ICES advice for North Western Waters

NWWAC meeting, July 2024

CELTIC SEA and West of Scotland

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CIEM

Science for sustainable seas

Image Dirk Vonten, Fotolia

Celtic Sea & West, Southwest Ireland + West of Scotland

West of Scotland & Rockall (6.ab)
- Cod (4,6a,7d,20)
- Haddock (4,6.a,sub 20; 6.b)
- Whiting (6.a; 6.b)
- Anglerfish (3.a,4,6)
- Megrim (4.a-6.a; 6.b)
- Saithe 3.a 4, 6
- *Nephrops* (FUs11-12-13)

Celtic Sea & West, Southwest Ireland
- Cod (7.e-k)
- Haddock (7.b-k)
- Plaice (CS; 7.h-k; 7.bc)
- Sole (CS; 7.b-c;7.h-k; 7.bc)
- Northern hake
- Anglerfish (7.b-k, 8.abd)
- Megrim (7.b-k, 8.abd)
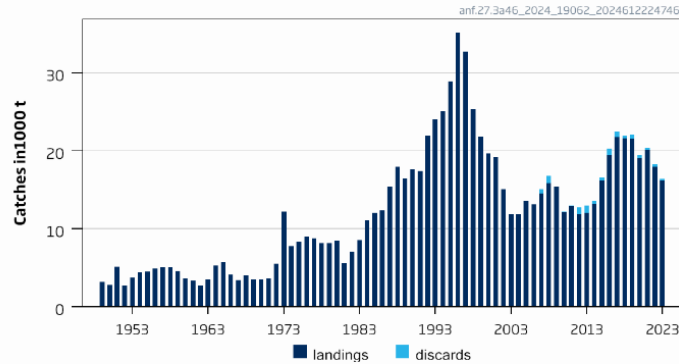- Pollack (6,7)
- *Nephrops* (FUs 16-17-20-22)
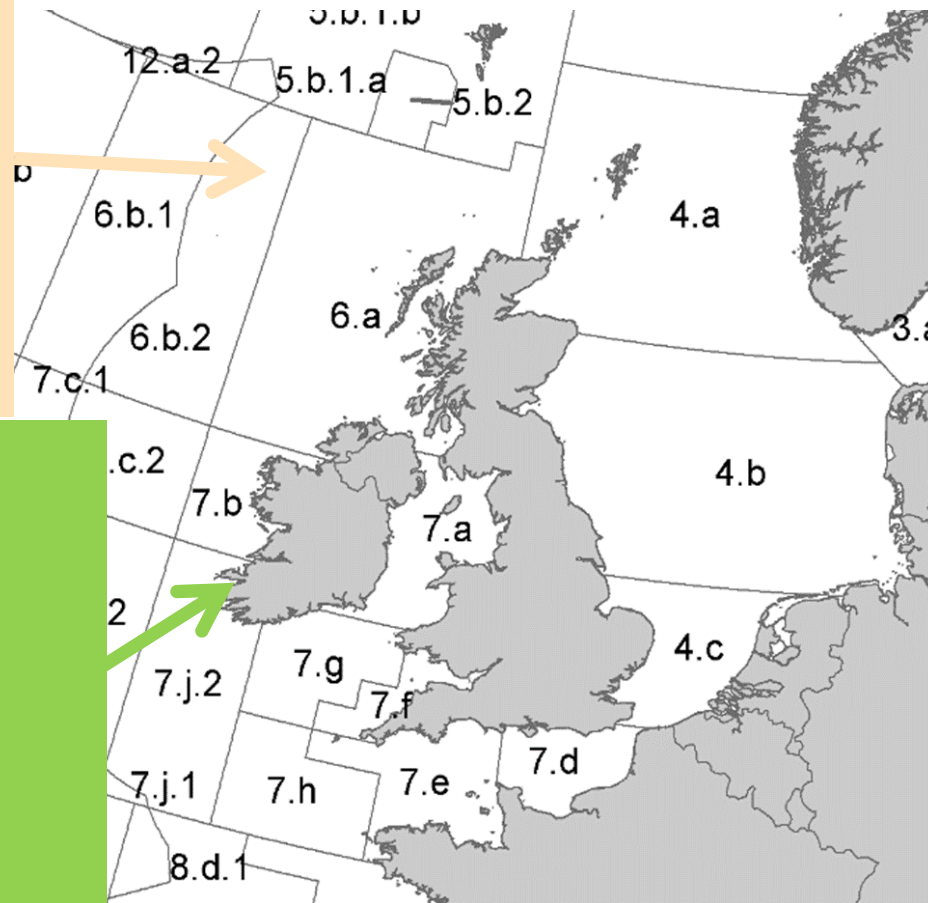
Deep sea stocks

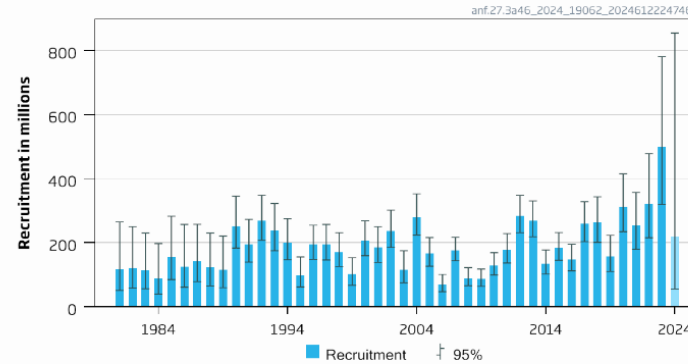Nephrops and elasmobranchs, megrim 6b-advice released in autumn

Advice for 2025 : MSY: Catch ≤ 30 726 advice +211%
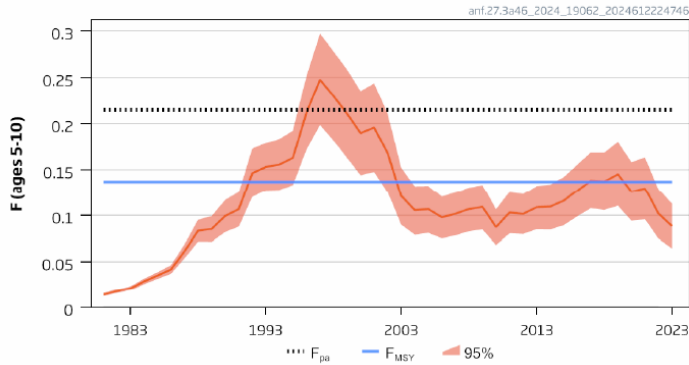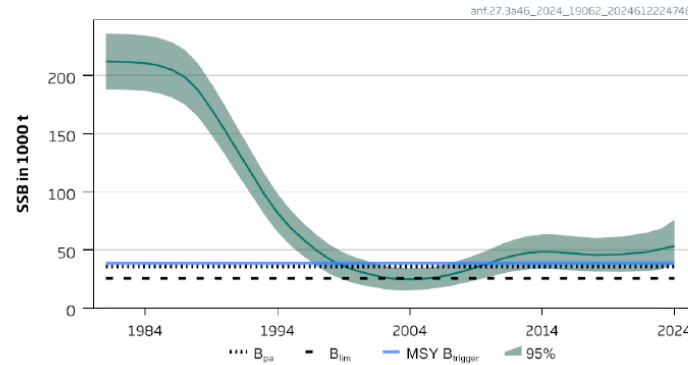

- Advice for black bellied and white combined
- Benchmark – 3 to 1
- $F<F_{msy}$ $SSB>$trigger
- SS3 – length based
- New and revised indices

Management at should be at stock level

Catch (2023) = 16 157t (1.5 % discards)

F(2024) = 0.089 (Fsq: 2023)

SSB (2025)= 57 665 > MSY$_{Btrigger}$ (38 604)   F$_{MSY}$= 0.137

Table 2   Anglerfish in subareas 4 and 6 and in Division 3.a. Annual catch scenarios. Weights are in tonnes.

| Basis	Total catch (2025)	Projected landings* (2025)	Projected discards** (2025)	F_{total} (2025)	SSB (2026)	% SSB change***	% advice change^	Probability SSB < B_{lim} in 2026 (%)
ICES advice basis								
MSY approach: F_{MSY}	30726	30265	461	0.137	60272	4.5	211	0
Other scenarios								
EU MAP^^: F_{MSY}	30726	30265	461	0.137	60272	4.5	211	0
EU MAP^^: $F_{MSY\ lower}$	23895	23537	358	0.105	61791	7.2	142	0
EU MAP^^: $F_{MSY\ upper}$	38379	37803	576	0.174	58567	1.56	288	0
F = 0	0	0	0	0	67094	16.4	−100	0
F = F_{pa}	46562	45864	698	0.215	56743	−1.60	371	0
SSB_{2026} = B_{lim}	184929	182155	2774	1.30	25686	−56	1772	50
SSB_{2026} = B_{pa}	140402	138296	2106	0.84	35692	−38	1321	3.2
SSB_{2026} = SSB_{2025}	42428	41792	636	0.194	57665	0	211	0
SSB_{2026} = MSY $B_{trigger}$	127467	125555	1912	0.73	38604	−33	1190	0.88
F = F_{2024}	20297	19993	304	0.089	62591	8.5	105	0
Catch advice 2025 = TAC_{2024}	11293	11124	169	0.048	64590	12.0	14.3	0

* Landings assuming recent discard rate

SS3

Black-bellied anglerfish in Subarea 7 and divisions 8.a–b, and 8.d
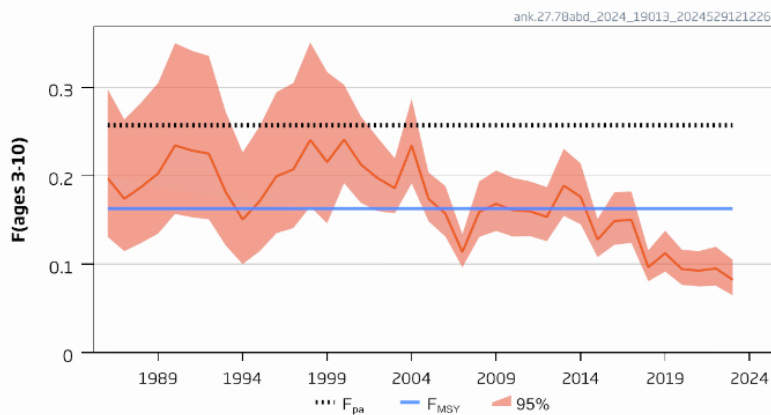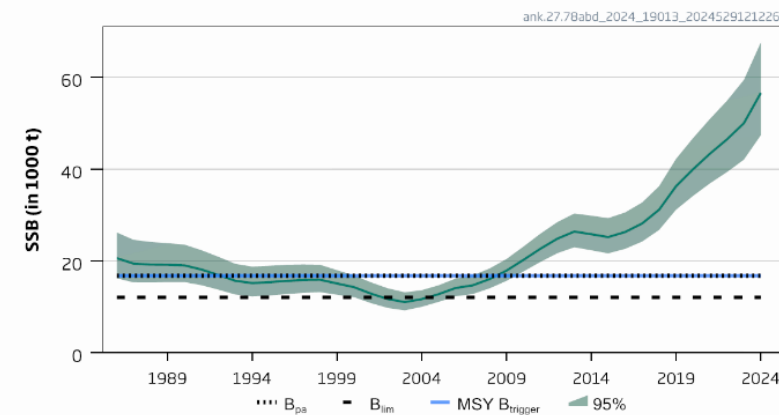
Advice for 2025 : MSY: Catch ≤ 25 317t advice -1%
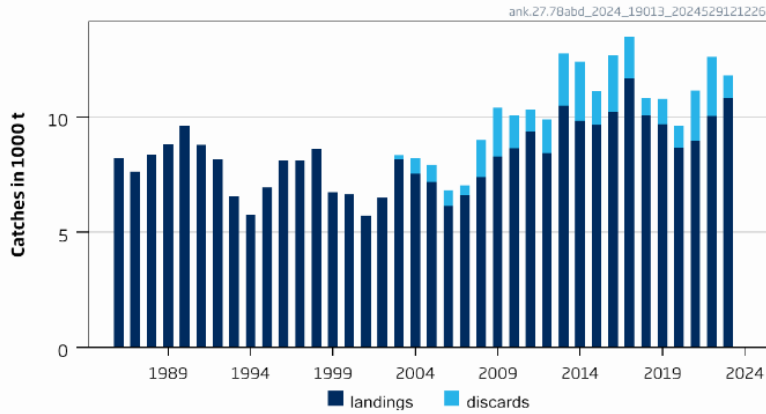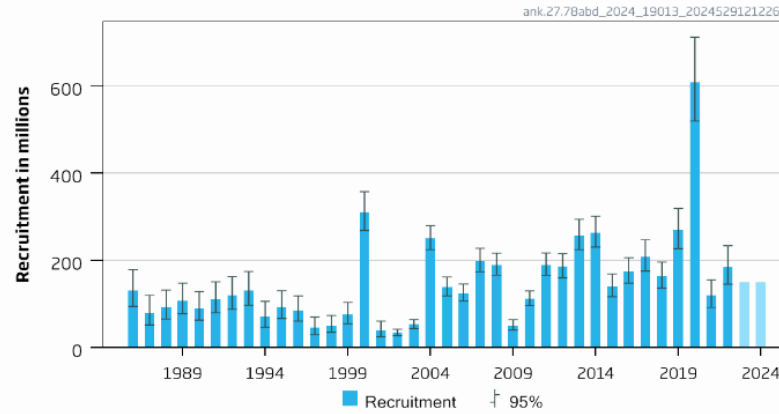
- F has been decreasing: below FMSY
- SSB has been increasing since 2002: above MSY Btrigger
- Exploitable biomass (not = SSB) levelling off as lower recruitment since 2020 enters

Catch (2023) = 11 790t (8.3 % discards)

F(2024) = 0.0902 (Fsq: average 2021-2023)

SSB (2025)= 65 236 > MSY$_{Btrigger}$ (16 776)   F$_{MSY}$= 0.163

Length based stock synthesis

Note: Under combined TAC with white anglerfish – could lead to overexploitation of either species

Table 2 Black-bellied anglerfish in Subarea 7 and in divisions 8.a–b and 8.d. Annual catch scenarios. Weights are in tonnes. Note: the % change in TAC is not computed because the TAC is for both species of anglerfish.

| Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F$_{ages 3–10}$ Total (2025)	F$_{ages 3–10}$ Projected landings (2025)	F$_{ages 3–10}$ Projected discards (2025)	SSB (2026)	% SSB change*	% advice change**
ICES advice basis									
MSY approach = F$_{MSY}$	25317	21173	4144	0.163	0.154	0.009	67235	3.1	−1.02
Other options									
F = MAP^^ F$_{MSY lower}$	17806	14895	2911	0.112	0.106	0.0062	70753	8.5	−30
F = MAP^^ F$_{MSY upper}$	36670	30656	6014	0.24	0.23	0.0135	61942	−5.1	43
F = 0	0	0	0	0	0	0	79138	21	−100
F$_{pa}$	38260	31983	6277	0.26	0.24	0.014	61203	−6.2	50
SSB$_{2026}$ = B$_{lim}$	149928	124539	25389	1.88	1.78	0.104	12073	−81	486
SSB$_{2026}$ = B$_{pa}$ = MSY B$_{trigger}$	138213	114936	23277	1.55	1.47	0.086	16776	−74	440
SSB$_{2026}$ = SSB$_{2025}$	29597	24749	4848	0.193	0.183	0.011	65236	0	15.7
F = F$_{2024}$	14486	12119	2367	0.09	0.085	0.005	72312	10.8	−43
Catch advice (2025) = catch advice (2024)***	25579	21392	4187	0.165	0.156	0.009	67113	2.9	0

White anglerfish in Subarea 7 and div. 8.a-b,d (Celtic Sea, Bay of Biscay)

Advice for 2025: MSY : Catch ≤ 34 983t advice -1.5%
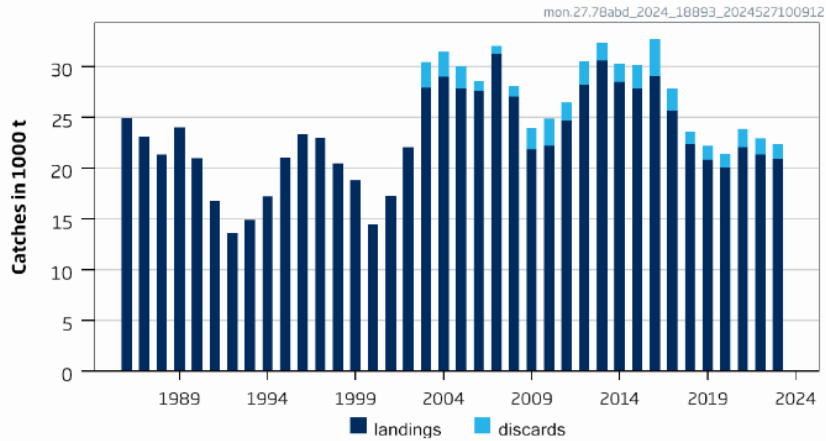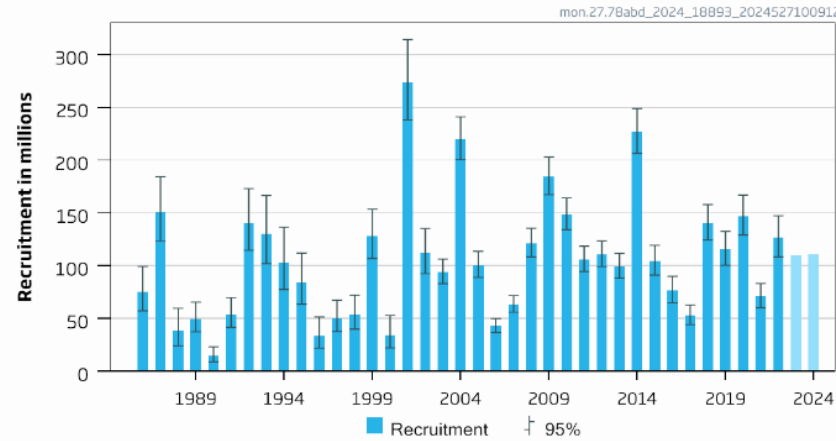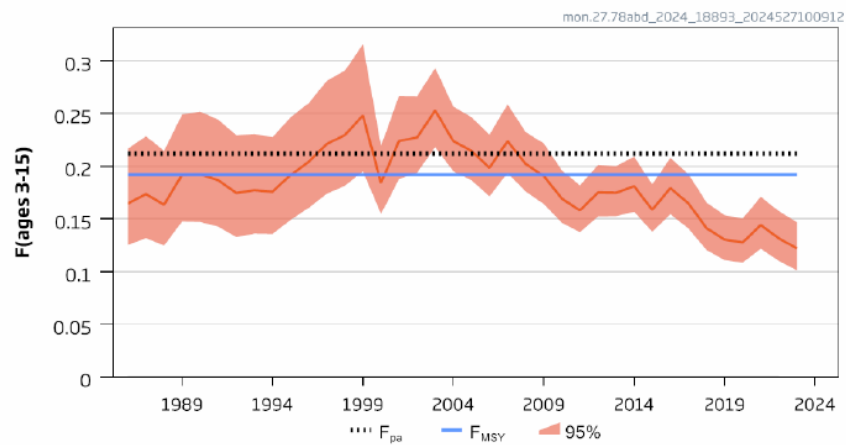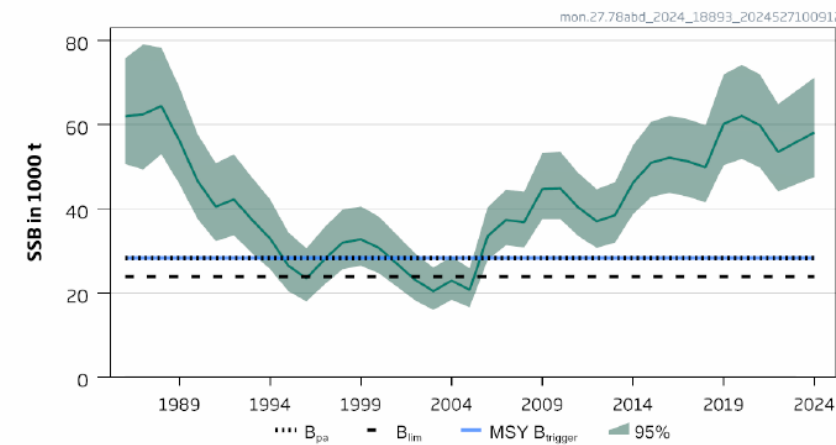

- F decreasing: below F_{MSY}
- SSB above MSY Btrigger
- Small downward revision in SSB

White anglerfish in Subarea 7 and div. 8.a-b,d (Celtic Sea, Bay of Biscay)

Catch (2023) : 22 322t (6.3 % discards)

F(2024) = 0.33 (Average 2021-2023);

SSB (2025)= 62 907> MSY$_{Btrigger}$ (28 275 t)   F$_{MSY}$= 0.192

Table 2 White anglerfish in Subarea 7 and in divisions 8.a–b and 8.d. Annual catch scenarios. Weights are in tonnes. Note: the % change in TAC is not computed because the TAC is for both species of anglerfish.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F$_{ages 3-15}$ Total (2025)	F$_{ages 3-15}$ Projected landings (2025)	F$_{ages 3-15}$ Projected discards (2025)	SSB (2026)	% SSB change *	% advice change^
ICES advice basis									
MSY approach = F$_{MSY}$	34983	30634	4348	0.192	0.190	0.00163	56926	−9.5	−1.46
Other scenarios									
F = MAP^^ F$_{MSY lower}$	24617	21561	3056	0.131	0.130	0.00111	60635	−3.6	−31
F = MAP^^ F$_{MSY upper}$	38241	33486	4755	0.212	0.21	0.00180	55761	−11.4	7.7
F = 0	0	0	0	0	0	0	69443	10.4	−100
F$_{pa}$	38241	33486	4755	0.212	0.21	0.00180	55761	−11.4	7.7
SSB$_{2026}$ = B$_{lim}$	127983	111747	16236	1.034	1.03	0.0088	23868	−62	260
SSB$_{2026}$ = B$_{pa}$ = MSY B$_{trigger}$	115419	100843	14575	0.870	0.86	0.0074	28275	−55	225
SSB$_{2026}$ = SSB$_{2025}$	18270	16003	2267	0.095	0.095	0.00081	62907	0	−49
F = F$_{2024}$	24908	21816	3093	0.133	0.132	0.00113	60531	−3.8	−30
Catch advice 2025 = Catch advice2024	35502	31089	4413	0.195	0.194	0.00166	56740	−9.8	0

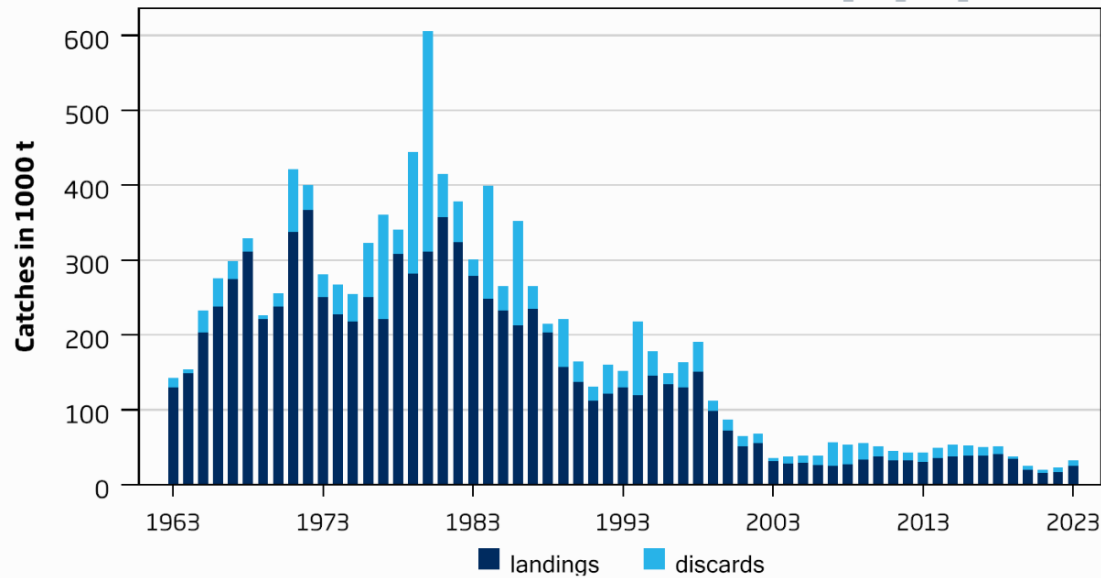Length based age structured stock synthesis

Note: Under combined TAC with black bellied anglerfish – could lead to overexploitation of either species
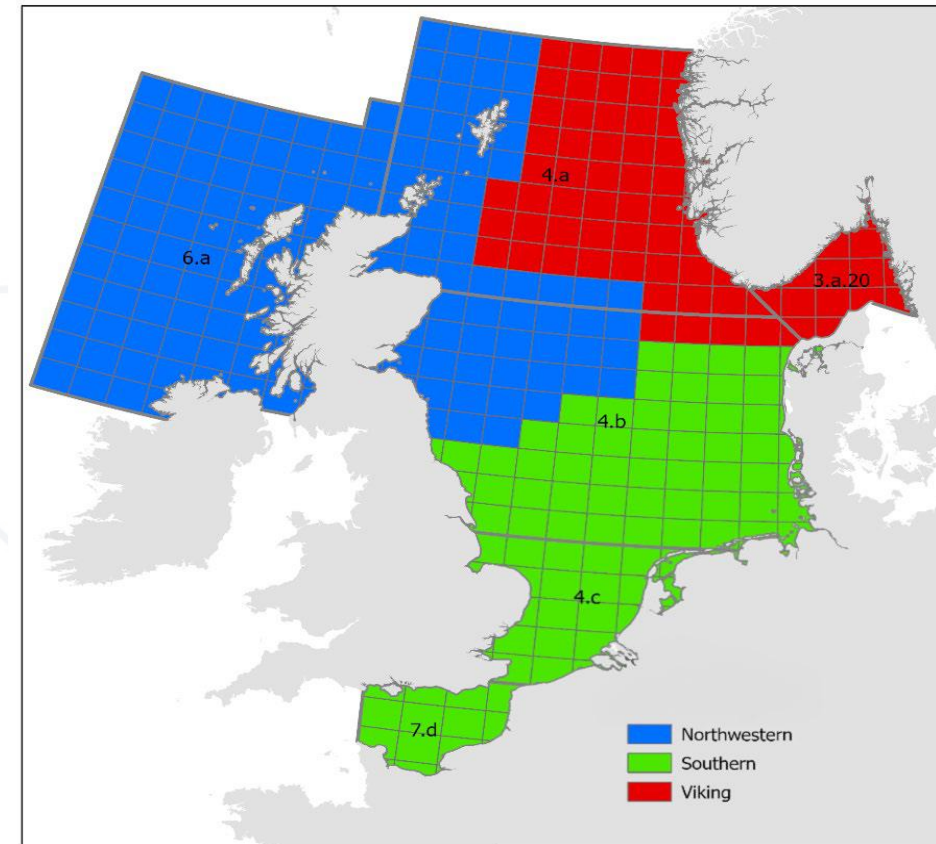
Advice for 2025 MSY: Catch $\leq$ 19 321 t

All substock combined catches

cod.27.46a7d20_2024_18678_2024423124355
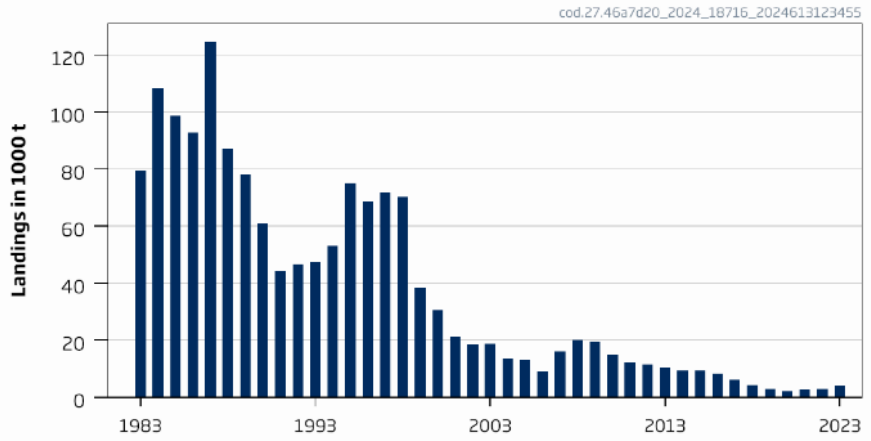
- Benchmark 2023
- Multi stock SAM

Advice for 2025 MSY: Catch $\leq$ 3 074t -22%

Model estimated catches

Recruitment (age 1)

- Benchmark 2023
- Multi stock SAM
- Below Btrigger
- F above FMSY
- SSB retro

Fishing Pressure

Spawning Stock Biomass

Catch (2023) : 32 561t (23% discards) values for total area

F(2024) = 0.43 (Fsq =2023);

SSB (2025)= 14 330 < MSY$_{Btrigger}$ (19 851t)   F$_{MSY}$= 0.231

Multi stock SAM

Table 2a   Cod in Subarea 4, divisions 6.a and 7.d, and Subdivision 20. Annual catch scenarios for the Southern substock. All weights are in tonnes.

Basis	Total catch 2025	F$_{total\ (ages\ 2-4)}$ 2025	SSB 2026	% SSB change*	% advice change**
ICES advice basis					
MSY approach: F$_{MSY}$ × SSB (2025)/MSY B$_{trigger}$	3074	0.167^	21693	51	−22
Other scenarios					
F$_{MSY\ lower}$ × SSB (2025)/MSY B$_{trigger}$	1984	0.104^	23222	62	−49
F$_{MSY}$	4111	0.231^	20303	42	4.8
F$_{MSY\ lower}$	2689	0.144^	22183	55	−31
F = 0	0	0	26143	82	−100
F$_{pa}$	7372	0.464^	15971	11.5	88
SSB (2026) = B$_{lim}$	8823	0.58	14126^	−1.42	125
SSB (2026) = MSY B$_{trigger}$ = B$_{pa}$	4278	0.24	19590^	37	9.1
F = F$_{2024}$	6813	0.43^	16746	16.9	74
SSB(2026) = SSB(2025)	8554	0.55	14455^	0.87	118

* SSB 2026 relative to SSB 2025 (14 330 t)

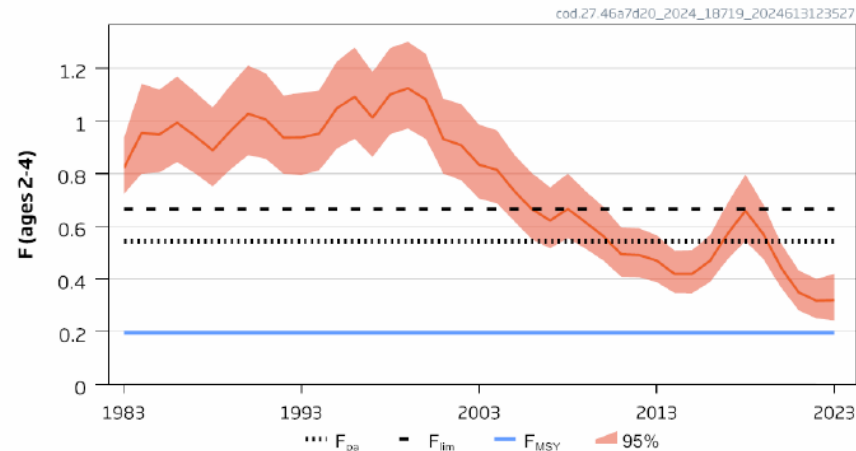**Advice for 2025 precautionary:** Catch $\leq$ 12 158t -10.1%
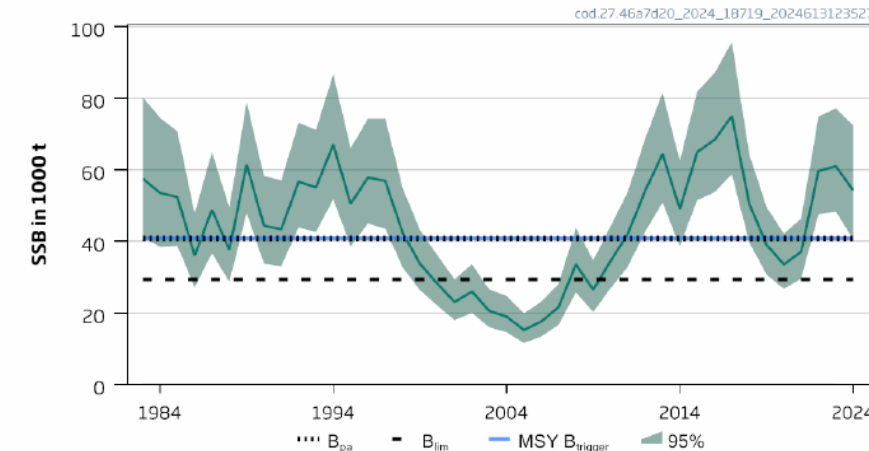
Model estimated catches
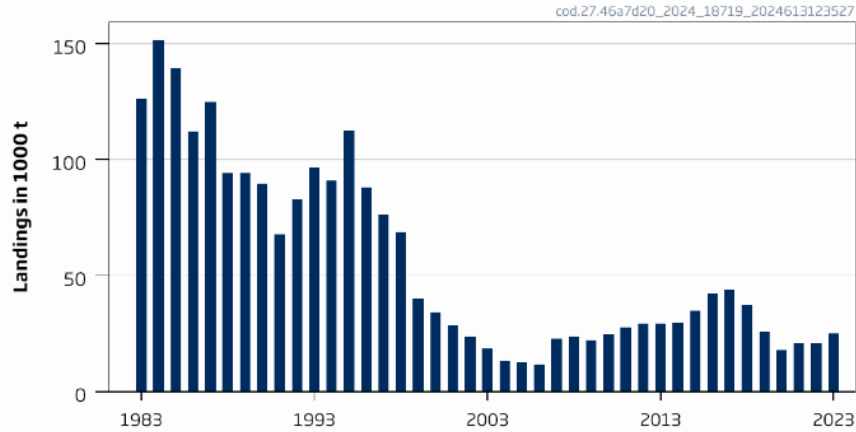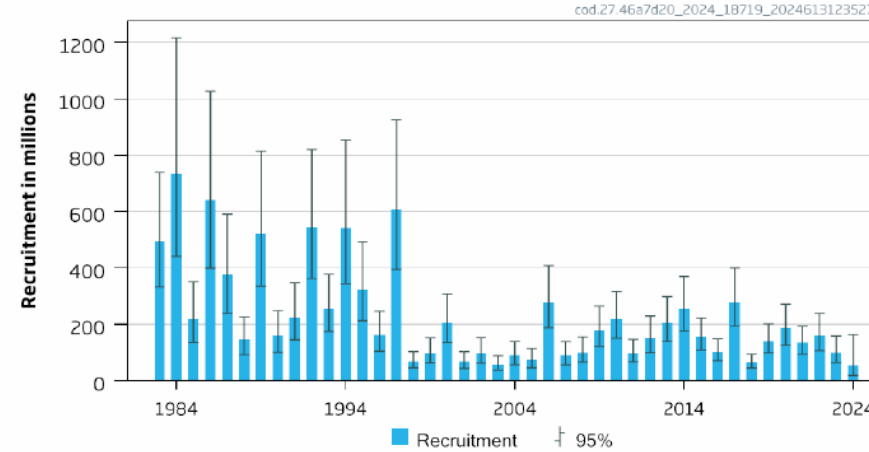
Recruitment (age 1)

Fishing Pressure
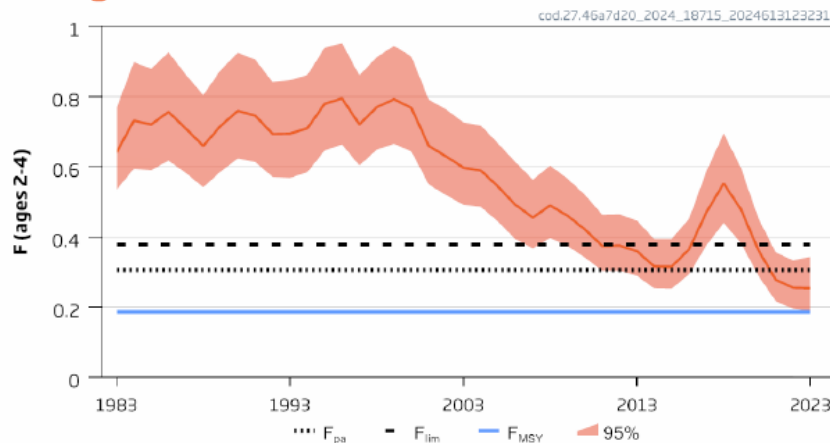
Spawning Stock Biomass

- Benchmark 2023
- Multi stock SAM
- F above FMSY
- SSB above trigger
- Decrease in stock size, lower recruitment, lower F (adjusted to due to status of southern)

Catch (2023) : 32 561t (23% discards) values for total area
F(2024) = 0.32 (Fsq =2023);
SSB (2025)= 65 657 > MSY$_{Btrigger}$ (40 823t)   F$_{MSY}$= 0.231

Multi stock
SAM

Table 2a   Cod in Subarea 4, divisions 6.a and 7.d, and Subdivision 20. Annual catch scenarios for the Southern substock. All weights are in tonnes.

Basis	Total catch 2025	F$_{total (ages 2–4)}$ 2025	SSB 2026	% SSB change*	% advice change**
ICES advice basis					
MSY approach: F$_{MSY}$ × SSB (2025)/MSY B$_{trigger}$	3074	0.167^	21693	51	−22
Other scenarios					
F$_{MSY lower}$ × SSB (2025)/MSY B$_{trigger}$	1984	0.104^	23222	62	−49
F$_{MSY}$	4111	0.231^	20303	42	4.8
F$_{MSY lower}$	2689	0.144^	22183	55	−31
F = 0	0	0	26143	82	−100
F$_{pa}$	7372	0.464^	15971	11.5	88
SSB (2026) = B$_{lim}$	8823	0.58	14126^	−1.42	125
SSB (2026) = MSY B$_{trigger}$ = B$_{pa}$	4278	0.24	19590^	37	9.1
F = F$_{2024}$	6813	0.43^	16746	16.9	74
SSB(2026) = SSB(2025)	8554	0.55	14455^	0.87	118

* SSB 2026 relative to SSB 2025 (14 330 t)

Advice for 2025 precautionary: Catch ≤ 4 089t -22%

- Benchmark 2023
- Multi stock SAM
- F above FMSY
- SSB above trigger
- Retro in stock size, lower recruitment, lower F (adjusted to due to status of southern)

Catch (2023) : 32 561t (23% discards) values for total area

F(2024) = 0.25 (Fsq =2023);

SSB (2025)= 17 617 > MSY$_{Btrigger}$ (13 732t)   F$_{MSY}$= 0.187

Multi stock SAM

Table 2c Cod in Subarea 4, divisions 6.a and 7.d, and Subdivision 20. Annual catch scenarios for the Viking substock. All weights are in tonnes.

| Basis	Total catch (2025)	F$_{total (ages 2-4)}$ (2025)	SSB (2026)	% SSB change**	% advice change***
ICES advice basis					
Precautionary considerations: F$_{(2024, Viking)}$ × 0.39*	4089	0.099	22034	25	−22
Other scenarios					
F$_{MSY}$	7310	0.186^	18841	6.9	40
F$_{MSY lower}$	4293	0.102^	21850	24	−18.1
F$_{MSY upper}$	10573	0.296^	15571	−11.6	102
F = 0	0	0	26234	49	−100
F$_{pa}$	10823	0.306^	15289	−13.2	107
SSB (2026) = B$_{lim}$	16828	0.59	9682^	−45	220
SSB (2026) = MSY B$_{trigger}$ = B$_{pa}$	12414	0.36	13787^	−22	137
F = F$_{2024}$	9182	0.26^	16856	−4.3	75
SSB(2026) = SSB(2025)	8434	0.21	17594^	−0.131	61

Advice for 2025: MSY: Catch =0 t advice: no change

- F above F_{MSY}
- SSB below B_{lim}
- Recruitment low
- No catch scenario brings stock above B_{lim}
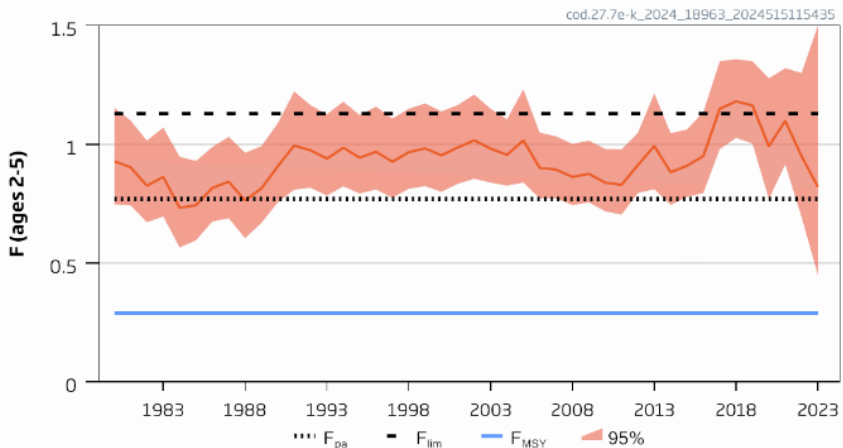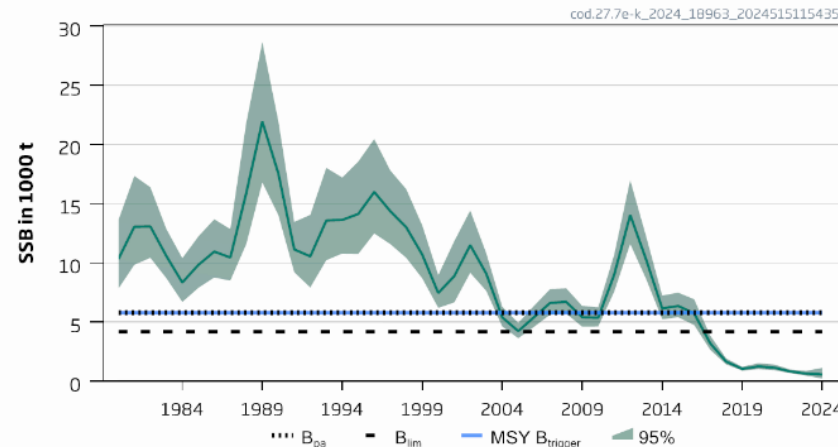- Some tendency to overestimate SSB and recruitment
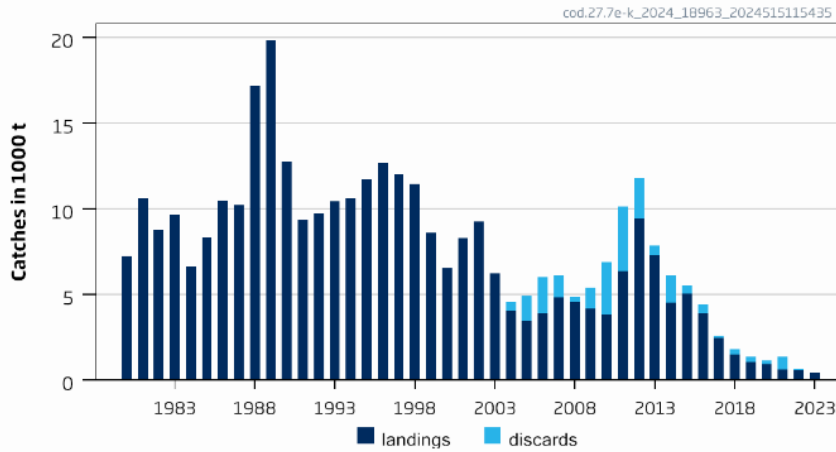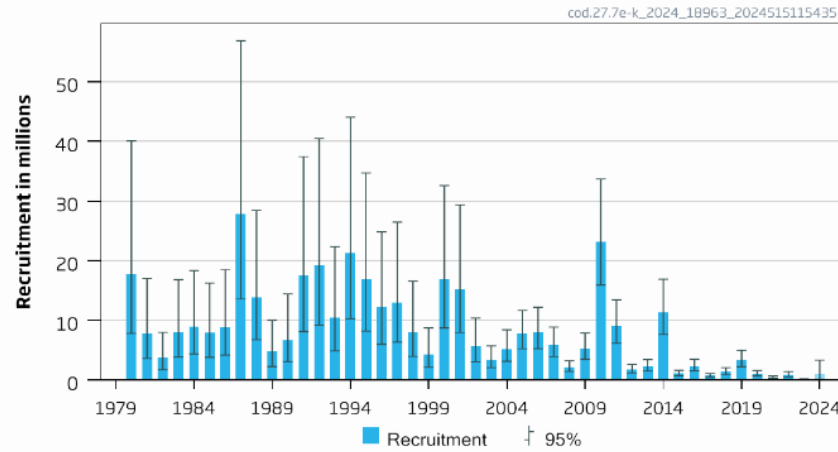
Catch (2023) : 457 t (3% discards)

F(2024) =0.821 (Fsq =2023)

SSB (2025)= 676 t < B_{lim} (7 300 t) F_{MSY}= 0.29

**Table 2** Cod in divisions 7.e–k. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2025)	F_{total} (2025)	SSB (2026)	% SSB change*	% TAC change**	Probability of SSB (2026) < B_{lim} (%)
ICES advice basis						
MSY approach: F = 0	0	0	2040	202	−100	91
Other scenarios						
F_{MSY} × SSB_{2025}/MSY $B_{trigger}$	42	0.034	1976	192	−93	92
EU MAP***: $F_{MSY\ lower}$ × SSB_{2025}/MSY $B_{trigger}$	25	0.020	1998	196	−96	92
EU MAP***: $F_{MSY\ upper}$ × SSB_{2025}/MSY $B_{trigger}$	60	0.048	1946	188	−91	93
F = F_{MSY}	324	0.29	1556	130	−50	97
F = $F_{MSY\ lower}$	201	0.17	1740	157	−69	95
F = $F_{MSY\ upper}$	436	0.41	1393	106	−32	98
F = F_{lim}	909	1.13	733	8.4	41	100
F = F_{pa}	707	0.770	1005	49	10	100
SSB_{2026} = SSB_{2025}	953	1.22	676	0	48	100
F = F_{2024}	739	0.82	961	42	15	99
SSB_{2026} = B_{lim}^						
SSB_{2026} = B_{pa} = MSY $B_{trigger}$^						

- **Caught in mixed fisheries with haddock and whiting.**
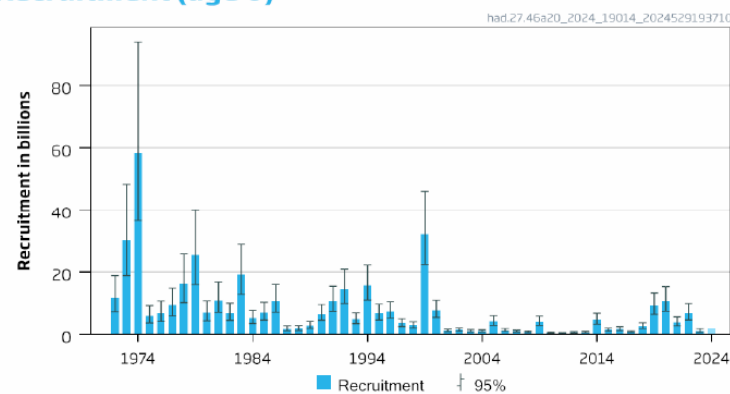- **Stock includes the south of Division 7.a (rectangles 33E2-33E3)**
- **SAM assessment**

Advice for 2025 MSY: Catch ≤ 112 435 t advice -25%
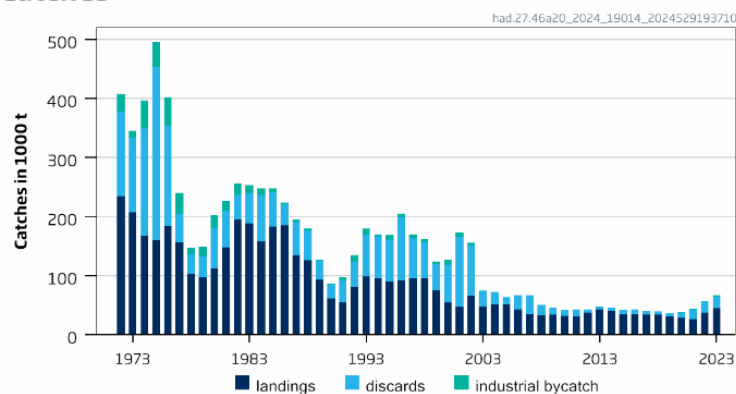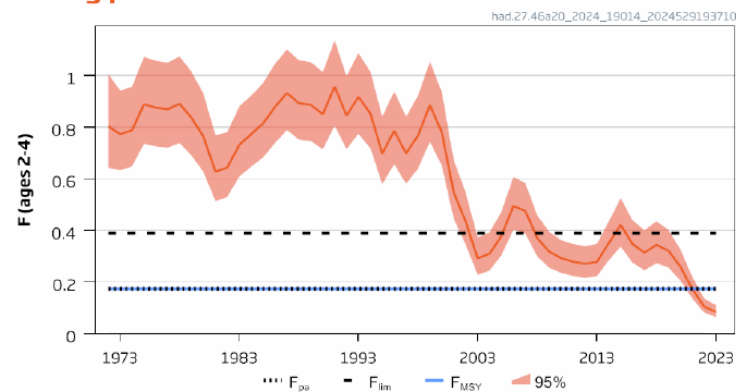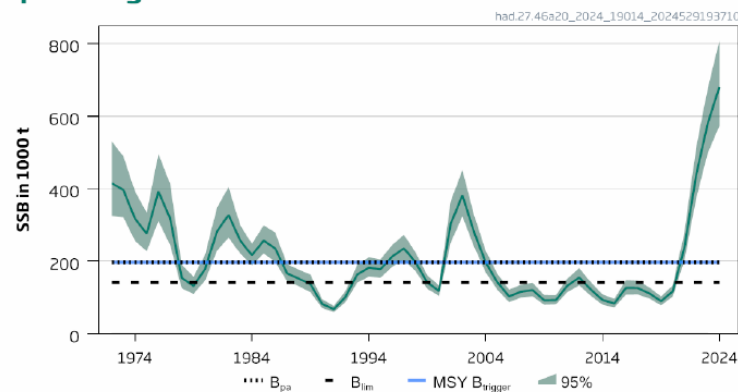
- F below F_{MSY}
- SSB above MSY $B_{trigger}$
- Decrease in Fmsy ref pt with new natural mortality

Catch (2023) : 66 645 t (30% discards); **4701 t catch in 6.a**

F(2024) = 0.084 (F 2023)

SSB(2025) = 535 682 t > $MSY_{Btrigger}$ (196 402 t) F_{MSY} = 0.174

Table 2   Haddock in Subarea 4, Division 6.a, and Subdivision 20. Annual catch scenarios. All weights are in tonnes.
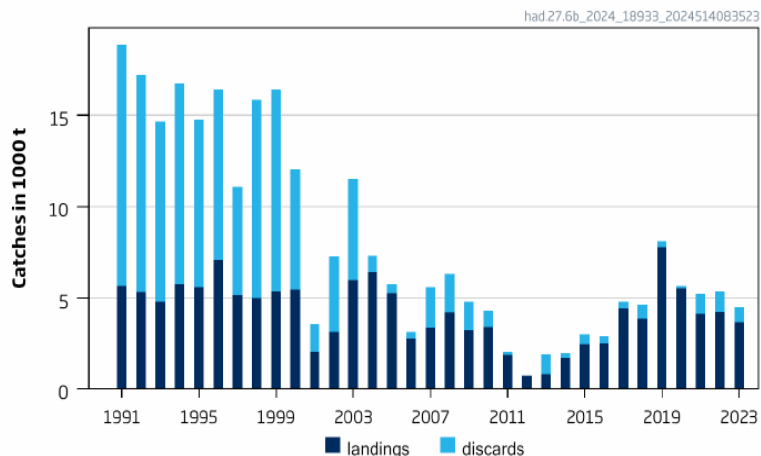
Basis	Total catch (2025)	Projected landings (2025)	Projected discards and insutrial bycatch (IBC; 2025)	F_{total} (ages 2–4) (2025)	$F_{projected\ landings}$ (ages 2–4) (2025)	$F_{projected\ discards\ and\ IBC}$ (ages 2–4) (2025)	SSB (2026)	% SSB change**	% TAC change***	% advice change^
ICES advice basis										
MSY approach: F_{MSY}	112 435	93 661	18 774	0.174	0.120	0.054	420 140	−22	−5.5	−25
Other scenarios										
$F_{MSY\ lower}$	104 820	87 350	17 470	0.161	0.111	0.050	426 231	−20	−11.9	−30
$F_{MSY\ upper}$	112 435	93 661	18 774	0.174	0.120	0.054	420 140	−22	−5.5	−25
F = 0	0	0	0	0	0	0	512 700	−4.3	−100	−100
F_{pa}	112 435	93 661	18 774	0.174	0.120	0.054	420 140	−22	−5.5	−25
F_{lim}	222 927	185 156	37 771	0.39	0.27	0.122	330 341	−38	87	50
SSB (2026) = B_{lim}	464 852	381 649	83 203	1.24	0.85	0.39	141 339	−74	291	212
SSB (2026) = B_{pa} = MSY $B_{trigger}$	392 814	324 060	68 754	0.89	0.61	0.28	196 402	−63	230	164
F = F_{2024}	57 225	47 765	9 460	0.084	0.058	0.026	465 273	−13.1	−52	−62

SAM model

Advice for 2025: MSY: Catch ≤ 31 565 advice +674%
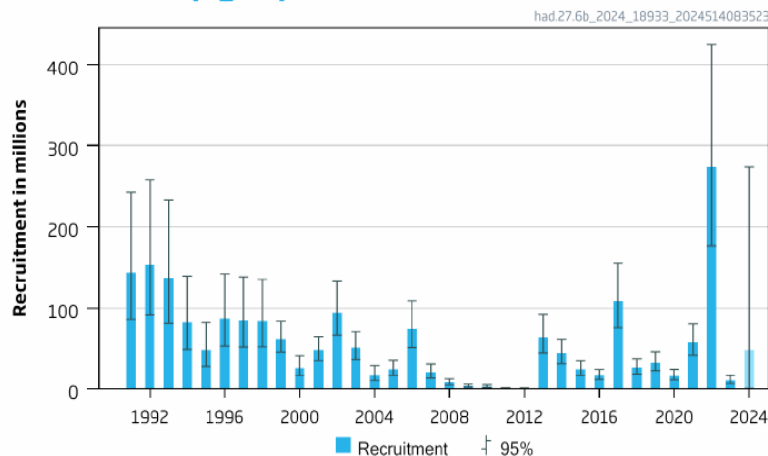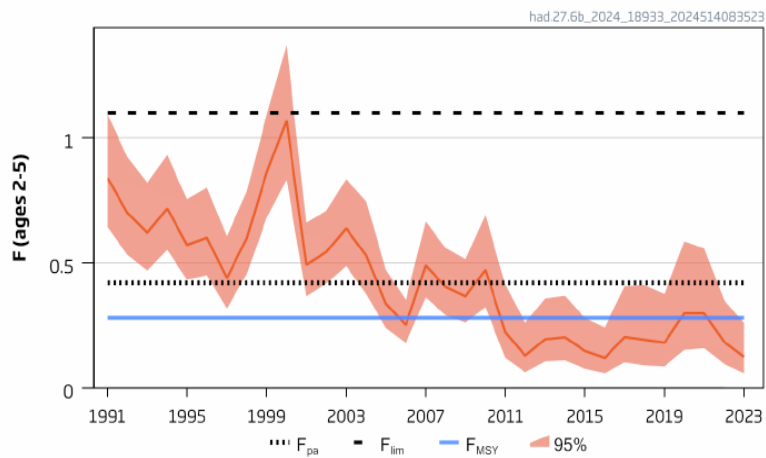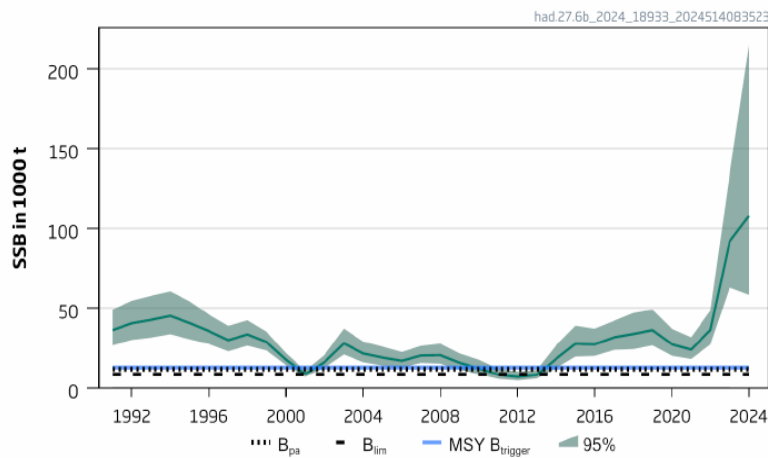
- Benchmark 3 to 1 - SAM
- F below FMSY
- SSB above trigger
- Catch sampling sparse

Catch (2023) : 4 492 t (18% discards)

F2024 = 0.035 (2024 catch assumption)

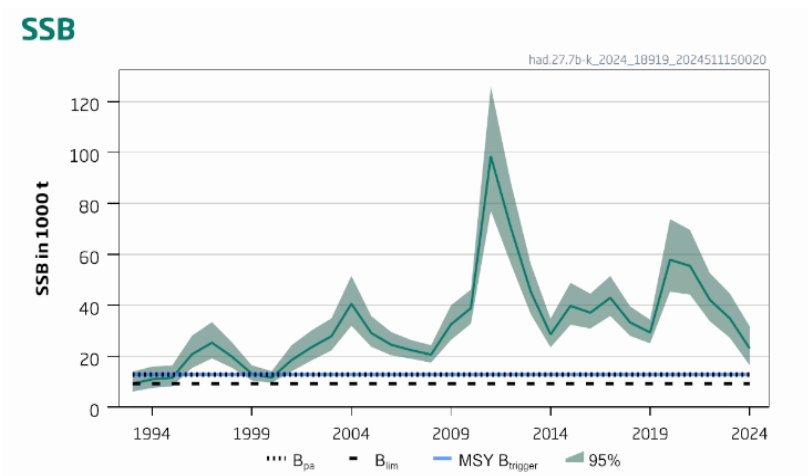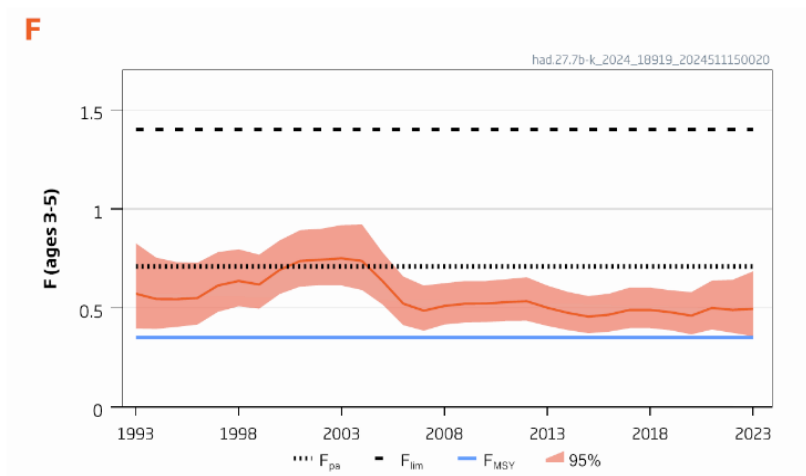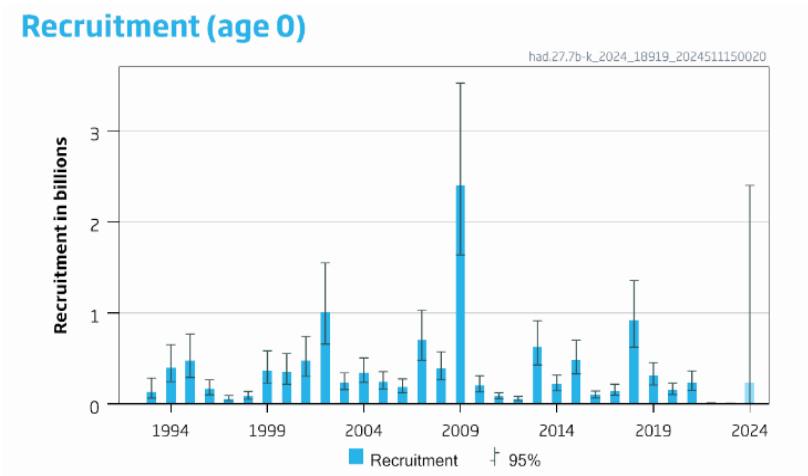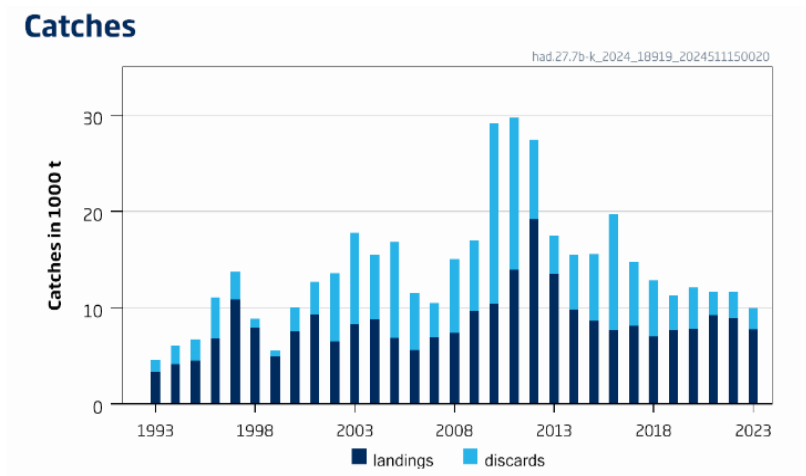**SSB 2025 = 117971 t > MSYbtrigger 12 877 t FMSY=0.28**

SAM

Table 2   Haddock in Division 6.b. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F_{total} (2025)	$F_{projected\ landings}$ (2025)	$F_{projected\ discards}$ (2025)	SSB (2026)	% SSB change *	% advice change^	Probability of SSB (2026) < B_{lim} (%)
ICES advice basis										
MSY approach: F = F_{MSY}	31565	30215	1350	0.28	0.25	0.027	100709	−14.6	674	0
Other scenarios										
EU MAP**: F_{MSY}	31565	30215	1350	0.28	0.25	0.027	100709	−14.6	674	0
EU MAP**: $F_{MSY\ lower}$	22041	21183	858	0.184	0.166	0.0180	111338	−5.6	440	0
EU MAP**: $F_{MSY\ upper}$	42625	40916	1709	0.41	0.37	0.040	88877	−25	945	0
F = 0	0	0	0	0	0	0	135134	14.5	-100	0
F_{pa}	43399	41662	1737	0.42	0.38	0.041	88080	−25	964	0
F_{lim}	79588	75944	3644	1.10	0.99	0.107	48969	−58	1852	0.44
F = F_{2024}	4607	4436	171	0.035	0.031	0.0040	130432	10.5	12.9	0
SSB_{2026} = B_{lim}	126876	117999	8877	7.1	6.4	0.69	8542	−93	3011	50
SSB_{2026} = B_{pa}	121639	114019	7620	4.7	4.3	0.46	11870	−90	2882	34
SSB_{2026} = MSY $B_{trigger}$	120065	112627	7438	4.3	3.9	0.42	12877	−89	2844	30
SSB_{2026} = SSB_{2025}	16257	15633	624	0.131	0.118	0.0130	117972	0	299	0

Advice for 2025: MSY: Catch ≤ 4 644t advice -44%

- $F < F_{MSY}$
- SSB declining: above MSY Btrigger
- Recruitment low – if continues will be steep stock decline
- Decrease in advice: decreasing stock size and low recruitment and upward revision of F (retrospective)

Catch (2023) : 9 964 (22.5% discards)
F(2024) = 0.50 (average 2021-2023, scaled to 2023)
SSB (2025)= 13 307> MSY$_{Btrigger}$ (12 822t)   F$_{MSY}$= 0.353

Table 2   Haddock in divisions 7.b–k. Annual catch scenarios. Weights are in tonnes.

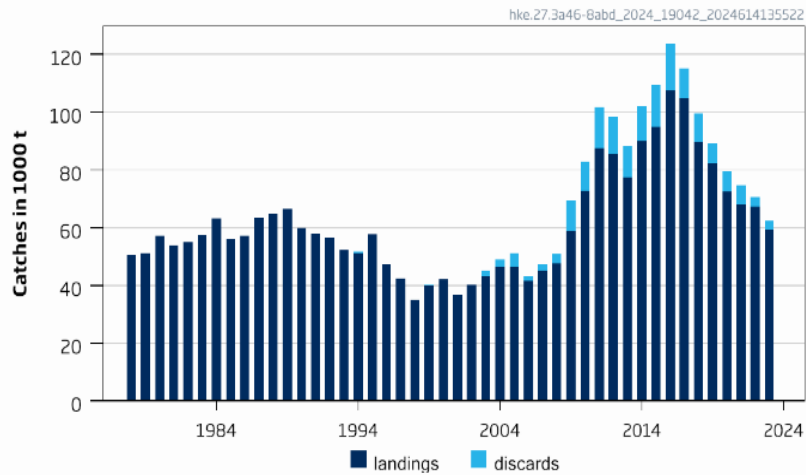| Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F$_{total}$ (2025)	F$_{projected}$ landings (2025)	F$_{projected}$ discards (2025)	SSB (2026)	% SSB change*	% advice change^	Probability SSB < B$_{lim}$ in 2026 (%)
ICES advice basis										
MSY approach: F$_{MSY}$	4644	3375	1269	0.353	0.282	0.071	19379	46	−44	7.5
Other scenarios										
EU MAP ^^: F$_{MSY}$	4644	3375	1269	0.353	0.28	0.071	19379	46	−44	7.5
EU MAP^^: F$_{MSY\ lower}$	3099	2277	822	0.221	0.177	0.044	20896	57	−62	4.5
EU MAP^^: F$_{MSY\ upper}$	6353	4548	1805	0.521	0.42	0.105	17715	33	−23	11.6
F = 0	0	0	0	0	0	0	24025	81	−100	1.14
F$_{pa}$	7978	5624	2354	0.71	0.57	0.142	16118	21	−3.3	16.8
F$_{lim}$	12384	8239	4145	1.40	1.12	0.28	12013	−9.7	50	34
SSB$_{2026}$ = B$_{lim}$	15544	9778	5766	2.2	1.75	0.44	9227	−31	88	50
SSB$_{2026}$ = B$_{pa}$= MSY B$_{trigger}$	11488	7748	3740	1.23	0.98	0.25	12822	−3.6	39	30
F = F$_{2024}$	6115	4387	1728	0.50	0.40	0.100	17946	35	−26	11.0
SSB$_{2026}$ = SSB$_{2025}$	10968	7451	3517	1.14	0.91	0.23	13307	0.00	33	28

SAM assessment

- **Stock includes the south of Division 7.a (rectangles 33E2-3)**

Hake – Northern stock (3.a, 4, 6, 7, 8.abd)

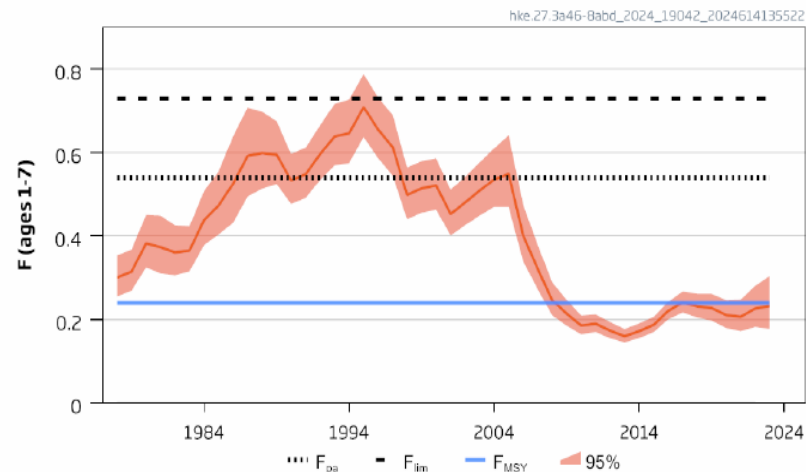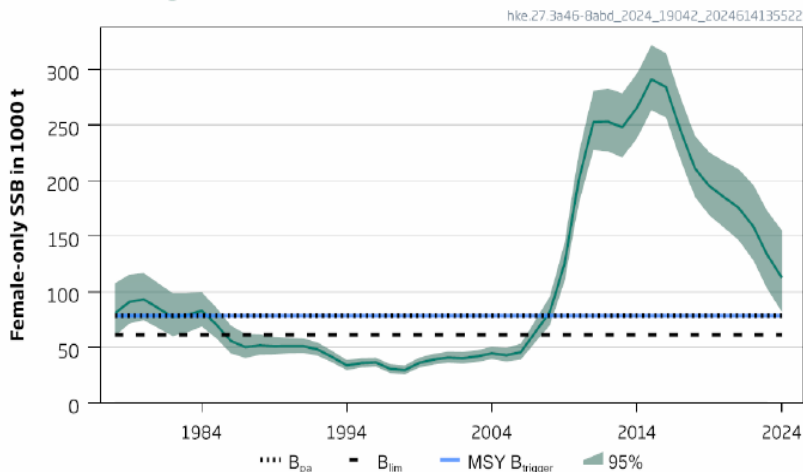**Advice for 2025: MSY:** Catch $\leq$ 52 466t advice -28%
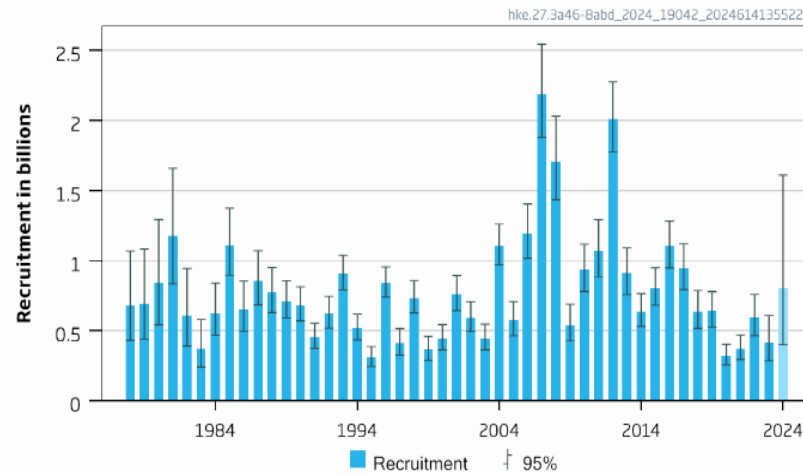
- F below Fmsy
- SSB above MSY $B_{trigger}$ but decreasing
- Recruitment lower than forecast
- Retro in SSB
- No survey that covers entire stock distribution
- Stock area does not correspond to the TAC areas

Hake – Northern stock (3.a, 4, 6, 7, 8.abd)

Catch (2023) : 61 391 t (5 % discards)

F(2024) = 0.22 (Average F $_{2021-2023}$)

SSB (2025)= 103 963 > MSY$_{Btrigger}$ (78 405t) F$_{MSY}$= 0.24

Length based and sex disaggregated stock synthesis

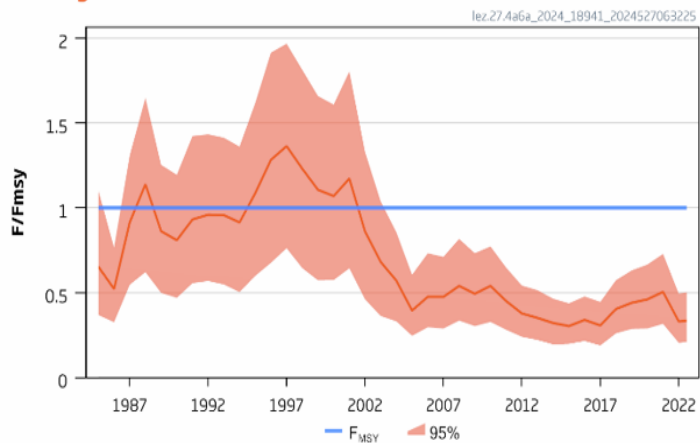| Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	$F_{ages\,1-7}$ total (2025)	$F_{ages\,1-7}$ projected landings (2025)	$F_{ages\,1-7}$ projected discards (2025)	SSB (2026)	% SSB change *	% Advice change **
ICES advice basis									
MSY approach = F$_{MSY}$	52466	48036	4430	0.24	0.22	0.021	98340 ***	−5.4	−28
Other scenarios									
EU MAP^: F$_{MSY}$	52466	48036	4430	0.24	0.22	0.021	98340	−5.4	−28
F = MAP^:F$_{MSY\ lower}$	33563	30810	2753	0.147	0.135	0.0121	110343	6.1	−54
F = MAP^:F$_{MSY\ upper}$	74366	67851	6515	0.37	0.34	0.032	84652	−18.6	2.1
F = 0	0	0	0	0	0	0	132023	27	−100
F = F$_{pa}$	98611	89566	9045	0.54	0.49	0.049	69816	−33	35
F = F$_{lim}$	121825	110069	11757	0.73	0.66	0.071	55987	−46	67
SSB (2026) = B$_{lim}$	112382	101769	10614	0.65	0.59	0.061	61563	−41	54
SSB (2026) = B$_{pa}$	84504	76963	7541	0.44	0.4	0.039	78405	−25	16.0
SSB (2026) = MSY B$_{trigger}$	84504	76963	7541	0.44	0.4	0.039	78405	−25	16.0
SSB (2026) = SSB(2025)	43579	39950	3629	0.196	0.18	0.0164	103963	0	−40
F = F$_{2024}$	48572	44496	4076	0.22	0.2	0.0187	100800	−3.0	−33
Catch (2025) = TAC (2024)	72839	66475	6364	0.36	0.33	0.031	85598	−17.7	0

* SSB 2026 relative to SSB 2025 (103 963 tonnes)

Advice for 2025: MSY: Catch ≤ 7 550 t advice -4.4%

- F below FMSY
- Stock size above MSY Btrigger
- Decline in stock size
- Bycatch in mixed demersal trawl in 6a and 4a.
- Advice is for 2 species:*L. whiffiagonis* and *L. boscii* combined.
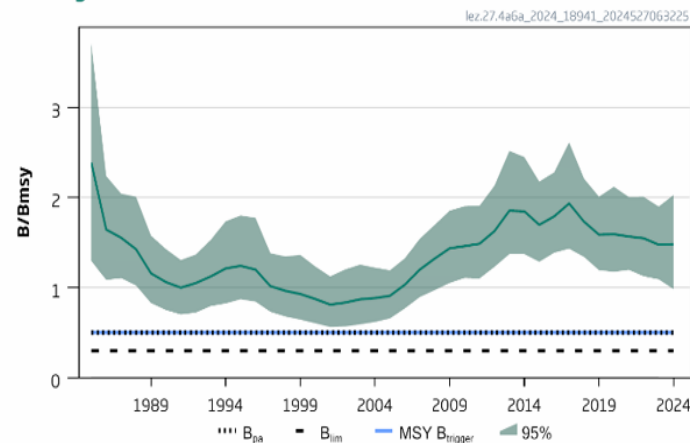- *L. boscii* negligible in catches.
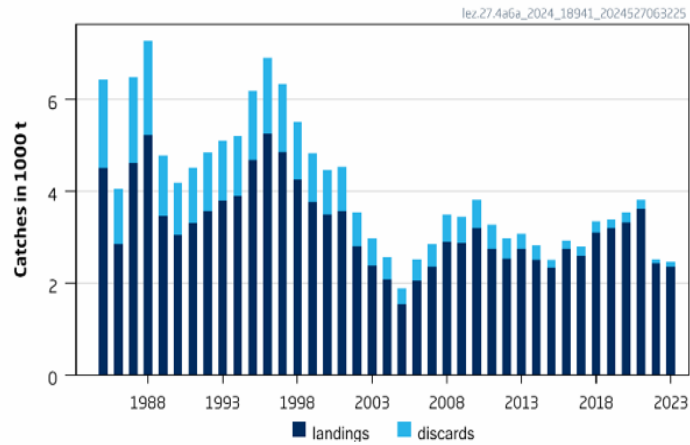
Catch (2023) : 2 466t (4.6% discards)

$F(2023)/F_{msy}$ = 0.31 (Fsq = F 2023/Fmsy)

$B2025/B_{MSY}$ = 1.48   *Note: TAC includes area 6b for which separate advice given*

Table 2   Megrim in divisions 4.a and 6.a. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	Fishing mortality F_{2025}/F_{MSY}	Stock size B_{2026}/B_{MSY}	% B change*	% advice change^
ICES advice basis							
MSY approach: F= F_{MSY}	7550	7214	336	1	1.35	−8.8	−4.4
Other scenarios							
EU MAP^^: F_{MSY}	7550	7214	336	1	1.35	−8.8	−4.4
EU MAP^^: $F_{MSY\ lower}$	5900	5637	263	0.78	1.44	−2.6	−25
EU MAP^^: $F_{MSY\ upper}$	7550	7214	336	1	1.35	−8.8	−4.4
F = 0	0	0	0	0	1.76	18.7	−100
$B_{2026} = B_{lim}$	28550	27279	1271	3.8	0.30	−80	261
$B_{2026} = B_{pa}$ = MSY $B_{trigger}$	23900	22836	1064	3.1	0.50	−66	203
$B_{2026} = B_{2025}$	5200	4969	231	0.68	1.48	0	−34
F = F_{2024}	2400	2293	107	0.31	1.63	10	−70

Bayesian production model

Advice for 2025: MSY: Catch ≤ 1 115 t advice +3%
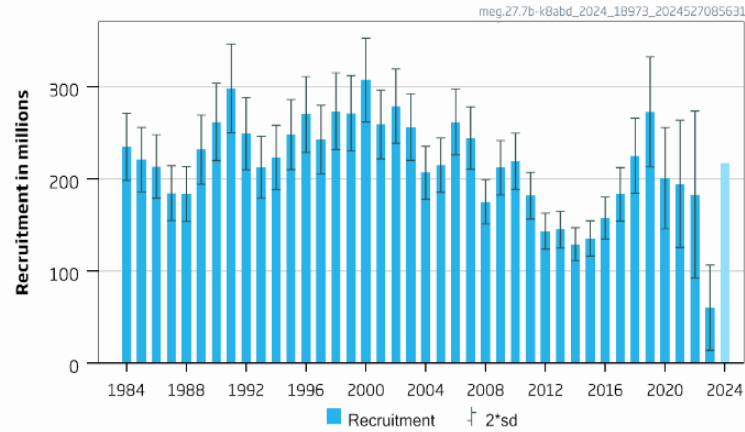
- Advice released autumn 2023
- New advice autumn 2024
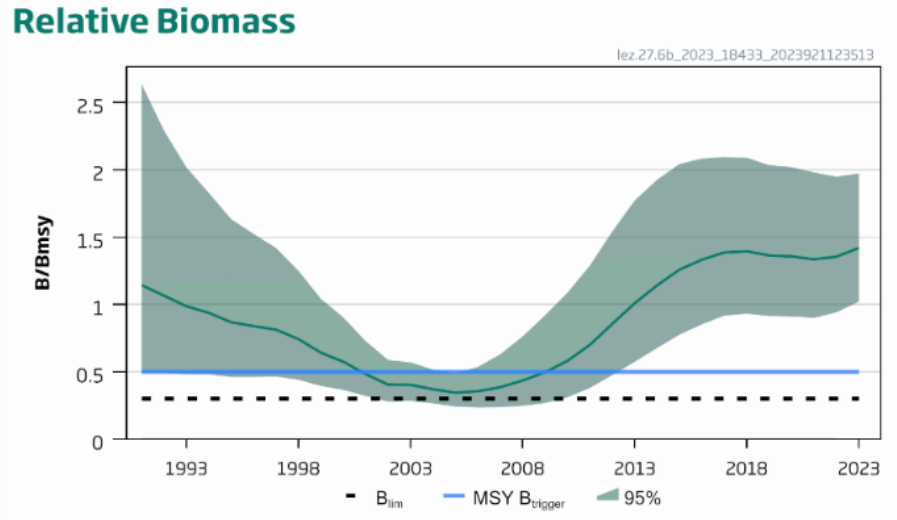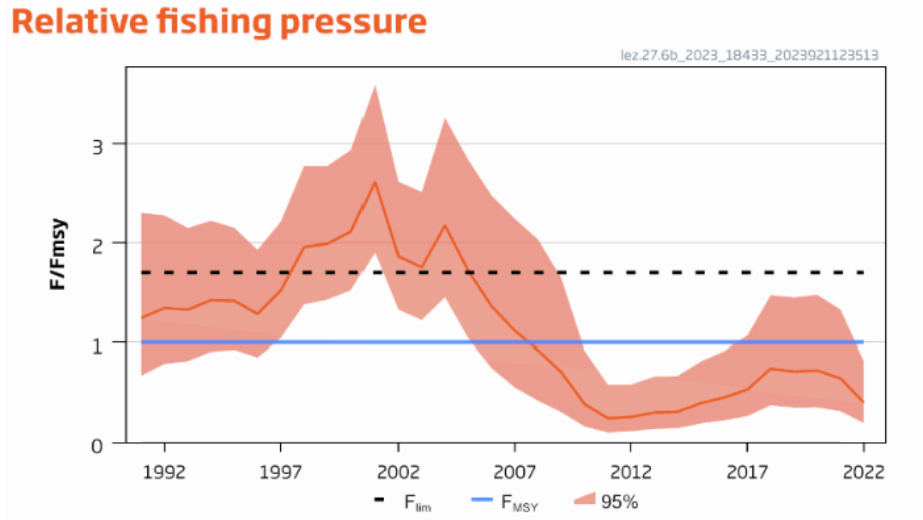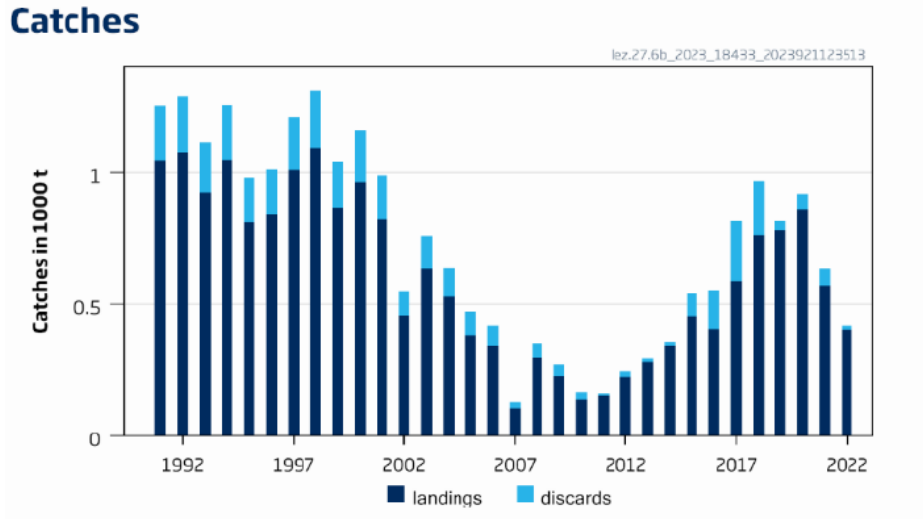
Catches

Relative fishing pressure

Relative Biomass

Advice for 2025: MSY: Catch ≤ 21 144 t advice -9.3%
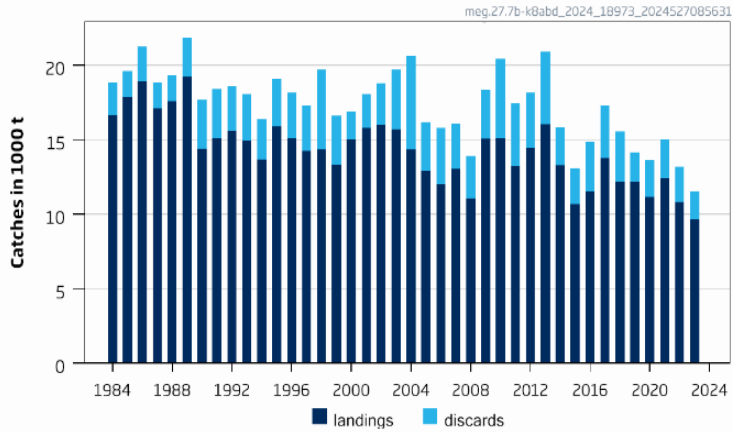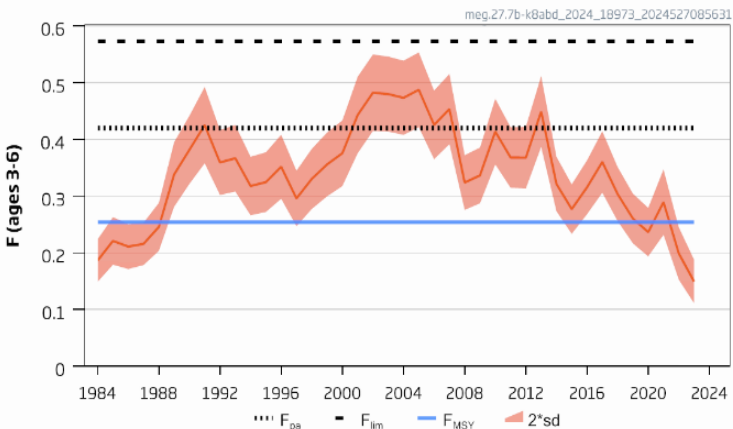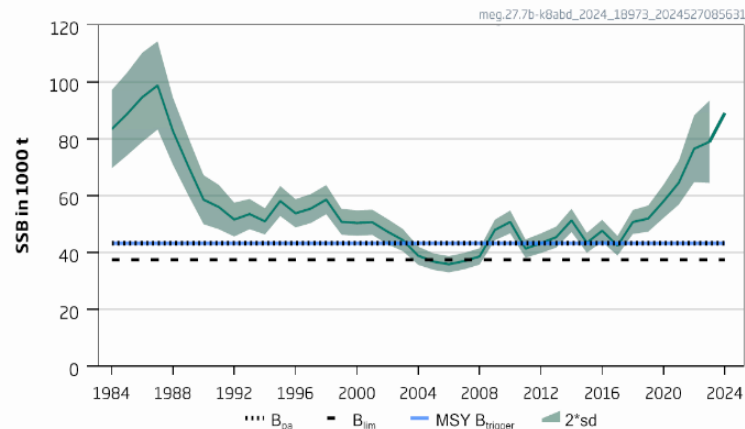

- F below F_{MSY}
- SSB MSY Btrigger
- Stock size and recruitment revised downwards compared to last year (retrospective)
- Reference points revised – error in input data corrected

Catch (2023) : 13 161 (18 % discards)

F(2024) = 0.21 (average 2021-2023)

SSB (2025)= 83 883 t > MSY$_{Btrigger}$ (43 249t)   F$_{MSY}$= 0.254

is not computed because the TAC is for the two megrim species combined.

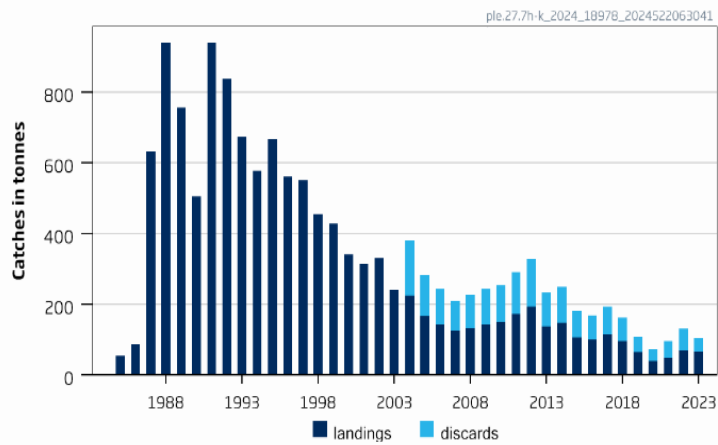| Basis^	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F$_{ages\ 3-6}$ Total (2025)	F$_{ages\ 3-6}$ Projected landings (2025)	F$_{ages\ 1-2}$ Projected discards (2025)	SSB (2026)	% SSB change*	% advice change^
ICES advice basis									
MSY approach: F$_{MSY}$	21144	18132	3012	0.25	0.2	0.02	73492	−12.4	−9.3
Other scenarios									
EU MAP^^ = F$_{MSY}$	21144	18132	3012	0.25	0.2	0.02	73492	−12.4	−9.3
F = MAP^^ F$_{MSY\ lower}$	13317	11439	1878	0.149	0.12	0.012	81567	−2.8	−43
F = MAP^^ F$_{MSY\ upper}$	32522	27811	4711	0.42	0.34	0.034	61856	−26	40
F = 0	0	0	0	0	0	0	95403	13.7	−100
F$_{pa}$	32522	27811	4711	0.42	0.34	0.034	61856	−26	40
F$_{lim}$	41115	35071	6044	0.57	0.46	0.047	53168	−37	76
SSB (2026) = B$_{lim}$	56950	48286	8665	0.94	0.76	0.077	37491	−55	144
SSB (2026) = B$_{pa}$	51061	43402	7660	0.79	0.64	0.065	43259	−48	119
SSB (2026) = MSY B$_{trigger}$	51061	43402	7660	0.79	0.64	0.065	43259	−48	119
SSB(2026)=SSB(2025)	11079	9521	1558	0.122	0.172	0.017	83883	0	−52
F = F$_{2024}$	18349	15745	2604	0.21	0.099	0.01	76370	−9.0	−21
Catch advice (2025) = Catch advice (2024)	23303	19974	3329	0.28	0.23	0.023	71275	−15.0	0

A4A statistical catch at age

* SSB 2026 relative to SSB 2025 (83 883 tonnes)

- The ICES advice is for *L. whiffiagonis*, whereas the TAC is for *L. whiffiagonis* and *L. boscii* combined
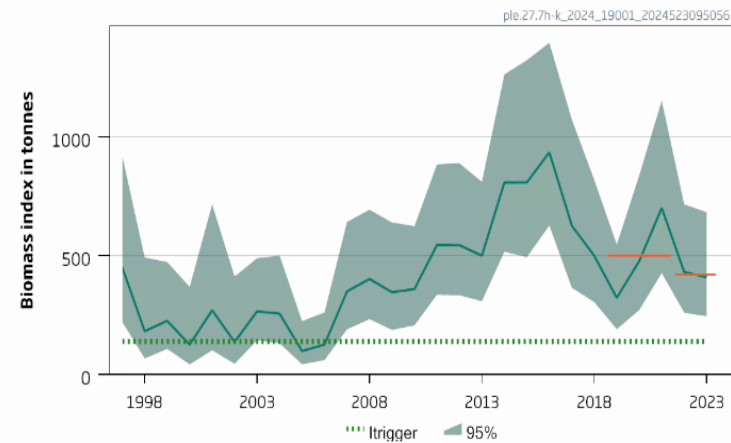
Advice for 2025 and 2026: MSY: Catch $\leq$ 130 t -1.4%

- F proxy below Fmsy proxy
- Biomass index: above Itrigger
- Biomass index has declined

Catch (2023) = 54 t (11 % discards)

rfb rule

|	
Previous catch advice Ay (advised catch for 2024)	132 tonnes
Stock biomass trend	
Index A (2022, 2023)	420 tonnes
Index B (2019, 2020, 2021)	500 tonnes
r: Index ratio (A/B)	0.84
Fishing pressure	
Mean catch length ($L_{mean} = L_{2023}$)	34.4 cm
MSY proxy length ($L_{F = M}$)	27.9 cm
Fishing pressure proxy ($L_{F=M}/L_{2023}$)	0.81
f: multiplier for relative mean length in catches ($L_{2023}/L_{F = M}$)	1.24
Biomass safeguard	
Last index value (I_{2023})	409 tonnes
Index trigger value ($I_{trigger} = I_{loss} \times 1.4$)	139 tonnes
b: multiplier for index relative to trigger min{$I_{2023}/I_{trigger}$, 1}	1
Precautionary multiplier to maintain biomass above Blim with 95% probability	
m: multiplier to maintain the biomass above B_{lim} to with 95% probability	0.95
RFB calculation**	130 tonnes
Stability clause (+20%/−30% compared to Ay, only applied if b=1)	Not applied
Discard rate	35%
Catch advice for 2025 and 2026 (A_y × stability clause)	130 tonnes
Projected landings corresponding to advice***	85 tonnes
% advice change^	−1.40 %

$A_{y+1} = A_y \times r \times f \times b \times m$, stability clause not applied

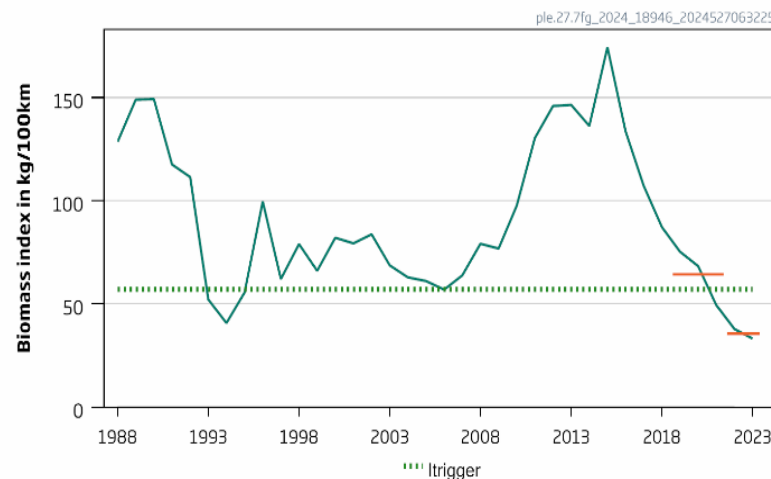**Advice for 2025 and 2026: MSY:** Catch ≤ 114 t advice -72%
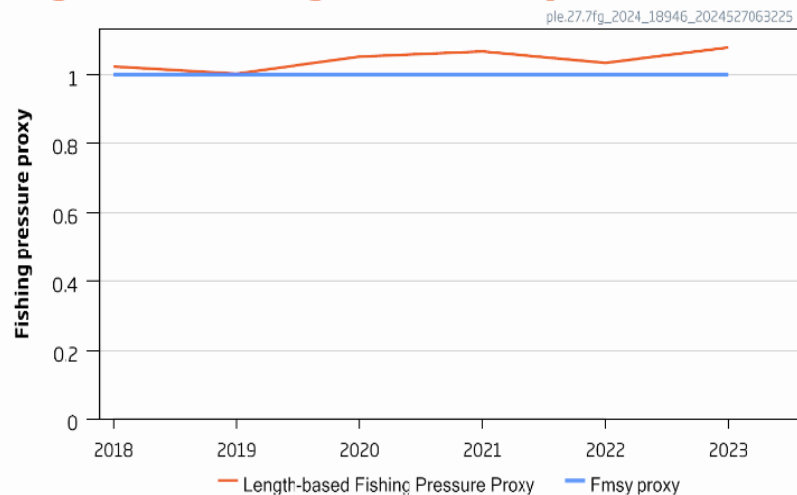
Catches
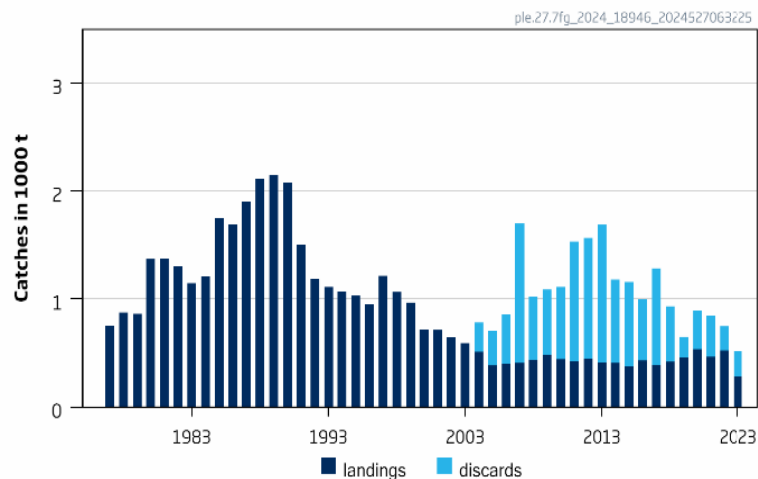
Biomass index

Length-based Fishing Pressure Proxy

- Fishing pressure above F_{MSY} proxy
- Stock size below trigger
- Decline in stock size
- Biomass safeguard as below trigger
- Caught in mixed fishery with sole – high discards

Catch (2023) = 518 t (45 % discards)

rfb rule

|	
Previous catch advice A_y (advised catch for 2023 and 2024)	402 tonnes
Biomass index trend	
Index A (2022, 2023)	36 kg/100 km
Index B (2019, 2020, 2021)	64 kg/100 km
r: stock biomass trend (index ratio A/B)	0.55
Fishing pressure	
Mean catch length ($L_{mean} = L_{2023}$)	28.0 cm
MSY proxy length ($L_{F=M}$)	30.2 cm
Fishing pressure proxy ($L_{F=M}/L_{2023}$)	1.08
f: multiplier for relative mean length in catches ($L_{2023}/L_{F=M}$)	0.93
Biomass safeguard	
Last index value (I_{2023})	33 kg/100 km
Index trigger value ($I_{trigger} = I_{loss} \times 1.4$)	57 kg/100 km
b: multiplier for index relative to trigger, min$\{I_{2023}/I_{trigger}, 1\}$	0.58
Precautionary multiplier to maintain biomass above B_{lim} with 95% probability	
m: multiplier (generic multiplier based on life history)	0.95
RFB calculation**	114 tonnes
Stability clause (+20%/−30% compared to A_y, only applied if b = 1)	Not applied
Discard rate	40 %
Catch advice for 2025 and 2026 [$A_y \times r \times f \times b \times m$]	114 tonnes
Projected landings corresponding to advice ***	68 tonnes
% advice change^	−72%

$A_{y+1} = A_y \times r \times f \times b \times m,$ stability clause not applied

Advice for 2025 : MSY: Zero catch   no change

Landings

F/Fmsy

B/Bmsy

- Landings have declined since the late 1980's
- Recreational catch unknown but substantial
- F above Fmsy
- Stock size very low: below Blim
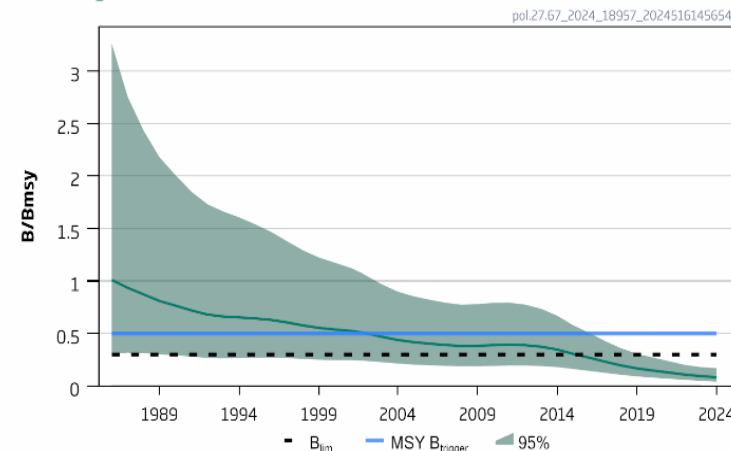- Much work to improve assessment – benchmark planned
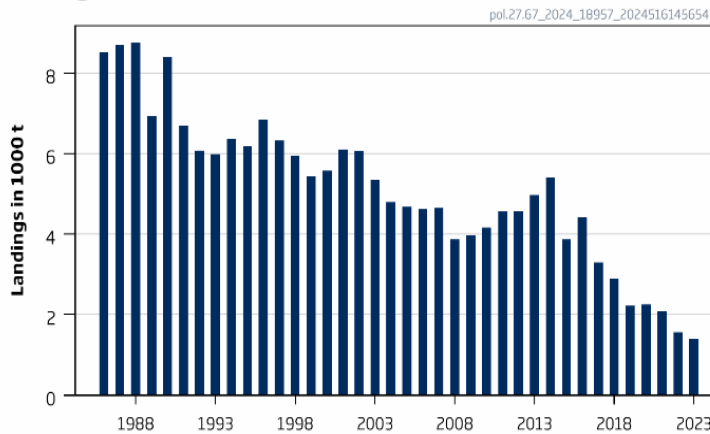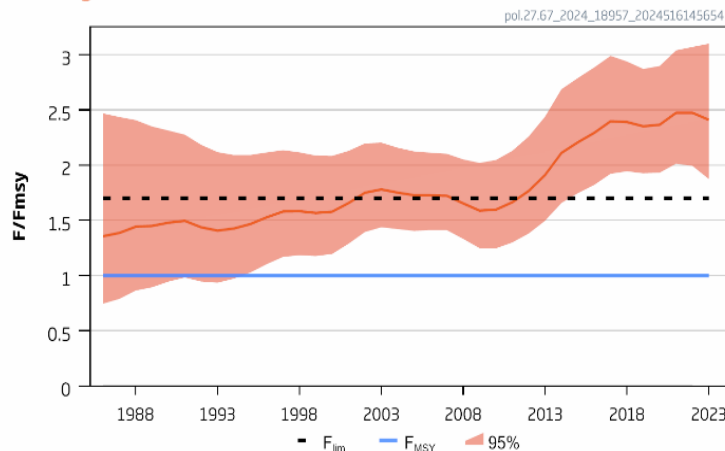
Catch (2023) : total unknown – commercial landings 1558 t
F(2024)/FMSY= 1.52 (based on 925 t catch 2024)
B_{2024}/BMSY = 0.089

**Table 2** Pollack in subareas 6–7. Annual catch scenarios. Weights are in tonnes.

Basis	Total catch (2025)	Fishing mortality F_{2025}/F_{MSY}	Stock size B_{2026}/B_{MSY}	% B change ^	% TAC change^^	% advice change ^^^
ICES advice basis						
MSY approach (F = 0)	0	0	0.144	61	−100	
Other scenarios						
F_{MSY}	131	1	0.137	54	−86	
F_{2024}	1348	1.62	0.079	−11.5	46	
F = 0	0	0	0.144	61	−100	

SPiCT

Advice for 2025: MSY: Catch ≤ 79 071 t advice +7%

Catches

Recruitment (age 3)

Fishing pressure
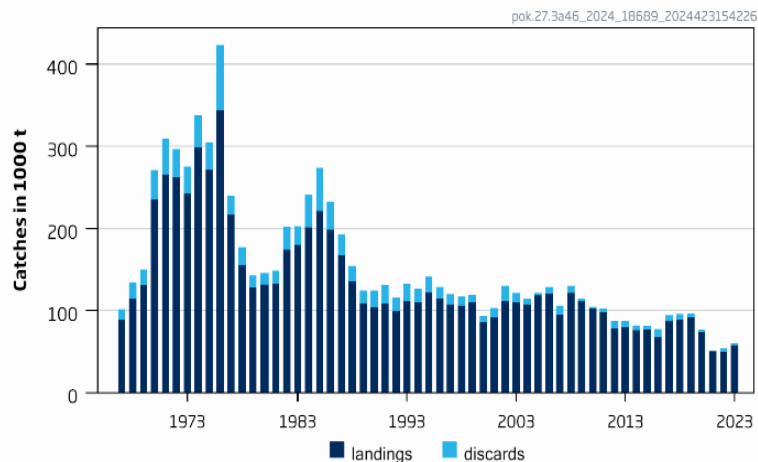
Spawning Stock Biomass
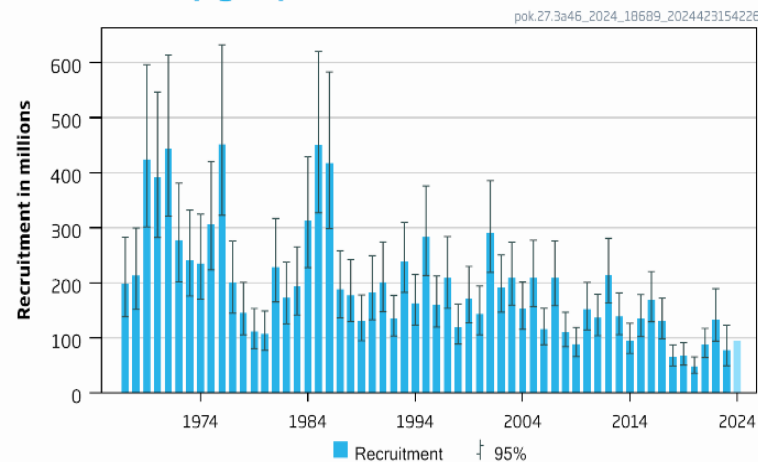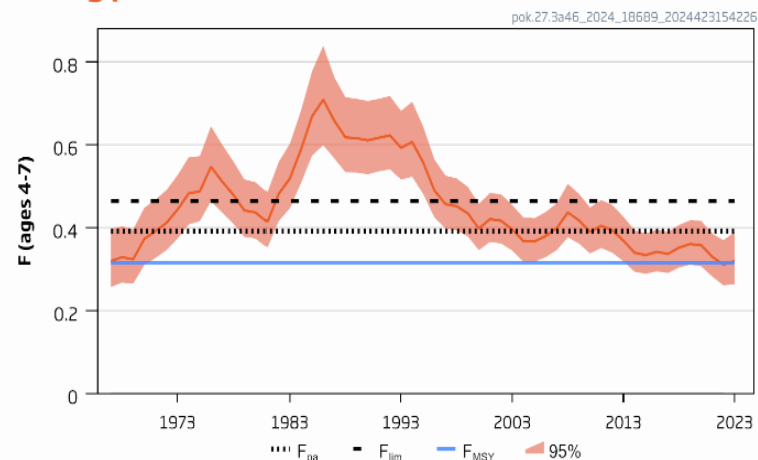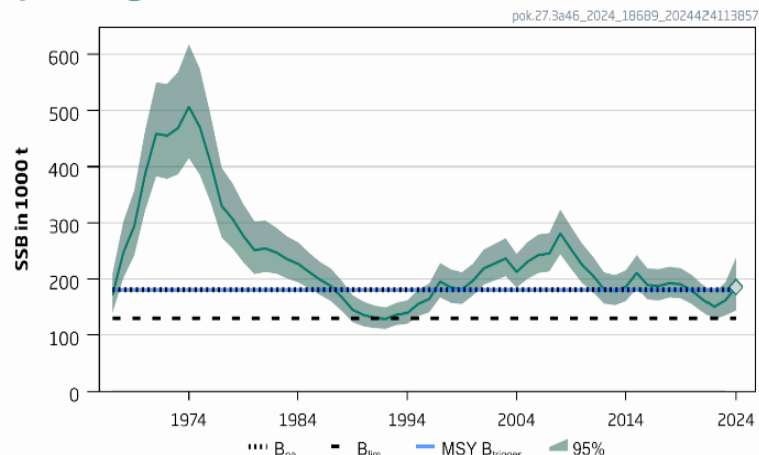
- F just above FMSY
- SSB above MSY $B_{trigger}$
- Benchmarked 2024
- Still SAM but changes to model, improved survey indices and biological data
- Recruitment 23% of projected catch

Catch (2023) : 60 896t (5.5 % discards); **2 340 t from West of Scotland**

F(2024) = 0.32 (Average exploitation pattern (2021-2023) scaled to F 2023);

SSB (2025)= 195 899t> MSY$_{Btrigger}$ (180 770 t)   F$_{MSY}$= 0.316

38

Basis	Total catch (2025)	Projected landings (2025)	Projected discards* (2025)	Projected landings ##		F$_{total}$ (ages 4–7) (2025)	F$_{projected\ landings}$ (ages 4–7) (2025)	F$_{projected\ discards}$ (ages 4–7) (2025)	SSB (2026)	% SSB change **	% TAC change #	% advice change ^
				Division 3.a and Subarea 4	Subarea 6							
ICES advice basis												
MSY approach: F$_{MSY}$	79071	75880	3191	68747	7133	0.316	0.30	0.0120	197298	0.71	7.1	7.1
Other scenarios												
F$_{MSY\ lower}$	50775	48717	2058	44138	4579	0.192	0.184	0.0080	220301	12.5	−31	−31
F$_{MSY\ upper}$	94916	91018	3898	82462	8556	0.392	0.38	0.0150	184452	−5.8	29	29
F = 0	0	0	0	0	0	0	0	0	262351	34	−100	−100
F$_{pa}$	94916	91018	3898	82462	8556	0.392	0.38	0.0150	184452	−5.8	29	29
F$_{lim}$	108957	104433	4524	94616	9817	0.464	0.45	0.0180	173248	−11.6	48	48
SSB (2026) = B$_{lim}$	165496	158342	7154	143458	14884	0.81	0.78	0.032	130090	−34	124	124
SSB (2026) = B$_{pa}$ = MSY B$_{trigger}$	100488	96286	4202	87235	9051	0.42	0.40	0.0160	180770	−7.7	36	36
F = F$_{2024}$	80031	76778	3253	69561	7217	0.32	0.31	0.0120	196519	0.32	8.4	8.4
TAC$_{2024}$	73814	70868	2946	64206	6662	0.29	0.28	0.0110	201560	2.9	0	0
TAC$_{2024}$ −15%	62743	60201	2542	54542	5659	0.24	0.23	0.0100	210501	7.5	−15.0	−15.0
TAC$_{2024}$ +15%	84889	81427	3462	73773	7654	0.34	0.33	0.0130	192614	−1.68	15.0	15.0
TAC$_{2024}$ −20%	59051	56653	2398	51328	5325	0.23	0.22	0.0090	213442	9.0	−20	−20
TAC$_{2024}$ +25%	92269	88462	3807	80147	8315	0.38	0.36	0.0150	186579	−4.8	25	25

SAM assessment

In 2024, quota in 6 is 9.4% (6939 t) of TAC for the stock

Advice for 2025 MSY: Catch ≤ 1 149 t advice -9.3%
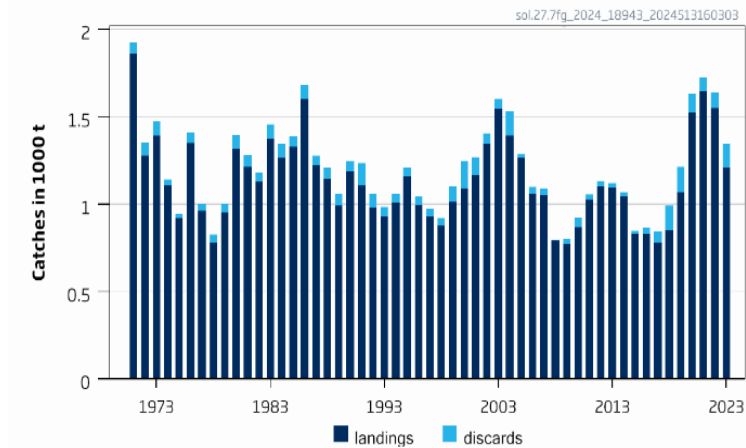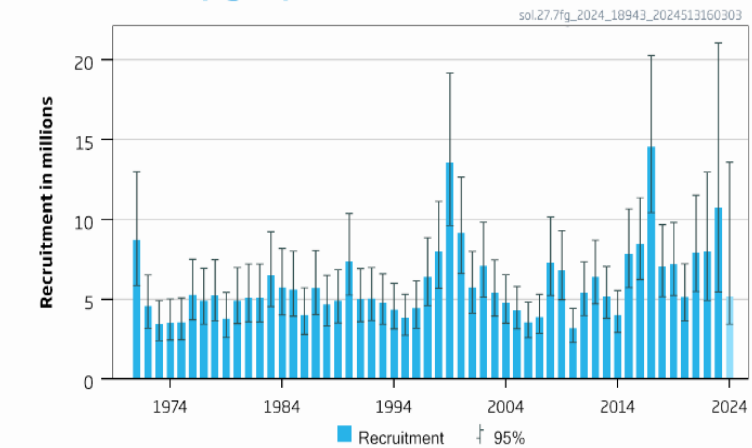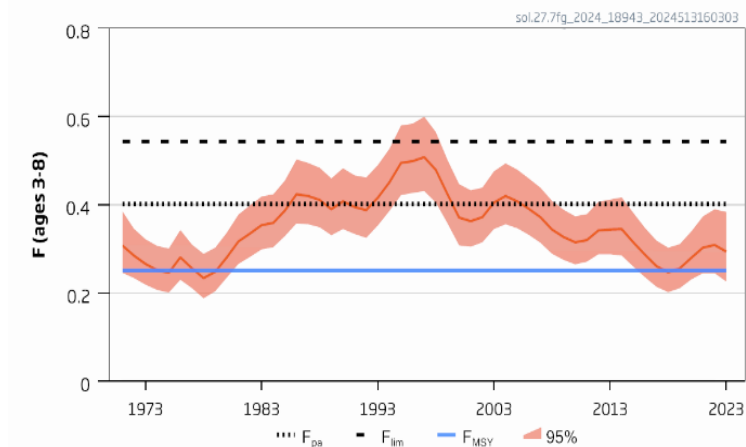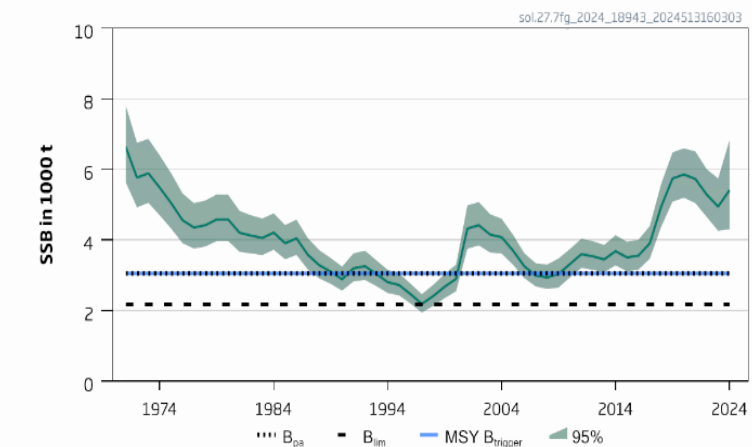

- F above F_{MSY}
- SSB is above MSY Btrigger
- Decrease in advice: downward revision in stock size (retrospective)
- Discard sampling incomplete but minimal impact

Sole in the Bristol Channel, Celtic Sea (7.f and 7.g)

Catch (2023) : 1344t (10 % discards)

F(2024) = 0.3 (average 2021-2023)

SSB (2025)= 5 275 t> MSY$_{Btrigger}$ (3 057t)   F$_{MSY}$= 0.251

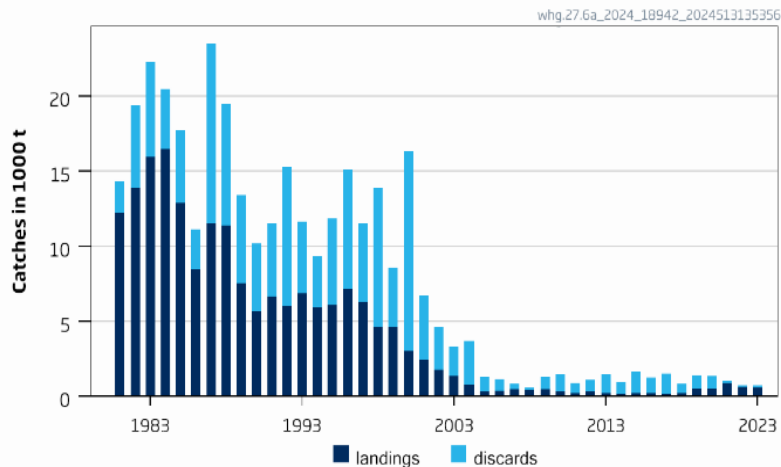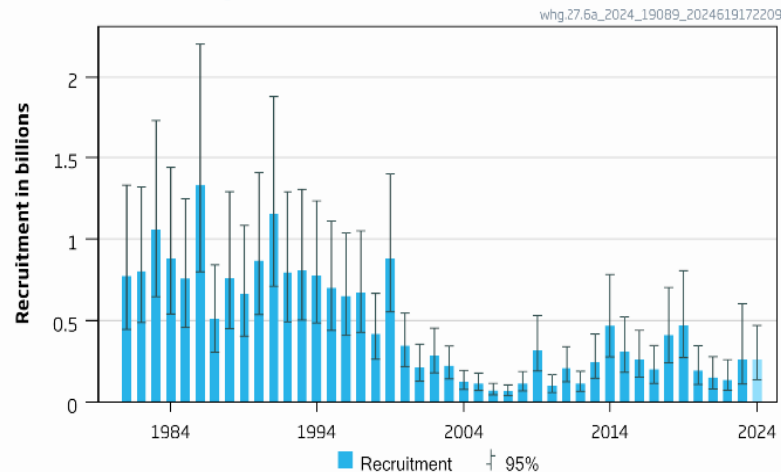| Basis	Total catch (2025)	Projected landings* (2025)	Projected discards** (2025)	F$_{total}$ (2025)	F$_{projected}$ landings (2025)	F$_{projected}$ discards (2025)	SSB (2026)	% SSB change ***	% advice change^	Probability of SSB (2026) < B$_{lim}$ (%)
ICES advice basis										
MSY approach: F = F$_{MSY}$	1149	1080	69	0.251	0.237	0.014	5226	−0.93	−9.3	0
Other scenarios										
EU MAP^^: F$_{MSY}$	1149	1080	69	0.251	0.237	0.014	5226	−0.93	−9.3	0
EU MAP^^: F$_{MSY\ lower}$	656	617	39	0.136	0.128	0.008	5734	8.7	−48	0
EU MAP^^ : F$_{MSY\ upper}$	1922	1802	120	0.462	0.436	0.026	4425	−16.1	52	0.01
F = 0	0	0	0	0	0	0	6427	22	−100	0
F= F$_{pa}$	1718	1611	107	0.402	0.379	0.023	4637	−12.1	36	0
F= F$_{lim}$	2180	2042	138	0.543	0.513	0.03	4159	−21	72	0.06
SSB$_{2026}$ = B$_{lim}$	4117	3823	294	1.48	1.393	0.083	2184	−59	225	50
SSB$_{2026}$ = B$_{pa}$ = MSY B$_{trigger}$	3252	3037	215	0.96	0.91	0.054	3057	−42	157	8.3
SSB$_{2026}$ = SSB$_{2025}$	1101	1034	67	0.24	0.226	0.013	5275	0	−13.1	0
F = F$_{2024}$	1350	1267	83	0.30	0.285	0.017	5017	−4.9	6.6	0

SAM assessment model

Advice for 2025 : MSY: Catch ≤ 5 116 advice +32%

- Catches have been low since early 2000's
- F below F_{MSY}
- SSB just below MSY Btrigger
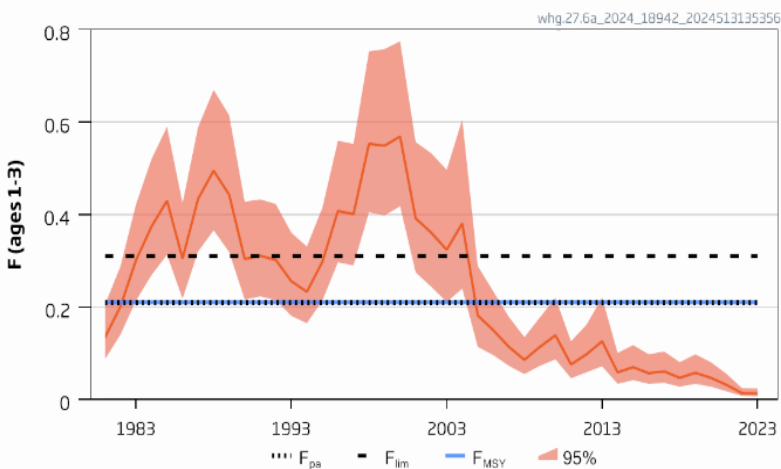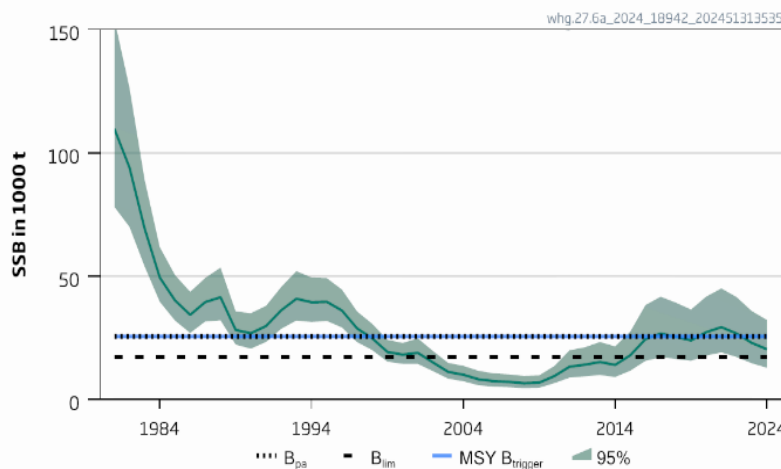- Increased recruitment leading to increased exploitable biomass

Catch (2023) = 676 t (17.4 % discards)
F(2024) = 0.0132 (average 2019-2023, rescaled to 2023)
SSB (2025)= 23 982> B$_{lim}$ (17 286)   but < MSY Btrigger (25 597) F$_{MSY}$= 0.21

SAM assessment

TAC includes Division 6.b, for which advice is given separately.   ICES recommends, therefore, that the TAC area corresponds to the assessment area.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F_{total} (2025)	$F_{projected\ landings}$ (2025)	$F_{projected\ discards}$ (2025)	SSB (2026)	% SSB change *	% advice change**	% probability of being below B$_{lim}$ in 2026
ICES advice basis										
MSY approach: F_{MSY} × SSB (2025) /MSY B$_{trigger}$	5116	2929	2187	0.196	0.079	0.117	22315	−7.0	32	17.4
Other scenarios										
MSY approach: $F_{MSY\ lower}$ × SSB (2025) /MSY B$_{trigger}$	4286	2456	1830	0.162	0.065	0.097	23062	−3.8	10.5	14.1
MSY approach: $F_{MSY\ upper}$ × SSB (2025) /MSY B$_{trigger}$	5116	2929	2187	0.196	0.079	0.117	22315	−7.0	32	17.42
F = 0	0	0	0	0	0	0	26974	12.5	−100	3.0
F= F_{MSY}	5440	3112	2328	0.21	0.084	0.126	22022	−8.2	40	18.9
F= $F_{MSY\ lower}$	4564	2614	1950	0.173	0.069	0.104	22801	−4.9	17.7	15.3
F= F_{pa}	5440	3112	2328	0.21	0.084	0.126	22022	−8.2	40	18.9
F= F_{lim}	7671	4366	3305	0.31	0.124	0.186	20089	−16.2	98	30
SSB (2026) = B$_{lim}$	11032	6252	4780	0.48	0.193	0.29	17286	−28	184	50
SSB (2026) = B$_{pa}$ = MSY B$_{trigger}$	1469	845	624	0.052	0.021	0.031	25597	6.7	−62	5.5
SSB (2026) = SSB (2025)	3260	1873	1387	0.121	0.048	0.073	23982	0.0	−16.0	10.2
F = F_{2024}	376	217	159	0.0132	0.0053	0.0079	26616	11.0	−90	3.5

Advice for 2025, 2026, 2027: PA: Catch ≤ 6 t -20%

Landings

Landings in tonnes
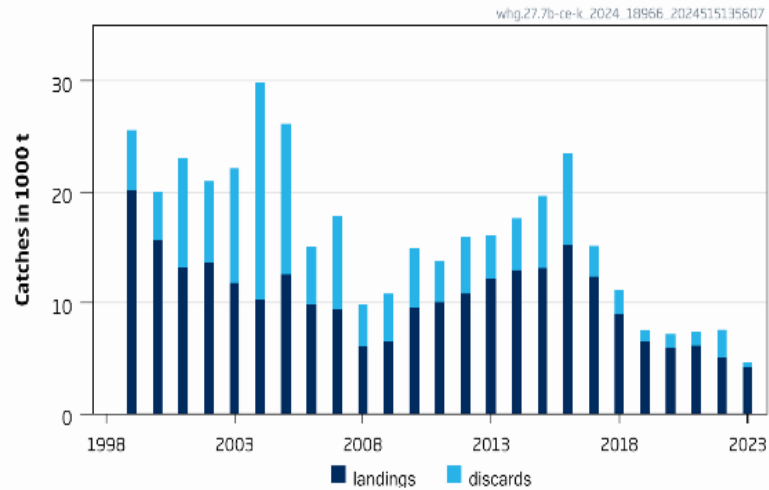
whg.27.6b_2024_18912_202458235523
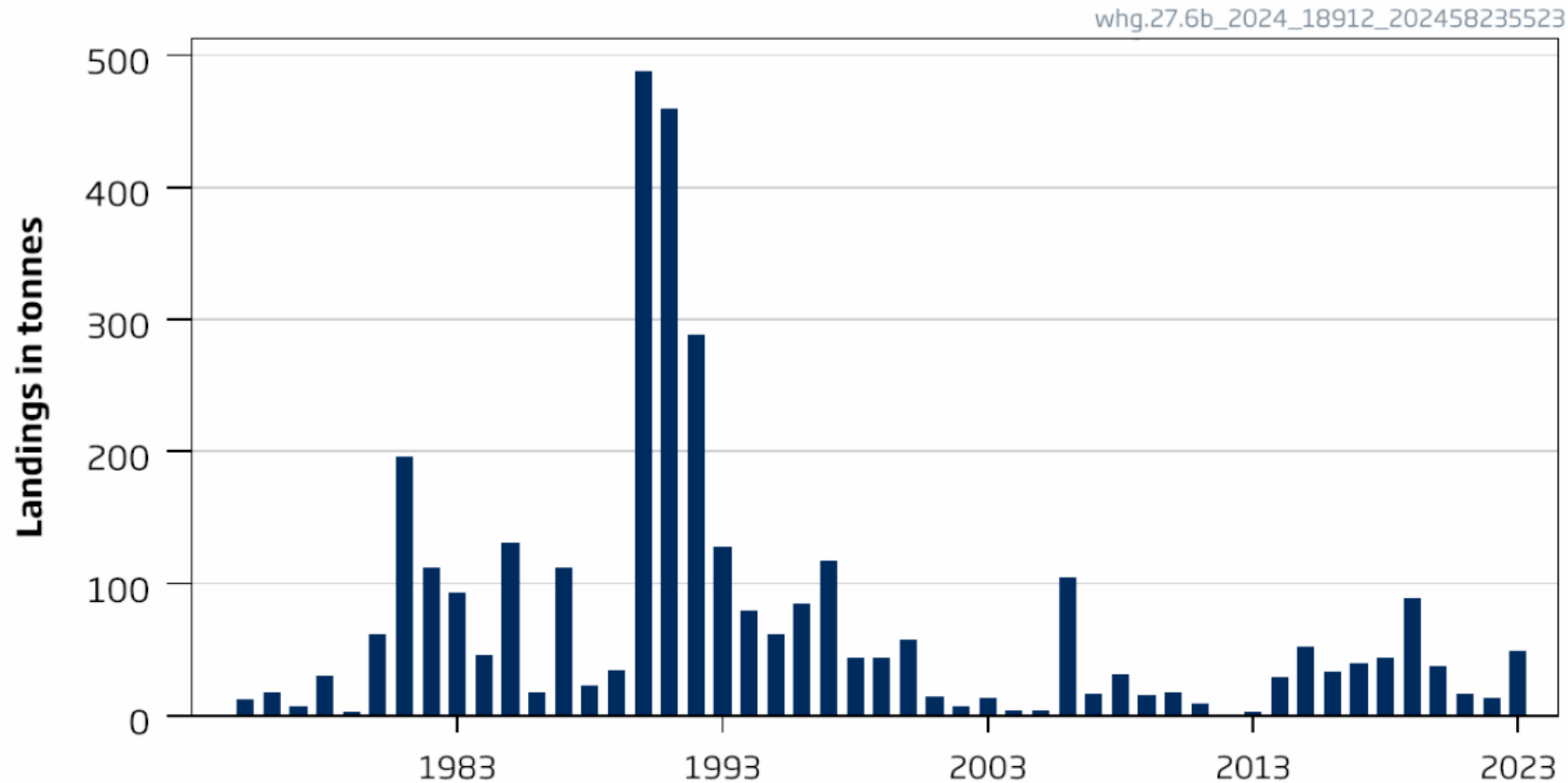
- Only landings data are available.
- Catch of 49 t in 2023
- There is uncertainty on the accuracy of historical landings
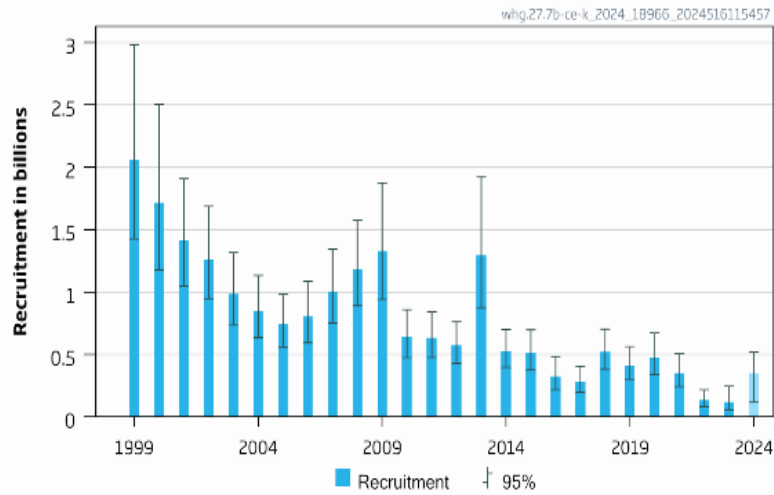- Discards uncertain
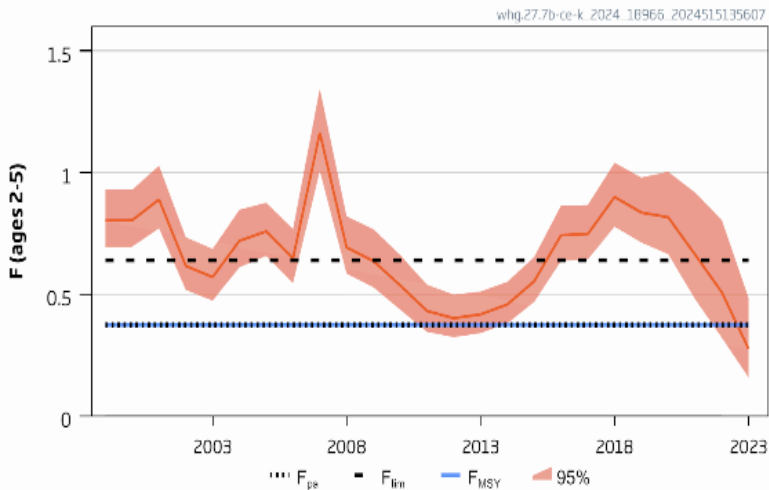- PA buffer applied

Advice for 2025 : MSY: zero catch

Catches

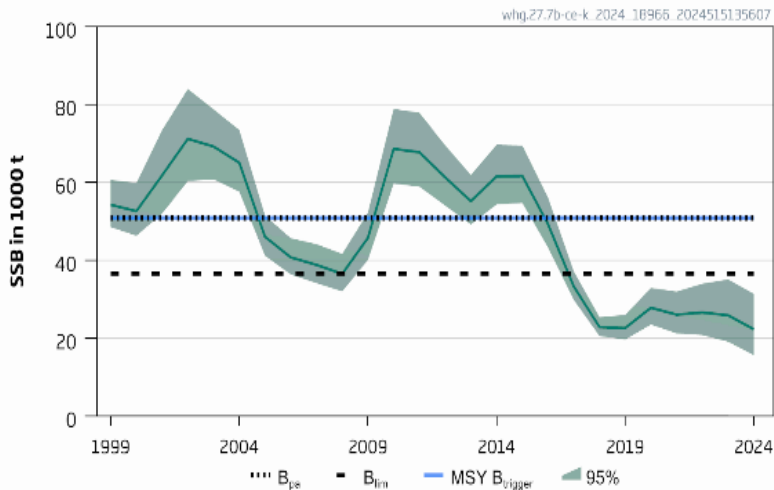**Recruitment (age 0)**

F

SSB

- F below F_{MSY}
- SSB is below B_{lim}
- No catch scenario brings SSB above Blim with 50% probability
- Incoming recruitment is low
- Tends to overestimate SSB and underestimate F

Catch (2023) = 4 663 t (8.5 % discards)
F(2024) = 0.268 (catch 4718 t)
SSB (2025)= 21 210< B_{lim} (36 571) F_{MSY}= 0.375

SAM assessment

Assessment and advice are for divisions 7.b–k, including rectangles 33E2 and 33E3

Fished under a common TAC with whiting in Division 7.d ICES recommends, that the TAC area corresponds to the assessment area

can be shown because the TAC area differs from the stock area.

Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F_{total} (2025)	$F_{projected\ landings}$ (2025)	$F_{projected\ discards}$ (2025)	SSB (2026)	% SSB change*	% advice change **	Probability SSB < B_{lim} in 2026
ICES advice basis										
MSY approach: F=0	0	0	0	0	0	0	26691	26		97
Other scenarios										
EU MAP^^: F_{MSY}	5750	5116	634	0.38	0.32	0.059	21646	2.1		100
EU MAP^^: $F_{MSY\ upper}$	5750	5116	634	0.38	0.32	0.059	21646	2.1		100
EU MAP^^: $F_{MSY\ lower}$	5006	4463	543	0.32	0.27	0.05	22281	5.1		100
$F_{MSY\ upper} \times SSB_{2025}/MSY\ B_{trigger}$	2749	2464	285	0.157	0.132	0.025	24226	14.2		99
$F_{MSY} \times SSB_{2025}/MSY\ B_{trigger}$	2749	2464	285	0.157	0.132	0.025	24226	14.2		99
$F_{MSY\ lower} \times SSB_{2025}/MSY\ B_{trigger}$	2347	2106	241	0.131	0.111	0.02	24580	15.9		99
F= F_{MSY} = F_{pa}	5750	5116	634	0.38	0.32	0.059	21646	2.1		100
$SSB_{2026} = B_{lim}$^										
$SSB_{2026} = B_{pa} = B_{trigger}$^										
TAC_2024	4718	4242	476	0.29	0.24	0.046	22640	6.7		100
F = F_{2024}	4337	3872	465	0.27	0.23	0.042	22715	7.1		100
$SSB_{2026} = SSB_{2025}$	6267	5565	702	0.42	0.35	0.066	21210	0.00		100

Advice for 2025 : MSY 18 966 t advice +7%
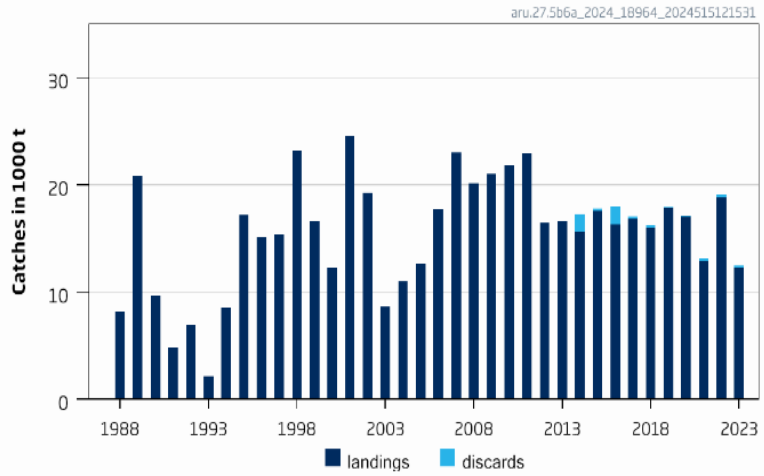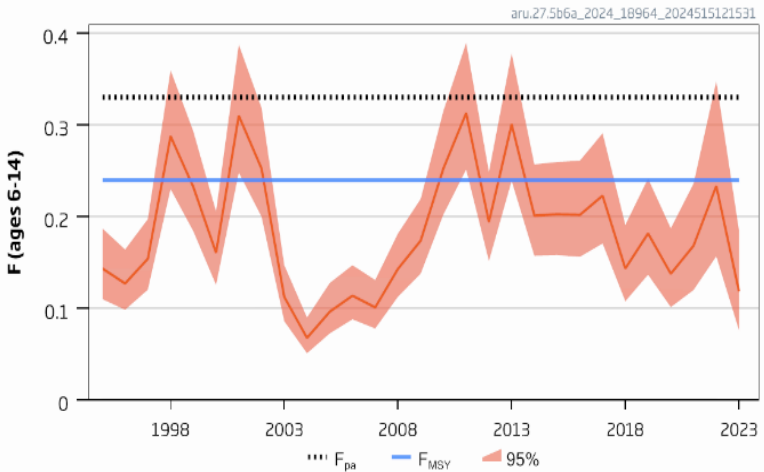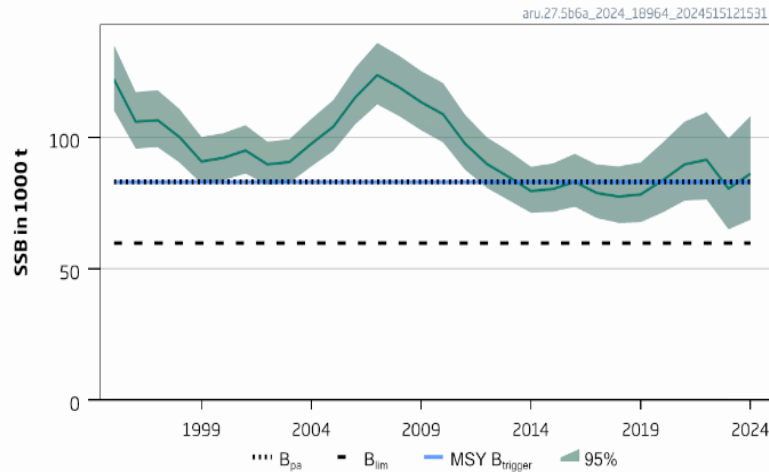
- F below F_{MSY}
- SSB above MSYbtrigger
- Forecast assumes same over run in TAC as since 2010

Catch (2023) = 12 438t (negligible discards)
F(2024) = 0.24 (catch 17967 t)
SSB (2025)= 80882> MSYBtrigger (82 999) F_{MSY}= 0.24

SAM assessment

Management measures are set independently by the Faroe Islands in Division 5.b and by EU and UK for subareas 5–7. Since 2016, the sum of unilateral quota has exceeded the recommended catches, except in 2022 and 2023.

Table 2   Greater silver smelt in divisions 5.b and 6.a. Annual catch scenarios. All weights are in tonnes.

| Basis	Total catch (2025)	F_{6-14} (2025)	SSB (2026)	% SSB change*	% Advice change^
ICES advice basis					
MSY approach = F_{MSY}	18966	0.24	78348	−6	7
Other scenarios					
F = 0	0	0	95429	15	−100
F_{sq} (2024)	21198	0.27	76369	−8	20
F_{pa}	25013	0.33	73032	−12	41
SSB (2026) = MSY $B_{trigger}$	13794	0.16	82999	0	−22
SSB (2026) = B_{lim}	40423	0.61	59730	−28	128

Advice for 2025, PA: Catch ≤ 4 214 t advice 0%
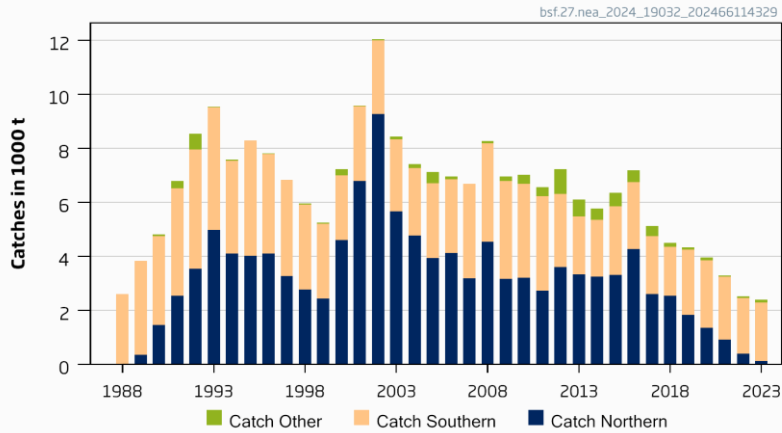
- Cannot assess status
- 'roll over' of previous advice
- Previously used effort series but considered unreliable - decrease in directed fishing
- Stock seems stable – stable lfs in French fishery, stable abundance trends
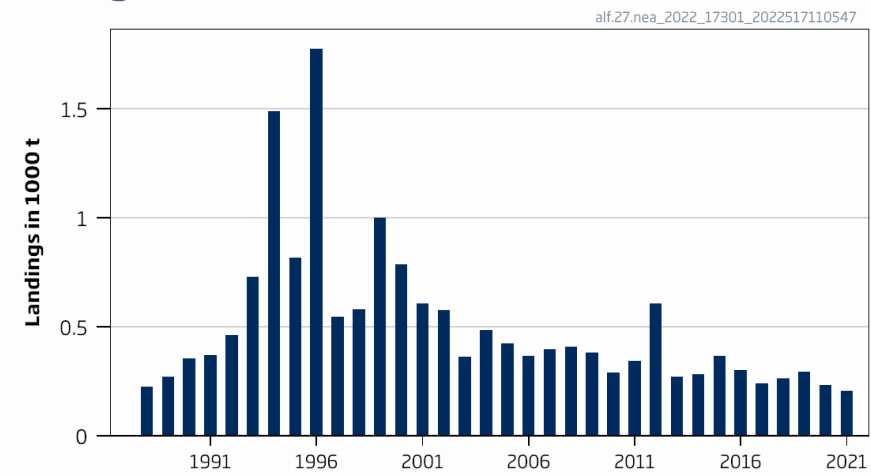- Benchmark planned
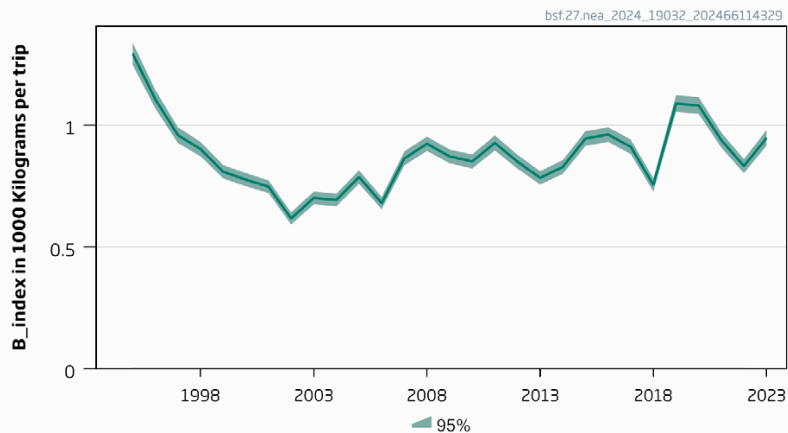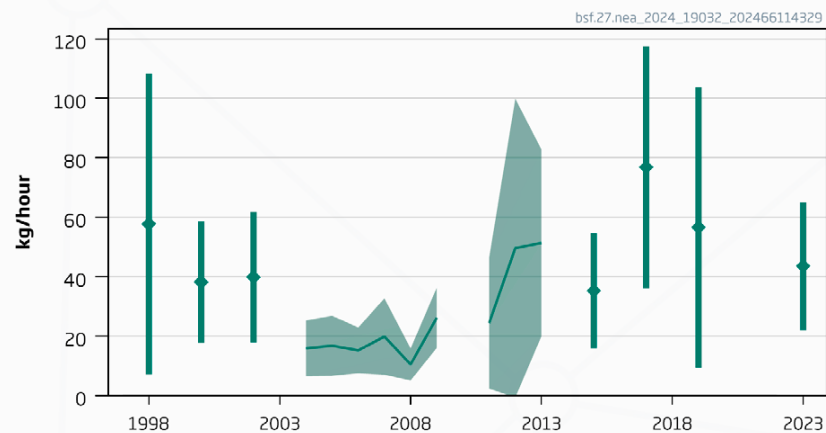
Advice for 2025 and 2026 , PA: Landings ≤ 179 t advice 0%

Landings

alf.27.nea_2022_17301_2022517110547

Landings in 1000 t

Landings in 2022 = 216 t

. 2023 =165 t

- Two Beryx species : most catch in Azorean EEZ and in Mid-Atlantic Ridge.
- Cannot assess stock status
- PA buffer last applied 2022 so applied not again

Table 1   Alfonsinos in the Northeast Atlantic. The basis for the catch scenarios*. Landings are in tonnes.
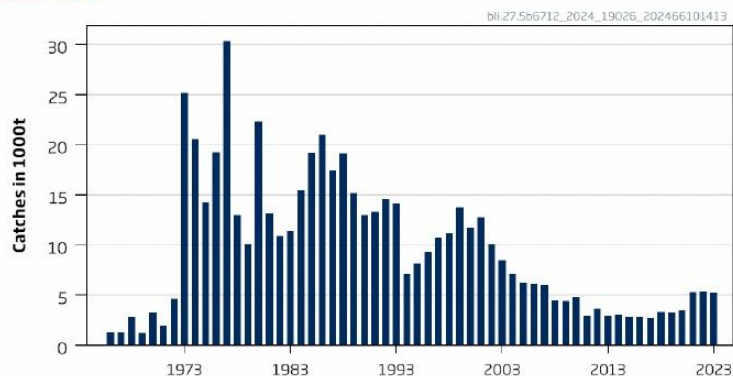
Advised landings for 2023–2024 issued in 2022		179
Discard rate		Unknown
Precautionary buffer	Not Applied	
Landings advice		179
% advice change**		0

Advice for 2025 and 2026, MSY: Catch ≤ 11 197 t and ≤11 170 t +2%
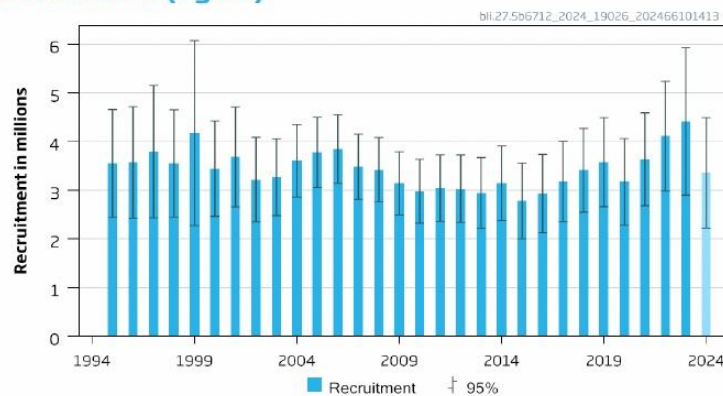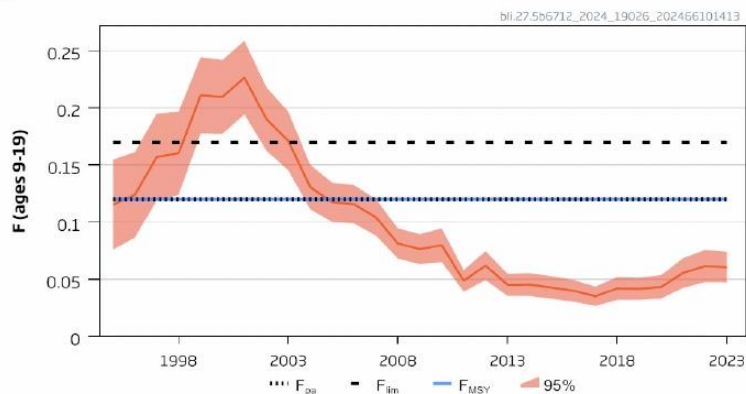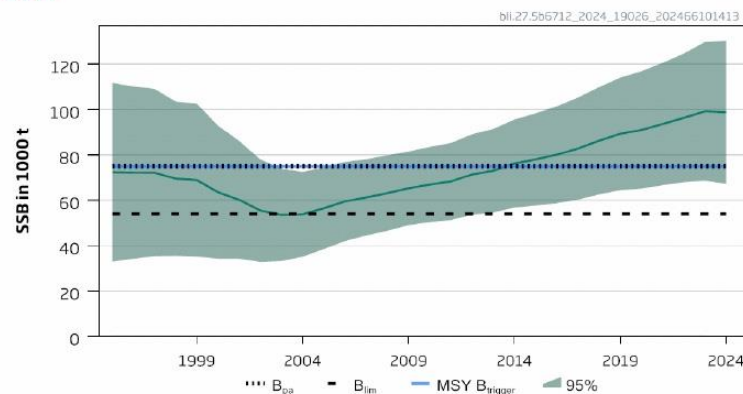
Fishing pressure below F_{MSY}

Spawning stock above MSY Btrigger

Advice applies only to 5b, 6, 7 and 12b (revised stock area 12b added)

No advice 12a, 12c

Catch (2023) : 5 187 t

F(2025) = 0.061 Fsq=2024

SSB (2023)= 98 870 > MSY$_{Btrigger}$ (75 037)   F$_{MSY}$= 0.12

Table 2a   Blue ling in subareas 6–7 and 12 and in Division 5.b. Annual catch scenarios for 2025. Weights are in tonnes.

| Rationale	Catch (2025)	F (2025)	SSB (2026)	% SSB change*	% advice change^
ICES advice basis					
MSY approach ($F_{2025} = F_{MSY}$)	11 197	0.12	93 046	−5.7	2.1
Other scenarios					
$F_{2025} = F_{pa}$	11 197	0.12	93 046	−5.7	2.1
$F_{2025} = 0$	0	0	104 290	5.7	−100
$F_{2025} = F_{lim}$	15 499	0.17	88 735	−10	41
SSB (2026) = B_{pa} = MSY $B_{trigger}$	29 207	0.348	75 037	−24	166
SSB (2026) = B_{lim}	50 413	0.70	54 000	−45	359
$F_{2025} = F_{sq} = F_{2023}$	5 822	0.061	98 440	−0.26	−47

* SSB in 2026 (1 January) in relation to SSB in 2025 (98 695 t)

Catch scenario table for 2025
Multi Year Catch Curves

Roundnose grenadier in subareas 6 and 7 and division 5.b and 12.b

Advice for 2025 and 2026, PA: Catch ≤ 2 542 t -20%

Landings
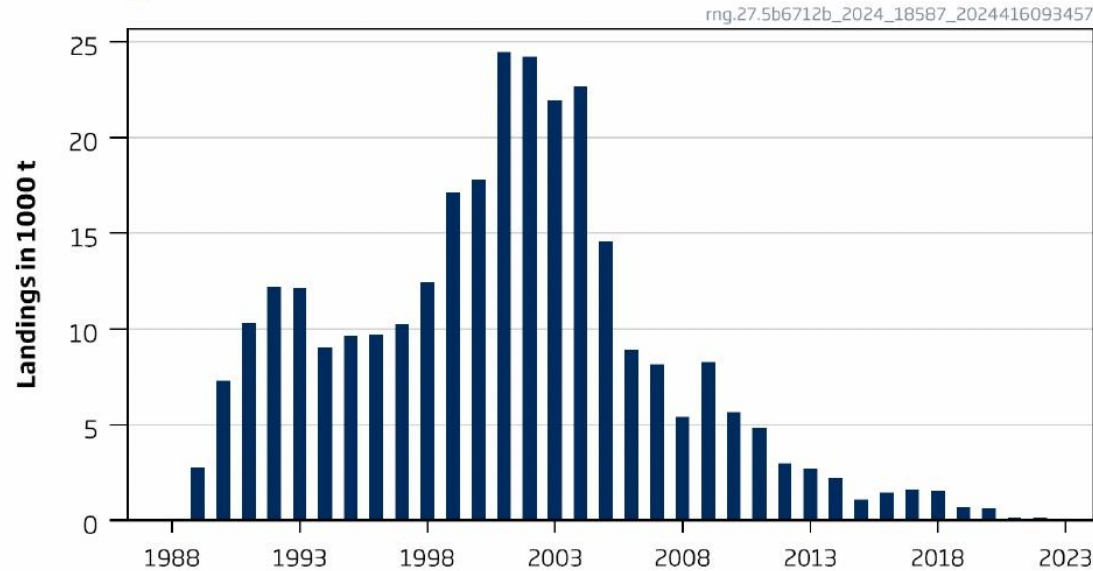
- Landings (2023) =32 t
- Cannot assess status
- Ban on fishing with bottom trawls in EU waters deeper than 800 m
- Less fishing activity
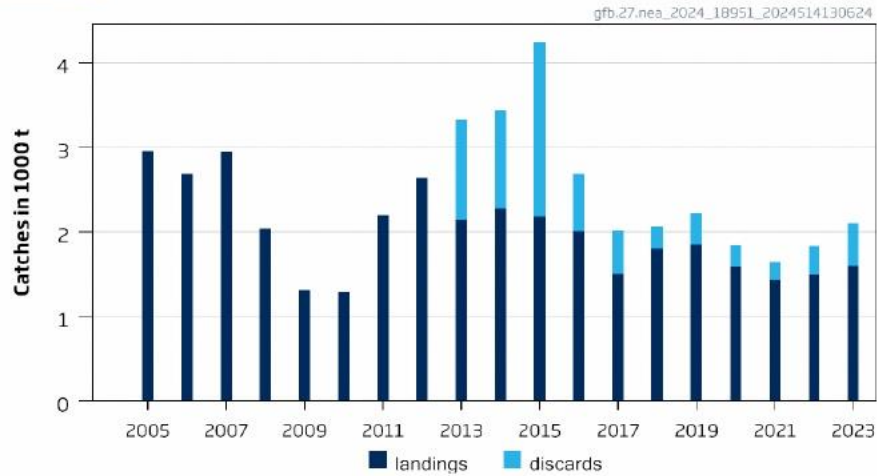- PA buffer not applied 2022 applied this time

Table 1 Roundnose grenadier in subareas 6 and 7 and divisions 5.b and 12.b. The basis for the catch scenarios*.

Advised catches for 2023–2024, issued in 2022		3 177
Discard rate (average 2021–2023)		Negligible
Precautionary buffer	Applied	0.8
Catch advice**		2 542 tonnes
% advice change^		−20%

Advice for 2025 and 2026, PA: Catch ≤ 573 t (landings 435t) advice -30%

Catches

gfb.27.nea_2024_18951_2024514130624

■ landings ■ discards

Biomass Index

gfb.27.nea_2024_18951_2024514130624

····· $I_{trigger}$
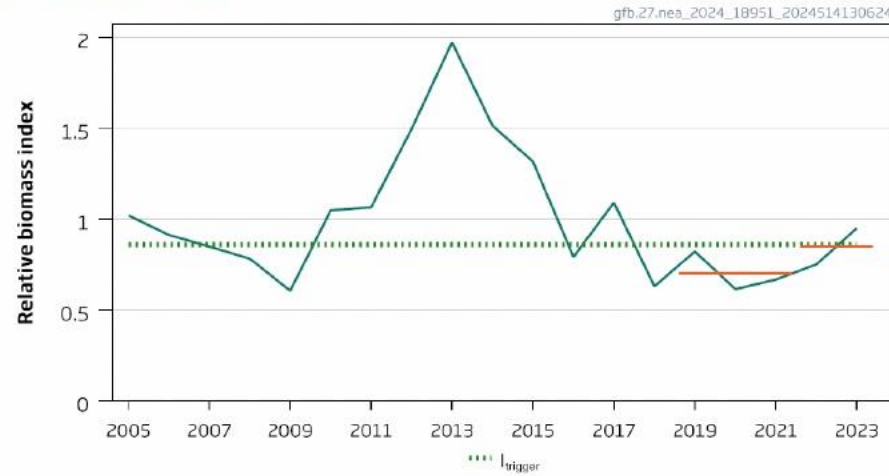
- Landings (2023) =1596 t
- rb rule (change from 2 over 3)
- Index has increased but advice is less due to change in method
- Stability clause applied

Landings (2023): 1 596 (advice 818 t)
Index (2023)= 0.95 kg/hr > I$_{Btrigger}$ (0.70 kg/hr)

**Table 1**   Greater forkbeard in the Northeast Atlantic and adjacent waters. The basis for the catch scenarios. Catches are in tonnes.*

Previous catch advice A$_y$ (2024)		818
Stock biomass trend		
Index A (2022, 2023)		0.85 kg/hr
Index B (2019, 2020, 2021)		0.70 kg/hr
r: Stock biomass trend (index ratio A/B)	1.21	
Biomass safeguard		
Last index value (I$_{2023}$)		0.95 kg/hr
Index trigger value (I$_{trigger}$)		0.86 kg/hr
b: multiplier for index relative to trigger min{I$_{2023}$/I$_{trigger}$, 1}		1
Precautionary multiplier to maintain biomass above B$_{lim}$ with 95% probability		
m: multiplier (generic multiplier based on life history)		0.5
RB calculation**		495
Stability clause (+20%/−30% compared to A$_y$, only applied if b = 1)	Applied	−30%
Discard rate		24%
Catch advice for 2025 and 2026***		573
Projected landings corresponding to advice^		435
% advice change^^		−30%

- $Ay+1 = Ay \times r \times b \times m$
- Stability clause (-30%) applied since change in advice would be more than -30%

Advice for 2025 and 2026, PA: Zero Catch – no change

Catches

Catches since 1988
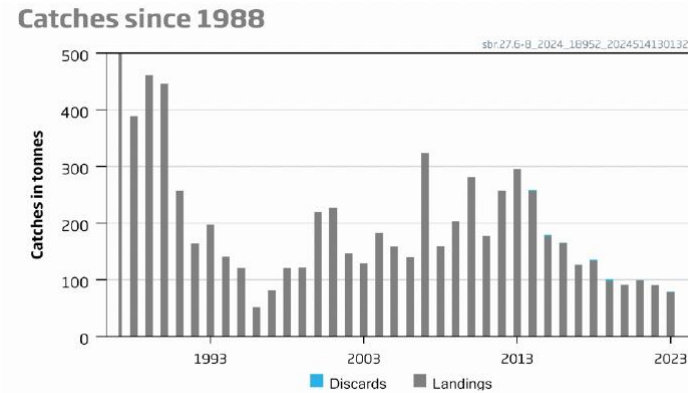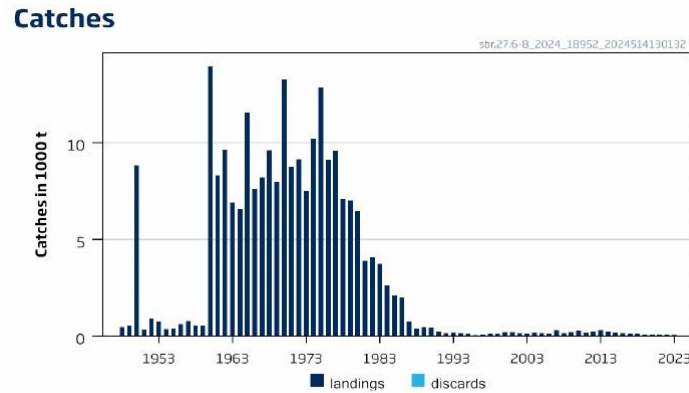
- Landings (2023) =79 t
- Cannot assess status
- No information clearly indicating exploitation level appropriate

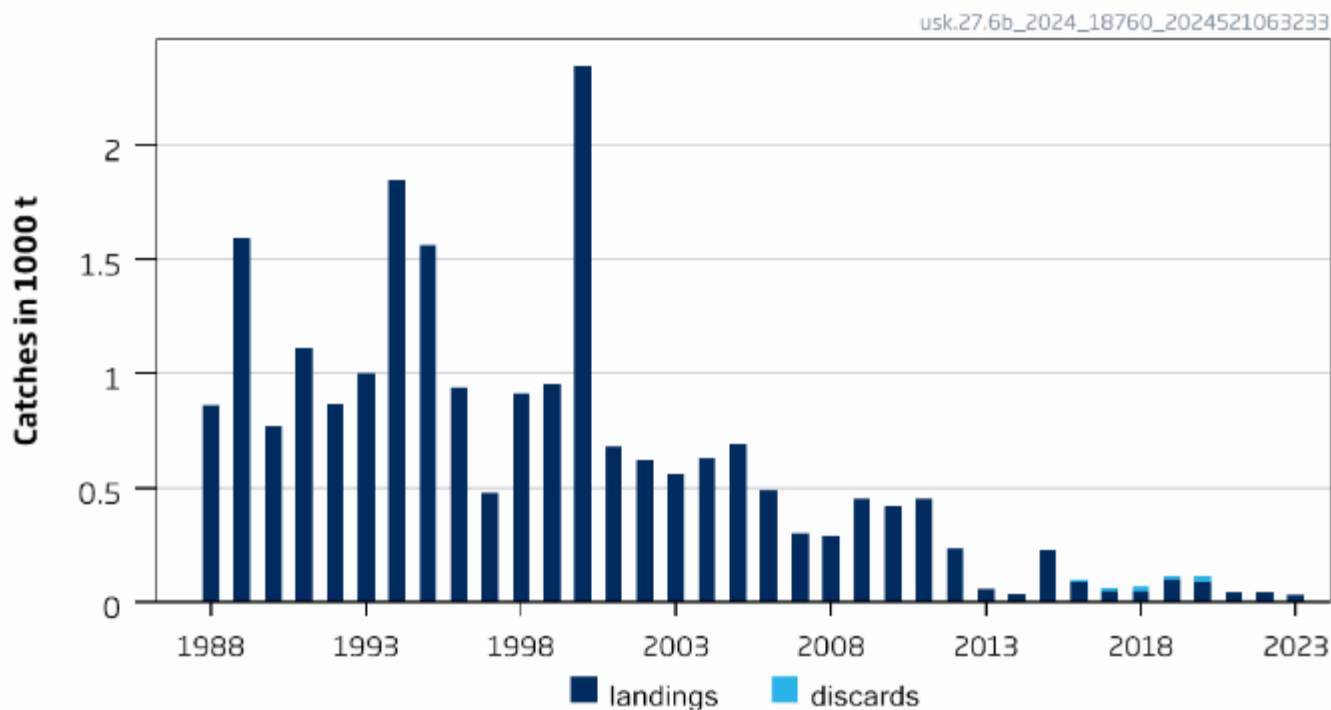**Table 1** Blackspot seabream in subareas 6–8. The basis for the catch scenarios. Catches are in tonnes.

Advised catches for 2025–2026 issued in 2024		0
Discard rate		Negligible
Precautionary buffer	Not applied	-
Catch advice		0
% advice change*		0

*Advice value for 2025–2026 relative to advice value for 2023–2024

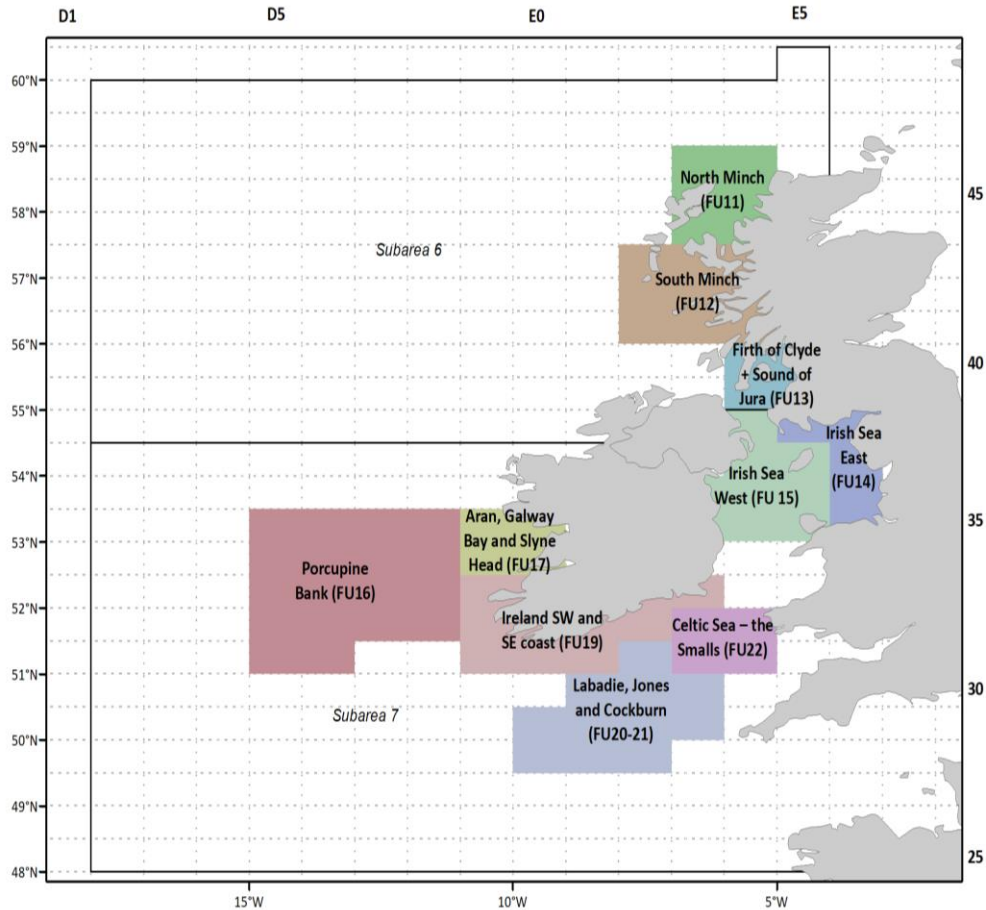**Advice for 2025 and 2026 PA:** Catch ≤ 224 t no change

- Category 5
- Precautionary buffer not applied (last applied 2022)
- No directed fishery
- Catch 2023 32 t

FU	Advice 2024	Change	Basis
11 – North Minch	≤ 4218 t	+ 11.5%	MSY
12- South Minch	≤ 4616 t	-10.4%	MSY
13 – Firth of Clyde + Sound of Jura	≤ 4527 t	-1.5%	MSY
16 – Porcupine Bank*	3732 – 4627 t	+22%	MAP
17 – Aran grounds	395 – 454 t	+25%	MAP
20-21 Celtic Sea	≤ 1865 t	+3.4%	MSY
22 – Celtic Sea, Bristol Channel	≤ 1912 t	-25%	MSY

Advice released autumn
*correction May 30 2024
Management should be at FU level
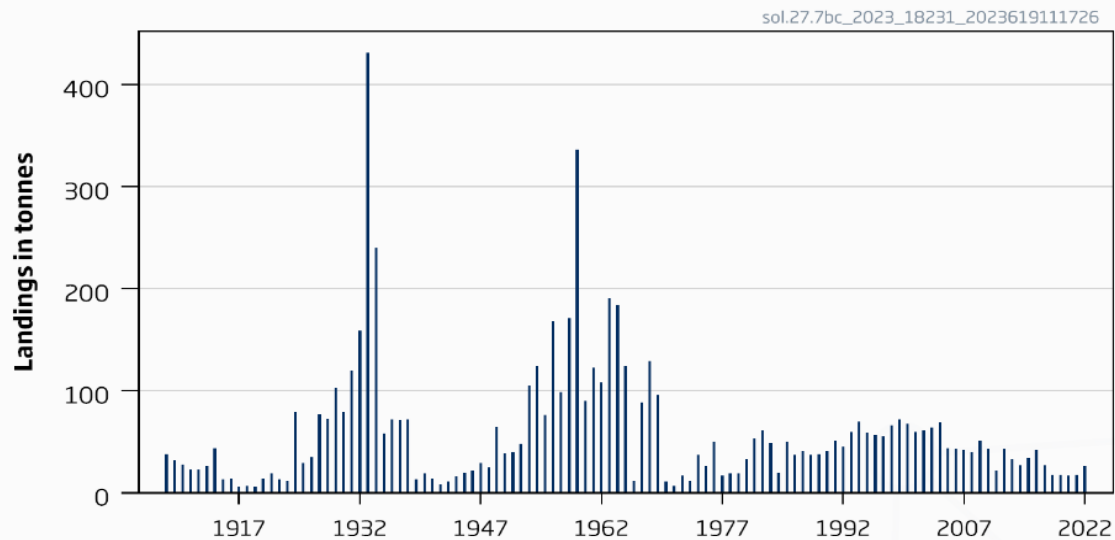
Thank you for your attention!

Joanne.Morgan@ices.dk

Advice for 2024, 2025 and 2026: PA: Catch ≤ 15 t -20%

Landings

sol.27.7bc_2023_18231_2023619111726
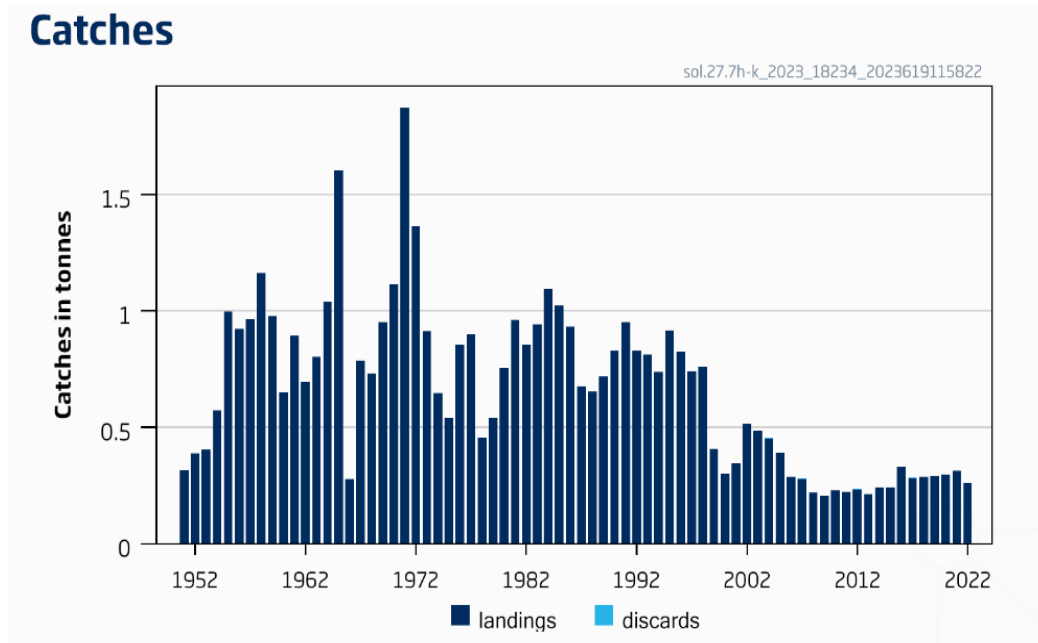
- State of the stock unknown.
- Category 6
- Landings in 2022, 26 t; discards considered negligible.
- Precautionary reduction advised from 19 t to 15 t.
- Buffer applied

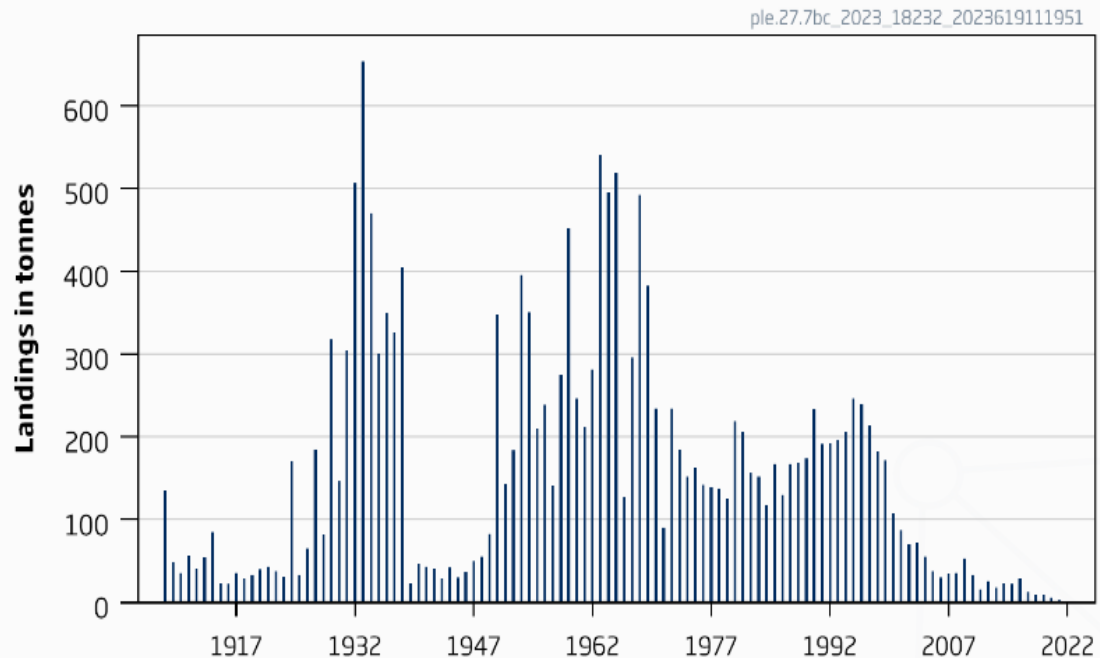**Advice for 2024, 2025, 2026: PA:** Catch ≤ 170 t -20%

- Category 5
- Stock identity uncertain, research ongoing
- There is area misreporting of the catch but unquantified
- Catch in 2022 = 264 t - discards negligible

Advice for 2024, 2025, 2026: PA: Catch ≤ 15 t advice -20%

Landings

ple.27.7bc_2023_18232_2023619111951

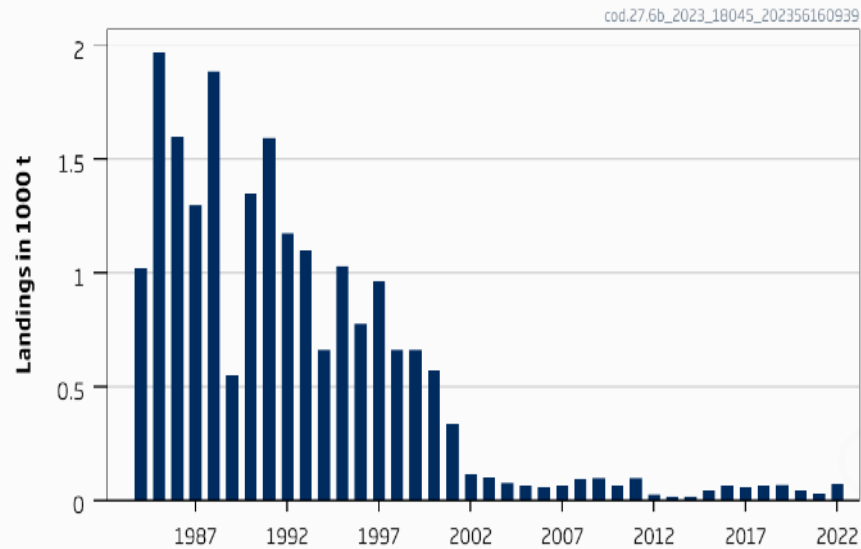- Category 6
- Precautionary buffer applied
- Discarding takes place but not fully quantified
- Catch (without discards) 2022: 2 t

Advice for 2024, 2025, 2026: PA: Catch =11 t -20%
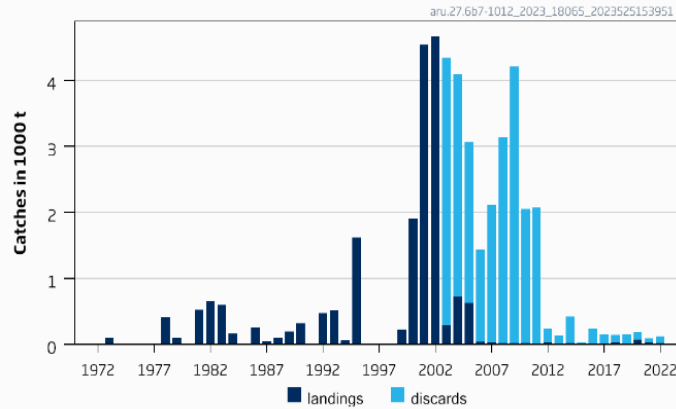
Landings — cod.27.6b_2023_18045_202356160939

- Category 6
- PA buffer applied as last applied in 2017
- Discarding takes place but can not be quantified
- Catch (without discards) 2022 71 t
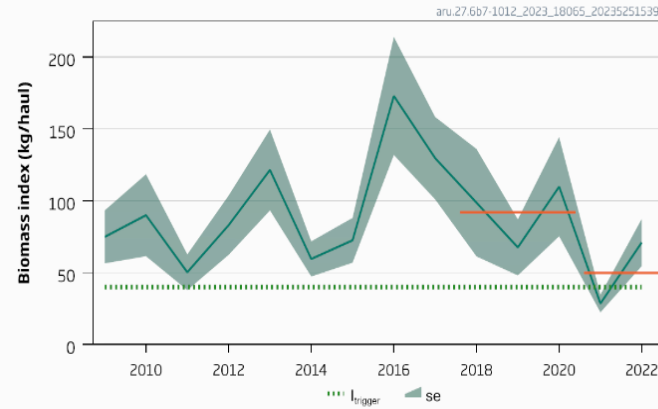- Stock ID uncertain

Advice for 2024 and 2025, MSY: Catch ≤ 87t Landings ≤ 16 t

Catches — aru.27.6b7-1012_2023_18065_2023525153951

Biomass index — aru.27.6b7-1012_2023_18065_2023525153951

Length-based Fishing Pressure Proxy — aru.27.6b7-1012_2023_18065_2023525153951
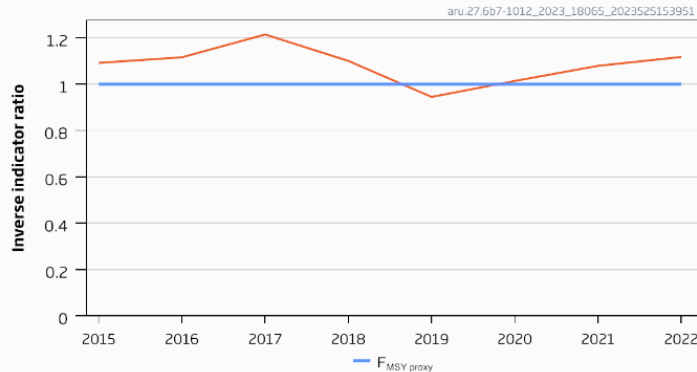
- New DLS method - rfb
- F above FMSY proxy
- Biomass in last 2 years lower than in previous 3 but above Itrigger
- Index is Spanish Porcupine Bank survey
- Decreased advice: decrease in survey index, new method, stability clause applied
- Landings assume average discard rate of last 7 years
- Survey doesn't cover whole stock area but is where most catch is taken

Catch (2022) : 126 t (87% discards)

rfb rule

Previous catch advice A_y (2023)		124 tonnes
Stock biomass trend		
Index A (2021, 2022)		50 kg haul^{-1}
Index B (2018, 2019, 2020)		92 kg haul^{-1}
r: Index ratio (A/B)		0.54
Fishing pressure proxy		
Mean catch length ($L_{mean} = L_{2022}$)		23 cm
MSY proxy length ($L_{F=M}$)		26 cm
f: multiplier for relative mean length in catches ($L_{2022}/L_{F=M}$)		0.90
Biomass safeguard		
Last index value (I_{2022})		71 kg haul^{-1}
Index trigger value ($I_{trigger} = I_{loss} \times 1.4$)		40 kg haul^{-1}
b: multiplier for index relative to trigger min$\{I_{2022}/I_{trigger}, 1\}$		1.00
Precautionary multiplier to maintain biomass above B_{lim} with 95% probability		
m: multiplier (generic multiplier based on life history)		0.90
rfb calculation**		54 tonnes
Stability clause (+20%/−30% compared to A_y, only applied if b ≥ 1)	Applied	0.7
Discard rate ^^		82%
Catch advice for 2024 and 2025 ($A_y \times$ stability clause)		87 tonnes
Projected landings corresponding to advice***		16 tonnes
% advice change^		−30%

- $Ay+1 = Ay \times r \times f \times b \times m$
- Stability clause applied

Advice for 2022 and 2023, PA: Catch ≤ 7 821 t)
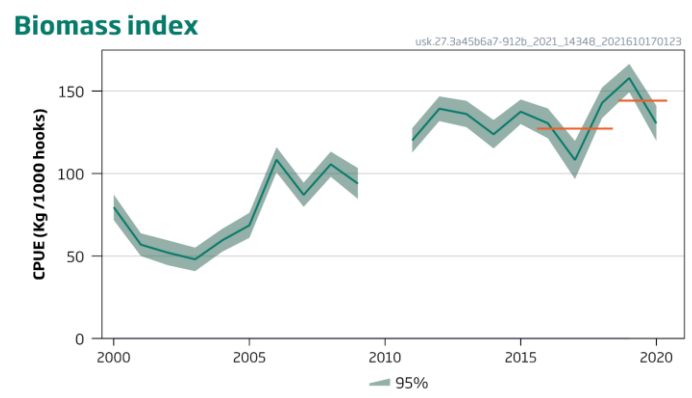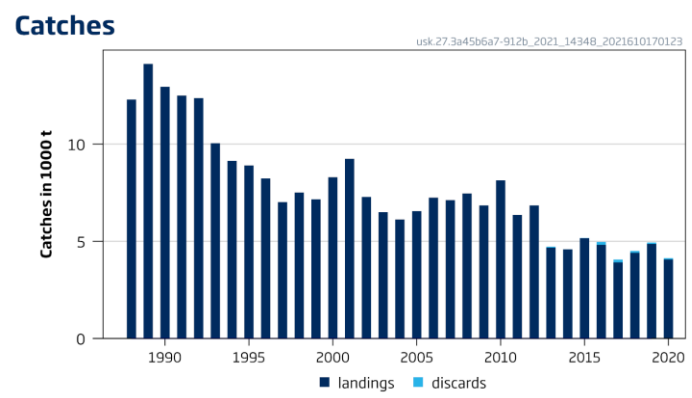
Catch (2020) =4 134 t (2% discards)

Index A (2019–2020)		144
Index B (2016–2018)		127
Index ratio (A/B)		1.13
Uncertainty cap	Not applied	
Advised catch for 2020–2021 (issued in 2019)		8 627 tonnes
Discard rate		1.80%
Precautionary buffer	Applied	0.8
Catch advice *		**7 821 tonnes**
Projected landings corresponding to advice**		7 684 tonnes
% Advice change ***		-9.30%

- Lower catches since 2013
- Catch per unit effort based on the Norwegian longline fleet remains high.

Advice for 2022 and 2023, PA: Catch ≤ 15 092 t

Catches

lin.27.346-91214_2021_14398_2021619020008

Biomass index

lin.27.346-91214_2021_14398_2021619020008
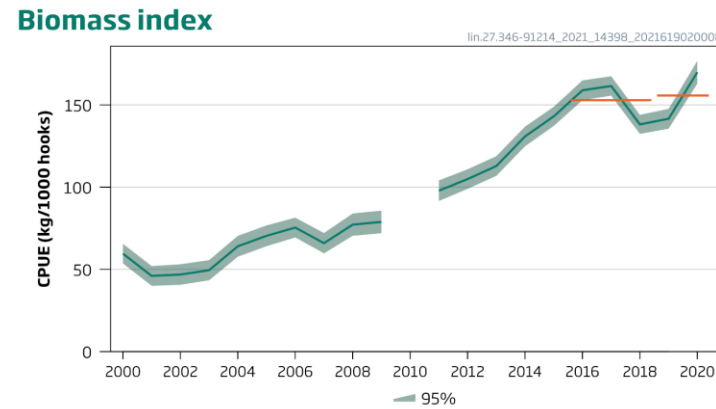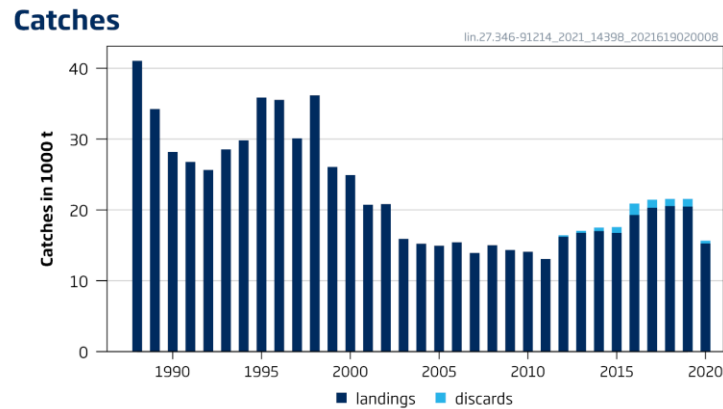
Catch (2020) =15 664 t (Discards = 407 t)

Index A (2019–2020)		156
Index B (2016–2018)		153
Index ratio (A/B)		1.02
Uncertainty cap	Not applied	
Advised catch for 2020 and 2021 (issued in		18 516 tonnes
Discard rate		0.044
Precautionary buffer	Applied	0.8
Catch advice*		**15 092 tonnes**
Landings corresponding to the catch advice**		14 418 tonnes
% Advice change ***		–18%

- Landings have been lightly higher in the last 3 years.
- Discards have declined in 2017-2018
- Catch per unit effort (cpue) based on the Norwegian longline fleet is high.
- Low abundance in Subarea 7 and 8.
- Uncertainty about the stock structure.