

Report of International Symposium for Pacific Saury

The international symposium for Pacific saury was held on 14-15 March 2014 at Hakuyo Hall, Tokyo University of Marine Science and Technology in Tokyo, Japan. The symposium was set up in NPFC-SWG 11, for the purpose of starting the discussion on stock assessment for Pacific saury. The symposium was coordinated by Harumi Yamada from Tohoku National Fisheries Research Institute of Fishery Research Agency, Japan.

The symposium was open for relevant experts (i.e., scientists, fishery managers, industry representatives concerned) from all the NPFC Participants. A total number of 66 from all the NPFC Participants was attended. Program and all of presentation slides are attached in this report.

Opening of the symposium was started by H. Nishida, Fisheries Agency of Japan declared at 10:00 on 14 March. The coordinator, H. Yamada introduced himself and briefly explain the objective of symposium successively, which was a sharing both of information and data on biology and fisheries for Pacific saury among the NPFC Participants to achieve the sustainable use of this resources.

The symposium consisted of three sessions with panel discussion. The presentations were made in each session by experts of NPFC Participants as follows:

Session 1. Research related Topics, chaired by Mitsuo Sakai (Japan)

In the Session 1, extensive research topics for the Pacific saury were presented on the basic biology, age and growth, reproductive process, fat condition, distribution patterns, population structure, migration, and stock assessment. Westward migration pattern in adult stage were suggested by Japan on the basis of otolith growth and ecological modeling. A recent distribution and abundance change was reported during fishing season in the coastal countries, Japan and Russia. A fishery-independent stock survey in the broad area of the North Pacific demonstrated a stock decreasing trend with a continuous increasing of fishing rate, however, Chinese Taipei reported a commercial-fishery-data based on CPUE from high sea trend has been slowly increasing. Japan and Russia reported on a decrease of CPUE in their national waters. A MSY was proposed through a first trial of surplus production model based on standardization of CPUE by Chinese Taipei and Japanese stock assessment survey. Considering unknown impact of recent environment or climate change on Pacific saury stock, research cooperation between participants will be required to assess the stock with utilizing long term fishery data and further information as unknown reproductive biology.

Session 2. Pacific saury Fisheries related Topics, chaired by Wen-Bin Huang (Chinese Taipei)

In the session 2, their own Pacific saury fishery history, fishing grounds, months, vessel numbers (or efforts), sizes and equipment were reported from Japan, Russia, Korea and Chinese Taipei as well as how to catch Pacific saury. Also, Japan and

Chinese Taipei reported their fishermen must submit their daily catch records to the competent authorities. In particular, an appropriate Pacific saury fisheries management has been applied over many years from the viewpoint of the sustainability in Japan. Japanese fishermen are worrying about the decreases in recent Pacific saury stocks, and hope NPFC framework will establish international appropriate Pacific saury fishery management. Major saury fishery in Russia has been and is conducted in the Northwestern Pacific Ocean of Kuril Islands both within and in adjacent areas beyond the Russian EEZ. Russia indicated that one of the main features of its Pacific saury fishery is that 100% of fish comes to the Russian market and is processed on Russian fish plants. In recent years, the number of Russia vessels fishing for Pacific saury has been gradually increasing; however, the number of fishing vessels is notably smaller than in the 1980's. In Korea, the Pacific saury fishing gear was mainly gillnets in coastal waters and stick-held dip nets in the Northwest Pacific Ocean. Numbers of Korean authorized vessels has decreased recently. In Chinese Taipei, the Pacific saury fishing fleet is composed of the squid jiggers changed their fishing practices to target Pacific saury in the second half of the year after 1996. All Chinese Taipei fishing vessels have been required to report their catches in a timely manner through an e-logbook system since 2007.

Session 3. Fisheries Management related Topics, chaired by D.V. Antonenko (Russia)

In the session 3, their management measures and systems for Pacific saury fisheries were reported from Japan, Russia and Chinese Taipei. Japan has management system of input control of effort, technical control, and output control for total catch. Japanese fishermen's additional voluntary measures for saury fisheries are limitation of fishing days and so on. Also both in Japan and Russia, the forecasting system for fishing ground, season and abundance help fishermen's operation strategies.

Governmental management in Russia includes control fishery via automatically VMS, daily control upon catch and transshipment, adoption of TAC, as well as the system for fishing permission. Chinese Taipei's management includes control fishery via automatically VMS, electronic catch reporting system, transshipment, as well as the system for fishing permission. Lessons learn from internationally managed pelagic fisheries: Case Study on Chilean jack mackerel was reported from Japan.

The panel discussion was preceded after sessions with panelists from each NPFC participant, M.Nakagami (Japan), A.A.Baitaliuk (Russia), Loh-Lee Low(USA), J.Curtis (Canada), Si Quan Tian (China), InJa Yeon (Korea) and Ming-Fen Wu (Chinese Taipei) facilitated by Harumi Yamada. The discussion was made on issues of stock assessment and sustainable use of Pacific saury.

Before starting the discussion, data availability for stock assessment for Pacific saury was reported by the NPFC Participants, and compiled in Table 1.

Stock assessments for Pacific saury were conducted by Japan, Chinese Taipei, and Russia; and it would be desirable to carry on more reliable stock assessments with integrated those analysis.

Serious concerns were expressed over stock status of Pacific saury.

Therefore, the panelists and participants at the symposium made the following recommendations to the NPFC Scientific Working Group (SWG):

1. Calls for NPFC Participants to submit their fisheries and research data for stock assessments and to better understand the historical and present fisheries in the Convention Area (CA) and national waters adjacent to the CA.
2. Calls for appointment of a small working group under SWG to comprehensively assess the status and outlook of entire Pacific saury resource in the North Pacific Ocean.
3. The small working group shall integrate their analyses of all relevant research and commercial fisheries data to:
 - a. determine the distributional range and biomass of the resource and seasonal details,
 - b. estimate the recruitment of year classes into the resource, particularly of age 1 fish in light of environmental factors,
 - c. determine the threshold of spawning stock biomass (SSB),
 - d. evaluate harvesting strategies for the resource in light of fishing strategies by the NPFC Participants,
 - e. estimate the amount of fishing effort relevant to harvesting strategies for the resource,
 - f. estimate catch limitations of the resources, and
 - g. evaluate uncertainties of the estimation procedures and limitations of data in the assessments above.
4. Calls for the SWG to discuss and develop interim measures for Pacific saury in the entire North Pacific in light of NPFC Convention Article 3(h) “ensuring that any expansion of fishing effort ...does not proceed without prior assessment of the impact of those fishing activities on the long term sustainability of the fisheries resource” .

Adjournment was stated by H. Nishida at 16:10 on 15 March.