**Stock: Megrim *L. boscii* in Divisions VIIIc and IXa**

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F( 2-4 ,u) | | | | | | | | | | | | | | | |
| Year | | | | | | | | | | | | | | | |
| Date of assessment | 1988 | | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| 1989 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 0.33 | | 0.41 | 0.26 | 0.21 | 0.39 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 0.35 | | 0.45 | 0.31 | 0.26 | 0.49 | 0.34 |  |  |  |  |  |  |  |  |  |
| 1995 | 0.37 | | 0.48 | 0.31 | 0.26 | 0.46 | 0.32 | 0.30 |  |  |  |  |  |  |  |  |
| 1996 | 0.36 | | 0.45 | 0.30 | 0.25 | 0.45 | 0.31 | 0.29 | 0.46 |  |  |  |  |  |  |  |
| 1997 | 0.36 | | 0.46 | 0.30 | 0.24 | 0.44 | 0.31 | 0.33 | 0.45 | 0.36 |  |  |  |  |  |  |
| 1998 | 0.37 | | 0.48 | 0.31 | 0.26 | 0.47 | 0.34 | 0.34 | 0.45 | 0.34 | 0.20 |  |  |  |  |  |
| 1999 | 0.38 | | 0.49 | 0.32 | 0.26 | 0.48 | 0.33 | 0.33 | 0.40 | 0.28 | 0.16 | 0.18 |  |  |  |  |
| 2000 | 0.38 | | 0.50 | 0.32 | 0.27 | 0.49 | 0.34 | 0.34 | 0.44 | 0.32 | 0.20 | 0.24 | 0.23 |  |  |  |
| 2001 | 0.38 | | 0.50 | 0.32 | 0.26 | 0.48 | 0.34 | 0.33 | 0.43 | 0.32 | 0.20 | 0.24 | 0.23 | 0.17 |  |  |
| 2002 | 0.39 | | 0.54 | 0.33 | 0.27 | 0.48 | 0.35 | 0.32 | 0.41 | 0.32 | 0.20 | 0.24 | 0.22 | 0.15 | 0.15 |  |
| 2003 | 0.37 | | 0.48 | 0.31 | 0.25 | 0.46 | 0.34 | 0.34 | 0.44 | 0.32 | 0.20 | 0.23 | 0.23 | 0.17 | 0.19 | 0.14 |

**Remarks:**

**Stock: Megrim *L. boscii* in Divisions VIIIc and IXa**

# Assessment Quality Control Diagram 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 1 ) Unit: millions | | | | | | | | | | | | | | | |
| Year class | | | | | | | | | | | | | | | |
| Date of assessment | 1989 | | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| 1989 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 34.5 | | 13.6 | 38.6 | 40.0 |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 30.1 | | 19.1 | 24.6 | 19.8 | 26.8 |  |  |  |  |  |  |  |  |  |  |
| 1995 | 29.8 | | 19.3 | 42.9 | 29.0 | 4.1 | 33.8 |  |  |  |  |  |  |  |  |  |
| 1996 | 30.7 | | 19.8 | 40.5 | 33.2 | 6.3 | 31.6 | 23.4 |  |  |  |  |  |  |  |  |
| 1997 | 31.2 | | 18.4 | 37.3 | 30.3 | 10.0 | 27.7 | 27.4 | 24.3 |  |  |  |  |  |  |  |
| 1998 | 29.7 | | 18.2 | 37.7 | 31.9 | 9.2 | 32.8 | 28.0 | 18.8 | 24.6 |  |  |  |  |  |  |
| 1999 | 29.7 | | 18.3 | 39.2 | 33.9 | 10.9 | 35.1 | 38.9 | 25.3 | 21.9 | 26.9 |  |  |  |  |  |
| 2000 | 29.3 | | 18.1 | 37.5 | 32.8 | 9.7 | 26.9 | 32.4 | 24.4 | 22.3 | 18.5 | 24.3 |  |  |  |  |
| 2001 | 29.5 | | 18.3 | 38.2 | 33.3 | 9.8 | 26.8 | 32.2 | 27.0 | 21.3 | 16.7 | 22.9 | 23.7 |  |  |  |
| 2002 | 28.6 | | 18.7 | 39.2 | 33.3 | 9.8 | 27.7 | 32.2 | 28.6 | 24.5 | 18.0 | 26.4 | 28.0 | 24.6 |  |  |
| 2003 \* | 36.3 | | 22.2 | 45.4 | 39.9 | 12.0 | 34.2 | 40.1 | 32.1 | 28.0 | 18.1 | 31.3 | 31.6 | 23.8 | 27.0 | 28.2 |

**Remarks:** GM assumed. Taper weighted GM of VPA. GM (90-year of assessment-2)

**\* Recruitment at age 0.**

**Stock: Megrim *L. boscii* in Divisions VIIIc and IXa**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass ('000 t) | | | | | | | | | | | | | | | | | |
| Year | | | | | | | | | | | | | | | | | |
| Date of assessment | 1989 | | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1989 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 6.0 | | 5.6 | 5.3 | 4.6 | 4.0 | 3.8 | 4.0 |  |  |  |  |  |  |  |  |  |  |
| 1994 | 5.3 | | 4.8 | 4.4 | 3.8 | 3.4 | 2.9 | 4.5 | 3.2 |  |  |  |  |  |  |  |  |  |
| 1995 | 5.6 | | 5.3 | 4.9 | 4.4 | 4.6 | 4.3 | 4.9 | 4.7 | 4.8 |  |  |  |  |  |  |  |  |
| 1996 | 5.9 | | 5.7 | 5.2 | 4.6 | 4.7 | 4.5 | 4.0 | 4.1 | 3.4 | 3.4 |  |  |  |  |  |  |  |
| 1997 | 6.0 | | 5.8 | 5.3 | 4.5 | 4.6 | 4.2 | 3.8 | 3.4 | 3.5 | 3.7 | 3.7 |  |  |  |  |  |  |
| 1998 | 7.4 | | 6.8 | 6.4 | 5.8 | 5.9 | 5.6 | 5.0 | 4.8 | 4.7 | 5.3 | 5.0 | 4.8 |  |  |  |  |  |
| 1999 | 7.1 | | 6.5 | 6.2 | 5.7 | 5.9 | 5.7 | 5.3 | 5.4 | 5.7 | 6.4 | 6.5 | 6.6 | 6.8 |  |  |  |  |
| 2000 | 7.5 | | 6.5 | 6.1 | 5.6 | 5.7 | 5.5 | 4.9 | 4.6 | 4.7 | 5.3 | 5.5 | 5.4 | 5.5 | 5.7 |  |  |  |
| 2001 | 7.2 | | 7.1 | 6.5 | 6.2 | 5.7 | 5.9 | 5.6 | 4.98 | 4.8 | 4.8 | 5.5 | 5.6 | 6.0 | 6.1 | 6.1 |  |  |
| 2002 | 6.8 | | 6.2 | 5.8 | 5.6 | 5.8 | 5.6 | 5.0 | 5.0 | 5.0 | 5.6 | 5.9 | 6.1 | 6.1 | 6.8 | 7.0 | 7.1 |  |
| 2003 | 7.5 | | 6.9 | 6.5 | 5.8 | 5.9 | 5.6 | 4.9 | 4.7 | 4.8 | 5.5 | 5.7 | 5.8 | 5.2 | 6.6 | 6.8 | 6.8 | 6.8 |

Forecast. . *Status quo.*

**Remarks:** Different maturity ogive since 1998