

(SWG5/Rec.)

## **Report of the Fifth Meeting of the Scientific Working Group**

**Tokyo, Japan  
2-5 December 2008**

### **1. Opening**

Mr. Shingo Ota of Japan opened the Fifth Meeting of the Scientific Working Group at 10:00 am on Tuesday, 2 December 2008 and welcomed all participants. Delegations from Japan, Korea, the Russian Federation, and the United States attended the meeting (Attachment 1).

### **2. Appointment of Facilitator and Rapporteur**

Dr. Akihiko Yatsu of Japan was appointed as facilitator and Drs. Gerard DiNardo and Dean Swanson of the United States agreed to serve as co-rapporteurs.

### **3. Adoption of Agenda**

The draft agenda was reviewed, and it was agreed to discuss item 6 after items 7 and 8 and to reorder the agenda items accordingly. The revised agenda was adopted (Attachment 2). In addition, a list of documents for the meeting was provided (Attachment 3).

### **4. Review and Follow-up of the Outcome of the Fourth Meeting of the Scientific Working Group**

The report of the Fourth Meeting of the Scientific Working Group (SWG5/Refl) was provided to the participants.

#### **A) Exchange of information**

##### **i) Footprint data**

Japan presented revised footprint data for fisheries operating in the Emperor Seamounts (SWG5/WP3). The revised data comprised more detailed maps of the seamounts and fishery statistics through 2006 which were requested at SWG4.

It was noted that Russia has not provided the 2006 fishery statistics due to the unreliability of these data. Russia will submit the data after they have been verified. It was noted that the existing seamount fishing area definitions may need more specificity in terms of fishing depth limitations. It was decided to defer decision on this issue (until agenda item 5) to the Plenary.

##### **ii) Seamount Bathymetry**

Japan presented a report describing revised seamount bathymetry and noted that names of certain seamounts were changed following the seamount naming contained in the reports of Smoot et al (1985, 1986). In particular, Seamount A was renamed to North Bank of Suiko, Suiko to South Bank of Suiko and Seamount B to Showa Seamount. The report included revised bathymetry data for Hancock Seamount.

It was pointed out by several participants that naming inconsistencies persist in many of the

documents (e.g., SWG5/WP3). It was agreed that these naming changes should be adopted and that they follow those outlined SWG5/WP13. There was some confusion over the caption in Figure I and it was recommended that it be revised as follows - dark blue areas indicate locations over 1 500m in depth. Dark blue areas on Northern Koko indicate deepest areas of Japanese fishing grounds.

Japan presented a map of fished and unfished seamounts in FAO Statistical Area 61, which encompasses the Emperor Seamounts, and adjacent areas. It was noted that a seamount was classified as fished if any fishing effort occurred at a particular seamount during the reference period 1997-2006.

Participants discussed whether data outside of FAO Statistical Area 61 should be included in the map and how to better portray data in the map. It was decided that within Statistical Area 61 only fished and unfished seamounts in the high seas area should be included. Seamounts in Statistical Area 61 within exclusive economic zones would not be included in the map. It was further recommended that seamounts outside Statistical Area 61 be included in the map and that a better coloring scheme portraying fished and unfished seamounts be implemented. This matter was referred to the Inter-governmental Meeting for further consideration

### **iii) Location of Net Loss or Hang-up**

Japan presented a summary of net loss and /or hang-up locations in the Emperor Seamounts based on Japanese and Russian trawling data from 1972 to 2007. Maps were provided depicting the location of the net loss and/or hang up, as well as tables including the exact location and date.

There was a discussion regarding the validity of the location of net loss and/or hang-ups associated with Japanese trawlers in the northwest corner of the Milwaukee Seamount Group, which appear to be on the slope, and not the seamount summit. These data were reviewed and determined to be correct. Japan agreed to revise the net loss and /or hang-up maps based on additional information provided by the participants.

### **iv) Bottom Trawling Corridors or Paths**

At the conclusion of SWG4 countries were encouraged to submit commercial fishing corridor and pathway data and present these data at SWG5. No data were submitted and no working papers presented. Industry considers these data to be proprietary, which limits the availability of these data. Russia presented vertical profile data associated with research surveys (SWG5/WP11/R).

Participants discussed the implied proprietary nature of these data and noted the importance of these data to assess the spatial extent of fishing and location of potentially impacted areas. Potential improvements to the Russian working paper were identified (e.g., better labeling of the graphs) and a revised working paper will be submitted by Russia.

### **v) Field Guide for Identification of Corals**

The United States presented a field manual used by trained observers in the North Pacific which includes pictures of decked coral specimens (SWG5/WP10/US). The manual was presented as a potential format to follow when developing a similar manual for corals in the Emperor Seamount ecosystem that can be used to train observers. Japan presented a field guide for corals in the Emperor Seamount that includes pictures of coral in their environment (SWG5/WP10/J).

Participants discussed the goal of the field guide, who would be using the guide and the most effective way to identify decked corals. It was decided that the manual should include pictures of corals in their environment, as well as pictures of the same species on deck. Pictures of corals on deck (live and dead) are important as these likely reflect the nature of observer and fishermen observations. The coral biologists agreed to meet and discuss the availability of pictures to develop a manual and report on progress during the meeting.

Participants discussed the utility of observers and how such field guides or manuals would be beneficial during their training. It was noted that using a single manual during the training of observers represents an efficient way to proceed.

#### **B) Assessment of key species and management recommendations**

Japan introduced SWG5/WP6/J1, which was its updated paper describing splendid alfonsin (hereinafter alfonsin) fisheries based on discussions at SWG4 and further work. It presented stock assessments based on ASPIC and an Excel spreadsheet surplus production models, each run with adjusted and unadjusted CPUE data. There were few differences in the results for low CPUE periods but larger differences for high CPUE periods. Russia provided its CPUE data (SWG5/WP12/R), explaining that the data from commercial fishing operations was collected on a per-day-fishing basis while the data from research operations was collected on a per-hour trawling basis. Japan noted that data provided by Russia is used in Appendix D of SWG5/WP7/J1. In the discussion, the United States commented that: the models did not address the spatial structure of the fisheries; pooling data over time assumes homogeneity of key factors such as catchability; using production models over a period with flat data produces no contrast in the data; and alfonsin may be displacing North Pacific armorhead (hereinafter armorhead). These factors, individually and collectively, diminish the reliability of the stock assessment and associated biological reference points ( $F_{msy}$  and  $B_{msy}$ ). Japan and Russia recognized these concerns.

Japan introduced SWG5/WP6/J2, which was its updated paper describing armorhead fisheries based on discussions at SWG4 and further work. Japan explained that it had moved the management section to SWG5/WP7/J1 and SWG5/WP7/J2, which were discussed later in the meeting. It was not possible to perform a stock assessment due to target species switching, absence of reliable estimates of biomass, uncertainties in population dynamics, and uncertainty in surplus production models, among other things. Japan explained that its basic idea was to reduce  $F$  for alfonsin by 20-30 percent, which would result in a coincident reduction in  $F$  for armorhead, and to apply an adaptive management approach through annual re-evaluation of real-time monitoring of effort by target species, catch by target species and major bycatch species, size compositions, and biological characteristics. Under Japan's proposal, if recruitment spikes were to occur, effort could be increased by up to 30 percent. There was discussion of "banking" recruitment increases toward stock recovery rather than temporary increases in fishing as well as alternative approaches to adaptive management, such as rotating area closures, but no conclusions were reached in this regard.

#### **C) Information necessary to assess associated and dependent species**

At SWG4 Russia presented three working papers on the likelihood of associated species with bottom trawling fisheries, including broad alfonsin, pencil cardinalfish, and dories. It had been decided that in

the interim leading up to SWG5 all participants would review the working papers, comment directly to Russia, and revised working papers produced. It was reported to date that only Japan has responded and Russia is awaiting comments from other participants.

Participants agreed to review and provide comments to Russia before SWG6. It was noted that there are a suite of other species associated with fishing activities in the Emperor Seamounts but working papers cannot be developed for these species due to a paucity of data.

Japan presented information based on Japanese, Korean, and Russian data on associated species densities over 4 time intervals at specific seamounts. Participants questioned the validity of the density estimates and it was suggested that estimates for armorhead and splendid alfonsin, while questionable, follow similar patterns to those observed in the commercial fishery. It should be noted that there were no data available to SWG participants to verify this suggestion, thus no conclusion could be reached. Russia will provide new data on target and associated species densities prior to SWG6 to be included into the compiled database.

#### **5. SWG Assessment Review for Bottom Fishing Activities**

Under this agenda item, Japan presented its assessment and intended interim measures for its bottom trawl fishery (SWG5/WP7/J1) and bottom gillnet fishery (SWG5/WP7/J2) in the area, which take into account associated and dependent species and the need to protect vulnerable marine ecosystems (VMES). The United States presented SWG5/WP7/US, which was its assessment of information about past and present Southern Emperor and Northern Hawaiian Ridge (SE-NHR) fisheries, their impacts on target and associated and dependent species, and their impacts on benthic habitats. Other participants did not present written assessments. In the course of discussing these submissions, participants repeated their commitment henceforth to collect and report trawling effort in terms of hours per trawl.

#### **6. Discussion on the Interim Measures on VMES and marine species**

Participants noted that SWG/WP7/J1, SWG/WP7/J2, and SWG/WP7/US each contained recommended interim measures for VMEs and marine species. Principal points of discussion included the proposals in Japan's paper for a reduction in  $F$  for alfonsin and armorhead, including a two month closure of the bottom fisheries in the ES-NHR, the U.S. proposals for a closure of the southern portion of Koko Seamount and portions of Kammu Seamount to protect potential VMEs pending further study of these areas, and the U.S. proposal for the closure of Colahan and C-H Seamounts to create a possible stock rebuilding area for pelagic armorhead. These recommendations were extensively discussed, but no consensus conclusion was reached on them as a whole. Participants agreed with the proposal for a two-month closure during the armorhead spawning season in November-December. The Participating States also agreed that they should cooperate in the conduct of further research into the presence of *Corallium spp.* on the southern portion of Koko Seamount, and on the improvement of the stock assessment for alfonsin and development of a stock assessment for armorhead. It was noted that, in accordance with the interim measures, each Participating State should take into account the discussion during the meeting, and produce or revise, as appropriate, its assessment paper, which could include additional measures.

This matter was referred to the Inter-governmental Meeting for further consideration.

## **7. Discussion of Definition of Encounter with VMEs**

The Interim Secretariat introduced SWG5/WP9, comparing the proposal by the Interim Secretariat and comments received from the United States regarding encounter provisions, and the United States introduced SWG5/WP14/US, which proposed roles and responsibilities to ensue if and when a fishing vessel encountered a species that was an indicator of a VME. The U.S. proposal and the general topic were extensively discussed, but no conclusion was reached, and the matter was referred to the Inter-governmental Meeting for further consideration.

## **8. Discussion on Establishment of Exploratory Protocol for New Fishing Areas**

The Interim Secretariat introduced SWG5/WP8, which was an adaptation of the exploratory protocol for new fishing areas adopted by the Northwest Atlantic Fisheries Organization. The United States noted that the agreed interim measures (SWG5/Ref3, paragraph 4) require that any fishing outside the footprint be premised on a determination that such fishing would not have significant adverse impacts on marine species or any VME. The Interim Secretariat was requested to revise its proposal, taking into account its consistency with the interim measures, for consideration at SWG6.

## **9. Other matters**

There were no additional items raised for discussion.

## **10. Adoption of the record of the meeting**

The record of the meeting was adopted.

## **11. Closing of meeting**

The meeting was concluded at 12:26 pm on Friday, 5 December 2008.