Report of the Management Procedure
Special Consultation

23 May 2005
Canberra, Australia
Agenda Item 1. Opening of meeting

1. The Chair (Mr Andrew Penney) welcomed participants and opened the meeting.
2. Meeting participants introduced themselves. The list of participants is at Attachment 1. The chair provided apologies for the CCSBT Executive Secretary and the SAG Chair who were unable to attend the meeting.
3. The agenda was adopted and is included at Attachment 2.
4. The chair provided some introductory remarks for the meeting, namely:
   - The purpose of the meeting was to focus on the outcomes of the Fourth Management Procedure Workshop (MPWS4). This was an opportunity for Commissioners to explore MP issues with the full Panel and to provide final guidance to scientists on the MP development process before SAG6/SC10.
   - The update of the operating model with new data after MPWS3 experienced a number of problems and work had to be initiated to resolve these. This meant that the final set of candidate management procedures (CMP) could not be provided to CCSBT 11 as specified in the initial MP development schedule.
   - CCSBT 11 gave clear instructions that the Management Procedure development process was to be concluded prior to CCSBT 12 and that the final list of CMPs be available for selection at CCSBT 12. The past problems with the operating model have been resolved. The operating model and the CMPs have been improved to deal with the new data and comprehensive testing has been conducted. A reduced set of CMPs has been chosen that behave well across the ranges tested.
   - There are two important processes between now and CCSBT 12: first, scientists will test and compare the reduced set of CMPs (including some additional scenarios) between now and the SAG6/SC11 meetings in August/September. Secondly, new data and indicators will be available for the SAG6/SC11 meetings and these data will be closely examined to provide further information on current recruitment and thus the current state of the stock.

Agenda Item 2. Presentation of outcomes from the 4th Management Procedure Workshop

5. Professor Ray Hilborn gave a presentation on the outcomes of MPWS4. The presentation provided a briefing of the progress in MP evaluations and identified the specific questions on which MP developers required guidance at this meeting.
6. The presentation reviewed the concepts behind MPs and commonly used terminology in the CCSBT MP development process, in particular:
   - “Reference set” which represents the most likely estimate of stock status;
• “Robustness trials” which cover a broader range of stock status in case the reference set is incorrect; and
• “Tuning level” which is the biomass level that the CMPs are adjusted to achieve (on average) in 2022 in comparison to 2004 levels. For example a 1.1 tuning means the MP would on average increase the stock biomass to 110% of the 2004 level by 2022.

7. The MP development and testing process has provided some information of relevance to the operation of an MP and to the selection of a tuning level. In particular:
   • Adjusting the TAC every 5 years only does not provide enough safety for managing declining stocks;
   • Tuning to 0.9 or less poses great risk to both biomass and CPUE; and
   • Tuning levels of 1.3 require very large catch reductions.

8. A reduced set of four CMPs (CMP_1 to CMP_4) have been selected for further testing. In terms of biological outcomes, CMP_1 was the most cautious, CMP_4 the least cautious and the other 2 CMP’s fell in the middle. The major difference between CMPs was the trade-off between short term and long term catch and responsiveness to recruitment trends.

9. The bad news about the stock is that: (a) current spawning stock is very low; and (b) data suggest poor recruitments in 2000 and 2001 and declining stock size in the near future.

10. The sensitivity of MPs to some assumptions was summarised as follows:
    • Recruitment: The MP will reduce or increase the TAC in the correct direction even if estimates of recruitment are incorrect;
    • Underlying Model: The MP will adjust the TAC in the correct direction even if the underlying model of the stock is incorrect;
    • IUU fishing: If there is undetected IUU fishing, the MP would continue to adjust the TAC in the correct direction, but it is the members catches that would be reduced as a consequence of the IUU fishing; and
    • Longline CPUE: If a change in longline fishing behaviour results in longline CPUE not changing as expected with abundance, then the MP would fail to perform as expected and a meta rule would need to be invoked. In other words, the MP’s are not robust to basic changes in longline fishing behaviour.

11. The primary questions that MP developers require answers for at this meeting are:
    • Verification of the start year for MP TAC changes (is this still 2008?);
    • Verification of the maximum acceptable TAC change (the scientists have been working on 5000 tonnes);
    • Verifications of 3 year steps between TAC changes (5 year steps did not work well enough) and whether other time steps such as annual or two yearly should be considered; and
    • What (if any) level of ad-hoc catch reduction in 2006 should be evaluated by scientists before September?
12. In concluding the presentation, Professor Hilborn outlined the decisions that would need to be made by the Commission at CCSBT12. These are:

- What level of recovery by 2022 is required (this is a choice of tuning level)?
- What is an acceptable trade off between early catch reductions and the level of biomass decline (this is a choice of CMP)?
- Should there be an ad-hoc catch reduction in 2006?
- What will be the time step between TAC adjustments (3 year, 5 year, or other time step)?

13. Following the presentation, some questions and comments were raised by members as outlined below:

- What was the basis of the option for an ad-hoc quota cut in 2006 prior to the first scheduled MP TAC adjustment in 2008? In response to this question, the Chair advised that the projections with a first TAC adjustment in 2008 allowed up to 40% biomass declines in the next 10 years. MPWS4 decided to evaluate two options (a 2500t and a 5000t TAC cut in 2006) so that advice could be provided to the Commission in case the Commission was concerned about the declines and asked questions about the effect of an early ad-hoc TAC cut.
- Questions were raised regarding constraints (such as limits on timing, or size of TAC reductions and direction of early TAC changes) built into some CMPs. It was advised that some constraints were designed by individual MP developers to obtain desirable performance characteristics from the MP, and that other constraints were from guidance provided by the Commission.
- Australia highlighted the serious consequences of a TAC reduction on employment at Port Lincoln. As a consequence of this and other impacts of TAC reductions, Australia wanted to make sure that any decisions were made on the best available data. In particular, Australia wanted: (1) the TIS to be expanded to become a catch documentation scheme; (2) monthly catch reporting from all members; (3) reporting of domestic consumption in Korea and Taiwan; (4) data from scientific observers; (5) a listing of all Taiwanese vessels (both on Taiwan’s register and those fishing for SBT under other flags); and (6) discussion concerning SBT discarding.
- Other members also emphasised the economic and social importance of SBT in their countries.

**Agenda Item 3. Questions/clarification from administrators and industry**

14. In initial responses to the presentation of CMP evaluation results by Prof Hilborn, participants raised the following issues related to adoption of a CCSBT MP:

- The Commission had primarily been considering 2008 as the proposed start year for MP implementation. They would need to carefully consider the results of the proposed evaluation of *ad hoc* TAC reductions in 2006 before considering any such options.
- While recognising the need to take management decisions based on the risk of further depletion of SBT biomass, it was important that such decisions be
based on reliable data and information, to prevent incorrect or inappropriate management action with serious economic consequences.

- It was particularly important to ensure that all catches are adequately monitored, reported and included in MP TAC calculations. Members do not wish to suffer TAC decreases that have resulted from the impact of unmanaged IUU fishing.
- Implementation of an MP would require that a number of data-related issues be simultaneously dealt with to ensure provision of complete and correct data to the MP process. These should be addressed at the CCSBT12 Commission meeting.

15. The Panel and Chair provided brief answers in response to a number of specific questions for clarification of aspects of the report of the 4th Management Procedures Workshop:

- The proposal to review the effects of possible precautionary TAC reductions in 2006, before MP implementation in 2008, resulted from increased concern at the state of the SBT stock. This increased concern resulted from the results of the SAG5 stock assessment in 2004, particularly indications of low recruitment in recent years, as indicated by reduced juvenile CPUE in the LL fisheries. It was noted that the difference between the information tabled at the SAG and previously, is that additional data (2001 - 2003) have now been included in developing the reference set.
- Earlier catch reductions would be expected to decrease the short-term risk of biomass depletion. However, there may still be a need for further reductions in 2008, on implementation of the MP, if the stock is in a state of low productivity.
- The SBT stock is at a low biomass and, under the reference set, is likely to decline by up to 40% before re-building commences. If recent poor recruitments are a result of low biomass, then further reduction in biomass would be of extreme concern. This would be likely to result in ongoing poor recruitment, and possibly stock collapse.
- Additional data on recruitment to be considered at the 2005 SAG6/SC10 meetings will include estimation of exploitation rates in the surface fishery, length-frequency composition of the most recent longline data, direct ageing of some longline fishery components, and aerial and acoustic survey data.
- The 4 CMPs have been tested against a wide range of the assumptions in the underlying Operating Model (e.g. natural mortality, steepness of the stock-recruit relationship), and have been designed to perform well across these ranges. These CMPs would therefore still be expected to work reasonably well if many of these underlying assumptions are incorrect.
- If exceptional circumstances result in implementation of a metarule, the MP would be abandoned and some other process (such as a new assessment) would be implemented to provide management advice appropriate to such exceptional circumstances. However, in many cases, less severe changes in the fishery could be dealt with in the normal MP review and revision process, while still retaining the MP as the basis for TAC recommendations.
- The current view of the state of the SBT stock is the same as that produced by the 2004 SAG5 meeting. Comments on the limited nature of the recruitment
data do not refer to limitations in reliability of these data, but rather to the limited time series (i.e. 2 years) of data currently available to estimate these recruitments. Data analysed in 2004 provide an indication of poor recruitment in 2000 and 2001 at least, and it is not yet known if poor recruitment has continued after that.

- Regarding the prioritization of efforts to improve reliability of data, the Panel suggested that emphasis be given to measures of recruitment and CPUE, particularly tagging program estimates of recruitment into the surface fishery, direct observation of length-frequency data on longline fleets by observers, direct ageing of components of the longline catch, improved reliability of estimates of total catch and developments of both aerial and acoustic surveys to improve reliability of the indices of recruitment they provide. It was noted that a list of proposed data improvements was already included in paragraph 27 of the CCSBT 11 report. Ideally, recruitment estimates should be in absolute numbers so that they can be used immediately, rather than waiting for a long time series of relative recruitment.

- Members were encouraged to investigate further options for incorporating economic data into the SBT assessment and management process. At the least, consultations with industry should continue to ensure that any changes in fishery behaviour that might affect the validity of CPUE data as an index of abundance are reported and understood.

16. With regard to reliability of data, the Panel were requested to prepare an overview of what is known about the relative confidence or uncertainty in the various data inputs to the MP process, to guide the Commission in setting priorities for improving data reliability. This should be developed in preparation for the SAG6 meeting.

**Agenda Item 4. Guidance from members regarding final requirements for development and evaluation of candidate management procedures prior to the Stock Assessment/Scientific Committee meeting in August/September 2005.**

17. Currently, all CMPs used a start year for TAC changes of 2008, with a 3 year interval between subsequent TAC changes. Members had different preferences with respect to timing of MP implementation, tuning levels and ad-hoc TAC cuts prior to MP implementation. However, members were able to provide guidance to the MP developers on the options that should be explored prior to SAG6/SC10.

18. It was agreed that the following options should be explored:

- The existing option of a start year in 2008 and a three year interval between TAC changes;
- A start year for the first MP TAC change in 2007, with a 2 year interval between the first 3 TAC changes (2007, 2009, 2011) and then reverting to a 3 year interval between changes after 2011; and
- An ad-hoc TAC change of (a) 2500t and (b) 5000t in 2006, followed by the first MP driven TAC change in 2008 with a three year interval between MP TAC changes.
• Tuning levels of 1.1 and 1.3 should continue to be explored, but the 0.9 tuning level can be discontinued due to the very low biomass and CPUE outcomes exhibited by this tuning.
• The maximum TAC change allowed by the CMPs was affirmed as being 5000t.

19. In response to comments that MPWS4 was not able to reduce the number of CMPs below four at the present time, the meeting requested that at SAG6/SC10, the Panel provide indications concerning the “best” CMP to achieve various objectives.

**Agenda Item 5. Adoption of report**

20. The report was adopted.
21. The meeting closed at 6:00pm, Monday 23 May 2005.
List of Attachments

Attachment

1  List of Participants
2  Agenda
Attachment 1

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Management Procedure Special Consultation
23 May 2005
Canberra, Australia

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1. Opening of meeting

2. Presentation of outcomes from the 4th Management procedure Workshop

3. Questions/clarification from administrators and/or industry

4. Guidance from members regarding final requirements for development and evaluation of candidate management procedures prior to the Stock Assessment/Scientific Committee meeting in August/September 2005

5. Adoption of report

Note: A break between items 3 and 4 is proposed for delegations to consult among themselves, or informally with Panel members, before final discussion of item 4.