.

It is important to understand that a non-exhaustive observation of the species in a batch makes it difficult to analyse the absence of a species.

The absence of the species can be interpreted in two ways:

- The species was present but not recorded;
- The species was indeed absent.

This ambiguity seriously limits the usefulness of all the observations made on the FO in subsequent analyses and statistical treatment.

For this reason, it is requested that all FOs sampled comply with the criterion of species exhaustiveness to produce wholly usable data.

When the observation on a batch is not complete, tick 'no' in the exhaustiveness box.

Remember

- **Sampled FO: Recording of WEIGHT, NUMBERS and SIZES by species on the RETAINED PART (commercial and 'obligation to land') and DETAILED DISCARDS.**
- **If conditions on board the vessel do not allow sampling of the entire DP, priority will be given to sampling (WEIGHT, NUMBERS and SIZES) of species present in both the RP and the DP. The other species do nevertheless have to be weighed and counted.**

3.4.3.5 Sorting into scientific species

The observer will have the necessary training to identify the species caught and name them using their scientific names. If in doubt, they can confirm their identification using a wildlife guide. For difficult cases, a photo will be taken or an individual brought back to the laboratory for identification. This last procedure is compulsory for certain sensitive species or for species that are particularly difficult to identify, such as monkfish under 15 cm.

Important rule for novice observers

Fish identifications made during your first fishing trips should be validated by Dr Samuel Iglesias of the MNHN. The observer should send photographs of the species and their identification by e-mail to: samuel.iglesias@mnhn.fr

For recording purposes, the scientific species name will be used. If the fisher groups species together under the same commercial name, (e.g. monkfish/anglerfish, fish for soup), first register the commercial batch and then detail its composition by scientific names.

If a species is separated into commercial categories based on size, these must include all the commercial categories (e.g. hake sorted into three size categories, small, medium and large).

If the number of individuals for a given species/category is too large, the observer should take a sub-sample. **A sub-sample of around thirty individuals is generally sufficient for the representativeness of the measurements.**

If the size structure of a given species (in the discarded or the retained part) is not homogeneous (e.g. presence of a few large individuals), and if the number of individuals requires sampling, the

observer can sort the individuals by grouping them according to size (e.g. large and medium) to obtain a sample that is representative of the overall batch.

A sub-sample can also be taken for the simple enumeration of a species. In this case, the sub-sample and the sample should be weighed, or the fraction taken for counting should be noted. The observer will carefully record the quantities sampled (weight or fraction) to finally work this back to the catch.

It must always be kept in mind that it is necessary to be able to reconstitute the total weights and numbers of the species in question.

3.4.3.6 Weights and numbers

Following the rule of exhaustiveness, each scientific species should be identified, weighed, counted and measured. In return, the measurement will be able to provide a number and a weight calculated using the size-weight relationship.

3.4.3.7 The measurements

Each species must be measured on at least one FO of every fishing trip observed. If a species is present in both parts of the catch, then the measurements will be carried out in parallel on the retained and discarded parts to maintain representativeness at the FO level.

If there is not enough time, the discards can be stored for analysis on land. It should be remembered to prioritise the quality of the data, so the observer should favour an exhaustive and complete analysis of a sampled FO.

3.4.3.8 Sex determination

For some species it is necessary to identify the sex of individuals (all crustaceans, blue ling, all elasmobranchs: sharks and rays, megrim, marine mammals).

For large crustaceans (crabs, lobsters, rock lobsters and edible crabs), **please indicate whether the female individuals are bearing eggs** or not.

When sex is distinguished, each group must be weighed separately, unless a height-weight relationship is used.

3.4.3.9 Collecting calcified parts and other materials

Specific samples may be requested, for example, of calcified parts (otoliths, scales, illicium). The observer will then be contacted and the protocol specified.

3.4.4 Specificities of the ObsMer protocol in the Mediterranean

Sampling protocol

In view of the specific characteristics of the Mediterranean coast in terms of fishing activities and target species, there is a special sampling protocol for the Mediterranean which is described below.

Also, from 2023 onwards, the observation of passive gears was introduced in addition to that of active ones.

Thus, the sampling protocol for active gears is identical to that for the other coastlines observed (see paragraphs above). It is nevertheless specific in terms of the scientific species to be observed.

For passive gears, the vessels targeted are over 9 m long and use the following metiers: nets, lines and longlines. They operate in the GSA7 zone (excluding Corsica) and are only observed at sea (lagoons are excluded from the observable areas).

The sampling protocol remains identical to that used for the other seaboard observed (see paragraphs above). It is nevertheless specific in terms of the scientific species to be measured. The few specific features are set out below.

- If several eligible meters are observed, the observer must sample each metier at least once.
- However, certain activities can be observed outside the plan, such as octopus pots/traps, due to the importance of the scientific monitoring of the target species.

Regarding octopus sampling at sea: it can be difficult for the observer to sample these animals immediately they are brought out of the water. It is advisable to put them aside for a while so that they can be measured more easily. The observer must give details of the fishing technique used when they observe octopus metiers. It is important to distinguish between traps and pots, as these techniques do not target the same size classes.

Regarding the observation of murex traps, it is interesting to acquire data on weight and number. So measurements are not mandatory.

- As in the classic protocol, observation must respect the rules of an FO sampled out of X as a function of the duration of the fishing trip and must follow a normal course. The sampling plan must be representative of the fishing trip plan in terms of the FO distribution;
- The observer must ensure that their sampling is exhaustive;
- **Golden rule: Any species sampled and measured in the RP must also be sampled and measured in the DP;**
- Observers must give priority in their sampling to accidental catches other than PETS (marine mammals, birds and turtles) which may be more frequent with these gears;

- Sampling can vary greatly depending on the sub-fleet observed. Depending on the vessel, the removal from nets and measurement can therefore be carried out on landing.

The important species to be monitored for stock assessment purposes and to be measured as a priority in the Mediterranean are listed in the table below.

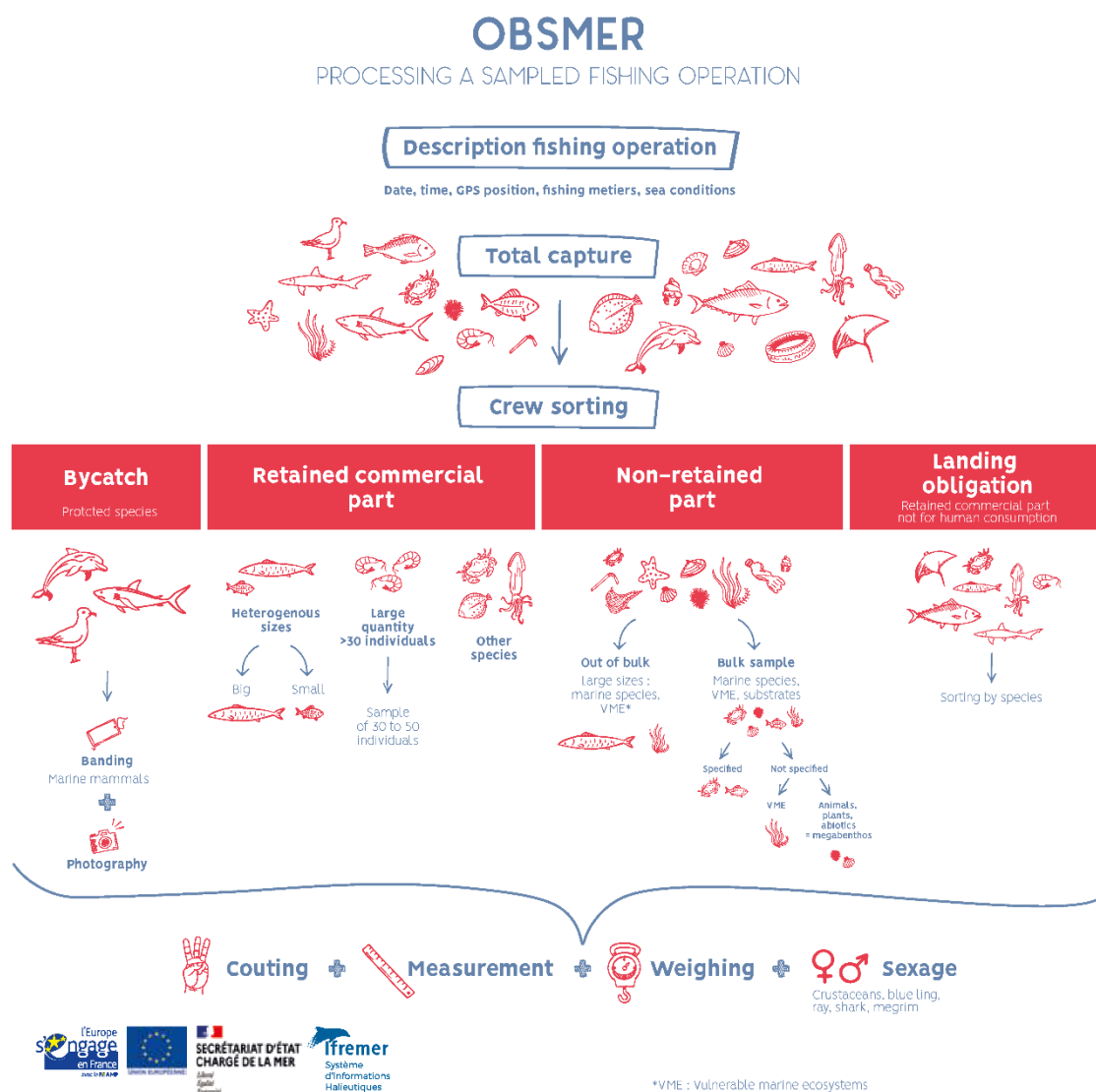
Table 1: List of species to be measured on ObsMer in MED

Commercial species names	Scientific species names	Miscellaneous comments/information
SKA Rays		All the elasmobranchs to measure
SKA Mediterranean starry ray	<i>Raja asterias</i>	The most abundant
SKA Thornback skate	<i>Raja clavata</i>	
SCL Small-spotted catshark	<i>Scyliorhinus canicula</i>	
PEZ Shrimps	<i>Parapenaeus longirostris</i>	Take measurements by calliper to avoid disrupting the automated auction measurement process
ANE Anchovy	<i>Engraulis encrasicolus</i>	
PIL Sardine	<i>Sardina pilchardus</i>	
BSS Sea bass	<i>Dicentrarchus labrax</i>	
SBG Gilt-head sea bream	<i>Sparus aurata</i>	Major economic importance
MUT Red mullet	<i>Mullus barbatus</i>	
MUR Red striped mullet	<i>Mullus surmuletus</i>	
ANK Black-bellied angler	<i>Lophius budegassa</i>	Recent assessment of the red monkfish stock. It is highly important to monitoring this species
MON Monkfish		
HKE European Hake	<i>Merluccius merluccius</i>	
PAX Blackspot seabream	<i>Pagellus bogaraveo</i>	No warning in place with regards to stock evolution, but a change in pattern has been evident since 2008, with an upward trend in abundance index.
JAX Jack mackerel	<i>Trachurus spp.</i>	
MAC Atlantic mackerel	<i>Scomber scombrus</i>	Huge stock, significant volumes landed, so there is a major interest in monitoring this species
POD Poor cod	<i>Trisopterus minutus</i>	
BLL Brill	<i>Scophthalmus rhombus</i>	
SOL Common sole	<i>Solea solea</i>	Significant landings of this species. Major interest in its monitoring.
TUR Turbot	<i>Scophthalmus maximus</i>	
Pelagic stingray	<i>Pteroplatytrygon violacea</i>	
Marbled electric ray	<i>Torpedo marmorata</i>	

A point about data entry

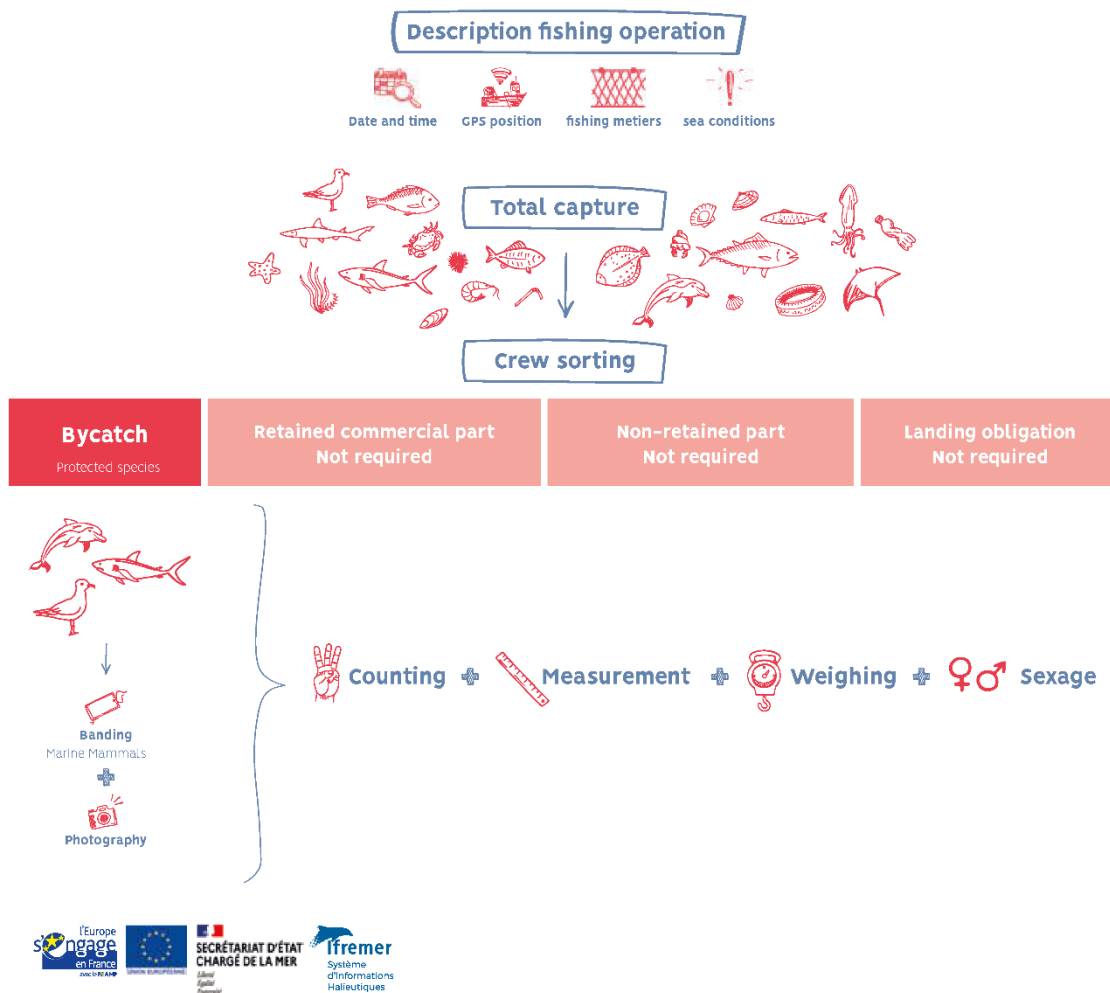
On these métiers, it is possible to have very few discards (or none). In such cases, when entering data, the observer must enter a weight of 0 for detailed/non-detailed discards, indicating 'no discards' in the comments.

3.4.5 Summary of observations to be made on retained and discarded parts



OBSMER

PROCESSING A UNSAMPLED FISHING OPERATION



***CATCH (C) = RETAINED PART (Commercial fraction + fraction with landing obligation) (RP) + DISCARDED PART (DP)**

GOLDEN RULE

Any species sampled in the RP must also be sampled in the DP.

4 On returning to land

4.1 Retrieving administrative documents

The aim of retrieving administrative documents is to improve the quality of data collected at sea.

4.1.1 The declarative document

The logbook (electronic logbook) or the fishing form are important documents for validating the sampling, especially if access to the retained part is difficult at sea.

The observer will try to obtain a copy from the skipper.

4.1.2 Bill of sale

If the sale takes place at an auction, the observer will try to obtain a copy of the bill of sale. For other types of sale (to a wholesaler, etc.), the observer will try, as far as possible, to recover a copy of the sales document with the maximum level of detail.

As with the declaration documents, this information will be very useful for cross-checking with the notes taken on board to validate the accuracy of the data.

A simple summary of landings by species, given by the skipper at the end of the fishing trip, can provide valuable information that is easy to obtain.

4.2 Analysis of samples

If, for practical reasons, the observer has set aside samples, they will analyse them on arrival, measuring height, numbers, weight, sex, etc.

Otoliths should only be read by a specialist on the species. Calcified parts should therefore be sent to Ifremer by contacting the observer network coordination unit [*cellule de coordination du réseau d'observateurs*].

If there is any doubt about the identification of a species, the observer should try to find answers based on an individual of this species that has been put aside or from one or more photos and will then complete the file.

4.3 Data entry

Data from a fishing trip should be entered by the observer on board the vessel. Data must be entered into Ifremer's Allegro software, transmitted and synchronised with the Harmonie central database within a contractually defined timeframe. When embarking on long fishing trips (several days), the observer should ideally take a laptop computer on board so that data can be recorded as they go along.

The fact that the data is entered by the person who carried out the observation, and the short timeframe required, should make the data more reliable. The observer will still remember the fishing trip and will be better able to read their notes. If this is not possible (due to a problem with observer availability, for example), the emphasis should be on meeting the contractual deadline to ease the process of making data available for the rest of the programme.

Observers are advised to consult the data entry guide on the SIH website.

4.4 Monitoring the sampling plan: WAO

The observer should remember to complete the sampling plan monitoring table [*tableau de suivi du plan d'échantillonnage*] **at least once a week**, specifying the date on which the fishing trip ended and the date on which the data were entered. **The observer is invited to make as many comments** as they wish on the progress of the fishing trip.

4.5 Document archiving

All the original field documents are grouped together in an observation dossier (a folder containing all the files). The name of the observer, the métier observed, the name and registration of the vessel and the date of embarkation are noted on the front of the folder.

The files prepared in this way are validated by the observer and the supervisor before being archived in accordance with the contractual framework defined by the DGAMPA. The records of the fishing trip are digitised and uploaded to the WAO website.

5 Specific features relating to the métiers observed and/or the catch composition

5.1 The case of deep-sea fishing

Please refer to the guide to observing deep-sea fisheries available on the SIH website (<https://doi.org/10.13155/95951>).

5.2 The case of bluefin tuna

To meet the scientific observation coverage rates mentioned in the ICCAT recommendation (Recommendation 21-08, amending Recommendation 19-04 establishing a multi-annual management plan for bluefin tuna in the Eastern Atlantic and Mediterranean), an observation campaign is planned each year through dedicated AEP strata targeting bluefin tuna. The coverage rate to meet this recommendation is specified in the WAO tool, under additional information on the dedicated strata.

The scientific protocol required for these observations is the same as that applied to the other sub-fleets.

Specific training is provided by the relevant government departments (inspection office) due to the change in the observer's status during these observations.

5.3 Accidental catches other than PETS (marine mammals, birds, turtles)

In the event of accidental capture of marine mammals, birds or turtles during an FO, the observer carries out a complete sampling of the individuals of each species (see specific accidental capture forms).

It is worth noting that the link between the commercial species caught and the presence of these so-called accidental species provides a better understanding of the dynamics of the joint presence of these species.

The observer will ask the crew to keep the dead individual(s) on deck so that the necessary observations can be made later (measurements, sexing, state of release).

The observer must also fill in the specific 'accidental catches' form and return the dead individuals to the water following the protocol for each species (e.g. for marine mammals: return of dead individuals to the water that had been marked with a caudal ring, the number of the mark and the geographical position must be recorded).

Individuals taken on board alive must be returned to the sea as quickly as possible. Once observations have begun on the individual(s), these become a priority and must be completed (the following FOs might not get sampled).

It is essential to handle living or dead animals using gloves to avoid any risk of disease transmission.

In the case of observation of net metiers, individuals of certain species caught accidentally often become detached when the net is hauled up out of the water. If possible, the observer should be on the vessel so as to be able to monitor the area where the net turns. The observation of such a situation (an animal becoming detached during the turn) must be recorded as an accidental capture, even if the animal cannot be measured.

You are then asked to report the accidental catch in the WAO by entering an appropriate comment in the 'Observations and accidental catches' [*Observations et captures accidentelles*] column. For marine mammals, the nomenclature to be used in the commentary should be in the following format:

Delphinus delphis 1 # Catch trace: O # Type of catch trace: Laceration # Tail ring: O # Tail ring reference: 5713575 # Discard date: 07/04/2021 # Discard time: 02:15 # Discard latitude :45°25,037N # Discard Longitude: 1°30.272W # Photo: N

[*Delphinus delphis* 1 # Trace de capture : O # Type de trace de capture : Lacération # Bracelet caudal : O # Référence bracelet caudal : 5713575 # Date rejet : 07/04/2021 # Heure rejet : 02H15 # Latitude rejet :45°25,037N # Longitude rejet :1°30.272W # Photo : N]

Please note that the comment entered on WAO must not include any element that could identify the vessel.

Remember to take photographs of the individual(s). Once ashore, carefully archive these photographs by uploading them to the WAO website, using the following nomenclature:

Example: OBSMER_2024_M0002_LOT1_S2_Dormants_20230320_2_Observer_Initials

5.3.1 Specifics of accidental bird catches

The impact of fishing on marine avifauna can be assessed by counting the number of seabirds caught accidentally. However, such an assessment also requires other essential data allowing the caught species to be detailed.

For this reason, the creation of a national database would provide a reliable assessment tool.

This database can be made up of a number of optional and compulsory items of information combined in a single record for each individual caught.

1. **Numeric code (mandatory)**

It is essential that each bird caught is given a unique number so that each capture can be identified. This number can be formatted as follows:

Species_Date in format YYYYMMDD_x -> (x = catch number of the day).

Example: Alca torda_20201117_1

2. Geographical position (mandatory)

It is essential to provide the approximate position of the capture as soon as the bird is brought on board. This position is the geographical x, y coordinates (WGS84) in DMS (Degrees, Minutes, Seconds).

Example:

Lat: 1° 58' 28,7436" (S)

Long: 30° 10' 41,7776" (E)

3. Identification of the species to the lowest taxonomic level (mandatory)

Species identification to the lowest taxonomic level: this makes it possible to differentiate between species.

i) Storm petrel sp (= uncertainty between several species) e.g. Leach's storm petrel / European Storm Petrel / Wilson's Storm Petrel

ii) Shearwaters x or y (= uncertainty between two species) e.g.: Balearic shearwater / Yelkouan shearwater

iii) Northern gannet (= definite identification)

4. Age group identification (optional)

Distinguishing between **adults** (birds with adult summer/winter plumage), **sub-adults** (birds with intermediate plumage between adult and juvenile) and **juveniles** (birds with juvenile plumage: juvenile and first winter) greatly refines the age classes most affected by fishing gears

5. Taking photographs (strongly recommended)

We strongly recommend that you take at least three photographs of each individual brought on board. Back and front photographs of the bird with its wings spread, and a photograph of the side of the bird's head. The three photographs should be given the same numerical code as the individual.

Alca torda_202001171-1

Alca torda_202001171-2

Alca torda_202001171-3

These photographs will be used by a designated expert to validate the taxonomic identification, or even to pursue this to the lowest taxonomic level (species, subspecies).

Example:



Sur le dos

e.g.: (Alca torda_202001171-1)



Sur le dos

e.g.: (Alca torda_202001171-2)



Tête de profil

e.g.: (Alca torda_202001171-3)

Live bird (unharmmed)

Note the markings on the rings
Take a photo of the rings
Release the bird

Live bird (injured)

Note the markings on the rings
Take a photo of the rings
Bring the bird back to land*.

Dead bird

Note the markings on the rings
Take a photo of the rings
Recover the scientific material
Discard the dead bird into the sea

Send the information (if the bird is released) or the material (if the bird is dead) to **Antoine CHABROLLE** (MNHN) via the generic address: oiseaux_obsmer@listes.ifremer.fr

**Arrange for the competent authorities to take charge of the bird on return to port, if necessary.*

6. Report the cause of death or the fate of the bird (compulsory)

To assess the impact of fishing on marine avifauna, it is essential to document certain information, which can be combined.

All this information will be used to objectively document the impact of fishing activities on marine avifauna.

It is essential to report the description of the interaction (A) and the state of the individual (B).

The description of the interaction (A) and the state of the individual (B) must be entered.	A.1 - Lines with hooks A.1.1 - hook in the beak A.1.2 - hook in the head, body, wings or legs A.1.3 - tangled in the line A.2 - Nets / trawls / seines A.2.1 - caught by the head A.2.2 - caught by the wings A.2.3 - caught by the legs A.2.4 - not determined A.3 - Traps and pots A.3.1 - present inside the trap or pot A.3.2 - caught on the outside A.4 - Cables/funnels A.4.1 - collision
B-State of the individual	B.1 DEAD BIRD B.1.1 - remains in the water (becomes detached or falls before being brought on board) B.1.2 - is brought aboard (by gear or operator), then thrown back into the water before observation B.1.3 - is brought on board (by gear or operator), then thrown back into the water after observation B.2 LIVE BIRD B.2.1 bird frees itself and leaves, appearing healthy B.2.2 bird frees itself and leaves, seems injured or unsteady B.2.3 bird recovered, released back into the water before observation B.2.4 bird recovered, released back into the water after observation: appears healthy B.2.5 bird recovered, released back into the water after observation: appears injured or unsteady B.2.6 bird kept for treatment in a care centre B.2.7 eventually dies

Example:

Caught by the head in a net and found dead. Recovered and then discarded into the water after carrying out the OBSMER protocol

=> A.2.1 / B.1.3 (see bird form table [*tableau fiche oiseau*])

See the sheet on accidental catches of seabirds in Appendix 4.

5.3.2 PETS sensitive species: special cases

The European sturgeon is a PETS-listed species due to its sensitive status and is protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES,

Appendix 1) and classified as Critically Endangered by the IUCN on the Red List of Threatened Species.

To monitor this species in particular, in addition to the protocol (species identification, weight, measurement), observers encourage the skipper to declare the catch on a dedicated website (<http://www.sturio.fr/index.php/declaration-de-cap>) as part of the 2016–2026 national action plan for the European sturgeon.

For turtles, two specific measurements are required: standard curve length [*LCS longueur courbe standard*] and carapace curve width [*LACC: largeur courbe carapace*]. Careful handling of these individuals is recommended.

5.4 Special observation around the vessel

In the event of special sightings around gear and vessels:

- If the observer is in the process of sampling an FO (analysing the retained part and/or the discarded part), **priority goes to observing the catch**.
- If this is not the case, the observer can observe these other species (marine mammals, birds, sharks, sunfish, etc.) (identification, counts, etc.) and report this in the WAO as an exceptional observation with a comment in the 'Observations and accidental catches' column [*Observations et captures accidentelles*].

5.5 Observation of benthic organisms that are indicators of Vulnerable Marine Ecosystems (VMEs)

5.5.1 Collecting and sorting VME indicator taxa

For all the FOs sampled, the observer should collect, as far as is possible, all the benthic organisms identified as VME indicators. To distinguish the VME indicator organisms from the others they can refer to the identification documents. In simplified terms, VME indicator organisms are fixed benthic species: sponges, corals, gorgonians, etc. Mobile flora and fauna (sea stars, brittle stars, sea urchins, sea cucumbers, arthropods, various worms, etc.) are not to be considered and are to be treated like the rest of the non-detailed discards from the DP.

The organisms collected must then be sorted by category:

- Colonial hard corals
- Solitary hard corals (cross-section)
- Black corals (antipatharians)
- Gorgonians
- Soft corals
- Pennatulas (sea pens)
- Cerianthes (tubicolous anemones)
- Hydrocorals
- Sponges
- Crinoids

- Xenophyophores
- Bryozoans
- Bivalves (*Neopycnodonte* spp.)

If in doubt about an organism, take a photo of it and treat it separately, then refer to the documentation (VME identification guide: <https://archimer.ifremer.fr/doc/00834/94627/>) or send an email to Ifremer to confirm the identification.

If the collection is not exhaustive and the observer has had to carry out sub-sampling or a single opportunistic collection of the organisms observed, this must be specified on the **'VME' FORM [FICHE FORMULAIRE 'EMV']** and on Allegro.

5.5.2 Photos and weighing of organisms

The observer should then simply:

- **Take a general photograph of the organisms sorted by category**, including a size marker (scale or graduated ruler). As far as possible, each organism should be identifiable and distinct from the others (refer to the guidelines for photographing benthic organisms in the VME identification guide). The observer can also take additional photos, for example of details of organisms, that they consider relevant.
- **Weigh the organisms sorted by category** (or failing that, weigh the entire batch). If weighing is not possible or not accurate, weights may be estimated, and this should be specified on the **'VME' FORM** and in Allegro.

No size measurement or counting of individuals is required.

The observer can add further details on the observation, for example on species composition, if they have been able to make more precise identifications than the simple categories.

5.5.3 Data entry

The observer must enter the collected information into Allegro under the detailed DP. A 'VME' reference tree listing the categories of VME indicator organisms can be copied into the FOs.

If no data is entered on VMEs for an FO, it may be specified whether the observer observed an absence of VME indicator taxa or if they were unable to make an observation (difference between 'not observed' and 'absent').

The photos taken must be renamed according to the usual nomenclature, as specified in the manual, and transmitted via the WAO in the usual way.

Nomenclature: OBSMER_Year_Metier_Batch_Stratum_Gear_VME Category_Date_N° batch_N° photo_Observer_Initials

6 Specific cases of the protocol to consult and take note of

This section covers the specifics and special cases encountered by observers in certain métiers and in the application of the protocol. If you have any questions or require further information, please contact harmonie@ifremer.fr

Sampling the retained part and the discarded part

A representative sample contains the same proportions of species and of waste as the total batch. As can be seen, sampling will be all the easier if the batch has few species and these are evenly distributed.

In practice, the observer will try to take several volumes from different places in the batch (edge, middle, top, bottom). Atypical individuals (large species, rare species, etc.) are to be treated separately from the main sampling (outside the bulk sample).

Measurement

Please consult the measurement guide available on the SIH website. Take care to use an instrument that is suitable for the species being measured (callipers, tape measure, etc.) and to ensure the required precision of the measurements (cm, ½ cm, mm, etc.).

Weighing

Weighing will be carried out using equipment taken on board by the observer or equipment present on board. In all cases, the equipment must be calibrated before the start of each fishing trip. The sensitivity of the device used should be adapted to the weights being measured.

Cases where it is impossible to use a balance on board

If it is not possible to use a balance, the live weight of the species can be determined from its size structure (see size structure/ size–weight relationships). In this case, the size structure will be recorded for all the species.

The weight can be measured or estimated. You can also use an intermediate calculation based on a unit of volume of known weight (again, measured or estimated).

Cases where species identification is difficult

If the observer has any doubts about species identification, they can either bring an individual ashore or take a digital photo. The final identification will then be made on shore with the help of another person and/or an identification guide.

The observer may contact Dr Samuel Iglesias of the MNHN for confirmation.

For some species, this is mandatory.

In the case of monkfish/anglerfish, it is essential to identify the species:

- Anglerfish or common monkfish *Lophius piscatorius*,
- Blackbellied angler or blackbellied monkfish *Lophius budegassa*.

Apart from the colour of the peritoneum (black for *Lophius budegassa*), the species can be distinguished by the number of rays on their dorsal fins:

- *Lophius budegassa*: 8 to 10 rays,
- *Lophius piscatorius*: from 11 to 13 rays.

It is essential to identify these two species according to the criteria described above. **For individuals smaller than 15 cm, the colouration of the peritoneum is not a reliable criterion for species determination, so it is necessary to count the rays of the dorsal fin, which is not an easy task on board a vessel.** All monkfish/anglerfish under 15 cm should therefore be brought back to the laboratory for species identification.

For a given species, how should one define the fraction to be analysed?

If the number of individuals of a species is too large, only a fraction (by weight or by volume) should be counted and/or measured (in practice, the examination of at least 30 individuals should be sufficient). If the overall number of individuals of a species is low, all the individuals will be examined. Ultimately, the fraction studied should be representative of the batch studied.

Special case of the Norway lobster

For Norway lobster, **a record of the size structure by sex** of the retained and discarded parts is required. The retained part is classically sorted into three commercial categories, large, medium and small. In addition, there is the discarded part. The weights of the sub-samples for measurements and sex determination should be:

- Commercial category 'large' or 'royale': around 2 kg,
- Commercial category 'medium': around 1.5 kg,
- Commercial category 'small': around 1 kg,
- Discards observed: around 500 g.

Cases of accidental catches and of PETS sensitive species

Accidental catches (e.g. marine mammals, birds, protected fish such as sturgeons or elasmobranchs) should be recorded in as much detail as possible (number, weight, size, sex, alive, dead, etc.).

When the data is being entered, these catches must be in an exhaustive non-bulk discard sample, and the comments fields can be used to provide the information. Catches of sensitive species fall within the scope of conventional sampling (see 3.4.2 Procedure to be followed for non-sampled FOs).

Cases of damaged individuals

For certain netting métiers where the number of damaged individuals can be high, we try to reconstruct the size of the individual, and the weight will be calculated by the size–weight relationship. ‘Reconstructed’ size and weight should thus be noted.

Payments in kind and the case of landed crates containing a mixture of species

Payments in kind (the fisherman's cut), are part of the retained part and thus should not be included in the discards observed. If identifiable at the time of the FO sorting, the species should be recorded under their commercial names together with a ‘fisherman’s cut’ category and detailed by species if possible.

In the case of a mixture of species, the observer should try to carry out a species-by-species analysis, noting the name of the mixture.

Estimation of crustaceans crushed by netters

Because there is not enough time to untangle them, crustaceans caught in nets are often crushed with a mallet. To estimate this often very large fraction of the discards, the observer should count the number of crushed crustaceans (if the observer is alone on board, they will have to ask a member of the crew to count the individuals of each species). After sampling a few individuals and estimating their average weight, the observer will obtain an estimate of the weight of the discarded crustaceans.

- If only the claws of crabs are kept for sale, this is the special case ‘CLA - claws’. The number of claws (Allegro cell: number of individuals counted – *nombre d’individus comptés*), the corresponding weight and presentation should be noted in the RP. No other information is required. In particular, do not count carapaces in the DP. It is implied that these form part of the discards, in the same way as the heads in the ‘Tal - tail’ presentation for monkfish/anglerfish, for example. It can happen that claws are kept and (whole) individuals discarded, in which case the information must be entered separately, in the RP and DP.
- As far as spider crab claws are concerned, there is no conversion coefficient for converting claw weight into live weight. It is therefore advisable to estimate the number of individual spider crabs and the weight corresponding to whole individuals.

Case of pair trawling

In the case of pair trawling (trawl towed by two vessels), the observer should note the name and registration of the other vessel.

If the catch is being processed on the other vessel or split up, the observer should try to obtain as much information as possible via radio about the composition of the catch held on board the other vessel, the sorting time, etc. The observer should also be vigilant in the event of accidental catch, and in this case will try to obtain as much information as possible about the individuals (number, sex, etc.).

Which species should be sexed?

Sexing is mandatory for:

- Norway lobster (*Nephrops norvegicus*),

- Other crustaceans (spider crab, edible crab, lobster, spiny lobster, etc.)
- Blue ling (*Molva dypterygia*),
- Elasmobranchs (rays and sharks)
- Megrim (*Lepidorhombus whiffiagonis*).

Please note that measurements should be taken for each sex.

When sex is distinguished, a separate weighing is required unless a size–weight relationship is used (which, in principle, should be by sex).

Please indicate whether female individuals of crustaceans (spider crab, edible crab, lobster, spiny lobster) are bearing eggs or not.

7 Appendices

7.1 Appendix 1: List of on-board equipment

On-deck sampling

- ☐ 4 fishing baskets (approx. 50 l): for taking samples of discards, buffer baskets for measurements, etc.
- ☐ Shovel: for taking samples of discards, cleaning the deck, etc.
- ☐ Freezer bags: scientific samples
- ☐ Refuse bags of various volumes: samples taken for onshore analysis of discharges
- ☐ Waterproof paper labels: for identifying samples
- ☐ Permanent markers
- ☐ Small PVC plates: to designate the marks in the baskets
- ☐ Whiteboard markers to write on these PVC plates
- ☐ Rags
- ☐ Bowls of different sizes: for waste sorting

Measuring equipment

- ☐ 2 flat rulers 30, 50 cm
- ☐ 1 100 cm long ruler with stop
- ☐ 1 stainless steel calliper
- ☐ 1 plastic calliper (for large crustaceans)
- ☐ Tape measure
- ☐ Weights: 30 kg, 20 kg, 5 kg, 2 kg (e.g. one of 25 kg and one of 5 kg)

Data entry

- ☐ Pencils
- ☐ Eraser
- ☐ Pencil sharpener
- ☐ Scissors
- ☐ Stapler
- ☐ Clipboard (*2)
- ☐ New polyester sheets
- ☐ PVC plates
- ☐ Latest version of field forms printed on plain paper and/or plastic sheets

Miscellaneous

- ☐ 2 torches
- ☐ Mobile phone (emergency: 112)
- ☐ Digital cameras
- ☐ Dictaphone (optional)
- ☐ GPS
- ☐ Spare batteries
- ☐ 4 snap hooks
- ☐ Rope
- ☐ Knife
- ☐ Species identification guides (Guide des poissons de l'Atlantique européen, Quéro, Delachaux, VME guides and forms)
- ☐ ObsMer documentation: manual, protocols, etc.

Gear to be embarked (per person)

- ☐ PFD (mandatory)
- ☐ Lifejacket
- ☐ Survival suit
- ☐ Safety boots
- ☐ Waterproof trousers
- ☐ Marine jacket
- ☐ Hard hat
- ☐ Gloves
- ☐ Arm shields

7.2 Appendix 2: Memorandum from the French Secretary of State for the Sea dated 2 November 2022 on the procedure for embarking observers of fisheries or marine life on board fishing vessels



SECRETARIAT D'ETAT A LA MER Direction générale des Affaires Maritimes, de la Pêche et de l'Aquaculture Sous direction de la sécurité des navires et de la transition écologique des navires Bureau de la sécurité des navires et de l'innovation navale Suivi par : sebastien.verdeau@developpement-durable.gouv.fr Sous-direction des gens de mer Bureau du travail maritime, de la santé et de la sécurité au travail maritime Suivi par : catherine.rodolphe-merot@developpement-durable.gouv.fr Sous direction des ressources halieutiques Bureau de l'Appui Scientifique et des Données Suivi par : louise.veron@agriculture.gouv.fr Adresse : Tour Séquoia, La Défense Réf.
NOTE DE SERVICE Date : 02 novembre 2022

La Première Ministre,

à

Date de mise en application : immédiate

Nombre d'annexes : 2

Mesdames et Messieurs les préfets de région

Madame et Messieurs les directeurs
interrégionaux de la mer et les directeurs de la
mer

Objet : Procédure d'embarquement des observateurs des pêches ou de la faune et de la flore marines à bord des navires de pêche

Bases juridiques:

- décret n° 84-810 du 30 août 1984 modifié relatif à la sauvegarde de la vie humaine en mer, à la prévention de la pollution, à la sûreté et à la certification sociale des navires
- décret n° 2007-1227 du 21 août 2007 relatif à la prévention des risques professionnels maritimes
- arrêté du 23 novembre 1987 relatif à la sécurité des navires

Résumé : procédure préalable à l'autorisation d'embarquer des observateurs des pêches ou de la faune et de la flore marines sur les navires de pêche

Mots-clés : observateurs / pêche maritime

Destinataires	
Pour exécution : Préfets des régions Normandie, Bretagne, Pays de la Loire, Nouvelle-Aquitaine, Provence-Alpes-Côtes d'Azur, Corse, La Réunion, Guyane, Martinique, Guadeloupe, Mayotte Par délégation : DIRM Méditerranée DIRM Sud-Atlantique DIRM Nord-Atlantique-Manche-Ouest DIRM Manche Est-Mer du Nord DDTM 2B, 2A, 06, 83, 13, 66, 64, 33, 17, 85, 44, 56, 29, 22, 35, 50, 14, 76, 62 DM Guadeloupe, Martinique, Guyane, Sud Océan Indien Centres de sécurité des navires – Société de classification habilitées en vertu du décret n°84-810	Pour information : CNPMEM Préfète des TAAF Préfets des régions Occitanie et Hauts-de-France

7.3 Appendix 3: Non-exhaustive list of abnormal events during a fishing operation

- Torn or damaged net (all metiers combined): (torn meshes, holes in the trawl net, entanglement of the net, broken main line, catching in rocks, loss of nets, snagged or shortened lines, etc.);
- Poorly closed codend, silted up trawl;
- Mechanical damage (hydraulic leaks, engine failure/breakage, winch failure, panels crossing/spreading apart/dropping off, probe problems, etc.);
- Shortened set: interrupted, net pulled up, vessel turning around early;
- Abnormal catch, presence of stones/rocks in the net, loss of catch.

7.4 Appendix 4: Bird bycatch form [Fiche captures accidentelles oiseaux]

ACCIDENTAL CAPTURES SHEET Seabirds (page 1)



Context

This form sets out the minimum information that must be filled in for ANY accidental capture of a seabird, whether or not the fishing operation is sampled.

Warning

Handling **seabirds**: never handle dead or living individuals without gloves and goggles (gannets for example).

Complete the table below, using one line for each individual. It is recommended that you take photos of the individuals. Remember to fill this information in on WAO when you return ashore.

N° FO	Species Scientific name	Digital code (YYYYMMDD_N*)	Geographical position	Age class (if possible)	Returned to the sea Dead / Alive	Description of the capture / Status of the individual (*)	3 Photos Yes / No + digital code

Comment(s):

* Description of the interaction (A) and the state of the individual (B) – see table on the next page

ACCIDENTAL CAPTURES SHEET

Seabirds (page 2)



Context

A-Description of the interaction	A.1 - Lines with hooks A.1.1 - hook in the beak A.1.2 - hook in the head, body, wings or feet A.1.3 - tangled in the line A.2 - Nets/trawls/seines A.2.1 - caught by the head A.2.2 - caught by the wings A.2.3 - caught by the legs A.2.4 - not determined A.3 - Traps and pots A.3.1 - present inside the trap or pot A.3.2 - caught on the outside A.4 - Cables / funnels A.4.1 - collision
B-State of the individual	B.1 DEAD BIRD B.1.1 - remains in the water (becomes detached or falls before being brought on board) B.1.2 - is brought aboard (by gear or operator), then thrown back into the water before observation B.1.3 - is brought on board (by gear or operator), then thrown back into the water after observation B.2 LIVE BIRD B.2.1 bird frees itself and leaves, appearing healthy B.2.2 bird frees itself and leaves, seems injured or unsteady B.2.3 bird recovered, released back into the water before observation B.2.4 bird recovered, released back into the water after observation: appears healthy B.2.5 bird recovered, released back into the water after observation: appears injured or unsteady B.2.6 bird kept for treatment in a care centre B.2.7 bird eventually dies

7.5 Appendix 5: Accidental capture of marine mammals form [*Fiche capture accidentelle de mammifères marins*]

As part of the partnership with PELAGIS, the protocol for observing accidental catches for the ObsMer programme is changing.

Any **dead individual marked with a tail ring must be put back into the sea, and its identifier and GPS position must be recorded.**

ACCIDENTAL CAPTURES SHEET Marine mammals



Context

This form sets out the minimum information that must be filled in for ANY accidental capture of a marine mammal, whether or not the fishing operation is sampled.

Warning

Handling **marine mammals**: never handle live or dead animals without gloves (risk of disease transmission).

Complete the table below, using one line for each individual. It is recommended that you take photos of the individuals.

Remember to fill in the WAO based on this information once you return ashore.

WARNING, the information in **yellow** in the table should be entered **as a comment for the fishing operation.**

N° FO	Species Scientific name	Length (cm)	Weight (kg)	Circumference (cm)	Sex Male / Female / Undetermined	Condition on return to the water Dead / Alive	Gear / species interaction	Marks of capture (Y/N)	Type of mark of capture (hook wound /amputation /laceration /rostral fracture...)	Caudal ring reference	Date and time of return	Latitude of return	Longitude of return	Photo Y/N + digital code

Comments:



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7.6 Accidental capture of Elasmobranchs and Turtles form [Fiche captures accidentelles d'Elasmobranches et de Tortues]

ACCIDENTAL CAPTURES SHEET Elasmobranchs / Turtles



Context

These forms present the minimum information to be filled in for ANY accidental capture of marine mammals, turtles or elasmobranchs, whether or not the fishing operation is sampled.

Warning

Handling **elasmobranchs**: watch out for spines on the dorsal fins and beware of bites from these animals.

Handling **turtles**: lift the turtle by holding the edges of the shell and refer to the measurements for these species.

Complete the table below, using one line for each individual. It is recommended that you take photos of the individuals. Remember to fill this information in on WAO when you return ashore.

N° FO	Species Scientific name	Weight (kg)	Length TL or FL (cm)/ for turtles: LCS/ LACC* (cm)	Sex Male / Female / Undetermined	Condition on return to the water Dead / Alive	Gear / species interaction	Photo Yes / No + digital code (YYYYMMDD_N°)

* For turtles, two specific measurements are required: standard curve length [LCS *longueur courbe standard*] and carapace curve width [LACC: *largeur courbe carapace*]. Careful handling of these individuals is recommended.

Comments:

7.7 Appendix 6: Communication form on the implementation of a monitoring protocol for VME indicator taxa [*Fiche de communication sur la mise en place d'un protocole de suivi des taxons indicateurs d'EMV*]

What are VMEs?

Vulnerable Marine Ecosystems refers to those marine ecosystems, often deep-sea and benthic (i.e. located on the ocean floor) considered vulnerable to potential impacts and because of some of their characteristics (rarity, functional importance, fragility, biological traits of the species and structural complexity). Examples of VMEs include deep and cold-water coral reefs, sponge and gorgonian communities and other types of dense emergent structuring fauna (which play an important role in the ecosystem).

Why monitor VME indicator taxa?

It is useful to monitor VME indicator taxa for several reasons. First of all, these vulnerable ecosystems are largely unknown and still relatively unexplored compared with others. They are made up of species that are potentially fragile, rare, habitat-engineering and very important for all the organisms that live in these environments, including fish species of commercial interest that can find places to feed, congregate, reproduce, have nursery grounds, etc.

Secondly, it is now a regulatory requirement under the European Data Collection Framework (DCF) to set up this type of monitoring for fisheries in the EU area.

Consequently, there is a real value in introducing this type of monitoring, based on voluntary participation, on commercial fishing vessels: observers and fishing vessels contribute to improving knowledge of these ecosystems and their role in the global ocean system, in addition to scientific programmes which do not always cover the areas frequented by fishing fleets.

What is the observer's role?

Observers are present first and foremost to collect scientific data, but as the ObsMer programme has gradually evolved, they no longer focus solely on species of commercial interest (fish, crustaceans, molluscs). More broadly, fisheries management is no longer based solely on the exploited species but considers the entire environment in which fishing activities operate; this is an ecosystemic approach.

Observers are therefore asked to collect, photograph and weigh these other organisms, and to send the data to Ifremer. The data will be validated by Ifremer in the same way as the rest of the data the observers collect, stored in a database and then made available to scientists and managers.

What is the purpose?

This monitoring, set up throughout Europe, is of crucial importance for gaining a better understanding of these ecosystems (species composition and distribution, ecological role), better ecosystem monitoring (state of health) and characterising fishing activities and pressures, among other objectives. In this way, they help to ensure the sustainability of fisheries and the good ecological status of the marine ecosystems in which they operate.

Observations from these monitoring programmes are fed into highly valuable international databases, which are used by scientists to carry out large-scale analyses. Based on these analyses and the scientific recommendations made, fisheries managers may implement management

7.8 Contacts

For all enquiries, please contact:

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