**Stock: Plaice in Sub-area IV (North Sea)**

**Assessment Quality Control Diagram 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average F(2-10,u) | | | | | | | | | | | | | | |
| Date of assessment | Year | | | | | | | | | | | | | |
|  | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| 1989 | 0.44 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 0.60 | 0.55 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 0.56 | 0.53 | 0.56 |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 0.44 | 0.38 | 0.39 | 0.46 |  |  |  |  |  |  |  |  |  |  |
| 1993 | 0.42 | 0.37 | 0.38 | 0.47 | 0.46 |  |  |  |  |  |  |  |  |  |
| 1994 | 0.42 | 0.39 | 0.37 | 0.46 | 0.47 | 0.46 |  |  |  |  |  |  |  |  |
| 1995 | 0.40 | 0.37 | 0.35 | 0.43 | 0.43 | 0.43 | 0.44 |  |  |  |  |  |  |  |
| 1996 | 0.42 | 0.39 | 0.37 | 0.46 | 0.49 | 0.50 | 0.53 | 0.46 |  |  |  |  |  |  |
| 1997 | 0.39 | 0.36 | 0.34 | 0.42 | 0.43 | 0.44 | 0.45 | 0.41 | 0.41 |  |  | |  |  |
| 1998 | 0.39 | 0.36 | 0.34 | 0.41 | 0.43 | 0.43 | 0.45 | 0.41 | 0.43 | 0.44 |  |  |  |  |
| 1999 | 0.40 | 0.37 | 0.35 | 0.43 | 0.45 | 0.46 | 0.48 | 0.44 | 0.47 | 0.50 | 0.38 |  |  |  |
| 2000 | 0.40 | 0.37 | 0.35 | 0.42 | 0.44 | 0.44 | 0.46 | 0.42 | 0.43 | 0.46 | 0.35 | 0.32 |  |  |
| 2001 | 0.43 | 0.41 | 0.38 | 0.47 | 0.50 | 0.51 | 0.54 | 0.49 | 0.53 | 0.53 | 0.46 | 0.44 | 0.34 |  |
| 2002 | 0.44 | 0.42 | 0.39 | 0.49 | 0.52 | 0.54 | 0.58 | 0.53 | 0.58 | 0.59 | 0.49 | 0.45 | 0.31 | 0.31 |

**Remarks:**

**Stock: Plaice in Sub-area IV (North Sea)**

**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 |
| 1989 | 750 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 584 | 588 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 617 | 696 | 690 |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 598 | 750 | 687 | 567 |  |  |  |  |  |  |  |  |  |  |
| 1993 | 471 | 676 | 699 | 529 | n/a |  |  |  |  |  |  |  |  |  |
| 1994 | 391 | 453 | 476 | 368 | 456 | - |  |  |  |  |  |  |  |  |
| 1995 | 386 | 452 | 457 | 312 | 254 | 525 | 530 |  |  |  |  |  |  |  |
| 1996 | 388 | 397 | 430 | 338 | 283 | 516 | 430 | 654 |  |  |  |  |  |  |
| 1997 | 398 | 402 | 424 | 305 | 285 | 427 | 310 | 801 | n/a |  |  |  |  |  |
| 1998 | 408 | 398 | 409 | 284 | 262 | 388 | 467 | 842 | 501 | n/a |  |  |  |  |
| 1999 | 402 | 396 | 400 | 280 | 244 | 346 | 368 | 775 | 366 | 445 | n/a |  |  |  |
| 2000 | 410 | 402 | 405 | 281 | 245 | 336 | 267 | 691 | 298 | 270 | 417 | n/a |  |  |
| 2001 | 398 | 403 | 405 | 286 | 239 | 330 | 258 | 815 | 241 | 223 | 342 | 411 | n/a |  |
| 2002 | 406 | 396 | 401 | 403 | 285 | 243 | 327 | 284 | 970 | 315 | 220 | 247 | 276 |  |

**Remarks:**  Prediction from recruitment surveys.

Geometric mean

XSA

**Stock: Plaice in Sub-area IV (North Sea)**

**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 | 385 | 364 | 361 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1990 | 382 | 377 | 345 | 326 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 383 | 376 | 355 | 354 | 357 |  |  |  |  |  |  |  |  |  |  |  |
| 1992 | 433 | 402 | 346 | 385 | 378 | 369 |  |  |  |  |  |  |  |  |  |  |
| 1993 | 429 | 406 | 345 | 325 | 388 | 336 | 329 |  |  |  |  |  |  |  |  |  |
| 1994 | 414 | 385 | 325 | 308 | 270 | 257 | 252 | 237 |  |  |  |  |  |  |  |  |
| 1995 | 424 | 398 | 340 | 325 | 284 | 252 | 235 | 234 | 222 |  |  |  |  |  |  |  |
| 1996 | 413 | 386 | 327 | 290 | 260 | 223 | 212 | 209 | 215 | 259 |  |  |  |  |  |  |
| 1997 | 427 | 404 | 345 | 309 | 281 | 239 | 230 | 223 | 212 | 265 | 260 |  |  |  |  |  |
| 1998 | 430 | 408 | 349 | 311 | 282 | 239 | 227 | 210 | 212 | 274 | 288 | 305 |  |  |  |  |
| 1999 | 421 | 397 | 340 | 303 | 271 | 228 | 212 | 191 | 181 | 194 | 259 | 291 | 268 |  |  |  |
| 2000 | 422 | 398 | 341 | 307 | 277 | 235 | 220 | 198 | 180 | 223 | 222 | 271 | 270 | 268 |  |  |
| 2001 | 404 | 377 | 320 | 284 | 252 | 213 | 191 | 171 | 150 | 199 | 192 | 222 | 237 | 235 | 249 |  |
| 2002 | 401 | 373 | 315 | 279 | 245 | 206 | 183 | 163 | 144 | 207 | 213 | 263 | 240 |  |  |  |

Forecast using *status quo* F

**Remarks:**