



Food and Agriculture
Organization of the
United Nations



General Fisheries Commission
for the Mediterranean
Commission générale des pêches
pour la Méditerranée

Understanding Mediterranean multi-taxa bycatch of vulnerable species and testing mitigation: a collaborative approach

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MEDBYCATCH PROJECT

As confirmed from the Status of Mediterranean & Black Sea fishery (SoMFI, 2018, 2020) and from the Regional Review (under publication), there are important gaps in the knowledge of the actual extent of bycatch in the Mediterranean and the Black Sea.

Incidental captures of vulnerable species, as well as discards, ***are serious issues hampering the sustainability of fishery activities in the GFCM area of application.***

Data collection has never been standardised in the Mediterranean; very difficult to compare quantitative data and understand impact

Need to expand incidental catch surveys and standardize practices in order to compare fisheries, as well as test potential methods and eventual mitigation tools.

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In the framework of the MAVA project “**Understanding Mediterranean multi-taxa ‘bycatch’ of vulnerable species and testing mitigation - a collaborative approach**“, to support Mediterranean countries, and specifically Morocco, Tunisia and Turkey, to identify and test measures to reduce impact of fisheries on these marine key species and to develop and implement standardized data collection of bycatch across the Mediterranean, have been developed the following publication

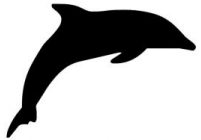


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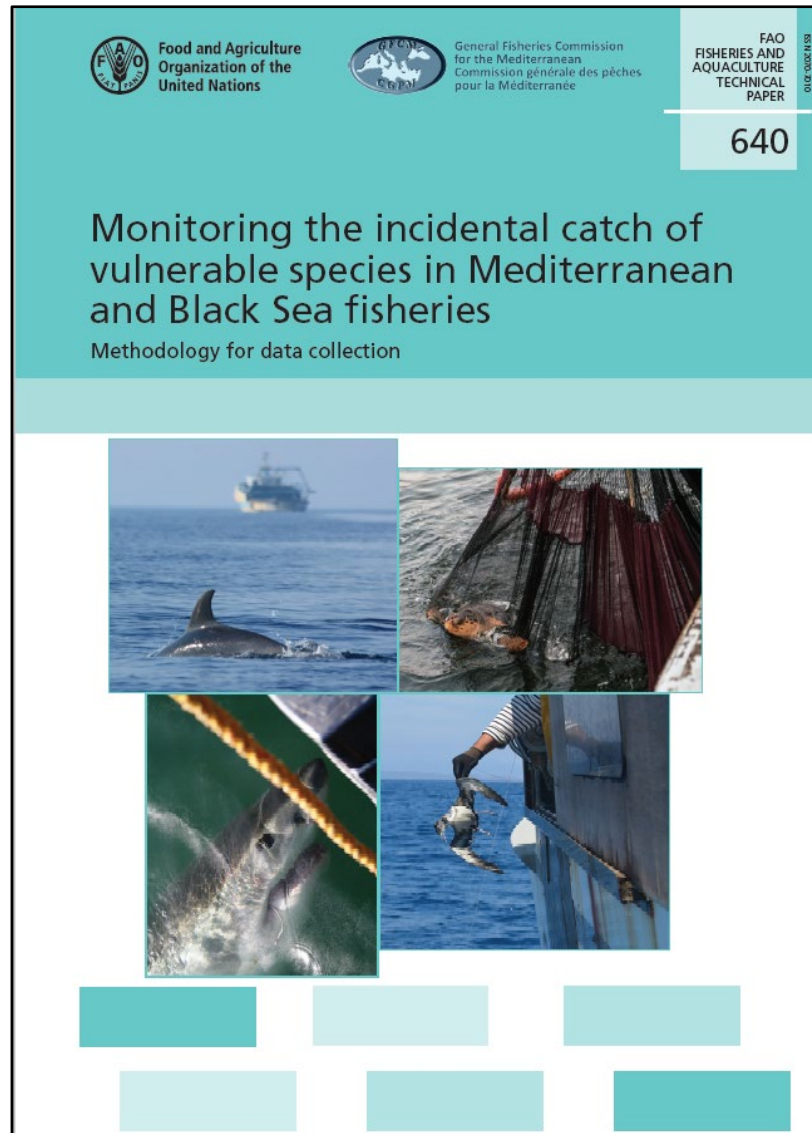


The methodology present in this publication should

- provide **minimum data to be collected** for the different groups of on vulnerable species;
- **standardize the data to be collected**, including the forms to be used to allow repeatability and comparison between fisheries in the region.
- **allows for replicability and comparisons among fisheries across the region**, thus offering a harmonized basis of knowledge, information and evidence for decision-making.



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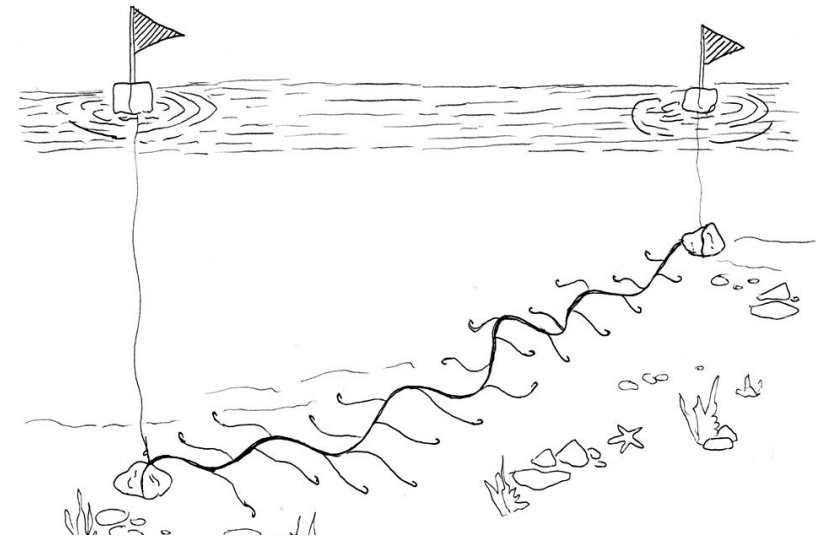
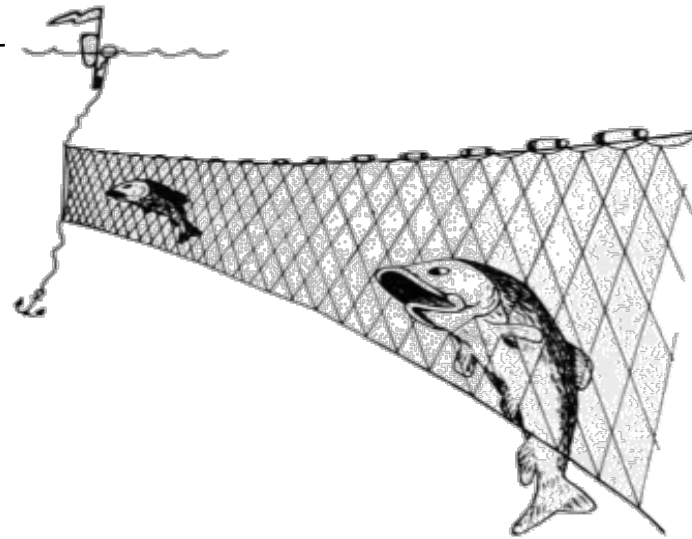
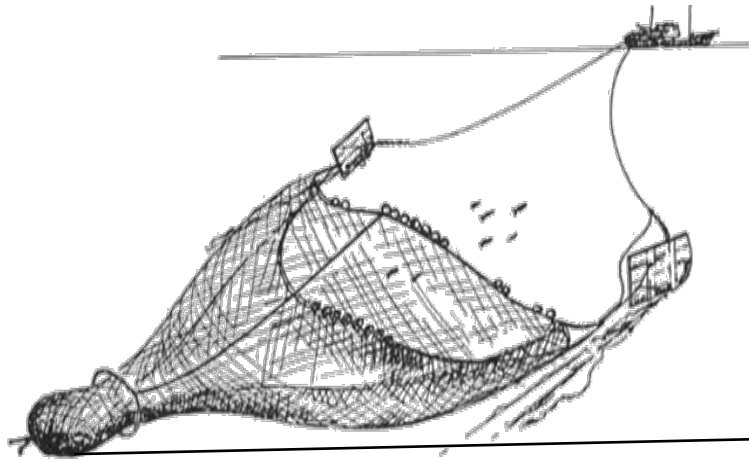
Methodologies

- First, bycatch can be sampled through at-sea monitoring of commercial catches (**by observers on board**).
- The second approach is to conduct direct dialogues with fishers (**by interviews/questionnaires**), collecting also perspectives on the bycatch issue, which is meant to complement the on board observations data analyses, and to provide an integrated approach toward management.
- The third one fishers sample their own bycatch (**by self-sampling**)



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This project focused on the three separate fishing gears: demersal trawl, gillnets and demersal longlines



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Morocco:

		Number of on board fishing observations	Number of questionnaires
Tangiers	Longliners	219	501
M'Diq	Trawlers	46	144
	Seiners	47	50
Al Hoceima	Trawlers	50	198
	Seiners	43	190
Nador	Trawlers	114	232
	Seiners	99	148

Tunisia: Based on the sampling plan prepared by the National focal points (in coordination with the partners), 22 ports were sampled, a total of **190 observations** onboard and **752 questionnaires** have been implemented in **GSA 12 and GSA 13**.

290 observations onboard and **826 questionnaires** were carried out in **GSA 14**.

Turkey: the observer programme was carried out across 20 ports and 2 GSAs (GSA 22 and GSA 24). Trawlers (> 12m) = On board observations; Polyvalent (< 12m) = Questionnaires.

92 On-board observations were carried out across 13 ports during the trawling season, which is from September to April; **2160 questionnaires** across 20 ports were carried out all year round.

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Annex 3.a. Onboard observation - Vessel characteristics					
Name of data collector(s)					
Date					
ID fishing trip					
Country					
GSA					
					Notes
Vessel name*					
Fleet segment					
Total length of the vessel					
Power (kW)					
Gross tonnage (GT)					
Port of departure					
Port of arrival					
Gear specifications					
	1 st gear	2 nd gear	3 rd gear	4 th gear	Notes
Gear type					
Net length (m)					
Mesh size (codend - mm)					
Number of hooks					
Bait					
Number of lines					
Number of pots/traps					
Soak time (the time during which the fishing gear is actively in the water)					
Other					
*If available					



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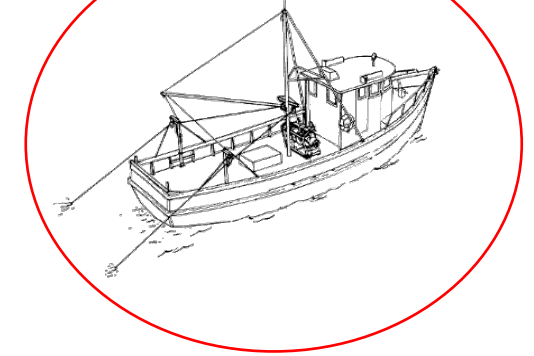
Annex 3.b. Onboard observation - General information by fishing trip

Date			
ID fishing trip			
	Notes		
Total number of fishing operations			
Fishing hours			
Bycatch of vulnerable species (Y/N)			
Number of fishing operations with zero catch of vulnerable species			
General information on the catch composition		Notes	
Total landing (kg)			
Main commercial species in the landing fraction			
Discard (kg and percentage), in the catch composition	kg	%	Notes
Main species in the discarded fraction			
Marine litter (Y/N)			

Vulnerable species
(Yes/No)



Fishing trip (i.e. fishing day)



Landing (kg)



Target species



Discards (kg/%)



Litter (Yes/No)



A vertical banner image showing a close-up of a blue rope with a red buoy floating in the ocean. The rope is taut and runs diagonally across the frame, with the red buoy attached to it. The water is a deep blue with white foam and bubbles visible around the rope and buoy. The image is oriented vertically, matching the text layout on the page.

*If available

- ✓ This template should be duplicated as many times, if during a single fishing operation different vulnerable species are caught.



[illegible]

- Source: indicate source of data and then report code for:
 - ID fishing trip: identification code assigned to each fishing trip (as in Annex 3.a).
 - ID fishing operation: identification code assigned to each fishing observation during a fishing trip (as in Annex 3.c).
 - ID self-sampling operation: identification code assigned to self-sampling operation (as in Annex 8.b).
 - ID standing observation: identification code assigned to standing observation (as in Annex 8).

Source: UN Environment/MAF, 2008.

Source: MARE/2014/19, 2016.

A vertical photograph showing a close-up view of a blue body of water. A red buoy is attached to a rope, partially submerged. The water surface is textured with small ripples and white foam from a wake or current. The lighting is bright, creating highlights on the water's surface.

A dense, close-up view of a large number of small, reddish-brown crabs and other small marine organisms, including shells and seaweed, scattered across a dark, wet surface. The crabs are the most prominent feature, with their characteristic pincers and legs visible. They are interspersed with various types of seashells, some of which are open, revealing their interiors. There are also pieces of seaweed and other organic debris scattered throughout the scene. The overall color palette is dominated by the reddish-brown of the crabs, the various shades of brown and grey of the shells and seaweed, and the dark, wet ground. The lighting is somewhat uneven, with some areas appearing brighter than others, highlighting the textures of the different organisms and the wet surface.

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One of the scope of the project was also to develop and maintain a pan-Mediterranean bycatch database hosted by GFCM.

Home

Welcome | **Bienvenue**

Welcome to the **GFCM Database of incidental catch of vulnerable species**.

This GFCM online system has been put at disposal by the GFCM Secretariat for the sake of facilitating the submission of bycatch data (on board observations, self-sampling, stranding data and related questionnaires) in the remit of the activities stemming from the MAVA project "Understanding Mediterranean multi-taxa 'bycatch' of vulnerable species and testing mitigation – a collaborative approach".

Relevant information could be found on the GFCM web site at: www.fao.org/gfcm/data/vulnerable-species.

Relevant technical documents

✓	📄	Name	Title
		Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea - Methodology for data collection	...

On board observations | **Self-sampling** | **Stranding data** | **Questionnaires**

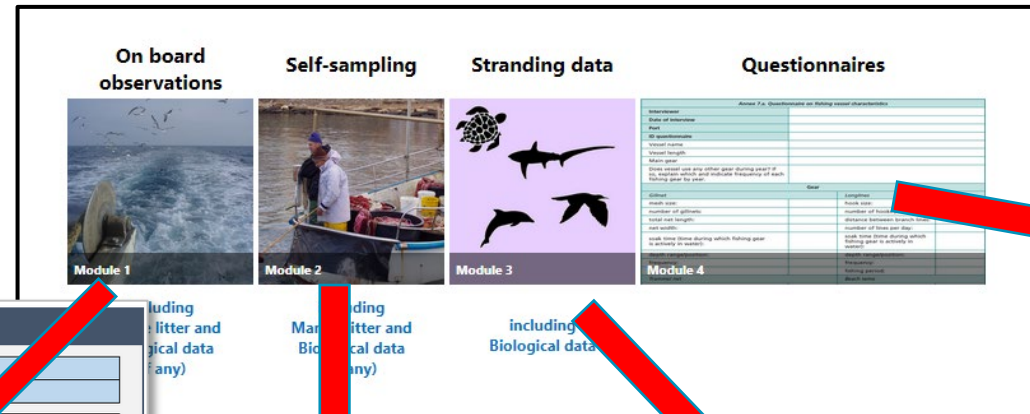
Module 1 | **Module 2** | **Module 3** | **Module 4**

including Marine Biological data (if any)

including Biological data

In this database all the data, collected following the suggested methodologies and through the ad-hoc templates present in the publication, should be uploaded

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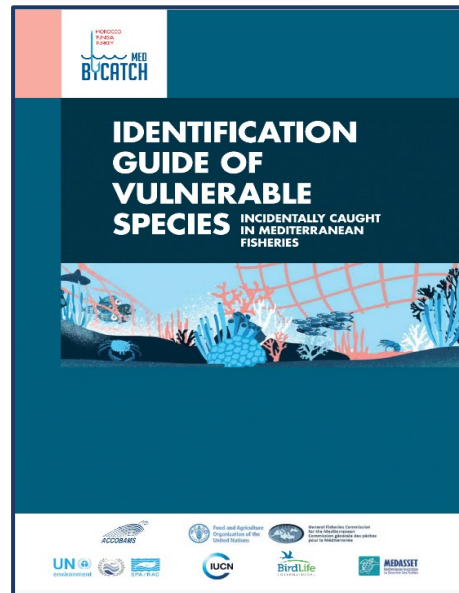
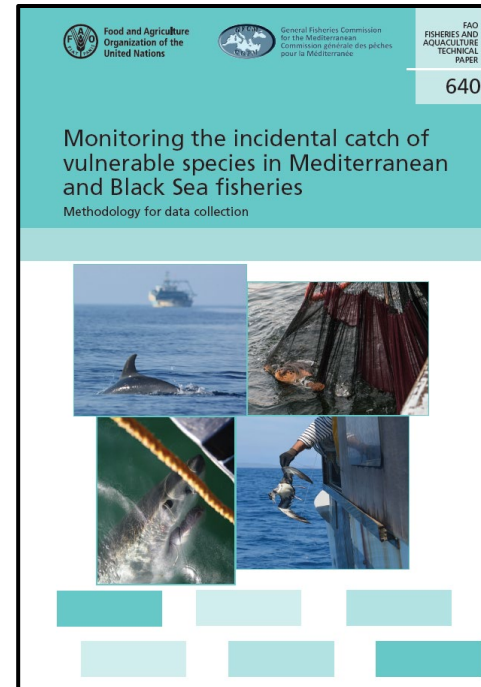
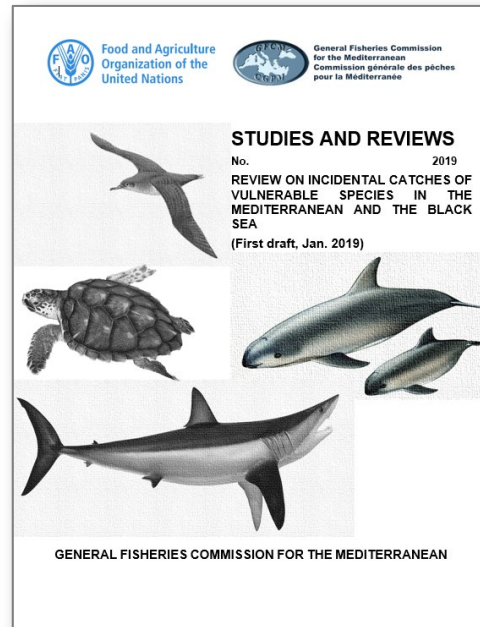
ON BOARD OBSERVATIONS [Data-entry module]	
Appendix 8.a	Vessel characteristics Gear specifications
Appendix 3.b	General information by fishing trip
Appendix 3.c	General information by fishing operation General information on vulnerable species by fishing operation Vulnerable species behaviour (presence of specimens around the vessel during fishing operation)
MARINE LITTER	
Appendix 13	Data on marine macro-litter - 1 Data on marine macro-litter - 2
BIOLOGICAL DATA	
Appendix 4.a	Data on Marine mammals - 1 Data on Marine mammals - 2 (other length measures)
Appendix 4.b	Data on Sharks, rays and chimaeras
Appendix 4.c	Data on Sea turtles
Appendix 4.d	Data on Seabirds
Appendix 6	Data on marine vulnerable benthic species - 1 Data on marine vulnerable benthic species - 2

SELF-SAMPLING [Data-entry module]	
Appendix 8.a	Vessel characteristics Gear specifications Catch composition by fishing trip
Appendix 8.b	Vulnerable species by fishing operation
MARINE LITTER	
Appendix 13	Data on marine macro-litter - 1 Data on marine macro-litter - 2
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Appendix 4.d	Data on Seabirds
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QUESTIONNAIRES [Data-entry module]	
Appendix 7.a	General information on fishing vessel characteristics General information on gear(s) type
Appendix 7.b	Questionnaire by fishing trip Gear specifications by fishing trip Catch composition by fishing trip Bycatch of vulnerable species by fishing trip Bycatch of benthic species by fishing trip
Appendix 7.c	Questionnaire on general information on bycatch of vulnerable species

STRANDING [Data-entry module]	
Appendix 11	Stranding data
BIOLOGICAL DATA	
Appendix 4.a	Data on Marine mammals - 1 Data on Marine mammals - 2 (other length measures)
Appendix 4.b	Data on Sharks, rays and chimaeras
Appendix 4.c	Data on Sea turtles
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Thank you for your attention

