**Stock: Herring in Sub-divisions 22-24 and Division IIIa (spring spawners)**

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(3-6,u) | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | |
|  | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1994 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1996 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1997 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1998 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1999 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2002 | 0.336 | 0.444 | 0.506 | 0.624 | 0.494 | 0.662 | 0.474 | 0.491 | 0.416 | 0.542 | 0.535 |  | |
| 2003 | 0.348 | 0.462 | 0.526 | 0.653 | 0.521 | 0.704 | 0.530 | 0.520 | 0.428 | 0.539 | 0.517 | 0.454 | |

**Remarks:**

**Stock: Herring in Sub-divisions 22-24 and Division IIIa (spring spawners)**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment (age 0) Unit: millions | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | |
|  | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1994 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1996 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1997 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1998 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 1999 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2002 | 5153 | 3871 | 3167 | 6088 | 4261 | 4015 | 3750 | 5081 | 5928 | 3393 | 4447 |  | |
| 2003 | 5116 | 3827 | 3203 | 6245 | 4225 | 4290 | 3706 | 5178 | 6392 | 3690 | 5845 | 4702 | |

**Remarks:**

**Stock: Herring in Sub-divisions 22-24 and Division IIIa (spring spawners)**

**Assessment Quality Control Diagram 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spawning stock biomass ('000 t) | | | | | | | | | | | | | | | |
|  | Year | | | | | | | | | | | | | |  |
| 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1991 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1994 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1995 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1997 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1998 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1999 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2002 | 327 | 343 | 316 | 252 | 205 | 147 | 159 | 125 | 123 | 135 | 138 | 140 | 134 | 136 |  |
| 2003 | 318 | 331 | 304 | 242 | 196 | 141 | 157 | 125 | 126 | 139 | 149 | 178 | 172 | 177 | 170 |

**Remarks:** Forecast: GM of 1991-1999 recruitment (4491 mill. 0-ringers) assumed for 2001-2003. GM of 1991-2000 1-ringers (3196 mill.) assumed for 2002.

Forecast: GM of 1991-2000 recruitment (4474 mill. 0-ringers) assumed for 2003-2005. GM of 1992-2001 1-ringers (3064 mill.) assumed for 2003.