**Stock: Cod in Division VIIa (Irish Sea)**

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(2-5,u) | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| 1990 | 1.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 0.99 | 0.73 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 1.21 | 1.20 | 1.14 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 1.15 | 1.09 | 0.93 | 1.15 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 1.15 | 1.04 | 1.05 | 1.39 | 1.04 |  |  |  |  |  |  |  |  |  |
| 1995 | 1.15 | 1.02 | 1.02 | 1.27 | 0.96 | 0.92 |  |  |  |  |  |  |  |  |
| 1996 | 1.18 | 1.09 | 0.99 | 1.35 | 1.12 | 1.06 | 0.69 |  |  |  |  |  |  |  |
| 1997 | 1.18 | 1.08 | 0.99 | 1.34 | 1.10 | 1.03 | 0.67 | 0.58 |  |  |  |  |  |  |
| 1998 | 1.15 | 1.02 | 0.98 | 1.25 | 1.24 | 1.15 | 0.87 | 0.77 | 0.86 |  |  |  |  |  |
| 1999 | 1.18 | 1.03 | 1.03 | 1.38 | 1.42 | 1.31 | 1.00 | 0.92 | 1.41 | 1.02 |  |  |  |  |
| 2000 | 1.19 | 1.03 | 1.03 | 1.38 | 1.42 | 1.32 | 1.00 | 0.93 | 1.43 | 1.07 | 1.07 |  |  |  |
| 2001 | 1.19 | 1.03 | 1.03 | 1.37 | 1.41 | 1.29 | 1.01 | 0.95 | 1.42 | 1.01 | 0.91 | 1.00 |  |  |
| 2002 | 1.19 | 1.03 | 1.03 | 1.38 | 1.42 | 1.31 | 1.02 | 0.95 | 1.49 | 1.27 | 1.69 | 1.12 | 1.08 |  |
| 2003 | 1.19 | 1.03 | 1.03 | 1.38 | 1.42 | 1.31 | 1.02 | 0.95 | 1.49 | 1.26 | 1.8 | 1.45 | 1.72 | 1.23 |

F(2-6).

F(2-4), with F(2-5) in parentheses

F(2-4)

UK (NI) Spring & Autumn commercial fleets removed, UK (E&W) commercial fleet removed.

**Remarks:**

**Stock: Cod in Division VIIa (Irish Sea)**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 1) Unit: '000 | | | | | | | | | | | | | | |
| Date of assessment | Year class | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| 1990 | 4918 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 5609 | 10608 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 3651 | 11929 | 7520 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 4053 | 5265 | 5689 | 2863 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 4265 | 4822 | 8742 | 850 | 4570 |  |  |  |  |  |  |  |  |  |
| 1995 | 4262 | 4767 | 7809 | 1399 | 4998 | 3996 |  |  |  |  |  |  |  |  |
| 1996 | 4112 | 4710 | 7468 | 1475 | 4885 | 3472 | 4473 |  |  |  |  |  |  |  |
| 1997 | 5024 | 5761 | 9096 | 1832 | 5786 | 4595 | 4549 | 4293 |  |  |  |  |  |  |
| 1998 | 5048 | 5763 | 9012 | 1808 | 5430 | 4064 | 3922 | 5950 | 1953 |  |  |  |  |  |
| 1999 | 4988 | 5736 | 8935 | 1780 | 5213 | 3786 | 3372 | 6983 | 2212 | 298 |  |  |  |  |
| 2000 | 4987 | 5736 | 8933 | 1781 | 5178 | 3809 | 3243 | 6666 | 2315 | 512 | 7154 |  |  |  |
| 2001 | 4988 | 5741 | 8928 | 1774 | 5178 | 3793 | 3374 | 6632 | 2304 | 770 | 5137 | 4408 |  |  |
| 2002 | 4987 | 5738 | 8928 | 1774 | 5169 | 3781 | 3181 | 5945 | 2163 | 994 | 4601 | 2932 | 3295 |  |
| 2003 | 4987 | 5737 | 8928 | 1774 | 5169 | 3782 | 3183 | 5920 | 2138 | 895 | 4929 | 3197 | 3879 | 1523 |

Estimates at age 0 converted to numbers at age 1.

Estimates at age 0**Stock: Cod in Division VIIa (Irish Sea)**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass (tonnes) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1990 | 4754 | 3194 | 2893 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 6840 | 6281 | 7467 | 9795 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 3703 | 2488 | 3448 | 6000 | 6500 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 4285 | 3159 | 3234 | 3209 | 3093 | 2520 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 4540 | 3294 | 2827 | 3109 | 4768 | 2945 | 3409 |  |  |  |  |  |  |  |  |  |
| 1995 | 4575 | 3428 | 2990 | 2919 | 3953 | 3152 | 3647 | 3930 |  |  |  |  |  |  |  |  |
| 1996 | 7886 | 5590 | 6058 | 4761 | 5604 | 4558 | 7614 | 8448 | 9912 |  |  |  |  |  |  |  |
| 1997 | 9206 | 6931 | 7507 | 6848 | 6748 | 5979 | 7911 | 10277 | 11591 | 12237 |  |  |  |  |  |  |
| 1998 | 9720 | 7215 | 7656 | 7009 | 6687 | 5678 | 6975 | 7736 | 8749 | 9108 | 7473 |  |  |  |  |  |
| 1999 | 9271 | 6921 | 7410 | 6533 | 6179 | 4901 | 6064 | 6035 | 5884 | 8127 | 4242 | 2723 |  |  |  |  |
| 2000 | 9225 | 6888 | 7381 | 6521 | 6167 | 4877 | 6007 | 5932 | 5506 | 6676 | 4281 | 5991 | 6846 |  |  |  |
| 2001 | 9230 | 6898 | 7397 | 6542 | 6180 | 4868 | 5979 | 5923 | 5710 | 6905 | 4381 | 5583 | 5813 | 5137 |  |  |
| 2002 | 9226 | 6889 | 7383 | 6524 | 6160 | 4849 | 5945 | 5781 | 4973 | 5106 | 2312 | 3364 | 4930 | 4580 | 4480 |  |
| 2003 | 9226 | 6888 | 7382 | 6523 | 6159 | 4849 | 5947 | 5786 | 4972 | 5062 | 2038 | 3055 | 5706 | 6462 | 7962 | 3272 |

Forecast.

SSB at 1 January.

New Maturity Ogive , same in 1997 onwards

**Remarks:** Forecasts based upon *status quo* F