

ICES advice for North Western Waters stocks for 2024

NWWAC meeting, July 2024

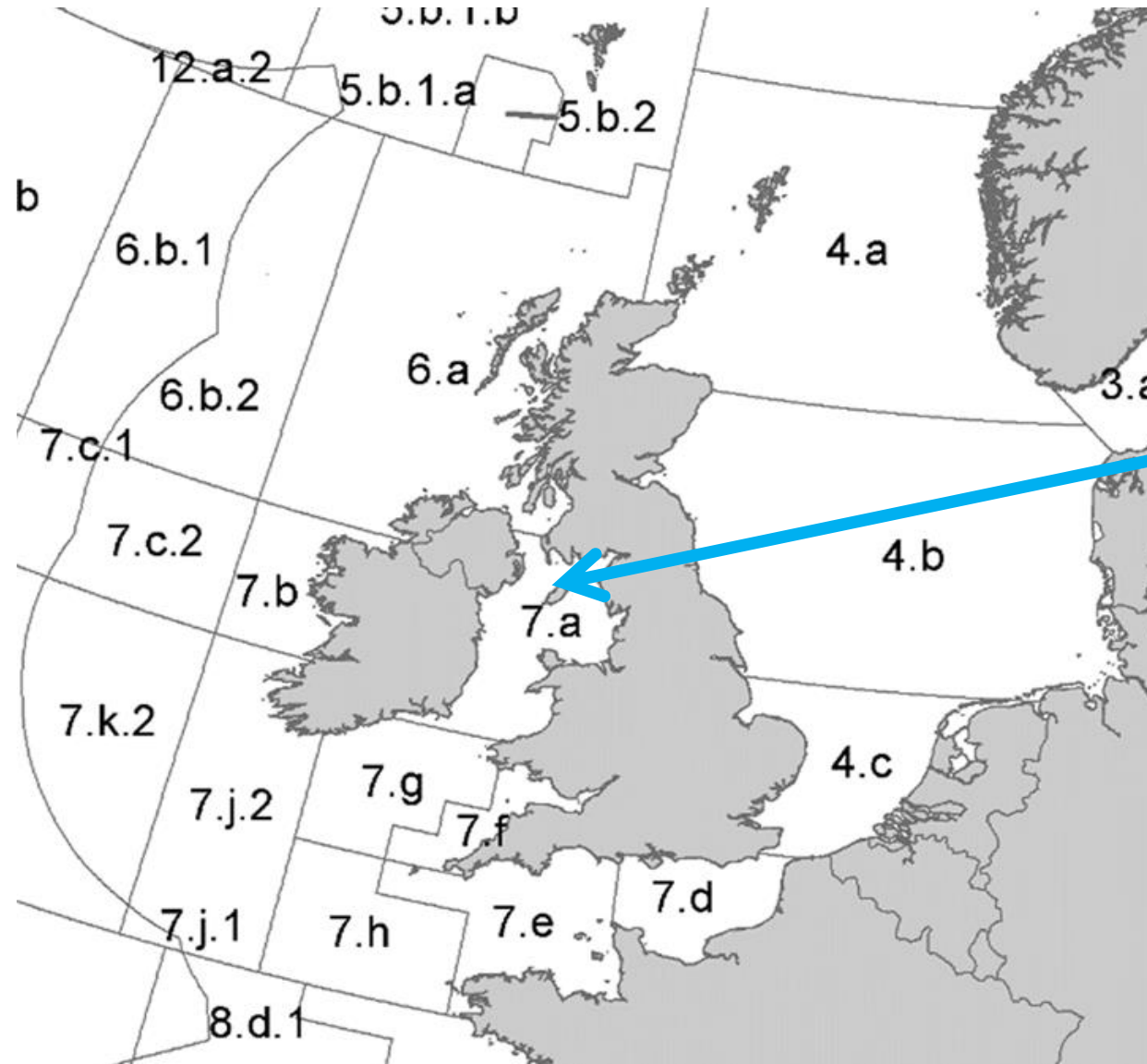
IRISH SEA

Joanne Morgan
ICES ACOM vice-chair



Image Dirk Vonten, Fotolia

Irish Sea (7.a)

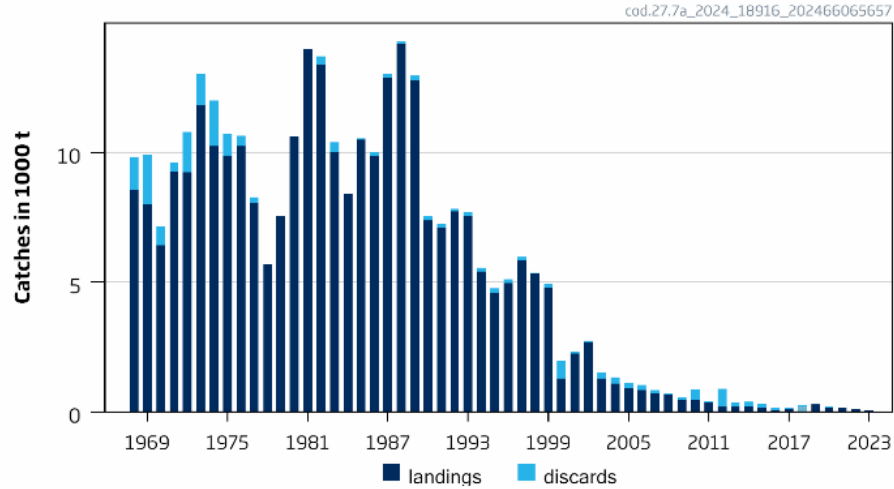


- Cod
 - Haddock
 - Sole
 - Plaice
 - Seabass
 - Whiting (advice from 2021)
- IN AUTUMN:**
- Nephrops (FUs 14-15-19)
 - Rays and skates
 - Spurdog

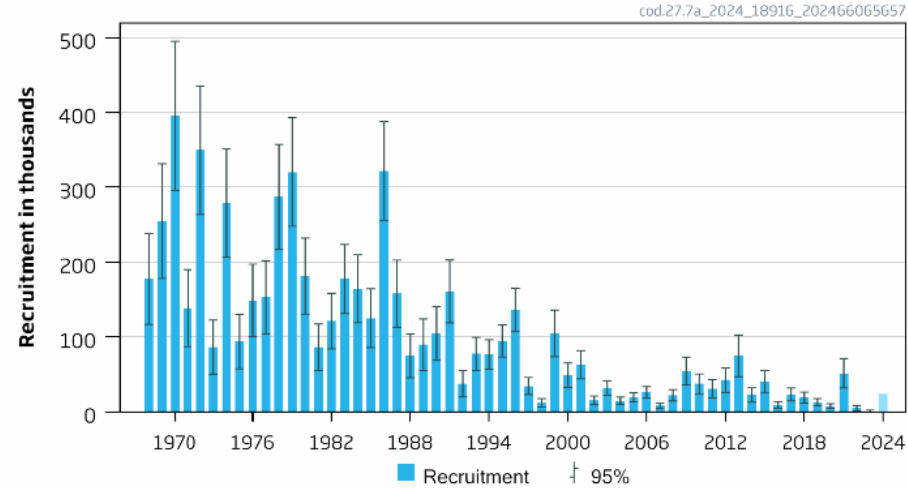
Cod in the Irish Sea (7.a)

Advice for 2025, MSY: Catch 0 t no change

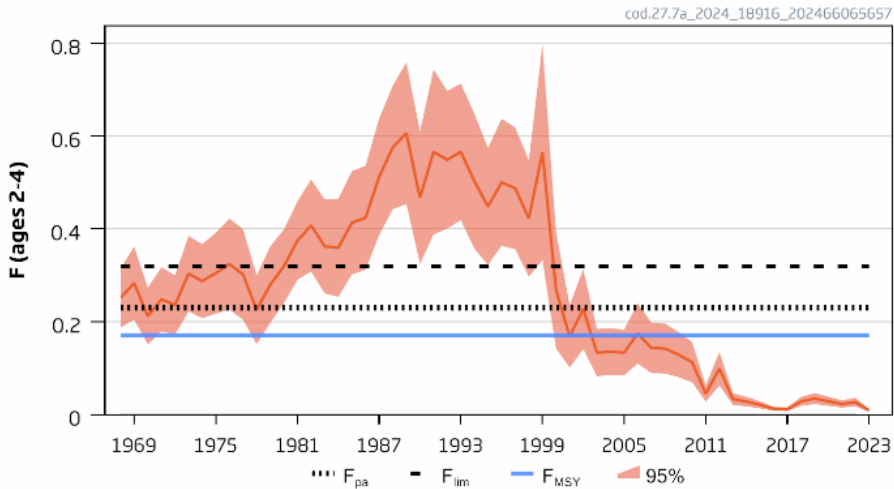
Catches



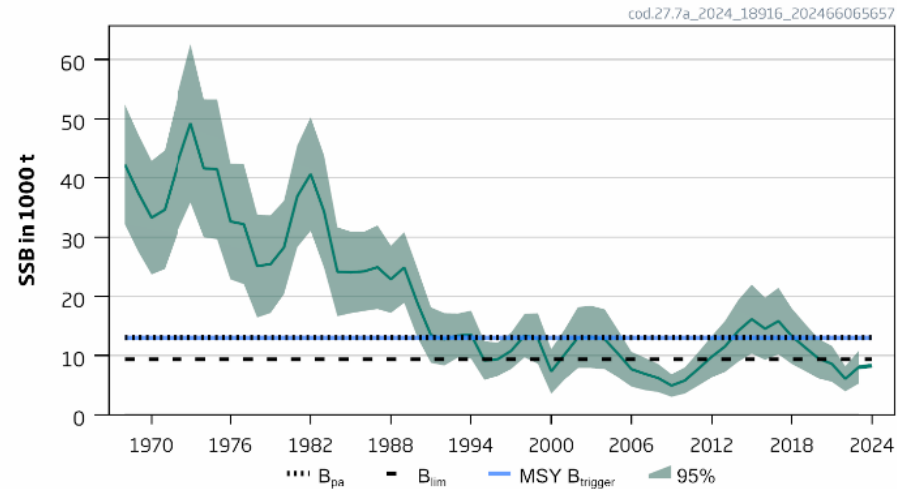
Recruitment (age 0)



F



SSB



2023 corrections made to model

F below FMSY

SSB below Blim – 2023 estimate revised downwards

No catch option that will bring SSB above Blim

Cod in the Irish Sea (7.a)

Catch (2023) : 65 t (1% discards)

F(2024) = 0.02 (Average F₂₀₂₁₋₂₀₂₃)

SSB (2025)= 6 399t < B_{lim} (9 364 t) F_{MSY} = 0.171



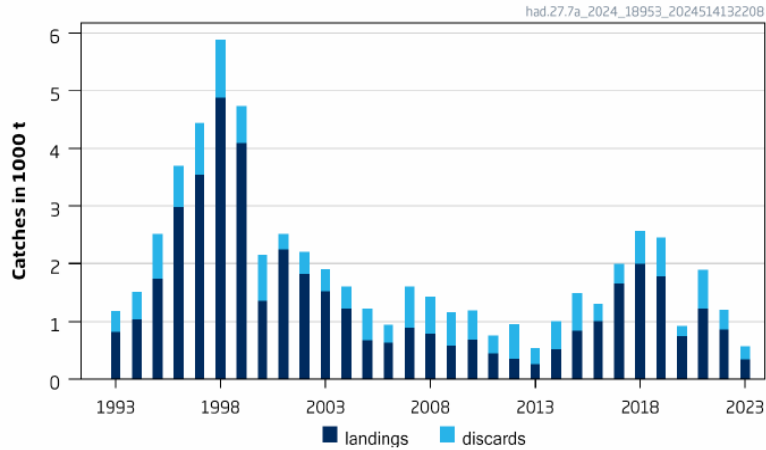
Basis	Total catch (2025)	Projected landings (2025)	Projected discards (2025)	F _{total} (2025)	F _{projected} landings (2025)	F _{projected} discards (2025)	SSB (2026)	% SSB change*	% TAC change ^
ICES advice basis									
MSY and precautionary considerations: F = 0	0	0	0	0	0	0	6311	-1.37	-100
Other scenarios									
MSY approach: F _{MSY} × SSB (2025)/MSY B _{trigger}	368	325	43	0.084	0.073	0.0110	5949	-7.04	123
F = 0	0	0	0	0	0	0	6311	-1.37	-100
EU MAP**: F _{MSY lower} × SSB (2025)/MSY B _{trigger}	303	268	35	0.069	0.060	0.0090	6012	-6.04	84
EU MAP**: F _{MSY upper} × SSB (2025)/MSY B _{trigger}	470	415	55	0.108	0.094	0.0142	5849	-8.60	185
EU MAP**: F _{MSY lower}	601	531	70	0.14	0.122	0.0184	5720	-10.6	264
EU MAP**: F _{MSY upper}	919	810	109	0.22	0.19	0.029	5410	-15.56	457
F = F _{MSY}	727	641	86	0.171	0.149	0.0224	5598	-12.52	341
F = F _{pa}	958	844	114	0.23	0.1998	0.030	5372	-16.0	480
F = F ₂₀₂₄	88	78	10	0.020	0.017	0.0025	6224	-2.73	-47
F = F _{lim}	1294	1138	156	0.32	0.278	0.042	5048	-21	684
F=F _{ECO}	601	531	70	0.14	0.122	0.0184	5720	-10.6	264
F _{ECO} × SSB(2025)/MSY B _{trigger}	303	268	35	0.069	0.060	0.0090	6012	-6.04	84
Rollover TAC	165	146	19	0.0370	0.032	0.0049	6148	-3.92	0
SSB (2026) = SSB (2025)***									
SSB (2026) = B _{lim} ***									
SSB(2026)=B _{pa} = MSY B _{trigger} ***									

SS3

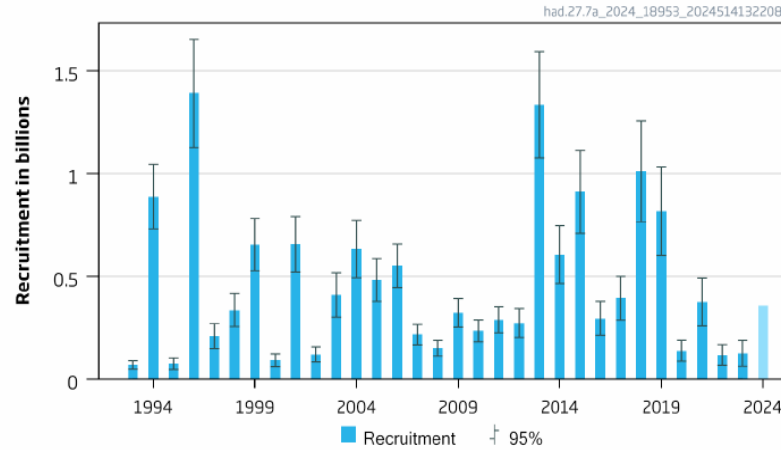
Haddock in the Irish Sea (7.a)

Advice for 2025, MSY: Catch: $\leq 1\ 893\text{t}$ advice -16.4%

Catches

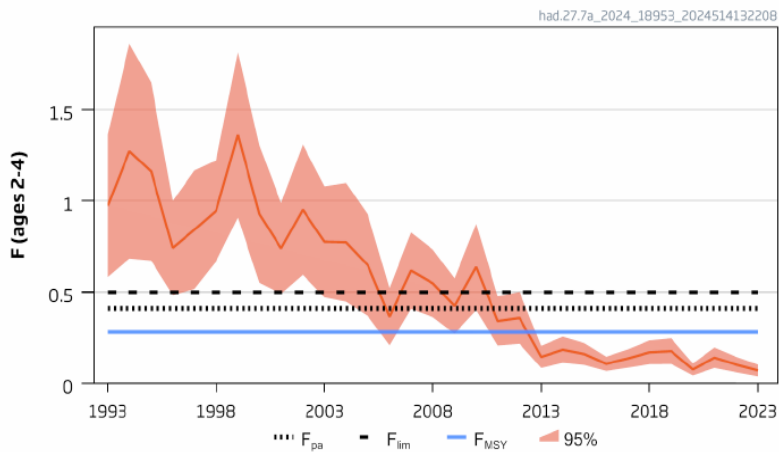


Recruitment (age 0)

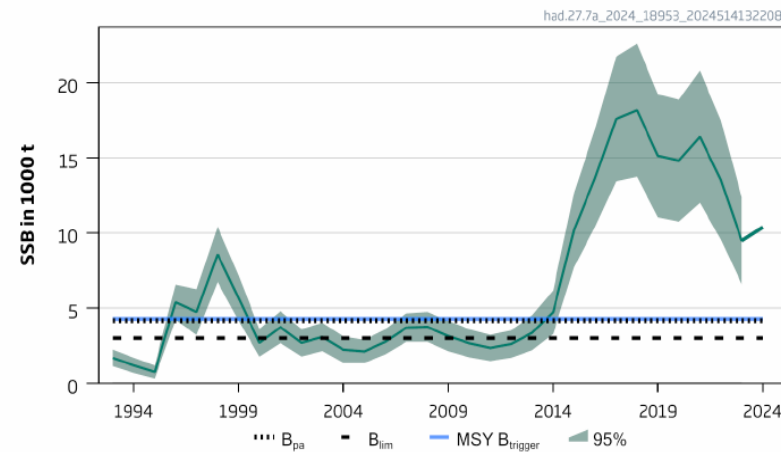


- SSB declining but above MSY Btrigger
- F below F_{MSY}
- Poor recruitment in 2020 and 2021 impacting stock
- SSB revised downwards, low recent recruitment

F



SSB



EU MAP : Catch: 1396 – 2300 t (F_{MSY} : 1893 t)

Haddock in the Irish Sea (7.a)

Catch (2023) : 556 t (40% discards)

F(2024) = 0.104 (Average F₂₀₂₁₋₂₀₂₃)

SSB (2025)= 7 917 t > MSY_{Btrigger} (4 281 t) F_{MSY}= 0.28



Table 2 Haddock in Division 7.a. 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*	% TAC change^	% advice change**
ICES advice basis										
MSY approach: F _{MSY}	1893	1243	650	0.28	0.127	0.153	6264	-21	-16.4	-16.4
Other scenarios										
EU MAP***: F _{MSY}	1893	1243	650	0.28	0.127	0.153	6264	-21	-16.4	-16.4
EU MAP***: F _{MSY lower}	1396	920	476	0.20	0.091	0.109	6730	-15.0	-38	-38
EU MAP***: F _{MSY upper}	2300	1506	794	0.35	0.159	0.191	5884	-26	1.64	1.64
F = 0	0	0	0	0	0	0	8060	1.81	-100	-100
F = F _{pa}	2632	1719	913	0.41	0.186	0.22	5578	-30	16.3	16.3
F = F _{lim}	3099	2017	1082	0.5	0.227	0.27	5149	-35	37	37
SSB ₂₀₂₆ = B _{lim}	5562	3529	2033	1.12	0.51	0.61	2994	-62	146	146
SSB ₂₀₂₆ = B _{pa}	4203	2708	1495	0.74	0.34	0.41	4160	-47	86	86
SSB ₂₀₂₆ = SSB ₂₀₂₅	149	99	50	0.0198	0.0090	0.0109	7917	0	-93	-93
SSB ₂₀₂₆ = MSY B _{trigger}	4066	2624	1443	0.71	0.32	0.39	4281	-46	80	80
F = F ₂₀₂₄	756	500	256	0.104	0.047	0.057	7337	-7.3	-67	-67

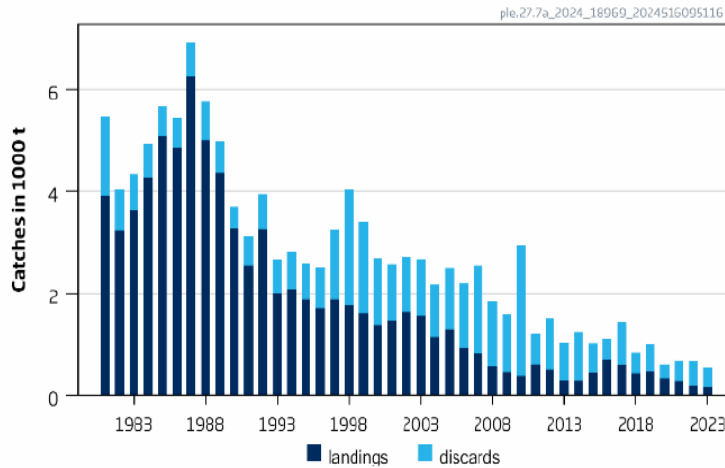
ASAP model (NOAA)

Landings from south of Division 7.a (rectangles 33E2-3) are not considered part of this stock

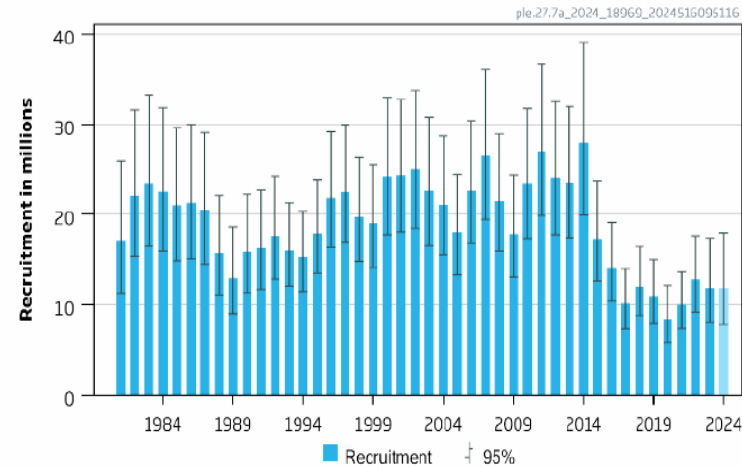
Plaice in the Irish Sea (7.a)

Advice for 2025, MSY: Catch $\leq 1\,504$ t -21%

Catches

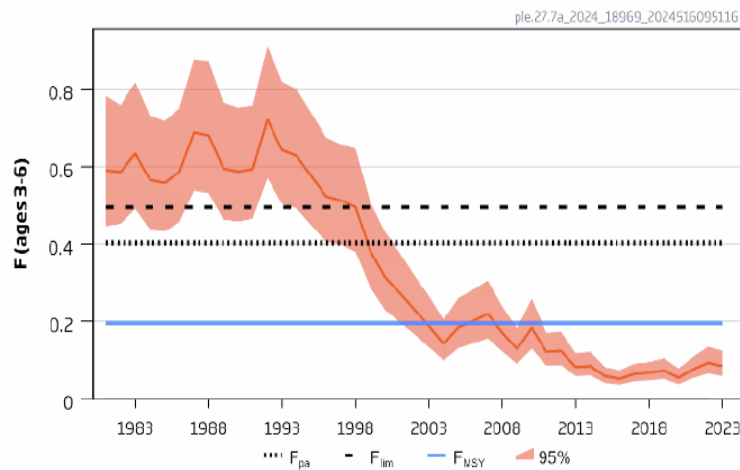


Recruitment (age 1)

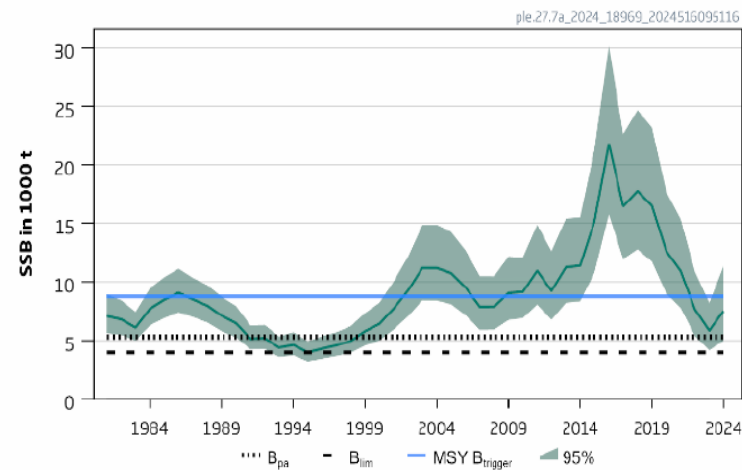


- SSB below MSY $B_{trigger}$.
- F below F_{MSY}
- Recruitment lower since 2016.
- Discarding high and variable, 40% assumed to survive.
- Downward revision SSB (retrospective) and SSB now below trigger so target F reduced

F



SSB



Plaice in the Irish Sea (7.a)

Catch (2023) : 539 t (71 % discards, but 40% of these esimated to survive)

$F(2024) = 0.086$ (Average $F_{2021-2023}$)

$SSB(2024) = 8134 \text{ t} < MSY_{B_{trigger}} (8757\text{t})$ $F_{MSY} = 0.196$



Basis	Total catch (2025)	Projected landings (2025)	Projected Surviving discards (2025)	Projected dead discards (2025)	Total projected discards* (2025)	F _{total} (2025)	F _{projected landings} (2025)	F _{projected discards**} (2025)	SSB (2026)	% SSB change ***	% advice change ^	Probabil-ity of SSB (2026) < B _{lim} (%)
ICES advice basis												
MSY approach: $F = F_{MSY} \times SSB_{2025} / MSY_{B_{trigger}}$	1504	485	408	612	1019	0.182	0.048	0.134	8237	1.27	-21	0
Other scenarios												
F_{MSY}	1610	519	436	655	1091	0.196	0.051	0.145	8167	0.41	-15.4	0
$F_{MSY \text{ lower}} \times SSB_{2025} / MSY_{B_{trigger}}$	1043	336	283	424	707	0.124	0.032	0.091	8539	5.0	-45	0
$F_{MSY \text{ upper}} \times SSB_{2025} / MSY_{B_{trigger}}$	2166	698	587	881	1468	0.27	0.071	0.20	7794	-4.2	13.9	0.6
$F = F_{MSY \text{ lower}}$	1119	361	303	455	758	0.133	0.035	0.098	8486	4.3	-41	0
$F = F_{MSY \text{ upper}}$	2312	745	627	940	1567	0.293	0.077	0.22	7678	-5.6	22	0.6
$F = F_{pa}$	3054	984	828	1242	2070	0.403	0.105	0.2975	7130	-12.3	61	2.1
$F = 0$	0	0	0	0	0	0	0	0	9329	14.7	-100	0
$F = F_{lim}$	3625	1168	983	1474	2457	0.50	0.130	0.37	6723	-17.0	91	4.4
$SSB_{2026} = B_{lim}$	7560	2436	2050	3074	5124	1.41	0.37	1.04	3958	-51	297	50
$SSB_{2026} = B_{pa}$	5619	1811	1523	2285	3808	0.88	0.23	0.65	5294	-35	195	21.7
$SSB_{2026} = MSY_{B_{trigger}}$	743	239	201	302	503	0.087	0.023	0.064	8757	7.7	-61	0
Rollover advice	1902	613	516	773	1289	0.24	0.062	0.174	7990	-1.77	0	0.1
$F = F_{2024}$	734	236	199	298	497	0.086	0.022	0.063	8765	7.8	-61	0
$SSB_{2026} = SSB_{2025}$	1676	540	454	682	1136	0.21	0.054	0.151	8134	0	-11.9	0

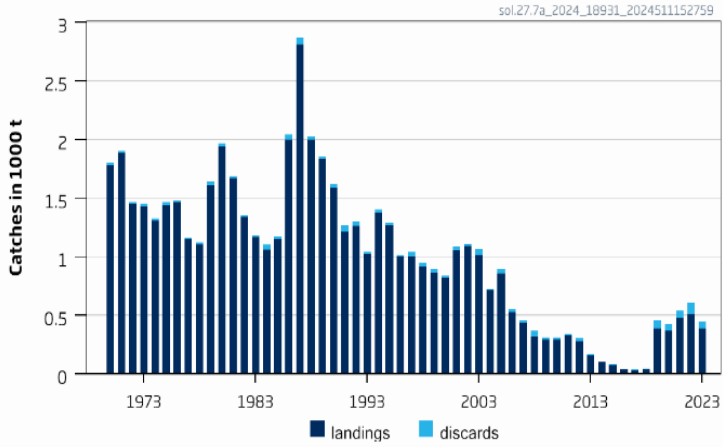
SAM
assessment

Sole in the Irish Sea (7.a)

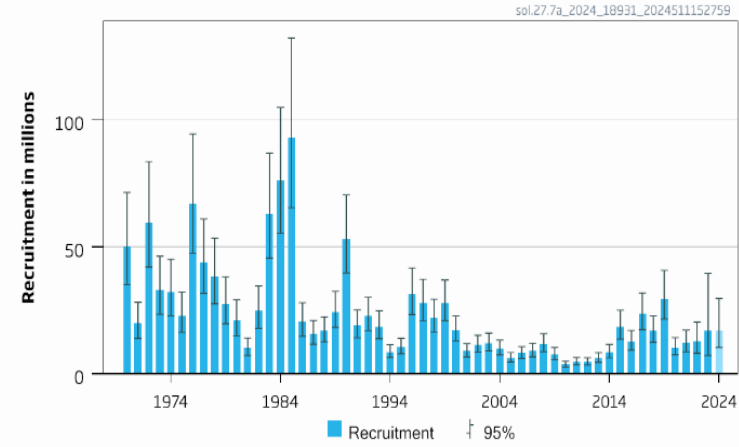
Advice for 2025, MSY: ≤ 609 t advice -2.6%

- 2024 advice revised after benchmark 2024 – 625 t
- F below FMSY
- SSB above MSY btrigger
- New model (SAM), revised data – including catch

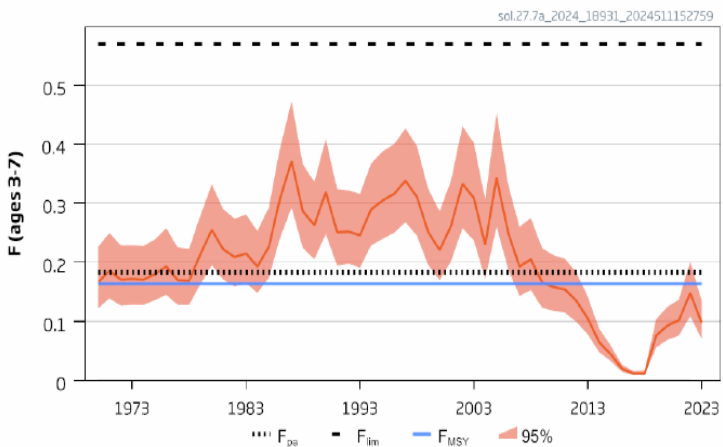
Catches



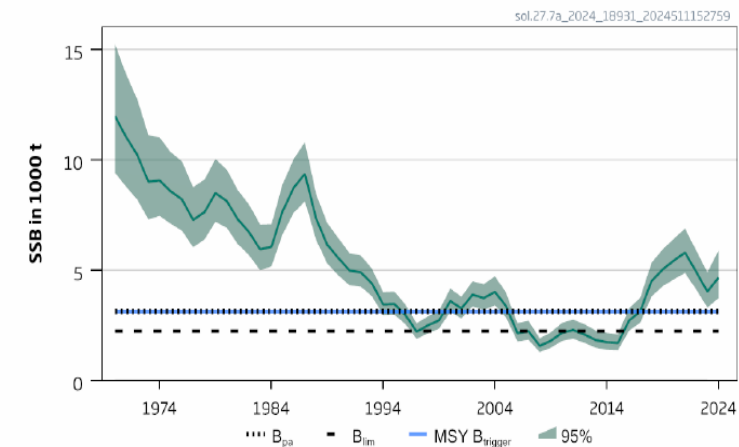
Recruitment (age 1)



F



SSB



Sole in the Irish Sea (7.a)

Catch (2023) : 443 t (13 % discards)

F(2024) = 0.116 (average 2021-2023)

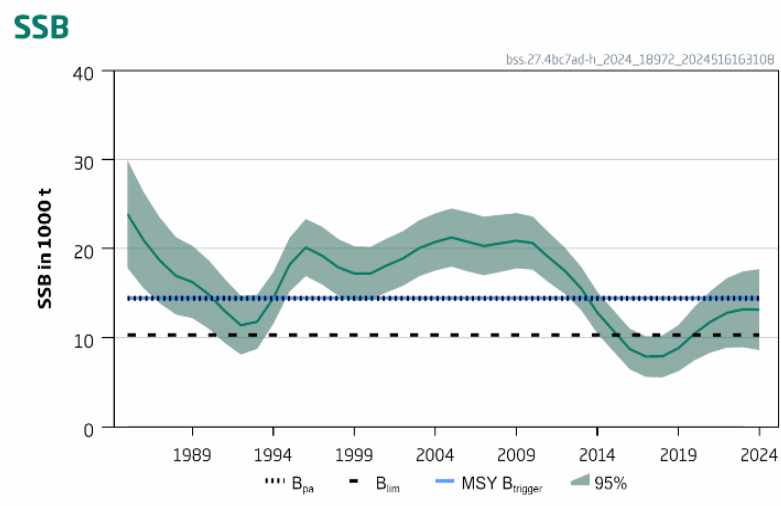
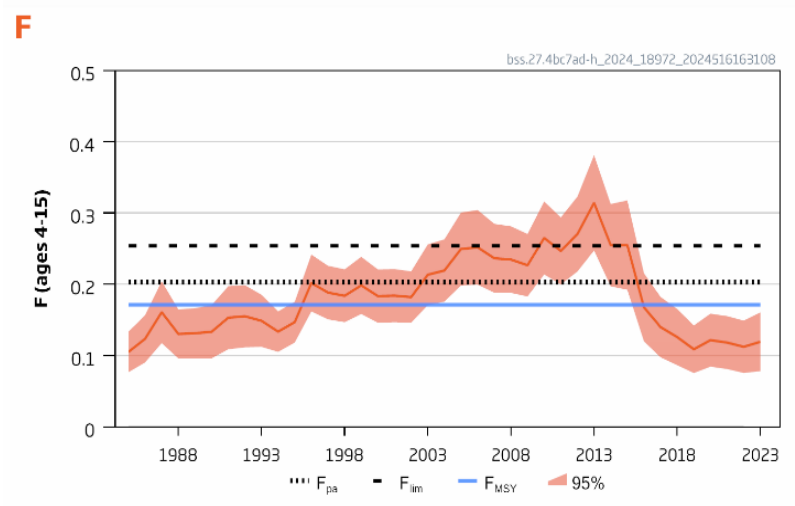
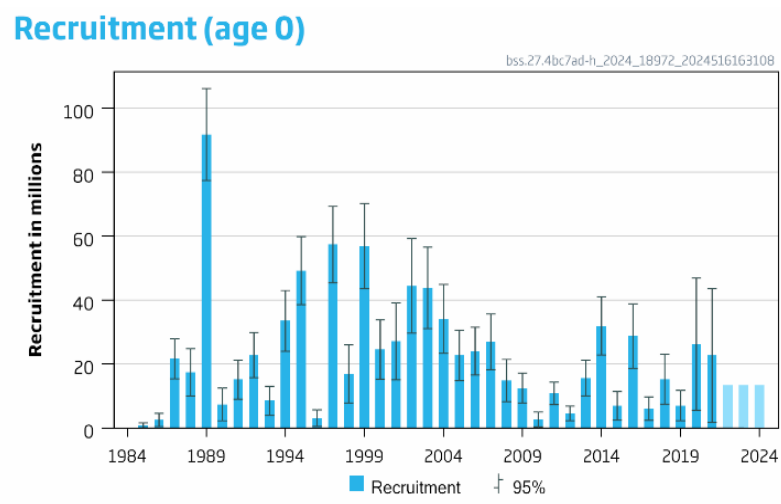
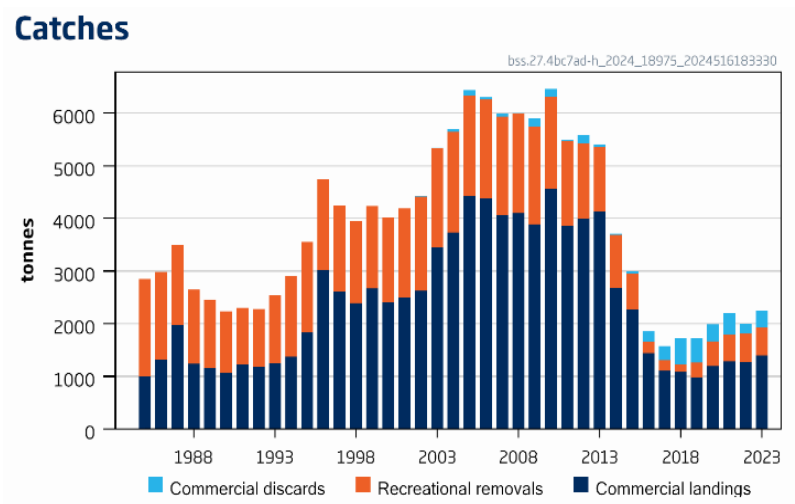
SSB (2025)= 4647 > MSY_{Btrigger} (3 129) F_{MSY}= 0.164

Table 2 Sole in Division 7.a. 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 of SSB (2026) < B _{lim} (%)
ICES advice basis										
MSY approach: F = F _{MSY}	609	529	80	0.164	0.131	0.033	4502	-3.1	-2.6	0.060
Other scenarios										
F = F _{MSY lower}	472	410	62	0.125	0.100	0.025	4633	-0.30	-24	0.030
F = F _{MSY upper}	673	585	88	0.183	0.147	0.036	4442	-4.4	7.7	0.110
F = 0	0	0	0	0	0	0	5088	9.5	-100	0
F = F _{pa}	673	585	88	0.183	0.147	0.036	4442	-4.4	7.7	0.110
F = F _{lim}	1786	1543	243	0.57	0.46	0.114	3471	-25	186	8.1
SSB ₂₀₂₆ = B _{lim}	3239	2769	470	1.40	1.12	0.28	2235	-52	420	50
SSB ₂₀₂₆ = B _{pa} = MSY B _{trigger}	2189	1887	302	0.75	0.60	0.149	3129	-33	250	16.4
SSB ₂₀₂₆ = SSB ₂₀₂₅	457	397	60	0.121	0.097	0.024	4647	0	-27	0.020
F = F ₂₀₂₄	440	382	58	0.116	0.093	0.023	4662	0.32	-30	0.0100

SAM

Advice for 2025, MSY: Catch ≤ 2 776 t: advice +14.1%



- SSB below MSYBtrigger
- F below F_{MSY}
- Higher recruitment – SSB now closer to trigger so adjustment to F is less

EU MAP : Catch: 2330 – 2776t (F_{MSY}: 2776t)

Sea bass in divisions 4.b–c, 7.a, and 7.d–h

Catch 2023: 2251 t (1397 t commercial, 316 t discards and 538 t recreational)

F (2024)= 0.117 (F_{sq} for commercial fishery and full compliance in recreational)

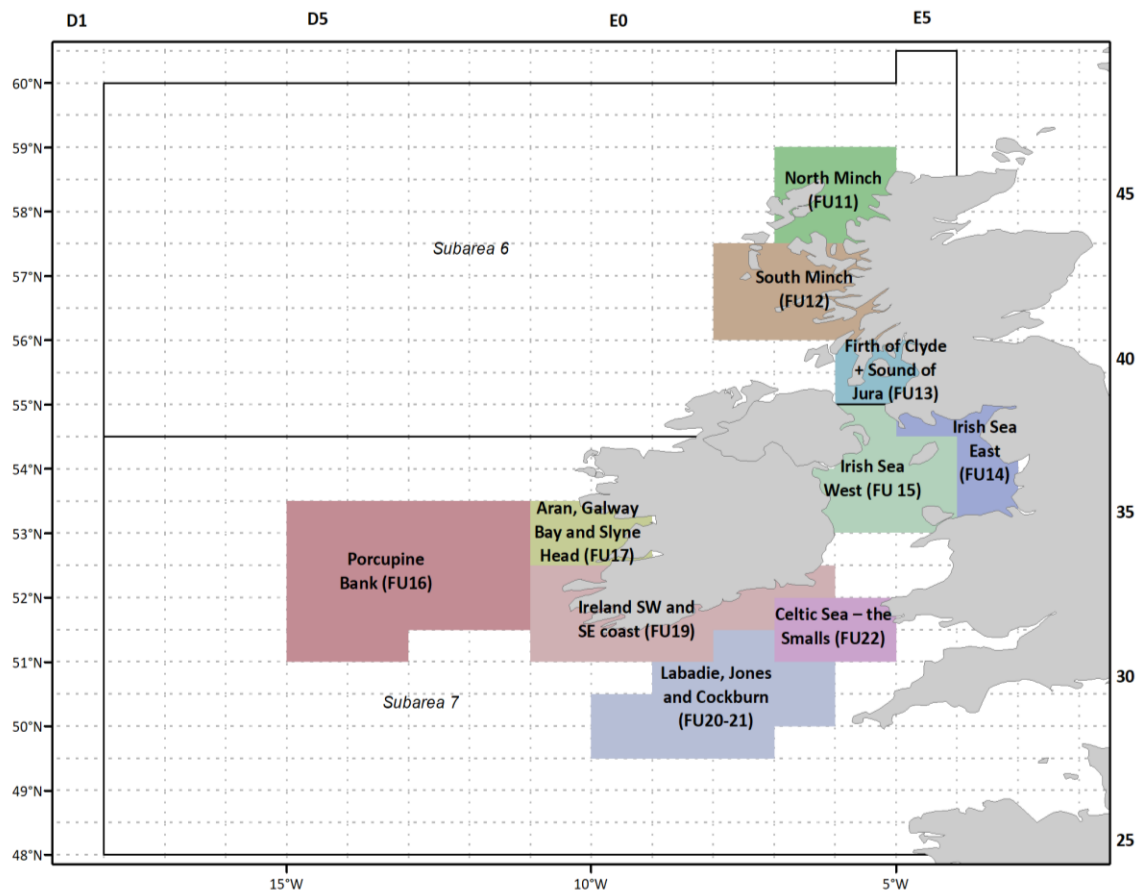
SSB(2025) = 113 358t > B_{lim} 10 313 t but < MSY B_{trigger} = 14 439 t F_{MSY} = 0.1713



Basis	Total removals* (2025)	F _{total} (2025)	SSB (2026)	% SSB change**	% advice change***
ICES advice basis					
MSY approach: F = F _{MSY} × SSB ₂₀₂₅ /MSY B _{trigger}	2776	0.159	13477	0.89	14.1
Other scenarios					
EU MAP [^] : F _{MSY} × SSB ₂₀₂₅ /MSY B _{trigger}	2776	0.159	13477	0.89	14.1
EU MAP [^] : F _{MSY lower} × SSB ₂₀₂₅ /MSY B _{trigger}	2330	0.131	13827	3.5	-4.2
EU MAP [^] : F _{MSY upper} × SSB ₂₀₂₅ /MSY B _{trigger}	2776	0.159	13477	0.89	14.1
F = F _{MSY lower}	2506	0.142	13689	2.5	3.0
F = F _{MSY}	2984	0.1713	13315	-0.32	23
F = F _{MSY upper}	2984	0.1713	13315	-0.32	23
F = 0	0	0	15672	17.3	-100
F _{pa}	3486	0.203	12923	-3.3	43
F _{lim}	4265	0.254	12319	-7.8	75
SSB ₂₀₂₆ = B _{lim}	6893	0.45	10313	-23	183
SSB ₂₀₂₆ = B _{pa}	1553	0.086	14439	8.1	-36
SSB ₂₀₂₆ = MSY B _{trigger}	1553	0.086	14439	8.1	-36
F = F ₂₀₂₄	2082	0.117	14022	5.0	-14.4
SSB ₂₀₂₆ = SSB ₂₀₂₅	2928	0.168	13358	0	20

SS3

Nephrops



FU	Advice 2024	Change	Basis
14 – Irish Sea, East	≤ 222 t	-72%	MSY
15 – Irish Sea, West	≤ 12008 t	+8.5%	MSY
19 – Irish Sea, Celtic Sea, eastern part of southwest Ireland	224-228 t	-27%	MAP

New advice released in autumn
 Management should be at FU level



**Thank you
for your
attention!**



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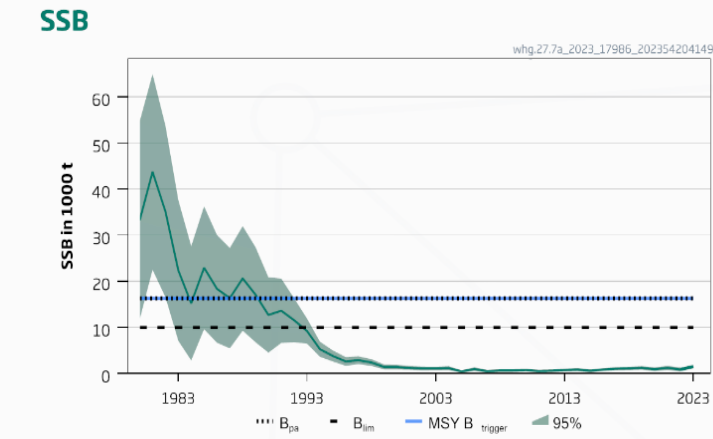
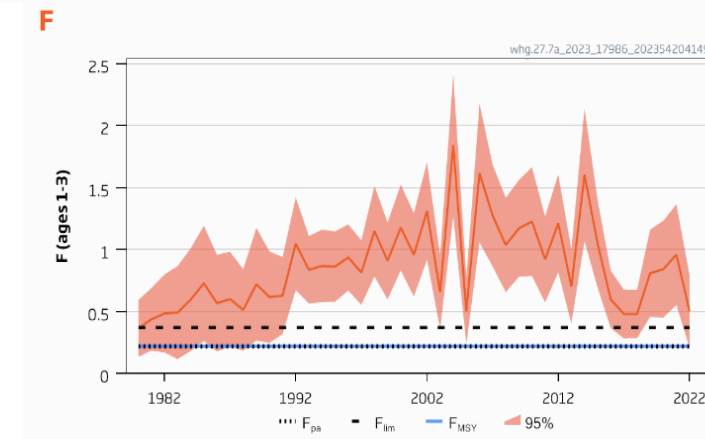
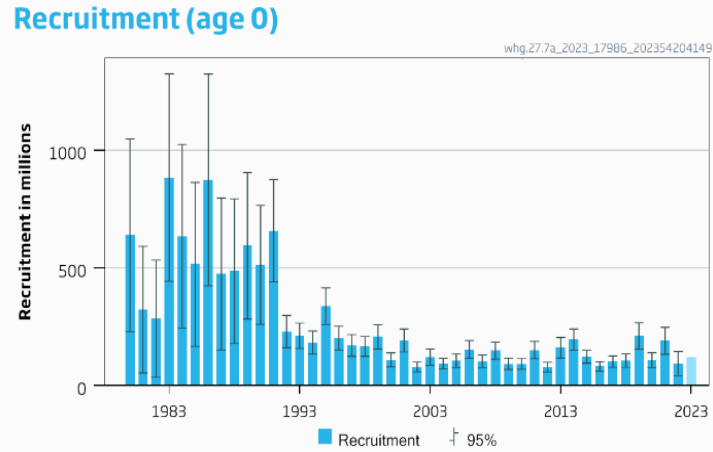
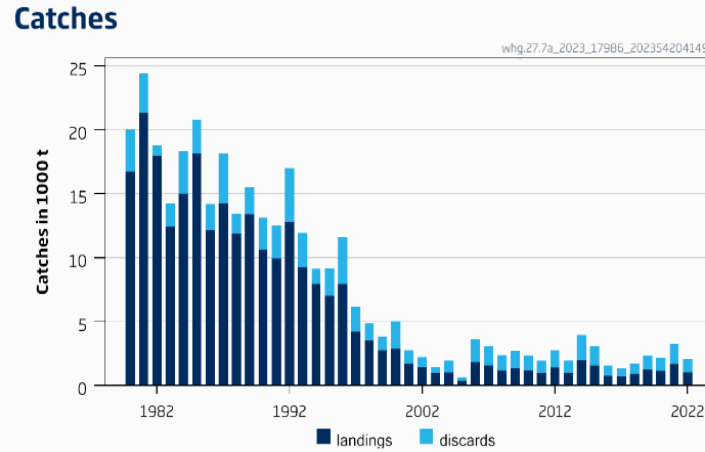
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Science for sustainable seas



Whiting in the Irish Sea (7.a)

Advice for 2024 and 2025, MSY: Catch = 0 no change



- Stock size is extremely low.
- Spawning-stock biomass (SSB) well below Blim since the mid-1990s.
- Recruitment has been low since the early 1990s.
- Fishing pressure (F) above F_{MSY} and F_{lim} .
- Discarding high; 97% in 2020 on catches of 1 118 t
- No NIMIK survey data and low discard sampling 2022 – minimal impact

Whiting in the Irish Sea (7.a)

Catch 2022: 1 043 t (95% discards)

F(2023)=0.77 (Fsq = average 2020-2022)

SSB(2024)=1096 < Blim (10 000 t) FMSY=0.22

Basis	Total catch (2024)	Projected landings (2024)	Projected discards (2024)	F total (2024)	Fprojected landings (2024)	Fprojected discards (2024)	SSB (2025)	% SSB change*	% advice change^^
ICES advice basis									
MSY approach: F = 0	0	0	0	0	0	0	2111	93	-
Other scenarios									
FMSY = Fpa	457	115	342	0.22	0.035	0.184	1706	56	-
F = 0	0	0	0	0	0	0	2111	93	-
FMSY lower	338	85	252	0.158	0.025	0.133	1811	65	-
FMSY upper	457	115	342	0.22	0.035	0.184	1706	56	-
FMSY × SSB ₂₀₂₄ /MSY Btrigger	33	9	25	0.0147	0.0023	0.0124	2081	90	-
FMSY lower × SSB ₂₀₂₄ /MSY Btrigger	24	6	18	0.0106	0.00169	0.0089	2089	91	-
FMSY upper × SSB ₂₀₂₄ /MSY Btrigger	33	9	25	0.0147	0.0023	0.0124	2081	90	-
Flim	729	182	548	0.37	0.059	0.31	1474	34	-
SSB ₂₀₂₅ = Blim^									
SSB ₂₀₂₅ = Bpa = MSY Btrigger^									
SSB ₂₀₂₅ = SSB ₂₀₂₄	1193	291	902	0.68	0.107	0.57	1096	0	-
SSB ₂₀₂₅ = SSB ₂₀₂₄ × 1.2	920	227	693	0.49	0.077	0.41	1315	20	-
F = F ₂₀₂₃	1313	318	995	0.77	0.122	0.65	1003	-8.5	-

ASAP
assessment
(NOAA)

Assessment and the advice are for Division 7.a, excluding the rectangles 33E2 and 33E3

Skates and rays

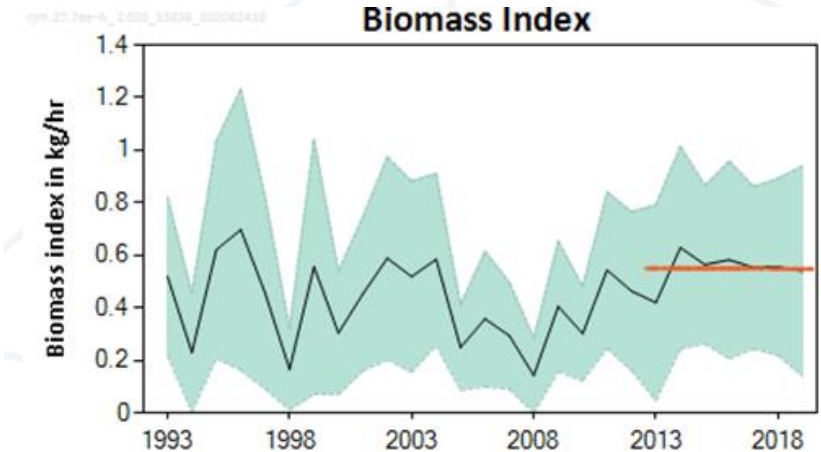
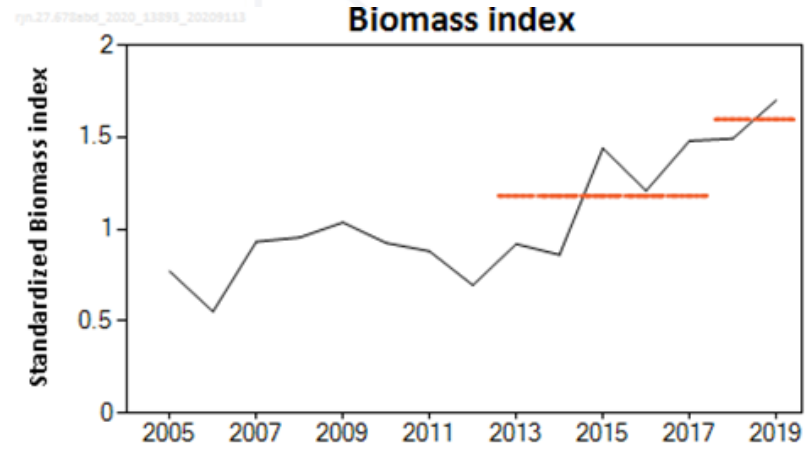
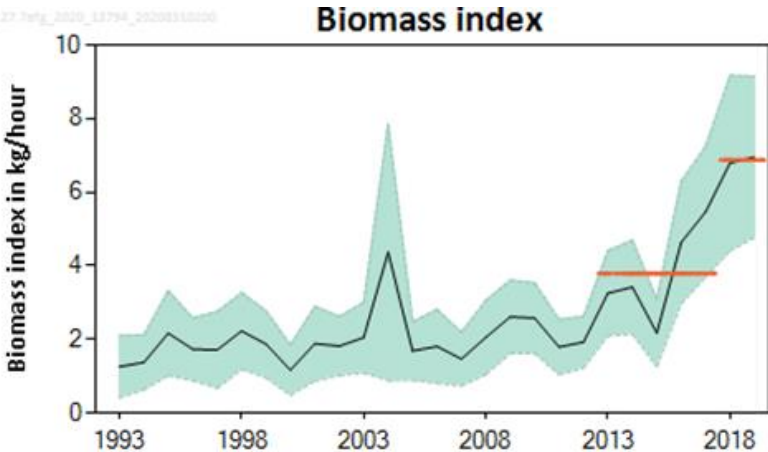
- Advice issued in 2020 for 2021/2022

Stock	Landings (2020)	Advice for 2022 Landings	Rationale
Thornback ray in 7.a and f-g	909	1596	PA - based on survey index (UK(E&W)-BTS-Q3)
Cuckoo ray in 6,7, 8abd	2453	3150	PA - based on survey indices (IGFS and EVHOE)
Spotted ray in 7.a and 7.e-h	741	1041	PA - based on survey index (UK(E&W)-BTS-Q3)
Blonde ray in 7.a and f-g	716	1703	PA - based on historical landings

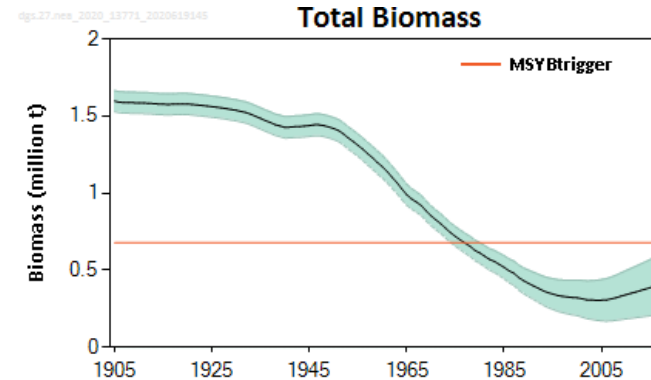
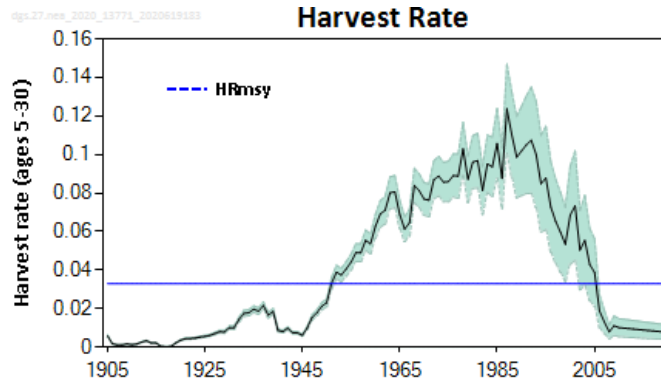
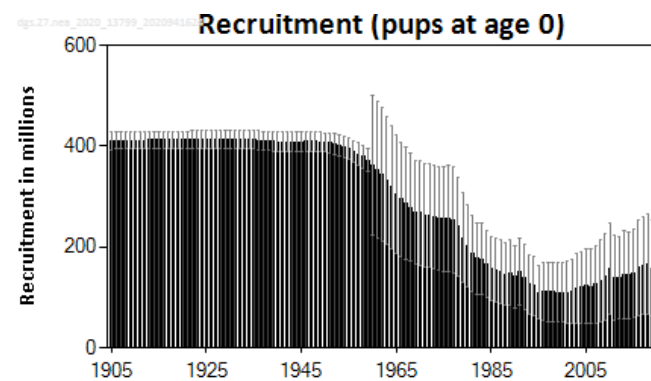
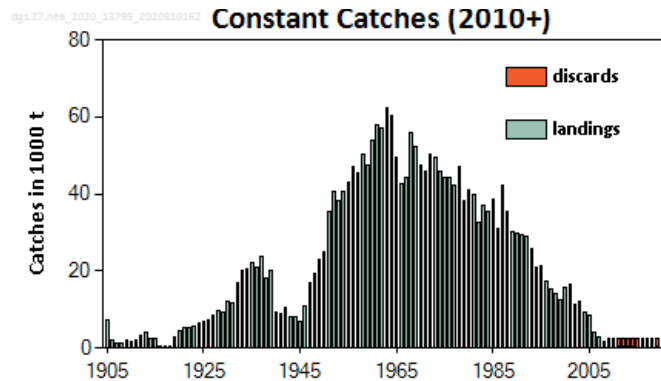
Thornback ray in 7.a, fg

Cuckoo ray in 6, 7, 8 abd

Spotted ray in 7.a , 7e-h



Advice issued in 2020 for 2021/2022: No targeted fisheries.



- Catch in 2019 - 3620 t
- Stock benchmarked in 2021.
 - New catch estimates including discards.
 - Additional survey indices
 - Fecundity data
 - Reference points
- New assessment using the benchmark results in 2022.