



Revision of input data for stock assessment on Pacific bluefin tuna

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Summary

Some errors found in input data for the SS3 model that has been used in the preliminary stock assessments on Pacific bluefin tuna after the data distribution in the preparation for coming assessment session of ISC-PBFWG in 2012. Data revisions were done for quarterly catch data for Fleet 2 and size data for Fleet 11.

Introduction

Data set applied for the SS3 model used in the preliminary stock assessments on Pacific bluefin tuna (PBF) was documented by Uematsu et al (2012). Input data were distributed to pertinent organizations on April 16 in 2012, after update of data had been done. After the distribution was completed, errors were found in quarterly catch data for small pelagic purse seine (SPeIPS) and size data for commercial fisheries (purse seine) in the eastern Pacific Ocean (EPOCOMM). SPeIPS and EPOCOMM correspond to Fleets 2 and 11 in the SS3 model, respectively. This document reports these data revisions for the record. The year in this document refers to fishing year which starts from July 1 and ends in June 30 in the following year.

Revision of quarterly catch data for Fleet 2

Fleet 2 includes Japanese SPeIPS and Korean SPeIPS. Hence, the quarterly catch data for Fleet 2 are sum of the catch data from Japanese and Korean SPeIPS. Errors were found in the quarterly catch data from both of Japan and Korea. The quarterly catches before and after the data revision are compared in in Fig. 1. During updating data for Fleet in 2012, Japanese quarterly catches included Korean catches by mistake, which were further added to Korean catches. This type of errors was found in the following two periods: the 3rd quarter (Jan.-Mar.) of 2001 to the 4th quarter (Apr.-Jun.) of 2007 and the 3rd and 4th quarters of 2010. In addition, Korean quarterly catches themselves included some errors. The errors occurred in calculation of catches during the periods between the 3rd quarter of 1999 and the 2nd quarter (Oct.-Dec.) of 2004. Owing to the data revision, the quarterly catch of 10 to 1,448 metric tons, 317 metric ton on an average, was removed from Japanese quarterly catch data. Additionally, Korean quarterly catch data increased or decreased with 3 to 1,671 metric tons, with 409 metric ton on an average. Consequently, the data revision made the quarterly catches for Fleet 2 increased or decreased with 2 to 1,469 metric tons, with 250 metric ton on an average, in the following two periods: the 3rd quarter of 1999 to the 4th quarter of 2007 and the 3rd and 4th quarters of 2010.

Revision of size data for Fleet 11

Length frequency data (size data) for Fleet 11 during the period between the 4th quarter of 1999 and the 4th quarter of 2010 were revised, because bugs were found in data processing program. Although the data revisions resulted in very minor changes in the size data, relatively apparent changes in length frequency distributions observed in the 1st quarter of 2000 and the 1st quarter of 2004 (Fig. 2).

References Cited

Uematsu, S., Oshima, K., Kanaiwa, M., Ichinokawa, M., Kai, M., Abe, M., Iwata, S., Fujioka, K., Fukuda, H., Mizuno, A., Yoo, J.T., Yoon, S.C., Hsu C.C., Teo S., Aires-da-Silva, A., Dreyfus, M. and Takeuchi Y. 2012. Input data for stock assessment model, Stock Synthesis 3, on Pacific bluefin tuna, *Thunnus orientalis*. ISC/12-2/PBFWG/02.

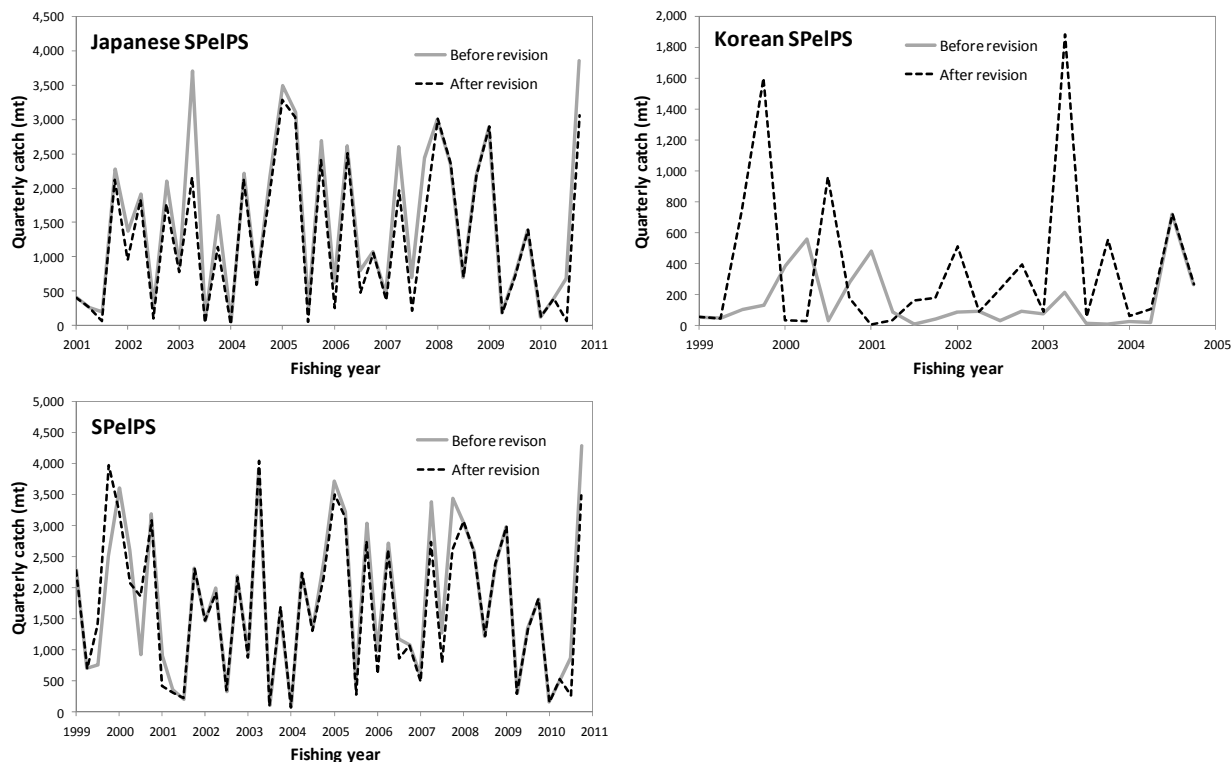


Fig. 1 Quarterly catches for Japanese SPeIPS (Upper left), Korean SPeIPS (Upper right) and SPeIPS (Fleet 2) which is sum of both countries (Lower) before and after data revision.

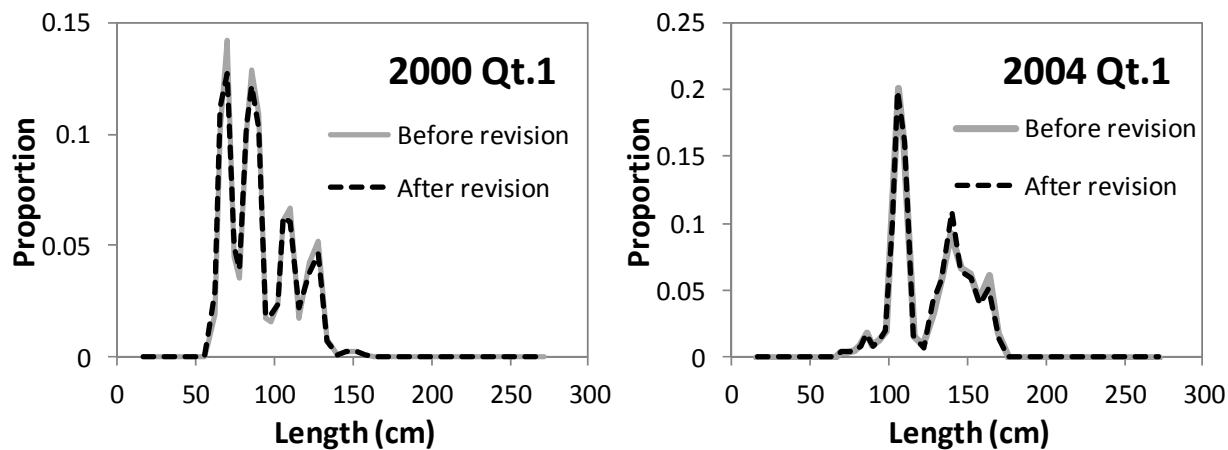


Fig. 2 Length frequency distributions of PBF catch by EPOCOMM (Fleet 11) before and after data revision.