(SWG/03/)

Fourth Inter-governmental Meeting on Establishment of New Mechanism for Management of High Seas Bottom Fisheries in the North Western Pacific Ocean

Vladivostok, Russian Federation
12-14 May 2008

Report of Third Meeting of the Scientific Working Group

1 Opening

Dr. Vadim Savinykh of the Russian Federation opened the third meeting of the Scientific Working Group at 10:00 am on Monday 12 May 2008 and welcomed all delegations. Participants from Japan, Korea, United States, and Russian Federation attended the meeting (Attachment 1).

2 Appointment of Facilitator and Rapporteur

Dr. Vadim Savinykh of the Russia Federation was selected as facilitator and Eric Kingma of the United States agreed to serve as rapporteur.

3 Adoption of Agenda

The agenda was reviewed and adopted (Attachment 2). In addition a list of documents was provided at the meeting (Attachment 3).

4 Review of scientific information from the recent relevant meeting of the FAO

The Interim Secretariat reported on the FAO Technical Consultation on International Guidelines for the Management of Deep-sea Fisheries in the High Seas held in Rome from 4-8 February 2008. The Technical Consultation on draft international guidelines made progress but did not finish the work and it was agreed at that meeting that another consultation is required and tentatively scheduled for 25-29 August 2008 in Rome (SWG3/WP3).

5 Review of outcome of the Second meeting of the Scientific Working Group

The report of the Second meeting of the Scientific Working Group (NWPBT/03/Inf.4) was provided to the participants.

A) Terms of Reference of the SWG

The participants reviewed the terms of reference for the Scientific Working Group. No changes were proposed, but the meeting noted that changes could be made in the future as necessary.

B) Draft Elements of the Work Plan for the SWG

i. Data Inventory

The Interim Secretariat reported on data provided by participants in accordance with the agreed template and timeline. In some cases not all data has yet been provided and participants were urged to provide outstanding data at the earliest possible time.

ii. Key species and habitats of concern

Japan stated that they have submitted two papers, one on alfonsin (*Beryx splendens*) and the other on armorhead (*Pseudopentaceros wheeleri*) and suggested review of these working papers at the appropriate time on the agenda.

iii. Data handling/sharing protocol

No participants offered remarks on the data handling/sharing protocol agreed to at the Second Meeting of the SWG.

iv. Compilation of data and provision of information on all current deepwater fisheries in NWP

The Interim Secretariat stated that all countries have submitted information on current deepwater fishing and that the information is provided in SWG/WP5.

v. Development of a comprehensive collaborative research plan for TOR

No comments were provided by participants on the collaborative research plan.

C) Information necessary to assess the status of key fish stocks affected by bottom fisheries on the high seas of the North Western Pacific Ocean

Alfonsin
Dr. Akihiko Yatsu of Japan provided a working draft paper (SWG3/WP4/J1) on alfonsin (*Beryx splendens)* which describes alfonsin distribution, life history characteristics, and fisheries information. Dr. Yatsu stated that paper identifies information still needed on Russian and Korean fisheries including but not limited to types of gear and depth of gear fished.

Russia stated that prior to this year, the Russian fisheries department was not able to collect fisheries information from its vessels that targeted alfonsin on the high seas, but that in 2008, Russia is developing rules and regulations for high seas fisheries management. It was noted that this is positive and that it is critical for effective management that data collection programs are instituted and that fisheries data be submitted on a timely basis.

Russia provided the common Russian name (nizkotely beryx) for alfonsin to be included in the working paper. It was agreed that the English common name used will be splendid alfonsin.

As identified in the paper, two surplus production models were used to evaluate the stock status of alfonsin, with results indicating that the alfonsin stock is below the Bmsy level. Dr. Hwang of Korea presented information on a stock assessment performed using Korean trawl data and reported that he found similar results for the estimation of alfonsin biomass (~ 5,000 mt) as described in the alfonsin working paper presented by Dr. Yatsu.

The paper presented by Japan recommended a 20 percent reduction in current (recent ten year average) alfonsin fishing mortality given that the fishing mortality is above Fmsy. Other participants also supported a reduction in fishing mortality along these lines. Korea stated that it will provide more comment on the paper in the near future. In response to comments that fishing mortality should be reduced by more than 20 percent, Dr. Yatsu noted that the recommendation takes into account recent increasing estimates in both biomass and CPUE.

Japan agreed to revise the paper as appropriate in light of comments received and pending receipt of further information from member nations with the goal of finalizing the paper by summer 2008.

Armorhead
Dr. Akihiko Yatsu of Japan provided a working paper (SWG3/WP4/J2) on armorhead (*Pseudopentaceros wheeleri*) which describes armorhead distribution, species characteristics, and fisheries information. It was agreed that the English common name used will be North Pacific armorhead. Information needs to be provided as appropriate by members interssessionally to include armorhead life span information and genetics, fishing locations of Korean fishing vessels by seamount name, and updated Korean armorhead catch information. Dr. Yatsu noted that accurate biomass information is lacking for armorhead and that without accurate estimations of natural mortality rates, appropriate biological reference points associated with stock assessments are difficult to determine.

In the absence of a reliable stock assessment and considering the episodic recruitment pattern associated with this species, a simple adaptive feed-back control rule for management of this stock is recommended.

Japan agreed to revise the paper as appropriate in light of comments received and pending receipt of further information with the goal of finalizing the paper by summer 2008.

<u>D) Information necessary to assess the status of associated and dependent species affected by these fisheries</u>

Dr. Alexey Baytalyuk of the Russian Federation provided a report on associated and dependent species caught during Russian seamount (research) trawl activities. Catches of associated and dependent species were described for two bathymetric zones, thalassobathyal (< 700 m near slopes and summits) and bathyal (>700 m). The location of those zones as they were fished in relation to seamounts within the Emperor Seamount-North Hawaiian Ridge (ES-NHR) seamount chain was also described.

It was agreed that scientists from member nations would combine data to produce a paper on associated and dependent species. It was noted that in the paper to be developed there is a need to appropriately describe fishing operations such trawl net size as well as describe size composition of fish caught. It was also noted that it is important to identify the species of endemic fish.

Russia agreed to develop a template for the paper, and the exchange of data will follow the data sharing protocol as agreed to at the second SWG.

E) Information necessary to identify vulnerable marine ecosystems

Dr. Humphreys of the United States presented (SWG/WP6) regarding information on the seamounts of ES-NHR including location, size, and depth. Large seamounts are categorized as greater than 12 km wide, small seamount are less than 3km wide, and peaked seamounts also less than 3km, but with rugged summits. Large seamounts of the ES-NHR (32-36 (latitude) include: Koko, Yuryaku, North Kammu, and South Kammu. Small seamounts of the ES-NHR (28-31(include: Colahan, NW Hancock, and SE Hancock. Peaked seamounts of the ES-NHR (28-31 latitude) include: C-H Seamount and K Bank (Hancock Seamounts).

Dr. Humphreys also presented Japanese catch information (1969-1981) by seamount, where large seamounts were observed to receive the majority of the fishing effort and total catch. Small and peaked seamounts were observed to have higher levels of CPUE than large seamounts, but that the high CPUE levels observed on small or peaked seamounts often decreased rapidly after repeated fishing.

Dr. Humphreys presented information on cold-water corals (e.g., pink coral) observed in ES-NHR. A pink coral (*Corallium secundum*) fishery is believed to have occurred on the flanks of smaller seamounts and on the summits of the large seamounts from the mid-1960s to early-1970s at depths of 400-450 m. A deeper pink coral (*Corallium spp.)* fishery occurred from late-1970s to early-1980s at depths from 1,000-1,500 m. Based on available information there may be existing physical refugia for cold-water corals such as rocky outcroppings and ledges that would cause trawl gear to be hung- up, damaged, or lost. Depressions or overhangs could also be refugia for cold-water corals.

Japan noted that Japanese fishermen in recent years have observed Taiwanese vessels in the location of the Emperor Seamounts most likely targeting cold-water corals.

Information needs include data on the historical or existing cold-water coral fishery occurring on the ES-NHR seamounts as well as updated bathymetric information on ES-NHR seamounts including multi-beam or side-scan mapping information. Japan stated that one of its research vessels has been doing some bathymetry mapping and that it may have some updated information from recent research cruises. It was also stated that Japanese fishing captains likely have detailed bathymetry information, however, it is likely closely held, but that Japan government will be asking for such information in the near future. It was noted that it would be helpful to know where common trawl hang-ups have been identified by fishermen as well as regularly used trawl tracks.

Participants also discussed other aspects of ecosystem identification and management within the ES-NHR. They noted that the appropriate management response may vary depending on whether or not the ES-NHR is considered a single ecological unit and agreed that further consideration by the SWG is necessary on this point.

F) Information necessary to assess whether bottom fishing activities would have significant adverse impacts on VMEs including seamounts, hydrothermal vents, and cold water corals.

Dr. Humphreys of the United States presented the following list of information needs to assess significant adverse impacts (SAIs) on VMEs:

- spatial expanse of the impact

- sensitivity of the ecosystem to impact
- magnitude of allow change of ecosystem function
- magnitude of allowable decline in habitat and biodiversity of indicator species
- duration of time required for recovery (greater than 5-20 yrs)
- level of uncertainty associated with the above information

Dr. Humphreys also presented the following information needs for assessing the presence of cold water coral refugia:

- observer-based monitoring
- trawl hang-up locations
- multi-beam and side-scan sonar surveys
- ROV, Drop-camera, submersible surveys

It was noted that existing moratorium on the Hancock Seamounts (~ 22 yrs) may permit the use of this area as a "control" area for research investigations.

The pending time limitation on implementation of appropriate management measures make obtaining information problematic.

It was noted that the standards and criteria for conducting assessments of SAIs and VMEs as well as procedures for assessing such impacts by the SWG urgently need to be developed.

6 Exchange of information on progress of five tasks identified in Attachment 5 of NWPBT/03/Inf4.

It was noted that significant progress has been made on the five tasks, but that further work is required. Member nations agreed to work intersessionally on completing the tasks.

7 Exchange of information related to the status of fishing activities in the North Western Pacific Ocean

The Interim Secretariat reported that (SWG3/WP5) catch data was provided by member nations. The Interim Secretariat asked Russia to provide 2006 fishing data based on the agreed template. For years 2002-2005, it is requested that Russia provide catch and effort data seamount by seamount fished. Russia stated that they will provide the information when it is received. The Interim Secretariat also requests that Korea provide catch and effort data, seamount by seamount, for years 2002-2006, to the extent that the information is available.

8 Other

Korea agreed to use the existing common names of seamounts used by the United States, Russia, and Japan for use in this arrangement, but that Korea will use its own existing seamount nomenclature internally. It was agreed by participants to use the name Youmei for North Nintoku Seamount. It was also agreed to add Suiko Seamount to the list of common seamount names, and that the position of Suiko on the provided table is not likely to be precise.

It was agreed that a visual aid should be developed to show seamounts in the NW Pacific, identifying which seamounts are open to fishing and which seamounts are closed to fishing.

A small working group was formed to discuss: 1) how to facilitate data exchange between member nations on associated and dependent species and 2) which data should be collected by observers and standards for the collection of such data.

Regarding data exchange on associated and dependent species it was agreed that Russia compile the data provided by Japan and Korea and that a low resolution approach to: compare density of major associated species at the genera level or above. It was also agreed that data identifying depth strata of fished seamounts (Koko, Milwaukee, Colahan and C-H) be provided to Russia to develop the paper. Further discussion on the identification of depth strata and as well as the deadline of data exchange regarding associated and dependent species was discussed during the week.

Regarding observer monitoring and data collection, Dr Yatsu presented a draft paper titled "Type and Format of Scientific Observer Data to be Collected" that was modified from the SPRFMO and considered in the small working group. Important considerations include: appropriate sub-sampling protocol as described in the observer manual, the development of a species list to include FISH BASE and Seamounts online, and procedures for preserving specimens. It was agreed that Dr. Humpreys and Dr. Yanagimoto will lead this work with the goal to be completed by summer 2008.

9 Adoption of meeting record

Participants adopted the report of the meeting.

10 Closing of meeting

The meeting was concluded at 15:15 on Wednesday 14 May 2008.