Questionnaire

ID:
(Filled in by coordinator)

Interviewer/Sampler:	Date:
(Name and Surname)	*(dd/mm/yyyy)*

Azorean fishers' local ecological knowledge

This questionnaire is undertaken under the PESCAz project (ref. MAR-01.03.02-FEAMP-0039) with the purpose of gathering information about priority stocks in the Azores. The participant is guaranteed anonymity, and by responding they consent to their participation. Participants can opt to not answer any questions or to interrupt the questionnaire at whatever point they desire. The study is undertaken in conformity with European Union regulations and ethical research guidelines (Iphofen 2013; Regulamentação (UE) 2016/679).

Interviewer: Indicate in notes which questions the participant did not wish to answer.

1 – Professional aspects

Island of residence: _____ Age: _____ How long have you worked in fishing? _____ Type of fishery: ( ) recreational ( ) commercial

2 – In the last five years, how frequently have you fished during the year??

Sampler: Indicate, for example, if daily, weekly, once a fortnight, monthly. Frequency may change throughout the year.

_____

3 – In which area do you usually fish in?

Sampler: Indicate, for example, if around islands, open sea, marine mounds, at depths.

_____

_____

4 – Which is the main fishing gear you use?

Sampler: Indicate, for exemple, if bottom longline, surface longline, hand lines, nets, etc.

_____

_____

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5 – On a scale of 1 to 3, where 1 is low, 2 is moderate and 3 high, which of these species are of the most economic importance to you?

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

6 – Which are the main species you target for fishing?
Sampler: Order from most important to least important (ex. 1, 2, 3).

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

7 – Which other species do you also capture, along with target species?
Sampler: Order from most important to least important (ex. 1, 2, 3).

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish

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☐	Island grouper	☐	Alfonsino	☐	Common mora
☐	Splendid alfonsino	☐	Common spiny lobster	☐	Thornback ray
☐	Black scabbardfish	☐	Veined squid	☐	Mediterranean slipper lobster
☐	Rough limpet				

NOTES: _____

8 Of the species mentioned, how frequently do you capture them where you fish?

Sampler: Indicate the participant's answer according to the following scale: 1: Rarely, 2: Frequently, 3: Very frequently

☐	Blue jack mackerel	☐	Parrotfish	☐	Blackspot seabream
☐	Blackbelly rosefish	☐	Silver scabbardfish	☐	Greater amberjack
☐	Common seabream	☐	Forkbeard	☐	Chub mackerel
☐	European eel	☐	Offshore rockfish	☐	Red scorpionfish
☐	Island grouper	☐	Alfonsino	☐	Common mora
☐	Splendid alfonsino	☐	Common spiny lobster	☐	Thornback ray
☐	Black scabbardfish	☐	Veined squid	☐	Mediterranean slipper lobster
☐	Rough limpet				

NOTES: _____

9 – How aggregated are those species where you fish?

Sampler: Indicate the participant's answer according to the following scale: 1: Disaggregated, 2: Slightly aggregated, 3: Very aggregated

☐	Blue jack mackerel	☐	Parrotfish	☐	Blackspot seabream
☐	Blackbelly rosefish	☐	Silver scabbardfish	☐	Greater amberjack
☐	Common seabream	☐	Forkbeard	☐	Chub mackerel
☐	European eel	☐	Offshore rockfish	☐	Red scorpionfish
☐	Island grouper	☐	Alfonsino	☐	Common mora
☐	Splendid alfonsino	☐	Common spiny lobster	☐	Thornback ray
☐	Black scabbardfish	☐	Veined squid	☐	Mediterranean slipper lobster
☐	Rough limpet				

NOTES: _____

10 – Which of these species undergo migrations during the year?

Sampler: Indicate with an "X" which species undergo migrations in depths, regions, migrations to reproduce or feed. Indicate in "Notes" species that do not undergo migrations.

☐ Blue jack mackerel	☐ Parrotfish	☐ Blackspot seabream
☐ Blackbelly rosefish	☐ Silver scabbardfish	☐ Greater amberjack
☐ Common seabream	☐ Forkbeard	☐ Chub mackerel
☐ European eel	☐ Offshore rockfish	☐ Red scorpionfish
☐ Island grouper	☐ Alfonsino	☐ Common mora
☐ Splendid alfonsino	☐ Common spiny lobster	☐ Thornback ray
☐ Black scabbardfish	☐ Veined squid	☐ Mediterranean slipper lobster
☐ Rough limpet		

NOTES:_____

11 And do you go in search of those species during their migrations, or continue in the same fishing area?

Sampler: Mark the species that the participant searches for during migrations, and if they do not search for species, write NO in "Notes"

☐ Blue jack mackerel	☐ Parrotfish	☐ Blackspot seabream
☐ Blackbelly rosefish	☐ Silver scabbardfish	☐ Greater amberjack
☐ Common seabream	☐ Forkbeard	☐ Chub mackerel
☐ European eel	☐ Offshore rockfish	☐ Red scorpionfish
☐ Island grouper	☐ Alfonsino	☐ Common mora
☐ Splendid alfonsino	☐ Common spiny lobster	☐ Thornback ray
☐ Black scabbardfish	☐ Veined squid	☐ Mediterranean slipper lobster
☐ Rough limpet		

NOTES: _____

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12 –Are any of those species easier to catch than others??

Sampler: Indicate if there is any biological or behavioural characteristic that make species easier to catch.

Blue jack mackerel	
Blackbelly rosefish	
Common seabream	
European eel	
Island grouper	
Splendid alfonsino	
Black scabbardfish	
Rough limpet	

Parrotfish	
Silver scabbardfish	
Forkbeard	
Offshore rockfish	
Alfonsino	
Common spiny lobster	
Veined squid	

Blackspot seabream	
Greater amberjack	
Chub mackerel	
Red scorpionfish	
Common mora	
Thornback ray	
Mediterranean slipper lobster	

NOTES: _____

13 – How big was the LARGEST INDIVIDUAL you have every caught or seen caught? And what year was it caught in?

Sampler: Pay attention to units of measurement (cm or kg)

	Size	Year
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Size	Year
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Size	Year
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

14 – How small was the SMALLEST INDIVIDUAL you have every caught or seen caught? And what year was it caught in?

Sampler: Pay attention to units of measurement (cm or kg)

	Size	Year
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Size	Year
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Size	Year
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

15 – Since you started fishing, have you noticed any differences in species size?

Sampler: Indicate each answer according to the following scale: 1: Size has increased, 2: No notable difference, 3: Size has decreased.

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

Cofinanciado por:

16 – What was the LARGEST QUANTITY you have every caught or seen caught for each species? And what year was it caught in?

Sampler: Pay attention to units of measurement (cm or kg)

	Quantity	Year
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Quantity	Year
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Quantity	Year
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

16 – What was the SMALLEST QUANTITY you have every caught or seen caught for each species? And what year was it caught in?

Sampler: Pay attention to units of measurement (cm or kg)

	Quantity	Year
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Quantity	Year
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Quantity	Year
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

18 – Since you started fishing, have you noticed any difference in species' landings?

Sampler: Indicate each answer according to the following scale: 1: Landings have increased, 2: No notable difference, 3: Landings have decreased.

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

19 – Which of these species do you think should not have regulations or TACS/quotas in order to make fishing more sustainable?

	Yes	No
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Yes	No
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Yes	No
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

Cofinanciado por:

20 – What is the average size at which these species start to reproduce?

Sampler: Pay attention to units of measurement (cm or kg) and if the participant answers by sex or combines sexes.

	Male	Female	Combined
Blue jack mackerel			
Blackbelly rosefish			
Common seabream			
European eel			
Island grouper			
Splendid alfonsino			
Black scabbardfish			
Rough limpet			

	Male	Female	Combined
Parrotfish			
Silver scabbardfish			
Forkbeard			
Offshore rockfish			
Alfonsino			
Common spiny lobster			
Veined squid			

	Male	Female	Combined
Blackspot seabream			
Greater amberjack			
Chub mackerel			
Red scorpionfish			
Common mora			
Thornback ray			
Mediterranean slipper lobster			

NOTES: _____

Cofinanciado por:

21 – Do you know where these species reproduce?

Sampler: Specify habitat (ex: submarine mounds, islands), depth (meters or fathoms), type of seafloor (rock, sand, mixed, coral).

Blue jack mackerel	
Blackbelly rosefish	
Common seabream	
European eel	
Island grouper	
Splendid alfonsino	
Black scabbardfish	
Rough limpet	
Parrotfish	
Silver scabbardfish	
Forkbeard	
Offshore rockfish	
Alfonsino	
Common spiny lobster	
Veined squid	
Blackspot seabream	
Greater amberjack	
Chub mackerel	
Red scorpionfish	
Common mora	
Thornback ray	
Mediterranean slipper lobster	

22 Do you know when these species reproduce?

Sampler: Specify year, period or season.

Blue jack mackerel	
Blackbelly rosefish	
Common seabream	
European eel	
Island grouper	
Splendid alfonsino	
Black scabbardfish	
Rough limpet	

Parrotfish	
Silver scabbardfish	
Forkbeard	
Offshore rockfish	
Alfonsino	
Common spiny lobster	
Veined squid	

Blackspot seabream	
Greater amberjack	
Chub mackerel	
Red scorpionfish	
Common mora	
Thornback ray	
Mediterranean slipper lobster	

NOTES: _____

23 – Do these species lay few or many eggs?

Sampler: Indicate each answer according to the following scale: 1: Few, 2: Moderate amount, 3: Many.

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

Cofinanciado por:

24 – Which periods of the year have the largest occurrence of small individuals of each species? How many times a year?

Sampler: Indicate month, period or season of the year and frequency of occurrence (ex: once a year, every summer, twice a year, etc.)

	Period	Frequency
Blue jack mackerel		
Blackbelly rosefish		
Common seabream		
European eel		
Island grouper		
Splendid alfonsino		
Black scabbardfish		
Rough limpet		

	Period	Frequency
Parrotfish		
Silver scabbardfish		
Forkbeard		
Offshore rockfish		
Alfonsino		
Common spiny lobster		
Veined squid		

	Period	Frequency
Blackspot seabream		
Greater amberjack		
Chub mackerel		
Red scorpionfish		
Common mora		
Thornback ray		
Mediterranean slipper lobster		

NOTES: _____

25 – After a period of intense fishing on these species' stocks, how long does it take for fishing levels to return to normal?

Sampler: Indicate each answer according to the following scale: 1 Slow recovery, 2: Moderate recovery, 3: Fast recovery.

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

26 – Of the species you indicated, what is their growth speed?

Sampler: Indicate each answer according to the following scale: 1: Slow growth, 2: Moderate growth, 3: Fast growth.

- ☐ Blue jack mackerel
- ☐ Blackbelly rosefish
- ☐ Common seabream
- ☐ European eel
- ☐ Island grouper
- ☐ Splendid alfonsino
- ☐ Black scabbardfish
- ☐ Rough limpet
- ☐ Parrotfish
- ☐ Silver scabbardfish
- ☐ Forkbeard
- ☐ Offshore rockfish
- ☐ Alfonsino
- ☐ Common spiny lobster
- ☐ Veined squid
- ☐ Blackspot seabream
- ☐ Greater amberjack
- ☐ Chub mackerel
- ☐ Red scorpionfish
- ☐ Common mora
- ☐ Thornback ray
- ☐ Mediterranean slipper lobster

NOTES: _____

27 – What do these species eat in a natural environment?

Sampler: Indicate if species eat fish, crustaceans, algae, or other organisms.

Blue jack mackerel	
Blackbelly rosefish	
Common seabream	
European eel	
Island grouper	
Splendid alfonsino	
Black scabbardfish	
Rough limpet	

Parrotfish	
Silver scabbardfish	
Forkbeard	
Offshore rockfish	
Alfonsino	
Common spiny lobster	
Veined squid	

Blackspot seabream	
Greater amberjack	
Chub mackerel	
Red scorpionfish	
Common mora	
Thornback ray	
Mediterranean slipper lobster	

NOTES: _____

Cofinanciado por: