

# South Pacific Regional Fisheries Management Organisation

## Science Working Group

Port Vila, Vanuatu: 19-23 September 2011

## REPORT OF THE 10<sup>th</sup> SCIENCE WORKING GROUP

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### 1. Welcome & Introductions

The meeting of the Scientific Working Group was opened by the chair of the SWG, Mr Andrew Penney (New Zealand), who welcomed all participants. On behalf of all participants, he thanked Vanuatu for hosting the meeting.

Participants introduced the members of their scientific delegations. A list of SWG participants is attached as Annex SWG-02.

### 2. Adoption of Agenda

The draft agenda (SWG-010-01) was adopted without amendment (Annex SWG-01).

### 3. Administrative Arrangements

The Chair explained the proposed schedule of meetings (SWG-09-02) and the Executive Secretary, Dr Robin Allen, explained other administrative arrangements.

#### 3.1. Meeting documents

The Executive Secretary provided participants with an updated documents list (SWG-010-03).

### 4. Nomination of Rapporteurs

The Chair offered to rapporteur the meeting, assisted by the interim Executive Secretary.

### 5. SWG Chairmanship

At the 9<sup>th</sup> SWG meeting in Viña del Mar, Chile, in October 2010, Andrew Penney (New Zealand) was re-confirmed as Chair of the SWG for the next two year period.

### 6. Discussion of National Reports

National reports were tabled at this meeting by, the European Union, Australia, New Zealand, Chile, China, Korea, Peru, Russia, Vanuatu and Chinese Taipei (documents SWG-10-04 to SWG-10-12). Participants made brief presentations of their national reports and provided answers and explanations in response to questions.

## **7. Inter-Sessional Work**

### **7.1. Report from the Interim Secretariat on status of catch & effort data submission**

The report by the Interim Secretariat on catch and effort data submission (DIWG-09-INF-01) was tabled and discussed at the meeting of the Data and Information Working Group.

### **7.2. Update by the Interim Secretariat on status of the SPRFMO catch and effort database, and the SPRFMO GIS database**

An update on the status of the SPRFMO catch and effort database was provided to the Data and Information Working Group. The Executive Secretary gave a brief update on the status of the SPRFMO geospatial database. The SPRFMO geospatial database contains data on the boundaries, bathymetry and seamounts in the SPRFMO Area. The Secretariat has prepared a joint bottom fishing footprint at 20-minute resolution based on individual bottom fishing footprint maps submitted by New Zealand, Australia, Korea and Chile (SWG-INF-10).

## **8. Report-Back from the Meeting of the Jack Mackerel Sub-Group**

### **8.1. Consideration of the report and summary of the Jack Mackerel Sub-Group meeting**

The Jack Mackerel Sub-Group met prior to the SWG meeting and the full report of that meeting is appended as Annex SWG-03. Main issues dealt with by the JMSG Sub-Group at this meeting were:

- The JMSG conducted stock assessments for jack mackerel using the Joint Jack Mackerel (JJM) statistical catch-at-age stock assessment model, using updated data inputs and indices.
- Results of these assessments were used to develop advice on the status of the Chilean jack mackerel resource in 2011. Projections were conducted under a future recruitment scenario based on average recruitment levels over 2002 – 2006, and five alternative future constant catch levels, were used to provide advice on probabilities of stock recovery at these various constant catch levels.
- The JMSG reviewed inter-sessional progress with development of projects under the Jack Mackerel Research Programme and made recommendations on future work to progress cooperative research under this programme.

### **8.2. SWG Advice on Jack Mackerel Stock Status**

The SWG endorsed the following advice by the Jack Mackerel Sub-Group on jack mackerel stock status in 2011:

- Jack mackerel catches by all but one of the fleets continued to decline in 2011, with overall 2011 catches being 69% of 2010 catches. Updated assessment results indicate that current biomass is now estimated to be 10% - 19% of the total biomass which would have existed if there had been no fishing, which is slightly higher than the estimated range from the 2010 assessment. The 2011 assessments results indicate a continuing decrease in fishing mortality and a slight increase in estimated total biomass over 2010, but a continuing decrease in spawning biomass.
- There continue to be indications of slightly improved recruitment in recent years, although the updated assessment indicates that the apparently strong recruitment observed by a number of fleets in 2010 was actually lower than the recruitment in 2009, and well below long-term average levels. Significant catches of 2 year old recruits were

only made by the North Chilean (Fleet 1) fleet in 2011 and the resulting estimate of higher recruitment in 2011 is highly uncertain, and still well below long-term average levels (Annex SWG-JM-03 Figure 17).

- Projection results under the assumption of average recruitment at the levels estimated for the recent five-year period 2006 – 2010 indicate that catches should be maintained below 520,000 t to maintain spawning biomass at least at current levels. Catches below 390,000 t are projected to have a high probability of resulting in spawning stock rebuilding under most projections.

## **9. Report Back from the Meeting of the Deepwater Sub-Group**

The Deepwater Sub-Group met prior to the SWG meeting and the full report of that meeting is appended as Annex SWG-04. Main issues dealt with by the Deepwater Sub-Group at this meeting were:

The Deepwater Sub-Group adopted the revised Bottom Fishery Impact Assessment Standard (Attachment 1 to its report), noting that it would replace the interim Benthic Assessment Framework. The sub-group recommended that this standard be approved by the Science Working Group and forwarded to the third meeting of the Preparatory Conference for consideration and adoption. The Science Working Group endorsed the recommendation.

The Deepwater sub-group reviewed the Australian bottom fishery impact assessment (SWG-10-DW-01a) and associated management measures (SWG-10-DW-01b). They noted that the impact assessment provided a comprehensive report that generally met, and went beyond, the interim Benthic Assessment Framework, as it was based on the draft BFIAS. The sub-group provided comments against the list of questions in Section 8 of the Report of SWG 4 (Noumea, September 2007). The sub-group recommended that the comments and review be forwarded by the Secretariat to Australia.

## **10. Future Scientific Work Programme**

The SWG noted that Dr Rafael Duarte had agreed to prepare a draft SWG scientific work programme incorporating the main components of the Jack Mackerel Stock Structure Research Programme, the components listed in Annex D to the report of the 2<sup>nd</sup> Preparatory Conference and proposals for collaborative work on acoustic surveys of jack mackerel. The SWG agreed that the future SWG work programme should be discussed further once this draft work programme is available.

## **11. Species and Habitat Profiles**

### **11.1. Revisions to existing species or habitat profiles**

No updates to existing species or habitat profiles were discussed.

## **12. Other Matters**

No other matters were discussed.

## **13. Adoption of SWG Report**

The SWG Plenary Report was adopted after inclusion of edits proposed by participants.

#### **14. Meeting Closure**

The meeting was closed at 17h45 on 23 September 2010.

## AGENDAS FOR THE SCIENCE WORKING GROUP & SUB-GROUPS

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### SCIENCE WORKING GROUP: PLENARY

#### AGENDA

1. **Welcome & Introductions**
2. **Adoption of Agenda**
3. **Administrative Arrangements**
  - 3.1. Meeting documents
4. **Nomination of Rapporteurs**
5. **SWG Chairmanship**
6. **Discussion of National Reports**
7. **Inter-Sessional Work**
  - 7.1. Report from the Interim Secretariat on status of catch & effort data submission
  - 7.2. Update by the Interim Secretariat on status of the SPRFMO catch and effort database, and the SPRFMO GIS database
8. **Report-Back from the Meeting of the Jack Mackerel Sub-Group**
  - 8.1. Consideration of the report and summary of the Jack Mackerel Sub-Group meeting
  - 8.2. SWG Advice on Jack Mackerel Stock Status
9. **Report Back from the Meeting of the Deepwater Sub-Group**
10. **Future Scientific Work Programme**
11. **Species and Habitat Profiles**
  - 11.1. Revisions to existing species or habitat profiles
12. **Other Matters**
13. **Adoption of SWG Report**
14. **Meeting Closure**

## **SCIENCE WORKING GROUP: JACK MACKEREL SUB-GROUP**

### **AGENDA**

- 1. Opening of the Meeting**
- 2. Adoption of Agenda**
- 3. Administrative Arrangements**
  - 3.1. Meeting arrangements
  - 3.2. Meeting documents
- 4. Nomination of Rapporteurs**
- 5. Chairmanship of the Jack Mackerel Sub-Group**
- 6. Report of the Jack Mackerel Otolith Interpretation & Ageing Workshop**
- 7. Report on Inter-Sessional Assessment Work by Participants**
- 8. Jack Mackerel Stock Assessments – Technical Session**
  - 8.1. Updating of data sets for additional stock assessment runs
  - 8.2. Selection and specification of the base-case assessment, and specification of additional stock assessment sensitivity runs to be conducted
  - 8.3. Conducting of additional stock assessment runs
  - 8.4. Synthesis and summary of key results from all stock assessment runs conducted
- 9. Advice to the Science Working Group on Jack Mackerel Stock Status**
- 10. Jack Mackerel Research Programme**
  - 10.1. Inter-Sessional Progress with the Jack Mackerel Stock Structure Research Programme
  - 10.2. Future Jack Mackerel Work Programme
  - 10.3. Identification of short term research and assessment requirements
- 11. Revisions to the Jack Mackerel Species Profile**
- 12. Other Matters**
- 13. Adoption of Jack-Mackerel Sub-Group Report and Summary**

## **SCIENCE WORKING GROUP: DEEPWATER SUB-GROUP**

### **AGENDA**

- 1. Opening of the Meeting**
- 2. Adoption of Agenda**
- 3. Administrative Arrangements**
  - 3.1. Meeting arrangements
  - 3.2. Meeting documents
- 4. Nomination of Rapporteurs**
- 5. SPRFMO Bottom Fishery Impact Assessment Standard**
- 6. Review of Bottom Fishery Impact Assessments**
- 7. Deepwater Species Assessment and Management**
- 8. Deepwater Research Programme**
  - 8.1. Future Deepwater Work Programme
  - 8.2. Identification of short term research and assessment requirements
- 9. Other Matters**
- 10. Adoption of Deepwater Sub-Group Report and Summary**

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