Translated summary of

Quantitative and qualitative changes in Korean coastal and offshore fisheries production

Jang, Chang Ik and Lee, Seon Gil
Pukyung National University, South Korea

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Translated by Soohyun (Debbie) Shon, Fisheries Centre, University of British Columbia

Changes in quantity of South Korean EEZ fisheries

In order to estimate the carrying capacity of the South Korean EEZ from 1950-2000, we applied annual reported landings data to a logistic model. Also, we applied landings data and catch per unit of effort data to a Fox surplus production model (Fox 1970). As a result, the carrying capacity of our EEZ is estimated to be around 1,820,000 t (logistic model) or 1,910,000 t (surplus production model).

Changes in quality of South Korean EEZ fisheries

We used the national reported landings data for our EEZ waters from 1950-2000, the average body length of the major species from 1962-1986, the annual species diversity, and the prey composition data of the captured species to estimate the annual trophic level of the catch. We divided the captured species into 16 groups and calculated the mean trophic level according to the method used in the study of Christensen and Pauly (1992).

The major species targeted by the commercial fishing industry in our EEZ waters have progressively changed over time. In the 1950s, the most frequently caught species were largehead hairtail. In the 1960s, it was squids. This was replaced by large catches of chub mackerel and thread-sail filefish catches in the 1970s, and thread-sail filefish and Japanese pilchard in the 1980s, respectively. In the 1990s, Japanese anchovy was the most frequently caught species. Overall, the trophic level of the major targeted species has been decreasing from 3.45 in the 1950s, 3.26 in the 1960s, 3.27 in the 1970s, 3.23 in the 1980s, 3.2 in the 1990s to 3.17 by 2000.

References

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