**Stock: Cod in Sub-divisions 25-32**

# Assessment Quality Control Diagram 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(3-7,u) or F(4-7,u) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| 1989 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 0.88 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 1.07 | 1.15 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 0.96 | 0.96 | 0.95 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 1.02 | 1.13 | 1.37 | 1.03 |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 1.17 | 1.31 | 1.52 | 1.54 | 1.28 |  |  |  |  |  |  |  |  |  |  |
| 1995 | 0.98 | 1.01 | 1.05 | 1.32 | 0.52 | 1.03 |  |  |  |  |  |  |  |  |  |
| 1996 | 1.13 | 1.21 | 1.30 | 0.93 | 0.35 | 0.53 | 0.69 |  |  |  |  |  |  |  |  |
| 1997 | 1.07 | 1.08 | 0.98 | 1.13 | 0.64 | 0.60 | 0.74 | 0.75 |  |  |  |  |  |  |  |
| 1998 | 1.11 | 1.18 | 1.33 | 0.90 | 0.30 | 0.50 | 0.64 | 0.83 | 0.68 |  |  |  |  |  |  |
| 1999 | 1.13 | 1.20 | 1.34 | 0.93 | 0.31 | 0.52 | 0.68 | 0.94 | 0.99 | 0.82 |  |  |  |  |  |
| 2000 | 1.14 | 1.21 | 1.36 | 0.96 | 0.32 | 0.53 | 0.69 | 0.97 | 1.08 | 1.05 | 0.90 |  |  |  |  |
| 2001 | 1.15 | 1.22 | 1.37 | 0.98 | 0.33 | 0.54 | 0.71 | 0.99 | 1.10 | 1.12 | 1.17 | 1.07 |  |  |  |
| 2002 | 1.14 | 1.24 | 1.39 | 1.08 | 0.42 | 0.67 | 0.79 | 1.02 | 1.08 | 1.08 | 1.13 | 1.00 | 1.01 |  |  |
| 2003 | 1.15 | 1.24 | 1.40 | 1.10 | 0.43 | 0.68 | 0.80 | 1.02 | 1.08 | 1.04 | 0.96 | 1.03 | 1.12 | 0.94 |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

In the assessment the mean F was F(4-7,u).

**Remarks:** Fisheries data for 1992-1993 unreliable.

**Stock: Cod in Sub-divisions 25-32**

**Assessment Quality Control Diagram 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Recruitment ('000) | | | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | | | |
|  | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| 1989 | 156 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 182 | 225 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 132 | 170 | 95 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 120 | 118 | 54 | 57 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 115 | 106 | 50 | 55 | 164 |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 113 | 104 | 48 | 81 | 173 | 100 |  |  |  |  |  |  |  |  |  |  |
| 1995 | 120 | 118 | 76 | 105 | 198 | 111 | 209 |  |  |  |  |  |  |  |  |  |
| 1996 | 117 | 116 | 79 | 125 | 174 | 147 | 175 | 278 |  |  |  |  |  |  |  |  |
| 1997 | 132 | 147 | 123 | 188 | 214 | 150 | 173 | 157 | 150 |  |  |  |  |  |  |  |
| 1998 | 118 | 117 | 79 | 131 | 176 | 130 | 152 | 155 | 98 | 122 |  |  |  |  |  |  |
| 1999 | 118 | 116 | 78 | 129 | 171 | 120 | 119 | 112 | 97 | 137 | 112 |  |  |  |  |  |
| 2000 | 117 | 115 | 78 | 129 | 170 | 118 | 114 | 102 | 91 | 136 | 142 | 140 |  |  |  |  |
| 2001 | 117 | 115 | 78 | 129 | 170 | 118 | 113 | 98 | 77 | 125 | 130 | 122 |  |  |  |  |
| 2002 | 115 | 112 | 77 | 129 | 171 | 118 | 113 | 99 | 77 | 117 | 124 | 128 | 161 |  |  |  |
| 2003 | 122 | 128 | 83 | 136 | 182 | 127 | 120 | 115 | 89 | 150 | 153 | 183 | 187 | 158 |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Estimated by GLM. Based on RCT3 reduced to 75% of the calculated value, see text Section 5.10. Based on RCT3 reduced to 90% of the calculated value, see text Section 5.10.

**Remarks:** Note the higher level of the 1990 yearclass in the 1997 assessment.

**Stock: Cod in Sub-divisions 25-32**

**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 | 2005 | 2006 |
| 1989 | 309 | 252 | 206 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 315 | 281 | 283 | 259 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 292 | 229 | 179 | 143 | 118 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 297 | 240 | 178 | 115 | 82 | 71 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 | 290 | 232 | 153 | 79 | 70 | 95 | 106 |  |  |  |  |  |  |  |  |  |  |  |
| 1994 | 284 | 216 | 146 | 72 | 68 | 112 | 123 | 119 |  |  |  |  |  |  |  |  |  |  |
| 1995 | 291 | 228 | 167 | 106 | 96 | 194 | 212 | 224 | 218 |  |  |  |  |  |  |  |  |  |
| 1996 | 288 | 223 | 160 | 103 | 124 | 212 | 244 | 260 |  |  |  |  |  |  |  |  |  |  |
| 1997 | 235 | 222 | 177 | 153 | 159 | 215 | 238 | 227 | 239 | 227 | 217 |  |  |  |  |  |  |  |
| 1998 | 239 | 218 | 154 | 99 | 123 | 207 | 260 | 191 | 188 | 219 | 203 | 199 |  |  |  |  |  |  |
| 1999 | 238 | 217 | 153 | 98 | 120 | 201 | 247 | 167 | 141 | 125 | 139 | 141 | 136 |  |  |  |  |  |
| 2000 | 238 | 216 | 152 | 97 | 119 | 199 | 244 | 164 | 133 | 109 | 88 | 101 | 106 | 107 |  |  |  |  |
| 2001 | 237 | 215 | 151 | 96 | 118 | 197 | 242 | 162 | 130 | 102 | 75 | 87 |  |  |  |  |  |  |
| 2002 | 237 | 213 | 149 | 92 | 111 | 188 | 235 | 162 | 131 | 104 | 74 | 72 | 77 |  |  |  |  |  |
| 2003 | 240 | 216 | 151 | 93 | 113 | 191 | 236 | 163 | 135 | 109 | 85 | 96 | 93 | 88 |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Forecast. Forecast with *status quo* option.