

## DELIVERABLE D4.2.3

*Application for internationally recognised sustainability certification Pre-Assessment*

Project ID	10045781
Project acronym	Adri.SmArtFish
Project full title	Valorisation of SMall-scale ARTisanal FISHery of the Adriatic coasts, in a context of sustainability
WP4	Valorisation of Small-Scale Fishing and diversification of opportunities
Activity 4.2	Registered SSF sustainability certification Protocol
Partner in charge	PP1
Partners involved	
Status	Final
Distribution	Public
Date	25/2/2022



## D4.2.3

Application for internationally recognised  
sustainability Pre-Assessment



Between the end of 2021 and the beginning of 2022, the preassessment of the COVEPA (COnsorzio VEneto Pesca Artigianale) artisanal fishery took place. The pre-assessment activity considered two stocks, the cuttlefish (*Sepia officinalis*) stock and the mantis shrimp (*Squilla mantis*) stock.

The execution of the service was entrusted to DVN Business Assurance, which was supported by internal and external experts.

The analysis showed some strengths, such as the low impact on non-target species and habitats, along with compliance with regulations. However, the need to collect more information, listed in the Final Management Protocol (D4.3.4), was highlighted.

Below is the technical report produced by DVN.

Pre-Assessment Report

# CO.VE.PA. ARTISANAL FISHERY

Marine Stewardship Council fisheries assessments

<b>Conformity Assessment Body (CAB)</b>	DNV Business Assurance
<b>Fishery client</b>	Ca' Foscari University of Venice
<b>Assessment Type</b>	Pre-assessment
<b>Date</b>	25.02.2022



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## 2 Glossary

### Abbreviations & acronyms

AIS	Automatic identification system
CFP	Common Fisheries Policy
CO.VE.PA.	Consorzio Veneto Pesca Artigianale
CPU	Catch per Unit of Effort
CSA	Consequence Spatial Analysis (RBF)
EEZ	Exclusive Economic Zone
EFCA	European Fisheries Control Agency
ETP	Endangered, threatened and protected species
EU	European Union
FCR	Fisheries Certification Requirements
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
GSA	Geographical Sub-Area
LTL	Low Trophic Level
MCRS	Minimum Conservation Reference Size
MEDAC	Mediterranean Advisory Council
MIPAAF	Italian Ministry of Agriculture and Forestry
MLS	Minimum Landing Size
MSC	Marine Stewardship Council
N	No
PI	Performance indicator
PISG	Performance Indicator Scoring Guidepost
PRI	Point of Recruitment Impairment
RBF	Risk-Based Framework
SG	Scoring Guidepost
SI	Scoring Issue
SIC	Sites of Important Communities
SPZ	Special Protection Zone
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total allowable catch
UoA	Unit of Assessment
VME	Vulnerable marine ecosystems
Y	Yes

### Stock assessment reference points

$B_0$	The (spawning) biomass expected if there had been no fishing (assuming recruitment as estimated through stock assessment).
$B_{lim}$	Spawning biomass limit reference point, sometimes used as a trigger within harvest control rules, or defined as the point below which recruitment is expected to be impaired or the stock dynamics are unknown
$B_{msy}$	Spawning Biomass at which the maximum sustainable yield is expected (sometimes expressed as $SB_{msy}$ )
$B_{targ}$	Spawning biomass target reference point
$F_{lim}$	Exploitation rate limit reference point, often taken as $F_{msy}$ based on UNFSA
$F_{msy}$	Fishing mortality rate associated with the achieving maximum sustainable yield
$F_{targ}$	Fishing mortality target reference point
MSY	Maximum Sustainable Yield



### 3 Executive summary

This report provides information on the preassessment of the COVEPA artisanal fishery for mantis shrimp and cuttlefish in the Veneto region, against Marine Stewardship Council (MSC) Fisheries Standard. The report is prepared by DNV for the client University Ca'Foscari in Venice.

The assessment covers 2 Units of Assessment (UoAs) targeting mantis shrimp (UoA 1: *Squilla mantis*) and cuttlefish (UoA 2: *Sepia officinalis*) with traps and pots. These species are indigenous to the Adriatic Sea and no enhancement takes place.

#### 3.1 Assessment team

##### Team Leader and Principle 2 expert: Lucia Revenga

Lucia Revenga is a marine scientist, specialized in Fisheries Biology who holds degrees in Marine Sciences and in Environmental Sciences from Cadiz University (Spain). For 5 years she worked with TRAGSA for the Spanish General Marine Secretariat, conducting research on the biology and stock status of different species, such as bluefin tunas, skipjack tunas, albacores, mackerels, sardines, eels, prawns, Norway lobsters, halibuts. She has also taken part in oceanographic surveys focused in the search of vulnerable marine ecosystems. From 2011 to 2015 she worked for IFAPA (Institute for Research and Training in Fisheries) as a Fisheries biology teacher for fishermen. She also conducted research in fishery local activities with the aim of increasing community awareness of the conservation of coastal ecosystems and encouraging sustainable fishing practices. From 2015 to 2020 she worked full time as an independent consultant, covering the roles of P2 assessor and team leader for different CABs and assessments. In 2020 she joined DNV as part of DNV MSC Fishery Global Unit.

Lucia's qualifications also meet the competence criteria defined in Annex PC for the Team-Leader and Chain of custody responsible:

- She has an appropriate university degree
- She has passed the MSC team leader training
- She has passed the MSC Traceability training module
- She meets ISO 19011 training requirements
- She has undertaken two fishery assessments as a team member in the last five years, and
- She has experience in applying different types of interviewing and facilitation techniques and is able to effectively communicate with clients and various stakeholder groups.
- She has no conflicts of interest in relation to the fishery under assessment.
- Full CV is available upon request.

##### Principle 1 expert: Lisa M. Borges

Lisa Borges has been a fisheries scientist for over 25 years and runs her own consulting firm. Lisa has a degree in Marine Biology and Fisheries from the University of Algarve (Portugal), a Master's in Fisheries from the University of Porto (Portugal) and a PhD in demersal fisheries discards from the National University of Ireland. Lisa worked for three national fisheries research institutes: IPMA (Portugal), Marine Institute (Ireland) and IMARES (Netherlands). Lisa has extensive knowledge and experience in assessing the environmental impact of fisheries, namely on discards and accidental catch. She also has knowledge and experience in fisheries management policies, including catch control rules; management plans and development of discard policies. Lisa developed fish stocks conservation policies while working for the European Commission in Belgium. In addition, Lisa has a multitude of publications on catch retention related fisheries policies and procedures and has been the chair/co-chair in several international conferences, workshops and working groups. Lisa has extensive experience conducting MSC pre-assessments and assessments in all three Principles, although is specialized in Principle 1. Lisa is also a member of the MSC Peer Review College.

Her qualifications meet the competence criteria defined in Annex PC for the Team-member with expertise in Fish stock assessment and biology:

- She has an appropriate university degree
- She has passed the MSC team member training
- She has passed the RBF training module
- She has over 3 years' experience in stock assessment techniques comparable with techniques used by the fishery under assessment
- She has over 3 years' experience in the biology and population dynamics of the species with similar biology.
- She has no conflicts of interest in relation to the fishery under assessment.
- Full CV is available upon request.

### Principle 3 expert: Mohamed Samy-Kamal

Dr. Mohamed Samy-Kamal is a fisheries scientist from the University of Alicante. Dr. Samy-Kamal holds a BSc in Marine Biology from Al Azhar University, Egypt, an MSc in Economics and Management of Fisheries from University of Barcelona, Spain, and a PhD in Marine Science and Applied Biology from University of Alicante, Spain. He was a scholarship holder of the research institution (IAMZ-CIHEAM) of Zaragoza and of the Spanish Agency for International Development and Cooperation (MAEC-AECID) of Madrid. Dr. Samy-Kamal has authored a number of scientific articles, regularly participates in international fisheries conferences (e.g. Iberian Symposium of Marine Biology Studies) and has taken numerous technical courses, including on MSC evaluation tools. He taught in the International master programme of Sustainable fisheries management organized by University of Alicante and IAMZ-CIHEAM.

His qualifications meet the competence criteria defined in Annex PC for the Team-member with expertise in fisheries management:

- He holds an MSc in Economics and Management of Fisheries and a PhD in Marine Science and Applied Biology and more than 3 years' research experience in fisheries;
- He has passed MSC Team Member training, including relevant updates;
- He has participated in more than 5 MSC certified fishery assessments and another 8 fisheries in assessment in the last 5 years;
- He has more than 3 years' experience as a practicing fishery manager and/or fishery/policy analyst/consultant;
- He has passed the Traceability and RBF training modules.
- He has no conflicts of interest in relation to the fishery under assessment.
- A full C.V. is available on request.

## 3.2 Assessment process and activities

The preassessment was carried out using MSC Fisheries Certification Process v2.2 and the default assessment tree in Annex SA from the MSC Fisheries standard v2.01, without any changes, was used. The assessment results are based on desk review of published literature and on input from different stakeholders. Further information on stakeholder meetings held can be found in Section 8.7

**Table 1 Stakeholders consulted**

Organization	People
University Ca'Foscari Veneto	Francesco CAVRARO Fabio Pranovi Alberto Caccin
COVEPA	Dionisio Crosera Fabio Borghesan
ISPRA	Sasa Raicevich
CNR	Giuseppe Scarcella

### 3.3 Main strengths and weaknesses of the client's operation

Table 2 Main strengths

Principle	Performance Indicator	Comment
Principle 1	1.1.1, 1.1.2	Cuttlefish stock is healthy at MSY levels. Both stocks are assessed quantitatively, and reference points are estimated
Principle 2	2.1.1, 2.2.1, 2.3.1, 2.4.1	According to stakeholders, interactions with non-targeted species are highly unlikely. Besides, impacts on habitats are considered low.
Principle 3	3.1.1, 3.1.2, 3.1.3, 3.2.3	3.1.1 The legal framework and management system are well defined. 3.1.2 Consultation, roles and responsibilities are well established at national and regional levels. 3.1.3 The overarching objectives of Italian fisheries are based on the CFP to guide decision-making. 3.2.3 There is reasonable expectation and confidence that MCS measures are effective. 3.2.3 Some evidence shows that the number of non-compliances in the area is quite low and that the applied sanctions are effective.

Table 3 Main weaknesses

Principle	Performance Indicator	Comment
Principle 1	1.2.1, 1.2.2	Mantis shrimp stock not at MSY levels but recovering, but the harvest strategy is not responsive to stock status and there are no explicit HCRs.
Principle 2	2.2.3, 2.4.3	Information on potential impacts (if any) with ETP species is scarce and on potential impacts on the seafloor (if any permanent) is also scarce.
Principle 3	3.2.1, 3.2.2, 3.2.2, 3.2.4	3.2.1 The absence of clear short- and long-term fishery-specific objectives. 3.2.2 The absence of clear harvest control rules for target species to consider the management decision is responsive to serious and other important issues. 3.2.2 The management system tries to resolve disputes to avoid judicial trials and only the most serious cases go to the judicial system. However, Italian justice remains the slowest in Europe. 3.2.4 Information about the frequency and regularity of the internal review mechanisms is absent.

### 3.4 Consistency with MSC Standard

Following the evaluation of the fishery against the MSC Standard v2.01 the assessment team concludes that at present the fishery does not meet the requirements of MSC certification. Detailed information is given in the scoring tables.

## 4 Report details

### 4.1 Aims and constraints of the pre-assessment

DNV highlights that pre-assessment does not attempt to duplicate a full assessment against the MSC Fisheries Standard. A full assessment involves a group of assessment team members and **public consultation stages** that are not included in a pre-assessment. A pre-assessment provides a provisional assessment based on a limited set of information provided mostly by the client. Generally speaking, the biggest limitation when conducting a preassessment is access to relevant information.

## 4.2 Version details

Table 4 Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	Version 2.2
MSC Fisheries Standard	Version 2.01
MSC General Certification Requirements	Version 2.3
MSC Pre-Assessment Reporting Template	Version 3.2

## 5 Unit(s) of Assessment

### 5.1 Description of the fishery

The present MSC pre-assessment covers the small-scale fishery for cuttlefish and mantis shrimp by 35 artisanal vessels of CO. VE.PA. The fishery takes place in coastal waters (<3nm) of the Veneto Region, from Caorle to Porto Tolle. Most vessels in the fleet do not carry AIS nor VMS monitoring systems, although some of them do (9) and send this data to University Ca'Foscari in order to cooperate with fisheries research in the region.



Figure 1 Provinces in Veneto region. Source: <https://en.wikipedia.org/wiki/Veneto>

Cuttlefish fishery is a seasonal fishery with most catches taking place in Spring, from March to June, however there are no seasonal closures to the fishery. The catch is taken with fyke nets with 1 m length and 60 cm wide. During the peak of the season each boat can carry a maximum of 300 fyke nets each. Fyke nets do not use any bait to attract cuttlefish, but according to fishermen and researchers interviewed more than 95% of the catch would be targeted cuttlefish. It has been highlighted that cuttlefish may deploy its eggs in the fyke net which would generally be destroyed during cleaning

and maintenance of the fyke nets. At present there is some research on the use of alternative traps which have even less bycatch and which facilitate survivability of cuttlefish eggs during cleaning operations. In general fyke nets stay in the water for 24 hours.

There is no legal minimum landing size for cuttlefish however if below 150 gr weight or 11 cm length it would generally be released.



Figure 2 Fyke net for the cuttlefish fishery. Source: G. Scarcella

Squilla mantis fishery is also a seasonal fishery with most catches taking place in Summer, from March to November, however there are no seasonal closures either to the fishery. The catch is taken with round or squared traps about 30 cm wide. There is no legal limit to the number of traps each boat can carry. Traps are fed with bait, mainly sardine or mackerel. There is no information on the percentage of bait used in the traps in relation to the squilla mantis catch taken. According to fishermen and researchers interviewed more than 95% of the catch would be targeted squilla mantis. In general traps stay in the water for 24 hours. There is no legal minimum landing size for cuttlefish however if below 20 cm length it would generally be released.



Figure 3 Pots with mantis shrimp. Source: Interreg Italy-Croatia Prizefish

## 5.2 Unit(s) of Assessment

There are 2 UoAs for the fishery.

Table 5 Units of Assessment (UoAs)

UoA 1	Description
Species	Cuttlefish ( <i>Sepia officinalis</i> )
Stock	To be determined
Fishing gear type(s) and, if relevant, vessel type(s)	Trap
Client group	CO.VE.PA
Other eligible fishers	Other Italian artisanal fisheries in the Northern Adriatic Sea targeting the same stock with the same fishing gear.
Geographical area	<b>FAO area:</b> 37 <b>Common name of the body of water:</b> Adriatic Sea <b>Local fisheries management area:</b> Government of Italy <b>Stock region:</b> Adriatic Sea/Mediterranean Sea
Justification for choosing the Unit of Assessment	Client's decision.
UoA 2	Description
Species	Mantis shrimp ( <i>Squilla mantis</i> )
Stock	To be determined
Fishing gear type(s) and, if relevant, vessel type(s)	Trap
Client group	CO.VE.PA
Other eligible fishers	Other Italian artisanal fisheries in the Northern Adriatic Sea targeting the same stock with the same fishing gear.
Geographical area	<b>FAO area:</b> 37 <b>Common name of the body of water:</b> Adriatic Sea <b>Local fisheries management area:</b> Government of Italy <b>Stock region:</b> Adriatic Sea/ Mediterranean Sea
Justification for choosing the Unit of Assessment	Client's decision.

## 6 Traceability

### 6.1 Traceability within the fishery

National and Community legislation within the control regime, established pursuant to regulations (EC) 1224/2009 and (EU) 404/2011, governs the traceability of the fish product, in particular from the moment of capture to the first sale, through the production and transfer of data between the various players in the supply chain in order to define a valid traceability system that allows the flow of information to follow the product up to retail.

Each operator of the fish industry has the obligation to comply, for its part of competence, with the provisions of the current legislation.

Pursuant to Title IV of regulation 1224/2009, the commanders of the fishing vessels of total length equal to or greater than 10 meters but less than 12 meters must complete the fishing log, the landing declaration and - where authorized - the transshipment declaration in paper format, using the model provided for in Annex VI to Reg. (EU) 404 / 2011 (Circular protocol no. 19490 of 31/07/2012), which must be and presented within 48 hours of disembarkation to the competent maritime authority of the place of disembarkation in duplicate. The Maritime Authority will keep a copy of what has been delivered by the captain or his delegate for the subsequent insertion of the data in the SIAN portal and to stamp and sign the remaining copy as receipt of the delivery.

The Italian Coast Guard performs random inspections both at sea and at landing sites.

Pursuant to art. 59 of Reg. (EC) 1224/2009, first-time buyers of fishery products and subjects who take charge of the product for the subsequent sale of the product must be registered. Pursuant to art. 114 of Reg. (EC) 1224/2009, the control site [www.controllopesca.politicheagricole.it](http://www.controllopesca.politicheagricole.it) was established, where it is possible to access the user registration procedure for data transmission. Buyers of fishery products weighing no more than 30 kg which are not subsequently placed on the market, but which are exclusively intended for private consumption, are exempt from the registration obligations.

For the purposes of their first placing on the market, fishery products must be sold only to registered operators.

**Table 6 Traceability within the fishery**

Factor	Description
<p>Will the fishery use gears that are not part of the Unit of Certification (UoC)?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> <li>- If this may occur on the same trip, on the same vessels, or during the same season;</li> <li>- How any risks are mitigated.</li> </ul>	<p>Yes. Vessels may use other gears to target other species during the same fishing season, but different gears would not be used in the same day.</p>
<p>Will vessels in the UoC also fish outside the UoC geographic area?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> <li>- If this may occur on the same trip;</li> <li>- How any risks are mitigated.</li> </ul>	<p>No.</p>
<p>Do the fishery client members ever handle certified and non-certified products during any of the activities covered by the fishery certificate? This refers to both at-sea activities and on-land activities.</p> <ul style="list-style-type: none"> <li>- Transport</li> <li>- Storage</li> <li>- Processing</li> <li>- Landing</li> <li>- Auction</li> </ul> <p>If Yes, please describe how any risks are mitigated.</p>	<p>No</p>
<p>Does transshipment occur within the fishery?</p> <p>If Yes, please describe:</p>	<p>No.</p>

<ul style="list-style-type: none"> <li>- If transshipment takes place at-sea, in port, or both;</li> <li>- If the transshipment vessel may handle product from outside the UoC;</li> <li>- How any risks are mitigated.</li> </ul>	
Are there any other risks of mixing or substitution between certified and non-certified fish?	None identified.
If Yes, please describe how any risks are mitigated.	

## 7 Pre-assessment results

### 7.1 Pre-assessment results overview

#### Overview

This report presents a pre-assessment by DNV of the CO.VE.PA. artisanal fishery for cuttlefish and mantis shrimp MSC standard v2.01 for sustainable fisheries (Note that at present this standard is under review and open for public consultation. Next version of the MSC Fisheries Standard is expected to be released by the end of 2022 (for further information on the review process, open until 4<sup>th</sup> April 2022, see : <https://www.msc.org/standards-and-certification/developing-our-standards/the-fisheries-standard-review/consultation#review> )

The pre-assessment was carried out as a desk study, using documentation and information either publicly available or provided by the client and other stakeholders. Several Microsoft Team calls were held with client and different stakeholders. Note that during a full-assessment process it is the client's responsibility to facilitate the assessment team with all relevant information needed to score the fishery appropriately.

The report includes an introduction to the fishery, the results of the pre-assessment, the rationales that substantiate the scores for each Performance Indicator (PI) and a recommendation as to whether the fishery is in a position at present to move forward and undergo full assessment.

To avoid implying a false level of accuracy, scoring has not been carried out to the detail of a full assessment. For each performance indicator it is clearly indicated if (i) it would fail to meet the minimum acceptable standard, (ii) meet the conditional pass mark or (iii) meet the unconditional pass mark.

#### Recommendations

- It is recommended that Harvest Control rules are implemented for the cuttlefish and mantis shrimp fisheries
- It is recommended that the fishery implements a regular review of alternative measures to minimise its impact on non-target species.
- It is recommended that the fishery ensures that stocks used as bait are above MSY sustainable levels.
- It is also recommended that the fishery implements a recording system for interactions with secondary, out of scope, and ETP species.
- It is recommended that information is gathered in relation to Vulnerable marine ecosystems (VMEs) present in the fishing grounds and its overlap with fishing gears (if any). Information on benthic impacts by fyke nets and traps would also be helpful during a full assessment.
- It is recommended that the client records and classifies infringements by the UoC members.

### 7.2 Summary of potential conditions by Principle

Table 7 Summary of Performance Indicator level scores

Principle of the Fisheries Standard	Number of PIs with draft scoring ranges <60
Principle 1 – Stock status	1 (all UoAs)
Principle 2 – Minimising environmental impacts	1 (all UoAs)
Principle 3 – Effective management	2 (all UoAs)



### 7.3 Summary of Performance Indicator level scores

Table 8 Summary of Performance Indicator level scores for all UoAs

Performance Indicator	Draft scoring range	Data deficient?
<b>UoA 1: SEPIA OFFICINALIS</b>		
<b>1.1.1 – Stock status (Sepia officinalis)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
Stock biomass of cuttlefish in GSA 17-18 is estimated in 2020 to be above $B_{MSY}$ .		
<b>1.1.2 – Stock rebuilding (Sepia officinalis)</b>	<b>NA</b>	<b>No</b>
Rationale or key points		
N/A		
<b>1.2.1 – Harvest Strategy (Sepia officinalis)</b>	<b>60 – 79</b>	<b>No</b>
Rationale or key points		
There is a harvest strategy, but it is not responsive to the state of the stock.		
<b>1.2.2 – Harvest control rules and tools (Sepia officinalis)</b>	<b>&lt;60</b>	<b>No</b>
Rationale or key points		
There is no generally understood HCR but there is evidence that exploitation is being limited.		
<b>1.2.3 – Information and monitoring (Sepia officinalis)</b>	<b>≥80</b>	<b>Yes</b>
Rationale or key points		
Stocks and the UoA are monitored and data is available to support an assessment.		
<b>1.2.4 – Assessment of stock status (Sepia officinalis)</b>	<b>≥80</b>	<b>Yes</b>
Rationale or key points		
Stocks is analytically assessed and reference points are estimated.		
<b>UoA 2: SQUILLA MANTIS</b>		
<b>1.1.1 – Stock status (Squilla mantis)</b>	<b>60 – 79</b>	<b>Yes</b>
Rationale or key points		
Stock biomass in GSA 17-18 is increasing in recent years so its very likely the stock is above PRI, but not at MSY levels		

<b>1.1.2 – Stock rebuilding (Squilla mantis)</b>	<b>60 – 79</b>	<b>Yes</b>
Rationale or key points		
There are rebuilding strategies and monitoring schemes, and there is some evidence that the stock is increasing but there is uncertainty if stock will be able to rebuild by the specific timeframe.		
<b>1.2.1 – Harvest Strategy (Squilla mantis)</b>	<b>60 – 79</b>	<b>Yes</b>
Rationale or key points		
There is a harvest strategy, but it is not responsive to the state of the stock.		
<b>1.2.2 – Harvest control rules and tools (Squilla mantis)</b>	<b>&lt;60</b>	<b>Yes</b>
Rationale or key points		
There is no generally understood HCR but there is evidence that exploitation is being limited.		
<b>1.2.3 – Information and monitoring (Squilla mantis)</b>	<b>≥80</b>	<b>Yes</b>
Rationale or key points		
Stocks and the UoA are monitored and data is available to support an assessment.		
<b>1.2.4 – Assessment of stock status (Squilla mantis)</b>	<b>≥80</b>	<b>Yes</b>
Rationale or key points		
Stocks is analytically assessed, and reference points are estimated.		
<b>ALL UoAs</b>		
<b>2.1.1 – Primary Outcome (UoA 1)</b>	<b>≥80</b>	<b>No</b>
<b>2.1.1 – Primary Outcome (UoA 2)</b>	<b>60-79</b>	<b>No</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main primary species to consider and the SG80 is given by default. For the mantis shrimp fishery, sardine is used as bait and there is no information on the quantity of bait used (and therefore if this proportion is above or below the MSC 5% threshold to consider a species as main species). Sardine in the Adriatic Sea is an overexploited species and management measures do not seem to bring the stock back to sustainable levels.		
<b>2.1.2 – Primary Management (UoA 1)</b>	<b>≥80</b>	<b>No</b>
<b>2.1.2 – Primary Management (UoA 2)</b>	<b>60-79</b>	<b>No</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main primary species to consider and the SG80 is given by default.		

For the mantis shrimp fishery, sardine is used as bait and there is no information on the quantity of bait used (and therefore if this proportion is above or below the MSC 5% threshold to consider a species as main species). Sardine in the Adriatic Sea is an overexploited species and management measures do not seem to bring the stock back to sustainable levels.		
<b>2.1.3 – Primary Information (UoA 1)</b>	<b>≥80</b>	<b>No</b>
<b>2.1.3 - Primary Information (UoA 2)</b>	<b>60-79</b>	<b>No</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main primary species to consider and the SG80 is given by default. For the mantis shrimp fishery, sardine is used as bait and there is no information on the quantity of bait used (and therefore if this proportion is above or below the MSC 5% threshold to consider a species as main species).		
<b>2.2.1 – Secondary Outcome (UoA 1)</b>	<b>≥80</b>	<b>No</b>
<b>2.2.1 – Secondary Outcome (UoA 2)</b>	<b>≥80</b>	<b>Yes</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main secondary species to consider and the SG80 is given by default. For the mantis shrimp fishery, mackerel is used as bait and there is no information on the quantity of bait used (and therefore if this proportion is above or below the MSC 5% threshold to consider a species as main species). Mackerel is a data deficient species in the Adriatic Sea and has been evaluated using the RBF, achieving a score above 80.		
<b>2.2.2 – Secondary Management (UoA 1)</b>	<b>≥80</b>	<b>No</b>
<b>2.2.2 – Secondary Management (UoA 2)</b>	<b>&lt;60</b>	<b>Yes</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main secondary species to consider and the SG80 is given by default. For the mantis shrimp fishery, mackerel is used as bait. There is no information on the successful level of implementation of management measures directed to small pelagics in the Adriatic Sea, and there is no information either on reviews by the UoA of alternative measures to minimise the UoA related mortality of non-targeted species. SG60 is not met by UoA 2.		
<b>2.2.3 – Secondary Information (UoA1)</b>	<b>≥80</b>	<b>No</b>
<b>2.2.3 – Secondary Information (UoA2)</b>	<b>60-79</b>	<b>Yes</b>
Rationale or key points		
For the cuttlefish UoA (1) there are no main secondary species to consider and the SG80 is given by default. For the mantis shrimp fishery, sardine is used as bait and there is no information on the quantity of bait used (and therefore if this proportion is above or below the MSC 5% threshold to consider a species as main species). Besides, information should be collected on minor secondary species interacted by both UoAs and on potential impacts with out of scope species.		
<b>2.3.1 – ETP Outcome (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
Interactions with ETP species are not expected.		
<b>2.3.2 – ETP Management (all UoAs)</b>	<b>≥80</b>	<b>No</b>

Rationale or key points		
Interactions with ETP species are not expected. The fishing gear allows for safety release the entangled species if needed.		
<b>2.3.3 – ETP Information (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
Interactions with ETP species are not expected. The Prizefish report shows bycatch of fyke nets without concerns on ETP species.		
<b>2.4.1 – Habitats Outcome (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>There are impacts by the UoAs on benthic habitats, however these are low, temporary, and light.</b>		
<b>2.4.2 – Habitats Management (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>The limited ecosystem impacts by the UoAs allow for the MSC interpretation on the “if necessary” clause. SG80 is met by default.</b>		
<b>2.4.3 – Habitats Information (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>The region is well studies and impacts on habitats by the UoA are expected to be low.</b>		
<b>2.5.1 – Ecosystems Outcome (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>There are limited ecosystem impacts by the fishery. Besides, ecosystem in the region is more affected by other factors rather than by fishing activities.</b>		
<b>2.5.2 – Ecosystems Management (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>The limited ecosystem impacts by the UoAs allow for the MSC interpretation on the “if necessary” clause. SG80 is met by default.</b>		
<b>2.5.3 – Ecosystems Information (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		
<b>The Norther Adriatic ecoregion is well studies and there are trophic models in the region.</b>		
<b>3.1.1 – Legal and customary framework (all UoAs)</b>	<b>≥80</b>	<b>No</b>
Rationale or key points		

<p>The legal framework of the Italian fisheries, as well as the overarching CFP, EU Directives, GFCM, and the other international agreements have binding procedures governing cooperation with other parties and are effective to deliver management outcomes consistent with MSC Principles 1 and 2. Also, the fishery is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective. In addition, Italian fisheries are managed by the CFP which also contains a formal commitment to observe the legal and customary rights of people dependent on fishing.</p>		
<b>3.1.2 – Consultation, roles and responsibilities (all UoAs)</b>	<b>≥80</b>	<b>No</b>
<p>Rationale or key points</p> <p>The Italian management system clearly defines the main organizations and stakeholders involved in the management process. At national level, the Federcoopesca, Federpesca, Lega Pesca, Legacoop, and Associazione Generale Cooperative Italiane (AGCI) are the most important cooperative associations which represent the fishing sector in Italy. MEDAC and "SSF Forum" at regional level as well as the cooperative associations which represent the fishing sector at national level, provide opportunity for all interested and affected parties to be involved in the consultation processes.</p>		
<b>3.1.3 – Long term objectives (all UoAs)</b>	<b>≥80</b>	<b>No</b>
<p>Rationale or key points</p> <p>The overarching objectives of Italian fisheries are based on the CFP of the EU. Other long-term objectives of the EU (and therefore its member states including Italy) for the exploitation of marine resources and conservation of the biodiversity and the marine ecosystem are outlined in the EC Birds Directive (Directive 2009/147/EC) and the EU Habitats Directive (Council Directive 92/43/EEC). Further important environmental legislations include; the Water Framework Directive (Directive 2000/60/EC) and the Marine Strategy Framework Directive (Directive 2008/56/EC) which set clear objectives such as achieving "Good Ecological Status".</p>		
<b>3.2.1 – Fishery specific objectives (all UoAs)</b>	<b>60 – 79</b>	<b>Yes</b>
<p>Rationale or key points</p> <p>Some fishery-specific management objectives can be found for this UoA in the "National Management Plan relating to fishing fleets for the capture of demersal resources in the context of GSA 17 (Central-Northern Adriatic Sea) and GSA 18 (Southern Adriatic Sea)". Although the two target species under P1 <i>Squilla mantis</i> and <i>Sepia officinalis</i> are not the main objective of this management plan both are specified in the plan and managed as associated species (among other species) of the fishing fleets catching of demersal resources (e.g. bottom trawls).</p>		
<b>3.2.2 – Decision making processes (all UoAs)</b>	<b>60 – 79</b>	<b>Yes</b>
<p>Rationale or key points</p> <p>Established decision-making procedures are specified in the CFP Basic Document, and supporting legislation ensures that adopted measures taken to achieve the fishery-specific objectives are implemented correctly. The decision making is based on scientific data (e.g. stock assessments) as well as on comprehensive consultation at regional and national levels. Some information is generally available online or on request to stakeholders, but it remains unclear whether this is the case if stakeholders request more fishery's specific data. Also, the management system tries to resolve disputes to avoid judicial trials and only the most serious cases go to the judicial system. However, Italian justice remains the slowest in Europe.</p>		
<b>3.2.3 – Compliance and enforcement (all UoAs)</b>	<b>≥80</b>	<b>Yes</b>
<p>Rationale or key points</p> <p>The Italian Coastguard is responsible for fisheries MCS. As part of the JDP established by the EFCA, each member state (e.g. including Italy) communicates the results of the risk assessment. EFCA uses information submitted by member states to coordinate risk assessment at regional level. The interviewed scientists have a reasonable expectation and confidence that MCS measures are effective considering the small scale of this fishery. According to the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, the number of non-compliances</p>		

in the area is quite low and shows a decreasing trend for the last 3 years (2018 – 2020). This is also evidence that the applied sanctions are effective.

<b>3.2.4 – Management performance evaluation (all UoAs)</b>	<b>≥80</b>	<b>Yes</b>
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Rationale or key points

The fishery has mechanisms to externally (e.g. EC, STECF, GFCM, IAS) evaluate and review key parts (e.g. MCS) of the management system on a regular basis. However, information about the frequency and regularity of the internal review mechanisms is absent.

## 7.4 Principle 1

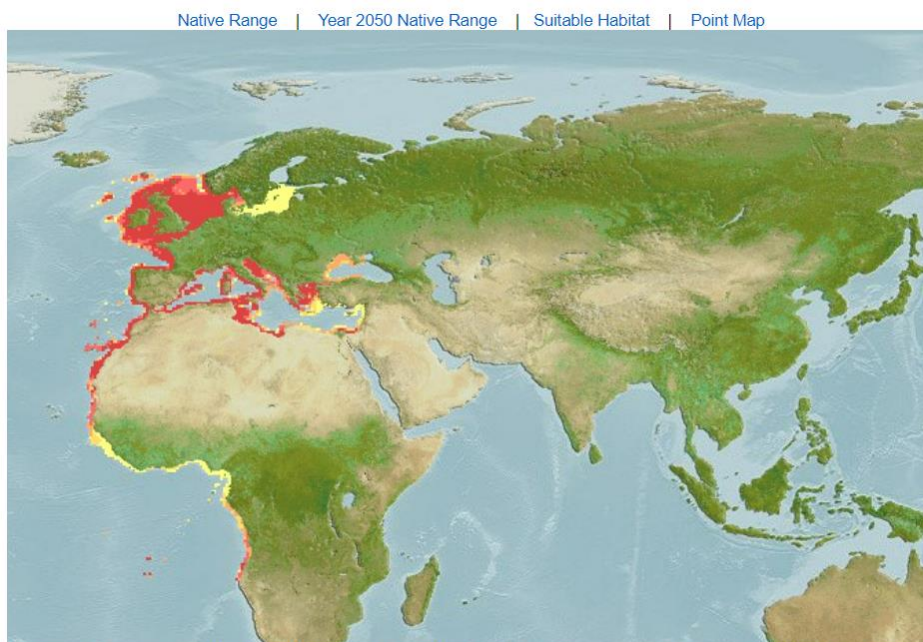
### 7.4.1 Principle 1 background

#### Cuttlefish

#### Biology

Cuttlefish (*Sepia officinalis*) are found from the Eastern Atlantic and the Mediterranean: from the Shetlands and southern Norway (stray in the Baltic Sea), south to the Mediterranean Sea to North-Western Africa. They are found at depths ranging between 1-2m down to 200 m, generally over sandy-muddy substrates (SeaLifeBase, 2022). In the Adriatic Sea (GSA 17-18) cuttlefish inhabits the shelf zone at depths up to 200m, but MEDITS findings indicate that this species is mainly concentrated up to 100 m depth (STECF, 2021).

Cuttlefish have a relatively short life cycle of between 18 and 24 months. Cuttlefish are intermittent terminal spawners; spawning occurs during latter stages of their lives. Females typically stop feeding during this time and undergoes no somatic growth. Females lay a number of batches of eggs over a few months in clusters and predominantly in shallow water often less than 40 metres deep. The eggs are attached to structures that are fixed to the seabed and these structures may be either natural or anthropogenic. Male and female adults usually die shortly after spawning and brooding, respectively (several authors in Davies & Nelson, 2018; SeaLifeBase, 2022).



**Note:** Distribution range colours indicate degree of suitability of habitat which can be interpreted as probabilities of occurrence.

**Figure 4 – Distribution map of cuttlefish (*Sepia officinalis*; SeaLifeBase, 2022).**

The diet of adult cuttlefish incorporates a wide range of different organisms and includes crustaceans, molluscs, polychaete worms and bony fish. Crustaceans, such as mysids, shrimps, prawns and crabs are often the preferred prey of cuttlefish. Sandeels and gobies made up the most common groups of fish eaten by cuttlefish. Cannibalism is also common (several authors in Davies & Nelson, 2018).

## Fisheries

The cuttlefish stock in GSA 17 is shared by Slovenian, Croatian and Italian fleets, with the latter accounting for an average of more than 90 percent of catches per year (WGSAD, 2021). In GSA17 cuttlefish are targeted with traps set in spring-summer during the spawning period and with trammel nets in winter-spring. In GSA 18 cuttlefish is targeted with traps in spring, and with trammel nets and gillnets all year round (Grati et al., 2018).

### Stock assessment & reference points

The General Fisheries Commission for the Mediterranean (GFCM) Scientific Advisory Committee (SAC) Working Group on Stock Assessment (WGSAD) carries out assessment of Mediterranean fish stocks (<http://www.fao.org/gfcm/en/>) based on their priority list. The European Commission Scientific, Technical and Economic Committee for Fisheries (STECF) also carries out assessments of selected Mediterranean fish stocks since 2008 (<https://stecf.jrc.ec.europa.eu/index.html>). There is an overlap between the work of these two scientific committees, with some stocks assessed by both institutions and in some cases with different conclusion reached. STECF assessments are public, which allows for a critical examination of the stock assessment methods used and results. GFCM WGSAD assessments have also public summaries, but their detailed assessments results are not public.

In the case of cuttlefish, GFCM performs an assessment in GSA 17 only, while STECF combines GSA 17 & 18. Catches in GSA 17 are low (Figure 5) but STECF 21-15 argues that there is no boundary between stocks in the Adriatic and catches from both GSA should be used (while there is also a management request and need for both areas). STECF states that no evidence supports the existence of more than one single stock of cuttlefish in the Adriatic Sea, while there is a continuity of common cuttlefish stock distribution along coasts of the Adriatic basin (Figure 6). **Considering that the STECF assessment is fully public, it is the most recent assessment (2021), its results are very similar using GSA17 or GSA 17& 18 combined, and that there seems to be no stock boundaries between the two GSAs, STECF 2021 assessment is the one considered to score the stock.** Nevertheless, the results of the GFCM 2020 stock assessment are also presented below.

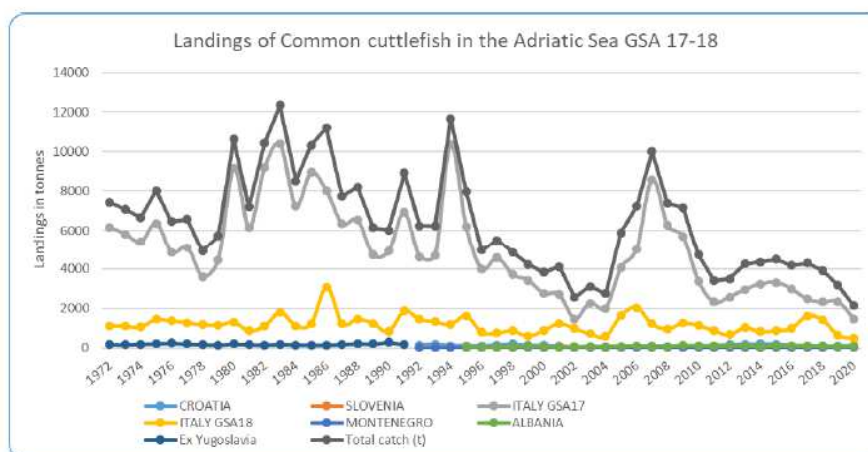


Figure 5 - Common cuttlefish in GSA 17-18. Total landings (t) (STEF, 2021).

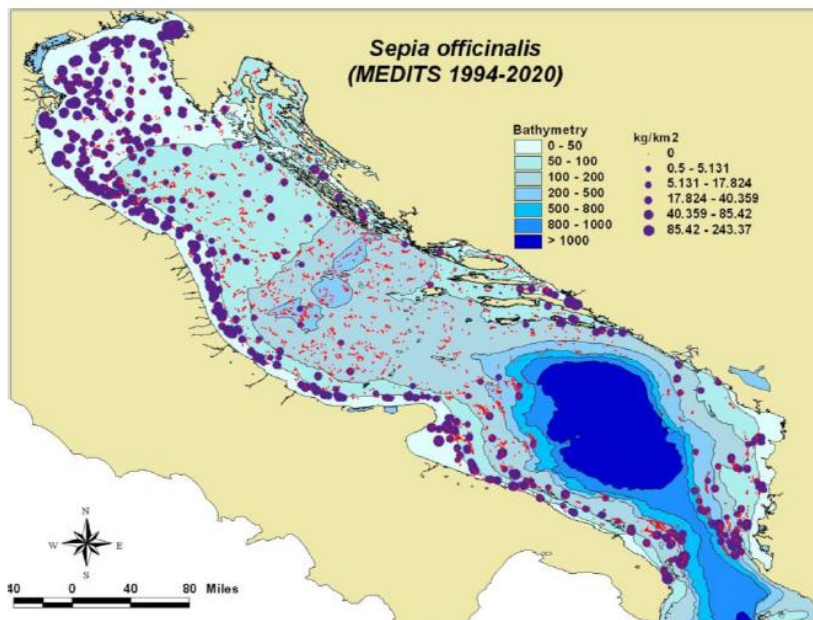


Figure 6 - Common cuttlefish in GSA 17-18. Biomass indices in the Adriatic Sea as obtained from the survey data (MEDITS, 1994-2020) (STECF, 2021).

The GFCM WGSAD performed an assessment for cuttlefish this year with a longer time series (since 1973 until 2019) for GSA 17 only, using a Bayesian surplus production model (CMSY). CMSY is a Bayesian state space implementation of the Schaefer surplus production model. Priors for final depletion were obtained with abundance maximum sustainable yield (AMSY). Comparisons were made with Just Another Bayesian Biomass Assessment JABBA model. Commercial catch data was used since 1973 from Italian fisheries, and an index of abundance from the SoleMon survey (2005 2019). Overall diagnostics are acceptable, and a sensitivity analysis was conducted to test the prior’s choice. The sensitivity analysis confirmed the model results, however in the final model, wide ranges of uncertainties for the  $F/F_{MSY}$  and  $B/B_{MSY}$  ratio are observed. Results indicated that the **stock is currently under sustainable exploitation, but with biomass far below the target value**. Reduction of fishing mortality and/or implementation of a recovery plan was recommended (WGSAD, 2021).

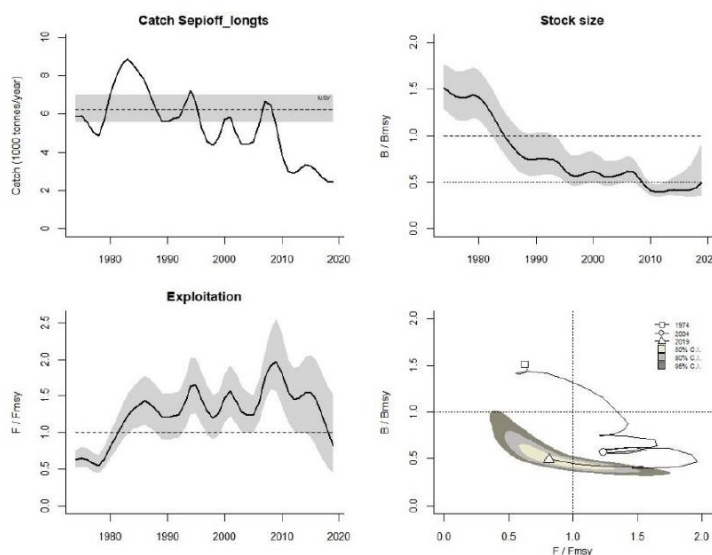


Figure 7 - Cuttlefish in GSA 17. GFCM 2020 Assessment results: trends in catch, relative biomass and exploitation as given by CMSY model 95% confidence limits (grey) are also indicated (WGSAD, 2021).

Cuttlefish in GSA 17-18 was assessed by STECF in 2021 using the same Bayesian surplus production model (CMSY). The data used was commercial data (landings and discards) and economic transversal data collected under the Data Collection Framework (DCF), FAO FishStat, Istat and EUROSTAT database, EURECFISH Project, data provided by DG-MARE, national fishery statistics and one scientific survey (MEDITS) data (the SOLOMON survey data was not



available). According to STECF, stock biomass has decreased since the 70s until 2010 where it was  $0.5 B_{MSY}$  **but has increased since and is in 2020 above  $B_{MSY}$** . **Fishing mortality** has been variable throughout the time series and above  $F_{MSY}$  since the 80s but has decreased since 2008 **and is below  $F_{MSY}$  since 2013**. STECF EWG 21-15 advises that when MSY considerations are applied, fishing mortality can be increased to  $F_{MSY}$ . As common cuttlefish is a short-lived species, living mostly up to 1-1.5-year, annual catches in 2022 will depend mostly on growth within the 1st year of life, and therefore no specific catch options can be provided for 2022. Catch at  $F_{MSY}$  with biomass ( $B_{MSY}$ ) is estimated at 7450 tonnes.

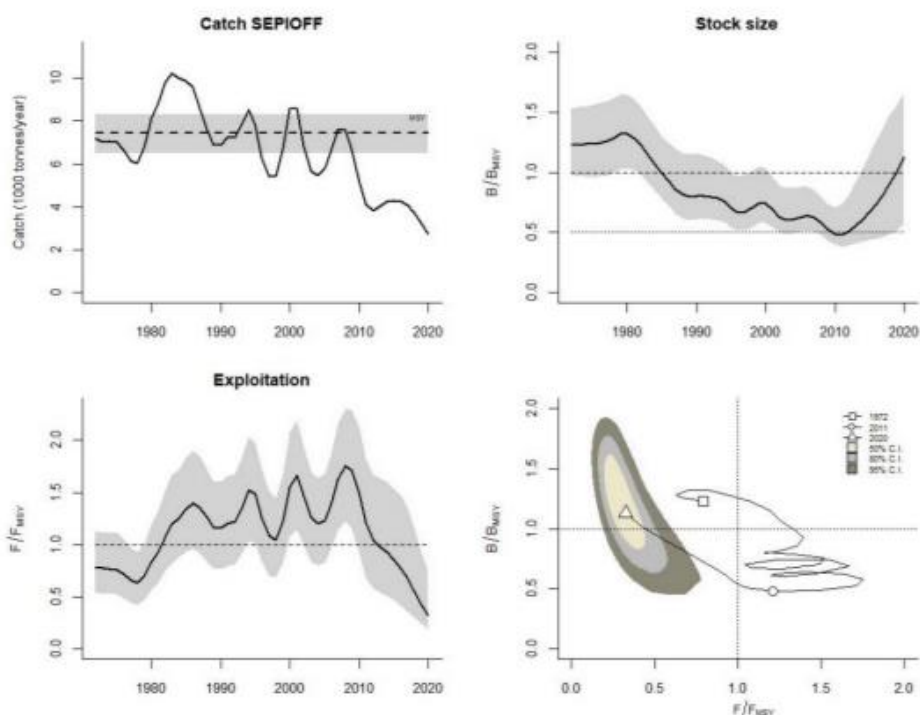


Figure 8 – Cuttlefish in GSA 17-18. STECF 2021 Assessment results: trends in catch, relative biomass and exploitation as given by CMSY model 95% confidence limits (grey) are also indicated (STECF, 2021).

The retrospective analysis shows a consistent pattern between assessment years in terms of biomass and fishing mortality.

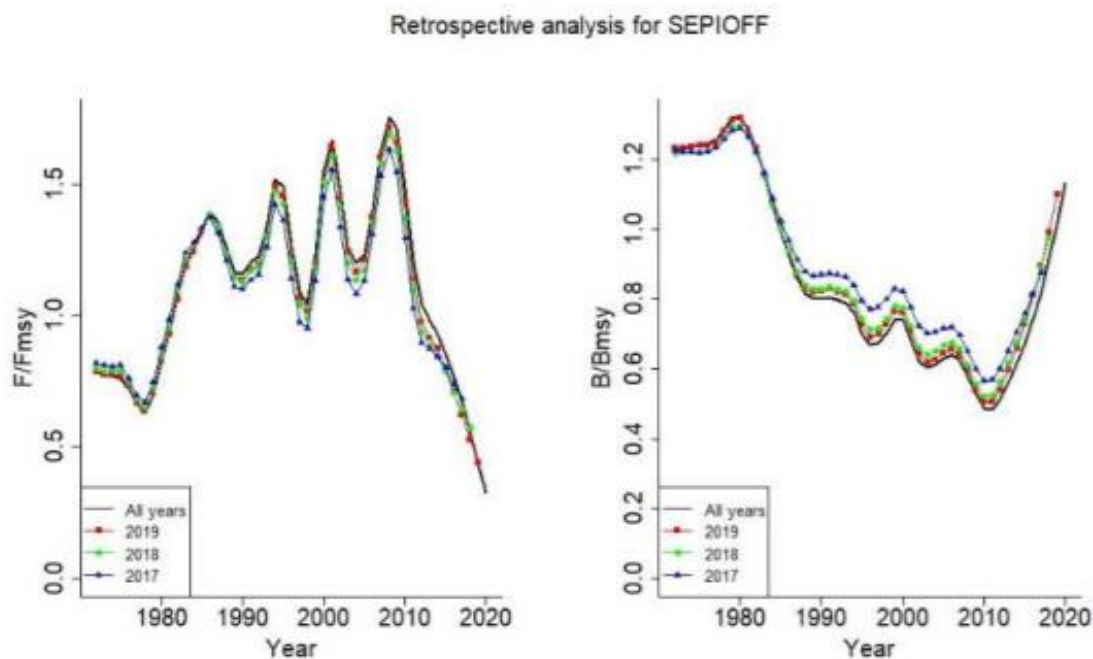


Figure 9 - Cuttlefish in GSA 17-18. STECF 2021 Retrospective performance of CMSY assessment (STECF, 2021).

## Stock management

A multiannual management plan for the sustainable fishing of European hake (*Merluccius merluccius*), Norway lobster (*Nephrops norvegicus*), common sole (*Solea solea*), deep-water rose shrimp (*Parapenaeus longirostris*) and red mullet (*Mullus barbatus*), by means of otter trawls, beam trawls, bottom pair trawls and otter twin trawls in the Adriatic Sea (geographical subareas (GSAs) 17–18), was adopted in 2019. The objective of the management plan is to reach MSY by 2026 of the demersal fisheries in the Adriatic Sea, and encompasses two steps:

1. Initial transitional fishing effort regime in 2020–2021 aimed at decreasing effort by set percentages (12 percent for otter trawls and 16 percent for beam trawls compared to the annual effort of 2015 or the average of 2015–2018)
2. Yearly fishing effort quotas in 2022–2026.

Although cuttlefish is not a target species of the Adriatic management plan, or of its targeted demersal gears, cuttlefish is still caught by demersal trawl gears and a reduction of fishing effort of these fisheries will probably also reduce cuttlefish catches. Nevertheless, the efficiency of the plan in reaching its objectives is still uncertain (STECF, 2019). Furthermore, there are no specific management measures for cuttlefish (no minimum conservation reference size or close areas), although the gillnet/trammel nets and trap fisheries are subjected to licences and specific mesh size limits and gear configurations.

### b. Mantis shrimp

#### Biology

The mantis shrimp (*Squilla mantis*) is found in Mediterranean waters and in the adjacent Atlantic, where it has been reported from the Gulf of Cadiz and from the Canary Islands and Madeira, its southernmost distribution being Angola. It is found from sublittoral depths on sandy and muddy bottoms, >3 m to around 150 m depth but occasionally deeper, especially where the influence of river run-off is important. In the Mediterranean, it is very abundant on the continental shelves of the rivers Ebro, Rhone, Po, and Nile (several authors in Maynou et al., 2004).

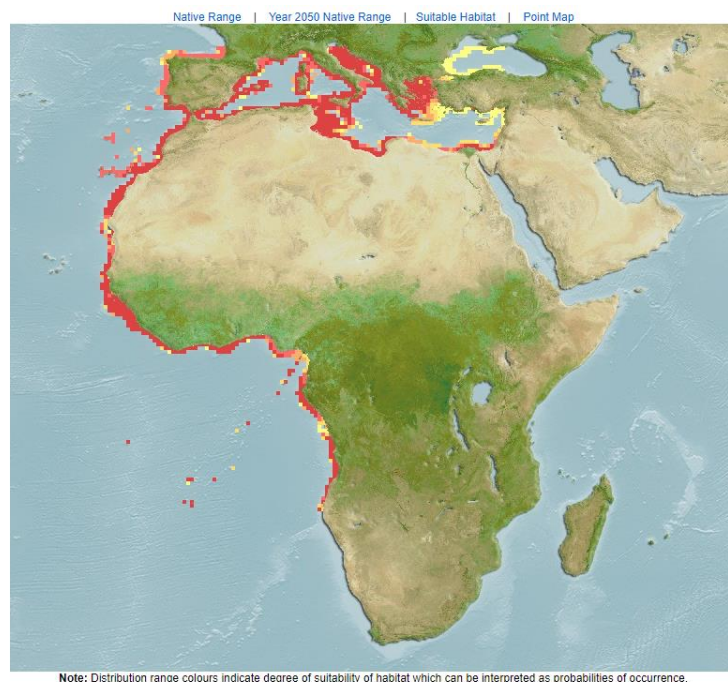


Figure 10 – Distribution map of mantis shrimp (*Squilla mantis*; SeaLifeBase, 2022).

The spawning period is concentrated from winter to spring and planktonic larvae are found in summer, with the settlement of post-larvae occurring from the end of summer to mid-autumn. In spring and early summer, females incubate the eggs in their burrows. Egg-bearing females do not exit their burrow during incubation. Recruitment to the fishery starts in late autumn, with full recruitment being reached between January and May. The population at sea consists of 3 year-classes and the life span is estimated at about 3 years. It is a benthic species, strongly associated to specific bottom sediments, as demonstrated by its burrowing behaviour and by the composition of its diet. The species also shows a strong territorial behaviour and is more active (out-of-burrow) during the night (several authors in Maynou et al., 2004).

#### Fisheries

Fisheries of mantis shrimp are found in the Mediterranean mostly in the vicinity of major river mouths. The fishery is mainly based on the exploitation of a single cohort constituted by the recruits of the previous year and is highly recruitment-dependant. In GSA17 traps and gillnets/trammel are used from May-July to October-December. In GSA 18 mantis shrimp is targeted with trammel nets all year round and with gillnets in January-February and June-October (Grati et al., 2018). However, mantis shrimp is also caught in multispecies demersal trawl fisheries between 30 to 80 meters depth (Maynou et al., 2004). Regarding landings in GSA 17 in 2018, 83% were represented by bottom trawl (2,723 tonnes), 11% by gillnet (348 tonnes), 6% by *rapido* trawl (199 tonnes) and 1% by small scale fisheries pots and traps (29 tonnes) (WGSAD, 2021).

### Stock assessment & reference points

As with cuttlefish both GFCM and STECF perform assessments, GFCM for GSA 17 separately and STECF for 17 & 18 combined. However, **for this species there is no clear way for deciding one assessment over another, and both assessments were used to score the stock.** This issue should be further investigated in a future assessment.

The GFCM WGSAD performed an updated assessment for mantis shrimp, with revised reference points, for GSA 17 only using SS3. The SS3 model used in this assessment is a seasonal size structure data model based on the separate fleet length frequency distributions (LFD) from 2009 to 2019. Abundancy index was provided by SOLEMON survey carried out in the fall for the years 2005-2019. The growth parameter used to run the assessment was the one studied by Froglija et al (1996 in WGSAD, 2021) in GSA 17. M vector was obtained from PRODBIOM model and maturity from the literature. No particular trends are evident in residuals and the retrospective analyses are consistent as well as jittering. Results indicated that the **stock is currently under sustainable exploitation, but with biomass below the target value.** Reduction of fishing mortality and/or implementation of a recovery plan was recommended (WGSAD, 2021).

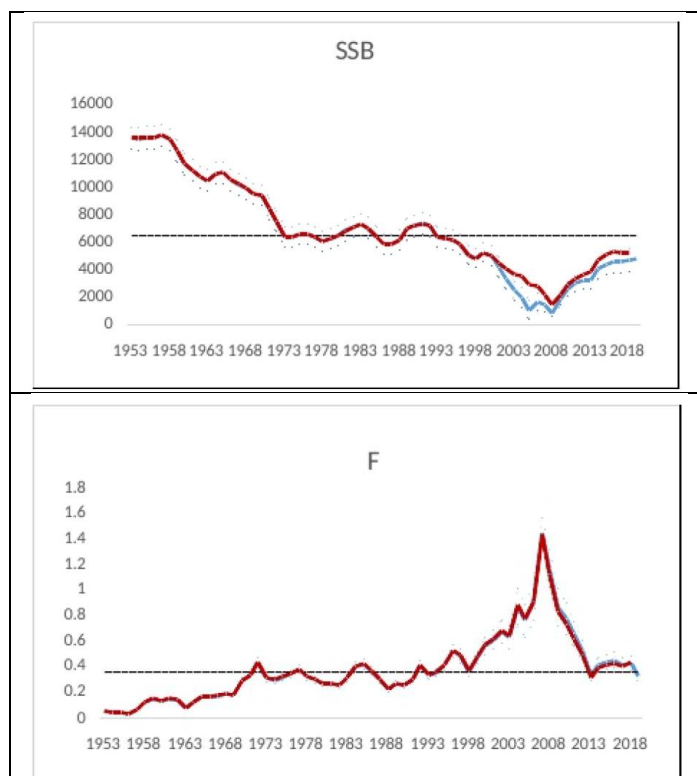
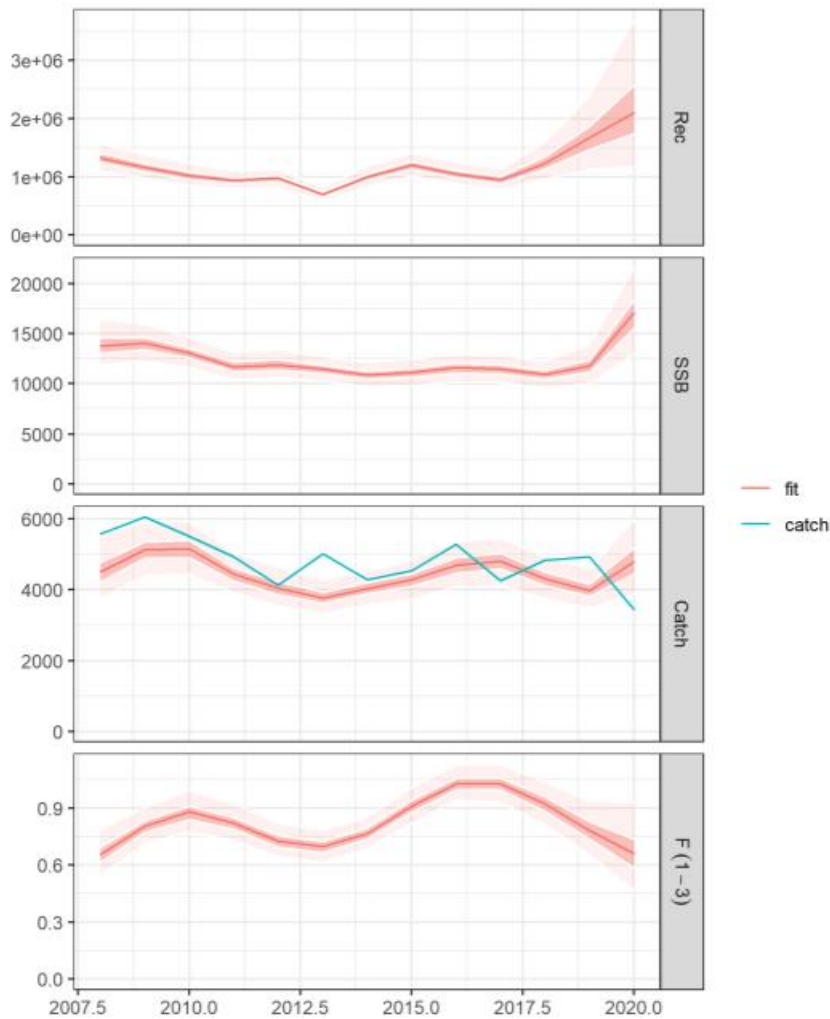


Figure 11 - Fishing mortality (below) and spawning stock biomass (above) and standard deviation calculated by SS3 model in 2019 (blue) and in 2018 (red) with  $F_{40\%}$  and  $B_{40\%}$  (black dotted line) (WGSAD, 2021).

Mantis shrimp in GSA 17-18 was assessed by STECF in 2021 using a statistical catch-at-age model a4a, using two separate tuning series. Fishing mortality was assumed to be a factor of age (constant after age 4) and a 6th order spline of year. Catchability was assumed to be a factor of age (constant after age 4) and stock recruitment a factor of year. The data used was commercial data (landings and discards) collected under the DCF and two scientific surveys (SOLEMON and MEDITS in GSA 17 & 18). According to STECF, **stock biomass has been relatively stable since 2008, but has increased in recent years, following an increase in recruitment and a decrease in fishing mortality.**

STECF EWG 21-15 advises that when MSY considerations are applied the fishing mortality in 2021 should be no more than 0.44 and corresponding catches in 2021 should be no more than 4945 tons.



**Figure 12 - Mantis shrimp in GSA 17-18. Assessment results: trends in catch, recruitment, fishing mortality and SSB resulting from the a4a model (STECF, 2021).**

Residuals of the total catch were evenly distributed around zero, and residuals at age in the catch and the survey do not show any particular patterns. Fitted versus observed catch at age and SOLEMON index at age show a fairly good fit of the model to the data. There are some inconsistencies in the stock assessment, shown by the different trends between coloured lines but also between the terminal values, particularly for fishing mortality. However, STECF 21-15 refers that residual and diagnostics were considered acceptable.

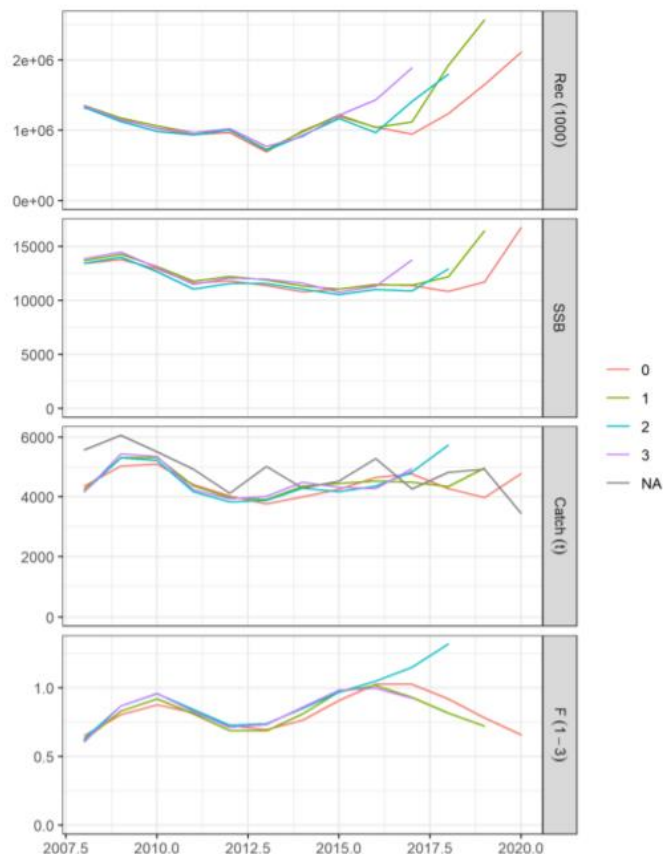


Figure 13 - Mantis shrimp in GSA 17-18. Historical assessment results (final year recruitment estimates included, STECF, 2021).

**Stock management**

As with cuttlefish, mantis shrimp is not a target species of the Adriatic management plan, or of its targeted demersal gears, but it is still caught by demersal trawl fisheries and a reduction of fishing effort of these fisheries will probably also reduce mantis shrimp catches. Nevertheless, there are no specific management measures for mantis shrimp (no minimum conservation reference size or close areas), although the gillnet/trammel nets and trap fisheries are subjected to licences and specific mesh size limits and gear configurations.

**7.4.2 Catch profiles**

Cuttlefish catches in the Adriatic Sea show a general decreasing trend since the 70s, although variable since its maximum of 10,000 tonnes in the mid-80s to around 3,000 tonnes in 2020 (Figure 5 and Figure 8). Mantis shrimp catch in the same area shows a general decreasing trend since 2008, from its maximum of 6,000 tonnes in 2009 to less than 4,000 tonnes in 2020 (Figure 12).

Table 9 Landings in Chioggia (Tns). Source: Client

Landings at Chioggia (Tns)	2017	2018	2019
<i>Sepia officinalis</i>	26.7	19.4	31.0
<i>Squilla mantis</i>	28.5	37.8	28.0

### 7.4.3 Total Allowable Catch (TAC) and catch data

Table 10 Total Allowable Catch (TAC) and catch data (Tns) for *Sepia officinalis*

TAC	Year	N/A	Amount	N/A
UoA share of TAC	Year	N/A	Amount	N/A
UoA share of total TAC	Year	N/A	Amount	N/A
Total green weight catch by UoC	Year (most recent)	<b>2019</b>	Amount	<b>31.0 Tns</b>
Total green weight catch by UoC	Year (second most recent)	<b>2018</b>	Amount	<b>19.4 Tns</b>

Table 11 Total Allowable Catch (TAC) and catch data (Tns) for *Squilla mantis*

TAC	Year	N/A	Amount	N/A
UoA share of TAC	Year	N/A	Amount	N/A
UoA share of total TAC	Year	N/A	Amount	N/A
Total green weight catch by UoC	Year (most recent)	<b>2019</b>	Amount	<b>28.0 Tns</b>
Total green weight catch by UoC	Year (second most recent)	<b>2018</b>	Amount	<b>37.8 Tns</b>

### 7.4.4 Principle 1 Performance Indicator scores and rationales

#### PI 1.1.1 – Stock status (UoA1: Cuttlefish GSA 17-18)

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guide post	It is <b>likely</b> that the stock is above the point where recruitment would be impaired (PRI).	It is <b>highly likely</b> that the stock is above the PRI.	There is a <b>high degree of certainty</b> that the stock is above the PRI.
	Met?	<b>Y</b>	<b>Y</b>	<b>Y</b>
Rationale				

Cuttlefish in GSA 17&18 stock biomass has decreased since the 70s until 2010 where it was 0.5  $B_{MSY}$  but has increased since and is in 2020 estimated to be above  $B_{MSY}$ . **SG60, SG80 and SG100 are all met.**

b	Stock status in relation to achievement of Maximum Sustainable Yield (MSY)			
	Guide post		The stock is at or fluctuating around a level consistent with MSY.	There is a <b>high degree of certainty</b> that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		<b>Y</b>	<b>N</b>
Rationale				

As stated above, stock biomass is above  $B_{MSY}$ . **SG80 is met.** However, as the stock has only been at MSY for two years, while there is some uncertainty on stock status. **SG100 is not met.**

#### References

STECF 21-15, WGSAC, 2021

Stock status relative to reference points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Reference point used in scoring stock relative to PRI (SIa)	0.5 $B_{MSY}$		$B_{2020} = 38.7$ (21.2 - 58.6) (thousand tonnes)  $B_{2020}/B_{MSY} = 1.13$ (0.571 - 1.66)
Reference point used in scoring stock relative to MSY (SIb)	$B_{MSY}$		$B_{2020}/B_{MSY} = 1.13$ (0.571 - 1.66)

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>
Data-deficient? (Risk-Based Framework needed)	<b>No</b>

## PI 1.1.1 – Stock status (UoA 2: Mantis shrimp GSA 17-18)

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Stock status relative to recruitment impairment			
	Guide post	It is <b>likely</b> that the stock is above the point where recruitment would be impaired (PRI).	It is <b>highly likely</b> that the stock is above the PRI.	There is a <b>high degree of certainty</b> that the stock is above the PRI.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

## Rationale

According to STECF, stock biomass has been relatively stable since 2008, but has increased in recent years, following an increase in recruitment and a decrease in fishing mortality. For GFCM, stock is increasing and is close to  $B_{MSY}$  proxy ( $B_{40\%}$ ). Thus, it is very likely that the stock is above PRI and both **SG60 and SG80 are reached**, but there is no high degree certainty due to stock assessment inconsistencies and **SG100 is not reached**.

<b>b</b>	Stock status in relation to achievement of Maximum Sustainable Yield (MSY)			
	Guide post		The stock is at or fluctuating around a level consistent with MSY.	There is a <b>high degree of certainty</b> that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		<b>N</b>	<b>N</b>

## Rationale

According to STECF, fishing mortality is estimated to have never been below  $F_{MSY}$ , while GFCM estimated  $F$  to be below  $F_{MSY}$  only in the most recent year. Thus, the stock is not at a level consistent with MSY and SG80 is not reached.

## References

STECF 21-15, WGSAD 2021

Stock status relative to reference points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Reference point used in scoring stock relative to PRI (S1a)	$\frac{1}{2}$ GFCM $B_{40\%}$	3,271 tonnes	GFCM $B_{2019}$ = 4,832 tonnes STECF $B_{2020}$ = 16,728 tonnes  $B_{2019}/B_{40\%}$ = 1.48
Reference point used in scoring stock relative to MSY (S1b)	STECF $F_{0.1}$	0.44	$F_{2020}$ = 0.66 $F_{2020}/F_{0.1}$ = 1.48
	GFCM $F_{40\%}$	0.36	$F_{2019}$ = 0.33 $F_{2019}/F_{40\%}$ = 0.921

Draft scoring range	<b>60-79</b>
Information gap indicator	<b>Information sufficient to score PI</b>
Data-deficient? (Risk-Based Framework needed)	<b>No</b>



## PI 1.1.2 – Stock rebuilding (UoA2: Mantis shrimp GSA 17-18)

PI 1.1.2		Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Rebuilding timeframes			
	Guide post	A rebuilding timeframe is specified for the stock that is the <b>shorter of 20 years or 2 times its generation time</b> . For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed <b>one generation time</b> for the stock.
	Met?			<b>N</b>
Rationale				

The CFP and the Adriatic management plan has the objective to reach MSY by 2020 and 2026, respectively and thus there is an intrinsic rebuilding timeframe which is less than 5 years. **SG60 is reached**.

<b>b</b>	Rebuilding evaluation			
	Guide post	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is <b>evidence</b> that the rebuilding strategies are rebuilding stocks, <b>or it is likely</b> based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the <b>specified timeframe</b> .	There is <b>strong evidence</b> that the rebuilding strategies are rebuilding stocks, <b>or it is highly likely</b> based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the <b>specified timeframe</b> .
	Met?	<b>Y</b>	<b>N</b>	<b>N</b>
Rationale				

There is monitoring in place of the fisheries and of the stock that allow for stock status to be estimated and thus **SG60 is reached**. There is also evidence that the stock is rebuilding in recent years in both GFCM and STECF assessments. However, it is uncertain if the stock will be able to rebuild by 2026 and **SG80 is not reached**.

## References

STECF 21-15, WGSAD 2021

Draft scoring range	<b>60-79</b>
Information gap indicator	<b>Information sufficient to score PI</b>

## PI 1.2.1 – Harvest strategy

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Harvest strategy design			
	Guide post	The harvest strategy is <b>expected</b> to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy <b>work together</b> towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is <b>designed</b> to achieve stock management objectives reflected in PI 1.1.1 SG80.
	UoA 1	Y	N	N
	UoA 2	Y	N	N
Rationale				

Cuttlefish and mantis shrimp in the Adriatic Sea are managed by GFCM and the EU. There is an Adriatic management plan for demersal trawl fisheries and national level technical regulations that contain different management measures. There is a national licencing scheme, gear restrictions and data collection. Therefore, **SG60 is reached**. Although the elements of the harvest strategy are likely to work together, there are no specific stock management objectives, while the harvest strategy is not responsive to the state of the stock and thus **SG80 is not reached**.

<b>b</b>	Harvest strategy evaluation			
	Guide post	The harvest strategy is <b>likely</b> to work based on prior experience or plausible argument.	The harvest strategy may not have been fully <b>tested</b> but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been <b>fully evaluated</b> and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	UoA 1	Y	N	N
	UoA 2	Y	N	N
Rationale				

A licencing scheme and fishing restrictions associated to the management plan of demersal trawl fisheries and gear related technical measures can work to limit fishing mortality. So **SG60 is reached**. However, and while catches have decreased for both stocks the strategy has not been tested, and as such **SG80 is not reached**.

<b>c</b>	Harvest strategy monitoring			
	Guide post	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	UoA 1	Y		
	UoA 2	Y		
Rationale				

There is monitoring in place to collect data on catches and biological data, including number of traps and other legal requirements, and independent abundance surveys are also carried out. **SG60 is met.**

<b>d</b>	Harvest strategy review			
	Guide post	The harvest strategy is periodically reviewed and improved as necessary.		
	UoA 1			<b>N</b>
	UoA 2			<b>N</b>
Rationale				

There is no information if the harvest strategy is review periodically and thus **SG100 is not reached.**

<b>e</b>	Shark finning			
	Guide post	It is <b>likely</b> that shark finning is not taking place.	It is <b>highly likely</b> that shark finning is not taking place.	There is a <b>high degree of certainty</b> that shark finning is not taking place.
	UoA 1	<b>NA</b>	<b>NA</b>	<b>NA</b>
	UoA 2	<b>NA</b>	<b>NA</b>	<b>NA</b>
Rationale				

The UoAs do not catch sharks. **This SI is not applicable.**

<b>f</b>	Review of alternative measures			
	Guide post	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a <b>regular</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a <b>biennial</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	UoA 1	<b>NA</b>	<b>NA</b>	<b>NA</b>
	UoA 2	<b>NA</b>	<b>NA</b>	<b>NA</b>
Rationale				

Trap fisheries are highly selective, while the discarded cuttlefish and mantis shrimp have high survival rate (stakeholders information). **This SI is not applicable.**

#### References

Recommendation GFCM/43/2019/5 on a multiannual management plan for sustainable demersal fisheries in the Adriatic Sea (geographical subareas 17 and 18).  
STECF 21-15, WGSAC, 2021

Draft scoring range UoA 1	<b>60-79</b>
Draft scoring range UoA 2	<b>60-79</b>
Information gap indicator	<b>Information sufficient to score PI</b>

## PI 1.2.2 – Harvest control rules and tools

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	HCRs design and application			
	Guide post	Generally understood HCRs are in place <b>or available</b> that are <b>expected</b> to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	Well defined HCRs are <b>in place</b> that <b>ensure</b> that the exploitation rate is reduced as the PRI is approached, are <b>expected</b> to keep the stock <b>fluctuating around</b> a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock <b>fluctuating at or above</b> a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, <b>most</b> of the time.
	UoA 1	<b>N</b>	<b>N</b>	<b>N</b>
	UoA 2	<b>N</b>	<b>N</b>	<b>N</b>
Rationale				

There are no generally understood HCR available or in place that may reduce exploitation when the state of the stocks approaches its PRI. Therefore, **SG60 is not reached**.

<b>b</b>	HCRs robustness to uncertainty			
	Guide post		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a <b>wide</b> range of uncertainties including the ecological role of the stock, and there is <b>evidence</b> that the HCRs are robust to the main uncertainties.
	UoA 1		<b>N</b>	<b>N</b>
	UoA 2		<b>N</b>	<b>N</b>
Rationale				

There are no generally understood HCRs for both species. **SG80 is not met**.

<b>c</b>	HCRs evaluation			
	Guide post	There is <b>some evidence</b> that tools used <b>or available</b> to implement HCRs are appropriate and effective in controlling exploitation.	<b>Available evidence indicates</b> that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	<b>Evidence clearly shows</b> that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	UoA 1	<b>Y</b>	<b>N</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
Rationale				

A licencing scheme and technical fishing restriction may be effective in limiting exploitation. Fishing mortality for both stocks is reducing in recent years and is below  $F_{MSY}$ . There is therefore evidence that exploitation is being limited and **SG60 is reached**. However, as there is no HCR, both **SG 80 and SG100 are not met**.

## References

STECF 21-15, WGSAC, 2021

Draft scoring range UoA 1	<b>&lt;60</b>
Draft scoring range UoA 2	<b>&lt;60</b>
Information gap indicator	<b>Information sufficient to score PI</b>

## PI 1.2.3 – Information and monitoring

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Range of information			
	Guide post	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data are available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, UoA removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	UoA 1	Y	Y	N
	UoA 2	Y	Y	N
Rationale				

There is information on catch and biological data. There is also information on stocks abundance and fleet composition and sufficient information on stock structure so **SG60 and SG80 are reached**. However, a comprehensive range of information is not available (for example mantis shrimp landings and discards frequency distributions are missing for Croatia for GSA17) and thus **SG100 is not reached**.

b	Monitoring			
	Guide post	Stock abundance and UoA removals are monitored and <b>at least one indicator</b> is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and UoA removals are <b>regularly monitored at a level of accuracy and coverage consistent with the harvest control rule</b> , and <b>one or more indicators</b> are available and monitored with sufficient frequency to support the harvest control rule.	<b>All information</b> required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent <b>uncertainties</b> in the information [data] and the robustness of assessment and management to this uncertainty.
	UoA 1	Y	Y	N
	UoA 2	Y	Y	N
Rationale				

UoA removals are regularly monitored and there are two indicators of stocks abundance that allow for stock assessments to be conducted and reference points to be estimated and thus both **SG60 and SG80 are met**. However, there are still uncertainties regarding historical catch data and biological parameters such as natural mortality that **stop SG100 of being reached**.

c	Comprehensiveness of information		
	Guide post	There is good information on all other fishery removals from the stock.	

UoA 1	Y	
UoA 2	Y	
Rationale		

All significant fisheries have compulsory EU and national measures to report catches, although there are Adriatic border countries that are not under the DCF (Moldovia and Albania). Nevertheless, these countries fisheries still submit data, although not comprehensible. **SG80 is met.**

## References

STECF 21-15, WGSAC, 2021

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>
Data-deficient? (Risk-Based Framework needed)	<b>No</b>

## PI 1.2.4 – Assessment of stock status

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Appropriateness of assessment to stock under consideration			
	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment takes into account the major features relevant to the biology of the species and the nature of the UoA.
	UoA 1	Y		Y
	UoA 2	Y		Y
Rationale				

Both cuttlefish and mantis shrimp are assessed by both STECF and GFCM regularly, using either CMSY and a4a/SS3 models, respectively. The assessment takes into account length composition, growth, maturity and natural mortality. Thus, the assessments takes into account the major features relevant to the biology of the species and the nature of the UoA. **And both SG80 and SG100 are met.**

<b>b</b>	Assessment approach			
	Guide post	The assessment estimates stock status relative to generic reference points appropriate to the species category.	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.	
	UoA 1	Y	Y	
	UoA 2	Y	Y	
Rationale				

The assessment estimates MSY reference points for both cuttlefish and mantis shrimp and both **SG60 and SG80 are reached.**

<b>c</b>	Uncertainty in the assessment			
	Guide post	The assessment <b>identifies major sources</b> of uncertainty.	The assessment <b>takes uncertainty into account.</b>	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a <b>probabilistic</b> way.
	UoA 1	Y	Y	Y
	UoA 2	Y	Y	N
Rationale				

The assessment takes uncertainty into account in the catch data and in the tuning series (abundance index) and thus both **SG60 and SG80 are reached for both UoAs.** However, mantis shrimp reference points are not estimated in a probabilistic way, while they are for cuttlefish and thus SG100 is reached for cuttlefish only. **UoA 1 meets SG100, but UoA 2 does not meet SG100.**

<b>d</b>	Evaluation of assessment
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	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	UoA 1			<b>N</b>
	UoA 2			<b>N</b>
Rationale				

The assessments for both cuttlefish and mantis shrimp have been tested using different models and assumptions and they show similar results. Retrospective patterns have also been analysed and shown no residual patterns. However, as there is discrepancy between GFCM and STECF stock assessment results **SG100 is not reached**.

	Peer review of assessment			
e	Guide post		The assessment of stock status is subject to peer review.	The assessment has been <b>internally and externally</b> peer reviewed.
	UoA 1		<b>Y</b>	<b>N</b>
	UoA 2		<b>Y</b>	<b>N</b>
Rationale				

STECF and GFCM assessments are reviewed internally but are not externally reviewed so **only SG80 is reached**.

## References

STECF 21-15, WGSAC, 2021

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>

## 7.5 Principle 2

### 7.5.1 Principle 2 background

For certification purposes, MSC splits non-target species into two categories: i) primary species, and ii) secondary species. Species which are endangered, threatened or protected (ETP) are considered separately.

Primary species are those for which there are management tools controlling exploitation as well as known reference points in place. Secondary species are those which are neither primary (including out of scope species) nor ETP.

Stakeholders interviewed agreed that interactions with fish species, as well as with out of scope or endangered, threatened or protected species would be highly unlikely due to the nature of the gear types. Such events are not remembered (however at present they are not recorded either). Stakeholder’s view on low bycatch levels is supported by research associated to the Interreg Italy-Croatia Prizefish project.

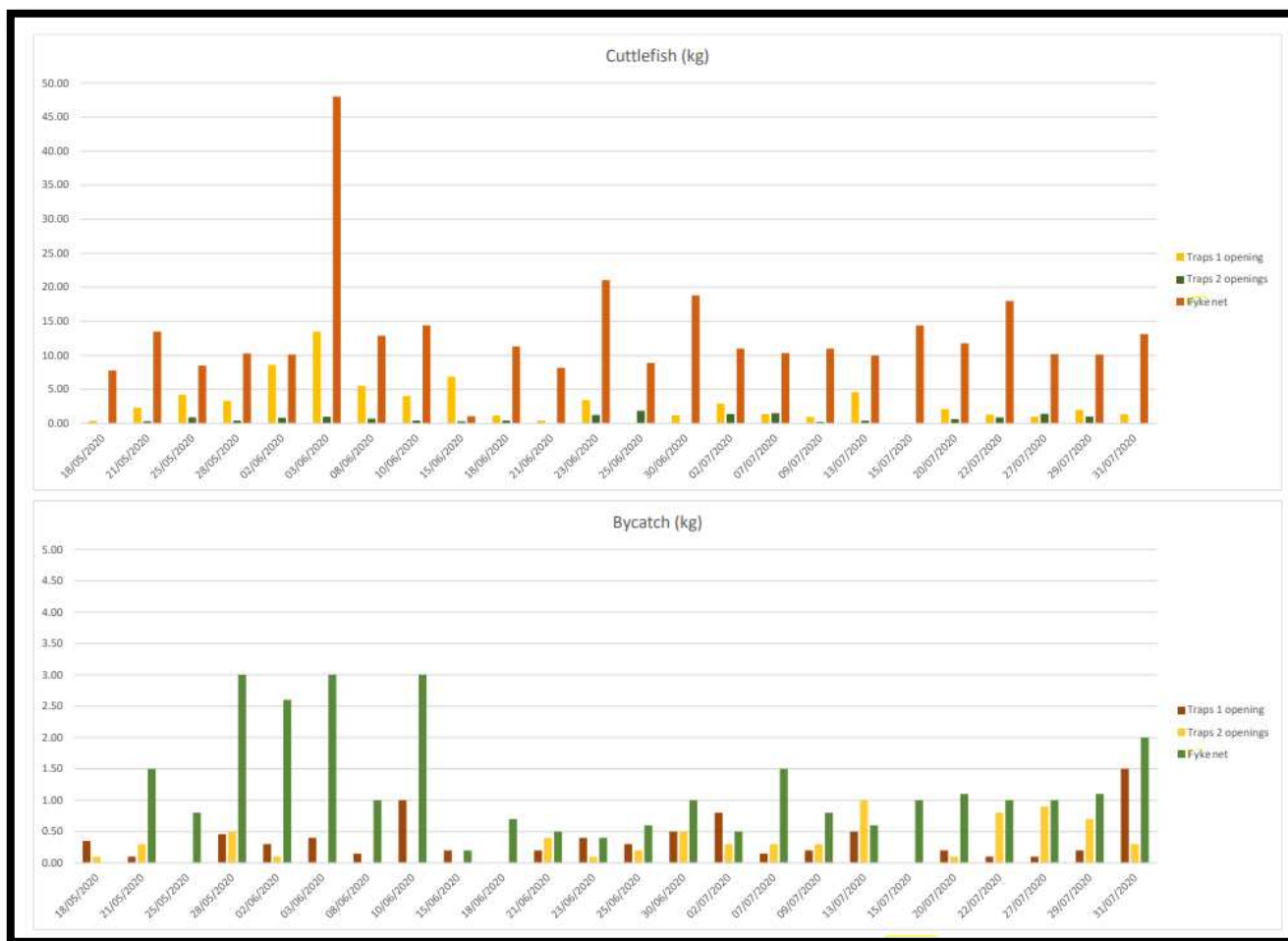


Figure 14 Catch and bycatch for cuttlefish traps and fyke nets (kgs). Fyke nets marked in orange on top and in green below. Source: Interreg Italy-Croatia/Prizefish

Of the species caught in the client’s operations, none of the by-catch species are managed using reference points. Bycatch species will therefore be considered as secondary species. However, sardine and mackerel used as bait in the mantis shrimp fishery are should also be considered as primary or secondary species.

MSC distinguishes primary and secondary species also in relation to the proportion of the catch that they make. With data available at preassessment it has not been possible to determine the percentage of bait used in relation to the catch. Given this, the team will consider both species as “main” species (accomplishing more than a 5% of the total catch (bait+catch)). If this percentage is lower than 2% species are considered as “minor” species.

Sardine (*Sardina pilchardus*) is subject to scientific advice and management measures in the Adriatic Sea. Latest available report (FAO 2020) suggests that that the exploitation ratio for the stock in the Adriatic Sea is above sustainable

levels ( $F/F_{msy} = 3.23$ ), this is, the stock is overexploited. FAO 2021 also shows that biomass levels for the stock are below sustainable limits.

Mackerel (*Scomber scombrus*) is not subject to scientific advice nor management measures, and therefore is considered as a secondary species and scored using the Risk Based Framework (RBF) to determine its assessment score. Detailed results are given in Section 8.8.

It should be noted however that a precautionary approach has been used when considering these species as main. Percentages used per each species should be considered at a full assessment. Besides, it is not clear to the team if sardine and mackerel used as bait comes from the Adriatic Sea or from other regions, or if it comes as a frozen prepared row bait from elsewhere.

The term out of scope species refers to species in the catch which are out of the scope of an MSC assessment (this is, reptiles, amphibians, mammals or birds), but which are not protected by any legislation and therefore not considered as Endangered, Threatened or Protected (ETP) species.

Council Regulation (EC) 1967/2006 of 21 December 2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 1626/94 describes what species should be considered as ETP species in the region. Italian national legislation may add other species to this list.

In relation to benthic habitats, these are also unlikely and reversible. There is no gear recovery program however gear loss is also a rare event, as described by stakeholders.

A trophic mass-balance model with 40 functional groups including target and non-target fish, invertebrate groups and detritus groups were defined to characterize the food web of the Northern and Central Adriatic (Coll et al., 2007; Coll and Libralato, 2012). The model highlighted that there is an important coupling between benthic and pelagic production of detritus, benthic invertebrates and plankton. Such tight coupling may be due to the relatively shallow waters, as well as the general water exchange patterns which prevail in the Adriatic. A high proportion of zooplankton production appears to be directed to detritus, thus maintaining elevated levels of benthic production, which in turn generate detritus which maintains zooplankton populations. The important link between benthic invertebrates and detritus components of the Adriatic Sea food webs may be affected directly or indirectly by fishing activities. In fact, fishing may be enhancing the re-suspension of organic matter, and discards may be converted to benthic detritus (Coll et al., 2007; Libralato et al., 2010;).

**Table 12 Scoring elements**

Component	Scoring elements	Designation	Data-deficient
Principle 1	<i>Sepia officinalis</i>	N/A	No
Principle 1	<i>Squilla mantis</i>	N/A	No
Primary	<i>Sardina pichardus</i>	Main	No
Secondary	<i>Scomber scombrus</i>	Main	Yes
Secondary	<i>Murex</i> spp.	Minor	Yes

### 7.5.2 Principle 2 Performance Indicator scores and rationales

#### PI 2.1.1 – Primary species outcome

PI 2.1.1		The UoA aims to maintain primary species above the point where recruitment would be impaired (PRI) and does not hinder recovery of primary species if they are below the PRI		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Main primary species stock status			
	Guide post	Main primary species are <b>likely</b> to be above the PRI.  OR  If the species is below the PRI, the UoA has measures in place that are <b>expected</b> to ensure that the UoA does not hinder recovery and rebuilding.	Main primary species are <b>highly likely</b> to be above the PRI.  OR  If the species is below the PRI, there is either <b>evidence of recovery</b> or a demonstrably effective strategy in place <b>between all MSC UoAs which categorise this species as main</b> , to ensure that they collectively do not hinder recovery and rebuilding.	There is a <b>high degree of certainty</b> that main primary species are above the PRI <b>and are</b> fluctuating around a level consistent with MSY.
		UoA 1	<b>N/A</b>	<b>N/A</b>
	UoA 2	<b>Yes</b>	<b>No</b>	<b>No</b>

Rationale

There are no main primary species taken as bycatch in the cuttlefish fyke net and mantis shrimp trap fishery. **For UoA 1 (cuttlefish), this Scoring Issue (SI) is not applicable** as there are no main primary species to consider. For UoA 2 (mantis shrimp), the only primary species to consider is the sardine used as bait in the traps. Proportion of bait used in relation to the catch has not been determined, and on a precautionary approach the assessment team has considered this proportion to be greater than 5% and therefore considered sardine as a main primary species for UoA 2. Sardine (*Sardina pilchardus*) is subject to scientific advice and management measures in the Adriatic Sea. These measures should serve to ensure that the UoA does not hinder recovery and rebuilding of the species. **SG60 is met for UoA 2.** Latest available report (FAO 2021) suggests that the exploitation ratio for the stock in the Adriatic Sea is above sustainable levels ( $F/F_{msy} = 3.23$ ), this is, the stock is overexploited. FAO 2021 also shows that biomass levels for the stock are below sustainable limits. Given this, the strategy to manage sardine in the Adriatic Sea can't be considered as effective. **SG80 is not met for UoA 2.**

		Minor primary species stock status		
<b>b</b>	Guide post	Minor primary species are highly likely to be above the PRI.  OR  If below the PRI, there is evidence that the UoA does not hinder the recovery and rebuilding of minor primary species.		
	UoA 1			<b>N/A</b>
	UoA 2			<b>N/A</b>

## Rationale

According to stakeholder interviews, it is highly likely that there are no minor primary species in the catch. This SI would therefore be considered **as N/A for both UoAs**.

## References

Interreg Italy-Croatia/Prizefish  
FAO 2021  
Stakeholder interviews

Draft scoring range UoA 1	<b>≥80 (If a fishery has no impact in an outcome component it meets SG100 by default)</b>
Draft scoring range UoA 2	<b>60-79</b>
Information gap indicator	More information sought in relation to the quantity and proportion of bait species used in the mantis shrimp fishery.
Data-deficient? (Risk-Based Framework needed)	<b>No</b>

## PI 2.1.2 – Primary species management strategy

PI 2.1.2		There is a strategy in place that is designed to maintain or to not hinder rebuilding of primary species, and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Management strategy in place			
	Guide post	There are <b>measures</b> in place for the UoA, if necessary, that are expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are likely to be above the PRI.	There is a <b>partial strategy</b> in place for the UoA, if necessary, that is expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are highly likely to be above the PRI.	There is a <b>strategy</b> in place for the UoA for managing main and minor primary species.
	UoA 1	Y	Y	N
	UoA 2	Y	Y	N
Rationale				

For UoA 1 there are no main nor minor primary species to consider. SG80 is met by default.

For UoA 2 (sardine as main primary species), the assessment team agrees that there is a partial strategy in place which should be expected to maintain or not to hinder the rebuilding of Adriatic Sea sardine at levels which are highly likely to be above PRI. SG60 and SG80 is met. So far the strategy is only considered as partial. SG100 is not met.

Management strategy evaluation				
<b>b</b>	Guide post	The measures are considered <b>likely</b> to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some <b>objective basis for confidence</b> that the measures/partial strategy will work, based on some information directly about the fishery and/or species involved.	<b>Testing</b> supports <b>high confidence</b> that the partial strategy/strategy will work, based on information directly about the fishery and/or species involved.
	UoA 1	Y	Y	Y
	UoA 2	Y	N	N
Rationale				

For UoA 1 there are no main nor minor primary species to consider. **SG80 is met by default for UoA 1.**

For UoA 2 (sardine as main primary species), the assessment team considers that measures implemented to manage the Adriatic Sea sardine stock are likely to work (**SG60 is met for UoA 2**), however with exploitation levels above 3 there is no confidence that the partial strategy to manage sardine will work. **SG80 is not met for UoA 2.**

Management strategy implementation				
<b>c</b>	Guide post		There is <b>some evidence</b> that the measures/partial strategy is being <b>implemented successfully</b> .	There is <b>clear evidence</b> that the partial strategy/strategy is being <b>implemented successfully and is achieving its overall objective as set out in scoring issue (a).</b>
	UoA 1		Y	Y
	UoA 2		N	N

Rationale

For UoA 1 there are no main nor minor primary species to consider. **SG80 is met by default for UoA 1.**  
 For UoA 2 (sardine as main primary species), the assessment team considers that the strategy to manage Adriatic Sea sardine is not successfully implemented due to different uncertainties. **SG80 is not met for UoA 2.**

**d** Shark finning

Guide post	It is <b>likely</b> that shark finning is not taking place.	It is <b>highly likely</b> that shark finning is not taking place.	There is a <b>high degree of certainty</b> that shark finning is not taking place.
All UoAs	<b>NA</b>	<b>NA</b>	<b>NA</b>

Rationale

There are no sharks in the catch of UoA 1 nor UoA 2.

**e** Review of alternative measures

Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species.	There is a <b>regular</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species and they are implemented as appropriate.	There is a <b>biennial</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all primary species, and they are implemented, as appropriate.
UoA 1	<b>NA</b>	<b>NA</b>	<b>NA</b>
UoA 2	<b>N</b>	<b>N</b>	<b>N</b>

Rationale

For UoA 1, there are no primary species to consider. This SI is Not Applicable.  
 For UoA 2, the team is not aware of any review of alternative measures to minimise the UoA related mortality of primary species such as the sardine used as bait. SG60 is not met.

References

Interreg Italy-Croatia/Prizefish  
 FAO 2021  
 Stakeholder interviews

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>&lt;60</b>
Information gap indicator	More information sought on proportion and origin of sardine used as bait, as well as on the existence of review of measures to minimise the UoA impact on primary species.

PI 2.1.3 – Primary species information

PI 2.1.3		Information on the nature and extent of primary species is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage primary species		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Information adequacy for assessment of impact on main primary species			
	Guide post	Qualitative information is <b>adequate to estimate</b> the impact of the UoA on the main primary species with respect to status.  <b>OR</b> <b>If RBF is used to score PI 2.1.1 for the UoA:</b> Qualitative information is adequate to estimate productivity and susceptibility attributes for main primary species.	Some quantitative information is available and is <b>adequate to assess</b> the impact of the UoA on the main primary species with respect to status.  <b>OR</b> <b>If RBF is used to score PI 2.1.1 for the UoA:</b> Some quantitative information is adequate to assess productivity and susceptibility attributes for main primary species.	Quantitative information is available and is <b>adequate to assess with a high degree of certainty</b> the impact of the UoA on main primary species with respect to status.
	UoA 1	<b>Y</b>	<b>Y</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
Rationale				

There is quantitative information on landings by the fishery since decades back. This information should suffice to determine the impact on main primary species with respect to status.  
 For UoA 1, where there are no main species, SG60 and SG80 are met. Independent information gathered by external stakeholders would serve to support higher scores.  
 For UoA 2, sardine is used as bait. The team could not find information on the quantity of bait used by the UoA. This information should be gathered easily, however without it the requirements at SG80 are not met.

<b>b</b>	Information adequacy for assessment of impact on minor primary species			
	Guide post	Some quantitative information is adequate to estimate the impact of the UoA on minor primary species with respect to status.		
	UoA 1			<b>Y</b>
	UoA 2			<b>Y</b>
Rationale				

Information on landings is sufficient to determine that there are no minor species in the catch. Both UoAs meet the requirements at SG100.

<b>c</b>	Information adequacy for management strategy			
	Guide post	Information is adequate to support <b>measures</b> to manage <b>main</b> primary species.	Information is adequate to support a <b>partial strategy</b> to manage <b>main</b> primary species.	Information is adequate to support a <b>strategy</b> to manage <b>all</b> primary species, and evaluate with a <b>high degree of certainty</b> whether the



				strategy is achieving its objective.
	UoA 1	Y	Y	Y
	UoA 2	Y	N	N
Rationale				

Information collected supports that there are no main species for UoA 1. Therefore, SG100 is met. As regards UoA 2, information should be collected to support a strategy on manage main primary species. At present the requirements of SG60 are met but the requirements at SG80 are not.

## References

Interreg Italy-Croatia/Prizefish  
FAO 2021  
Stakeholder interviews

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>60-70</b>
Information gap indicator	More information sought on the quantities of sardine used as bait and on its precedence.

PI 2.2.1 – Secondary species outcome

PI 2.2.1		The UoA aims to maintain secondary species above a biologically based limit and does not hinder recovery of secondary species if they are below a biological based limit		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Main secondary species stock status</b>			
	Guide post	Main secondary species are <b>likely</b> to be above biologically based limits.	Main secondary species are <b>highly likely</b> to be above biologically based limits.	There is a <b>high degree of certainty</b> that main secondary species are above biologically based limits.
		OR	OR	
		If below biologically based limits, there are <b>measures</b> in place expected to ensure that the UoA does not hinder recovery and rebuilding.	If below biologically based limits, there is either <b>evidence of recovery</b> or a <b>demonstrably effective partial strategy</b> in place such that the UoA does not hinder recovery and rebuilding. AND Where catches of a main secondary species outside of biological limits are <b>considerable</b> , there is either <b>evidence of recovery</b> or a, <b>demonstrably effective strategy in place between those MSC UoAs that have considerable catches of the species</b> , to ensure that they collectively do not hinder recovery and rebuilding.	
UoA 1	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
	UoA 2	<b>Y</b>	<b>Y</b>	<b>N</b>

Rationale

There are no main primary species taken as bycatch in the cuttlefish fyke net and mantis shrimp trap fishery. **For UoA 1 (cuttlefish), this Scoring Issue (SI) is not applicable** as there are no main primary species to consider. For UoA 2 (mantis shrimp), the only secondary species to consider is the mackerel used as bait in the traps. Proportion of bait used in relation to the catch has not been determined, and on a precautionary approach the assessment team has considered this proportion to be greater than 5% and therefore considered mackerel as a main secondary species for UoA 2. The RBF has been used to score mackerel achieving a score above 80. **SG80 is met for UoA2.**

		<b>Minor secondary species stock status</b>		
<b>b</b>	Guide post	Minor secondary species are highly likely to be above biologically based limits.		
		OR		
		If below biologically based limits', there is evidence that the UoA does not hinder the recovery and rebuilding of secondary species		
	UoA 1			<b>N</b>

UoA 2

N

### Rationale

According to stakeholder interviews, it is likely that there are minor secondary species in the catch represented by molluscs or another invertebrate. Given the nature of the gear type these species could be released without harm if handled carefully.

The team does not have information on which species might be minor secondary species nor has information on their stock biomass.

SG100 is not met by any UoA.

### References

Interreg Italy-Croatia/Prizefish

FAO 2021

Stakeholder interviews

[https://www.fishbase.se/popdyn/KeyfactsSummary\\_1.php?ID=118&GenusName=Scomber&SpeciesName=scombrus&vStockCode=132&fc=416](https://www.fishbase.se/popdyn/KeyfactsSummary_1.php?ID=118&GenusName=Scomber&SpeciesName=scombrus&vStockCode=132&fc=416)

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>≥80</b>
Information gap indicator	More information sought on the quantity and origin of the mackerel used as bait in UoA 2.
Data-deficient? (Risk-Based Framework needed)	Yes (Mackerel used as bait)

## PI 2.2.2 – Secondary species management strategy

PI 2.2.2		There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Management strategy in place</b>			
	Guide post	There are <b>measures</b> in place, if necessary, which are expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery.	There is a <b>partial strategy</b> in place, if necessary, for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery.	There is a <b>strategy</b> in place for the UoA for managing main and minor secondary species.
	UoA 1	<b>Y</b>	<b>Y</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
<b>Rationale</b>				

There are no main secondary species to consider for UoA 1. An SG80 score is achieved by default. For UoA 2, where mackerel is considered a main secondary species, the team considers that management measures applying to the sardine stock, and which limit the fishing activity by pelagic fishing vessels, can be considered as measures in place which are expected to ensure that the UoA does not hinder the recovery of this species. SG60 is met for UoA 2. Given that these measures are not directed to mackerel but to sardine it can not be considered that there is a partial strategy. SG80 is not met for UOA 2.

<b>Management strategy evaluation</b>				
<b>b</b>	Guide post	The measures are considered <b>likely</b> to work, based on plausible argument (e.g. general experience, theory or comparison with similar UoAs/species).	There is <b>some objective basis for confidence</b> that the measures/partial strategy will work, based on some information directly about the UoA and/or species involved.	<b>Testing</b> supports <b>high confidence</b> that the partial strategy/strategy will work, based on information directly about the UoA and/or species involved.
	UoA 1	<b>Y</b>	<b>Y</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
<b>Rationale</b>				

There are no main secondary species to consider for UoA 1. An SG80 score is achieved by default. For UoA 2, where mackerel is considered a main secondary species, the team considers that management measures applying to the sardine stock, and which limit the fishing activity by pelagic fishing vessels, can be considered as measures in place which are expected to ensure that the UoA does not hinder the recovery of this species. SG60 is met for UoA 2. The team can not evaluate if these measures will work in protecting the mackerel stock. SG80 is met. In any case the UoA could always opt for using sustainable bait from other sources.

<b>Management strategy implementation</b>				
<b>c</b>	Guide post	There is <b>some evidence</b> that the measures/partial strategy is being <b>implemented successfully</b> .		There is <b>clear evidence</b> that the partial strategy/strategy is being <b>implemented successfully and is achieving its objective as set out in scoring issue (a)</b> .

	UoA 1		Y	N
	UoA 2		N	N
Rationale				

For UoA 1 there are no main nor minor secondary species to consider. **SG80 is met by default for UoA 1.**  
 For UoA 2 (mackerel as main secondary species), the assessment team considers that the strategy to manage Adriatic Sea pelagic stocks is not successfully implemented. **SG80 is not met for UoA 2.**

Shark finning				
d	Guide post	It is <b>likely</b> that shark finning is not taking place.	It is <b>highly likely</b> that shark finning is not taking place.	There is a <b>high degree of certainty</b> that shark finning is not taking place.
	All UoAs	NA	NA	NA
Rationale				

There are no sharks in the catch by the UoAs

Review of alternative measures to minimise mortality of unwanted catch				
e	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of <b>unwanted</b> catch of main secondary species.	There is a <b>regular</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of <b>unwanted</b> catch of main secondary species and they are implemented as appropriate.	There is a <b>biennial</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of <b>unwanted</b> catch of all secondary species, and they are implemented, as appropriate.
	UoA 1	NA	NA	NA
	UoA 2	N	N	N
Rationale				

For UoA 1, there are no secondary species to consider. This SI is Not Applicable.  
 For UoA 2, the team is not aware of any review of alternative measures to minimise the UoA related mortality of secondary species such as the mackerel used as bait. SG60 is not met.

## References

Interreg Italy-Croatia/Prizefish  
 FAO 2021  
 Stakeholder interviews

Draft scoring range UoA 1	≥80
Draft scoring range UoA 2	<60
Information gap indicator	More information sought on review of alternative measures (if any) and on the level of implementation of management measures directed to small pelagics in the Adriatic Sea.

PI 2.2.3 – Secondary species information

PI 2.2.3		Information on the nature and amount of secondary species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage secondary species		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Information adequacy for assessment of impacts on main secondary species			
	Guide post	Qualitative information is <b>adequate to estimate</b> the impact of the UoA on the main secondary species with respect to status.	Some quantitative information is available and <b>adequate to assess</b> the impact of the UoA on main secondary species with respect to status.	Quantitative information is available and <b>adequate to assess with a high degree of certainty</b> the impact of the UoA on main secondary species with respect to status.
		OR	OR	
		<b>If RBF is used to score PI 2.2.1 for the UoA:</b>	<b>If RBF is used to score PI 2.2.1 for the UoA:</b>	
	Qualitative information is adequate to estimate productivity and susceptibility attributes for main secondary species.	Some quantitative information is adequate to assess productivity and susceptibility attributes for main secondary species.		
	UoA 1	<b>Y</b>	<b>Y</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
Rationale				

There is quantitative information on landings by the fishery since decades back. This information should suffice to determine the impact on main secondary fish species, if any.

For UoA 1, where there are no main species, SG60 and SG80 are met. Independent information gathered by external stakeholders would serve to support higher scores.

For UoA 2, mackerel is used as bait. The team could not find information on the quantity of bait used by the UoA. This information should be gathered easily, however without it the requirements at SG80 are not met.

Besides, out of scope species are not expected in the catch of any UoA but independent confirmation of this stakeholder comment would be needed during a full assessment process in order to achieve higher scores.

Information adequacy for assessment of impacts on minor secondary species				
<b>b</b>	Guide post			Some quantitative information is adequate to estimate the impact of the UoA on minor secondary species with respect to status.
	UoA 1			<b>Y</b>
	UoA 2			<b>Y</b>
Rationale				

Information on landings is sufficient to determine that there are no minor species in the catch. Both UoAs meet the requirements at SG100.

Information adequacy for management strategy				
<b>c</b>	Guide post	Information is adequate to support <b>measures</b> to manage <b>main</b> secondary species.	Information is adequate to support a <b>partial strategy</b> to	Information is adequate to support a <b>strategy</b> to manage <b>all</b> secondary species, and

			manage <b>main</b> secondary species.	<b>evaluate with a high degree of certainty</b> whether the strategy is <b>achieving its objective</b> .
	UoA 1	<b>Y</b>	<b>Y</b>	<b>N</b>
	UoA 2	<b>Y</b>	<b>N</b>	<b>N</b>
<b>Rationale</b>				

Information collected supports that there are no main secondary species for UoA 1. Therefore, SG80 is met. However SG100 is not met since there is no information on minor secondary species impacted by the UoA.

As regards UoA 2, information should be collected to support a strategy to manage main secondary species. At present the requirements of SG60 are met but the requirements at SG80 are not.

Besides, and for both UoAs, information should be collected in relation to potential impacts of the different UoAs with out of scope species.

#### References

Interreg Italy-Croatia/Prizefish

FAO 2021

Stakeholder interviews

Draft scoring range UoA 1	<b>≥80</b>
Draft scoring range UoA 2	<b>60-79</b>
Information gap indicator	More information sought in relation to the quantity of mackerel used as bait and its origin, as well as on minor secondary species impacted by both UoAs ,and on potential interactions, if any, with out of scope species.

PI 2.3.1 – ETP species outcome: All UoAs

PI 2.3.1	The UoA meets national and international requirements for the protection of ETP species The UoA does not hinder recovery of ETP species		
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Scoring Issue	SG 60	SG 80	SG 100
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<b>a</b>	Effects of the UoA on population/stock within national or international limits, where applicable			
	Guide post	Where national and/or international requirements set limits for ETP species, the <b>effects of the UoA</b> on the population/ stock are known and <b>likely</b> to be within these limits.	Where national and/or international requirements set limits for ETP species, the <b>combined effects of the MSC UoAs</b> on the population /stock are known and <b>highly likely</b> to be within these limits.	Where national and/or international requirements set limits for ETP species, there is a <b>high degree of certainty</b> that the <b>combined effects of the MSC UoAs</b> are within these limits.
	Met?	NA	NA	NA

Rationale

To the team’s knowledge, there are no ETP species interacting the UoAs. **This SI would be N/A.**

<b>b</b>	Direct effects			
	Guide post	Known direct effects of the UoA are likely to not <b>hinder recovery</b> of ETP species.	Direct effects of the UoA are <b>highly likely</b> to not <b>hinder recovery</b> of ETP species.	There is a <b>high degree of confidence</b> that there are no <b>significant detrimental direct effects</b> of the UoA on ETP species.
	Met?	Y	Y	N

Rationale

To the team’s knowledge, there are no ETP species interacting the UoAs. This is confirmed by the client and by stakeholder G. Scarcella and S. Raicevich. The requirements at **SG80 are met**. Further evidence is needed in order to meet the **SG100 requirements by all UoAs**.

<b>c</b>	Indirect effects		
	Guide post	Indirect effects have been considered for the UoA and are thought to be <b>highly likely</b> to not create unacceptable impacts.	There is a <b>high degree of confidence</b> that there are no <b>significant detrimental indirect effects</b> of the UoA on ETP species.
	Met?	Y	N

Rationale

To the team’s knowledge, the fishery does not interact with ETP species, nor directly nor indirectly. The requirements at **SG80 are expected to be met**. However, given that indirect impacts can include issues such as injuries caused by the gear, reduction in prey availability, or noise disturbance among others things, the team considers that the requirements at **SG100 are not met by any UoA**.

References

Stakeholder personal comments.

Draft scoring range	≥80
Information gap indicator	More information sought on potential interactions by the UoA with ETP species, as well as publications on the topic.
Data-deficient? (Risk-Based Framework needed)	Yes / No (likely not to be needed, but still uncertain)



PI 2.3.2 – ETP species management strategy: All UoAs

PI 2.3.2	The UoA has in place precautionary management strategies designed to: <ul style="list-style-type: none"> <li>- meet national and international requirements;</li> <li>- ensure the UoA does not hinder recovery of ETP species.</li> </ul> Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species		
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Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Management strategy in place (national and international requirements)			
	Guide post	There are <b>measures</b> in place that minimise the UoA-related mortality of ETP species, and are expected to be <b>highly likely to achieve</b> national and international requirements for the protection of ETP species.	There is a <b>strategy</b> in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to be <b>highly likely to achieve</b> national and international requirements for the protection of ETP species.	There is a <b>comprehensive strategy</b> in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to <b>achieve above</b> national and international requirements for the protection of ETP species.
	Met?	<b>NA</b>	<b>NA</b>	<b>NA</b>

Rationale

This SI is N/A to the fishery.

<b>b</b>	Management strategy in place (alternative)			
	Guide post	There are <b>measures</b> in place that are expected to ensure the UoA does not hinder the recovery of ETP species.	There is a <b>strategy</b> in place that is expected to ensure the UoA does not hinder the recovery of ETP species.	There is a <b>comprehensive strategy</b> in place for managing ETP species, to ensure the UoA does not hinder the recovery of ETP species.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

Rationale

The fishing strategy by both UoAs, which allow for nil fatal interactions of the UoAs with ETP species, and the possibility of release of these (should they occur) while still in the water, are seen as a strategy which is expected to ensure that the UoA does not hinder the recovery of ETP species. The requirements **at SG80 are met** by both UoAs. The team does not consider this strategy to be comprehensive as it lacks records of sightings and interactions, and does not take into consideration indirect effects by the fishery. The requirements **at SG100 are not met** by any UoA. It is recommended that the fishery continues to have no impact on ETP species and establishes ongoing monitoring to ensure that no impact occurs on designated ETP species.

<b>c</b>	Management strategy evaluation			
	Guide post	The measures are <b>considered likely</b> to work, based on <b>plausible argument</b> (e.g., general experience, theory or comparison with similar fisheries/species).	There is an <b>objective basis for confidence</b> that the measures/strategy will work, based on <b>information</b> directly about the fishery and/or the species involved.	The strategy/comprehensive strategy is mainly based on information directly about the fishery and/or species involved, and a <b>quantitative analysis</b> supports <b>high confidence</b> that the strategy will work.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

Rationale

According to stakeholders interviewed there are no interactions with ETP species by the UoAs. Given this information, the requirements at **SG80 are met**. As there is no analysis of interactions (if any), the requirements at **SG100 are not met by any UoA**. This type of information should be sought for a full assessment process.

Management strategy implementation				
<b>d</b>	Guide post		There is some <b>evidence</b> that the measures/strategy is being implemented successfully.	There is <b>clear evidence</b> that the strategy/comprehensive strategy is being implemented successfully and <b>is achieving its objective as set out in scoring issue (a) or (b)</b> .
	Met?		<b>Y</b>	<b>N</b>

**Rationale**

Evidence is based on researchers comments related to potential interactions with ETP species. The requirements at **SG80 are met**. The requirements at **SG100 are not met**.

Review of alternative measures to minimize mortality of ETP species				
<b>e</b>	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species.	There is a <b>regular</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.	There is a <b>biennial</b> review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality ETP species, and they are implemented, as appropriate.
	Met?	N/A	N/A	N/A

**Rationale**

To the team’s knowledge there is no formal review of alternative measures to minimise mortality of ETP species. However, fishing strategy allows for minimal impacts to these species and for releasement of individuals if entangled in the traps and fyke nets. To the team’s knowledge there is no ETP mortality associated to the UoAs.

As described in MSC FS v2.1 SA 3.5.3, this clause applies “if there is unwanted catch”. As there is no unwanted catch nor mortality associated to the UoAs, **this PI is N/A**.

The client is however recommended to record interactions (if any) and to implement and review management measures if/when needed.

**References**

Stakeholder comments.

Draft scoring range	<b>≥80</b>
Information gap indicator	More information sought on potential interactions of the UoAs with ETP species as well as publications on these.

## PI 2.3.3 – ETP species information: All UoAs

PI 2.3.3	Relevant information is collected to support the management of UoA impacts on ETP species, including: <ul style="list-style-type: none"> <li>- Information for the development of the management strategy;</li> <li>- Information to assess the effectiveness of the management strategy; and</li> <li>- Information to determine the outcome status of ETP species</li> </ul>		
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Scoring Issue	SG 60	SG 80	SG 100
Information adequacy for assessment of impacts			
<b>a</b>	Qualitative information is <b>adequate to estimate</b> the UoA related mortality on ETP species.  <b>OR</b> <b>If RBF is used to score PI 2.3.1 for the UoA:</b> Qualitative information is <b>adequate to estimate productivity and susceptibility</b> attributes for ETP species.	Some quantitative information is <b>adequate to assess</b> the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species.  <b>OR</b> <b>If RBF is used to score PI 2.3.1 for the UoA:</b> Some quantitative information is <b>adequate to assess productivity and susceptibility</b> attributes for ETP species.	Quantitative information is available to assess with a high degree of certainty the <b>magnitude of UoA-related impacts, mortalities and injuries and the consequences for the status</b> of ETP species.
Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

## Rationale

There is qualitative (and some quantitative on the Prizefish publications) information on the UoA impacts on ETP species. The requirements at **SG80 are met** by both UoAs. However there is no information on the UoA related injuries that may be caused to ETP species. The requirements at **SG100 are not met** by any UoA.

Information adequacy for management strategy			
<b>b</b>	Guide post  Information is adequate to support <b>measures</b> to manage the impacts on ETP species.	Information is adequate to measure trends and support a <b>strategy</b> to manage impacts on ETP species.	Information is adequate to support a <b>comprehensive strategy</b> to manage impacts, minimize mortality and injury of ETP species, and evaluate with a <b>high degree of certainty</b> whether a strategy is achieving its objectives.
Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

## Rationale

Available information is sufficient to support a strategy to manage impacts on ETP species, however this strategy would not be comprehensive as it would require of further information such as non-fatal interactions with the ETP species or their population levels in the UoA fishing grounds. **SG80 is met**. The requirements at **SG100 are not met** by any UoA.

## References

Interreg Italy-Croatia/Prizefish  
Stakeholder interviews

Draft scoring range	<b>≥80</b>
Information gap indicator	More information sought on publications on interactions with ETP species.

PI 2.4.1 – Habitats outcome: All UoAs

PI 2.4.1		The UoA does not cause serious or irreversible harm to habitat structure and function, considered on the basis of the area covered by the governance body(s) responsible for fisheries management in the area(s) where the UoA operates		
Scoring Issue		SG 60	SG 80	SG 100
<b>Commonly encountered habitat status</b>				
<b>a</b>	Guide post	The UoA is <b>unlikely</b> to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	The UoA is <b>highly unlikely</b> to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	There is <b>evidence</b> that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
<b>Rationale</b>				
The fishery takes place with fyke nets and traps. Both fishing gears are light and impacts on the seafloor are reversible and temporary. SG80. SG100 is likely met but research or publications in relation to physical impacts by trap gears on the seafloor would be needed.				
<b>VME habitat status</b>				
<b>b</b>	Guide post	The UoA is <b>unlikely</b> to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.	The UoA is <b>highly unlikely</b> to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.	There is <b>evidence</b> that the UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.
	Met?	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Rationale</b>				
The assessment team is not aware of VMEs occurring in the fishing grounds for the UoAs. It is likely that this SI is not applicable, however note that if there are VMEs overlapping the UoAs, then it would be likely that a condition would be raised in this PI.				
<b>Minor habitat status</b>				
<b>c</b>	Guide post			There is <b>evidence</b> that the UoA is highly unlikely to reduce structure and function of the minor habitats to a point where there would be serious or irreversible harm.
	Met?			<b>N</b>
<b>Rationale</b>				
There is no evidence, as the team could not find publications on the benthic impacts by the fishing gears in the fishing grounds. SG100 is not met.				
<b>References</b>				
Stakeholder comments.				
Draft scoring range			<b>≥80</b>	
Information gap indicator			<b>More information sought on VMEs overlapping the fishing grounds, if any.</b>	
Data-deficient? (Risk-Based Framework needed)			<b>No</b>	

## PI 2.4.2 – Habitats management strategy: All UoAs

PI 2.4.2		There is a strategy in place that is designed to ensure the UoA does not pose a risk of serious or irreversible harm to the habitats		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Management strategy in place			
	Guide post	There are <b>measures</b> in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a <b>partial strategy</b> in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a <b>strategy</b> in place for managing the impact of all MSC UoAs/non-MSC fisheries on habitats.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				
Given the low level of benthic impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <a href="https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402">https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402</a>				
<b>b</b>	Management strategy evaluation			
	Guide post	The measures are <b>considered likely</b> to work, based on plausible argument (e.g. general experience, theory or comparison with similar UoAs/habitats).	There is some <b>objective basis for confidence</b> that the measures/partial strategy will work, based on <b>information directly about the UoA and/or habitats</b> involved.	<b>Testing</b> supports <b>high confidence</b> that the partial strategy/strategy will work, based on <b>information directly about the UoA and/or habitats</b> involved.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				
Given the low level of ecosystem impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <a href="https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402">https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402</a>				
<b>c</b>	Management strategy implementation			
	Guide post		There is <b>some quantitative evidence</b> that the measures/partial strategy is being implemented successfully.	There is <b>clear quantitative evidence</b> that the partial strategy/strategy is being implemented successfully and is achieving its objective, as outlined in scoring issue (a).
	Met?		<b>Y</b>	<b>N</b>
Rationale				
Given the low level of ecosystem impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <a href="https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402">https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402</a>				
<b>d</b>	Compliance with management requirements and other MSC UoAs'/non-MSC fisheries' measures to protect VMEs			
	Guide post	There is <b>qualitative evidence</b> that the UoA complies with its management requirements to protect VMEs.	There is <b>some quantitative evidence</b> that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other	There is <b>clear quantitative evidence</b> that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other

		MSC UoAs/non-MSC fisheries, where relevant.	MSC UoAs/non-MSC fisheries, where relevant.
	Met?	Y	N
Rationale			

According to fishermen interviewed, the UoAs comply with regulation in relation to the protection of benthic habitats. Note that during a full assessment process management authorities are interviewed so that the fishery's compliance with this and other management measures is independently verified. Only other MSC certified fishery in the region is the Venetian wild harvested striped clam fishery, which complies with management measures (as followed up at each surveillance audit) and who does not have any other specific autotest measure to protect VMEs. SG80 is met.

## References

MSC Public Certification Report for Veentain wild harvested striped clam fishery:  
<https://fisheries.msc.org/en/fisheries/venetian-wild-harvested-striped-clam-venus-chamelea-gallina/@@assessments>

<https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402>

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>More information sought on fisheries compliance with management measures afforded to the protection of VMEs.</b>

PI 2.4.3 – Habitats information: All UoAs

PI 2.4.3		Information is adequate to determine the risk posed to the habitat by the UoA and the effectiveness of the strategy to manage impacts on the habitat		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Information quality</b>			
	Guide post	The types and distribution of the main habitats are <b>broadly understood</b> .  <b>OR</b>  <b>If CSA is used to score PI 2.4.1 for the UoA:</b> Qualitative information is adequate to estimate the types and distribution of the main habitats.	The nature, distribution and <b>vulnerability</b> of the main habitats in the UoA area are known at a level of detail relevant to the scale and intensity of the UoA.  <b>OR</b>  <b>If CSA is used to score PI 2.4.1 for the UoA:</b> Some quantitative information is available and is adequate to estimate the types and distribution of the main habitats.	The distribution of all habitats is known over their range, with particular attention to the occurrence of vulnerable habitats.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
<b>Rationale</b>				

The Northern Adriatic Sea is well studied including benthic habitats (however the team is not able to mention any specific report at present). Sg80 is expected to be met as long as some research bibliography is conducted since the requirements at SG80 are met. The scale and intensity of the fishery is low, and vulnerability of main habitats have been studied since there are designated Natura 200 areas in the region. SG80 is met.

<b>Information adequacy for assessment of impacts</b>				
<b>b</b>	Guide post	Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear.  <b>OR</b>  <b>If CSA is used to score PI 2.4.1 for the UoA:</b> Qualitative information is adequate to estimate the consequence and spatial attributes of the main habitats.	Information is adequate to allow for identification of the main impacts of the UoA on the main habitats, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear.  <b>OR</b>  <b>If CSA is used to score PI 2.4.1 for the UoA:</b> Some quantitative information is available and is adequate to estimate the consequence and spatial attributes of the main habitats.	The physical impacts of the gear on all habitats have been quantified fully.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

**Rationale**  
 Information on the following aspects can be easily gathered: physical impacts by the gears, spatial extent of interaction (including timing) and vulnerability of fishing grounds. SG80 is met (although further information on the distribution and vulnerability of fishing grounds is needed to support this score). An SG100 score could be easily obtained by quantifying the impacts by the UoA, however to the team's knowledge this has not been done so far.

Monitoring				
<b>C</b>	Guide post		Adequate information continues to be collected to detect any increase in risk to the main habitats.	Changes in all habitat distributions over time are measured.
	Met?		<b>Y</b>	<b>N</b>
Rationale				

There are monitoring activities carried out by the Italian Ministry of Infrastructure and Transport (reports from research studies listed in <http://www.istitutoveneto.org/venezia/documenti/documenti1.htm>) and on the coastal areas along the Venetian lagoon (e.g. Cecconi et al., 2005; Ispra, 2012)

Agriteco research institute also collects information on benthic habitats in the region. SG80 is met. The team is not aware of measuring of changes in habitat distributions. SG100 is not met.

#### References

Cecconi et al., 2005;  
Ispra, 2012  
<http://www.istitutoveneto.org/venezia/documenti/documenti1.htm>

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>



## PI 2.5.1 – Ecosystem outcome: All UoAs

PI 2.5.1		The UoA does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Ecosystem status</b>			
	<b>Guide post</b>	The UoA is <b>unlikely</b> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The UoA is <b>highly unlikely</b> to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is <b>evidence</b> that the UoA is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
	<b>Met?</b>	<b>Y</b>	<b>Y</b>	<b>N</b>
<b>Rationale</b>				

The northern Adriatic Sea is a shallow (29 m average depth) Mediterranean sub-basin. Physical and biological characteristics make the northern Adriatic Sea a peculiar ecosystem with high, but variable, primary productivity, supported by the large nutrient loads mainly discharged by the Italian rivers, particularly the Po River. A review of studies on long term series on river discharges, oceanographic features, plankton, fish and benthic compartments, collected since the 1970s revealed significant changes of mechanisms and trophic structures in the northern Adriatic ecosystems (Giani et al., 2012). A gradual increase of eutrophication pressure occurred during the 1970s until the mid-1980s, followed by a reversal of the trend, particularly marked in the 2000s. This trend was ascribed to the combination of a reduction of the anthropogenic impact, mainly due to a substantial decrease of the phosphorus loads, and of climatic modifications, resulting in a decline of atmospheric precipitations and, consequently, of the runoff in the northern Adriatic Sea. Significant decreases of the phytoplankton abundances were observed after the mid-1980s, concurrently with changes in the species composition of both benthic and planktonic communities. Moreover, changes in the fish assemblages were also observed. In fact, the decrease of demersal fishes, top predators and small pelagic fishes in the Northern Adriatic was ascribed to both overfishing and a demise of eutrophication. Hypoxia has been often considered a recurrent feature event in the Northern Adriatic and one of the most significant source of environmental risk for its ecosystems. In fact, mass mortalities of benthic macrofauna have been reported during the 1970s and 1980s, being a consequence of repeated events (Degobbis et al., 2000; Solidoro et al., 2009; Djakovac et al., 2012). Macrozoobenthic communities have slowly recovered in the last two decades after the anoxia events. A long study carried out in the north-eastern Adriatic Sea showed that soft-bottom polychaete declined after the anoxic event of 1989 leading the macrobenthic communities to an instability with the dominance of bivalves (Mikac et al., 2011). In addition, an increasing number of non-autochthonous species has been recorded in the last decades being facilitated by the increasing seawater temperature and mainly caused by shipping/maritime transport, aquaculture activities or by a diffusion through the Suez Canal or Gibraltar Strait (Crocetta, 2011). A trophic mass-balance model with 40 functional groups including target and non-target fish, invertebrate groups and detritus groups was defined to characterize the food web of the Northern and Central Adriatic (Coll et al., 2007; Lotze et al., 2011; Coll and Libralato, 2012). The model highlighted that there is an important coupling between benthic and pelagic production of detritus, benthic invertebrates and plankton. Such tight coupling may be due to the relatively shallow waters, as well as the general water exchange patterns which prevail in the Adriatic. A high proportion of zooplankton production appears to be directed to detritus, thus maintaining elevated levels of benthic production, which in turn generate detritus which maintains zooplankton populations. The important link between benthic invertebrates and detritus components of the Adriatic Sea food webs may be affected directly or indirectly by fishing activities. In fact, fishing may be enhancing the re-suspension of organic matter, and discards may be converted to benthic detritus (Coll et al., 2007; Libralato et al., 2010;).

However, in the case of the cuttlefish fyke net and mantis shrimp trap fishery the re-suspension of organic matter by the fishing activity is likely to be limited due to the localized scale and low weight of the fishing gears. Besides, discard volumes are low.

In addition, the potential direct and indirect impacts of the UoA on micro- and meso-zooplankton communities. through the re-suspension of organic matter and/or the conversion of discards to benthic detritus will however not affect primary productivity by phytoplankton communities, which are mainly influenced by fluctuations in salinity, nutrients and temperature (Giani et al., 2012).

There is evidence that the fishery is highly unlikely to disrupt the key elements underlying the ecosystem structure and function to a point where there would be a serious or irreversible harm and a loss of resilience and productivity. SG80 is met.

Major ecosystem impact by the UoAs is the vulnerability of egg cases associated to fyke nets. This impact is considered under Principle 1 (and not under Principle 2).

## References

Stakeholder comments  
Giani et al., 2012  
Degobbis et al., 2000;  
Solidoro et al., 2009;  
Djakovac et al., 2012  
Mikac et al., 2011  
Crocetta, 2011  
Lotze et al., 2011;  
Coll and Libralato, 2012  
Coll et al., 2007;  
Libralato et al., 2010

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>
Data-deficient? (Risk-Based Framework needed)	<b>No</b>

PI 2.5.2 – Ecosystem management strategy: All UoAs

PI 2.5.2	There are measures in place to ensure the UoA does not pose a risk of serious or irreversible harm to ecosystem structure and function		
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Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Management strategy in place			
	Guide post	There are <b>measures</b> in place, if necessary which take into account the <b>potential impacts</b> of the UoA on key elements of the ecosystem.	There is a <b>partial strategy</b> in place, if necessary, which takes into account <b>available information and is expected to restrain impacts</b> of the UoA on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	There is a <b>strategy</b> that consists of a <b>plan</b> , in place which contains measures to <b>address all main impacts of the UoA</b> on the ecosystem, and at least some of these measures are in place.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

Rationale

The fishing practices in use, coupled with the few harvest control rules (number of traps or commonly accepted limited minimum size) are measures which, if necessary, take into account the potential impact by the UoA. It could be argued that the limited impact by the fisheries make it unnecessary to develop a strategy to manage the fishery, however the lack of harvest control rules on the stocks make it desirable certain level of regulation of the fishery regardless of its limited impact. Given the low level of ecosystem impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402>

Management strategy evaluation

<b>b</b>	Guide post	The <b>measures</b> are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar UoAs/ ecosystems).	There is <b>some objective basis for confidence</b> that the measures/ partial strategy will work, based on some information directly about the UoA and/or the ecosystem involved.	<b>Testing</b> supports <b>high confidence</b> that the partial strategy/ strategy will work, based on information directly about the UoA and/or ecosystem involved.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

Rationale

Given the low level of ecosystem impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402>

Management strategy implementation

<b>c</b>	Guide post		There is <b>some evidence</b> that the measures/partial strategy is being <b>implemented successfully</b> .	There is <b>clear evidence</b> that the partial strategy/strategy is being <b>implemented successfully and is achieving its objective as set out in scoring issue (a)</b> .
	Met?		<b>Y</b>	<b>Yes / No</b>

Rationale

Given the low level of ecosystem impacts by the UoAs the following interpretation applies and the SG80 score is met by default: <https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402>

## References

<https://mscportal.force.com/interpret/s/article/Use-of-if-necessary-in-P2-management-PIs-2-1-2-2-2-2-4-2-2-5-2-PI-2-1-2-1527262011402>

Draft scoring range

**≥80**

Information gap indicator

**Information sufficient to score PI**

PI 2.5.3 – Ecosystem information: All UoAs

**PI 2.5.3** There is adequate knowledge of the impacts of the UoA on the ecosystem

Scoring Issue	SG 60	SG 80	SG 100
<b>a</b>	Information quality		
	Guide post	Information is adequate to <b>identify</b> the key elements of the ecosystem.	Information is adequate to <b>broadly understand</b> the key elements of the ecosystem.
	Met?	Y	Y

**Rationale**

The UoA in the Northern Adriatic Sea is one of the most studied ecosystem in the Mediterranean Sea. This is particularly evident in the trophic mass-balance models which included a paramount of information being characterized by 40 functional groups including target and non-target fish, invertebrate groups and detritus groups defined to define the food web in the Northern and Central Adriatic (i.e. Coll et al., 2007; Lotze et al., 2011; Coll and Libralato, 2012).

The cuttlefish and mantis shrimp fishery are included in the Interreg Prizefish project, increasing the knowledge of both the fishery and its impact in the region. SG80 is met.

Investigation of UoA impacts			
<b>b</b>	Guide post	Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, but <b>have not been investigated</b> in detail.	Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, and <b>some have been investigated in detail</b> .
	Met?	Y	Y

**Rationale**

The information concerning the dynamic of cuttlefish and mantis shrimp as well as for non-targeted bycatch is described in the food web in the Northern and Central Adriatic (i.e. Coll et al., 2007; Lotze et al., 2011; Coll and Libralato, 2012) and is adequate to support the conclusion that the main impact of the UoA on key ecosystem elements can be generally inferred. The cuttlefish and mantis shrimp fishery are included in the Interreg Prizefish project, increasing the knowledge of both the fishery and its impact in the region. SG80 is met. Further independent research would be needed to support higher scores. SG100 is not met.

Understanding of component functions			
<b>c</b>	Guide post	The main functions of the components (i.e., P1 target species, primary, secondary and ETP species and Habitats) in the ecosystem are <b>known</b> .	The impacts of the UoA on P1 target species, primary, secondary and ETP species and Habitats are identified and the main functions of these components in the ecosystem are <b>understood</b> .
	Met?	Y	N

**Rationale**

The main function of the target, primary, secondary, ETP species as well as habitats are identified and understood together with their main functions in the ecosystem in the UoA mostly using the dynamic of target and non-target fish, invertebrate groups and detritus groups described in the food web in the Northern and Central Adriatic (i.e. Coll et al., 2007; Lotze et al., 2011; Coll and Libralato, 2012). SG80 is met.

**d** Information relevance

	Guide post		Adequate information is available on the impacts of the UoA on these components to allow some of the main consequences for the ecosystem to be inferred.	Adequate information is available on the impacts of the UoA on the components <b>and elements</b> to allow the main consequences for the ecosystem to be inferred.
	Met?		<b>Y</b>	<b>N</b>

#### Rationale

Based on the stakeholder and expert opinions as well as on the exploration of literature the information available on the impact of the UoA on these components is considered adequate to allow some of the main consequences for the ecosystem to be inferred. SG80 is met.

<b>Monitoring</b>				
<b>e</b>	Guide post		Adequate data continue to be collected to detect any increase in risk level.	Information is adequate to support the development of strategies to manage ecosystem impacts.
	Met?		<b>Y</b>	<b>N</b>

#### Rationale

The cuttlefish and mantis shrimp fishery are at present under research on the INterreg Italy-Croatia interreg Prizefish project. SG80 is met.

#### References

Coll et al., 2007;  
 Lotze et al., 2011;  
 Coll and Libralato, 2012  
 Interreg Italy-Croatia Prizefish

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>Information sufficient to score PI</b>

## 7.6 Principle 3

### 7.6.1 Principle 3 background

The fishery is performed only in the EEZ and falls under the national jurisdiction of Italy. Therefore, only the Italian's fisheries management system should be considered taking into account the wider management of the European Union (EU) and Mediterranean Sea.

Being a member state of the EU, the Italian fisheries management authorities operate in accordance and with commitment to the decisions taken in the EU commission (EC). The EC through the Common Fisheries Policy (CFP) sets a framework for fisheries management, which is then implemented by the fisheries management authorities of member states including Italy. Also, as a Mediterranean country the Italian fisheries are managed in accordance with the General Fisheries Commission of the Mediterranean and Black Sea (GFCM) which is a regional fishery management organisation of the UN FAO.

#### 7.6.1.1 European Union management

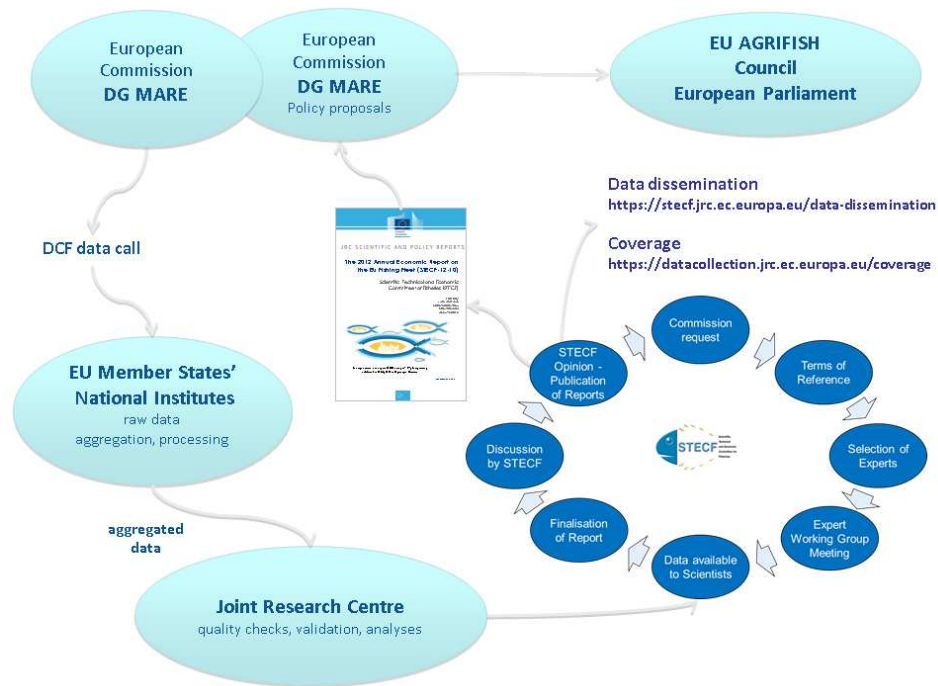
Community legislation deals with the issues relating to the conservation, management and exploitation of aquatic resources and aquaculture, the processing and marketing of fishery and aquaculture products with the aim of ensuring sustainable exploitation of resources, taking into account environmental, as well as economic and social aspects of the sector, also guaranteeing compliance with the rules through a control system.

The Common Fisheries Policy (CFP) was first introduced in the 1970s and updated several times. The latest reform dates back to 1 January 2014. The CFP contains the rules for the management of European fishing fleets and the conservation of stocks, featuring:

- 1) fish stock management at maximum sustainable yield by 2020 for all managed stocks,
- 2) gradual introduction of a landing obligation by 2019
- 3) continued application of the so-called multiannual plans (MAPs) to manage fisheries in different sea basins,
- 4) regionalisation to allow EU countries with a management interest to propose detailed measures, which the Commission can then adopt as delegated or implementing act and transpose them into EU law,
- 5) fleet capacity ceilings per EU country in combination with the obligation for EU countries to ensure a stable and enduring balance between fishing capacity and fishing opportunities over time. EU countries may need to develop action plans to reduce overcapacity (for which they can use scrapping money).

The CFP has also adopted the precautionary principle, which takes into account the impact of human activities on all components of the ecosystem. The aim is to make fleets more selective in their fishing activities and to gradually eliminate the practice of discarding unwanted fish. The reform also changes the way the CFP is managed, giving EU countries more control at national and regional level.

The fisheries management decisions taken by the EC are based on the best available scientific data. The Scientific, Technical and Economic Committee for Fisheries (STECF) and various other scientific organizations provide recommendations and advice to the EC based on the scientific data they have. The EC also provides financial support for short, medium and long-term projects to study data poor fisheries. All the annual stock assessment, management plans, reports and recommendations made by the STECF are publicly available and can be consulted at the website of the STECF. The outcomes of the decisions, communications and regulations taken by the EU Fisheries Commission are also publicly available.



**Figure 15 Decision-making process and scientific consultation in the EC and STECF (Source: <https://stecf.jrc.ec.europa.eu/about-stecf>).**

In addition, the European Maritime Affairs, Fisheries and Aquaculture Fund (EMFAF) was established by the EU Regulation no. 2021/1139 of 07.07.2021, as a new financial instrument to support the fisheries and aquaculture sector for the period 2021-2027 and to replace the previous programme: the European Maritime and Fisheries Fund (EMFF) 2014/2020. The fund helps achieve sustainable fisheries and conserve marine biological resources. This should lead to: food security through the supply of seafood products; growth of a sustainable blue economy; and healthy, safe and sustainably managed seas and oceans. It also helps achieve the UN's Sustainable Development Goal 14 (conserve and sustainably use the oceans, seas and marine resources), to which the EU is committed.

In addition, the Mediterranean Advisory Council (MEDAC) is a non-profit association, based in Rome, Italy, that pursues an objective of general European interest. The MEDAC is made up of European and national organizations representing the fishing sector (industrial fleet, artisanal fishing, transformation sector and trade unions) as well as other interest groups (including environmental organisations, consumer associations and recreational fishing associations). Within the scope of the CFP, the MEDAC prepares opinions on the management of the fishing activity and on the socio-economic aspects related to the conservation of fishing in the Mediterranean, directing them to the member states and the European institutions to contribute to the fulfilment of the objectives of the CFP. In addition, at the request of the member states, it provides technical solutions and suggestions, including joint recommendations (ex art. 18 of Reg.1380/2013). The MEDAC has a permanent working group (e.g. WG1: Reform of the Common Fisheries Policy; and WG5: Small-Scale Fisheries and Socio-Economic Impact) with the role of assisting the Executive Committee in the preparation of the opinions and joint recommendations. Also has other focus groups that are set up for a specific purpose and limited duration (e.g. Focus Group on Adriatic Sea).

As for Monitoring, Control and Surveillance (MCS), all EU member states are required to comply with the agreed control regulations within the CFP framework. For example, the CFP requires that all fishing vessels longer than 12 meters to electronically report catch data in their logbook, as well as to have installed a satellite-based Vessel Monitoring System (VMS) on board. Also, all fishing vessels longer than 18 meters are also required to have an Automatic Identification System (AIS) on board. From 1 May 2014, AIS must be on board all vessels over 15 meters in length.

In addition, after the evaluation of the current MCS system, the EC decided in 2018 to initiate a revision of the fisheries control system. The overall objective of the revision is to modernise, strengthen and simplify the EU fisheries control system, ensure sustainability and increase the level playing field in fisheries control. The revision is in line with the EU's Regulatory Fitness and Performance programme (the REFIT programme), a programme ensures that regulatory burdens are minimised and simplification options are identified and applied.

The European Fisheries Control Agency (EFCA) is a EU body based in Vigo, Spain that was established in 2005 to organise operational coordination of fisheries control and inspection activities by the member states and to assist them to cooperate so as to comply with the rules of the EU's CFP in order to ensure its effective and uniform application.



The long-term objectives of the EU (and therefore its member states including Italy) for the exploitation of marine resources and conservation of the biodiversity and the marine ecosystem are outlined in the EC Birds Directive (Directive 2009/147/EC) and the EU Habitats Directive (Council Directive 92/43/EEC). Further important environmental legislations include: the Water Framework Directive (Directive 2000/60/EC) and the Marine Strategy Framework Directive (Directive 2008/56/EC) which set clear objectives such as achieving “Good Ecological Status”.

The elimination of discard practices in all EU countries was adopted through the landing obligation introduced by the CFP regulation (EU) No 1380/2013. Discard plans were adopted based on Article 15(6) for a period of no more than three years on the basis of joint recommendations developed by member states in consultation with the relevant Advisory Councils.

### 7.6.1.2 Mediterranean fisheries management

With specific regard to the Mediterranean basin, Black Sea and connecting waters, the main (along with the ICCAT) Regional Fisheries Management Organization (RFMO) is the GFCM. It consists of 24 member countries, with a fundamental task to promote the development, conservation and rational / sustainable exploitation of the marine resources of the Mediterranean Sea. The GFCM operates by issuing specific recommendations and / or resolutions, which the EU member states are obliged to comply with pursuant to and for the purposes of Article 24, par. 6, of the current EC regulation n.1967 / 2006.

The GFCM plays a critical role in fisheries governance in its area of application, having the authority to adopt binding recommendations for fisheries conservation and management and for aquaculture development. These recommendations can relate, among others, to the regulation of fishing methods, fishing gear and minimum landing size, as well as the establishment of spatial protection measures, fishing effort control and of multiannual management plans for selected fisheries.

Representatives of the GFCM contracting parties meet annually to review and adopt the recommendations prepared on the basis of the advice provided by the GFCM subsidiary bodies:

- the Scientific Advisory Committee on Fisheries (SAC)
- the Scientific Advisory Committee on Aquaculture (CAQ)
- the Compliance Committee (COC)
- the Committee of Administration and Finance (CAF)
- the Working Group for the Black Sea (WGBS).

The GFCM implements its policy and activities through its secretariat, based at its headquarters in Rome and implements a sub-regional approach to fisheries management through its technical units in the GFCM sub-regions. In cooperation with other RFMOs, the GFCM plays a decisive part in coordinating governmental efforts to effectively manage fisheries at the regional level following the United Nations Fish Stocks Agreement (UNFSA) and in line with the FAO Code of Conduct for Responsible Fisheries. Moreover, it closely collaborates with intergovernmental, non-governmental and civil society organizations in matters of mutual interest. It also coordinates and benefits from the support of projects and programmes at the regional and sub-regional levels in order to enhance scientific cooperation and capacity-building among its contracting parties.

Similar to the CFP, the national management plans of GFCM's contracting parties (countries) must be consistent with GFCM plans, and only can be more restrictive but not less. The Compliance Committee (COC) of the GFCM is responsible to evaluate whether the contracting parties have enforced the agreed plans correctly or not.

Recently, in November 2020, the GFCM's contracting parties reconfirmed the political commitments under the MedFish4Ever and Sofia Declarations and launched the process defining a new common strategy for ensuring the sustainability of fisheries and aquaculture in the Mediterranean and Black Sea. The goals of the new 2030 Strategy of the GFCM are in alignment with blue transformation, a pillar of FAO's new Strategic Framework. Further, on 30 June 2021, the GFCM and WWF Mediterranean Marine Initiative, in collaboration with the EC, co-organized a high-level event on advancing the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea (RPOA-SSF) in the context of the GFCM 2030 strategy.

In addition, in November 2021, the countries of the region who were meeting at the annual session of the GFCM, and in the presence of NGOs such as IUCN, Oceana and WWF, adopted the multiannual management plans for the sustainable exploitation of demersal and small pelagic stocks in the Adriatic Sea, to ensure the sustainability of the fishing activity targeting these resources. The countries agreed on a total number of 21 binding recommendations and 14 resolutions aimed at enhancing efforts in support to the conservation, sustainable use and management of fisheries resources across the Mediterranean and the Black Sea, ranging from the establishment of management measures for sustainable trawl fisheries, the definition of minimum conservation reference size for priority stocks, the mitigation of fisheries impacts on vulnerable species, the establishment of fisheries restricted areas and the reporting of non-

indigenous species in aquaculture. Moreover, among these measures, the resolution addressing abandoned, lost, or otherwise discarded fishing gear is the first of its kind in the Mediterranean and the Black Sea. Ghost nets, as they are generally referred to, constitute a significant part of marine pollution, threatening sensitive habitats and posing a risk of entanglement and ingestion to marine wildlife. For this, countries have adopted a detailed procedure that fishing vessels losing their gear should follow. Furthermore, they have agreed to work on guidelines to equip ports with reception facilities for waste fishing gear.

Also, after a successful experiment in Jabuka Pomo Pit, the GFCM's countries bordering the Adriatic have also agreed to set up various fisheries restricted areas (FRA) throughout the Adriatic Sea. The countries bordering the Adriatic are hoping to obtain similar results with the establishment of another FRA in the Bari canyon and another in Southern Adriatic that foresees a specific pilot project to be launched next year on bamboo coral, a vulnerable species that appears on the seabed across the Mediterranean Sea.

The GFCM also provide the opportunity to small-scale fishers and fish workers from the Mediterranean and Black Sea region to participate, come together, share knowledge and exchange best practices to build capacity on common issues and jointly identify opportunities and alternative scenarios for their resources management through the Small-Scale Fishers' Forum or "SSF Forum". This initiative responds to the recommendations within the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea (RPOA-SSF) to offer support to small-scale fishers and fish workers to further develop their capacities and skills with regard to sustainable small-scale fisheries and livelihoods. In particular, Paragraph 39e of the RPOA-SSF calls upon countries to: "*Facilitate education and training opportunities for men and women of the fisheries sector, such as summer universities, aimed at developing fisheries-specific skills, policy knowledge (fisheries, environment) and, in particular, knowledge and innovative solutions and technology developments*".

### 7.6.1.3 Italian fisheries management

#### Legal framework

In Italy, the framework of national fisheries planning has been developing since the 1960s (e.g. Law 14 July 1965, n. 963). However, law no. 41/1982 provided for the first time a mechanism for governing the sector through a three-year program of sea fishing and aquaculture which identifies objectives and tools.

In addition, the Legislative Decree 4/2012 regulates fishing and aquaculture activities and the system of sanctions.

**Professional fishing** is defined (in **Article 2**) as the organized economic activity carried out in marine or brackish or freshwater environments, aimed at the search for living aquatic organisms, the hauling, laying, towing and recovery of a fishing gear, transfer on board of catches, transshipment, storage on board, processing on board, transfer, caging, fattening and landing of fish and fishery products. Also, **Article 4** defines the **fish entrepreneur** as the holder of a fishing license who professionally carries out the professional fishing activity, while the young fish entrepreneur (**article 5**) is the one who carries out the activities of the fish entrepreneur with an age not exceeding 40 years.

In the decree in question there is also the definition of **non-professional fishing (article 6)**, directed for recreational, tourist, sporting purposes, which was borrowed from art. 4 of Regulation (EC) 1224/2009, as well as scientific fishing, such as the activity directed for purposes of study, research and experimentation. Finally, a ministerial decree is required to regulate in detail fishing for recreational, tourist and sporting purposes. In this regard, it should be remembered that currently only underwater fishing is regulated (articles 128-131 of Presidential Decree 1639/68 implementing the law on fishing).

**Chapter II** of the decree, defines the **sanctioning system** (amended by Article 39 of Law No. 154 of 2016, which rewrote **Articles 7 to 12** of Legislative Decree No. 4/2012) distinguishing between behaviors that cause the issuance of fines (articles 7-9), and those that constitute administrative offenses (articles 10-12), also establishing for both the main penalties, the ancillary ones, and what are "serious infringements", sanctioned with the **points system** provided for by Article 14. For offenses, which fall into the category of "offenses", the penalties are of a custodial (arrest) and pecuniary (fine) nature; for "administrative offenses" the sanction is exclusively monetary. The obligation to provide for "serious infringements" was required directly by EC rules (see Article 42 of Regulation (EC) 1005/2008 and Article 90 of Regulation (EC) 1224/2009), which however left the individual member state to determine the "serious nature of the violation".

The **offenses defined in article 7** relate to the prohibition of:

- fish for, hold, transport and market species whose capture is prohibited at any stage of growth (excluding scientific fishing);
- damage the biological resources of marine waters with the use of explosive materials, electricity or toxic substances capable of numbing, stunning or killing fish and other aquatic organisms;
- collect, transport or market fish and other aquatic organisms that have become numb, stunned or killed in the manner described above,
- fish in waters subject to the sovereignty of other States, except in the areas, within the times and in the manner provided for by international agreements,

- fish in waters under the jurisdiction of a regional fisheries organization, in breach of its conservation or management measures and without having the flag of one of the member states of that organization,
- removal of the aquatic organism object of the fishing activity of others, carried out using fixed or mobile tools or instruments;
- removal of aquatic organisms found in water spaces removed from free use and reserved for fishing and aquaculture establishments.

**Article 8** quantifies the **main penalties** to be applied to offenses, providing for differentiated penalties depending on whether they are the first five cases indicated above (for which arrest is foreseen from two months to two years or a fine from 2000 to 12,000 euro) or the last two (sanctioned, upon complaint by a party, with arrest from one month to one year or with a fine of between 1000 and 6000 euro).

**Article 9** defines the **accessory penalties**, which essentially consist in the confiscation of the fish and gear, in the obligation to restore the state of the habitat and in the suspension of commercial operation from 5 to 10 days.

As for **administrative offenses (article 10)**, they refer, in particular, to fishing without a valid license or authorization, or in prohibited areas and periods; the possession and marketing of fish caught in prohibited areas and periods; fishing for fish stocks subject to biological detention or in quantities greater than those authorized or with prohibited gear; tampering with the motor system or the satellite tracking device; the falsification of the identification marks of the fishing units and the violation of the obligations envisaged in terms of recording catches, labeling and traceability; obstructing the activities of fisheries inspectors and supervisory bodies or carrying out transshipment with vessels caught in illegal fishing activities.

The **administrative pecuniary sanctions**, in the most serious cases, can reach 150 thousand euros (in particular, where the violations concern Bluefin tuna and swordfish), while the ancillary sanctions may consist in the confiscation of the fish and tools, in the obligation to restore the state of the places and to suspend the license for up to 6 months, to arrive at the revocation of the same in certain cases of recidivism (**articles 11 and 12**).

As for traceability of the fish product, national and EC legislation within the control regime, established pursuant to regulations (EC) 1224/2009 and (EU) 404/2011, governs the traceability of the fish product, in particular from the moment of capture to the first sale, through the production and transfer of data between the various players in the supply chain in order to define a valid traceability system that allows the flow of information to follow the product up to retail.

Further laws can be found at the website of the Ministry of Agricultural, Food and Forestry Policies (Source: <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/156>), or the website of the Italian Coastguard (Source: <https://www.guardiacostiera.gov.it/normativa-e-documentazione/Pages/pesca-professionale.aspx> and <https://www.guardiacostiera.gov.it/normativa-e-documentazione/Pages/tutela-dell%27ambiente-costiero.aspx>).

### **Fishing rights**

In Italy, commercial fishing is not allowed without the preliminary registration in the fishing register. Crew members are also registered in the seamen register and vessels are recorded in the vessels register. This obligatory recording regime came from the Navigation Code, Presidential Decree No. 328/1952 of 1952, Law No. 963/1965 of 1965, and Presidential Decree No. 1639/1968 of 1968.

The fishing licenses are issued to the owner of a vessel, duly registered in the registers of fishing companies (Legislative Decree n.153 / 04), by the Ministry of Agricultural, Food and Forestry Policies (herein MIPAAF). The license authorizes the exercise of the professional fishing activity using the fishing gears/tools indicated therein. All data relating to the ship-owner, owner and vessel are entered in the electronic archive of fishing licenses (Fleet Register) which allows the authorities to have the Italian fishing fleet under control in real time. In order to register, professional fishermen must satisfy the following statutory requirements:

- a) they must show that fishing is their sole or principal source of income; and
- b) they must demonstrate that they have acquired adequate professional knowledge and skills to conduct commercial fishing operations (training course).

The registers are kept by the local offices of the Coastguards located along the Italian coastline. This document is valid for a period of eight years from its issuance but becomes effective only after payment of the government concession fee and is renewable upon request by the interested party. Pending the renewal of the fishing license by the central administration, the fisheries authorities are allowed to issue a provisional certificate in lieu of the fishing license.

### **Roles and responsibilities**

The following section describes roles and responsibilities of different management, industry and scientific organizations and agencies involved in fisheries management in Italy.

The Ministry of Agricultural, Food and Forestry Policies (In Italian: *Ministro delle Politiche Agricole Alimentari e Forestali* – herein MIPAAF) is the central government ministry responsible for managing fishing activity in Italy. The General directorate for sea fisheries and aquaculture (In Italian: *Direzione generale della pesca marittima e dell'acquacoltura* – herein PEMAC) subordinates to this ministry and is acting as the executive arm responsible for carrying out this task. Functions and roles of PEMAC include:

- 1- National planning in the field of fisheries and aquaculture, general discipline and coordination of policies relating to fishing and aquaculture activities in the management of marine fish resources, import and export of fish products,
- 2- State aid for fisheries and aquaculture,
- 3- Management of the fishing credit fund,
- 4- Research applied to fishing and aquaculture,
- 5- Protection, enhancement, traceability and quality of fish products,
- 6- Technical measures relating to sea fishing,
- 7- National obligations relating to the European Fisheries Fund (EFF),
- 8- Control and surveillance activities of all national control authorities competent for compliance with the rules of the common fisheries policy, collection, processing and certification of data on fishing activities pursuant to Regulation (EC) no. 1224/2009, of the Council of 20 November 2009;
- 9- Activities pursuant to Regulation (EC) no. 199/2008 of the Council of 25 February 2008 on the collection, management and use of data in the fisheries sector,
- 10- Community activities concerning issues relating to the fishing and aquaculture sector,
- 11- International activities concerning institutions, bodies and entities in the sector, including ICCAT.

The Italian Coastguard is responsible for fisheries MCS at sea and on land. It is delegated by the PEMAC to draw up national control plans for the protection of particular fish stocks, and to combat illegal fishing (IUU). Also, to issue operational directives for the daily checks. It works with the local and national agencies (e.g. with the financial ministry and police to progress prosecutions) to apply these controls. The Coastguard also coordinates works with EFCA, and other control authorities to implement joint control and monitoring plans such as those for specific fisheries (e.g. Bluefin Tuna). The Coastguard functionally depends on the Ministry of the Environment and the Protection of the Territory and the Sea, pursuant to article 8, of Law 8 July 1986, n. 349 and article 3, of the Law of 28 January 1994, n. 84, exercising supervisory and control functions regarding the protection of the marine and coastal environment.

The National Fisheries Control Center (In Italian: *Centro Controllo Nazionale Pesca* – CCNP), which is operated by the Coastguard, was established by the Decree 9 October 1998 n. 424 with a priority task of the surveillance of fishing effort and related economic activities. The central office is located in Rome with additional 15 regional offices around the country, each with their own assets for aerial, sea and land-based inspections. For fisheries in GSA 17 and GSA 18, the Italian Coastguard carries out aerial surveillance, sea-based inspections and port inspections with resources targeted using a risk analysis approach.

The Ministry of the Environment and of the Protection of the Territory and the Sea (In Italian: *Ministero dell'Ambiente e della Tutela del Territorio e del Mare*) is the government body responsible for implementing the environmental policy. Established in 1986, it carries out functions including among other things: protection of biodiversity, ecosystems and marine-coastal heritage; land and water protection; policies to combat climate change and global warming; sustainable development. Further, it promotes, in line with community policies, programs and initiatives aimed at reducing the environmental impacts. It also plays a role of direction and supervision of the activities of the Higher Institute for Environmental Protection and Research (ISPRA - *Istituto Superiore per la Protezione e la Ricerca Ambientale*) and of national parks and marine protected areas.

The Marine Sciences Research Institute (ISMAR) of the Italian National Research Council (CNR) (hereafter CNR-ISMAR) is the most important scientific institute for marine and fisheries studies at national level. It carries out interdisciplinary scientific research including physical and biogeochemical oceanography; chemical and biological ocean variables and for risk assessment; Geological evolution of the oceans; ecological research for the study of the structure, functioning and evolution of ecosystems; management of marine fisheries; maritime spatial planning and development of an ecosystem-based marine economy.

*NISEA Società cooperativa* (NISEA) is a research cooperative that conducts socio economic study and research activities in the fisheries and aquaculture sectors. The NISEA's scientific research activities cover all the sectors of the fishing industry from capture at sea to aquaculture, from the processing of fishery products to their commercialization. Since 2014, NISEA has been responsible for producing Italian National Economic data in the fisheries sector under the National Fisheries Data Collection Programme (Council Regulation EC n. 199/08).

The Italian fishery sector itself is organized within cooperatives, many of which are also producer organisations (an EU-recognized marketing body that often also acts as a representative of its members). The Federcoopesca, Federpesca, Lega Pesca, Legacoop, and Associazione Generale Cooperative Italiane (AGCI) are the most important cooperative associations which represent the fishing sector at a national level. For example, the fishing department of Legacoop associates 300 cooperatives and 95 companies. The boats managed are over 3,100 (25% of the total Italian boats). The members are 8,600 (27% of the Italian employees in fishing and aquaculture). The objectives of each of these associations is presented in their respective websites. For instance, the main objective of Federpesca is to represent the fishing sector towards public authorities, administrations, organizations and associations of any kind, including the following roles:

- 1- Protect the interests of member companies in all legal, trade union, economic, technical fields, in harmony with the higher interests of the country,
- 2- Assist and represent companies, associations and trade unions in solving problems concerning employment relationships and social legislation,

- 3- Harmonize the activities and guidelines of business unions for the rational development of production in relation to the general interest of fishing and the national economy, in compliance with the Common Fisheries Policy (CFP),
- 4- Promote, study, implement initiatives and projects useful for the development of fishing companies,
- 5- Follow the activities of similar industries at an international level and promote agreements and understandings with associations and entities in other countries.

In addition, the Italian Center for Research and Studies for Fisheries (In Italian: *Centro Italiano Ricerche e Studi per la Pesca* (C.I.R.S.PE.) was founded in 1979 by Federcoopesca, in order to create a structure capable of responding to training, study, technical assistance and marketing needs at the service of the fisheries and aquaculture. It has allowed to consolidate over time a fruitful collaboration relationship with fishing cooperatives and with the Public Administration. The structure guarantees an effective response to the real needs of operators in the sector and, at the same time, offers constant support to those called to carry out the planning of interventions for the purpose of managing biological resources.

### **Monitoring, Control and Surveillance (MCS)**

No specific data about the inspection activities, infringements or non-compliances by the fishery (for the UoA) was provided by the interviewed stakeholders (e.g. scientists and fisherman) or the client. However, the Assessment Team was able to find some data for the whole Veneto region. The following data for the Veneto region (including all fisheries – not only the UoA), presented in Table 13 and Table 14, was extracted from the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard.

**Table 13: Complex regional (Venice and Chioggia – 148 km of coastline) inspection operations made by Venice fishing control center during 2020.**

Name of the operation	BLACK SWORDFISH	FENICE	ADRIATIC STORM	THALASSA
Period of the operation (start and end date)	28/01 – 07/02	06/07 – 18/07	14/09 – 25/09	23/11 – 03/12
Total of contested administrative infringements	45	11	9	11
Total crime reports	//	//	//	//
Total amount of infringements in euros	66.389/97	24.616/00	22.542/60	21.918/00

**Table 14: The state of the proceedings relating to the infringements of the period 2018 – 2020.**

	2018	2019	2020
Total number of points award orders issued	26	10	4
Total points awarded	122	42	22
Total of injunction orders issued	49	39	23
Total number of confiscation orders issued	36	41	29
Total licenses / licenses suspended due to reaching the threshold	5	1	0
Total licenses suspended for deriving	0	0	0
Total of administrative minutes paid at a reduced rate	69	72	44
Total appeals Law 689/81 pending before the judicial authority	2	10	2
Total of the proceedings defined by the judicial authority concluded in favor of the administration	18	2	4
Total of proceedings defined by the judicial authority which ended with the unsuccessful administration	3	1	0

## 7.7 Principle 3 Performance Indicator scores and rationales: All UoAs

### PI 3.1.1 – Legal and/or customary framework

PI 3.1.1		The management system exists within an appropriate legal and/or customary framework which ensures that it: <ul style="list-style-type: none"> <li>- Is capable of delivering sustainability in the UoA(s);</li> <li>- Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and</li> <li>- Incorporates an appropriate dispute resolution framework</li> </ul>		
Scoring Issue		SG 60	SG 80	SG 100
a	Compatibility of laws or standards with effective management			
	Guide post	There is an effective national legal system <b>and a framework for cooperation</b> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and <b>organised and effective cooperation</b> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and <b>binding procedures governing cooperation with other parties</b> which delivers management outcomes consistent with MSC Principles 1 and 2.
	Met?	Y	Y	Y
Rationale				
<p>The fishery is performed only in the EEZ and falls under the national jurisdiction of Italy. Therefore, only the Italian’s fisheries management system should be considered taking into account the wider management of the European Union (EU) and Mediterranean Sea.</p> <p>The framework of national fisheries planning has been developing since the 1960s (e.g. Law 14 July 1965, n. 963). However, law no. 41/1982 provided for the first time a mechanism for governing the sector through a three-year program of sea fishing and aquaculture which identifies objectives and tools. In addition, the Legislative Decree 4/2012 regulates fishing and aquaculture activities and the system of sanctions.</p> <p>At regional level, being a member state of the EU, the Italian fisheries management authorities operate in accordance and with commitment to the decisions taken in the EU commission (EC). The EC through the Common Fisheries Policy (CFP) (Reg. EU 1380/2013) sets a framework for fisheries management, which is then implemented by the fisheries management authorities of member states including Italy. In addition, at the Mediterranean level, the GFCM operates by issuing specific recommendations and / or resolutions, which the EU member states are obliged to comply with pursuant to and for the purposes of Article 24, par. 6, of the current EC regulation n.1967 / 2006.</p> <p>Italy also adheres to the EC Birds Directive (Directive 2009/147/EC) and the EU Habitats Directive (Council Directive 92/43/EEC). Further important environmental legislations include; the Water Framework Directive (Directive 2000/60/EC) and the Marine Strategy Framework Directive (Directive 2008/56/EC) which set clear objectives such as achieving “Good Ecological Status”.</p> <p>Taking into account that outputs of the legal framework of the Italian fisheries, as well as the overarching CFP, EU Directives, GFCM, and the other international agreements have binding procedures governing cooperation with other parties and are effective to deliver management outcomes consistent with MSC Principles 1 and 2, therefore <b>SG60, SG80 and SG100 are met.</b></p>				
b	Resolution of disputes			
	Guide post	The management system incorporates or is subject by law to a <b>mechanism</b> for the resolution of legal disputes arising within the system.	The management system incorporates or is subject by law to a <b>transparent mechanism</b> for the resolution of legal disputes which is <b>considered to be effective</b> in dealing with most issues and that is appropriate to the context of the UoA.	The management system incorporates or is subject by law to a <b>transparent mechanism</b> for the resolution of legal disputes that is appropriate to the context of the fishery and has been <b>tested and proven to be effective.</b>

	Met?	Y	Y	N
<b>Rationale</b>				
<p>In Italy, a transparent court system mechanism is provided to avoid and resolve disputes and issues arising between the fishing companies and inspectors or among companies. The court system also provides a recourse for the resolution of disputes resulting from the management system which can be applied at a local and national level.</p> <p>The 'traditional' right of access to administrative documents ruled in Law No. 241/1990 allows private parties to read or take a copy of administrative documents, in order to defend their own legal position. Recently, the Italian legislation has introduced new rules on the transparency of administrative action (Law No. 190/2012 and Legislative Decree No. 33/2013, reformed by Legislative Decree No. 97/2016) (Anna Simonati, 2018). After the 2013 and the 2016 reforms, such a right of access survived. Now, it works together with the two kinds of civic access. The first, introduced by Legislative Decree No. 33/2013 in its original formulation, allows everyone to know directly, without being compelled to give reasons for the request, documents, data and information that must be published in the websites of authorities. According to the second, besides the ex lege publication of documents, data and information, anyone has a right to know the content of administrative documents and data (without being compelled to give reasons for the request), with the exception of those containing secrets to be kept in the public interest or to defend private and highly confidential data (Anna Simonati, 2018).</p> <p>The fishery is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective, and therefore <b>SG60 and SG80 are met</b>. However, the Assessment Team didn't have access to any legal cases between the fishermen in the UoA and the management authorities, and therefore no evidence available that this system has been tested and proven to be effective to the context of the fishery, thus <b>SG100 is not met</b>.</p>				
<b>C</b>	<b>Respect for rights</b>			
	Guide post	The management system has a mechanism to <b>generally respect</b> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to <b>observe</b> the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to <b>formally commit</b> to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.
	Met?	<b>Y</b>	<b>Y</b>	<b>Y</b>
<b>Rationale</b>				
<p>In Italy, the definitions, rights and obligations of commercial as well as recreational fishermen are outlined in the Legislative Decree 4/2012. The management system has mechanisms to allocate a limited number of licenses to eligible fishers. Commercial fishing is not allowed without the preliminary registration in the fishing register. Crew members are also registered in the seamen register and vessels are recorded in the vessels register. This obligatory recording regime came from the Navigation Code, Presidential Decree No. 328/1952 of 1952, Law No. 963/1965 of 1965, and Presidential Decree No. 1639/1968 of 1968.</p> <p>The fishing licenses are issued to the owner of a vessel, duly registered in the registers of fishing companies (Legislative Decree n.153 / 04), by the MIPAAF. The license authorizes the exercise of the professional fishing activity using the fishing gears/tools indicated therein. All data relating to the ship-owner, owner and vessel are entered in the electronic archive of fishing licenses (Fleet Register) which allows the authorities to have the Italian fishing fleet under control in real time. In order to register, professional fishermen must satisfy the following statutory requirements:</p> <p>a) they must show that fishing is their sole or principal source of income; and</p> <p>b) they must demonstrate that they have acquired adequate professional knowledge and skills to conduct commercial fishing operations (training course).</p> <p>In addition, there are a number of mechanisms to support the interests of small scale fisheries and coastal communities. At the national and local level, the Italian fishery sector itself is organized within cooperatives, many of which are also producer organisations (an EU-recognized marketing body that often also acts as a representative of its members). The Federcoopescas, Federpesca, Lega Pesca, Legacoop, and Associazione Generale Cooperative Italiane (AGCI) are the most important cooperative associations which represent the fishing sector at a national level. Furthermore, as mentioned before, Italian fisheries are managed by the CFP which also contains a formal commitment to observe the legal and customary rights of people dependent on fishing "<i>In view of the precarious economic state of the fishing industry and the dependence of certain coastal communities on fishing, it is necessary</i></p>				

*to ensure the relative stability of fishing activities by allocating fishing opportunities among Member States, based on a predictable share of the stocks for each Member State" (Article 35).*

The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2. Therefore, the **SG60, SG80 and SG100 are met.**

#### References

Anna Simonati, 2018.

Draft scoring range

**≥80**

Information gap indicator

**Information sufficient to score PI**



## PI 3.1.2 – Consultation, roles and responsibilities

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	<b>Roles and responsibilities</b>			
	Guide post	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <b>generally understood</b> .	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <b>explicitly defined and well understood for key areas</b> of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are <b>explicitly defined and well understood for all areas</b> of responsibility and interaction.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
<b>Rationale</b>				
<p>The Italian management system clearly defines the main organizations and stakeholders involved in the management process. The functions, roles and responsibilities specific to each organization are well defined in their own websites. The fisheries management system is organized and coordinated through the General directorate for sea fisheries and aquaculture (PEMAC) as the fisheries enforcement agency, which reports to the Ministry of Agricultural, Food and Forestry Policies (MIPAAF) as the central government ministry responsible for managing fishing activity in Italy. The Italian Coastguard is responsible for fisheries MCS at sea and on land. The Federcoopesca, Federpesca, Lega Pesca, Legacoop, and Associazione Generale Cooperative Italiane (AGCI) are the most important cooperative associations which represent the fishing sector at a national level. The rest of functions, roles and responsibilities of organisations involved in the management are described in Section 7.6. At EU and Mediterranean levels, the roles of the main organizations and agencies involved in the management process are also clearly defined such as; the European Commission, the GFCM, STECF, MEDAC, EFCA. Bearing in mind that the functions, roles and responsibilities of the main management organisations are explicitly defined and integrated into the national institutional framework, and it seems to be well-understood, this scoring issue <b>meets SG60 and SG80</b>. However, at the pre-assessment stage it is difficult to guarantee that they are explicitly defined and well understood for "ALL" areas. Therefore, the <b>SG100 is not met</b> for a precautionary purpose.</p>				
<b>b</b>	<b>Consultation processes</b>			
	Guide post	The management system includes consultation processes that <b>obtain relevant information</b> from the main affected parties, including local knowledge, to inform the management system.	The management system includes consultation processes that <b>regularly seek and accept</b> relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.	The management system includes consultation processes that <b>regularly seek and accept</b> relevant information, including local knowledge. The management system demonstrates consideration of the information and <b>explains how it is used or not used</b> .
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
<b>Rationale</b>				
<p>At national level, the Federcoopesca, Federpesca, Lega Pesca, Legacoop, and Associazione Generale Cooperative Italiane (AGCI) are the most important cooperative associations which represent the fishing sector in Italy. According to the interviewed stakeholders (e.g. scientists and a fisherman) in this pre-assessment, there is a well-known instrument of consultation in Italy called the "blue table" which are organised regularly to exchange opinion between managers, scientists and the fishing sector. According to this, the management system includes consultation processes that regularly seek and accept relevant information, including local knowledge and the management system demonstrates consideration of the information obtained.</p>				

At regional level, the MEDAC is made up of European and national organizations representing the fishing sector (industrial fleet, artisanal fishing etc.) as well as other interest groups (including environmental organisations, consumer associations etc.). It prepares opinions on the management of the fishing activity and on the socio-economic aspects related to the conservation of fishing in the Mediterranean, directing them to the member states and the European institutions to contribute to the fulfilment of the objectives of the CFP. It has a permanent basis working group for Small-Scale Fisheries and Socio-Economic Impact and a focus group on Adriatic Sea. In addition, the GFCM also provide the opportunity to small-scale fishers and fish workers from the Mediterranean and Black Sea region to participate, come together, share knowledge and exchange best practices to build capacity on common issues and jointly identify opportunities and alternative scenarios for their resources management through the Small-Scale Fishers' Forum or "SSF Forum". Therefore, **SG60 and SG80 are met.**

However, according to the interviewed stakeholders, the previously mentioned mechanisms at national level are more concerned with issues related to the large-scale fisheries and big fishing industry rather than SSF. Also, it is not clear whether the management system seeks and accepts relevant information and explains how it is used or not used information obtained from consultation, therefore **SG100 is not met.**

Participation				
C	Guide post		The consultation process <b>provides opportunity</b> for all interested and affected parties to be involved.	The consultation process provides <b>opportunity and encouragement</b> for all interested and affected parties to be involved and <b>facilitates</b> their effective engagement.
	Met?		<b>Y</b>	<b>N</b>

Rationale

The previously mentioned consultation mechanisms, including MEDAC and "SSF Forum" at regional level as well as the cooperative associations which represent the fishing sector at national level, provide opportunity for all interested and affected parties to be involved in the consultation processes. The MEDAC is supported and funded by the EU to enable an effective engagement and opportunities for stakeholders in the management process. Since the 2013 reform of the CFP there was a greater emphasis on regionalization and sea basin-level management and enhancement to the role of the MEDAC. Some examples are provided in the background section indicate that GFCM provided the opportunity for all interested and affected parties (e.g. NGOs, IUCN, Oceana and WWF) to be involved in the management process including; the preparation of the new 2030 Strategy of the GFCM and the multiannual management plans for the sustainable exploitation of demersal and small pelagic stocks in the Adriatic Sea. Overall, this indicates that the **SG80 is met.**

However, taking into account that, according to the interviewed stakeholders, such mechanisms at national level are more concerned with issues related to the large-scale fisheries and big fishing industry rather than SSF, therefore this system cannot be considered effective in providing opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement, and therefore **SG100 is not met.**

References

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>More information sought to score PI</b>

## PI 3.1.3 – Long term objectives

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Fisheries Standard, and incorporates the precautionary approach		
Scoring Issue		SG 60	SG 80	SG 100
a	Objectives			
	Guide post	Long-term objectives to guide decision-making, consistent with the MSC Fisheries Standard and the precautionary approach, are <b>implicit</b> within management policy.	<b>Clear</b> long-term objectives that guide decision-making, consistent with MSC Fisheries Standard and the precautionary approach are <b>explicit</b> within management policy.	<b>Clear</b> long-term objectives that guide decision-making, consistent with MSC Fisheries Standard and the precautionary approach, are <b>explicit within and required by</b> management policy.
	Met?	Y	Y	Y
Rationale				
<p>The overarching objectives of Italian fisheries are based on the CFP of the EU. The CFP has the rules for the management of European fishing fleets and the conservation of stocks. Its purpose is to manage shared resources, give all European fishing fleets equal access to EU waters and fisheries, and allow fishermen to compete fairly. With the latest reform from 2013, the CFP is the main comprehensive legal framework, featuring:</p> <ol style="list-style-type: none"> <li>1) fish stock management at maximum sustainable yield by 2020 for all managed stocks</li> <li>2) gradual introduction of a landing obligation by 2019</li> <li>3) continued application of the so-called multiannual plans (MAPs) to manage fisheries in different sea basins</li> <li>4) regionalisation to allow EU countries with a management interest to propose detailed measures, which the Commission can then adopt as delegated or implementing act and transpose them into EU law</li> <li>5) fleet capacity ceilings per EU country in combination with the obligation for EU countries to ensure a stable and enduring balance between fishing capacity and fishing opportunities over time. EU countries may need to develop action plans to reduce overcapacity (for which they can use scrapping money).</li> </ol> <p>The CFP has also adopted the precautionary principle, which takes into account the impact of human activities on all components of the ecosystem. The aim is to make fleets more selective in their fishing activities and to gradually eliminate the practice of discarding unwanted fish. The reform also changes the way the CFP is managed, giving EU countries more control at national and regional level.</p> <p>Other long-term objectives of the EU (and therefore its member states including Italy) for the exploitation of marine resources and conservation of the biodiversity and the marine ecosystem are outlined in the EC Birds Directive (Directive 2009/147/EC) and the EU Habitats Directive (Council Directive 92/43/EEC). Further important environmental legislations include the Water Framework Directive (Directive 2000/60/EC) and the Marine Strategy Framework Directive (Directive 2008/56/EC) which set clear objectives such as achieving “Good Ecological Status”. Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy of Italia and the EU, and therefore the <b>SG60, SG80 and SG100 are met.</b></p>				
References				
Common Fisheries Policy (CFP)				
Directive 2009/147/EC				
Council Directive 92/43/EEC				
Directive 2000/60/EC				
Directive 2008/56/EC				

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

## PI 3.2.1 – Fishery-specific objectives

PI 3.2.1		The fishery-specific management system has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Objectives			
	Guide post	<b>Objectives</b> , which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <b>implicit</b> within the fishery-specific management system.	<b>Short and long-term objectives</b> , which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <b>explicit</b> within the fishery-specific management system.	<b>Well defined and measurable short and long-term objectives</b> , which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are <b>explicit</b> within the fishery-specific management system.
	Met?	<b>Y</b>	<b>N</b>	<b>N</b>
Rationale				
<p>Some fishery-specific management objectives can be found for these UoAs in the "National Management Plan relating to fishing fleets for the capture of demersal resources in the context of GSA 17 (Central-Northern Adriatic Sea) and GSA 18 (Southern Adriatic Sea)". The plan aims to achieve, in the case of fishing for demersal species, an improvement in the spawning biomass (SSB) by reducing the exploitation rate (weighted for a pool of species: hake (<i>Merluccius merluccius</i>), mullet (<i>Mullus barbatus</i>), sole (<i>Solea solea</i>) and white shrimp (<i>Parapenaeus longirostris</i>)) from current level at a level compatible with the sustainability standards provided for by the new CFP (Article 2 of EU regulation 1380/2013). The process of getting closer to the objectives takes into account the reduction in capacity foreseen for 2017-2018 by the Action Plan2 for the fleet segments in which structural over-capacity has been detected, in accordance with the report on the balance between the capacity of the fleet and the fishing opportunity drawn up on the basis of Art. 22 of EU Reg. 1380/2013. This management plan takes into account the anticipated capacity reduction and adds other management measures.</p> <p>Although the two target species under P1 <i>Squilla mantis</i> and <i>Sepia officinalis</i> are not the main objective of this management plan both are specified in the plan and managed as associated species (among other species) of the fishing fleets catching of demersal resources (e.g. bottom trawls). This management plan and the specified management measures (e.g. effort reduction) will also improve the status of both species.</p> <p>Such implicit objectives are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, and therefore <b>SG60 is met</b>. However, such objectives are not explicit within the fishery-specific management system and therefore <b>SG80 is not met</b>.</p>				
References				
National Management Plan relating to fishing fleets for the capture of demersal resources in the context of GSA 17 (Central-Northern Adriatic Sea) and GSA 18 (Southern Adriatic Sea).				

Draft scoring range

**60-79**

Information gap indicator

**Information sufficient to score PI**

## PI 3.2.2 – Decision-making processes

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery		
Scoring Issue		SG 60	SG 80	SG 100
a	Decision-making processes			
	Guide post	There are <b>some</b> decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are <b>established</b> decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Y	Y	
Rationale				
<p>The decision-making process of the fisheries management system is clear and based on scientific data as well as on comprehensive consultation at regional and national levels as explained in the previous sections. Established decision-making procedures are specified in the CFP Basic Document, and supporting legislation ensures that adopted measures taken to achieve the fishery-specific objectives are implemented correctly. A good example is the decision-making process in the EC and STECF (Figure 15). This is also the case for the GFCM as the national management plans of GFCM's contracting parties (countries) must be consistent with GFCM plans, and only can be more restrictive but not less. The Compliance Committee (COC) of the GFCM is responsible to evaluate whether the contracting parties have enforced the agreed plans correctly or not. This is applied to the UoA fishery as well as to the Adriatic Sea fisheries as a whole. Therefore, <b>SG60 and SG80 are met.</b></p>				
b	Responsiveness of decision-making processes			
	Guide post	Decision-making processes respond to <b>serious issues</b> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions.	Decision-making processes respond to <b>serious and other important issues</b> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	Decision-making processes respond to <b>all issues</b> identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
	Met?	Y	N	N
Rationale				
<p>The decision-making process is based on updated scientific data (e.g. catch statistics, monitoring and survey results) and stakeholder's consultation. The decision making-process responds to serious issues at least on an annual basis. This is evidenced by the availability of annual reports including, among other reports; annual reports of STECF with recommendations for stock management; annual report of fisheries control including an analysis of non-compliance risk by region. All management decisions taken in Italian fisheries in general including this fishery are in line with the CFP and are reflected in the Italian legislations. Based on the collected data, recommendations are made for the management of coastal fish stocks including <i>Squilla mantis</i> and <i>Sepia officinalis</i> (P1 species) in the Adriatic Sea. Therefore, <b>SG60 is met.</b></p> <p>However, due to the absence of clear harvest control rules for target species as well as the absence of specific cases from the UoAs where the management decision responded to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions, the <b>SG80 cannot be met.</b></p>				
c	Use of precautionary approach			
	Guide post		Decision-making processes use the precautionary	

			approach and are based on best available information.	
	Met?		Y	
Rationale				
As previously stated, the decision making is based on scientific data (e.g. stock assessments) as well as on comprehensive consultation at regional and national levels. The CFP has also adopted the precautionary principle, which takes into account the impact of human activities on all components of the ecosystem. The aim is to make fleets more selective in their fishing activities and to gradually eliminate the practice of discarding unwanted fish. The reform also changes the way the CFP is managed, giving EU countries more control at national and regional level. Therefore, <b>SG80 is met</b> .				
	Accountability and transparency of management system and decision-making process			
d	Guide post	Some information on the fishery's performance and management action is generally available on request to stakeholders.	<b>Information on the fishery's performance and management action is available on request</b> , and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders <b>provides comprehensive information on the fishery's performance and management actions</b> and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
	Met?	Y	N	N
Rationale				
Some information is generally available online or on request to stakeholders. This was clear as the Assessment Team was able to find a very useful information regarding the fishery's performance (e.g. stock assessments, regulations, and/or inspection and compliance data) and management action at the websites of management agencies (e.g. GFCM, STECF, MIPAAF, Italian Coastguard). Therefore, <b>SG60 is met</b> .				
However, it remains unclear whether this is the case if stakeholders request a more fishery's specific data (e.g. compliance data for the 25 vessels under assessment) and whether explanations are provided by the management authorities for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity. Therefore, <b>SG80 is not met</b> .				
	Approach to disputes			
e	Guide post	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Y	N	N
Rationale				
Both the management system and the fishing sector try to resolve disputes and issues arise regarding the compliance to avoid judicial trials. Only the most serious cases go to prosecution by the fishery inspectorate and may transfer to the judicial system. There is also no evidence of any legal challenges through the courts, nor any judicial action for the UoAs. As mentioned in PI 3.1.1 SIb, anyone has a right to know the content of administrative documents and data. For example, chapter 5 of the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, provides the main jurisprudential cases on the subject of fishing for 2018-2020. This indicates that <b>SG60 is met</b> .				

However, according to the latest findings made available by the CEPEJ (a body set up within the Council of Europe) for the effectiveness of justice, which described the general trends in the judicial systems of 45 European countries, including Italy, as well as it has been remarkably highlighted by a recent article by the Observatory on Italian Public Accounts of the Catholic University (Matilde Casamonti, 2021), despite some remarkable improvements, the Italian justice remains the slowest in Europe. Therefore, **SG80 is not met**.

#### References

European judicial systems CEPEJ Evaluation Report.

Council of Europe European Commission for the efficiency of justice (CEPEJ).

Matilde Casamonti, 2021.

Draft scoring range

**60-79**

Information gap indicator

**More information sought to score PI**

## PI 3.2.3 – Compliance and enforcement

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the management measures in the fishery are enforced and complied with		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	MCS implementation			
	Guide post	Monitoring, control and surveillance <b>mechanisms</b> exist, and are implemented in the fishery and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance <b>system</b> has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A <b>comprehensive</b> monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				
<p>The Italian Coastguard is responsible for fisheries MCS at sea and on land. Also, to issue operational directives for the daily checks. It works with the local and national agencies. The Coastguard also coordinates works with EFCA, and other control authorities to implement joint control and monitoring plans such as those for specific fisheries (e.g. Bluefin Tuna). The National Fisheries Control Center (CCNP), which is operated by the Coastguard, has the task of the surveillance of fishing effort and related economic activities. In the Adriatic Sea, including the fishery under assessment, MCS activities include a set of technical measures such as the requirement for AIS or VMS on vessels over 12m and logbooks. For fisheries in GSA 17 and GSA 18, the Italian Coastguard carries out aerial surveillance, sea-based inspections and port inspections with resources targeted using a risk analysis approach. According to the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, the control and inspection activity concerned in particular the compliance with fishing areas and periods, technical compliance of the gear used; as well as the verification, at wholesalers and retailers, of species subject to management / recovery plans, such as Bluefin tuna, swordfish and small pelagics; and the control of the entire fish supply chain, as regards, in particular, the traceability of the fish product; and also the compliance with the minimum sizes, the protection of protected species and the safeguarding of general hygienic-sanitary regulations, for the protection of the final consumer.</p> <p>At regional level, as part of the Joint Deployment Plan (JDP) established by the EFCA, each member state (e.g. including Italy) concerned communicates the results of the risk assessment. EFCA uses information submitted by member states to coordinate risk assessment at regional level.</p> <p>The interviewed scientists have a reasonable expectation and confidence that MCS measures are effective considering the small scale of this fishery but also highlighted the existence of IUU by other fishing gears (e.g. trawls or recreational fishing). Also, according to the data for the Veneto region (including all fisheries – not only the UoA), extracted from the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, number of non-compliances is quite low and shows a decreasing trend for the last 3 years (2018 – 2020) (see Table 13 and Table 14).</p> <p>Overall, the information indicates that a MCS system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules and therefore <b>SG60 and SG80 are met</b>. However, it is difficult to consider this system comprehensive enough because no specific data for the fishery (e.g. UoA) about the inspection activities, infringements or non-compliances was provided by the interviewed stakeholders (e.g. scientists and fisherman) or the client. According to the interviewed fisherman, they receive 2 or 3 inspections per year. In addition, being very small boats, the 25 boats of the UoA are not required to install a VMS, and although they are controlled by a GPS system, such a system is managed by a university and not by the management or inspection authorities. Therefore, <b>SG100 is not met</b>.</p>				
<b>b</b>	Sanctions			
	Guide post	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, <b>are consistently applied</b> and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and <b>demonstrably</b> provide effective deterrence.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				



Sanctions are provided to address non-compliance within the Italian fisheries management system in the Chapter 2 of the legislative Decree 4/2012, defining the sanctioning system and distinguishing between behaviours that cause the fines (articles 7-9), and those that constitute administrative offenses (articles 10-12). Also establishing for both the main penalties, the ancillary ones, what are "serious infringements" and/or "administrative offenses". According to the data for the Veneto region (including all fisheries – not only the UoA), extracted from the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence (see Table 13 and Table 14). Also, chapter 5 of the same report provides the main jurisprudential cases on the subject of fishing for 2018-2020. In addition, the decreasing trend of non-compliances and issued fines indicate that sanctions are effective, therefore **SG60 and SG80 are met**.

However, at the pre-assessment stage, it is difficult to demonstrate that these sanctions provide effective deterrence. Therefore, **SG100 is not met**.

Compliance				
<b>C</b>	Guide post	Fishers are <b>generally thought</b> to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	<b>Some evidence exists</b> to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a <b>high degree of confidence</b> that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>

#### Rationale

The interviewed scientists have a reasonable expectation and confidence that MCS measures are effective considering the small scale of this fishery and that fishermen comply with the system under assessment. Also according to the data for the Veneto region (including all fisheries – not only the UoA), extracted from the annual report of fisheries control in Italy for the year 2020 issued by the Coastguard, number of non-compliances is quite low and shows a decreasing trend for the last 3 years (2018 – 2020) (see Table 13 and Table 14). This evidence demonstrates that fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery, therefore **SG60 and SG80 are met**. However, the absence of specific compliance data to the UoA, and the existence of IUU by other fishing gears (e.g. trawls or recreational fishing) as highlighted by the interviewed scientists, don't provide a high degree of confidence that fishers comply with the management system under assessment, therefore **SG100 is not met**.

Systematic non-compliance				
<b>d</b>	Guide post		There is no evidence of systematic non-compliance.	
	Met?		<b>Y</b>	

#### Rationale

There is no evidence of systematic non-compliance in the fishery. The Assessment Team did not find any information indicating that this is not the case.

Therefore, information indicates that the **SG 80 is met**.

#### References

Annual report of fisheries control in Italy for the year 2020 issued by the Coastguard.

Website of the Italian Coastguard.

Website of the EFCA.

Draft scoring range

**≥80**

Information gap indicator

**More information sought to score PI**

## PI 3.2.4 – Monitoring and management performance evaluation

PI 3.2.4		There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives There is effective and timely review of the fishery-specific management system		
Scoring Issue		SG 60	SG 80	SG 100
<b>a</b>	Evaluation coverage			
	Guide post	There are mechanisms in place to evaluate <b>some</b> parts of the fishery-specific management system.	There are mechanisms in place to evaluate <b>key</b> parts of the fishery-specific management system.	There are mechanisms in place to evaluate <b>all</b> parts of the fishery-specific management system.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				
<p>Given that Italian fisheries are managed according to the CFP of the EU, a number of mechanisms are in place to review key parts of the fishery-specific management system. This includes the review mechanisms by the EU to all stock assessments, TACs, enforcement and control measures to its member states as well as to its CFP. The CFP is reviewed every 10 years being the last review made in 2013 with the CFP last reform. The EU Commission regularly consults the STECF on marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture related issues. All the STECF reports and its Working Groups can be found at its website reviewing the EU fishery management system. An example of the reviewed issues by the EU is the fisheries enforcement in its member states which was reviewed in 2018 by the European Fisheries Control Agency (EFCA), which in turn was audited by the Internal Auditing Service (IAS). This review was made to assess the capacity and suitability of the MCS's design and its effectiveness. Based on this review, the Commission decided to propose a number of changes to the control regulation, as well as targeted amendments to the regulation on illegal, unregulated and unreported fishing (IUU regulation) and to the EFCA founding regulation. The overall objective of the revision is to modernise, strengthen and simplify the EU fisheries control system, ensure sustainability and increase the level playing field in fisheries control. The revision is in line with the EU's REFIT programme, a programme that ensures that regulatory burdens are minimised and simplification options are identified and applied.</p> <p>Furthermore, every year, the EC publishes a communication outlining progress on the situation of fish stocks and launching a wide public consultation on the fixing of annual fishing opportunities for the following year. This communication assesses the state of play of the implementation of the CFP and sets out the rationale for the proposal on fishing opportunities for the following year. The EC invites input from member states, Advisory Councils - which include the fishing industry and NGOs - and interested citizens and organisations via an online public consultation.</p> <p>Although the limited information available to the Assessment Team on the evaluation and review mechanisms at national and the fishery level, overall information indicates that "key" parts of the fishery-specific management system are reviewed by these mechanisms, and therefore <b>SG60 and SG80 are met</b>. However, it is challenging to consider that "all" parts of the fishery-specific management system are subject to review. Therefore, <b>SG100 is not met</b>.</p>				
<b>b</b>	Internal and/or external review			
	Guide post	The fishery-specific management system is subject to <b>occasional internal</b> review.	The fishery-specific management system is subject to <b>regular internal and occasional external</b> review.	The fishery-specific management system is subject to <b>regular internal and external</b> review.
	Met?	<b>Y</b>	<b>Y</b>	<b>N</b>
Rationale				
<p>The fishery has mechanisms to externally evaluate and review key parts of the management system on a regular basis as explained above in PI 3.2.4 Sla, which <b>meets the SG60 and the SG80</b>. Taking into account the absence of information about the frequency and regularity of the internal review mechanisms, the <b>SG100 is not met</b>.</p>				
References				

Draft scoring range	<b>≥80</b>
Information gap indicator	<b>More information sought to score PI</b>

## 8 Appendices

### 8.6 Assessment information

#### Small-scale fisheries

Table 15 Small scale fisheries

Unit of Assessment (UoA)	Percentage of vessels with length <15m	Percentage of fishing activity completed within 12 nautical miles of shore
1	100%	100%
2	100%	100%

### 8.7 Evaluation processes and techniques

#### 8.7.1 Site visits

No site visit was conducted for this preassessment. Several remote stakeholder meetings were conducted in order to gather information on the fishery to prepare the preassessment.

Table 16 Stakeholder meetings

Date and time	Participants	Organization
17 <sup>th</sup> November 2022 10.00-11.00 CET	Lucia Revenga	DNV
	Francesco CAVRARO	Ca' Foscari University of Venice
	Fabio Pranovi	Ca' Foscari University of Venice
	Alberto Caccin	Ca' Foscari University of Venice
10 <sup>th</sup> January 2022 14.30 – 16.00 CET	Dionisio Crosera	President COVEPA
	Fabio Borghesan	Scientific consultant COVEPA
	Francesco CAVRARO	Ca' Foscari University of Venice
	Fabio Pranovi	Ca' Foscari University of Venice
	Alberto Caccin	Ca' Foscari University of Venice
	Lucia Cirillo	DNV (Translator)
	Lucia Revenga	DNV
	Lisa Borges	Independent consultant
20 <sup>th</sup> January 2022 13.00-15.00 CET	Mohamed Samy-Kamal	Independent consultant
	Sasa Raicevich	ISPRA - Italian National Institute for Environmental Protection and Research (Researcher)
	Lucia Revenga	DNV
	Lisa Borges	Independent consultant
28 <sup>th</sup> January 2022 16.00 – 17.00 CET	Mohamed Samy- Kamal	Independent consultant
	Giuseppe Scarcella	CNR (Researcher)
	Lucia Revenga	DNV
	Lisa Borges	Independent consultant
	Mohamed Samy-Kamal	Independent consultant

#### 8.7.2 Recommendations for stakeholder participation in full assessment

For a full assessment process, the assessment team should consider contacting also the following stakeholders:

- Control, Monitoring and Surveillance authorities. Coast Guard.
- Ministry of Fisheries
- AGRITECO Research Institute
- WWF,
- Grupo de Azione locale di pesca
- Fishermen from other cooperatives in the region.
- OP BIVALVIA VENETO SOCIETA COOPERATIVA

- Agci Agrital Pesca Veneto
- CONFCOOPERATIVE VENETO
- Direzione Marittima del Veneto
- Federcoopescas
- GAC Chioggia
- GAC del Veneziano
- Laboratorio Biologia Marina e Pesca di Fano
- Legacoop Veneto
- Ministero delle politiche agricole alimentari e forestali Direzione generale della pesca marittima e dell'acquacoltura
- Osservatorio Socio Economico della pesca dell' Alto Adriatico
- Università di Venezia
- Università di Trieste

## 8.8 Risk Based Framework (RBF)

Data to perform the Productivity part of the analysis has been taken from the Fishbase website. Note that during a full assessment the RBF results should be reconsidered and with the input and participation of relevant stakeholders.

Table 17 PSA Productivity Susceptibility Analysis

Performance Indicator	2.2.1 (UoA 2)	
<b>Productivity</b>		
Scoring element (species)	Mackerel ( <i>Scomber scombrus</i> )	
<b>Attribute</b>	<b>Rationale</b>	<b>Score</b>
Average age at maturity	2.6 years	<b>1</b>
Average maximum age	11 years	<b>2</b>
Fecundity	629,285 eggs	<b>1</b>
Average maximum size Not scored for invertebrates	60 cm.	<b>1</b>
Average size at maturity Not scored for invertebrates	26 cm	<b>1</b>
Reproductive strategy	Spawners	<b>1</b>
Trophic level	3.6	<b>3</b>
Density dependence Invertebrates only	N/A	<b>N/A</b>
<b>Susceptibility</b>		
Fishery Only where the scoring element is scored cumulatively	N/A	
<b>Attribute</b>	<b>Rationale</b>	<b>Score</b>
Areal Overlap	Low	<b>1</b>

Encounterability	Low	<b>1</b>
Selectivity of gear type	High	<b>1</b>
Post capture mortality	High	<b>3</b>
Catch (weight) Only where the scoring element is scored cumulatively	N/A	<b>N/A</b>

Table 18 RBF results: PI 2.2.1(mackerel) >80

PI	SCIENTIFIC_NAME	COMMON_NAME	Average age at maturity	Average max age	Fecundity	Average max size	Average size at Maturity	Reproductive strategy	Trophic level (fishbase)	Total Productivity (average)	Availability	Encounterability	Selectivity	Post-capture mortality	Total (multiplicative)	PSA Score	MSC Score	Risk Category Name	MSC scoring guidepost
2.2.1	Scomber scombrus	Mackerel	1	2	1	1	1	1	3	1,43	1	1	1	3	1,05	1,77	97,9	Low	>80

## 8.9 Harmonised fishery assessments

There is only one MSC certified fishery in the area targeting stripped clam. At a full certification process the assessment team should consider the fishery for harmonization of certain PIs in Principle 2 and Principle 3. There is no room for harmonization under Principle 1.

There are no other certified fisheries in the region.

**Table 19 Overlapping fisheries**

Fishery name	Certification status and date
Venetian Wild Harvested Striped Clam ( <i>Venus Chamelea gallina</i> )	Certified since 16 <sup>th</sup> July 2018. Certificate expires 16 <sup>th</sup> January 2024

## 8.10 References

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### Template version control

Version	Date of publication	Description of amendment
1.0	15 August 2011	Date of first release
1.1	31 October 2013	Updated in line with changes to CR v1.3
2.0	08 October 2014	Confirmed background sections (Section 3) as optional (use of 'may' statements) Modified Table 6.3 to create a simplified scoring sheet to be completed in place of full evaluation tables Made amendments to PIs based on Fishery Standard Review changes (e.g. removed original PIs 1.1.2, 3.1.4 and 3.2.4).
2.1	9 October 2017	Inclusion of optional full evaluation tables
3.0	17 December 2018	Release alongside Fisheries Certification Process v2.1
3.1	29 March 2019	Minor document changes for usability
3.2	25 March 2020	Release alongside Fisheries Certification Process v2.2

A controlled document list of MSC program documents is available on the MSC website ([msc.org](https://www.msc.org)).

Marine Stewardship Council  
Marine House  
1 Snow Hill  
London EC1A 2DH  
United Kingdom

Phone: + 44 (0) 20 7246 8900  
Fax: + 44 (0) 20 7246 8901  
Email: [standards@msc.org](mailto:standards@msc.org)

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