**Stock: Blue whiting combined stock (Sub-areas I–IX and XIV)**

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(3-7,u) | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | |
|  | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| 1989 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 0.49 | 0.53 | 0.53 | 0.36 | 0.32 | 0.37 |  |  |  |  |  |  |  |  |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1996 | 0.49 | 0.53 | 0.51 | 0.30 | 0.23 | 0.26 | 0.28 | 0.40 |  |  |  |  |  |  |
| 1997 | 0.48 | 0.51 | 0.48 | 0.27 | 0.20 | 0.21 | 0.22 | 0.27 | 0.32 |  |  |  |  |  |
| 1998 | 0.49 | 0.52 | 0.47 | 0.25 | 0.18 | 0.22 | 0.20 | 0.31 | 0.40 | 0.41 |  |  |  |  |
| 1999 | 0.50 | 0.53 | 0.49 | 0.25 | 0.18 | 0.21 | 0.18 | 0.27 | 0.33 | 0.32 | 0.52 |  |  |  |
| 2000 | .48 | .50 | .44 | .23 | .16 | .18 | .19 | .24 | .30 | .29 | .44 | .43 |  |  |
| 2001 | 0.37 | 0.44 | 0.43 | 0.18 | 0.19 | 0.18 | 0.18 | 0.23 | 0.31 | 0.32 | 0.47 | 0.49 | 0.86 |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Remarks:**

**Stock: Blue whiting combined stock (Sub-areas I–IX and XIV)**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 0) Unit: millions | | | | | | | | | | | | | | |
| Date of assessment | Year class | | | | | | | | | | | | | |
|  | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | |
| 1989 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1990 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1994 | 10189 | 10185 | 7338 | 8604 | 22185 | 7251 |  |  |  |  |  |  |  |  | |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1996 | 11033 | 10622 | 8296 | 9675 | 23272 | 9721 | 7198 | 5297 |  |  |  |  |  |  | |
| 1997 | 11247 | 10954 | 8737 | 10864 | 25935 | 11816 | 8098 | 6944 | 11951 |  |  |  |  |  | |
| 1998 | 12281 | 10808 | 8580 | 10863 | 25689 | 10736 | 7097 | 5591 | 8155 | 9187 |  |  |  |  | |
| 1999 | 11992 | 10602 | 8904 | 11463 | 27072 | 12276 | 7628 | 5947 | 7826 | 10264 | 31242 |  |  |  | |
| 2000 | 12316 | 11157 | 9145 | 11973 | 28802 | 11393 | 7853 | 6193 | 8025 | 10630 | 35212 | 48818 |  |  | |
| 2001 | 11800 | 11100 | 9000 | 10400 | 24000 | 10100 | 6400 | 5200 | 6400 | 8400 | 27000 | 43300 | 19600 |  | |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |

**Remarks:**

**Stock: Blue whiting combined stock (Sub-areas I–IX and XIV)**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass ('000 t) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| 1989 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 1519 | 1318 | 1793 | 2340 | 1828 | 1578 | 1447 | 1517 |  |  |  |  |  |  |  |  |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1996 | 1595 | 1436 | 1676 | 2384 | 2192 | 2025 | 1794 | 1613 | 1795 | 2103 |  |  |  |  |  |  |
| 1997 | 1654 | 1534 | 1875 | 2442 | 2364 | 2320 | 2255 | 2199 | 2433 | 2714 | 2809 |  |  |  |  |  |
| 1998 | 1671 | 1566 | 1895 | 2444 | 2319 | 2205 | 1993 | 1848 | 2021 | 2718 | 3111 | 2766 |  |  |  |  |
| 1999 | 1408 | 1342 | 1771 | 2317 | 2220 | 2152 | 1931 | 1791 | 2001 | 2597 | 2919 | 2542 | 2136 |  |  |  |
| 2000 | 1488 | 1446 | 1921 | 2518 | 2412 | 2327 | 2067 | 1936 | 2166 | 2818 | 3007 | 2755 | 2251 | 1942 |  |  |
| 2001 | 1531 | 1426 | 1835 | 2409 | 2336 | 2281 | 2071 | 1903 | 1976 | 2640 | 2783 | 2246 | 1514 | 1208 | 963 |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Forecast, F status quo

**Remarks:** Forecast for 1999 - 2001 based on F factor of 1.000 in 1999 and 2000