









































































(雌) を示す。

(3) 将来予測

各年齢の資源尾数は以下の式で求めた。

$$N_{0,y} = SSB_y \times RPS \quad (9)$$

$$SSB_y = \sum_{a=2}^{3+} N_{a,y} f r_a W_a \quad (10)$$

$$N_{a,y} = N_{a-1,y-1} \exp(-M_{a-1}) - C_{a-1,y-1} \exp(-M_{a-1}/2) \quad (a=1, 2) \quad (11)$$

$$N_{3+,y} = N_{2,y-1} \exp(-M) - C_{2,y-1} \exp(-M/2) + N_{3+,y-1} \exp(-M) - C_{3+,y-1} \exp(-M/2) \quad (12)$$

各年齢の漁獲尾数は以下の式で求めた。

$$C_{a,y} = N_{a,y} (1 - \exp(-F_{a,y})) \exp(-M_a/2) \quad (13)$$

2017～2023 年の将来予測において、再生産成功率(RPS)は 2012～2016 年の中央値である 0.93 を使用した。2018 年の漁獲圧は 2017 年の年齢別漁獲係数に等しく、2019 年以降は 2017 年の年齢別選択率に等しいと仮定した。

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補足表 3-1. 資源解析結果 (1994~2005年)

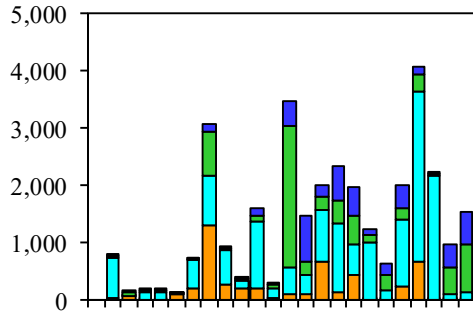
| 年齢別漁獲尾数(全国・万尾)                         |         |         |         |         |         |         |         |         |         |         |         |         |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 2,494   | 2,233   | 2,425   | 1,650   | 1,500   | 2,789   | 3,655   | 3,317   | 1,970   | 3,143   | 2,213   | 2,422   |
| 1歳                                     | 635     | 1,188   | 1,034   | 883     | 502     | 1,042   | 1,835   | 1,160   | 1,322   | 975     | 1,880   | 1,287   |
| 2歳                                     | 259     | 378     | 212     | 308     | 426     | 150     | 264     | 536     | 179     | 198     | 239     | 261     |
| 3歳以上                                   | 244     | 188     | 176     | 155     | 166     | 193     | 208     | 129     | 153     | 240     | 199     | 135     |
| 計                                      | 3,632   | 3,987   | 3,847   | 2,995   | 2,594   | 4,175   | 5,962   | 5,141   | 3,624   | 4,556   | 4,530   | 4,105   |
| 年齢別漁獲尾数(北海道太平洋北区、太平洋北区、太平洋中区、太平洋南区・千尾) |         |         |         |         |         |         |         |         |         |         |         |         |
| 0歳                                     | 440     | 301     | 493     | 276     | 115     | 278     | 1,780   | 1,032   | 235     | 282     | 199     | 485     |
| 1歳                                     | 313     | 526     | 346     | 433     | 241     | 387     | 1,033   | 645     | 347     | 188     | 360     | 583     |
| 2歳                                     | 47      | 146     | 89      | 55      | 63      | 80      | 158     | 224     | 119     | 72      | 66      | 93      |
| 3歳以上                                   | 81      | 37      | 72      | 62      | 54      | 70      | 70      | 41      | 45      | 85      | 80      | 72      |
| 年齢別漁獲尾数(北海道日本海北区、日本海北区、日本海西区、東シナ海区・千尾) |         |         |         |         |         |         |         |         |         |         |         |         |
| 0歳                                     | 2,054   | 1,931   | 1,931   | 1,374   | 1,385   | 2,512   | 1,875   | 2,285   | 1,735   | 2,861   | 2,013   | 1,937   |
| 1歳                                     | 322     | 662     | 688     | 450     | 262     | 655     | 802     | 515     | 976     | 786     | 1,520   | 704     |
| 2歳                                     | 212     | 232     | 123     | 253     | 362     | 71      | 106     | 312     | 60      | 126     | 173     | 169     |
| 3歳以上                                   | 163     | 152     | 104     | 93      | 111     | 123     | 138     | 88      | 107     | 155     | 119     | 63      |
| 年齢別漁獲量(全国・トン)                          |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 14,979  | 13,302  | 12,838  | 10,011  | 8,825   | 16,544  | 20,831  | 18,605  | 11,987  | 19,808  | 12,316  | 13,090  |
| 1歳                                     | 10,536  | 19,249  | 16,064  | 13,446  | 8,651   | 17,763  | 30,855  | 19,251  | 20,479  | 15,374  | 29,227  | 21,394  |
| 2歳                                     | 9,868   | 15,134  | 8,362   | 11,905  | 15,626  | 6,238   | 10,507  | 19,495  | 7,379   | 7,741   | 9,433   | 10,129  |
| 3歳以上                                   | 18,419  | 13,983  | 13,070  | 11,850  | 12,381  | 14,375  | 15,269  | 9,579   | 11,350  | 17,862  | 15,370  | 10,277  |
| 計                                      | 53,802  | 61,667  | 50,334  | 47,211  | 45,483  | 54,920  | 77,462  | 66,929  | 51,194  | 60,785  | 66,346  | 54,890  |
| 年齢別漁獲量(北海道太平洋北区、太平洋北区、太平洋中区、太平洋南区・トン)  |         |         |         |         |         |         |         |         |         |         |         |         |
| 0歳                                     | 2,614   | 1,945   | 2,691   | 1,522   | 703     | 1,659   | 9,831   | 5,652   | 1,384   | 1,695   | 1,128   | 2,443   |
| 1歳                                     | 5,329   | 9,055   | 5,855   | 6,970   | 4,670   | 7,387   | 18,850  | 11,834  | 6,804   | 3,321   | 6,174   | 10,825  |
| 2歳                                     | 2,425   | 6,581   | 3,845   | 2,524   | 2,839   | 3,691   | 6,636   | 9,009   | 5,322   | 3,294   | 2,938   | 4,034   |
| 3歳以上                                   | 6,555   | 2,961   | 5,254   | 5,032   | 4,425   | 5,426   | 5,535   | 3,230   | 3,587   | 6,706   | 6,553   | 5,743   |
| 年齢別漁獲量(北海道日本海北区、日本海北区、日本海西区、東シナ海区・トン)  |         |         |         |         |         |         |         |         |         |         |         |         |
| 0歳                                     | 12,365  | 11,357  | 10,147  | 8,488   | 8,122   | 14,885  | 11,000  | 12,953  | 10,603  | 18,113  | 11,188  | 10,647  |
| 1歳                                     | 5,207   | 10,193  | 10,209  | 6,476   | 3,981   | 10,376  | 12,005  | 7,416   | 13,675  | 12,053  | 23,054  | 10,569  |
| 2歳                                     | 7,443   | 8,553   | 4,517   | 9,380   | 12,786  | 2,547   | 3,871   | 10,486  | 2,057   | 4,447   | 6,495   | 6,095   |
| 3歳以上                                   | 11,864  | 11,021  | 7,816   | 6,817   | 7,956   | 8,949   | 9,734   | 6,349   | 7,763   | 11,155  | 8,817   | 4,534   |
| 年齢別漁獲係数                                |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 0.71    | 0.63    | 0.62    | 0.80    | 0.51    | 0.49    | 0.87    | 0.82    | 0.63    | 0.60    | 0.48    | 0.66    |
| 1歳                                     | 0.51    | 1.10    | 0.81    | 0.56    | 0.70    | 0.99    | 0.82    | 0.91    | 1.15    | 0.89    | 1.11    | 0.67    |
| 2歳                                     | 0.72    | 0.76    | 0.66    | 0.69    | 0.66    | 0.53    | 0.86    | 0.69    | 0.37    | 0.58    | 0.65    | 0.48    |
| 3歳以上                                   | 0.72    | 0.76    | 0.66    | 0.69    | 0.66    | 0.53    | 0.86    | 0.69    | 0.37    | 0.58    | 0.65    | 0.48    |
| 単純平均                                   | 0.67    | 0.82    | 0.69    | 0.69    | 0.63    | 0.64    | 0.85    | 0.78    | 0.63    | 0.66    | 0.72    | 0.57    |
| 年齢別資源尾数(万尾)                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 5,694   | 5,519   | 6,064   | 3,476   | 4,348   | 8,388   | 7,291   | 6,883   | 4,876   | 8,055   | 6,706   | 5,794   |
| 1歳                                     | 1,847   | 2,071   | 2,167   | 2,405   | 1,155   | 1,930   | 3,813   | 2,255   | 2,244   | 1,916   | 3,262   | 3,064   |
| 2歳                                     | 585     | 822     | 512     | 715     | 1,022   | 424     | 533     | 1,246   | 672     | 524     | 581     | 799     |
| 3歳以上                                   | 552     | 409     | 425     | 360     | 398     | 543     | 421     | 300     | 573     | 637     | 484     | 412     |
| 計                                      | 8,678   | 8,821   | 9,167   | 6,956   | 6,923   | 11,285  | 12,057  | 10,684  | 8,365   | 11,133  | 11,033  | 10,068  |
| 年齢別資源量(トン)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 34,194  | 32,881  | 32,107  | 21,093  | 25,578  | 49,757  | 41,554  | 38,610  | 29,661  | 50,759  | 37,330  | 31,319  |
| 1歳                                     | 30,649  | 33,560  | 33,650  | 36,643  | 19,903  | 32,894  | 64,122  | 37,420  | 34,754  | 30,223  | 50,722  | 50,923  |
| 2歳                                     | 22,315  | 32,889  | 20,170  | 27,648  | 37,524  | 17,559  | 21,224  | 45,342  | 27,724  | 20,543  | 22,928  | 30,940  |
| 3歳以上                                   | 41,652  | 30,388  | 31,527  | 27,520  | 29,734  | 40,463  | 30,842  | 22,278  | 42,645  | 47,402  | 37,358  | 31,391  |
| 計                                      | 128,810 | 129,717 | 117,454 | 112,904 | 112,739 | 140,672 | 157,742 | 143,650 | 134,784 | 148,927 | 148,339 | 144,573 |
| 年齢別親魚量(トン)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 1歳                                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 2歳                                     | 11,158  | 16,445  | 10,085  | 13,824  | 18,762  | 8,779   | 10,612  | 22,671  | 13,862  | 10,272  | 11,464  | 15,470  |
| 3歳以上                                   | 41,652  | 30,388  | 31,527  | 27,520  | 29,734  | 40,463  | 30,842  | 22,278  | 42,645  | 47,402  | 37,358  | 31,391  |
| 計                                      | 52,809  | 46,832  | 41,612  | 41,344  | 48,496  | 49,242  | 41,454  | 44,949  | 56,507  | 57,673  | 48,822  | 46,862  |
| 年齢別平均体重(g)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    |
| 0歳                                     | 600     | 596     | 529     | 607     | 588     | 593     | 570     | 561     | 608     | 630     | 557     | 541     |
| 1歳                                     | 1,659   | 1,620   | 1,553   | 1,523   | 1,723   | 1,704   | 1,681   | 1,659   | 1,549   | 1,577   | 1,555   | 1,662   |
| 2歳                                     | 3,816   | 4,002   | 3,940   | 3,868   | 3,671   | 4,145   | 3,984   | 3,640   | 4,124   | 3,918   | 3,950   | 3,874   |
| 3歳以上                                   | 7,547   | 7,422   | 7,426   | 7,653   | 7,475   | 7,451   | 7,334   | 7,426   | 7,442   | 7,439   | 7,722   | 7,627   |

補足表 3-1. (つづき) 資源解析結果 (2006~2017年)

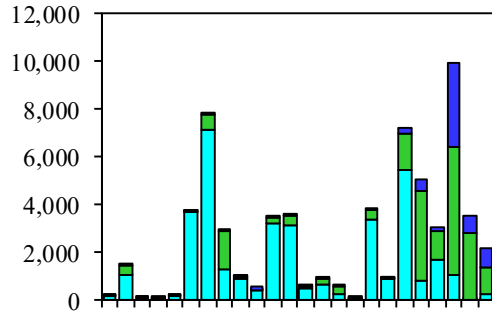
| 年齢別漁獲尾数(全国・万尾)                         |         |         |         |         |         |         |         |         |         |         |         |         |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 2,938   | 2,182   | 2,954   | 4,171   | 3,606   | 3,578   | 3,757   | 3,818   | 3,919   | 2,361   | 3,329   | 4,871   |
| 1歳                                     | 1,007   | 1,796   | 1,360   | 1,410   | 3,110   | 2,812   | 2,315   | 1,669   | 3,073   | 2,766   | 1,530   | 1,549   |
| 2歳                                     | 481     | 298     | 484     | 335     | 353     | 608     | 496     | 688     | 728     | 823     | 887     | 757     |
| 3歳以上                                   | 230     | 256     | 234     | 229     | 284     | 270     | 347     | 551     | 425     | 520     | 384     | 509     |
| 計                                      | 4,656   | 4,533   | 5,033   | 6,146   | 7,353   | 7,268   | 6,915   | 6,727   | 8,145   | 6,470   | 6,130   | 7,687   |
| 年齢別漁獲尾数(北海道太平洋北区、太平洋北区、太平洋中区、太平洋南区・千尾) |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 658     | 773     | 612     | 836     | 655     | 1,648   | 995     | 671     | 1,212   | 468     | 523     | 2,787   |
| 1歳                                     | 423     | 560     | 385     | 435     | 714     | 823     | 1,613   | 586     | 520     | 609     | 414     | 275     |
| 2歳                                     | 83      | 121     | 189     | 228     | 228     | 267     | 274     | 536     | 311     | 486     | 476     | 410     |
| 3歳以上                                   | 55      | 60      | 69      | 87      | 114     | 116     | 170     | 207     | 164     | 236     | 154     | 191     |
| 年齢別漁獲尾数(北海道日本海北区、日本海北区、日本海西区、東シナ海区・千尾) |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 2,280   | 1,409   | 2,342   | 3,335   | 2,950   | 1,930   | 2,762   | 3,147   | 2,707   | 1,893   | 2,806   | 2,084   |
| 1歳                                     | 585     | 1,236   | 975     | 975     | 2,396   | 1,989   | 702     | 1,083   | 2,553   | 2,157   | 1,115   | 1,274   |
| 2歳                                     | 398     | 177     | 295     | 107     | 125     | 342     | 222     | 152     | 418     | 337     | 411     | 347     |
| 3歳以上                                   | 175     | 196     | 166     | 142     | 171     | 154     | 177     | 344     | 260     | 284     | 230     | 318     |
| 年齢別漁獲量(全国・トン)                          |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 17,765  | 13,022  | 17,264  | 25,341  | 22,197  | 21,846  | 21,019  | 24,033  | 22,802  | 13,970  | 21,630  | 29,063  |
| 1歳                                     | 17,393  | 29,112  | 22,709  | 22,955  | 50,145  | 45,995  | 36,818  | 26,033  | 43,679  | 40,800  | 24,827  | 23,696  |
| 2歳                                     | 17,141  | 11,967  | 18,567  | 13,024  | 13,958  | 23,641  | 18,644  | 26,570  | 27,491  | 30,468  | 32,946  | 28,208  |
| 3歳以上                                   | 17,053  | 18,371  | 17,424  | 17,014  | 20,590  | 19,437  | 25,357  | 40,541  | 31,250  | 37,951  | 27,355  | 36,410  |
| 計                                      | 69,352  | 72,471  | 75,963  | 78,334  | 106,890 | 110,918 | 101,838 | 117,177 | 125,221 | 123,188 | 106,758 | 117,377 |
| 年齢別漁獲量(北海道太平洋北区、太平洋北区、太平洋中区、太平洋南区・トン)  |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 3,928   | 4,302   | 3,339   | 4,468   | 3,600   | 9,979   | 4,968   | 4,024   | 5,927   | 2,540   | 2,849   | 15,510  |
| 1歳                                     | 7,762   | 9,507   | 7,257   | 7,613   | 13,583  | 15,263  | 26,401  | 9,868   | 9,765   | 10,728  | 7,010   | 5,035   |
| 2歳                                     | 3,569   | 5,317   | 7,474   | 9,143   | 9,335   | 10,636  | 10,988  | 20,964  | 12,474  | 18,726  | 18,509  | 15,775  |
| 3歳以上                                   | 4,347   | 4,573   | 5,362   | 6,823   | 8,494   | 8,817   | 12,758  | 15,832  | 12,672  | 17,584  | 11,167  | 13,725  |
| 年齢別漁獲量(北海道日本海北区、日本海北区、日本海西区、東シナ海区・トン)  |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 13,837  | 8,720   | 13,925  | 20,873  | 18,597  | 11,866  | 16,051  | 20,009  | 16,875  | 11,429  | 18,781  | 13,553  |
| 1歳                                     | 9,630   | 19,605  | 15,452  | 15,342  | 36,562  | 30,732  | 10,418  | 16,165  | 33,913  | 30,072  | 17,817  | 18,661  |
| 2歳                                     | 13,572  | 6,650   | 11,093  | 3,881   | 4,623   | 13,005  | 7,656   | 5,607   | 15,017  | 11,742  | 14,437  | 12,433  |
| 3歳以上                                   | 12,706  | 13,798  | 12,062  | 10,191  | 12,096  | 10,620  | 12,599  | 24,709  | 18,578  | 20,367  | 16,188  | 22,685  |
| 年齢別漁獲係数                                |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 0.52    | 0.49    | 0.62    | 0.47    | 0.45    | 0.49    | 0.56    | 0.44    | 0.44    | 0.39    | 0.60    | 0.48    |
| 1歳                                     | 0.76    | 0.83    | 0.76    | 0.80    | 0.93    | 0.93    | 0.82    | 0.59    | 0.92    | 0.73    | 0.54    | 0.72    |
| 2歳                                     | 0.66    | 0.60    | 0.63    | 0.48    | 0.54    | 0.52    | 0.45    | 0.71    | 0.64    | 0.79    | 0.63    | 0.65    |
| 3歳以上                                   | 0.66    | 0.60    | 0.63    | 0.48    | 0.54    | 0.52    | 0.45    | 0.71    | 0.64    | 0.79    | 0.63    | 0.65    |
| 単純平均                                   | 0.65    | 0.63    | 0.66    | 0.56    | 0.61    | 0.62    | 0.57    | 0.61    | 0.66    | 0.68    | 0.60    | 0.62    |
| 年齢別資源尾数(万尾)                            |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 8,420   | 6,540   | 7,443   | 12,895  | 11,481  | 10,667  | 10,237  | 12,437  | 12,906  | 8,515   | 8,604   | 14,758  |
| 1歳                                     | 2,208   | 3,709   | 2,967   | 2,971   | 5,963   | 5,402   | 4,823   | 4,350   | 5,927   | 6,187   | 4,275   | 3,508   |
| 2歳                                     | 1,162   | 769     | 1,201   | 1,027   | 988     | 1,741   | 1,581   | 1,580   | 1,786   | 1,746   | 2,203   | 1,851   |
| 3歳以上                                   | 556     | 661     | 582     | 702     | 795     | 772     | 1,106   | 1,266   | 1,041   | 1,102   | 953     | 1,244   |
| 計                                      | 12,345  | 11,678  | 12,193  | 17,596  | 19,226  | 18,582  | 17,747  | 19,632  | 21,659  | 17,550  | 16,036  | 21,362  |
| 年齢別資源量(トン)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 50,911  | 39,031  | 43,499  | 78,346  | 70,676  | 65,128  | 57,268  | 78,277  | 75,084  | 50,375  | 55,898  | 88,058  |
| 1歳                                     | 38,120  | 60,108  | 49,530  | 48,379  | 96,148  | 88,354  | 76,692  | 67,840  | 84,237  | 91,282  | 69,397  | 53,656  |
| 2歳                                     | 41,426  | 30,850  | 46,052  | 39,874  | 39,059  | 67,668  | 59,489  | 60,999  | 67,414  | 64,587  | 81,813  | 68,943  |
| 3歳以上                                   | 41,213  | 47,358  | 43,217  | 52,091  | 57,614  | 55,634  | 80,910  | 93,073  | 76,631  | 80,450  | 67,930  | 88,990  |
| 計                                      | 171,670 | 177,348 | 182,298 | 218,689 | 263,497 | 276,783 | 274,359 | 300,190 | 303,367 | 286,694 | 275,038 | 299,647 |
| 年齢別親魚量(トン)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 1歳                                     | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       |
| 2歳                                     | 20,713  | 15,425  | 23,026  | 19,937  | 19,529  | 33,834  | 29,744  | 30,500  | 33,707  | 32,294  | 40,907  | 34,472  |
| 3歳以上                                   | 41,213  | 47,358  | 43,217  | 52,091  | 57,614  | 55,634  | 80,910  | 93,073  | 76,631  | 80,450  | 67,930  | 88,990  |
| 計                                      | 61,926  | 62,784  | 66,243  | 72,028  | 77,143  | 89,467  | 110,655 | 123,573 | 110,338 | 112,744 | 108,837 | 123,461 |
| 年齢別平均体重(g)                             |         |         |         |         |         |         |         |         |         |         |         |         |
| 年                                      | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
| 0歳                                     | 605     | 597     | 584     | 608     | 616     | 611     | 559     | 629     | 582     | 592     | 650     | 597     |
| 1歳                                     | 1,726   | 1,621   | 1,669   | 1,628   | 1,612   | 1,636   | 1,590   | 1,560   | 1,421   | 1,475   | 1,623   | 1,529   |
| 2歳                                     | 3,565   | 4,014   | 3,833   | 3,882   | 3,954   | 3,887   | 3,762   | 3,861   | 3,775   | 3,700   | 3,713   | 3,725   |
| 3歳以上                                   | 7,418   | 7,168   | 7,430   | 7,418   | 7,247   | 7,203   | 7,315   | 7,352   | 7,359   | 7,300   | 7,125   | 7,151   |

補足資料4 海区別（または主要地域別）主要漁法別の年齢別漁獲量の推移

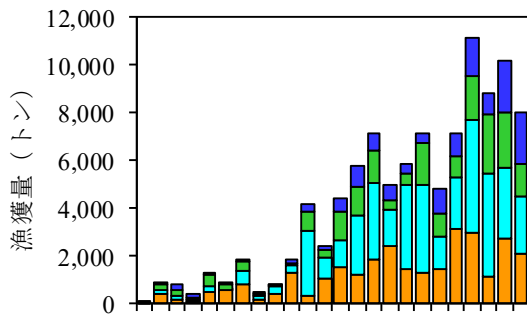
日本海北区（大中まき）



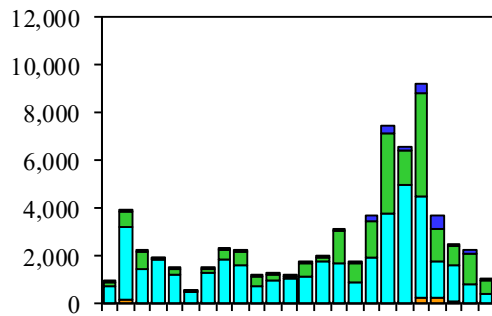
太平洋北区+北海道太平洋北区（大中まき）



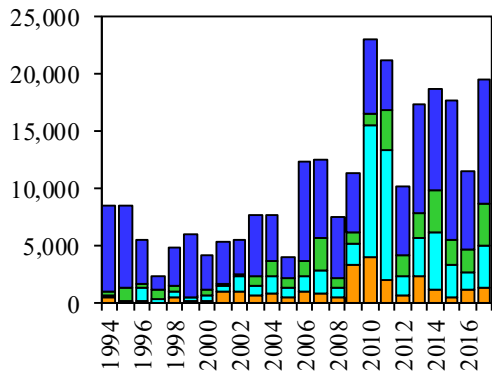
日本海西区（大中まき）



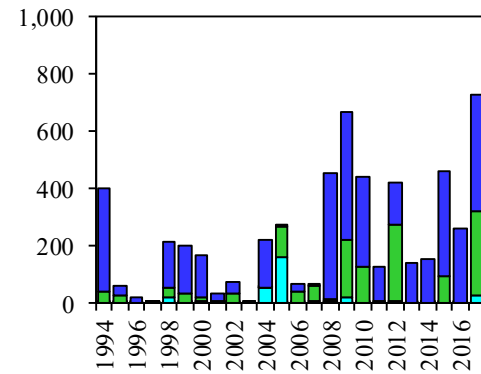
太平洋中区（大中まき）



東シナ海区（大中まき）

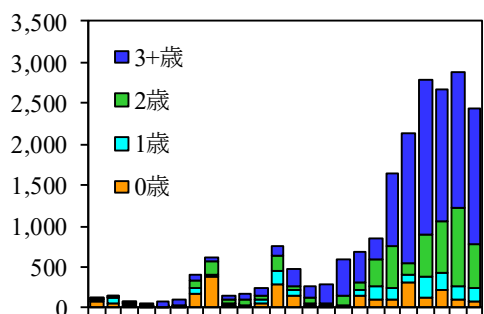


太平洋南区（大中まき）

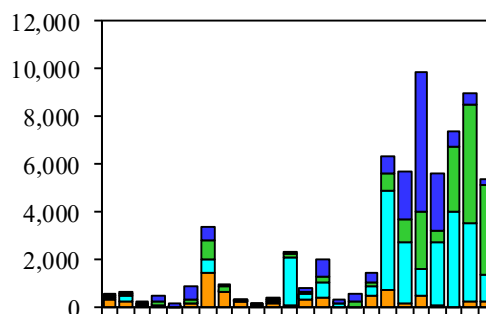


補足資料4 (つづき)

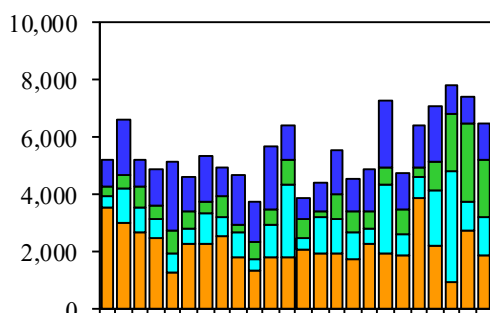
北海道日本海北区 (定置・釣・刺網・その他)



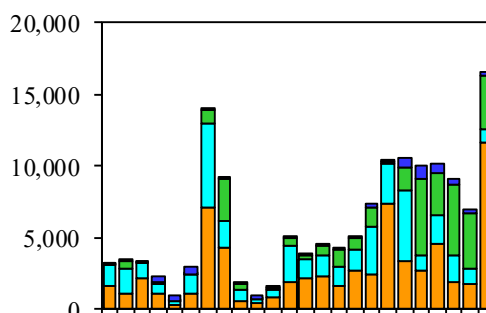
北海道太平洋北区 (定置・釣・刺網・その他)



日本海北区 (定置・釣・刺網・その他)

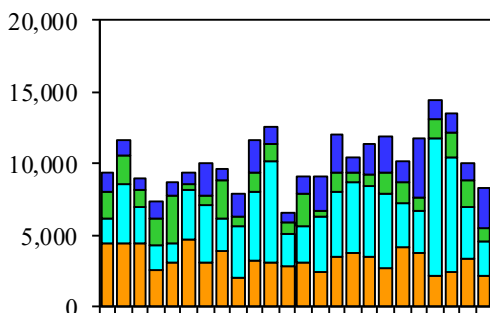


太平洋北区 (定置・釣・刺網・その他)

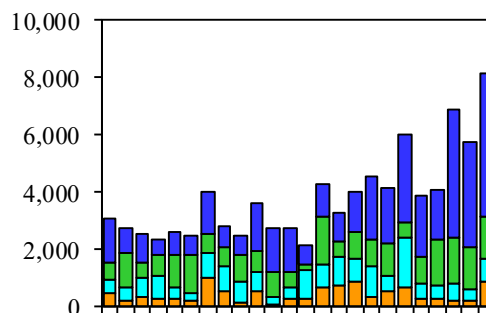


漁獲量 (トン)

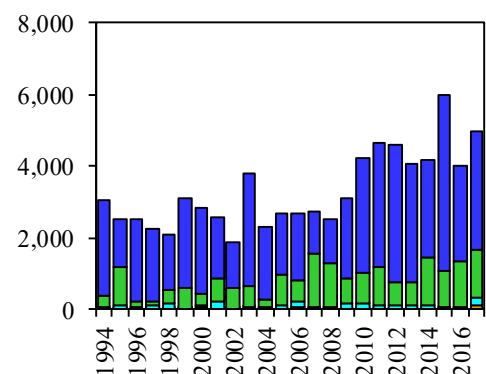
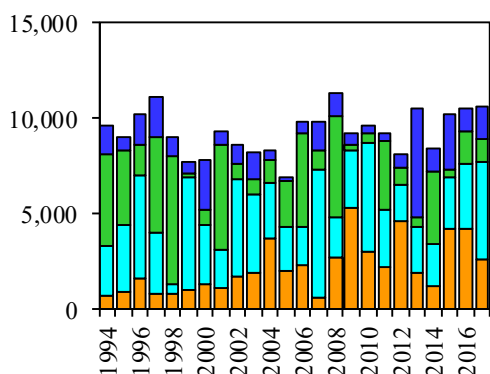
日本海西区 (定置・釣・刺網・その他)



太平洋中区 (定置・釣・刺網・その他)

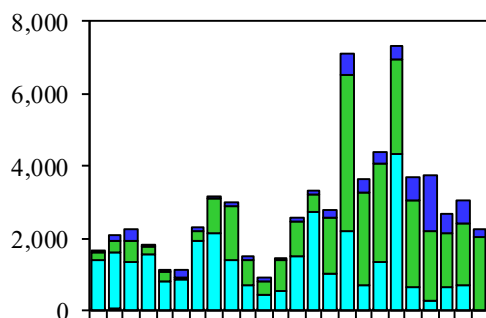


東シナ海区 (定置・釣・刺網・中まき・その他) 太平洋南区 (定置)

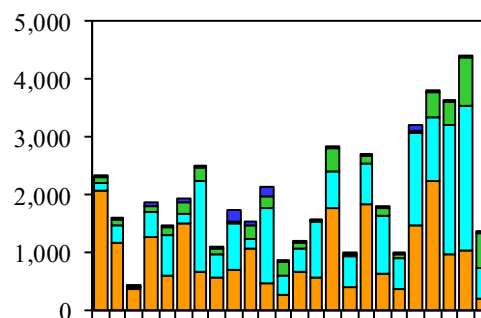


補足資料4 (つづき)

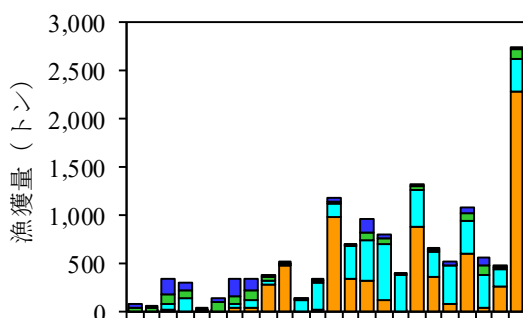
千葉 (中まき)



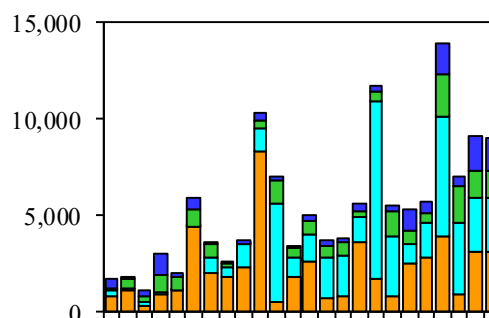
石川 (中まき)



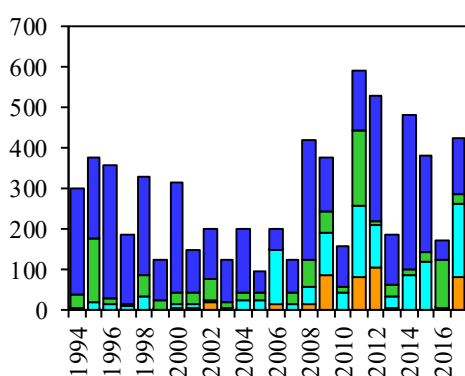
神奈川～三重 (中まき)



島根 (中まき)



太平洋南区 (中まき)



太平洋南区 (釣・刺網・その他)

