

**9th ANNUAL CONFERENCE OF THE PARTIES TO THE CONVENTION ON THE
CONSERVATION AND MANAGEMENT OF POLLOCK RESOURCES IN THE
CENTRAL BERING SEA**

**REPORT OF THE MEETING OF THE
SCIENTIFIC AND TECHNICAL COMMITTEE**

7-9 September 2004 – Kushiro, Japan

Final: 09 September 2004

Delegations from Japan, the Republic of Korea (Korea), the Russian Federation (Russia), Poland, and the United States (US) participated in a meeting of the Scientific and Technical (S&T) Committee in conjunction with the 9th Annual Conference of the Parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea in Kushiro, Japan.

1. Opening remarks

Dr. Richard Marasco (US), Chair of the Scientific and Technical Committee, opened the meeting at 1400, 7 September 2004. A list of the participants is provided (attachment 1).

2. Appointment of Rapporteur

Ms. Taina Honkalehto (US) was appointed as rapporteur.

3. Adoption of Agenda

The agenda for the meeting was adopted (attachment 2).

4. Discussion of Science Issues

4.1. Update catch and effort statistics

4.1.1. Russia provided 2003 data to amend the table of catch and effort statistics for pollock in the Bering Sea, maintained by the United States, which was subsequently updated (Tables 1 & 2 of attachment 3, pages 5-6).

4.2. Review results of trial fishing

4.2.1. Dr. Alexander Glubokov (Russia) reported that during the period of November 15-27, 2003, the fishing vessel PIONER NIKOLAYEVA, company Turnif, conducted trial fishing using mid-water trawl and echo integration surveys in the Central Bering Sea (attachment 4). No pollock echosign was observed. Thirteen hauls were made during survey ranging from the surface to 310 meters depth. One individual female pollock was caught (65 centimeters) in position 56-59.6N 177-54.8W. The survey cost was 250,000 USD.

4.2.2. Russia pointed out that all historic instances of pollock catch were on eastern side of the Donut Hole (1998-2001). (Figure 6 (page 9) and Table 2 (page 11) of attachment 5). The individual pollock caught in 2003 was the largest in length of those caught.

4.2.3. Dr. Won Seok Yang (Korea) asked if water temperature was monitored during Russia's trial survey. Russia stated they regularly monitor sea water temperatures during trial fishing. Russia stated 2003-2004 were warm years and were favorable for pollock reproduction, especially northern pollock of the Navarin region.

4.2.4. Dr. Loh Lee Low (US) asked for Russia's assessment of why there are so few pollock in the convention area. Russia responded that both human-induced and natural factors have played a role. Russia stated the human-induced factors have been eliminated for the past ten years. The problem is to determine which factors affect pollock. This issue is discussed in a later agenda item.

4.2.5. Three Korean fishing vessels conducted trial fishing in 2003. (See attachment 6). Two surveys were reported at last S&T meeting in 2003. The third, F/V ORYONG 503 (from 19 Oct – 07 Nov 2003) resulted in no pollock caught.

4.2.6. Commander Michael Cerne (US) reported on monitoring and surveillance of trial fishing in the Donut Hole. USCG observed no trial fishing in 2004. A long range aircraft periodically patrols the Donut Hole to verify activity. If trial fishing occurs, USCG attempts to board vessels to ensure compliance (attachment 7).

4.2.7. No other Parties present at the S&T Committee Meeting conducted trial fishing since the last S&T Committee meeting.

4.3. Review results of research cruises

4.3.1. Ms. Taina Honkalehto (US) provided a review of the 2003 Bogoslof survey, described plans for the 2005 Bogoslof survey, and reported results of research cruise in 2004 (attachment 8).

4.3.2. The US presented a review of the results of the 9-13 March 2003 echo-integration-trawl survey of pollock in the southeastern Aleutian Basin near Bogoslof Island by the R/V MILLER FREEMAN. The cruise was able to complete acoustic data collection, but only 5 of 12 planned trawl hauls due to bad weather. The pollock biomass estimate for the Bogoslof Island area was 198,000 mt. Biomass estimates for this area have averaged about 200,000 mt for the past 4 years. Updated ages for 2002 and new age information for 2003 were presented.

4.3.3. The next survey is planned for 5-11 March 2005, with similar tracklines as 2003 (attachment 13). R/V OSCAR DYSON will shadow R/V MILLER FREEMAN. The US extended an invitation to all convention parties to participate in the planned 2005 research survey. The US requested as much notice as possible (minimum of two months) to include visiting scientists on planned research

cruises. Korea said they would send one scientist in 2005.

4.3.4. United States provided preliminary results of R/V MILLER FREEMAN 2004 Eastern Bering Sea survey from Bristol Bay to Cape Navarin, including Russian waters. 154 hauls were completed, including some experimental hauls with an opening-closing mid-water trawl net. Four Russian scientists participated. Approximately 90 percent of pollock were in the US zone and 10 percent were in the Russian zone.

4.3.5. Dr. Alexander Nikolayev (Russia) provided a detailed report on research cruises conducted by TINRO (Report 3 of attachment 5). The total pollock abundance estimated in the Navarin-Anadyr region in October 2003 was 932,000 t, an increase over 2002. Russia noted that, in general, pollock stocks are beginning to show signs of recovery in the Navarin area.

4.3.6. Dr. Alexander Glubokov (Russia) presented some results of bottom and mid-water trawl survey for walleye pollock in the Navarin area and western Bering Sea in 2003 aboard fishing vessels PIONER NIKOLAYEVA and BAGRATION (Report 5 of attachment 5). The total pollock benthic biomass estimated in the Navarin area in October-November (in a 16,240 nm² area) was 589,000 t. The pollock biomass based on echointegration-trawl survey in an 8897 nm² area was 667,000 t. He also gave an overview of all Russian survey results of 2003 (Reports 1, 2, 3 and 5 of attachment 5).

4.3.7. Dr. Akira Nishimura (Japan) reported on the results of a salmon gillnet survey in the central Bering Sea in June-July 2004 by R/V WAKATAKE MARU (attachment 9). There was no incidental catch of pollock in 2004. Japan pointed out that there was significant incidental catch of pollock during salmon surveys in the 1980s. However, incidental catches of pollock have decreased since 1990. Japan stated that this time series is a good indicator of the decreased amount of pollock in the convention area.

4.4. Review the status of Aleutian Basin pollock stocks

4.4.1. Dr. Loh Lee Low (US) said recent surveys confirm that the abundance of pollock in the central Bering Sea is low. He noted that data presented by Russia and Japan, including the new information about pollock bycatch in the ongoing Japanese salmon surveys (attachment 9), support this conclusion, as does the low status of the Bogoslof stock. The S&T Committee agreed with the assessment that pollock abundance in the central Bering Sea is low.

4.4.2. Two additional documents were submitted on pollock stocks. Japan reported on the preliminary results of a survey of geographic variations of nuclear DNA on walleye pollock (attachment 10), and Russia provided information on pollock biomass estimates from 1996 (attachment 12). The parties agreed to review the new information and request additional details and clarifications.

4.4.3. There was no comprehensive survey that could be used to determine the status of Aleutian Basin pollock stock.

4.5. Factors affecting recovery of the stocks

4.5.1. Dr. Loh Lee Low (US) said two workshops in July 2000 and May 2003 dealt with this subject. There is not much more to add. The most important factor seems to be year class strength and the concept that when strong year classes occur, surplus pollock move from the shelf to the basin.

4.5.2. Japan said there was strong pollock abundance in the eastern Bering Sea in the recent past. If stock is abundant in the eastern Bering Sea, then the fish should start to migrate to the basin, but this does not appear to have happened.

4.5.3. The US said it is unclear if historic pollock abundance near the eastern edge of the Donut Hole, as indicated by the Russian reports (Figure 6, page 9, of attachment 4), is due to migration or other factors. The analysis of the R/V WAKATAKE MARU provides the longest time series on the relative abundance of pollock in the Donut Hole (attachment 9), which shows significant declines of pollock from the early 1980s.

4.5.4. Russia said it is possible that pollock might migrate to the central Bering Sea from the Navarin area. The biomass in Navarin in the past couple of years has increased, especially pelagic pollock (attachment 5). Perhaps when the pelagic density reaches a certain level, the fish become more likely to move into the deeper water of the Donut Hole. Russia concluded that even though studies show that concentrations of pollock do exist in deep water, the numbers are not high.

4.5.5. Korea said the 2002-2003 meetings concluded that ecological changes, environment, and pollock migration route are the main factors affecting the recovery of pollock stocks in the Central Bering Sea. Korea suggested that pollock migration routes might change to US EEZ from the Bogoslof area, not through the Donut Hole.

4.5.6. Dr. Low discussed US management actions in the Aleutian and Bogoslof area. A fishery took place in the Aleutian Islands region when the convention entered into force. Subsequently, the pollock fishery in the Aleutian region between 170E and 170W was closed due to sea lion and other issues. A limited fishery in the Aleutian area near Adak may open soon. It is unclear how or if this new fishery will affect the central Bering Sea region. In the past, there has not been an established genetic link between the stocks of the Aleutian Islands and stocks in the central Bering Sea. The only link that has been tentatively made is between the Aleutian Islands and Bogoslof stocks.

4.5.7. Japan said abundance in the eastern Bering Sea is strong and it is a mystery why that stock does not seem to migrate to the basin. However there are signs of migration toward the basin from the Navarin area. We are not grasping something that lurks behind this mystery. It is necessary to reexamine all the factors behind stock abundance to discover why the stock in the central Bering Sea has not recovered after over 10 years of moratorium. Perhaps rearranging the factors will help to find the solution. For example, we should examine the results of recent studies from Northwest Atlantic Fisheries Organization (NAFO).

4.5.8. Korea surveyed the Donut Hole and Bogoslof areas six times from 1994-2000. During these surveys a cold water mass was identified between 100 and 300 meters, which may affect pollock migration.

4.5.9. Russia postulated that pollock feeding over the basin grow at a lower rate than shelf pollock. But, material provided by Dr. Nishimura (attachment 9), provides new information that suggest that young of the year pollock in deep water spend a year over the basin where feeding conditions are worse than on the shelf. Growth rate is fixed during the first year of life. It is smaller. Fish move to the shelf and settle. The smaller growth rate is thus retained. Once fish reach spawning age, they are bound to go back to where they fed their first year. This is roughly what we know about pelagic pollock. Refer to Russia's report (Figure 6, page 9 of report 1 of attachment 5). A major task is to determine how much pollock is available in the Russia and US EEZS deepwater areas. Once that is known, we can make a better judgment about the rate of recovery.

4.5.10. The Chair summarized the previous discussion as follows: numerous factors were identified as influencing basin stock recovery. These range from climate change to predation. No one factor was identified as being solely responsible for the lack of biomass recovery. It appears to be a combination of factors. The parties agreed that continued research is required.

4.6. The effects of the moratorium and its continuation

4.6.1. The US has observed a continual improvement in pollock stocks on the eastern Bering Sea shelf. However, this improvement does not seem to relate to Aleutian Basin pollock recovery despite many years of a moratorium. Fishing will not improve this situation. The US recommends that the moratorium continue until the stock rebuilds.

4.6.2. Japan noted that the moratorium has been in place for more than 10 years with no sign of recovery of pollock stocks in the Convention Area. The objective of the convention is the conservation and management of pollock. Additional methods should be considered to fulfill the objectives of the convention. Even if there will not be fishing, an AHL should be decided upon.

4.7. Methodologies to determine Allowable Biological Catch (ABC) and Allowable Harvest Level (AHL)

4.7.1. Japan submitted a proposal for ABC of 2005 in the Aleutian Basin (attachment 11). There is no survey biomass for 2004. Four scenarios were provided to overcome this limitation, using tier 3 methodology which requires estimates of B40 and F40. Table 2 in attachment 11 was amended and used for further discussion.

4.7.2. The US stated that the North Pacific Fishery Management Council's (NPFMC) Plan Team has not met to determine ABC for Bogoslof area pollock. Dr. Low illustrated the Council's SSC process, which is shown as scenario 4 in the Japanese text.

4.7.3. Japan requested to use scenarios 1 or 2, and suggested scenario 4 is too pessimistic, but stated they are not opposed to using a range.

4.7.4. The US said it is difficult to decide on the best scenario and that the least optimistic scenario assumes no recruitment. The US proposes using an ABC range (616 to 2009 t for the specific area or 1026 to 3349 t for the extrapolated Aleutian Basin area) as the parties could not agree on which scenario would be best.

4.7.5. Korea said scenario 1 is the best as it is based on biomass.

4.7.6. Russia showed the historical time series of Bogoslof pollock biomass (in attachment 8). The trend showed a spike in 1995 and a slight increase in 1998, then remained the same from 2000-2003. There appears to be a seven year cycle (1988-1995), and shorter cycles between 1995 and 1998. If indeed, this pattern is true, than we can expect a rise in biomass. Russia recommends approval of the US suggestion to provide an ABC range.

4.7.7. Poland said providing an ABC range would be the best solution.

4.7.8. The Chair summarized the results of methodology discussion for ABC as the following: three of the delegations supported an ABC range, two supported a point estimate.

4.7.9. Discussion on methodology to determine AHL ensued.

4.7.10. Japan recommended using the ABC range to set the AHL.

4.7.11. US said the terms of the Convention specify methodology in the Annex, part 1. By consensus, the parties can decide upon an alternative methodology. The US does not see a change in stock that justifies using an alternative method, and prefers to use the methodology specified in the Convention.

4.7.12. Russia supports the US position.

4.7.13. Poland said that at this moment, we don't know if consensus will be reached by the Annual Conference so it is too early to use the methodology specified in the Annex.

4.7.14. Japan and the US discussed how the United States North Pacific Fishery Management Council (NPFMC) arrives at AHL from ABC. Dr. Low described how the NPFMC process sets AHL, a socio-economic decision, following recommendation of ABC, a science-based decision, by the Scientific and Statistical Committee (SSC), an S&T counterpart. He suggested that the S&T committee do the same and recommend methodologies to the Annual Conference.

4.7.15. Japan pointed out that Article IX item 4 of the Convention says "the S&T shall make recommendations...including AHL for succeeding years". Japan commented that they support procedures based on Article VII, item 1. As ABC is based on stock biomass, Japan suggested that AHL should be decided based on ABC.

4.7.16. The US said that biomass levels are substantially lower than the trigger described in Part 1 of the Annex to the Convention (If biomass is less than or equal to 1.67 million t, then AHL is zero). Since there are no significant changes or new information that suggests the rebuilding of the stock, the US cannot support any procedure that deviates from Article VII, paragraph 2, at this time.

4.7.17. Poland proposed setting AHL based on Article VII.

4.7.18. Consensus was not reached on how to determine AHL. Some delegations supported setting the AHL between the ABC range suggested by Japan. Other delegations did not support the use of Article VII due to the condition of the stock (biomass less than 1.67 million t).

4.8. Recommendation on AHL

4.8.1. Discussions were covered in section 4.7.

5. Discussion of Enforcement and Management Issues

5.1. Trial fishing terms and conditions for 2005

5.1.1. The Chair proposed applying the same conditions for trial fishing used in 2004 for 2005. The US and Russia concurred.

5.1.2. Korea said the trial fishing area is too large to find fish. Korea requested use of five vessels at the same time, to have a more comprehensive research on pollock biomass in the central Bering Sea.

5.1.3. The US referred to the terms and conditions set by the Annual Conference that allows only two trial fishing vessels per country at one time. In order to change that rule, the US asked for a detailed written proposal from Korea for all of the parties to review, prior to considering a change to the previous agreement.

5.1.4. Japan further requested information on where the vessels would operate, and if the studies would include just the convention area, or the entire Bering Sea. Korea clarified that this would only include the Donut Hole area.

5.1.5. The Chair stated that a detailed study design is needed prior to discussion that would change a previously decided aspect of the terms and conditions.

5.2. Components and Recommendations

5.2.1. The term “components” was clarified as “components of a management system.” No issues were raised for discussion.

6. Other Matters and Recommendations

6.1. The US developed a website which contains reports on the Convention, reports from the Annual Conferences, records of workshops, documents and data records, and information on key contact persons from each Party. The website is temporarily located at:
http://www.afsc.noaa.gov/refm/cbs/convention_conferences.htm.

6.2. The US requested deferring a past agenda item about comprehensive surveys of the Bering Sea to the next annual meeting.

6.3. The US wants a working group to develop protocol for genetic research. Dr. Glubokov (Russia) and Dr. Low (US) were nominated as the co-chairs of this working group. Other members are Dr. Akira Nishimura (Japan) and Dr. Hyun-su Jo (Korea).

7. Report to the Annual Conference

7.1. The Chair of the S&T gave the S&T report to the Annual Conference.

8. Closing Remarks

8.1. The Chair thanked all the participants of the S&T for their thoughtful discussions, and thanked the rapporteurs for compiling the written report. With that, the Chair closed the S&T meeting at approximately 6 pm on Wednesday, September 9, 2004.

List of Attachments:

1. S&T Committee Participants for 2004

The following attachments will be made available on the Convention website:

2. S&T Agenda for 2004
3. Information Submitted to the Scientific and Technical Committee by the United States for the 9th Annual Conference of the Parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, with amended tables (book)
4. Russian report on trial fishing (powerpoint)
5. Information submitted to the Scientific & Technical Committee by the Russian Federation for the 9th Annual Conference of the Parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (book)
6. Results of the Korean trial fishing for walleye pollock in the Convention area of the Bering Sea in 2003 (report)
7. US Coast Guard Enforcement of Donut Hole region 2004 (powerpoint)
8. Results of Research Cruises – U.S.A. (powerpoint)
9. Walleye pollock bycatch in salmon gillnet survey (WAKATAKE MARU) in the central Bering Sea, 1981-2004 (report)

10. Geographic variations of nuclear DNA on walleye pollock (preliminary results), submitted by Japan delegation (report)
11. Japanese proposal for the ABC of 2005 in the Convention Area (report)
12. Table of Navarin Pollock biomass 1996-2003
13. 2005 Echo Integration Trawl Survey Plan (document)