**Stock: Cod in Division VIa (West of Scotland)**

**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 | 0.70 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 1.03 | 0.81 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 1.04 | 0.83 | 0.89 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 0.96 | 0.76 | 0.81 | 0.72 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 0.96 | 0.77 | 0.87 | 0.85 | 0.71 |  |  |  |  |  |  |  |  |  |
| 1995 | 1.01 | 0.81 | 0.92 | 0.89 | 0.81 | 0.74 |  |  |  |  |  |  |  |  |
| 1996 | 0.93 | 0.67 | 0.65 | 0.96 | 0.72 | 0.86 | 1.07 |  |  |  |  |  |  |  |
| 1997 | 0.94 | 0.85 | 0.97 | 1.02 | 0.98 | 0.94 | 0.96 | 0.86 |  |  |  |  |  |  |
| 1998 | 0.96 | 0.84 | 0.97 | 0.99 | 0.93 | 0.90 | 0.95 | 0.82 | 0.66 |  |  |  |  |  |
| 1999 | 0.95 | 0.84 | 0.98 | 0.99 | 0.95 | 0.93 | 1.01 | 0.95 | 0.85 | 0.65 |  |  |  |  |
| 2000 | 0.95 | 0.86 | 1.02 | 1.01 | 0.94 | 0.88 | 0.92 | 1.04 | 1.03 | 0.93 | 0.84 |  |  |  |
| 2001 | 0.95 | 0.86 | 1.03 | 1.01 | 0.94 | 0.88 | 0.93 | 1.05 | 1.06 | 0.98 | 0.98 | 0.90 |  |  |
| 2002 | 0.96 | 0.88 | 1.06 | 1.03 | 0.93 | 0.86 | 0.90 | 1.06 | 1.06 | 0.99 | 0.97 | 0.83 | 0.61 |  |
| 2003 | 0.97 | 0.86 | 1.00 | 0.98 | 0.96 | 0.94 | 0.95 | 1.12 | 1.15 | 1.09 | 1.16 | 1.14 | 1.06 | 1.01 |

**Remarks:** Estimates of mis-reporting now included for years 1992-1995. TSA assessments

**Stock: Cod in Division VIa (West of Scotland)**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 1) Unit: millions | | | | | | | | | | | | | | |
| Date of assessment | Year class | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| 1990 | 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 7 | 13 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 6 | 12 | 15 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 5 | 8 | 11 | 10 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 4 | 7 | 13 | 3 | 10 |  |  |  |  |  |  |  |  |  |
| 1995 | 4 | 7 | 11 | 4 | 14 | 9 |  |  |  |  |  |  |  |  |
| 1996 | 5 | 10 | 19 | 8 | 16 | 13 | 10 |  |  |  |  |  |  |  |
| 1997 | 5 | 8 | 16 | 7 | 12 | 9 | 5 | 12 |  |  |  |  |  |  |
| 1998 | 4 | 8 | 16 | 8 | 10 | 8 | 4 | 12 | 9 |  |  |  |  |  |
| 1999 | 4 | 8 | 15 | 7 | 10 | 7 | 3 | 11 | 5 | 6 |  |  |  |  |
| 2000 | 4 | 7 | 13 | 6 | 8 | 6 | 2 | 8 | 3 | 2 | 9 |  |  |  |
| 2001 | 4 | 7 | 13 | 6 | 8 | 6 | 2 | 8 | 2 | 2 | 6 | 5 |  |  |
| 2002 | 4 | 7 | 12 | 5 | 8 | 6 | 2 | 8 | 2 | 1 | 5 | 2 | 3 |  |
| 2003 | 7 | 11 | 21 | 8 | 12 | 9 | 4 | 12 | 3 | 2 | 6 | 1 | 3 | 2 |

Geometric mean. RCT3. Estimates of misreporting now included for years 1992-1995. TSA assessments. short-term geometric mean

**Remarks:**

**Stock: Cod in Division VIa (West of Scotland)**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass ('000 t) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1990 | 31 | 30 | 29 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 18 | 18 | 19 | 21 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 18 | 16 | 19 | 21 | 21 |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 19 | 17 | 15 | 18 | 20 | 24 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 19 | 16 | 14 | 16 | 17 | 16 | 18 |  |  |  |  |  |  |  |  |  |
| 1995 | 18 | 16 | 13 | 15 | 15 | 12 | 22 | 22 |  |  |  |  |  |  |  |  |
| 1996 | 20 | 20 | 21 | 22 | 26 | 26 | 22 | 19 | 16 |  |  |  |  |  |  |  |
| 1997 | 18 | 14 | 11 | 15 | 16 | 16 | 16 | 14 | 14 | 14 |  |  |  |  |  |  |
| 1998 | 18 | 15 | 12 | 15 | 17 | 16 | 14 | 12 | 15 | 17 | 17 |  |  |  |  |  |
| 1999 | 18 | 14 | 11 | 15 | 16 | 15 | 13 | 9 | 9 | 13 | 12 | 13 |  |  |  |  |
| 2000 | 18 | 14 | 10 | 13 | 13 | 13 | 12 | 8 | 6 | 5 | 5 | 7 | 9 |  |  |  |
| 2001 | 18 | 14 | 10 | 13 | 13 | 13 | 12 | 7 | 6 | 5 | 3 | 4 | 6 | 6 |  |  |
| 2002 | 18 | 14 | 10 | 12 | 13 | 12 | 12 | 7 | 6 | 5 | 4 | 4 | 6 | 7 | 8 |  |
| 2003 | 18 | 15 | 12 | 14 | 14 | 13 | 12 | 8 | 6 | 5 | 3 | 3 | 3 | 2 | 2 | 2 |

Forecast. Estimates of mis-reporting now included for years 1992-1995. TSA assessments

**Remarks:** Forecast assuming *status quo*