

## Greater silver smelt (*Argentina silus*) in divisions 5.b and 6.a (Faroes grounds and west of Scotland)

### ICES advice on fishing opportunities

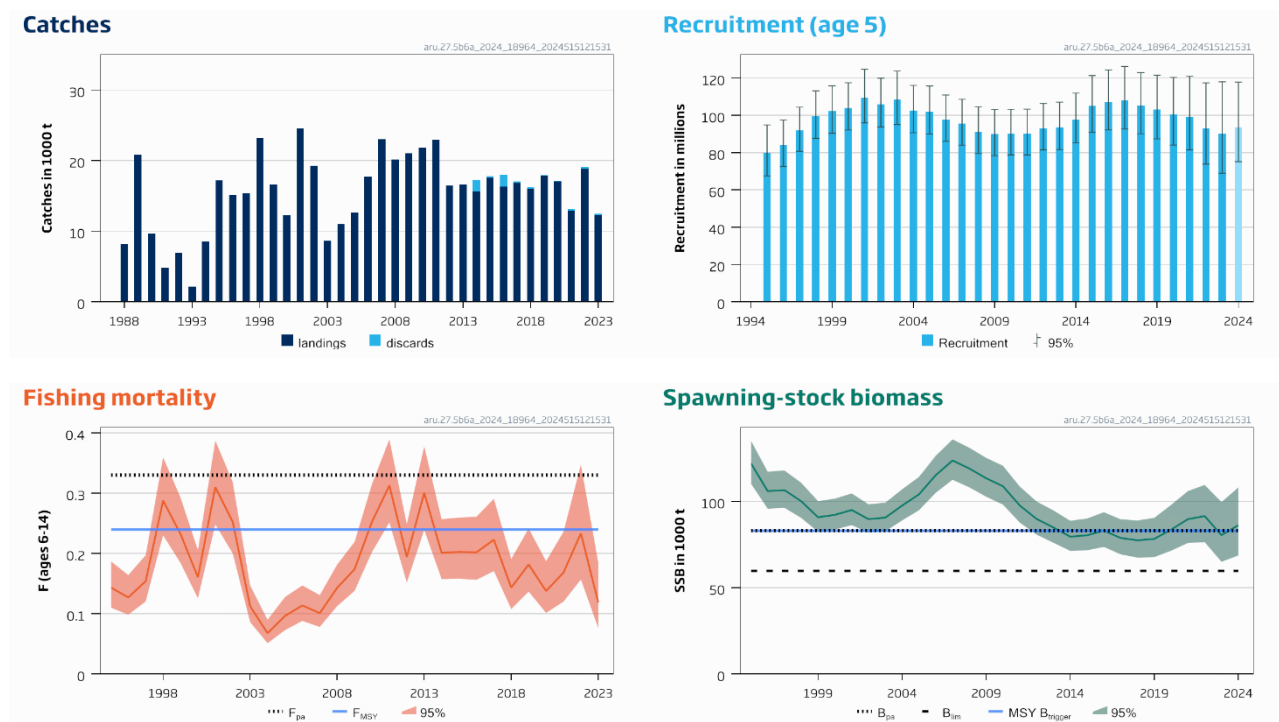
ICES advises that when the MSY approach is applied, catches in 2025 should be no more than 18 966 tonnes.

### ICES Non-fisheries conservation considerations

ICES has not identified any conservation aspects other than those related to the commercial fisheries.

### Stock development over time

Fishing pressure on the stock is below  $F_{MSY}$  and  $F_{pa}$ . Spawning-stock size is above MSY  $B_{trigger}$ ,  $B_{pa}$ , and  $B_{lim}$ .



**Figure 1** Greater silver smelt in divisions 5.b and 6.a. Summary of the stock assessment with plots showing 95% confidence intervals. Catches, recruitment (R), fishing mortality (F), and spawning-stock biomass (SSB). The assumed recruitment value for 2024 is shaded in a lighter colour.

### Catch scenarios

**Table 1** Greater silver smelt in divisions 5.b and 6.a. Assumptions made for the interim year and in the forecast. Weights are in tonnes.

Variable	Value	Notes
$F_{ages\ 6-14}$ (2024)	0.24	Based on a catch of 17 967 tonnes for 2024
SSB (2025)	80882	Median SSB calculated within the short-term forecast
$R_{age\ 5}$ (2024–2026)	94096	Mean recruitment, calculated from the past three years; thousands
Total catch (2024)	17967	Catch constraint based on the ratio of TAC to catch since 2010 (ICES, 2023b)

**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

\* SSB 2026 relative to SSB 2025.

^ Advice value for 2025 relative to advice value for 2024 (17695 tonnes).

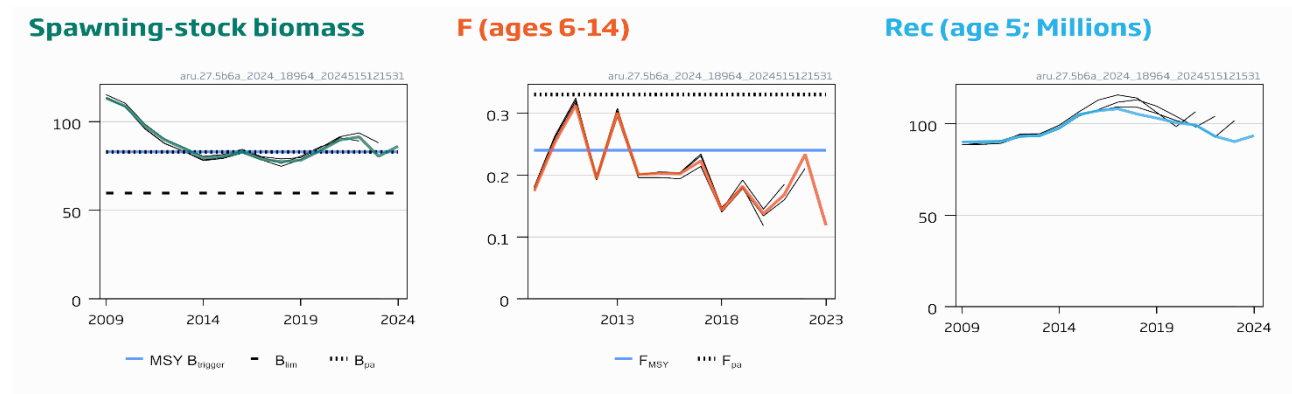
### Basis of the advice

**Table 3** Greater silver smelt in divisions 5.b and 6.a. The basis of the advice.

Advice basis	MSY approach
Management plan	ICES is not aware of any agreed precautionary management plan for greater silver smelt in this area

### Quality of the assessment

The results of the current assessment are consistent with the previous assessment.



**Figure 2** Greater silver smelt in division 5.b and 6.a. Historical assessment results. Final-year recruitment and biomass estimates are included.

### Issues relevant for the advice

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.

The forecast assumes that catch will exceed TAC in 2024 by the ratio of TAC to catch since 2010. If the TAC does not exceed the catch then the biomass will be underestimated in the forecast.

This stock is classified as Category 4 in the NEAFC categorization of deep-sea species/stocks (NEAFC, 2016). This implies that fisheries are primarily restricted to coastal state exclusive economic zones (EEZs); therefore, management measures are not taken by NEAFC unless complementary to coastal state conservation and management measures.

## Reference points

**Table 4** Greater silver smelt in divisions 5.b and 6.a. Reference points, values, and their technical basis. Weights are in tonnes.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	82999	$B_{pa}$	ICES (2021)
	$F_{MSY}$	0.24	Stochastic simulations (EqSim) with segmented regression fixed at $B_{lim}$	ICES (2022)
Precautionary approach	$B_{lim}$	59730	$B_{lim} = B_{pa} / \exp(\sigma \times 1.645), \sigma = 0.2$	ICES (2021)
	$B_{pa}$	82999	$B_{loss}$ , lowest observed SSB (2014) from 2020 benchmark	ICES (2021)
	$F_{lim}$	Not defined		ICES (2022)
	$F_{pa}$	0.33	The F that provides a 95% probability for SSB to be above $B_{lim}$	ICES (2022)

## Basis of the assessment

**Table 5** Greater silver smelt in divisions 5.b and 6.a. Basis of the assessment and advice.

ICES stock data category	1 ( <a href="#">ICES, 2023</a> )
Assessment type	Age-based analytical assessment (SAM model) (Nielsen and Berg, 2014) that uses catches in the model and in the forecast (TAF: <a href="https://github.com/ices-advice/2024_aru.27.5b6a">https://github.com/ices-advice/2024_aru.27.5b6a</a> )
Input data	Commercial catches (mainly Faroese and Dutch catches, ages and length frequencies from catch sampling); indices from the Faroese groundfish summer survey (G3284), Faroese Deepwater survey (G2728), MSS Deepwater Slope Survey (G6642), and combined and standardized commercial CPUE from Faroe Islands and EU fleets; time invariant maturity ogive; natural mortalities set at 0.15 (ICES, 2023b)
Discards and bycatch	ICES can only quantify discards since 2014. Discards have been < 2% since 2017.
Indicators	None
Other information	Benchmark in 2020 (ICES, 2021)
Working group	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources ( <a href="#">WGDEEP</a> )

## History of the advice, catch, and management

**Table 6** Greater silver smelt in divisions 5.b and 6.a. ICES advice and official landings. Weights are in tonnes.

Year	ICES advice <sup>a</sup>	Catch corresponding to advice	TAC Faroes in Faroese EEZ	EU TAC subareas 5–7	UK TAC subareas 5–7	ICES landings
2003	No fisheries unless data collection on (by)catch; no expansion unless proven to be sustainable	-		6247		8623
2004	Biennial	-		6247		10997
2005	No fisheries unless accompanied by programmes to collect data on both target and bycatch fish	-		5310		12606
2006	Biennial	-		5310		17699
2007	The fishery should not be allowed to expand unless it can be shown that it is sustainable	-		5311		23035
2008	Biennial	-		5311		20142
2009	Same advice as 2007	-		5311		21007
2010	Biennial	-	< 18000	5099		21846
2011	The fishery should not be allowed to expand, and a reduction in catches should be considered	-	< 18000	4691		22969
2012	No new advice, same as 2011		< 18000	4316		16432
2013	Reduce catches by 10%	31300	< 18000	4316		16618
2014	No new advice, same as 2013	31300	16000	4316		15663
2015	No new advice, same as 2013	31300	14400	4316		17548
2016	Precautionary approach including PA buffer	10030	13000	4316		16330

Year	ICES advice <sup>^</sup>	Catch corresponding to advice	TAC Faroes in Faroese EEZ	EU TAC subareas 5–7	UK TAC subareas 5–7	ICES landings
2017	Biennial	10030	11500	3884		16806
2018	Precautionary approach	≤ 12036	11700	4661		16033
2019	Precautionary approach (same value as advised landings for 2018)	≤ 12036	11700	4661		17830
2020	Precautionary approach	≤ 7703	11700	3729		17014
2021	Precautionary approach (same value as advised landings for 2020)	≤ 7703	11700	3521	208	12948
2022	MSY approach	≤ 24493	18000	10976	650	18849
2023	MSY approach	≤ 17078	12700	7670	454	12245*
2024	MSY approach	≤ 17695	12800	7929	469	
2025	MSY approach	≤ 18966				

<sup>^</sup> Until 2016, the advice was combined for subareas 1, 2, 4, 6–10, 12, and 14; and for divisions 3.a and 5.b.

\* Preliminary.

### History of the catch and landings

There are no reported catches in the NEAFC regulatory areas.

**Table 7** Greater silver smelt in divisions 5.b and 6.a. Catch distribution by fleet in 2023 as estimated by ICES.

Catch (2023)	Landings	Discards
12438 tonnes	100% trawl	Negligible (192 t)
	12245 tonnes	

**Table 8** Greater silver smelt in divisions 5.b and 6.a. History of commercial landings; ICES estimated values are presented by country. Weights are in tonnes.

Year	Denmark	Faroes	France	Germany	Iceland	Ireland	Lithuania	Netherlands	Norway	Poland	UK (EWNI)	UK (Scotland)	Russian Federation	Spain	Total
1988		287				3040			4884						8211
1989		299				1325		3715	11984			3369	116		20808
1990		3574		14		110		5870				112	3		9683
1991		59	7					4709				11			4786
1992		1439	1			100		4964				466	4		6974
1993		1063						663				406			2132
1994		960		43				6217				1375			8595
1995		6017		284				3706				465	6752		17224
1996		9495		1384		295		3953				3			15130
1997		8433		1496		1089		4309							15327
1998		17570		464		405		4696							23135
1999		8186	5	24		168		8188			28	15			16614
2000		3713	83	403		3178		3436				247	1185		12245
2001		9572	7	189		5839		3654				4871	414		24546
2002		7058	1	150		3035		4014			424	4280	264		19226
2003		6261		26		1		2009				81	245		8623
2004		3441	147	652		46		5460				549	702		10997
2005		7042	10	125		18		5291				61	59		12606
2006		12606		213				4841				3	35	1	17699
2007		14339		589				8062	35				8	2	23035
2008		15921		10				4186	6				19		20142
2009		18123		115				2616	83			6	64		21007
2010		18627						3139	7			60	13		21846
2011		19233						3724			2	2	8		22969
2012		12525		538				3248			5	5	111		16432

Year	Denmark	Faroes	France	Germany	Iceland	Ireland	Lithuania	Netherlands	Norway	Poland	UK (EWNI)	UK (Scotland)	Russian Federation	Spain	Total
2013	388	14306		417				1380					127		16618
2014	711	11242		1018				2332					360		15663
2015		14080	0	1066	132			2154	0				115		17548
2016		13179	0	267	345			2526				0	13		16330
2017	0	11727		600	63			4407	2				6		16806
2018		12087	8	1001				2763	5	1			168		16033
2019	0	12174	4	954	6	6		4540		32			114	0	17830
2020	0	12045	8	384		0	114	4330		111			22	0	17014
2021	0	8552	17	336	20	0		4019		1		3		0	12948
2022	4	9408	1	728	15	4		8664	0	21	6				18849
2023*	15	6156	0	886		0	13	5074		102		0		0	12245

\* Preliminary.

**Table 9** Greater silver smelt in divisions 5.b and 6.a. Discards in tonnes (<0.5 t) reported to InterCatch unless otherwise specified with ^.

Year	Division 5.b				Division 6.a					Divisions 5.b and 6.a	
	France	Germany	Netherlands	UK (Scotland)	France	Germany	Netherlands	Spain	UK (Scotland)	Total	% of catch
2014		28			808 <sup>^</sup>	92			653	1 581	8.4
2015					161 <sup>^</sup>				109	270	1.5
2016	12 <sup>^</sup>				200 <sup>^</sup>				1 451	1 663	8.5
2017	31		0		217		9		14	270	1.6
2018	2				118				67	187	1.1
2019					13			9	64	86	0.5
2020				0			0	2	124	127	0.7
2021								0	156	157	1.2
2022								83	159	243	1.3
2023*				0				104	88	192	1.5

<sup>^</sup> Reported to WGDEEP.

\* Preliminary.

**Summary of the assessment**

**Table 10** Greater silver smelt in divisions 5.b and 6.a. Assessment summary. Weights are in tonnes, recruitment in thousands. High and Low indicate 95% confidence intervals.

Year	Recruitment			Spawning-stock biomass			Landings	Discards	Fishing mortality		
	Low	Age 5	High	Low	SSB	High			Low	Ages 6–14	High
	thousands			tonnes			tonnes				
1988							8211				
1989							20808				
1990							9683				
1991							4786				
1992							6974				
1993							2132				
1994							8595				
1995	67519	80041	94886	11028	12215	135290	17224		0.11	0.144	0.187
1996	72618	84172	97563	95727	10593	117227	15130		0.09	0.127	0.164
1997	80722	91810	104422	96230	10653	117953	15327		0.12	0.154	0.197
1998	87679	99608	113161	90363	10003	110749	23135		0.23	0.29	0.36
1999	90403	102321	115810	82314	90793.	100146	16614		0.18	0.23	0.29
2000	92182	104076	117506	83667	92210.	101626	12245		0.12	0.161	0.21
2001	95981	109423	124746	86246	94996.	104635	24546		0.25	0.31	0.39
2002	93740	106049	119973	81824	89707.	98351.2	19226		0.2	0.25	0.32
2003	95107	108506	123794	82665	90594.	99284.7	8623		0.08	0.113	0.147
2004	90703	102614	116089	88939	97571.	107042	10997		0.05	0.068	0.09
2005	89979	102052	115746	94820	10405	114184	12606		0.07	0.096	0.128
2006	86112	97734	110926	10493	11519	126470	17699		0.08	0.114	0.147
2007	83982	95529	108663	11249	12367	135965	23035		0.07	0.101	0.131
2008	79583	91222	104564	10808	11903	131088	20142		0.11	0.143	0.182
2009	78409	89940	103168	10268	11339	125222	21007		0.13	0.174	0.22
2010	78825	90206	103232	98054	10877	120656	21846		0.2	0.25	0.32
2011	78833	90271	103368	87696	97601.	108626	22969		0.25	0.31	0.39
2012	81444	93106	106439	80712	89830.	99978.2	16432		0.15	0.194	0.25
2013	81706	93546	107102	76018	84893.	94805.8	16618		0.24	0.3	0.38
2014	85323	97741	111967	71287	79575.	88826.7	15663	1581	0.15	0.2	0.26
2015	90875	105012	121347	71640	80335.	90086.7	17548	270	0.15	0.2	0.26
2016	92249	107113	124371	73603	83070.	93755.5	16330	1663	0.15	0.2	0.26
2017	92711	108190	126253	69290	78818.	89657.1	16806	270	0.17	0.22	0.29
2018	90166	105306	122989	67424	77449.	88964.5	16033	187	0.10	0.143	0.191
2019	87424	103101	121590	67707	78266.	90471.2	17830	86	0.13	0.182	0.24
2020	84080	100601	120367	71382	83628.	97973.9	17014	127	0.10	0.138	0.187
2021	81526	99322	121003	75886	89682.	105986	12948	157	0.12	0.168	0.24
2022	73884	93156	117456	76367	91474.	109570	18849	242	0.15	0.23	0.35
2023	68967	90214	118008	64969	80462.	99651.6	12245*	192*	0.07	0.119	0.185
2024	75159**	93527**	117842**	68636	86173	108070					

\* Preliminary.

\*\* Mean 2021–2023 recruitment from stochastic forecast.

## Sources and references

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### [Download the stock assessment data and figures](#)

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