



# STECF stock assessments 2021 Western Mediterranean, Adriatic and Ionian seas

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Joint  
Research  
Centre

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**Geographical Sub Areas (GSA)** = Geographically defined zones, Mediterranean Sea.

**Stock** = Combination species and GSAs.

**Fishing mortality (F)** = Part of total mortality rate due to fishing.

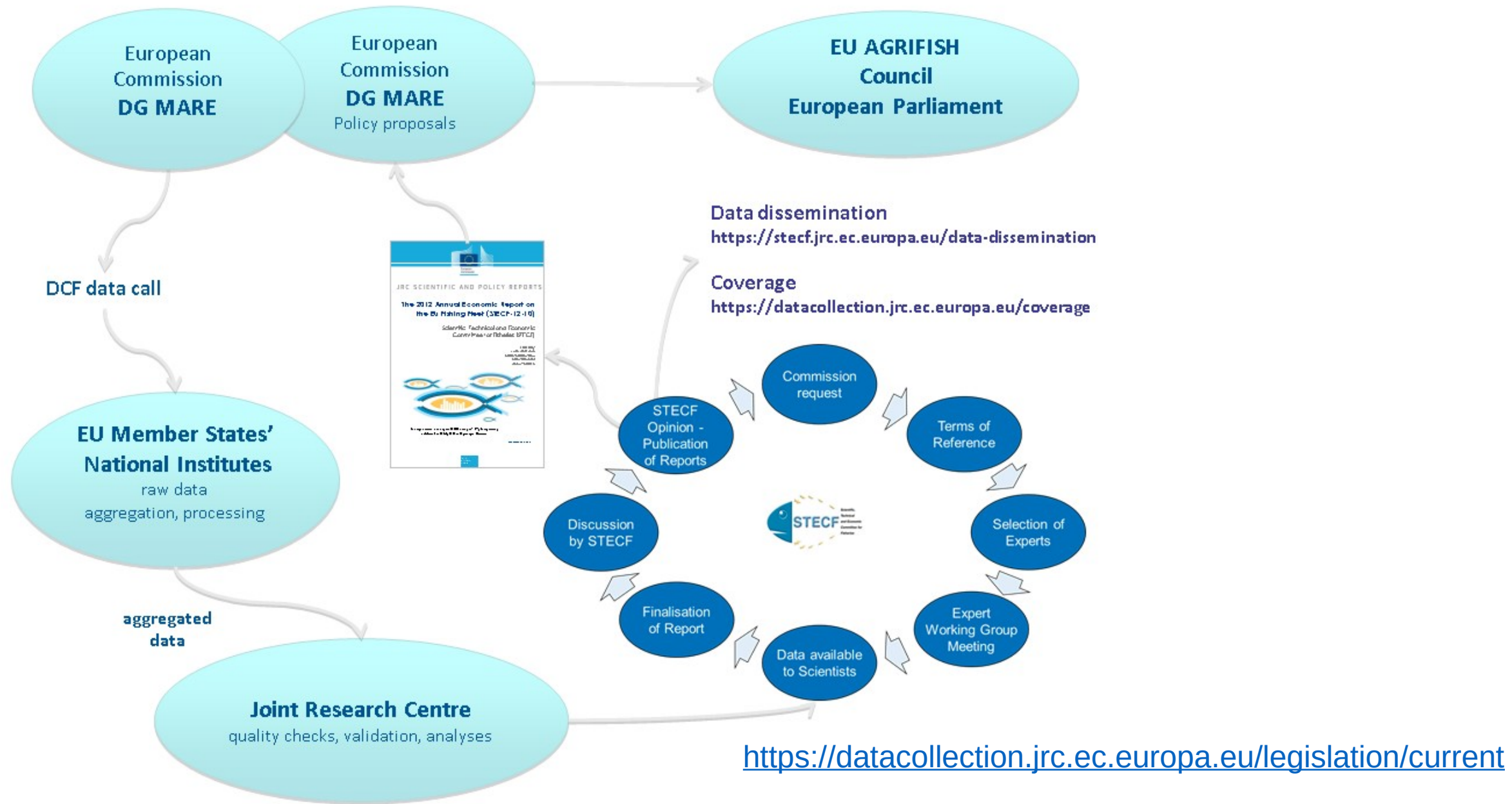
**F<sub>current</sub>** = Estimated F level in last year.

**F<sub>msy</sub>** = Fishing mortality at MSY level (F<sub>0.1</sub> as proxy)

**Maximum Sustainable Yield (MSY)** = The largest annual catch that may be taken from a stock every year without affecting the catch of future years.

**Exploitation level** = Ratio between F<sub>current</sub> and F<sub>msy</sub>. If >1 (**Overfishing**)

**Biomass** = Sum of weights of all individuals in a stock.



<https://stecf.jrc.ec.europa.eu/index.html>

**Landings and discards length frequency distributions from commercial samples**

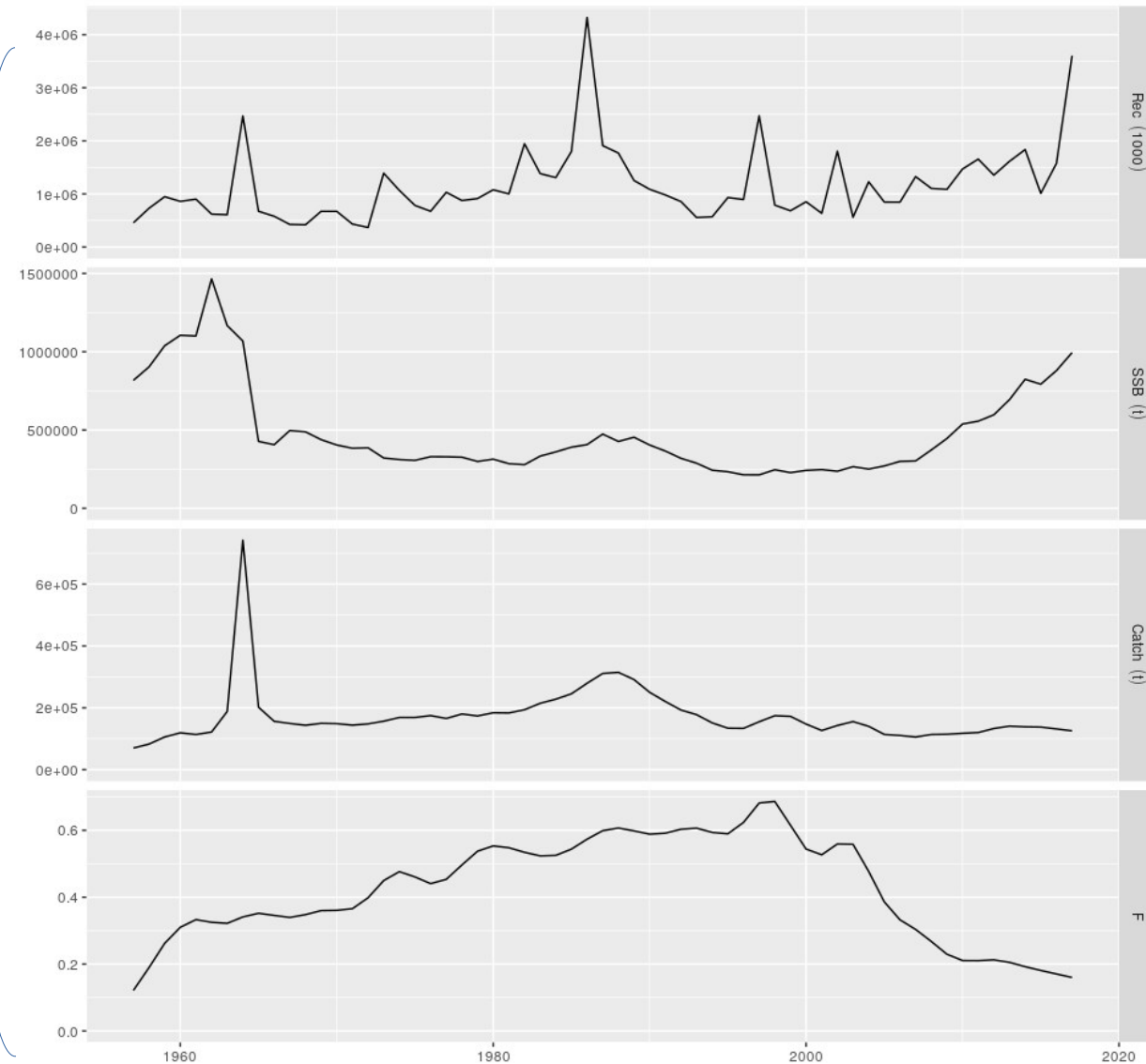
**Landings and discards weights from commercial samples and official data**

**Biological data (growth rate, maturity, etc) both from commercial and scientific samples**

**Biomass at sea estimated by scientific samples/surveys**

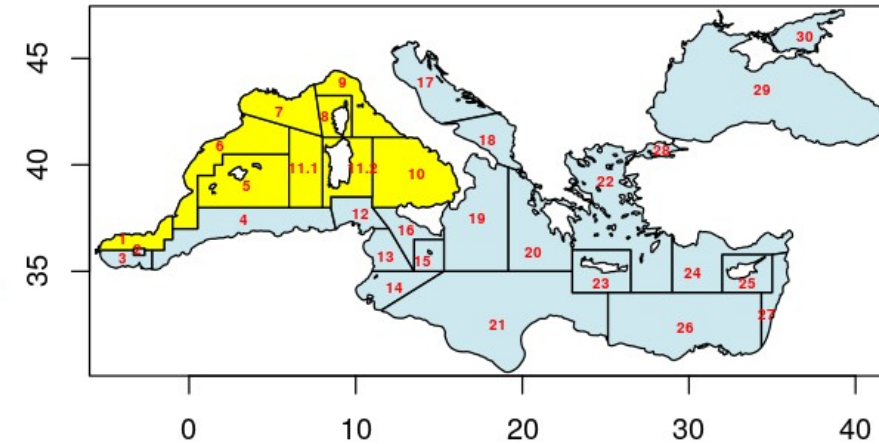
**STOCK ASSESSMENT MODELS**

**Stock assessment data input and main outputs**



## How many stocks assessed in EWG 21-11

Area	Common name	Scientific name
GSA 1-5-6-7	Hake	<i>Merluccius merluccius</i>
GSA 1-5-6-7	Deep-water rose shrimp	<i>Parapenaeus longirostris</i>
GSA 1	Red mullet	<i>Mullus barbatus</i>
GSA 5	Striped red mullet	<i>Mullus surmuletus</i>
GSA 6	Red mullet	<i>Mullus barbatus</i>
GSA 7	Red mullet	<i>Mullus barbatus</i>
GSA 5	Norway lobster	<i>Nephrops norvegicus</i>
GSA 6	Norway lobster	<i>Nephrops norvegicus</i>
GSA 8-9-10-11	Hake	<i>Merluccius merluccius</i>
GSA 8-9-10-11	Deep-water rose shrimp	<i>Parapenaeus longirostris</i>
GSA 9	Red mullet	<i>Mullus barbatus</i>
GSA 10	Red mullet	<i>Mullus barbatus</i>
GSA 9	Norway lobster	<i>Nephrops norvegicus</i>
GSA 11	Norway lobster	<i>Nephrops norvegicus</i>
GSA 1	Blue and red shrimp	<i>Aristeus antennatus</i>
GSA 5	Blue and red shrimp	<i>Aristeus antennatus</i>
GSA 6-7	Blue and red shrimp	<i>Aristeus antennatus</i>
GSA 8-9-10-11	Giant red shrimp	<i>Aristaeomorpha foliacea</i>
GSA 8-9-10-11	Blue and red shrimp	<i>Aristeus antennatus</i>



<https://stecf.jrc.ec.europa.eu/ewg2111>

Area	Species	Method/	Age	Biomass	Catch	F 2020	F MSY	Change in F	Catch 2020	Catch 2022 at Fmsy	Change in catch
		Basis	Fbar	2018-2020	2018-2020						
1_5_6_7	European Hake	a4a	1-3	declining	declining	1.94	0.44	-77%	2011	1220	-39%
1_5_6_7	Deep-water rose shrimp	Index 2020	Biomass	fluctuating	increasing				1764	681	-61%
1	Red Mullet	a4a	1-3	declining	declining	1.29	0.61	-53%	98	82	-16%
5	Striped Red Mullet	Index 2021	Biomass	fluctuating	declining				84	85	1%
6	Red Mullet	a4a	1-3	increasing	decreasing	0.90	0.32	-65%	1539	842	-45%
7	Red Mullet	a4a	1-3	increasing	increasing	0.62	0.46	-27%	389	351	-10%
5	Norway lobster	Index 2021	Biomass	fluctuating	declining				58	37	-35%
6	Norway lobster	a4a	3-6	increasing	decreasing	0.26	0.26	-1%	128	206	61%
8_9_10_11	European Hake	a4a	1-3	increasing	stable	0.50	0.17	-67%	1983	920	-54%
9_10_11	Deep-water rose shrimp	a4a	1-2	fluctuating	increasing	1.58	1.29	-19%	1960	1455	-26%
9	Red Mullet	a4a	1-3	Increasing	declining	0.37	0.52	39%	629	1033	64%
10	Red Mullet	a4a	1-3	increasing	stable	0.31	0.40	27%	426	485	14%
9	Norway lobster	a4a	2-6	declining	declining	0.15	0.30	100%	103	220	113%
11	Norway lobster	Index 2020	Biomass	low fluctuating	increasing				44	13	-70%
1	Red and blue shrimp	a4a	1-2	stable fluctuation	fluctuation	1.68	0.29	-83%	117	33	-72%
5	Red and blue shrimp	Index 2020	Biomass	stable	declining				131	137	5%
6_7	Red and blue shrimp	a4a	1-2	increasing	declining	0.85	0.29	-66%	549	267	-51%
9_10_11	Red and blue shrimp	a4a	2-5	declining	increasing	1.68	0.29	-82%	366	45	-88%
9_10_11	Giant red shrimp	a4a	1-3	declining	stable	0.98	0.46	-35%	496	241	-51%

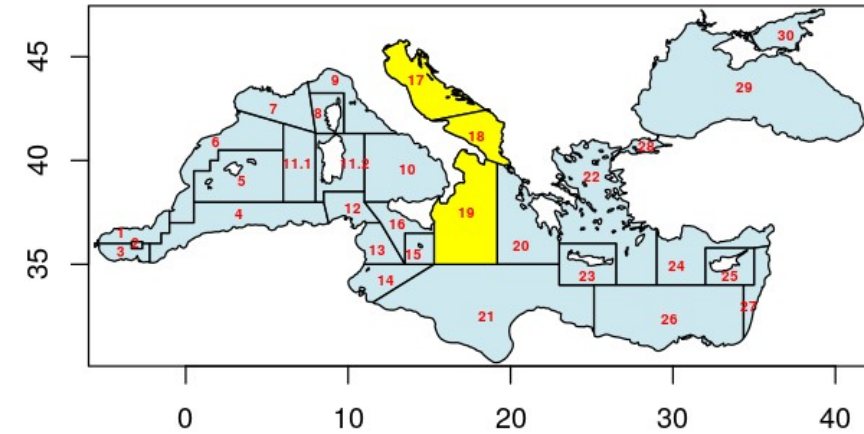
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## How many stocks assessed in EWG 21-15

	Area	Common name	Scientific name
1	GSA 17-18*	Hake <sup>^</sup>	<i>Merluccius merluccius</i>
2	GSA 17-18	Red mullet <sup>^</sup>	<i>Mullus barbatus</i>
3	GSA 17-18	Norway lobster <sup>^</sup>	<i>Nephrops norvegicus</i>
4	GSA 17-18-19	Deep-water rose shrimp <sup>^</sup>	<i>Parapenaeus longirostris</i>
5	GSA 17-18**	Common cuttlefish	<i>Sepia officinalis</i>
6	GSA 17*	Sole <sup>^</sup>	<i>Solea vulgaris</i>
7	GSA 17-18**	Spottail mantis shrimp	<i>Squilla mantis</i>
8	GSA 18-19-20**	Giant red shrimp	<i>Aristaeomorpha foliacea</i>
9	GSA 19*	Hake	<i>Merluccius merluccius</i>



<sup>^</sup> Stocks under GFCM Demersal Plan (GFCM/43/2019/5)

\* Stock with a GFCM benchmark

\*\* Stock boundaries to be defined on the basis of expert knowledge

<https://stecf.jrc.ec.europa.eu/reports/medbs>

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		Basis	Fbar	2018-2020	2018-2020						
GSA 17-18	European Hake	SS3	1-4	increasing	declining	0.37	0.18	-52%	4841	2920	-40%
GSA 17	Common Sole	Index 2020	biomass	declining	declining				1605	1960	22%
GSA 17-18	Red mullet	a4a	1-3	increasing	declining	0.37	0.36	-5%	3123	4279	37%
GSA 17-18	Common cuttlefish	CMSY	biomass	increasing	declining	0.07	0.16	123%	2150	7450	247%
GSA 17-18	Norway lobster	SPiCT	biomass	increasing	declining	0.16	0.37	131%	870	1986	128%
GSA 17-18	Spottail mantis shrimp	a4a	1-3	increasing	fluctuating	0.66	0.44	-33%	4780	4945	3%
GSA 17-18-19	Deep-water rose shrimp	a4a	0-2	stable	stable	1.61	0.72	-55%	5121	3092	-40%
GSA 18-19-20	Giant red shrimp	Index 2021	biomass	fluctuating	fluctuating				386	303	-22%
GSA 19	European Hake	a4a	0-4	increasing	declining	0.29	0.15	-47%	584	420	-28%

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GSA 17-18-19	Deep-water rose shrimp	a4a	0-2	stable	stable	1.61	0.72	-55%	5121	3092	-40%
GSA 18-19-20	Giant red shrimp	Index 2021	biomass	fluctuating	fluctuating				386	303	-22%
GSA 19	European Hake	a4a	0-4	increasing	declining	0.29	0.15	-47%	584	420	-28%

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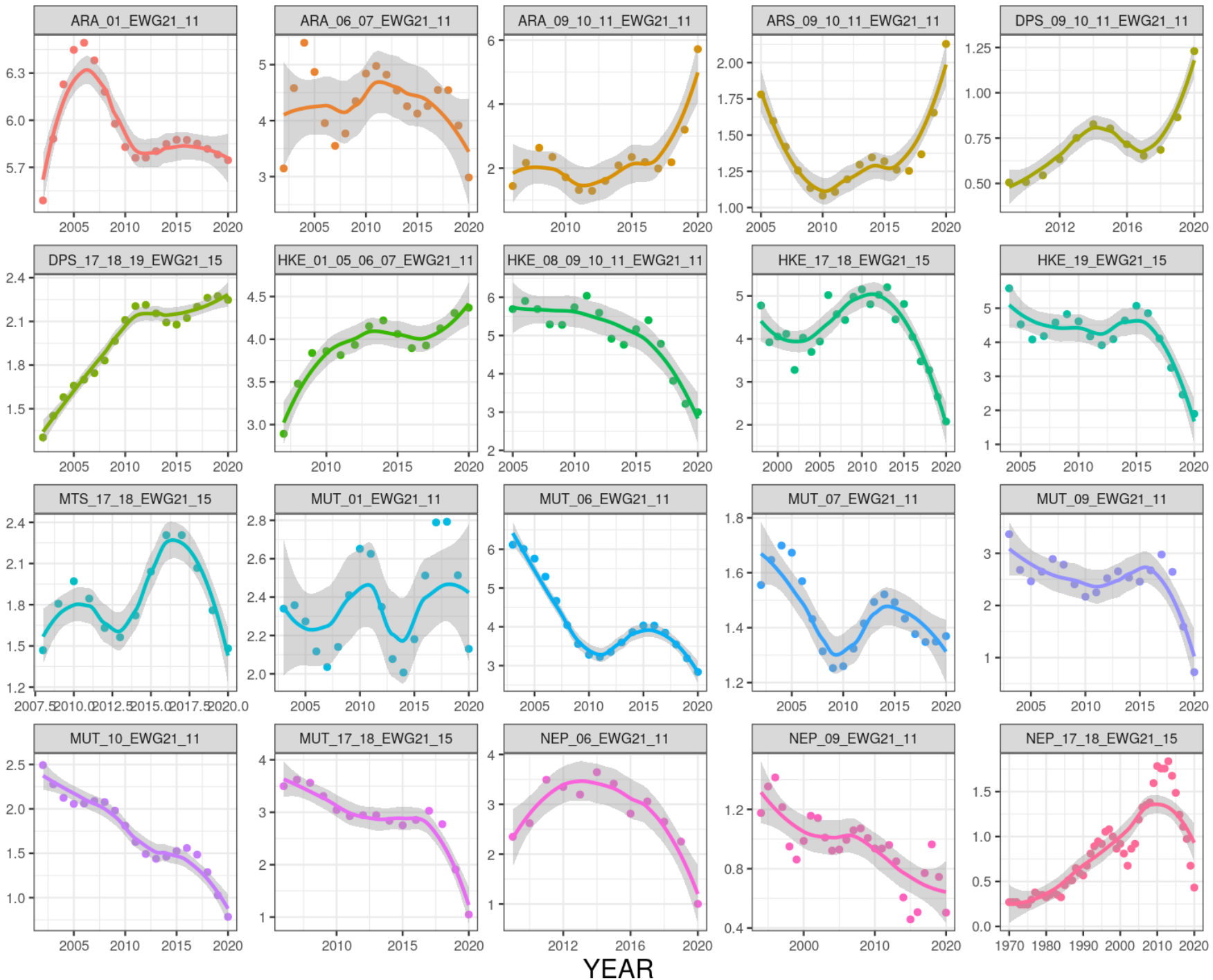
✓ **A total of 28 stocks were assessed**

**53.6% of the assessed stocks suffering overfishing**

**21.4% of the assessed stocks are not in overfishing**

**25% of the stocks the advice based on index biomass**

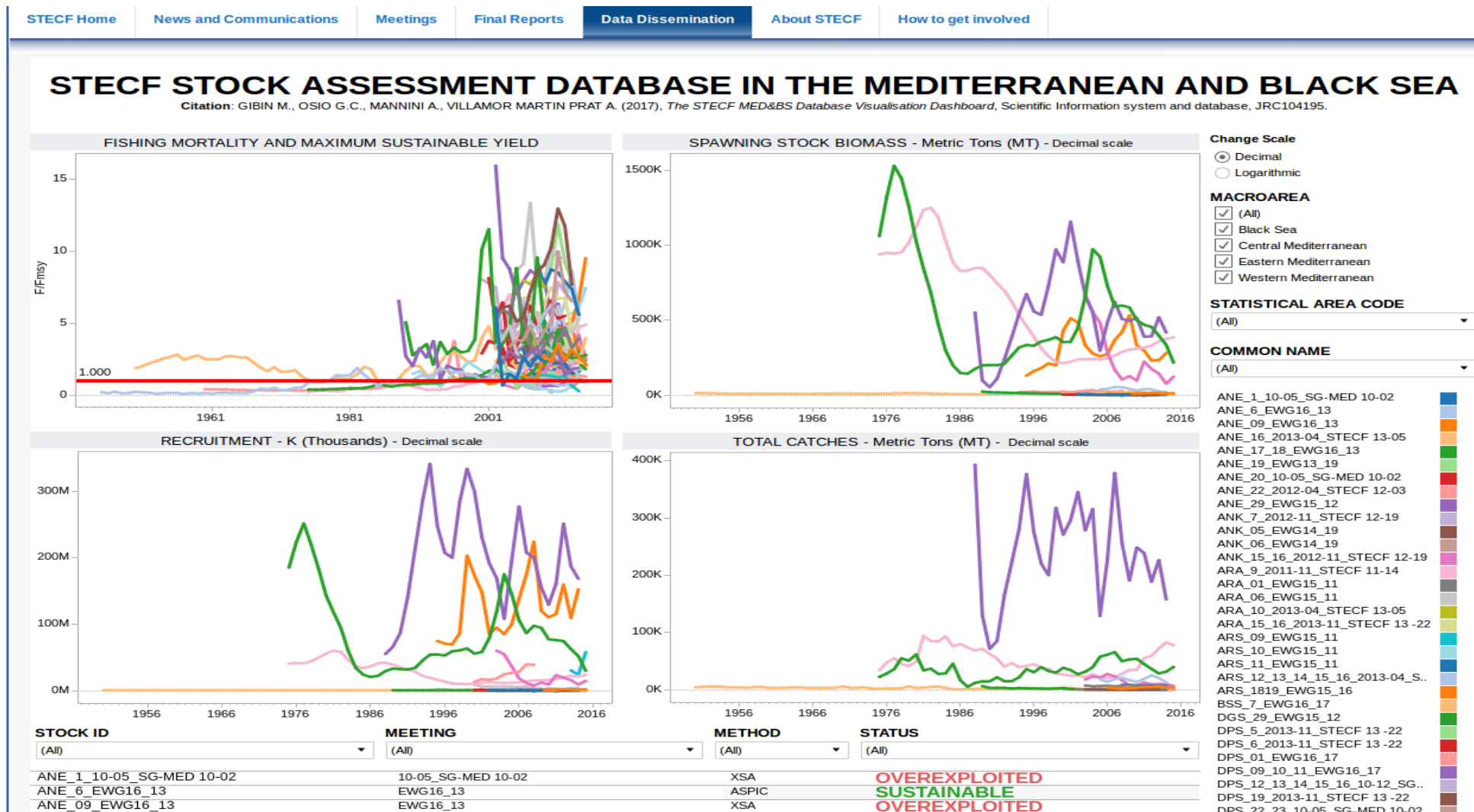
F\_FMSY



# The STECF MED&BS Database Visualisation Dashboard.

## Scientific Information system and database

<https://stecf.jrc.ec.europa.eu/web/stecf/dd/medbs/sambs>



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# Thank you



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