





















## SUMMARY OF 2022 ICES ADVICE FOR PELAGIC SPECIES

	Date of advice	Status of key stocks in 2021 and 2022 (more detail in the following pages)	ICES Catch advice	TAC for previous year	SSB Compared with previous yr	Pg
<b>Blue whiting combined stock I-IX, XII &amp; XIV</b>	<b>Sept 2022</b>	The 2020-year class is estimated to be historically high (71.6 billion) and will be fully recruited to the fishery in 2023. The revision of the 2020 year- class is due to a historically high survey index value in 2022 (corroborated by high commercial catch-at-age of the same year class in 2021 and 2022).	<b>1,359,629 (2023)</b>	<b>752,736 (2022)</b>		<b>4</b>
<b>Barents Sea capelin</b>	<b>Oct 2021</b>	Spawning-stock biomass (SSB) has been declining since 2018. The advice for 2022 has increased from zero in 2021 because the maturing stock is estimated to be larger.	<b>70,000 (2022)</b>	<b>Zero (2021)</b>		<b>5</b>
<b>Capelin Iceland East Greenland Jan Mayen</b>	<b>Nov 2021</b>	The initial advice for 2022/2023 is the same as the initial advice for the 2021/2022 fishing season, because the estimated number of immature fish was in both years high enough to reach the 400,000 tonne cap on the initial TAC.	<b>400,000 (2022/23)</b>	<b>400,000 (2021/22)</b>		<b>5</b>
<b>Herring N Sea autumn spawners</b>	<b>June 2022</b>	The stock level has been decreasing in recent years because of ongoing low recruitment. The basis for the 22% decrease in catch advice is mainly due to the decline in stock biomass.	<b>414,886 (2023)</b>	<b>532,1832 (2022)</b>		<b>6</b>
<b>Herring Icelandic summer spawners</b>	<b>June 2022</b>	Fishing pressure on the stock is below the harvest rate for the management plan. The spawning stock size is above all the reference points. The infection rates of <i>Ichthyophonus</i> infection remain high.	<b>66,195 (2022/23)</b>	<b>72,239 (2021/22)</b>		<b>6</b>
<b>Norwegian spring spawning herring</b>	<b>Sept 2022</b>	The advice for 2023 is 15% lower than for 2022 because the stock size is declining, as a result of low recruitment since the large 2016-year class.	<b>511,171 (2023)</b>	<b>598,588 (2022)</b>		<b>7</b>
<b>Mackerel in the Northeast Atlantic</b>	<b>Sept 2022</b>	In 2022, there has been an upwards revision of SSB and a downwards revision of fishing mortality for the period 2007 to 2017, and a revision in the opposite direction for the most recent SSB and F estimates.	<b>782,066 (2023)</b>	<b>794,920 (2022)</b>		<b>8</b>

	Date of advice	Status of key stocks in 2020 and 2021 (more detail in the following pages)	ICES Catch advice	TAC for previous year	SSB Compared with previous yr	Pg
Norway pout in the North Sea	Oct 2022	Stock size is highly variable from year to year. Spawning-stock size is above precautionary levels.	116,823 (2023)	118,273 (2022)		9
Sandeel in the Dogger Bank (1r)	Feb 2022	Catch advice for 2022 is zero because no fishing mortality that can bring the stock above MSY Bescapement due to low stock and year class size in 2021. 2019 recruitment value have been revised further downwards.	Zero (2022)	5,464 (2021)		10
Sandeel in central and southern N Sea (2r)	Feb 2022	Large increase in advice from a zero advice for 2021 is due to the large 2021 year class, which is expected to contribute to catches in 2022, resulting in an SSB above MSY Bescapement by 1 January 2023	71, 859 (2022)	5,000 Monitoring (2021)		10
Sandeel in north/central N Sea (3r)	Feb 2022	This stock was inter-benchmarked in 2020. A density dependency has been included to account for overestimation of recruitment and SSB of large incoming year classes when recruitment is above average.	85,559 (2022)	161,335 (2021)		10
Sandeel in north/central N Sea (4)	Feb 2022	Zero catch is advised because there is no catch that will maintain the stock above MSY Bescapment in 2023 due to low recruitment since 2020	Zero (2022)	77,512 (2021)		11
Sandeel 6.a West of Scotland	Feb 2021	The available information on sandeel in Division 6.a is inadequate to evaluate stock status	Zero (2021)	No TAC (2020)		11
Sandeel in Viking and Bergen Banks (5r)	Feb 2022	ICES advice for this stock has been for zero catch since 2011. Available information is inadequate to evaluate stock status or trends so status is unknown.	Zero (2022)	Zero (2021)		11
Sandeel in the Kattegat (6)	Feb 2022	Available information is inadequate to evaluate stock status or trends. The state of the stock is therefore unknown.	140 (2022)	140 (2021)		11
Sandeel in Shetland (7r)	Feb 2022	ICES advice for this stock has been for zero catch since 2013, and advice remains at zero catch for 2021 and 2022	Zero (2022)	Zero (2021)		11
Sprat in the Baltic	May 2022	The advised catches for 2023 have declined by 15% compared to those for 2022 mainly because of the low 2021-year class.	183,749 - 317,905	214,000 - 373,210 (2021)		12

	Date of advice	Status of key stocks in 2020 and 2021 (more detail in the following pages)	ICES Catch advice	TAC for previous year	SSB Compared with previous yr	Pg
Sprat in the Skaggeiak/ Kattegat/ North Sea	May 2022	The 36% reduction in advised catch this year is due to the decrease in stock size following the low recruitment observed in 2021.	68,690 (2022/23)	106,715 (2021-22)		12
Sprat in the West of Scotland/S. Celtic Sea	June 2021	Adult stock size and fishing pressure are unknown.	1,446 (2021-22)	2,800 2020-21		13
Sprat in the English Channel	May 2022	The large increase in advice for 2022/2023 in relation to the 2022 advice is due to a substantial increase in survey biomass.	9,200 (2023)	2,897 (2022)		13

**KEY**

**Fishing mortality** – Removals from a stock by fishing.

**Spawning Stock Biomass** – total weight of all sexually mature fish in the stock.

**MSY** – Maximum Sustainable Yield.

$F_{MSY}$  fishing at levels that catch the maximum proportion of a fish stock that can safely be removed on a continuous basis.

$B_{MSY}$  spawning stock biomass that results from fishing at  $F_{MSY}$  for a long time.

$MSY B_{trigger}$  value of spawning stock biomass that triggers a specific management action.

**PA – Precautionary Approach**

$F_{pa}$  precautionary reference point for fishing mortality.

$F_{lim}$  minimum limit (fishing limit reference point).

$B_{pa}$  precautionary reference point for spawning stock biomass (SSB)

$B_{lim}$  limit reference point for spawning stock biomass (SSB)

$B_{escapement}$  biomass reference point for short-lived species. Target is to leave reference SSB to spawn the next year

**Mg'ment – Management Plan** – agreed by all parties to maintain/rebuild stocks.


$F_{MGT}$  fishing mortality reference point as defined in management plans.

$B_{MGT}$  fishing mortality reference point as defined in management plans.



**Cpue** – Catch per unit effort. **Lpue** – Landing per unit effort.

*In the following tables a very simple statement has been included on the status of the spawning stock biomass in comparison with the previous year. This is an estimate based on ICES stock status information and is not necessarily definitive.*



## BLUE WHITING

Stock	TAC for 2022 Tonnes	Status of stock in September 2022	*Fishing mortality	TAC advice for 2023	*Stock status
<b>Inside safe biological limits</b>					
Blue whiting combined stock Sub-areas I-IX, XII and XIV  <b>September 2022</b>	752,736 (2022)	This year's assessment shows a substantial revision. The 2020-year class is estimated to be historically high (71.6 billion) and will be fully recruited to the fishery in 2023. Last year's estimate was 22.8 billion. Fishing mortality (F) in 2021 is revised downward by 29%, and SSB in 2021 upward by 46%. The revision of the 2020 year- class is due to a historically high survey index value in 2022 (corroborated by high commercial catch-at-age of the same year class in 2021 and 2022). The catch for 2021 was 9.1% lower than the preliminary value used last year, which contributes to the revision of F and SSB in this year's assessment. Other surveys, which are not presently used in the assessment, confirm a very large 2020-year class.	Fishing pressure on the stock is above FMSY and Fpa but below Flim.	ICES advises that when the MSY approach is applied, catches in 2023 should be no more than 1,359,629 tonnes.  The advice for 2023 is 81% higher than that for 2022, because of a large upward revision of estimated recruitment in 2021 (age 1).  There have been consistent deviations from the long-term management strategy since 2018 as evident from the sum of unilateral quotas. Failing to adhere to the advised catches, as derived from the application of the MSY approach, or the long-term management strategy, may not be precautionary. Specifically, this may result in an increased risk for the stock to fall below Blim, loss of catch in the long term and unsustainable utilization of the resource.	<b>IMPROVING</b>    <b>Spawning stock biomass</b> is above MSY Btrigger, Bpa, and Blim


**CAPELIN**

Stock	TAC Tonnes	Status of stock	*Fishing mortality	TAC advice	*Stock status
<b>Reference points not fully defined</b>					
<b>Advice in October 2021</b>					
Barents Sea capelin Subareas I and II, excluding Division IIa west of 5°W.  <b>October 2021.</b>	Zero (2021)	In Oct 2021. Spawning-stock biomass (SSB) has been declining since 2018. The advice for 2022 has increased from zero in 2021 because the maturing stock is estimated to be larger.	No reference points for fishing pressure have been defined for this stock	ICES advises that when the management plan of the Joint Norwegian–Russian Fisheries Commission (JNRFC) is applied, catches in 2022 should be no more than 70,000 tonnes.	<b>INCREASING</b>    <b>Spawning stock biomass size</b> is above Blim.
<b>Advice in November 2021</b>					
Capelin in the Iceland East Greenland Jan Mayen area Subareas V and XIV and Division IIa west of 5°W  <b>November 2021</b>	400,000 (2021/22)	The initial advice for 2022/2023 is the same as the initial advice for the 2021/2022 fishing season, because the estimated number of immature fish was in both years high enough to reach the 400,000 tonne cap on the initial TAC	No reference points for fishing pressure have been defined for this stock.	ICES advises that when the harvest control rule agreed in 2015 by the Coastal States is applied, the initial TAC for the fishing season 15 October 2022–15 April 2023 should be 400,000 tonnes. The initial TAC is expected to be revised based on acoustic survey information in autumn 2022 (intermediate TAC) and with the final TAC being set based on the results of the winter survey in 2023.	<b>INCREASING</b>    <b>Spawning stock biomass</b> is above Blim and Bmgt.

## HERRING

Stock	TAC advice Tonnes	Status of stock in 2022	*Fishing mortality	TAC advice for 2023	*SSB Status
<b>Inside safe biological limits</b>					
Herring in IV and VIId North Sea, Eastern English channel - autumn spawners  <b>June 2022</b>	532,183 in 2022	The basis for the 22% decrease in catch advice is mainly due to the decline in stock biomass. Additionally, the spawning stock biomass in the forecast year (2023) is forecast to be below MSY Btrigger which implies that the fishing pressure is scaled down from the FMSY reference point.  The stock level has been decreasing in recent years because of ongoing low recruitment.	Fishing pressure on the stock is below FMSY.	ICES advises that when the MSY approach is applied, catches in 2023 should be no more than 414,886 tonnes.  The application of the MSY advice rule with these reference points, in combination with low recruitment, may keep the stock below MSY Btrigger in the short to medium term.	<b>DECLINING</b>    <b>Spawning stock biomass</b> is above MSY Btrigger, Bpa, and Blim
<b>Inside safe biological limits</b>					
Herring Icelandic summer spawners Va  <b>June 2022</b>	72,239 (2021/2022)		Fishing pressure on the stock is above Harvest rate management.	ICES advises that when the Icelandic management plan is applied, catches in the fishing year 2022/2023 should be no more than 66,195 tonnes.  The infection rates of <i>Ichthyophonus</i> remain high, and this is taken into account in both the assessment and management plan.	<b>SAME</b>    <b>Spawning stock biomass</b>  1. Above MSY Btrigger 2. Above Bpa 3. Above Blim

**HERRING contd**


Stock	TAC for 2022 Tonnes	Status of stock in September 2022	*Fishing mortality	TAC advice for 2023	*SSB Status
<b>Inside safe biological limits</b>					
Norwegian spring spawners (Atlanto-Scandian) herring. ICES sub area I, divisions IIa, Va, Vb.  <b>September 2022</b>	598,588 (2022)	<p>The advice for 2023 is 15% lower than for 2022 because the stock size is declining, as a result of low recruitment since the large 2016-year class. The estimated SSB and fishing mortality are generally in line with the estimates from last year's assessment.</p> <p>The 2016-year class is expected to dominate the catches in 2023, and the subsequent year classes recruiting to the fishery are estimated to be weak. SSB is predicted to be below SSB<sub>mgt</sub> in 2024 if F<sub>mgt</sub> is applied in 2023</p>	Fishing pressure on the stock is above F <sub>MSY</sub> and between F <sub>pa</sub> and F <sub>lim</sub> .	<p>ICES advises that when the long-term management strategy agreed by the European Union, the Faroe Islands, Iceland, Norway, and the Russian Federation is applied, catches in 2023 should be no more than 511,171 tonnes.</p> <p>A long-term management strategy was agreed by the European Union, the Faroe Islands, Iceland, Norway, and Russia in 2018. ICES has evaluated the long-term management strategy and found it to be precautionary. There has been an overshoot of the catches in relation to the advised TAC since 2013. The advice is based on the target fishing mortality in this long-term management strategy.</p>	<p><b>DECLINING</b></p>  <p><b>Spawning stock biomass</b> size is above MSY B<sub>trigger</sub>, B<sub>pa</sub>, and B<sub>lim</sub></p>

**MACKEREL**

Stock	TAC for 2022 Tonnes	Status of stock in Sept 2022	*Fishing mortality.	TAC advice for 2023	*SSB Status
<b>Inside safe biological limits</b>					
<p>Mackerel in the Northeast Atlantic (NEA) (combines Southern, Western and North Sea spawning components).</p> <p><b>September 2022.</b></p> <p><b>August 2020 ICES was asked to advise on long-term management strategies for NEA mackerel. Their response was published on 3 Aug. Their Management Evaluation Strategy (MSE) tool provides a useful instrument to explore a wider range of uncertainties associated with NEA mackerel stock assessment.</b></p>	<p>794, 920 (2022)</p> <p>No internationally agreed quotas. Values presented are the sum of unilateral quotas (including quotas and transfers).</p>	<p>In 2022, there has been an upwards revision of SSB and a downwards revision of fishing mortality for the period 2007 to 2017, and a revision in the opposite direction for the most recent SSB and F estimates.</p>	<p>Fishing pressure on the stock is above FMSY but below Fpa and Flim.</p>	<p>ICES advises that when the MSY approach is applied, catches in 2023 should be no more than 782,066 tonnes.</p> <p>There is no long-term management strategy for Northeast Atlantic (NEA) mackerel agreed by all parties involved in the mackerel fishery. In 2019 Coastal State delegations from Norway, the EU, and the Faroes requested ICES to review new harvest control rule (HCR) options for a management strategy. ICES delivered the advice from this evaluation in August 2020.</p> <p>The sum of the unilateral quotas for mackerel and the resulting catches have exceeded the scientific advice by on average 41% since 2010.</p>	<p><b>Spawning stock biomass</b></p> <p><b>SAME</b></p> <p>Spawning-stock size is above MSY Btrigger, Bpa, and Blim.</p>



## NORWAY POUT

Stock	TAC for 2022 Tonnes	Status of stock in October 2022	*Fishing mortality	TAC advice for 2023	*SSB Status
Inside safe biological limits					
Norway pout in the North Sea and Skagerrak & Kattegat Subarea IV and Division IIIa  October 2022	118,273 (2022)	<p>The directed fishery for Norway pout was closed in 2005, the first half of 2006, and in 2007, as well as in the first half of 2011 and 2012. Historically, the fisheries have resulted in bycatches of other species, particularly whiting, blue whiting, haddock, saithe, and herring. Bycatches of these species have been low in the recent decade.</p> <p>The assessment shows a tendency in recent years to overestimate SSB and to underestimate F</p>	No reference points for fishing pressure or for MSY Btrigger have been defined for this stock	<p>Due to the short-lived nature of this species a preliminary TAC is set every year, which is updated on the basis of advice in the first half of the year.</p> <p>ICES advises that when the MSY approach is applied, catches from 1 November 2022 to 31 October 2023 should be no more than 116,823 tonnes.</p> <p>The catch forecast is for the period 1 October to 30 September. ICES considers that this forecast sufficiently approximates the TAC period and that it can be used directly for management purposes.</p>	<p><b>SAME</b></p>  <p><b>Spawning stock biomass</b> is above Bpa and Blim.</p>



**SANDEEL**

Stock	TAC for 2021 Tonnes	Status of stock in February 2022	*Fishing mortality	TAC advice for 2022	*SSB Status
<b>Sandeel in North Sea IV and IIIa – divided into sub areas 1r, 2r, 3r, 4, 5r, 6 and 7r.</b>					
<b>Reference points not fully defined</b>					
<b>1r</b> Sandeel Central and southern North Sea, Dogger Bank  <b>Feb 2022</b>	5,464 (2021)	<b>1r.</b> Catch advice for 2022 is zero because no fishing mortality that can bring the stock above MSY Bescapement due to low stock and year class size in 2021. 2019 recruitment value have been revised further downwards.	<b>1r</b> No fishing pressure reference points defined	<b>1r</b> – ICES advises that when the MSY approach and precautionary considerations are applied, there should be zero catch in 2022.	<b>DECREASING</b>  Below MSY B <sub>escapement</sub> and between B <sub>pa</sub> and B <sub>lim</sub> .
<b>2r</b> Sandeel Central and South North Sea  <b>Feb 2022</b>	5,000 (2021)	<b>2r.</b> Large increase in advice from a zero advice for 2021 is due to the large 2021 year class, which is expected to contribute to catches in 2022, resulting in an SSB above MSY Bescapement by 1 January 2023	<b>2r</b> No fishing reference points defined	<b>2r</b> - ICES advises that when the MSY approach is applied, catches in 2022 should be no more than 71, 859 tonnes.	<b>DECREASING</b>  Below MSY B <sub>escapement</sub> , B <sub>pa</sub> and B <sub>lim</sub> .
<b>3r</b> Sandeel North and Central North Sea, Skaggerak  <b>Feb 2022</b>	161,335 (2021)	<b>3r.</b> This stock was inter-benchmarked in 2020. The 2019 and 2020 recruitment values have been revised further downwards by this year's assessment. The large decrease in advice from 2021 is due to the lower 2021-year class.	<b>3r</b> No fishing reference points defined	<b>3r</b> – ICES advises that when the MSY approach is applied, catches in 2022 should be no more than 85,559 tonnes.	<b>DECREASING</b>  Above MSY B <sub>escapement</sub> , B <sub>pa</sub> and B <sub>lim</sub> .



## SANDEEL contd

Stock	TAC for 2021 Tonnes	Status of stock in February 2022	*Fishing	TAC advice for 2022	*SSB Status
<b>Sandeel in North Sea IV and IIIa –divided into sub areas 1r, 2r, 3r, 4, 5r, 6 and 7r.</b>					
<b>Reference points not fully defined</b>					
<b>Area 4</b> Sandeel North and Central North Sea <b>Feb 2022</b>	77,512 (2021)	<b>4.</b> Zero catch is advised because there is no catch that will maintain the stock above MSY B <sub>escapement</sub> in 2023 due to low recruitment since 2020	<b>Area 4</b> No fishing reference points defined	<b>Area 4</b> – ICES advises that when the MSY approach and precautionary considerations are applied, there should be zero catch in 2022.	<b>DECREASING</b> Below MSY B <sub>escapement</sub> , and between B <sub>pa</sub> and B <sub>lim</sub> .
<b>5r</b> Sandeel North North Sea Viking and Bergen Bank <b>Feb 2022</b>	Zero (2021)	<b>5r.</b> ICES advice for this stock has been for zero catch since 2011. Available information is inadequate to evaluate stock status or trends so status is unknown.	<b>5r</b> No fishing reference points defined	<b>5r</b> - ICES advises that when the precautionary approach is applied, there should be zero catches in each of the years 2021 and 2022.	<b>SAME</b> No biomass reference points defined
<b>Area 6</b> Sandeel Skagerrak, Kattegat and Belt Sea <b>Feb 2022</b>	140 (2021)	<b>6.</b> Available information is inadequate to evaluate stock status or trends. The state of the stock is therefore unknown.	<b>Area 6</b> No fishing reference points defined	<b>Area 6</b> - ICES advises that when the precautionary approach is applied, catches should be no more than 140 tonnes in 2021 and 2022 (buffer quota)	<b>SAME</b> No biomass reference points defined
<b>7r</b> Sandeel Shetland area <b>Feb 2022</b>	Zero (2021)	<b>7r.</b> ICES advice for this stock has been for zero catch since 2013, and advice remains at zero catch for 2021 and 2022	<b>7r</b> No fishing reference points defined	<b>7r</b> - ICES advises that when the precautionary approach (PA) is applied there should be zero catches in each of the years 2021 and 2022.	<b>SAME</b> No biomass reference points defined
<b>Sandeel</b> in 6a West of Scotland <b>Feb 2021</b>	No TAC (2020)	The available information on sandeel in Division 6.a is inadequate to evaluate stock status	No fishing reference points defined	ICES advises that when the precautionary approach (PA) is applied, there should be zero catches in each of the years 2021, 2022, and 2023.	<b>SAME</b> No biomass reference points defined

**SPRAT**

Stock	TAC for 2021/2022  Tonnes	Status of stock in May 2022	*Fishing mortality	TAC advice for 2022/2023	*SSB Status
<b>Inside safe biological limits</b>					
Sprat in the Baltic Subdivisions 22 – 32  May 2022	Between 214,000 – 373,210 (2022)	The advised catches for 2023 have declined by 15% compared to those for 2022 mainly because of the low 2021-year class.	Fishing pressure on the stock is above FMSY and between F <sub>pa</sub> and F <sub>lim</sub>	ICES advises that when the EU multiannual plan (MAP) for the Baltic Sea is applied, catches in 2023 that correspond to the F ranges in the plan are between 183,749 tonnes and 317,905 tonnes. Catches higher than those corresponding to FMSY (249,237 tonnes) can only be taken under conditions specified in the plan, whilst the entire range is considered precautionary when applying ICES advice rule.	<b>SAME</b>   Spawning-stock size is above MSY B <sub>trigger</sub> , B <sub>pa</sub> , and B <sub>lim</sub>
Sprat in the Skagerrak & Kattegat Division IIIa and North Sea Subarea IV  May 2022	106,715 1 July 2021 – 30 June 2022	The 36% reduction in advised catch this year is due to the decrease in stock size following the low recruitment observed in 2021. The assessments over the last four years show fairly consistent trends	No fishing reference points defined	ICES advises that when the MSY approach is applied, catches in the period from 1 July 2022 to 30 June 2023 should be no more than 68,690 tonnes.	<b>DECLINING</b>   Below MSY B <sub>escapement</sub> , and B <sub>pa</sub> and above B <sub>lim</sub> .

## SPRAT contd

Stock	TAC for 2020/2021  Tonnes	Status of stock in June 2021	*Fishing mortality - 1. MSY 2. PA 3. Mg'ment Plan	TAC advice for 2022	*SSB Status  1. MSY 2. PA 3. Mg'ment plan
<b>Reference points not fully defined</b>					
Sprat in Subarea VI and Divisions VIIa-c and f-k (West of Scotland and southern Celtic Sea)  June 2021	<2,800 (2020/21)	The information available is insufficient to evaluate stock trends and exploitation. Stock identity for this species in this area is not defined.	No fishing reference points defined	ICES advises that when the precautionary approach is applied, catches should be no more than 2,240 tonnes in each of the years 2022 and 2023.	<b>SAME</b>  No biomass reference points defined
Sprat in Divisions VIIId,e (English Channel)  May 2022	2,897 (2022)	The large increase in advice for 2022/2023 in relation to the 2022 advice is due to a substantial increase in survey biomass.	Below MSY proxy	ICES advises that when the MSY approach is applied, catches in the period from 1 July 2022 to 30 June 2023 should be no more than 9,200 tonnes.	<b>INCREASING</b>  Above MSY B <sub>trigger</sub>

## For further information:

ICES advice

<https://www.ices.dk/advice/Pages/Latest-Advice.aspx>

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