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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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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.

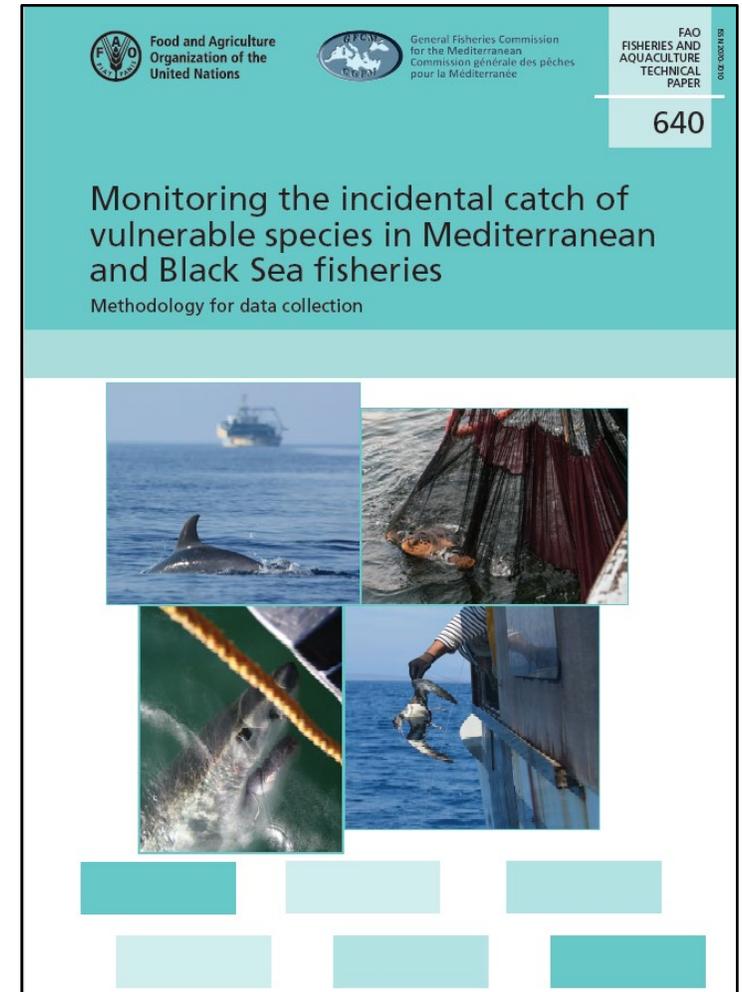
Incidental captures of vulnerable species, as well as discards, **are serious issues hampering the sustainability of fishery activities in the GFCM area of application.**

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

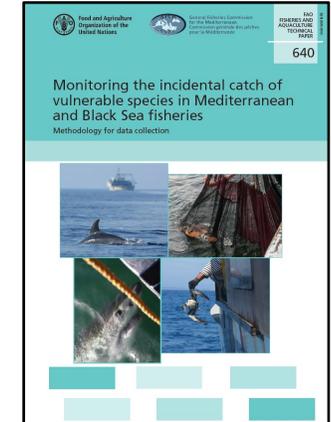
Need to expand incidental catch surveys and standardize practices in order to compare fisheries, as well as test potential methods and eventual mitigation tools.

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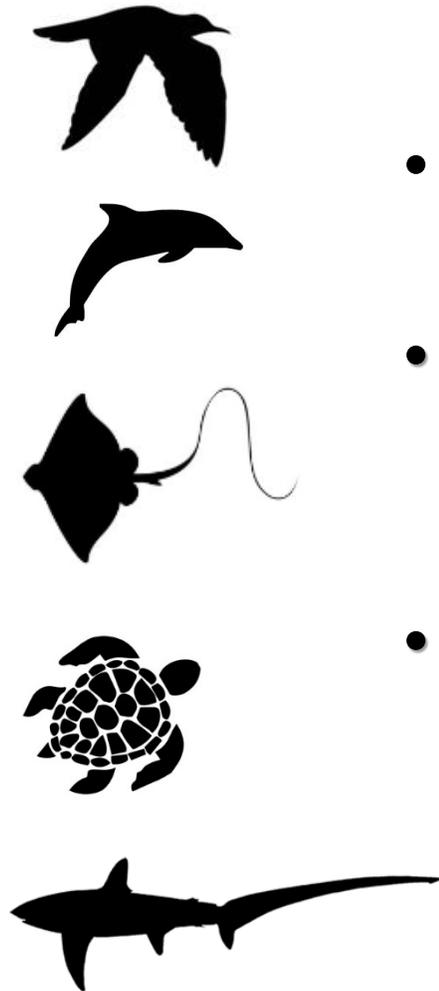
In the framework of the MAVA project “**Understanding Mediterranean multi-taxa ‘bycatch’ of vulnerable species and testing mitigation - a collaborative approach**“, to support Mediterranean countries, and specifically Morocco, Tunisia and Turkey, to identify and test measures to reduce impact of fisheries 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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FAO
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PAPER
0101/002/01/001

640

Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries

Methodology for data collection

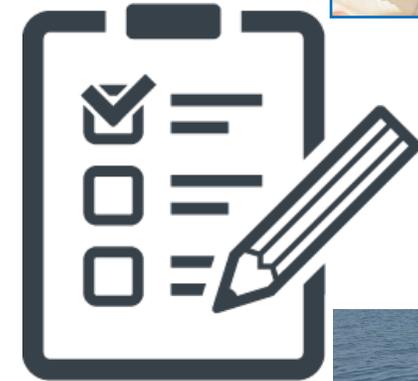


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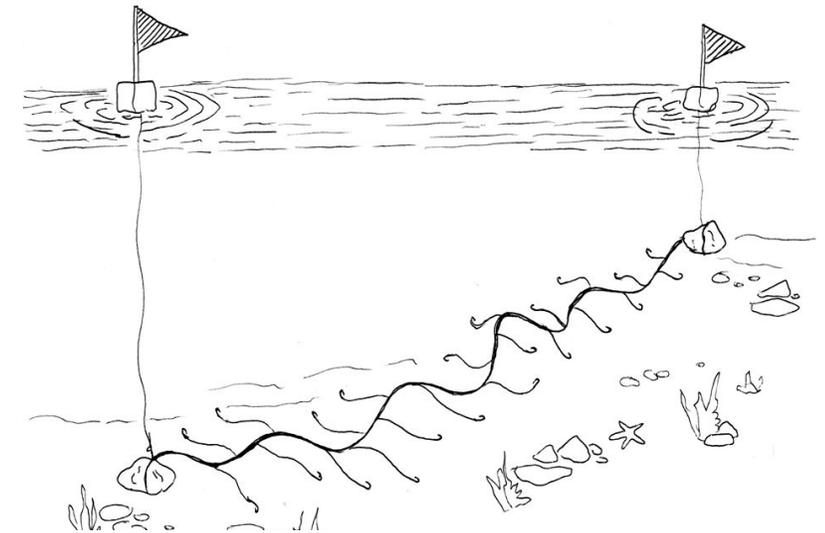
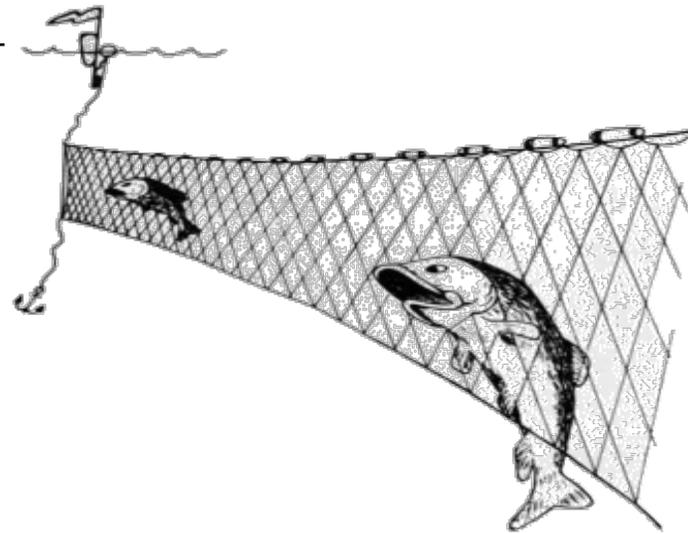
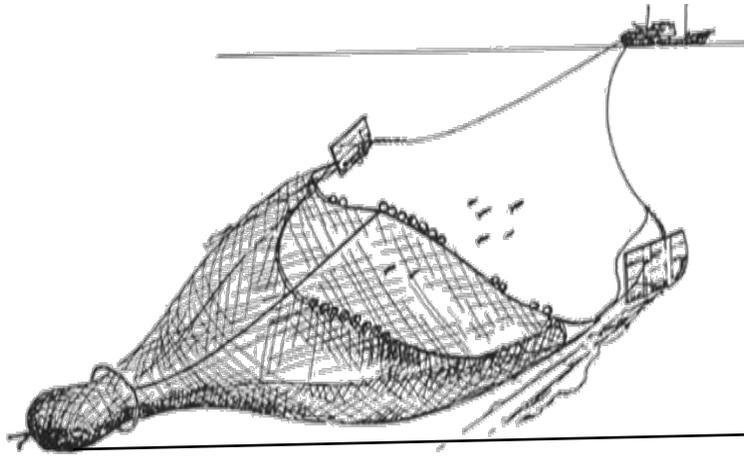
Methodologies

- 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					

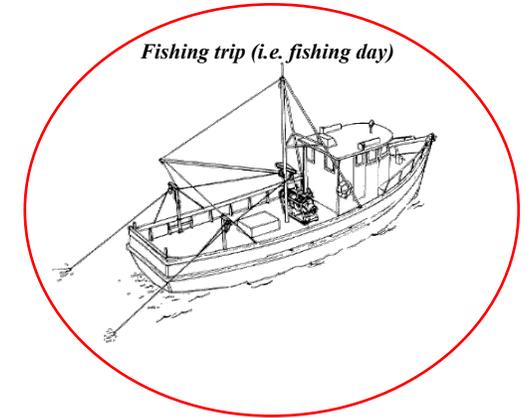


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Annex 3.b. Onboard observation - General information by fishing trip

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)



Landing (kg)



Target species



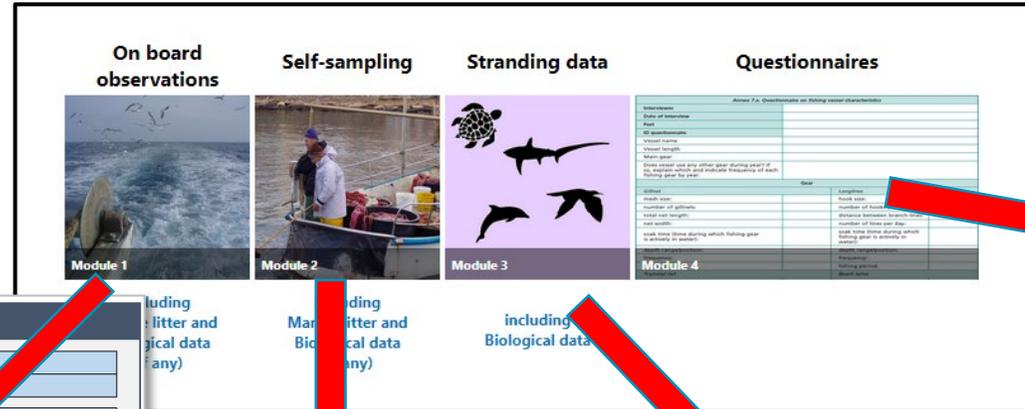
Discards (kg/%)



Litter (Yes/No)



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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
BIOLOGICAL DATA	
Appendix 4.a	Data on Marine mammals - 1 Data on Marine mammals - 2 (other length measures)
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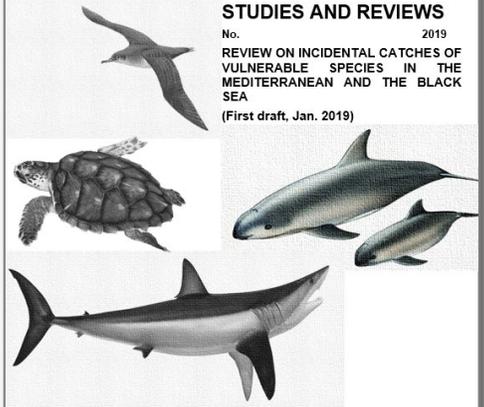
QUESTIONNAIRES [Data-entry module]	
Appendix 7.a	General information on fishing vessel characteristics General information on gear(s) type
Appendix 7.b	Questionnaire by fishing trip Gear specifications by fishing trip Catch composition by fishing trip Bycatch of vulnerable species by fishing trip Bycatch 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
Appendix 4.d	Data on Seabirds
Appendix 6	Data on marine vulnerable benthic species - 1 Data on marine vulnerable benthic species - 2

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STUDIES AND REVIEWS
 No. 2019
REVIEW ON INCIDENTAL CATCHES OF VULNERABLE SPECIES IN THE MEDITERRANEAN AND THE BLACK SEA
 (First draft, Jan. 2019)



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 Methodology for data collection





IDENTIFICATION GUIDE OF VULNERABLE SPECIES INCIDENTALLY CAUGHT IN MEDITERRANEAN FISHERIES





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GOOD PRACTICE GUIDE FOR THE HANDLING OF CETACEANS CAUGHT INCIDENTALLY IN MEDITERRANEAN FISHERIES









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GOOD PRACTICE GUIDE FOR THE HANDLING OF SEA TURTLES CAUGHT INCIDENTALLY IN MEDITERRANEAN FISHERIES









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GOOD PRACTICE GUIDE FOR THE HANDLING OF SEABIRDS CAUGHT INCIDENTALLY IN MEDITERRANEAN PELAGIC LONGLINE FISHERIES









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GOOD PRACTICE GUIDE FOR THE HANDLING OF SHARKS AND RAYS CAUGHT INCIDENTALLY IN MEDITERRANEAN PELAGIC LONGLINE FISHERIES










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Thank you for your attention

