

FAIRSEA (ID 10046951)

“Fisheries in the Adriatic Region - a Shared Ecosystem Approach”

D 4.4.1 – Catches and fishing capacity by fleet segment

Work Package:	WP4 - Implementation of a shared and integrated platform Activity: Act.4.4 - Catches and fishing capacity by fleet segment
Type of Document	The deliverable contains a description of the dataset of time series of information on catches (i.e. landings and discards), fleet consistency and economic data (e.g. costs, revenues) by fleet segment available to the partnership for developing the integrated platform.
Use	Public
Responsible PP	PP3-CNR-IRBIM
Authors	Francesco Masnadi (PP3-CNR-IRBIM); Igor Celic (PP1-OGS); Anna Nora Tassetti (PP3-CNR-IRBIM); Pierluigi Strafella (PP3-CNR-IRBIM); Piero Polidori (PP3-CNR-IRBIM); Giuseppe Scarcella (PP3-CNR-IRBIM); Simone Libralato (PP1-OGS).
Version and date	Version 1, 31/12/2019

D 4.4.1

Catches and fishing capacity by fleet segment and port

FAIRSEA – Fisheries in the Adriatic Region – a shared Ecosystem Approach

FAIRSEA is financed by Interreg V-A IT-HR CBC Programme (Priority Axis 1 – Blue innovation)

Start date: 01 January 2019

End date: 28 February 2021

Contents

Acronyms used	3
About FAIRSEA Project	4
Project specific objectives	4
WP4 - Implementation of a shared and integrated platform	5
Activity 4.4 Module FSTAT – Fisheries production and capacity	6
Data format and definitions	6
Table A. Catch data summary	6
Table B. LFD data summary	7
Table C. Fleet capacity and effort summary	8
Landings trends	10
Fleet capacity and effort trends	17
References	18
Appendix 1: Sub-region codes	19
Appendix 2: Country codes	19
Appendix 3: Fishing technique codes	19
Appendix 4: Gear type codes	20
Appendix 5: Vessel length codes	20
Appendix 6: Mesh size range	21
Appendix 7: Métier	21
Appendix 8: Species codes	21

Acronyms used

AIS	Automatic Informative System
CFP	Common Fisheries Policy
DCF	Data Collection Framework
DCR	Data Collection Regulation
EAF	Ecosystem Approach to Fisheries
EU	European Union
FAIRSEA	Fisheries in the Adrlatic Region – a Shared Ecosystem Approach
FAO	Food and Agriculture Organisation
FDI	Fisheries Dependent Informations
JRC	EU Joint Research Center
kW	kilowatt
GT	Gross tonnage
GSA	Geographical Sub Areas
IP	Integrated Platform
LFD	Length Frequency Distribution
LOA	Length Over All
MCDA	Multicriteria Decision Analysis
SSF	Small-scale fisheries
STECF-AER	Scientific, Technical and Economic Committee for Fisheries-Annual Economic Report
VMS	Vessel Monitoring System
WP	Work package

FAIRSEA

About FAIRSEA Project

The FAIRSEA project aims at enhancing transnational capacity and cooperation in the field of an ecosystem approach to fisheries in the Adriatic region by exchanging knowledge and sharing good practices among partners. The complementary expertise of the partners is shared, interlinked and integrated, considering also challenges and opportunities identified by stakeholders. These efforts are embedded in a spatially explicit management platform that will allow to share expertise, create a common pool of knowledge, boost the operational application of the ecosystem approach to fisheries, enhance the competence in complex system dynamics, foster a consensus on the state of the environment and fisheries in the region.

Project specific objectives

The overall objective of FAIRSEA is to enhance the conditions for implementing innovative approaches in the sector of sustainable fisheries management in the Adriatic Sea considered as the FAO geographical sub-areas (GSA) 17, 18 and 19. This is done through the development of a shared conceptual and operational framework for an Ecosystem approach to fisheries (EAF). It will be achieved through the implementation of a spatially explicit and territorially integrated tool that considers water mass circulation, physical-chemical properties, plankton productivity, dynamics of resources including their interactions, fisheries displacement and bio-economic drivers. The technical integration is adapted to address stakeholders' and policy makers' issues and is used for increasing awareness, for understanding EAF, for increasing technical skills and capacities in the region also through demonstrative applications. The platform result in a high technological and innovative tool for EAF to be useful for policy makers, institutions and organizations and might require patent.

Overall objective will be achieved through three specific objectives:

- Enhance transboundary integrated competence in the field of ecosystem approach to fisheries;
- Implement a shared “state of the art” integrated platform for the region;
- Share benefits and challenges of ecosystem approach to facilitate the achievement of the Common Fisheries Policy (CFP) objectives.

WP4 - Implementation of a shared and integrated platform

Working Package number 4 (WP4) is dedicated to the development of an integrated platform (IP) for a quantitative ecosystem approach to fisheries that goes across territorial boundaries and across several disciplines. The platform will integrate datasets from physics to bioeconomy of fisheries as a state of the art and decision support tool.

The platform cornerstone elements are:

- i) water masses circulation and connectivity (module HYDRO);
- ii) biogeochemical planktonic processes and productions (module BGC);
- iii) distribution of main resources using scientific surveys (module BSTAT);
- iv) disaggregated catches and fleet capacity changes over time (module FSTAT);
- v) spatial distribution of effort using scientific VMS/AIS data (module EFFORT);
- vi) bioeconomic responses (BIOECO);
- vii) food web dynamics (FWM);
- viii) preference modelling (through MCDA – Multicriteria Decision Analysis - methods).

These informative layers are analysed considering spatial limits of management unit areas in order to highlight possible critical overlap or separation. The integrated platform will be developed by the technical partners also considering issues, criteria, and management actions that are foreseen in the region as emerging from technical meetings (WP3) and stakeholder engagement (WP5). The platform is then used as a demonstrative and applied tool to highlight potentialities of the EAF at different target groups. A simplified version containing some scenarios will be used as a demo for dissemination (WP2). Some of its results and controlled simulations will be used for an efficient communication with stakeholders of the Adriatic Region and simulation of alternative local management actions will result in pilot applications (WP5). Application of different broad management measures will provide the basis for informing policy makers of best practices and guidelines also transferable beyond the project area (again in WP5).

Activity 4.4 Module FSTAT – Fisheries production and capacity

Fisheries dependent information in the Adriatic region has been collected by observers on board commercial vessels under the Data Collection Regulation/Framework (DCR/DCF; EU Regulations No. 1543/2000, No. 199/2008) and other national or international projects and includes total landings by fleet segment, composition of catches (landings and discards) and economic variables. These data will be used to have the best estimates of catches, costs and fleet capacity through time by fleet segment and by main gear.

The output of the activity 4.4.1 is a dataset (provided as Annex in the official share-point of the project) including information for the last decade in terms of:

- A. catches (both quantities and price) by species, by fleet segment (combination of a particular fishing technique category and a vessel length category);
- B. landings and discards length frequency distribution (LFD) by species, by fleet segment (combination of a particular fishing technique category and a vessel length category);
- C. fleet segment capacity (number, GT, LOA, and fixed and variable costs) by fleet segment, associating main gear where possible.

Data format and definitions

The Annex data format is detailed in the following pages together with the related definitions of the terms used. Data are aggregated in 4 tables of homogeneous information. Data source is reported for each table. Data were made available by the National Authorities after a formal request letter of the Lead Partner.

Table A. Catch data summary

Table containing information on landings, both in terms of wet weight and gross price, for the entire project area (GSA 17, 18 and 19). Data are yearly with a time frame from **2008** to **2018**. Data are reported by species divided by fishing technique at different vessel length. Sources are STECF AER (STECF, 2019) and Albania and Montenegro MARE 27 project data from 2008 to 2013 (Spedicato et al., 2016). 2018 data from Italy are still not available. A pivot table is also available in the Annex to facilitate the exploration of the data by year.

1. YEAR: Reference year;
 2. SUB_REGION: Fishing area (FAO GSA) according to the code list in Appendix 1;
 3. COUNTRY: Country in which the product was landed, according to the code list provided in Appendix 2;
 4. FISHING_TECH: Fishing technique according to the code list provided in Appendix 3; -1 if not reported.
- The codes used are the same used in the DCF fleet socio-economic data call. Every fishing vessel must be

assigned only to one fishing technique. Therefore, if a vessel operated using more than one fishing technique, a dominance criterion must be applied;

5. GEAR: Fishing gear according to the code list provided in Appendix 4: -1 if not reported. Fishing gear is a more detailed sub-group of fishing technique code;

6. VESSEL_LENGTH: Vessels length class (LOA; length over all) according to the code list provided in Appendix 5: -1 if not reported;

7. SPECIES: According to the FAO 3-alpha code list, see Appendix 8;

8. CATCH_TYPE: Landings or Discard. Landings are defined as the catches landed in foreign or domestic ports; Discards are fish and organisms that are returned to the sea during sorting the catch on board (discards have to be based on scientific estimates);

9. KG: Weight of the catches in kilograms.

10. EURO: Derivative income of the catches in euro.

Table B. LFD data summary

Table containing information on length frequency distribution (LFD) divided by landing and discard for the entire project area. Data can be yearly or quarterly with a time frame from **2002** to **2018**. Data are reported by species divided by fishing technique and gear at different vessel length. Italian data sources are JRC/FDI.

1. YEAR: Reference year;

2. QUARTER: Reference quarter of the year: -1 refers to the total year;

3. SUB_REGION: Fishing area according to the code list in Appendix 1;

4. COUNTRY: Country in which the product was landed, according to the code list provided in Appendix 2;

5. GEAR: Fishing gear according to the code list provided in Appendix 4: -1 if not reported. Fishing gear is a more detailed sub-group of fishing technique code;

6. VESSEL_LENGTH: Vessels length class (LOA; length over all) according to the code list provided in Appendix 5: -1 if not reported;

7. SPECIES: According to the FAO 3-alpha code list, see Appendix 8;

8. VALUE: Landings or discard weight in tonnes. Landings are defined as the catches landed in foreign or domestic ports; Discards are fish and organisms that are returned to the sea during sorting the catch on board (discards have to be based on scientific estimates);

9. CATCH_TYPE: Landing or Discard. Landings are defined as the catches landed in foreign or domestic ports; Discards are fish and organisms that are returned to the sea during sorting the catch on board (discards have to be based on scientific estimates);

10. UNIT: Centimetre (cm) or millimetre (mm) of length classes used in following columns. For fish (Osteichthyes and Elasmobranches), the total length should be provided at the lower centimetre; for crustaceans, the cephalo-thoracic length should be provided at the lower millimetre; and for cephalopods, the dorsal mantle length should be provided at the lower centimetre;
- 11: LENGTHCLASS0-LENGTHCLASS100_PLUS: number of individuals referring to the reported amount of landings/discards (Point 8-9).

Table C. Fleet capacity and effort summary

Table containing information on fleet capacity and effort data for the entire project area (GSA 17, 18 and 19). Data are quarterly with a time frame from **2015** to **2018**. Italian and Croatian data sources is FDI.

1. YEAR: Reference year;
2. QUARTER: Reference quarter of the year: -1 refers to the total year;
3. SUB_REGION: Fishing area according to the code list in Appendix 1;
4. COUNTRY: Country in which the product was landed, according to the code list provided in Appendix 2;
5. FISHING_TECH: Fishing technique according to the code list provided in Appendix 3. The codes used are the same used in the DCF fleet socio-economic data call. Every fishing vessel must be assigned only to one fishing technique. Therefore, if a vessel operated using more than one fishing technique, a dominance criterion must be applied;
6. GEAR: Fishing gear according to the code list provided in Appendix 4: -1 if not reported. Fishing gear is a more detailed sub-group of fishing technique code;
7. VESSEL_LENGTH: Vessels length class (LOA; length over all) according to the code list provided in Appendix 5: -1 if not reported;
8. MESH_SIZE_RANGE: According to the code list provided in Appendix 6: -1 if not reported;
9. METIER: According to Appendix 7: -1 if not reported;
10. TOTSEADAYS: Days at sea¹: -1 if not reported;
11. TOTKWSDAYSATSEA: Fishing effort in kW-days, i.e. engine power in kW times days at sea: -1 if not reported;
12. TOTGTDAYSATSEA: Fishing effort in gross tonnage*days at sea: -1 if not reported;
13. TOTFISHDAYS: Fishing day¹: -1 if not reported;
14. TOTKWFISHDAYS: Fishing effort in kW-days, i.e. engine power in kW times fishing days: -1 if not reported;
15. TOTGTFISHDAYS: Fishing effort in gross tonnage*fishing days: -1 if not reported;
16. HRSEA: Hours at sea: -1 if not reported;
17. KWRSEA: kW hours at sea [kW*hours at sea]: -1 if not reported;
18. GTHRSEA: GT hours at sea [Gross tonnage*hours at sea]: -1 if not reported;

19. TOTVES: Number of vessels conducting activity as defined in columns 2 to 9²: -1 if not reported.

¹ For recommended calculation method of days at sea and fishing days, please refer to the following report: Castro Ribeiro, C. et al. Report of the 2nd Workshop on Transversal Variables. Nicosia, Cyprus. 22-26 February 2016. A DCF ad-hoc workshop. 109pp. EUR 27897; doi 10.2788/042271.

² It is realised and accepted that if vessels use more than 1 gear and/or fish in more than 1 sub-region in a quarter the total across categories will exceed the number of vessels in the fleet segment.

Landings trends

In this chapter is reported a short descriptive summary of the landings trends over the years.

The graphs represent the landings trends (both in terms of wet weight and gross price) in the analysed time serie aggregate at GSAs level (not nationally). Only a subset of target species find in the Annex has been analysed because considered target of fishing in one or more GSAs belonging to the study area.

The selected species divided by GSA are:

- **GSA17)** *Engraulis encrasicolus* (ANE), *Sepia officinalis* (CTC), *Parapenaeus longirostris* (DPS), *Eledone moschata* (EDT), *Merluccius merluccius* (HKE), *Mantis shrimp* (MTS), *Mullus barbatus* (MUT), *Nephrops norvegicus* (NEP), *Sardina pilchardus* (PIL), *Sole solea* (SOL), *Loligo vulgaris* (SQR), *Chamelea gallina* (SVE), *Penaeus kerathurus* (TGS), *Merlangius merlangus* (WHG);
- **GSA18)** *Engraulis encrasicolus* (ANE), *Aristeus antennatus* (ARA), *Aristaeomorpha foliacea* (ARS), *Sepia officinalis* (CTC), *Parapenaeus longirostris* (DPS), *Eledone moschata* (EDT), *Eledone cirrosa* (EOI), *Merluccius merluccius* (HKE), *Mantis shrimp* (MTS), *Mullus barbatus* (MUT), *Nephrops norvegicus* (NEP), *Octopus vulgaris* (OCC), *Sardina pilchardus* (PIL), *Illex coindetii* (SQM), *Loligo vulgaris* (SQR), *Chamelea gallina* (SVE);
- **GSA19)** *Engraulis encrasicolus* (ANE), *Aristeus antennatus* (ARA), *Aristaeomorpha foliacea* (ARS), *Boops boops* (BOG), *Sepia officinalis* (CTC), *Parapenaeus longirostris* (DPS), *Eledone moschata* (EDT), *Eledone cirrosa* (EOI), *Merluccius merluccius* (HKE), *Mullus surmuletus* (MUR), *Mullus barbatus* (MUT), *Nephrops norvegicus* (NEP), *Octopus vulgaris* (OCC), *Sardina pilchardus* (PIL), *Illex coindetii* (SQM), *Loligo vulgaris* (SQR).

Figure 1 shows that the aggregated value of the landings (both in terms of wet weight and gross price) slightly decreased during all the whole time series. However, in the recent years GSA 17 and 19 show an increasing trend. In general, the most productive sub area in terms of wet weight is the GSA17 (mean \approx 110000 tons, 240000 thousand of euro) followed by GSA18 (mean \approx 21000 tons, 100000 thousand of euro) and GSA19 (mean \approx 6000 tons, 50000 thousand of euro).

The increasing trends for GSA17 after 2011, showed in the upper graph in Figure 1, is bias by the fact that the landings of *Sardina pilchardus*, one of the most important small pelagic species caught by Croatian purseiners, has not been reported in the available data until 2012 (see Figure 3). This problem has not been found out in terms of gross price due to the low commercial value of the species (lower graph in Figure 1).

Looking more carefully at the data by species (Figures 2,4,5) it is recognizable that, although almost all of the species considered have a decreasing trend, the greatest negative effect can be attributed to a few but very important species in the area. Considering GSA17 (Figures 2) the clam (*Chamelea gallina* ;SVE) is

the first specie both in weight and economic terms, greatly influencing the general trend of total landing for this GSA. In contrast, some species show an increasing trend in recent years, among them the deep-water rose shrimp (*Parapenaeus longirostris*; DPS), the caramote prawn (*Penaeus kerathurus*; TGS), the red mullet (*Mullus barbatus*; MUT) and the common sole (*Solea solea*; SOL).

Considering GSA18 (Figures 4), the major impact on the overall trend is due to the decreasing trends of species such as anchovy (*Engraulis encrasicolus*; ANE) and european hake (*Merluccius merluccius*; HKE) followed by clam (*Chamelea gallina*; SVE) and norway lobster (*Nephrops norvegicus*; NEP). Contrary to what has been seen for the northern Adriatic (GSA17), the trend of the deep-water rose shrimp (*Parapenaeus longirostris*; DPS) is rather stable; this is also true for the group of species belonging to the cephalopods (*Eledone cirrhosa*;EOI, *Eledone moschata*;EDT, *Loligo vulgaris*;SQR, *Illex coindetii*;SQM) with the only exception of the common octopus (*Octopus vulgaris*; OCC) found in slight decrease. Also noteworthy is the growing trend of the blue and red shrimp (*Aristeus antennatus*; ARA), a species of considerable commercial value despite the reduced presence in the area (South Adriatic Pit).

The same shrimp instead presents in GSA19 (Figures 5) a decreasing trend throughout the time serie; on the contrary, the giant red shrimp (*Aristaeomorpha foliacea*; ARS), another target species of deep fishery implemented in the sub-area, is constantly increasing in terms of weight and gross price.

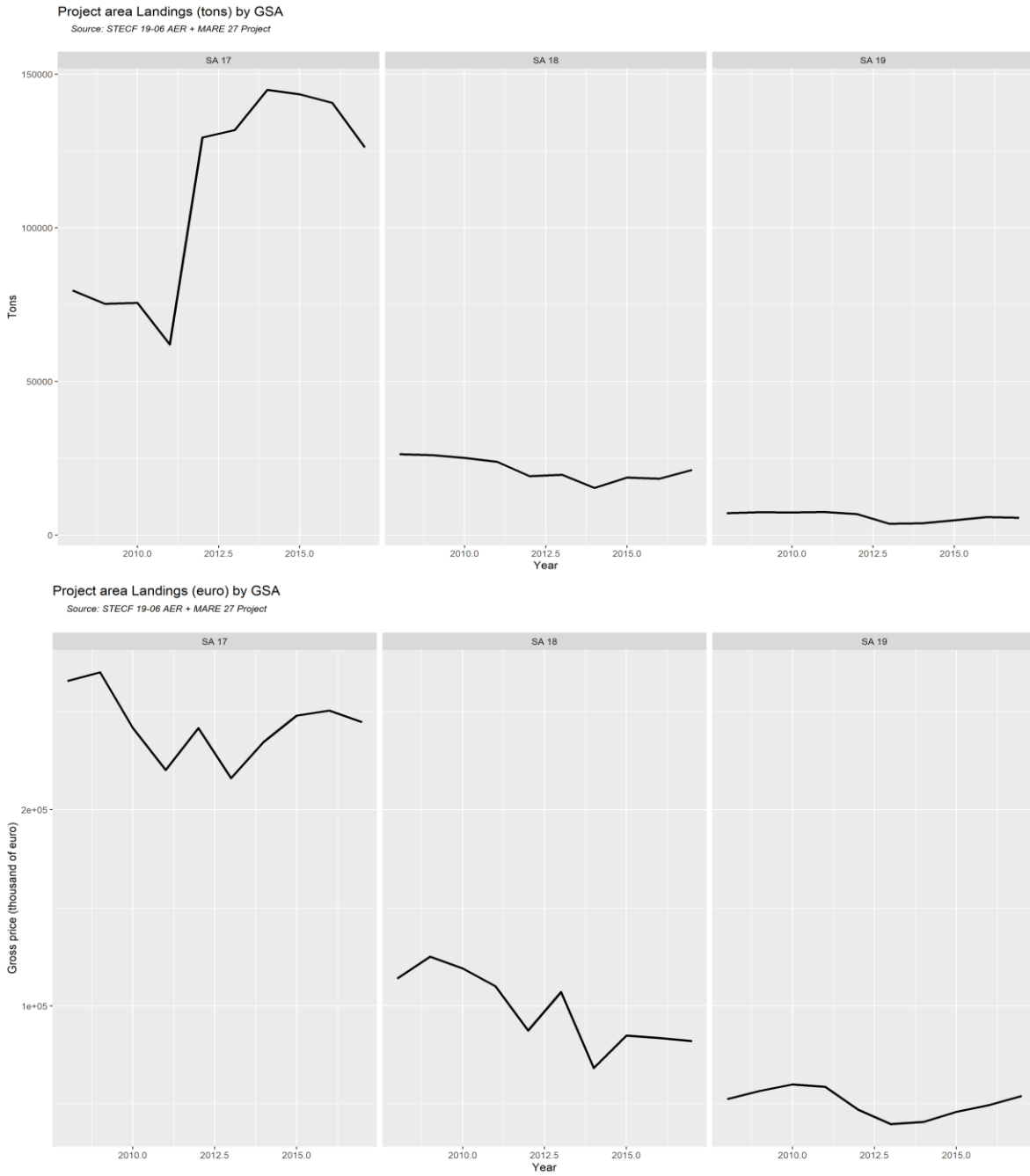


Figure 1. Aggregated value of the landings both in terms of wet weight (tons; upper graphs) and gross price (thousands of euro; lower graphs) divided by GSAs (Sub-area 17, Sub-area 18, Sub-area 19).

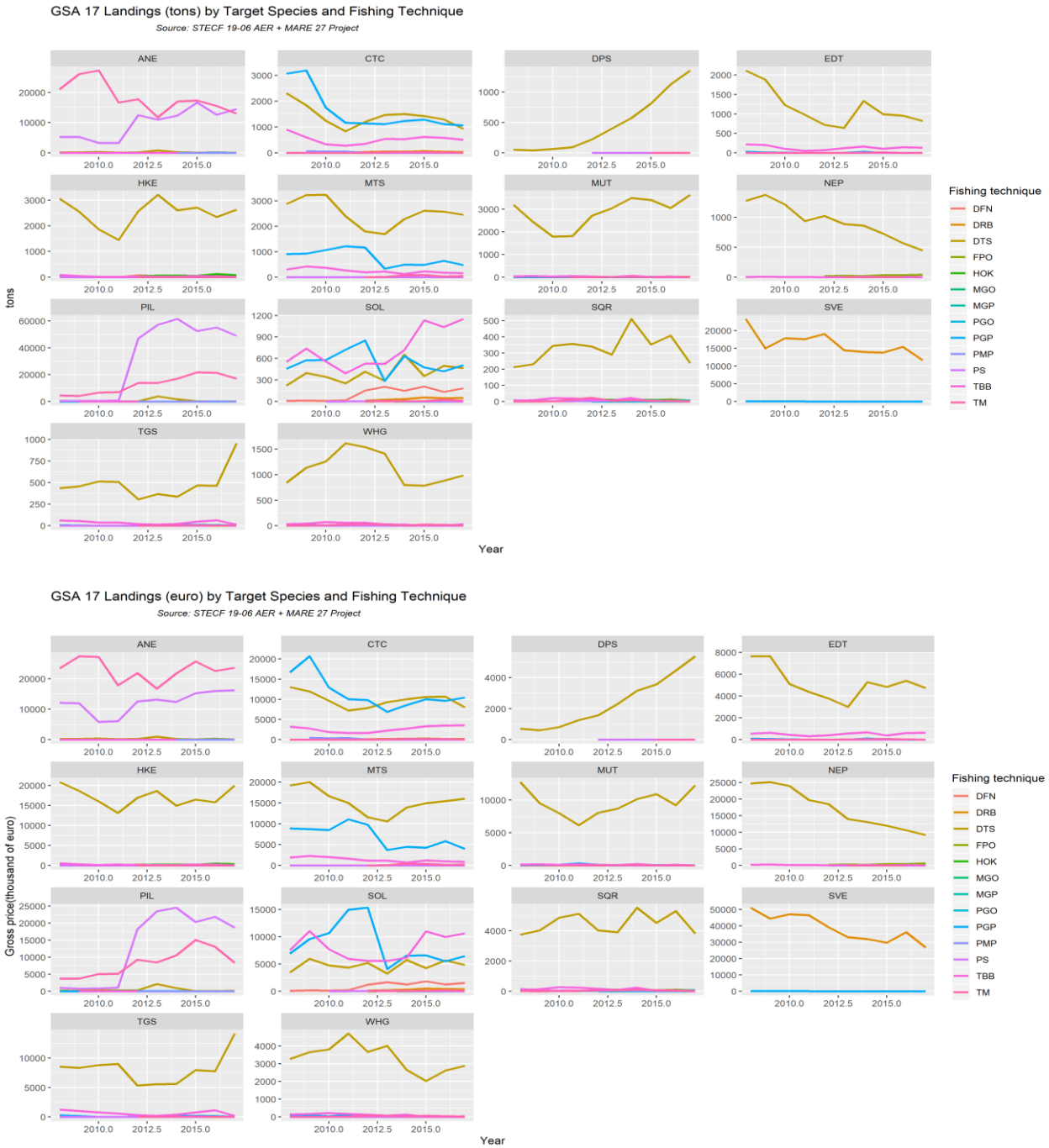


Figure 2. Value of the landings of GSA 17 both in terms of wet weight (tons; upper graphs) and gross price (thousands of euro; lower graphs) divided by species (see Appendix 6) and fishing technique (see Appendix 3).

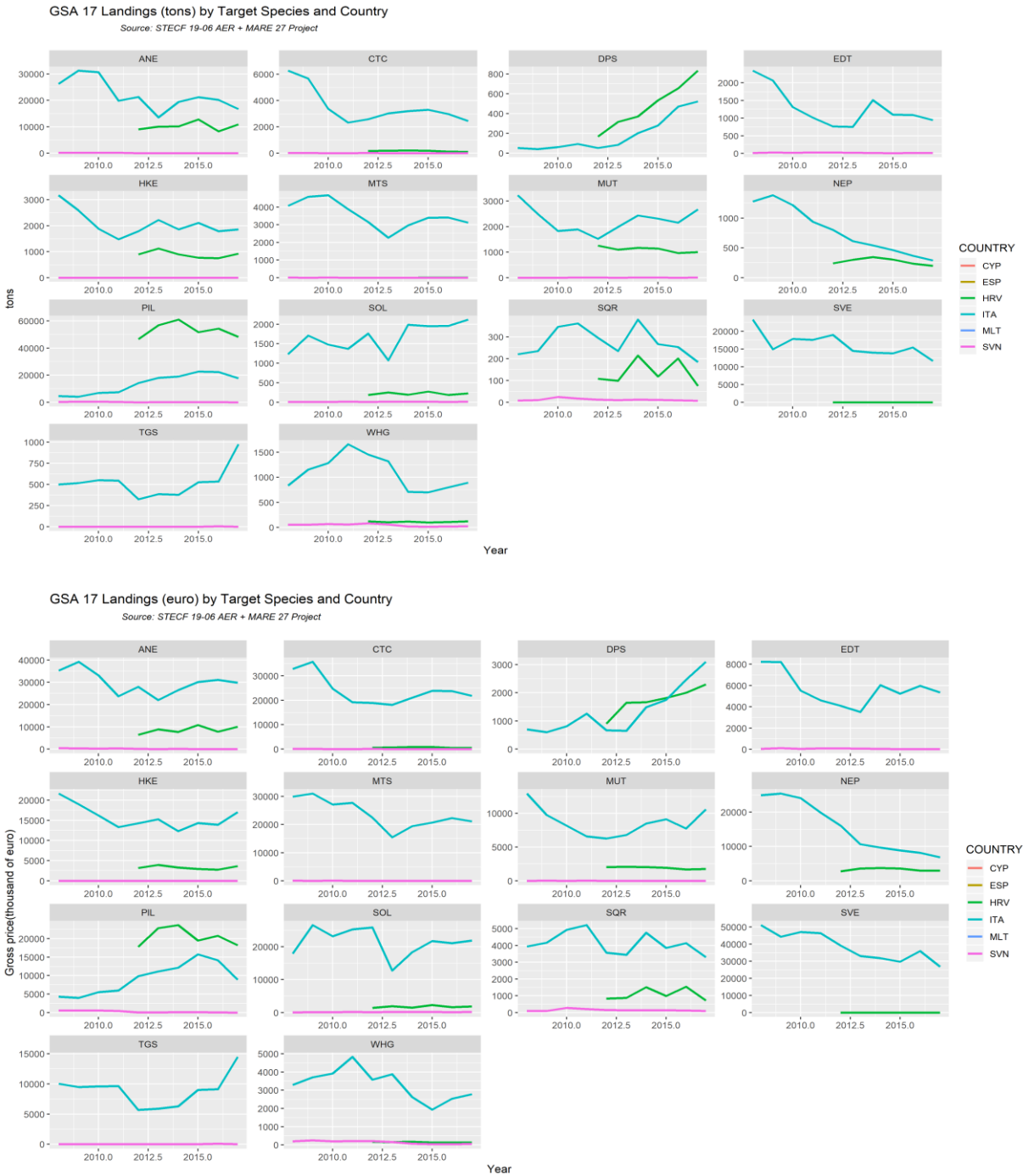
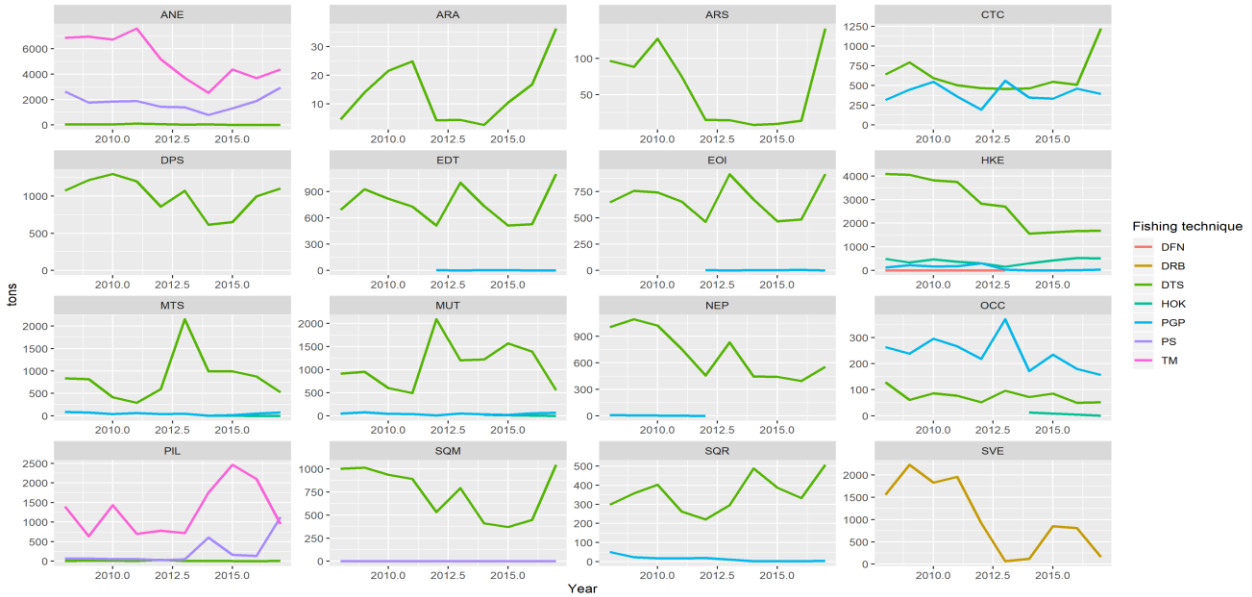


Figure 3. Value of the landings of GSA 17 both in terms of wet weight (tons; upper graphs) and gross price (thousands of euro; lower graphs) divided by species (see Appendix 6) and country (see Appendix 3).

GSA 18 Landings (tons) by Target Species and Fishing Technique

Source: STECF 19-06 AER + MARE 27 Project



GSA 18 Landings (euro) by Target Species and Fishing Technique

Source: STECF 19-06 AER + MARE 27 Project

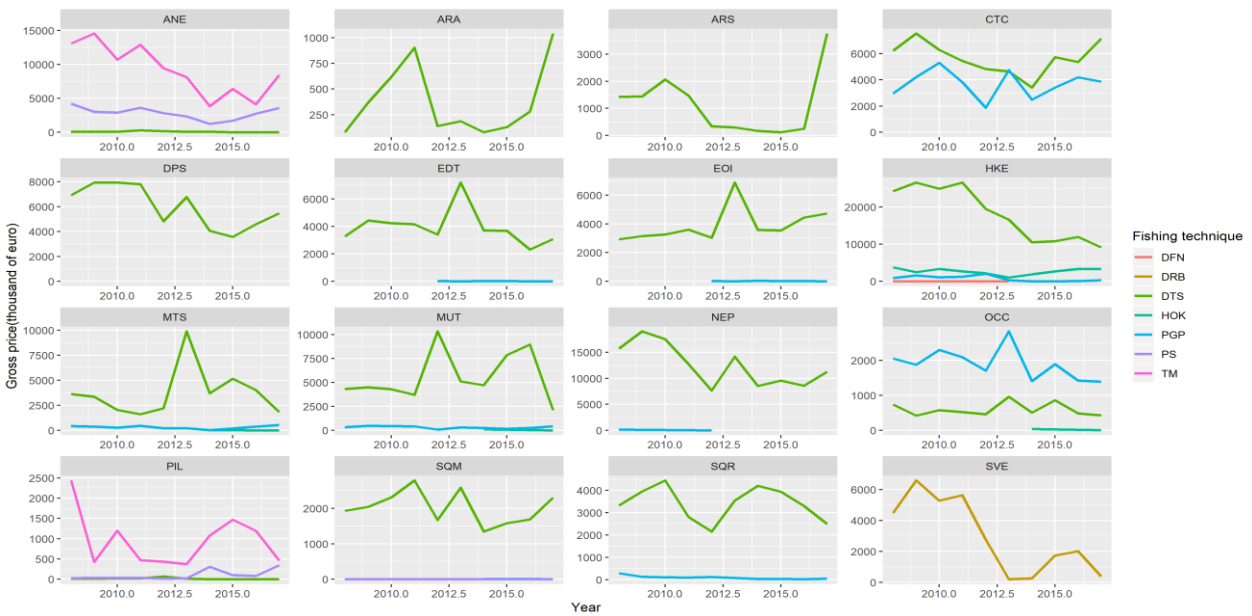
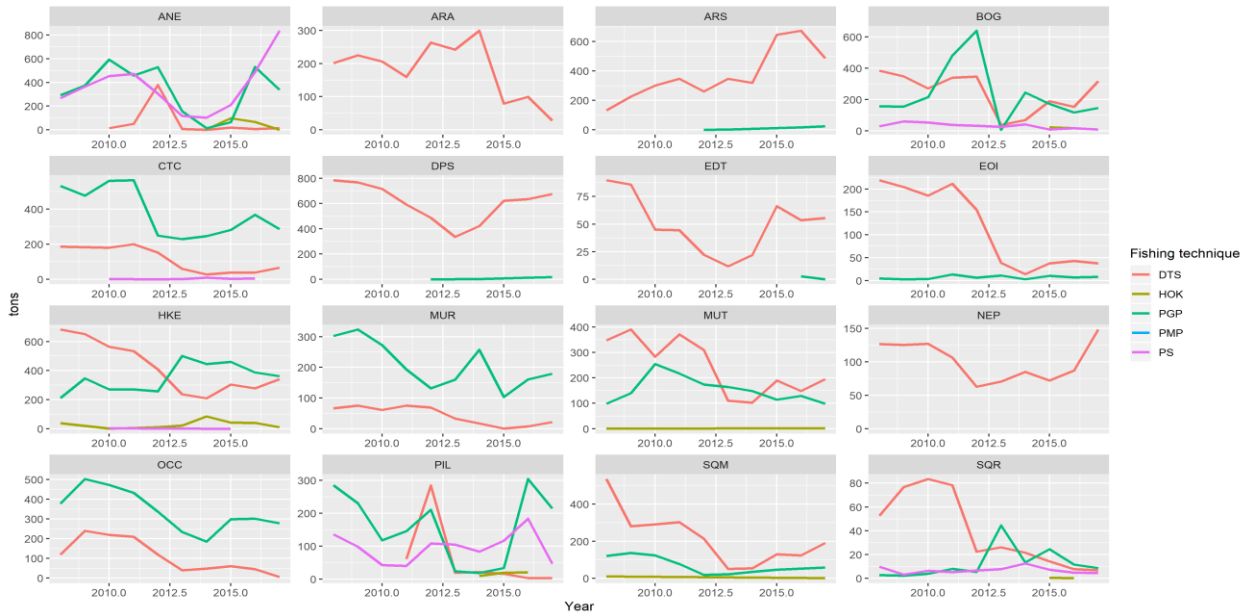


Figure 4. Value of the landings of GSA 18 both in terms of wet weight (tons; upper graphs) and gross price (thousands of euro; lower graphs) divided by species (see Appendix 6) and fishing technique (see Appendix 3).

GSA 19 Landings (tons) by Target Species and Fishing Technique

Source: STECF 19-06 AER + MARE 27 Project



GSA 19 Landings (euro) by Target Species and Fishing Technique

Source: STECF 19-06 AER + MARE 27 Project

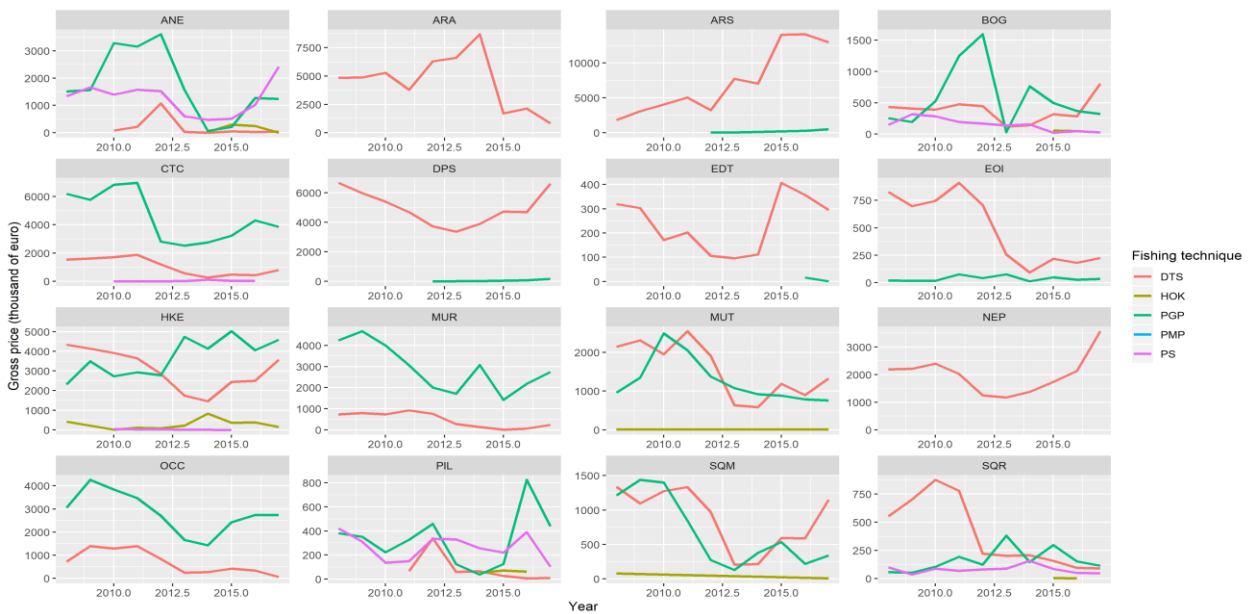


Figure 5. Value of the landings of GSA 19 both in terms of wet weight (tons; upper graphs) and gross price (thousands of euro; lower graphs) divided by species (see Appendix 6) and fishing technique (see Appendix 3).

Fleet capacity and effort trends

In this chapter is reported a short descriptive summary of the fleet capacity and effort trends over the years by GSAs.

Considering both the total number of vessel and effort (fishing days at sea) divided by fishing technique, PGP vessels represent the majority of the fleet effort and capacity in all the GSAs (Figure 6). Indeed, PGP includes SSF, one of the most typical and widespread types of fishery in the Mediterranean (Grati et al., 2018). Second in importance are DTS vessels mainly represented by demersal otter trawlers.

Moreover, other important fishing techniques in the area are TM and PS (targeting both small pelagic) while DRB (targeting clams in costal shallow waters) and TBB (targeting common sole with a specific gear called “rapido”) are almost exclusive to GSA 17.

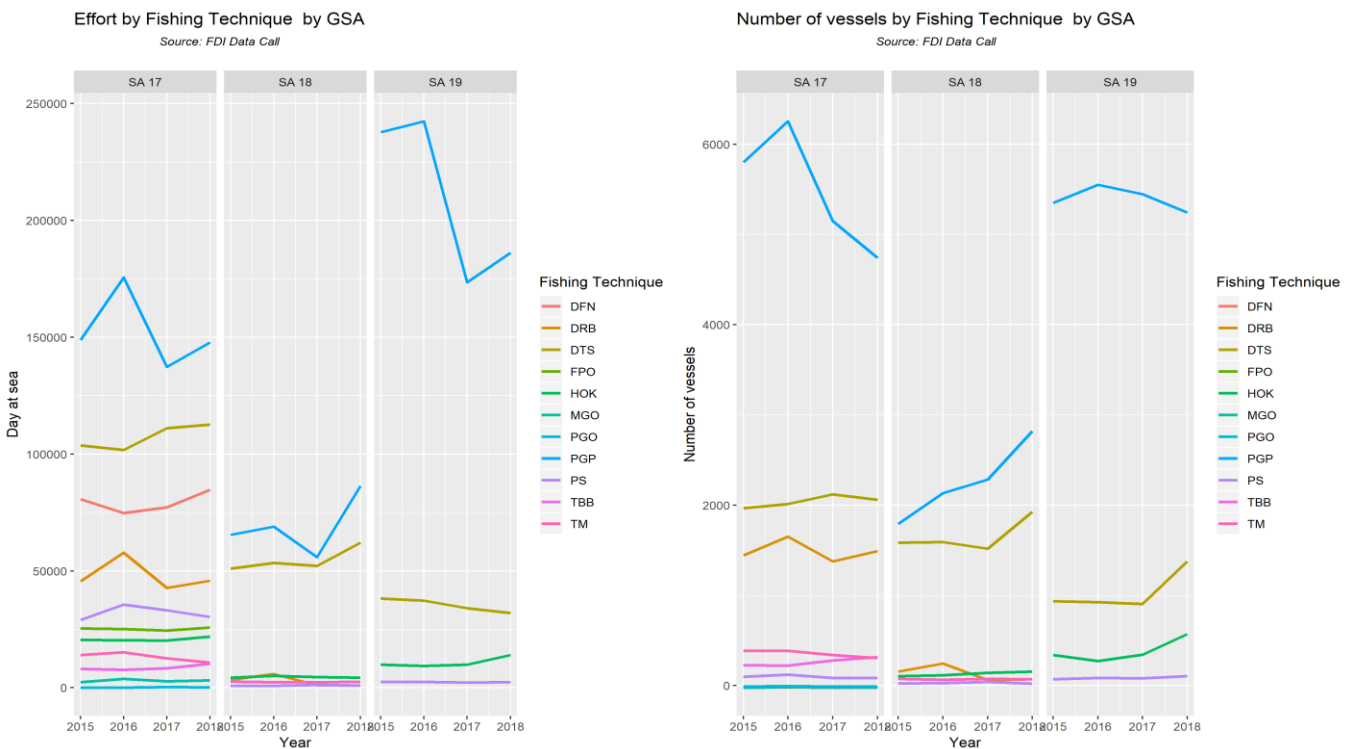


Figure 6. Fleet capacity (Number of vessels; left graph) and effort (Days at sea; right graph) value divided by fishing technique (see Appendix 3) and GSAs (see Appendix 1).

References

- Grati, F., Aladzuz, A., Azzurro, E., Bolognini, L., Carbonara, P., Çobani, M., Domenichetti, F., Dragicevic, B., Dulcic, J., Đurovic, M., Ikica, Z., Joksimovic, A., Kolitari, J., Marceta, B., Matic-Skoko, S., Vrdoljak, D., Lembo, G., Santojanni, A., Spedicato, M., Stagicic, N., Vrgoc, N., Zerem, N., Arneri, E., Ceriola, L., & Milone, N. 2018. Seasonal dynamics of small-scale fisheries in the Adriatic Sea. *Mediterranean Marine Science*, 19(1), 21-35. *doi:https://doi.org/10.12681/mms.2153*.
- Spedicato, M. T., Bitetto, I., Facchini, M. T., Accadia, P., Carpi, P., Ligas, A., Musumeci, C., *et al.* 2016. Study on the evaluation of specific management scenarios for the preparation of multiannual management plans in the Mediterranean and the Black Sea. SERVICE CONTRACT NUMBER - EASME/EMFF/2014/1.3.2.7/SI2.703 193 CALL MARE/2014/27.
- STECF. 2019. Scientific, Technical and Economic Committee for Fisheries (STECF): The 2019 Annual Economic Report on the EU Fishing Fleet (STECF 19-06), Carvalho, N., Keatinge, M. and Guillen Garcia, J. editor(s), EUR 28359 EN, Publications Office of the European Union.

Appendix 1: Sub-region codes

FAO statistical areas	Sub-region Codified GFCM GSA as defined in Resolution GFCM/33/2009/2
Northern Adriatic	SA 17
Southern Adriatic Sea	SA 18
Western Ionian Sea	SA 19

Appendix 2: Country codes

Country name	Country code
Spain	ESP
Croatia	HRV
Italy	ITA
Cyprus	CYP
Malta	MLT
Portugal	PRT
Slovenia	SVN
Albania	ALB
Montenegro	MNE

Appendix 3: Fishing technique codes

Fishing technique description	Fishing technique code
Drift and/or fixed netters	DFN
Dredgers	DRB
Demersal trawlers and/or demersal seiners	DTS
Vessels using pots and/or traps	FPO
Vessels using hooks	HOK
Vessel using other active gears	MGO
Vessels using polyvalent active gears only	MGP
Vessels using passive gears only for vessels < 12m	PG
Vessels using other passive gears	PGO

Vessels using polyvalent passive gears only	PGP
Vessels using active and passive gears	PMP
Purse seiners	PS
Pelagic trawlers	TM
Beam trawlers	TBB

Appendix 4: Gear type codes

Gear classes	Gear type description	Gear code
Dredges	Boat dredges	DRB
Gillnets and entangling nets	Driftnets	GND
Gillnets and entangling nets	Set gillnets (anchored)	GNS
Gillnets and entangling nets	Trammel nets	GTR
Hooks and lines	Handlines and pole-lines (mechanised)	LHM
Hooks and lines	Handlines and pole-lines (hand-operated)	LHP
Hooks and lines	Drifting longlines	LLD
Hooks and lines	Set longlines	LLS
Hooks and lines	Troll lines	LTL
Seine nets	Beach seines	SB
Seine nets	Boat seines	SV
Surrounding nets	Purse seines	PS
Traps	Pots and Traps	FPO
Traps	Fyke nets	FYK
Trawls	Bottom otter trawl	OTB
Trawls	Midwater otter trawl	OTM
Trawls	Pelagic pair trawl	PTM
Trawls	Beam trawl	TBB

Appendix 5: Vessel length codes

Vessel length classes (LOA)	Vessel length code
Length over all shorter than 6 m.	VL0006
Length over all shorter than 12 m.	VL0012
Length over all of 6 m. to shorter than 12 m.	VL0612

Length over all of 12 m. to shorter than 18 m.	VL1218
Length over all of 12 m. to shorter than 24 m.	VL1224
Length over all of 18 m. to shorter than 24 m.	VL1824
Length over all of 24 m. to shorter than 40 m	VL2440
Length over all of 40 m. or longer	VL40XX

Appendix 6: Mesh size range

Mesh size range	Code
Diamond mesh <14 mm	00D14
Diamond mesh >=14 mm and <16 mm	14D16
Diamond mesh >=16 mm and <20 mm	16D20
Diamond mesh >=20 mm and <40 mm	20D40
Diamond mesh >=40 mm and <50 mm	40D50
Diamond mesh >=50 mm and <100 mm	50D100
Diamond mesh >=100 mm and <400 mm	100D400
Diamond mesh >=400 mm	400DXX
Square mesh <40 mm	00S40
Square mesh >=40 mm	40SXX

Appendix 7: Métier

Métier definitions follow the recommendation of STECF (report JRC 49816) on definitions consistent with level 6 of the Commission Decision 2010/93. The labels should follow the format:

*gear type_target assemblage_mesh size range_selective device_
mesh size range of the selective device*

Each field (e.g. gear type, target assemblage, etc.) within the label is connected by an underscore.

Appendix 8: Species codes

Species coding according to the FAO Fisheries and Aquaculture Statistics and Information Branch 3-alpha code (<http://www.fao.org/fishery/collection/asfis/en>)