# Mackerel (*Scomber scombrus*) in subareas 1-8 and 14 and in divisions 9.a, 12.a, and 12.b (Northeast Atlantic and adjacent waters)

## ICES advice on fishing opportunities

ICES advises that when the maximum sustainable yield (MSY) approach is applied, catches in 2026 should be no more than 174 357 tonnes.

## Non-fisheries conservation considerations

Conservation aspects and associated management measures may exist at a national or regional level but were not reviewed by ICES.

## Stock development over time

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

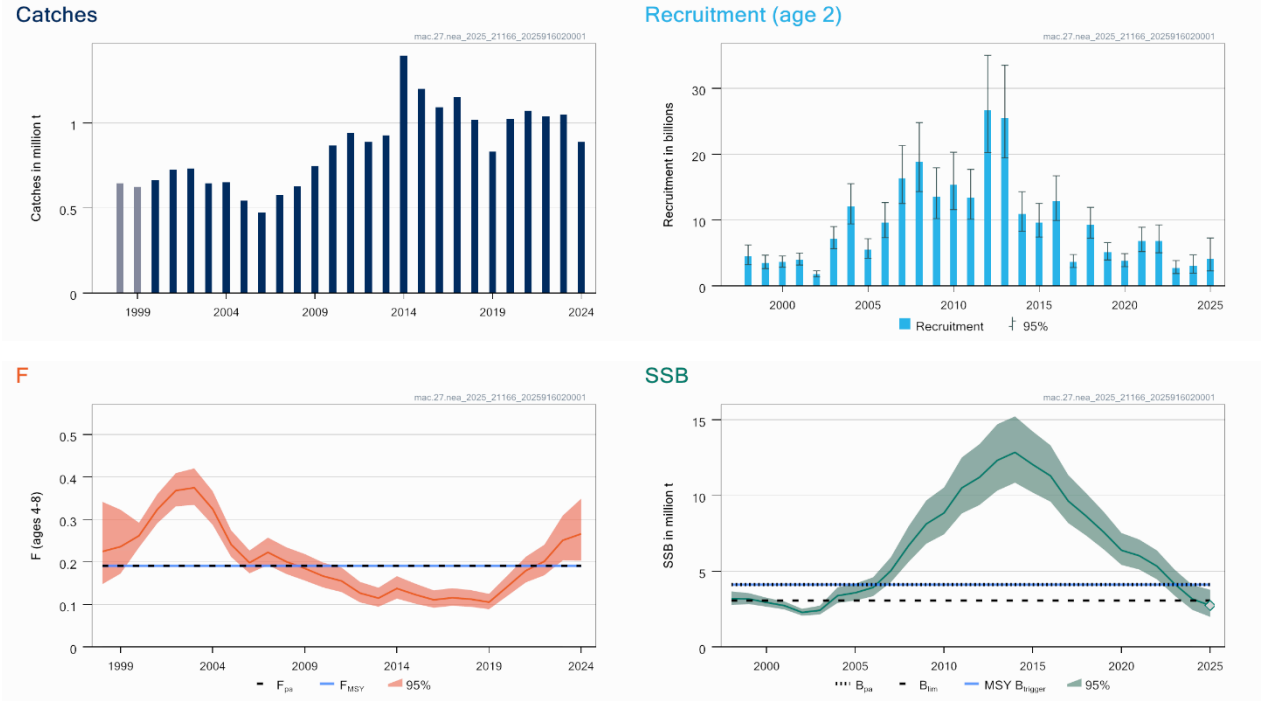


**Figure 1** Mackerel I subareas 1–8 and 14 and divisions 9.a, 12.a, and 12.b. Summary of the stock assessment. Catches prior to 2000 have been downweighted in the assessment because of the considerable underreporting suspected to have taken place in this period. Catches do not include catches of ages 0, and 1 as they were not used in the assessment. Spawning-stock biomass (SSB) is at spawning time, and the predicted value for 2025 is highlighted with a diamond.

## Catch scenarios

**Table 1** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. Values in the forecast and for the interim year.

| Variable | Value | Notes |
|---|---|---|
| $F_{ages\ 4–8}$ (2025) | 0.29 | From the forecast for 2025, based on assumed catch for 2025 |
| Spawning-stock biomass (SSB; 2025) at spawning time | 2 740 823 | From the forecast for 2025; tonnes |
| $R_{age\ 2}$ (2026–2027) | 4 659 625 | Resampled recruitments from the years 2017–2025 (geometric mean shown); thousands |
| Total catch (2025) | 755 143 | Sum of expected landings and discards, discards based on the observed landings in the first half of the year, accounting for the interannual transfers from 2024; tonnes |

**Table 2** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. Annual catch scenarios. All weights are in tonnes.

| Basis | Total catch | $F_{ages\ 4–8}$ | Spawning-stock biomass (SSB) at spawning time | | % change | | | Probability of $SSB_{2027}$ < $B_{lim}$ (%)^ |
|---|---|---|---|---|---|---|---|---|
| | 2026 | 2026–2027 | 2026 | 2027 | SSB* | Catch** | Advice*** | |
| ICES advice basis | | | | | | | | |
| $SSB_{2027} = B_{lim}$ | 174357 | 0.072 | 2752834 | 3067887 | 11.4 | −77 | −70 | 50 |
| Other scenarios | | | | | | | | |
| $F_{2026} = F_{MSY} * SSB_{2025}/MSY\ B_{trigger}$ | 299010 | 0.127 | 2732223 | 2964353 | 8.5 | −60 | −48 | 57 |
| $F = F_{MSY} = F_{PA}$ | 435390 | 0.191 | 2708199 | 2848254 | 5.2 | −42 | −25 | 65 |
| F = 0 | 0 | 0 | 2781516 | 3224181 | 15.9 | 100 | −100 | 39 |
| $Catch_{2026} = catch_{2025} − 20\%$ | 604114 | 0.27 | 2676229 | 2710274 | 1.27 | −20 | 4.7 | 73 |
| $Catch_{2026} = catch_{2025}$ | 755143 | 0.36 | 2646111 | 2588554 | −2.2 | 0 | 31 | 79 |
| $Catch_{2026} = catch_{2025} + 25\%$ | 943928 | 0.47 | 2605601 | 2438883 | −6.4 | 25 | 64 | 85 |
| $F = F_{2025}$ | 630387 | 0.29 | 2671278 | 2685274 | 0.52 | −16.5 | 9.3 | 75 |
| $SSB_{2027} = B_{PA}$^^ | | | | | | | | |
| $p(SSB_{2027}<B_{lim}) = 5\%$^^ | | | | | | | | |

* $SSB_{2027}$ relative to $SSB_{2026}$.
** Catch in 2026 relative to estimated catches in 2025 (755 143 tonnes). There is no internationally agreed total allowable catch (TAC) for 2025.
*** Advice value for 2026 relative to the advice value for 2025 (576 958 tonnes).
^ The probability of SSB being below $B_{lim}$ in 2027. This probability relates to the short-term probability of SSB < $B_{lim}$ and is not comparable to the long-term probability of SSB < $B_{lim}$ tested in simulations when estimating fishing mortality reference points.
^^ These options cannot be achieved even with zero catch in 2026.

The change in advice (−70%) is due to the decline in the stock size, a reduction in advised fishing pressure to achieve a 50% probability of spawning-stock biomass (SSB) being above $B_{lim}$ in 2027 (because $SSB_{2025}$ is below $B_{lim}$) and the change in the perception of the stock after the benchmark.

## Basis of the advice

**Table 3** Mackerel in subareas 1-8 and 14 and in divisions 9.a, 12.a, and 12.b. The basis of the advice.

| | |
|---|---|
| Advice basis | Maximum sustainable yield (MSY) approach |
| Management plan | There is no internationally agreed long-term management strategy for Northeast Atlantic (NEA) mackerel |

## Quality of the assessment

The stock was benchmarked in 2025 (ICES, 2025a). Several changes were made, including the use of a new age-varying natural mortality, the use of radio-frequency identification (RFID) data as an abundance-at-age index in place of the raw recapture data, the inclusion of abundance indices for the younger ages from the IESSNS survey (age 2) and the tagging data (age 2–4). In addition, the assessment period was shortened (now starting in 1998), and the minimum age of fish included in the assessment increased from 0 to 2.

These changes resulted in an upward revision in the estimated stock size and downward revision in fishing mortality, mostly because of the new natural mortality assumption, and a corresponding revision to biomass (upwards) and fishing mortality (downwards) reference points. The benchmark led to an improvement of the retrospective pattern (upward revisions of stock size around 2015), and to more accurate recruitment estimates (now at age 2, informed by two indices and catch information).

Following the inclusion of a new year of data since the benchmark, the assessment of the state of the stock remains consistent but with a lower uncertainty in the estimated stock size and fishing mortality.

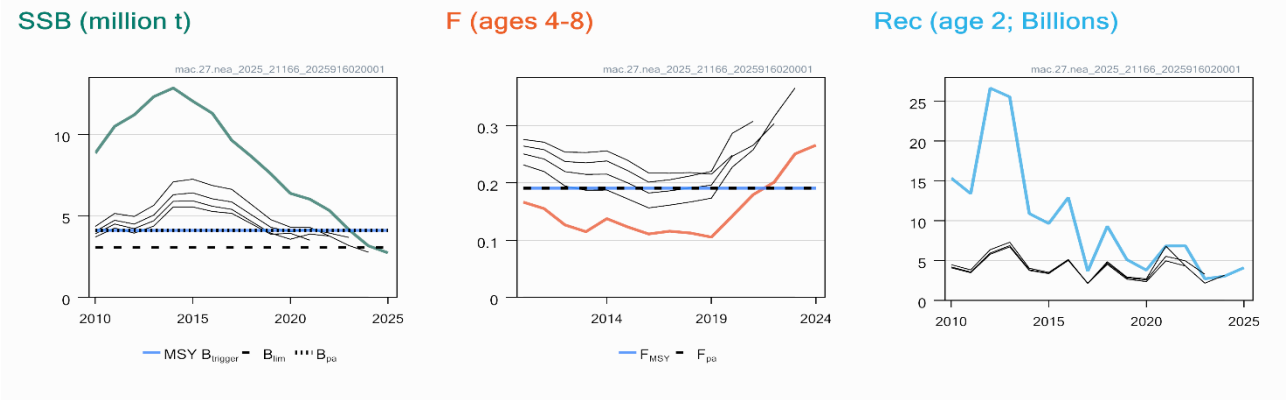


**Figure 2** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. Historical assessment results. The reference points were revised in 2025 following a benchmark, and only assessment results from the latest assessment should be compared to the reference points indicated. Prior to the 2022 assessment, recruitment was presented as age 0 and is not shown.

## Issues relevant for the advice

The sum of the unilateral quotas for mackerel has resulted in catches that have exceeded the scientific advice by, on average, 39% since 2010. The stock is estimated to be below both MSY $B_{trigger}$ and $B_{lim}$ in 2025. The advice is based on the MSY approach that should lead to a short-term recovery above $B_{lim}$ and a medium-term recovery above MSY $B_{trigger}$. Failing to adhere to the advised catches as derived from the application of the MSY approach may lead to a lower chance of the stock recovering to above $B_{lim}$ in the short term and to above MSY $B_{trigger}$.in the longer term.

Following the guidelines, to provide advice for stocks below $B_{lim}$, 2017–2025 was selected as the time period to calculate the recruitment in the forecast to reflect the currently observed low stock productivity (ICES, 2025b).

The advice for 2026 is based on a fishing mortality that leads to a 50% probability of SSB being above $B_{lim}$ in 2027. The forecasted SSB in 2027 is composed of more than 40% of age 2 and age 3 fish, for which the abundances are based on recruitment assumptions, rather than assessment estimates. Therefore, the forecasted SSB in 2027 and the advice are sensitive to the forecast assumptions.

## Reference points

**Table 4** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. Reference points, values, and their technical basis.

| Framework | Reference point | Value | Technical basis | Source |
|---|---|---|---|---|
| Maximum sustainable yield (MSY) approach | MSY $B_{trigger}$ | 4 119 337 | $B_{PA}$; tonnes | ICES (2025a) |
| | $F_{MSY}$ | 0.191 | Stochastic simulations, capped at $F_{PA}$ | ICES (2025a) |
| Precautionary approach | $B_{lim}$ | 3 067 017 | Lowest spawning-stock biomass (SSB) level that in the past has resulted in good recruitment (2002, 2004, 2005); in tonnes | ICES (2025a) |
| | $B_{PA}$ | 4 119 337 | $B_{lim} \times \exp(1.65 \times \sigma)$, $\sigma = 0.179$; tonnes | ICES (2025a) |
| | $F_{PA}$ | 0.191 | The F that provides a 95% probability for SSB to be above $B_{lim}$ ($F_{P05}$ with advice rule) | ICES (2025a) |

## Basis of the assessment

**Table 5** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. Basis of the assessment and advice.

| | |
|---|---|
| ICES stock data category | 1 (ICES, 2023) |
| Assessment type | Age-based analytical model (SAM)* |
| Input data | Catch data, steel tagging data ([L3182] 1998–2006), and three survey indices: SSB index from the triennial egg survey ([I4189] 1992–2025), abundance indices from the RFID tagging data ([L5543] age 2-11, 2013-2023), and from the IESSNS survey ([A7806] ages 3–11, 2010, 2012–2025 and age 2, 2018-2025). Catches prior to 2000 are given a very low weight in the assessment. Weight-at-age updated annually from samples. Maturity ogive and age-varying natural mortality constant over years. |
| Discards | Discarding is known to take place (0.3% of the total catch in weight in 2024) but is only quantified for part of the fisheries; the proportion of the landings covered cannot be calculated. Partial discard estimates are included in the assessment and overall discarding in recent years is assumed negligible. |
| Indicators | None |
| Other information | Benchmarked in 2025 (WKBMACNSSH; ICES, 2025a) |
| Working group | Working Group on Widely Distributed Stocks (WGWIDE; ICES 2025c) |

* View assessment in Transparent Assessment Framework (TAF)

## History of the advice, catch, and management

**Table 6** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. History of ICES advice, the total allowable catch (TAC), and ICES estimates of catch. All weights are in tonnes.

| Year | ICES advice | Catch corresponding to advice | TAC * | ICES landings | Discards and slipping | ICES catch |
|---|---|---|---|---|---|---|
| 1987 | Given by stock component | | 442000 | 644016 | 10789 | 654805 |
| 1988 | Given by stock component | | 610000 | 644926 | 35566 | 680492 |
| 1989 | Given by stock component | | 532000 | 582419 | 7090 | 589509 |
| 1990 | Given by stock component | | 562000 | 611911 | 15600 | 627511 |
| 1991 | Given by stock component | | 612000 | 637183 | 30700 | 667883 |
| 1992 | Given by stock component | | 707000 | 735351 | 25000 | 760351 |
| 1993 | Given by stock component | | 767000 | 806856 | 18180 | 825036 |
| 1994 | Given by stock component | | 837000 | 816025 | 5370 | 821395 |
| 1995 | Given by stock component | | 645000 | 748079 | 7721 | 755800 |
| 1996 | Significant reduction in F | - | 452000 | 552196 | 11415 | 563611 |
| 1997 | Significant reduction in F | - | 470000 | 550749 | 18864 | 569613 |
| 1998 | F between 0.15 and 0.2 | 498000 | 549000 | 658652 | 8012 | 666664 |
| 1999 | F of 0.15 consistent with PA | 437000 | 562000 | 640311 | n/a | 640311 |
| 2000 | F = 0.17: $F_{pa}$ | 642000 | 612000 | 671793 | 3832 | 675625 |
| 2001 | F = 0.17: $F_{pa}$ | 665000 | 670000 | 735412 | 1215 | 736627 |
| 2002 | F = 0.17: $F_{pa}$ | 694000 | 683000 | 747710 | 23878 | 771588 |
| 2003 | F = 0.17: $F_{pa}$ | 542000 | 583000 | 659857 | 19980 | 679838 |
| 2004 | F = 0.17: $F_{pa}$ | 545000 | 532000 | 640532 | 20300 | 660833 |

| Year | ICES advice | Catch corressponding to advice | TAC * | ICES landings | Discards and slipping | ICES catch |
|---|---|---|---|---|---|---|
| 2005 | F = 0.15 to 0.20 | 320000–420000 | 422000 | 523897 | 26388 | 550285 |
| 2006 | F = 0.15 to 0.20 | 373000–487000 | 444000 | 462169 | 26737 | 488906 |
| 2007 | F = 0.15 to 0.20 | 390000–509000 | 502000 | 571245 | 15648 | 586893 |
| 2008 | F = 0.15 to 0.20 | 349000–456000 | 458000 | 597638 | 37156 | 634794 |
| 2009 | F = 0.15 to 0.20 | 443000–578000 | 605000** | 737939 | 16118 | 754057 |
| 2010 | Harvest control rule | 527000–572000 | 885000^ | 864236 | 13183 | 877420 |
| 2011 | See scenarios | 529000–672000 | 959000^ | 938070 | 11459 | 949529 |
| 2012 | Follow the management plan | 586000–639000 | 927000^ | 884376 | 15200 | 899576 |
| 2013 | Follow the management plan | 497000–542000 | 906000^ | 932204 | 4799 | 937003 |
| 2014 | Follow the management plan | 927000–1011000 | 1392000^ | 1395336 | 6430 | 1401766 |
| 2015 | Follow the management plan | 831000–906000 | 1229000^ | 1205407 | 10353 | 1215760 |
| 2016 | Maximum sustainable yield (MSY) approach | ≤ 773842 | 1057000^ | 1094281 | 6005 | 1100286 |
| 2017 | MSY approach | ≤ 857185 | 1173000^ | 1158380 | 2847 | 1161226 |
| 2018 | MSY approach | ≤ 550948 | 998000^ | 1021031 | 2748 | 1023779 |
| 2019 | MSY approach | ≤ 770358 | 864000^ | 831925 | 6516 | 838441 |
| 2020 | MSY approach | ≤ 922064 | 1090879^ | 1030272 | 1556 | 1031828 |
| 2021 | MSY approach | ≤ 852284 | 1199103^ | 1079523 | 3133 | 1082656 |
| 2022 | MSY approach | ≤ 794920 | 1188227^ | 1043141 | 3562 | 1046702 |
| 2023 | MSY approach | ≤ 782066 | 1188265^ | 1053402 | 3123 | 1056526 |
| 2024 | MSY approach | ≤739386 | 990582^ | 894735 | 2966 | 897701 |
| 2025 | MSY approach | ≤576958 | 760714^ | | | |
| 2026 | MSY approach | ≤174 357 | | | | |

n/a = not available.
* For all areas, except some catches in international waters in Subarea 2.
** Does not include the unilateral Norway–Faroe Islands TAC, first declared in 2009, nor the Icelandic quota.
^ No internationally agreed quotas. Values presented are the sum of declared quotas (including interannual transfers).

## History of the catch and landings

**Table 7** Mackerel in subareas 1−8 and 14 and in divisions 9.a, 12.a, and 12.b. Landings distribution by fleet and discards, as estimated by ICES. All weights are in tonnes

| Catch (2024) | Landings | | | Discards |
|---|---|---|---|---|
| 897 701 | Pelagic trawl 71% | Purse-seine 28% | Others 1% | 2 966 * |
| | 894 735 | | | |

* Only quantified for part of the fisheries.

**Table 8** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. History of commercial catch and landings; ICES estimates are presented by country. All weights are in tonnes. "Misreported" refers to assumed area misreporting between divisions 4.a and 6.a, and "Unallocated" indicates differences between official reported values and ICES estimates.

| Country | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Belgium | 125 | 177 | 146 | 98 | 22 | 2 | 5 | 1 | 3 | 1 | 2 | 3 | 29 | 21 |
| Denmark | 27416 | 30011 | 29177 | 22522 | 34376 | 27621 | 25665 | 23212 | 24219 | 25223 | 26726 | 23491 | 41445 | 35958 |
| Estonia | 7356 | 3595 | 2673 | 219 | | | | | | | | | | |
| Faroe Islands | 11229 | 11620 | 21023 | 24005 | 19768.3 | 14014 | 13030 | 9769 | 12067 | 13430 | 11289 | 14062 | 70987 | 122050 |
| France | 17835 | 16367 | 19445 | 20956 | 21878 | 22906 | 20266 | 16338 | 14953 | 20038 | 15602 | 18340 | 11386 | 12766 |
| Germany | 21412 | 19949 | 22979 | 25307 | 26532 | 24059 | 23244 | 19040 | 16608 | 18221 | 15502 | 22703 | 19055 | 24083 |
| Greenland | | | | | | | | | | | | | | 62 |
| Iceland | 357 | | | | 53 | 122 | | 363 | 4222 | 36706 | 112286 | 116160 | 121008 | 159263 |
| Ireland | 66650 | 59675 | 71233 | 70452 | 72172 | 67355 | 61102 | 45687 | 40664 | 49259 | 44760 | 61056 | 57994 | 61596 |
| Lithuania | | | 2085 | | | | | | 95 | 7 | | | | 23 |
| Netherlands | 30163 | 28621 | 32407 | 36096 | 33450 | 30468 | 27532 | 25126 | 24157 | 24244 | 19972 | 23568 | 23088 | 28395 |
| Norway | 158177 | 160738 | 174098 | 180595 | 184291 | 163406 | 157363 | 119678 | 121993 | 131691 | 121524 | 121229 | 233952 | 208065 |
| Poland | | | | | | | 0.062 | 591 | 1368 | 978 | 0.16 | 0.17 | | |
| Portugal | 2897 | 2002 | 2253 | 3119 | 2995 | 2749 | 2289 | 1656 | 2889 | 3086 | 2954 | 2681 | 4121 | 3265 |
| Spain | 44607 | 45915 | | | | | | | 54136 | 62946 | 64637 | 114074 | 52737 | 18725 |
| Sweden | 5146 | 5233 | 4994 | 5098 | 5234 | 4451 | 4440 | 3206 | 3212 | 3858 | 3662 | 7304 | 3429 | 3248 |
| UK | 185948 | 160152 | 192196 | 249307 | 244544 | 235017 | 214770 | 152714 | 103050 | 133695 | 124924 | 171992 | 160425 | 180989 |
| USSR/Russian Federation | 67836 | 51348 | 50772 | 41568 | 45811 | 40026 | 49489 | 40495 | 33580 | 35408 | 32728 | 41414 | 59310 | 73601 |
| Misreported | | −211 | | | | | | | | | | | | |
| Unallocated | 11498 | 38996 | 46311 | 56070 | 56584 | 27660 | 41337 | 66022 | 4954 | 12453 | 1069 | -139 | 5271 | 5961 |
| Discards | 8030 | | 3832 | 1215 | 23878 | 19980 | 20300 | 26388 | 26737 | 15648 | 37156 | 16118 | 13183 | 11459 |
| Total | 666682 | 634399 | 675625 | 736627 | 771588 | 679838 | 660833 | 550285 | 488906 | 586893 | 634794 | 754057 | 877420 | 949529 |

**Table 8 (cont.)**

| Country | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Belgium | 39 | 62 | 56 | 52 | 143 | 128 | 168 | 66 | 124 | 110 | 242 | 68 | 60 |
| Denmark | 36500 | 33218 | 42222 | 46870 | 41139 | 40028 | 30690 | 30563 | 38485 | 32796 | 21434 | 28209 | 28304 |
| Estonia | | 1367 | | | | | | | | | | | |
| Faroe Islands | 107630 | 143001 | 150236 | 108411 | 93267 | 99667 | 81079 | 62665 | 69064 | 105096 | 133757 | 175832 | 72163 |
| France | 20467 | 14643 | 21719 | 25704 | 20189 | 22950 | 21380 | 17870 | 21878 | 16442 | 17373 | 14807 | 15604 |
| Germany | 18944 | 20931 | 28456 | 28257 | 23411 | 24858 | 19883 | 16904 | 25030 | 11996 | 14128 | 17024 | 17403 |
| Greenland | 7402 | 52783 | 78581 | 30351 | 36142 | 46419 | 62973 | 30241 | 26577 | 33360 | 18039 | 28324 | 14789 |
| Iceland | 149282 | 151238 | 172960 | 169333 | 170374 | 167366 | 168330 | 128077 | 151534 | 132109 | 129976 | 141370 | 89614 |
| Ireland | 63049 | 56511 | 103178 | 88745 | 76526 | 84915 | 66747 | 53312 | 74114 | 60752 | 52273 | 51956 | 50818 |
| Lithuania | | | 9598 | 565 | 2652 | | | | 853 | 6656 | | 237 | |
| Netherlands | 25817 | 21159 | 46665 | 39808 | 37929 | 43766 | 30392 | 22694 | 30318 | 25693 | 26332 | 21343 | 18674 |
| Norway | 176023 | 164607 | 277731 | 242231 | 209352 | 222356 | 187207 | 159107 | 211672 | 270653 | 294086 | 213274 | 250186 |
| Poland | 0.17 | | | 24 | 0 | 1 | 4057 | 3706 | 5302 | 1779 | 105 | 3231 | 1061 |
| Portugal | 5692 | 5388 | 7952 | 8293 | 6688 | 4331 | 4565 | 3940 | 4799 | 4723 | 3567 | 2104 | 1648 |
| Spain | 19386 | 16414 | 37806 | 34530 | 30036 | 32885 | 30037 | 21112 | 34307 | 27783 | 29424 | 25267 | 22331 |
| Sweden | 4564 | 2906 | 4422 | 3930 | 3663 | 3701 | 3966 | 2958 | 3671 | 3514 | 3244 | 2207 | 1992 |
| UK | 169757 | 163822 | 287866 | 247993 | 217645 | 226948 | 190913 | 152166 | 203726 | 209886 | 197032 | 216635 | 225562 |
| USSR/Russian Federation | 74587 | 80817 | 116433 | 128433 | 121644 | 138061 | 118255 | 126544 | 128817 | 136176 | 102129 | 111512 | 84526 |
| Unallocated | 5237 | 3337 | 9457 | 1876 | 3484 | | 392 | | | | | | |
| Discards | 15200 | 4799 | 6430 | 10353 | 6005 | 2847 | 2748 | 6516 | 1556 | 3133 | 3562 | 3123 | 2966 |
| Total | 899576 | 937003 | 1401766 | 1215760 | 1100286 | 1161226 | 1023779 | 838441 | 1031828 | 1082656 | 1046702 | 1056526 | 897701 |

**Table 9** Mackerel in subareas 1–8 and 14 and in divisions 9.a, 12.a, and 12.b. History of catch and landings; the ICES estimates are presented by area. All weights are in tonnes.

| Year | Subarea 6 | | | Subarea 7 and divisions 8.a, 8.b, 8.d, and 8.e | | | Subareas 3 and 4 | | | Subareas 1, 2, 5, 14, 12a, and 12b | | | Divisions 8.c and 9.a | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Landings | Discards | Catch | Landings | Discards | Catch | Landings | Discards | Catch | Landings | Discards | Catch | Landings | Discards | Catch | Landings | Discards | Catch |
| 1998 | 110141 | 71 | 110212 | 105181 | 3206 | 108387 | 264947 | 4735 | 269682 | 134219 | | 134219 | 44 164 | | 44164 | 658652 | 8012 | 666664 |
| 1999 | 116362 | | 116362 | 94290 | | 94290 | 313014 | | 313014 | 72848 | | 72848 | 43796 | | 43796 | 640311 | | 640311 |
| 2000 | 156031 | 1 | 156032 | 115711 | 1918 | 117630 | 271420 | 1913 | 273333 | 92557 | | 92557 | 36074 | | 36074 | 671793 | 3832 | 675625 |
| 2001 | 133430 | 83 | 133513 | 150008 | 1081 | 151089 | 341663 | 51 | 341714 | 67113 | | 67113 | 43198 | | 43198 | 735412 | 1215 | 736627 |
| 2002 | 127966 | 12931 | 140897 | 104143 | 2364 | 106507 | 391857 | 8583 | 400440 | 74109 | | 74109 | 49637 | | 49637 | 747710 | 23878 | 771588 |
| 2003 | 135690 | 1399 | 137089 | 90352 | 6256 | 96608 | 354109 | 11794 | 365904 | 53883 | | 53883 | 25823 | 531 | 26354 | 659857 | 19980 | 679838 |
| 2004 | 133033 | 1705 | 134738 | 103703 | 6329 | 110032 | 306043 | 11329 | 317372 | 62913 | 9 | 62922 | 34841 | 928 | 35769 | 640532 | 20300 | 660833 |
| 2005 | 79975 | 8201 | 88176 | 90280 | 12609 | 102889 | 249748 | 4782 | 254530 | 54129 | | 54129 | 49765 | 796 | 50561 | 523897 | 26388 | 550285 |
| 2006 | 91539 | 6081 | 97621 | 66219 | 8746 | 74965 | 204674 | 8302 | 212977 | 46716 | | 46716 | 53020 | 3607 | 56627 | 462169 | 26737 | 488906 |
| 2007 | 110788 | 2450 | 113238 | 71237 | 7871 | 79108 | 253013 | 4255 | 257268 | 72891 | | 72891 | 63315 | 1072 | 64387 | 571245 | 15648 | 586893 |
| 2008 | 81109 | 21889 | 102997 | 75272 | 5543 | 80814 | 232157 | 8862 | 241019 | 148669 | 112 | 148781 | 60432 | 750 | 61182 | 597638 | 37156 | 634794 |
| 2009 | 141529 | 3927 | 145456 | 91412 | 2945 | 94357 | 232718 | 8281 | 240999 | 163604 | | 163604 | 108676 | 966 | 109642 | 737939 | 16118 | 754057 |
| 2010 | 106732 | 2904 | 109636 | 104129 | 4686 | 108815 | 246819 | 949 | 247768 | 355731 | 5 | 355736 | 50826 | 4640 | 55465 | 864236 | 13183 | 877420 |
| 2011 | 160756 | 1836 | 162592 | 51098 | 5384 | 56482 | 301746 | 2405 | 304151 | 398132 | 28 | 398160 | 26339 | 1807 | 28145 | 938070 | 11459 | 949529 |
| 2012 | 121114 | 952 | 122067 | 65728 | 9673 | 75401 | 218400 | 1142 | 219541 | 449325 | 1 | 449326 | 29809 | 3431 | 33240 | 884376 | 15200 | 899576 |
| 2013 | 132062 | 273 | 132335 | 49869 | 1703 | 51572 | 260922 | 355 | 261277 | 464484 | 13 | 464498 | 24867 | 2455 | 27322 | 932204 | 4799 | 937003 |
| 2014 | 180067 | 340 | 180408 | 93709 | 1388 | 95098 | 383887 | 326 | 384213 | 684082 | 91 | 684173 | 53590 | 4284 | 57874 | 1395336 | 6430 | 1401766 |
| 2015 | 134728 | 29 | 134757 | 98574 | 3068 | 101642 | 295877 | 44 | 295921 | 632493 | 78 | 632571 | 43735 | 7134 | 50869 | 1205407 | 10353 | 1215760 |
| 2016 | 206326 | 200 | 206526 | 37301 | 1950 | 39252 | 248070 | 581 | 248651 | 563528 | 54 | 563582 | 39056 | 3220 | 42276 | 1094281 | 6005 | 1100286 |
| 2017 | 225972 | 151 | 226123 | 21135 | 2002 | 23137 | 270921 | 405 | 271327 | 603838 | 62 | 603900 | 36512 | 227 | 36739 | 1158380 | 2847 | 1161226 |
| 2018 | 157249 | 90 | 157339 | 31970 | 1470 | 33441 | 342362 | 619 | 342981 | 455689 | 51 | 455740 | 33761 | 518 | 34279 | 1021031 | 2748 | 1023779 |
| 2019 | 122991 | 144 | 123135 | 32848 | 4666 | 37514 | 307236 | 756 | 307992 | 345019 | 18 | 345037 | 23832 | 932 | 24764 | 831925 | 6516 | 838441 |
| 2020 | 130577 | 341 | 130918 | 48807 | 340 | 49147 | 456517 | 732 | 457250 | 356985 | | 356985 | 37386 | 143 | 37529 | 1030272 | 1556 | 1031828 |
| 2021 | 146519 | 117 | 146635 | 15912 | 2529 | 18440 | 222119 | 423 | 222542 | 663111 | | 663111 | 31862 | 65 | 31928 | 1079523 | 3133 | 1082656 |
| 2022 | 63850 | 222 | 64072 | 25084 | 686 | 25770 | 350718 | 2475 | 353193 | 571403 | | 571403 | 32086 | 178 | 32264 | 1043141 | 3562 | 1046702 |
| 2023 | 116875 | 147 | 117022 | 11307 | 2474 | 13782 | 376512 | 387 | 376899 | 522456 | 0.02 | 522456 | 26252 | 115 | 26366 | 1053402 | 3123 | 1056526 |
| 2024 | 136014 | 753 | 136767 | 12038 | 1526 | 13564 | 371175 | 405 | 371580 | 353018 | 2 | 353020 | 22490 | 280 | 22771 | 894735 | 2966 | 897701 |

**Table 10** Mackerel in subareas 1-8 and 14 and in divisions 9.a, 12.a, and 12.b. Catches inside and outside the NEAFC regulatory areas (RAs), as estimated by ICES, as well as total catches. Weights are in tonnes.

| Year | Inside the NEAFC RAs | Outside the NEAFC RAs | Total catch | Percentage inside the NEAFC RAs |
|---|---|---|---|---|
| 2018 | 213608 | 810171 | 1023779 | 21 |
| 2019 | 207200 | 631241 | 838441 | 25 |
| 2020 | 247901 | 783927 | 1031828 | 24 |
| 2021* | 195938 | 749427 | 945365 | 21 |
| 2022* | 186199 | 758392 | 944591 | 20 |
| 2023 | 262370 | 794156 | 1056526 | 25 |
| 2024 | 125204 | 772497 | 897701 | 14 |

* Without catches from the Russian Federation, as it did not report catches inside/outside the NEAFC RAs for 2021 or 2022. In the past, around 90% of Russian catches were taken inside the NEAFC RAs.

## Summary of the assessment

**Table 11** Mackerel in subareas 1-8 and 14 and in divisions 9.a, 12.a, and 12.b. Assessment summary. Weights are in tonnes and recruitment in thousands. "High" and "Low" values indicate the 95% confidence intervals.

| Year | Recruitment (age 2) | | | Spawning-stock biomass (SSB) at spawning time | | | Total catch* | F (ages 4–8) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Low | Value | High | Low | Value | High | | Low | Value | High |
| 1998 | 3235935 | 4487490 | 6223106 | 2767577 | 3189212 | 3675083 | 646744 | 0.147 | 0.22 | 0.34 |
| 1999 | 2649038 | 3519337 | 4675560 | 2831913 | 3176574 | 3563183 | 623345 | 0.173 | 0.24 | 0.32 |
| 2000 | 2857548 | 3611987 | 4565611 | 2658534 | 2942079 | 3255865 | 663328 | 0.23 | 0.26 | 0.29 |
| 2001 | 3180809 | 3981608 | 4984016 | 2476412 | 2731919 | 3013789 | 728111 | 0.29 | 0.32 | 0.36 |
| 2002 | 1375825 | 1782675 | 2309836 | 2068035 | 2285012 | 2524755 | 734436 | 0.33 | 0.37 | 0.41 |
| 2003 | 5670215 | 7152487 | 9022245 | 2141418 | 2418703 | 2731893 | 646596 | 0.33 | 0.37 | 0.42 |
| 2004 | 9428758 | 12102608 | 15534720 | 2906523 | 3386023 | 3944629 | 652254 | 0.29 | 0.32 | 0.37 |
| 2005 | 4205668 | 5492222 | 7172345 | 3062951 | 3581529 | 4187905 | 543402 | 0.21 | 0.24 | 0.27 |
| 2006 | 7343781 | 9644614 | 12666308 | 3352610 | 3929231 | 4605026 | 475688 | 0.173 | 0.198 | 0.23 |
| 2007 | 12528693 | 16353119 | 21344964 | 4266298 | 5030467 | 5931513 | 577647 | 0.193 | 0.22 | 0.26 |
| 2008 | 14334799 | 18863103 | 24821881 | 5608936 | 6687513 | 7973498 | 627549 | 0.172 | 0.20 | 0.23 |
| 2009 | 10230181 | 13552349 | 17953365 | 6819839 | 8128171 | 9687495 | 749162 | 0.156 | 0.185 | 0.22 |
| 2010 | 11604843 | 15357517 | 20323699 | 7435755 | 8852951 | 10540253 | 869705 | 0.140 | 0.167 | 0.199 |
| 2011 | 10132974 | 13394211 | 17705056 | 8813789 | 10504788 | 12520220 | 943111 | 0.129 | 0.155 | 0.187 |
| 2012 | 20265348 | 26644541 | 35031798 | 9375395 | 11208960 | 13401119 | 890040 | 0.105 | 0.127 | 0.153 |
| 2013 | 19466835 | 25544691 | 33520150 | 10322367 | 12323807 | 14713313 | 927124 | 0.095 | 0.115 | 0.140 |
| 2014 | 8298320 | 10897585 | 14311013 | 10848708 | 12856027 | 15234759 | 1397906 | 0.114 | 0.138 | 0.167 |
| 2015 | 7423727 | 9649393 | 12542323 | 10193681 | 12047160 | 14237650 | 1201421 | 0.102 | 0.123 | 0.149 |
| 2016 | 9955189 | 12909399 | 16740273 | 9591026 | 11304014 | 13322947 | 1094934 | 0.092 | 0.111 | 0.133 |
| 2017 | 2809087 | 3662980 | 4776437 | 8180386 | 9642070 | 11364931 | 1152946 | 0.097 | 0.116 | 0.138 |
| 2018 | 7250060 | 9306894 | 11947249 | 7362827 | 8656092 | 10176515 | 1017413 | 0.095 | 0.113 | 0.134 |
| 2019 | 3965027 | 5115757 | 6600451 | 6442600 | 7586899 | 8934442 | 833313 | 0.089 | 0.105 | 0.125 |
| 2020 | 2933466 | 3795689 | 4911344 | 5418184 | 6389023 | 7533819 | 1026050 | 0.120 | 0.142 | 0.168 |
| 2021 | 5216606 | 6825520 | 8930659 | 5116477 | 6028589 | 7103302 | 1073866 | 0.152 | 0.180 | 0.21 |
| 2022 | 5043946 | 6838341 | 9271095 | 4463692 | 5337128 | 6381475 | 1038522 | 0.169 | 0.20 | 0.24 |
| 2023 | 1888947 | 2701484 | 3863535 | 3379915 | 4156171 | 5110708 | 1052977 | 0.20 | 0.25 | 0.31 |
| 2024 | 1939950 | 3030156 | 4733032 | 2447226 | 3165538 | 4094689 | 889848 | 0.20 | 0.27 | 0.35 |
| 2025 | 2300033 | 4094160 | 7287784 | 1984050** | 2740823** | 3784036** | | | | |

* Not including catches of age 0 and 1 fish, as they are not used in the assessment
** Estimated value from the forecast.

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