Australian Government
Australian Fisheries Management Authority

19 August 2011

High seas: conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems

ABSTRACT

Australia has consented to implement the interim measures adopted in 2007 (as amended) by participants in negotiations to establish the South Pacific Regional Fisheries Management Organisation (SPRFMO). Under the interim measures relating to bottom fishing (SPRFMO Interim Measures), participants are to submit to the SPRFMO Science Working Group (SWG):

- their assessments of whether individual bottom fishing activities would have significant adverse impacts on vulnerable marine ecosystems (VMEs)
- proposed management measures to prevent significant adverse impacts.[1]

Australia's Bottom Fishing Impact Assessment (BFIA) for the SPRFMO area of competence (SPRFMO Area), undertaken by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), has been completed and submitted to the SWG for consideration.

This paper sets out Australia's proposed conservation and management measures, to be implemented by the Australian Fisheries Management Authority (AFMA), to prevent significant adverse impacts on VMEs.

Executive summary

1. The BFIA identified that, after taking into account current monitoring, management and mitigation measures, the risk of significant adverse impact on VMEs by Australian vessels is low for demersal trawl and demersal auto-longline, and negligible for mid-water trawl and drop-line.

2. Although there is a low current risk of significant adverse impacts, the BFIA identified that ongoing monitoring, management and mitigation measures are necessary. This is because of:

   a) uncertainties in assessing and managing risk; and

   b) the potential for risks to increase if effort levels increase or expand within or beyond the current fishing footprint.

[1] SPRFMO Interim Measures para 12(a). The 2008 *International Guidelines for the Management of Deep-sea Fisheries in the High Seas of the Food and Agriculture Organization of the United Nations* (FAO Deepsea Guidelines) provide that conservation and management measures should be made publicly available (paragraph 51).

3. The Australian high seas fishery, including in the SPRFMO Area, is characterised by low effort. This, and the low risk of significant adverse impacts on VMEs identified in the BFIA, has informed AFMA's general approach (described in more detail below) to maintain its current conservation and management measures with the proposed addition of a number of measures including:

   a) improved data collection through observer and operator training;

   b) gear specific trigger threshold levels for evidence of VMEs;

   c) complementary management in respect of a number of areas identified by CSIRO; and

   d) monitoring effort and uncertainties to ensure that the risk of significant adverse impact remains low.

Current (and proposed continuing) measures

4. AFMA has implemented conservation and management measures for Australian vessels that seek to mitigate the impact of bottom fishing on VMEs.[2] It is proposed that the current conservation and management measures, set out below, will continue to apply.

Vessel monitoring systems

5. Australian flagged vessels operating in the SPFRMO Area must be fitted with an operational integrated computer vessel monitoring system (VMS) based on Automatic Location Communicators (ALCs) with built-in Global Positioning Systems.

6. VMS must operate continuously unless special circumstances exist in which case AFMA must first agree to the change. ALCs transmit data on vessel registration, date, time, vessel position, course and speed. Reports are made to AFMA every hour with accuracy down to 100 metres.

Catch and effort data collection systems

7. AFMA requires operators to record catch and effort data in logbooks on a shot-by-shot basis, including start and end positions for gear deployment and retrieval, gear method and depth. For auto-longlining the number of hooks and line length is required. Operators are also required to record discards, bycatch and interactions with certain marine or threatened species listed under Australian law in the logbooks. AFMA distributes, collects and processes these logbooks. Disposal of catch is also monitored by AFMA through catch disposal records.

[2] The *Revised Draft Bottom Fishery Impact Assessment Standard* (SPRFMO, 2008) (BFIAS) provides that a detailed description of the specific monitoring, management and mitigation measures to reduce impacts on VMEs that are currently in place should be provided to the SWG – para 7.1.5.

8. While the BFIA notes that uncertainties could be reduced with finer scale recording and the use of start and end points for when gear is in contact with the seabed,[3] requirements for high seas data in logbooks, for example the spatial scale for reporting operation start and end points, are the same as used for Australian domestic fisheries for current management purposes.[4]

9. Upon encountering specified evidence of VMEs (50 kg of corals and sponges) there is a requirement to report the encounter to AFMA as soon as reasonably practicable, but in any event no later than 24 hours after the shot. The report to AFMA, in addition to logbook requirements, must include details of the shot including its location.

Scientific observer coverage

10. AFMA has implemented mandatory 100% observer coverage for trawl operators. For non-trawl operators there is mandatory first trip observer coverage with ongoing target coverage of at least 10% annually. While the BFIA notes that uncertainties could be reduced with higher observer coverage for auto-longline AFMA considers the current levels of coverage are appropriate.[5]

11. Observers collect data including vessel characteristics, fishing activity, catch composition, discarding, bycatch and wildlife observations. Where evidence of VMEs is encountered, observers collect information on the VME taxa such as coral and sponges.

Data to be provided to the SPRFMO Secretariat

12. Australia reports to the SPRFMO (Interim) Secretariat as set out in the SPRFMO Interim Measures and the SPRFMO *Standards for the collection, reporting, verification and exchange of data* (28 January 2011) (SPRFMO Data Standards).

13. Details of evidence of VMEs collected by observers are reported to the SPRFMO Secretariat. For each observed trawl, data for all sensitive species such as sponges, sea fans or coral, are collected as per the SPRFMO templates for submission and reported under the SPRFMO Data Standards.[6]

Gear to prevent or reduce impacts on VMEs

14. Australia restricts fishing methods and gear types, including not permitting the use of deep water gillnets. Permits specify the type of gear that is able to be used by each operator.

---

[3] See BFIA para 6.1.

[4] As required by FAO Deepsea Guidelines para 32.

[5] As required by the SPRFMO Interim Measures para 9, having regard to the BFIA at para 4.1.3 which notes the potential for a higher benthic impact rating for bottom-set auto-longline, and para 4.1.5, which describes the costs of observers as a disincentive to fishing.

[6] Para 3(c), Annex 8 section 8. See also the SPRFMO data submission template for observers.

Detecting evidence of fishing on VMEs and move on

15. If the take of coral and sponge exceeds 50 kg in any one shot, then the operator must cease fishing and not fish at any point within five nautical miles of that shot using that gear type for the life of the permit (usually 12 months). The operator must notify AFMA of the details of the shot.

16. Upon receipt of a notice from AFMA advising that the trigger level of 50 kg has been exceeded by any vessel, all high seas permit holders are prohibited from fishing within five nautical miles of the shot using the same gear method for the life of the permit.[7]

17. Upon receiving a report of the triggered area, AFMA will make an assessment as to whether the area should be re-opened in following seasons.

Avoiding certain species

18. High seas permits require operators to avoid interactions with cetaceans and certain marine, migratory and threatened species listed under Australian law. If fishing activity does result in an interaction, the master or skipper of the vessel must report the interaction to the onboard observer and to AFMA on forms annexed to fishing logbooks.

19. There are also prohibitions on catching certain species (e.g. Black Cod, Blue Marlin and Black Marlin).

Restrictive fishing footprint

20. As specified in the SPRFMO Interim Measures, fishing activities of Australian vessels are restricted to areas already fished during a historical reference period of 2002 to 2006.[8]

Proposed additional measures

21. The BFIA conducted for Australian vessels fishing in the SPRFMO Area identifies, after taking into account current monitoring, mitigation and management measures, that the risk of significant adverse impacts on VMEs for the two primary bottom fishing methods, demersal trawl and auto-longlining, is low.

22. The *Revised Draft Bottom Fishery Impact Assessment Standard* (SPRFMO, 2008) (BFIAS) provides that, where no additional mitigation and management measures are required to reduce significant adverse impacts (that is, there is 'Low Significance'), then effective monitoring measures should be implemented to detect changes that would prompt the need for a re-assessment.[9]

[7] This addresses SPRFMO Interim Measures para 7 and FAO Deepsea Guidelines para 67.

[8] SPRFMO Interim Measures para 2.

[9] BFIAS para 7.1.5.

23. Accordingly, and in light of the limited effort by Australian vessels, AFMA intends to maintain its current measures with the addition of the following proposed additional measures.

Catch and effort data collection systems

24. AFMA proposes to implement additional training for scientific observers and operators including the identification and targeted collection of taxa constituting evidence of VMEs.[10]

Data provided to the SPRFMO Secretariat

25. In addition to the information contained in the BFIA, Australia intends to provide to the SPRFMO Secretariat results of a study to assess the sustainability of harvest rates by Australian flagged vessels of target species in the high seas fisheries (see paragraph 33.c) below).[11]

Gear to prevent or reduce impacts on VMEs

26. AFMA will work with Australian operators that are authorised to fish in the SPRFMO Area and other areas of the high seas to develop an industry code of practice. It is anticipated that the code will incorporate areas of management that depend on industry expertise, execution and monitoring for effective implementation. These areas may include: using trawl methods that minimise contact with the seafloor; gear design and retrieval methods (such as 'peeling' auto-longline gear on retrieve or using weak links in midwater trawl gear)[12]; minimising discards;[13] and eliminating or minimizing lost gear.[14]

27. Development and implementation of the code will be facilitated and monitored by AFMA.

Evidence of VMEs and move on rule

28. The BFIA recommends the use of gear specific trigger threshold levels for evidence of VMEs.[15]

29. In respect of bottom trawl, which has low effort by Australian vessels, 100% observer coverage and a history of no substantial catches of VME taxa,[16] Australia intends to

---

[10] This aims to reduce uncertainties by improving the 'evidence of VME' protocol - see BFIA para 6.1.

[11] See the BFIAS para 7.1.5 regarding data to be provided to the SPRFMO Secretariat.

[12] See the BFIA para 4.1.2 regarding industry comments on mitigating the impact of fishing on VMEs.

[13] See FAO Fisheries and Aquaculture Report No. 957 *Report of the Technical Consultation to Develop International Guidelines on Bycatch Management and Reduction of Discards* (6-10 December 2010).

[14] FAO Deepsea Guidelines para 71.

[15] For a discussion, refer to BFIA para 4.1.2 under the heading 'Detection of Evidence of VME'.

continue with current trawl trigger threshold (50 kg of coral and sponges) for evidence of VMEs. This is appropriate given the small size and low effort by Australian vessels.[17] Trawl effort and catches of VME taxa will be monitored by AFMA in consideration of future changes to the trawl trigger threshold, recognising the approach outlined in the New Zealand Bottom Fishing Assessment and the BFIAS.[18]

30. In respect of auto-longline, as recommended in the BFIA,[19] Australia proposes to adopt a gear-specific threshold similar to the Commission for the Conservation of Antarctic Marine Living Resources standard 10 kg/ 10 litres of VME indicator species collected across a line segment (e.g. 1000 hooks or 1200 metres, whichever is shorter).

Footprint

31. New Zealand has applied a tiered management system for the 20 minute blocks of their footprint in the SPRFMO Area.[20] Within this spatial management system, a number of blocks are designated as closed to New Zealand fishing because they either have a history of light fishing effort or have a heavier fishing effort but are closed to ensure representativeness in regard to depth and topography.[21]

32. CSIRO has identified three 20 minute blocks within the Australian combined gear footprint that have zero or light effort by Australian vessels (less than three operations over the period 2002-2009) which overlap with blocks that have been closed to New Zealand operators because of zero or light trawl effort. Two of these are on the West Norfolk Ridge and one is on the West Challenger Plateau. Australia intends to discuss complementary management arrangements with New Zealand in respect of these areas.

Events requiring review of measures

33. The following are proposed to be designated as events which, if occurring, will give rise to a requirement to consider appropriate conservation, management, monitoring and mitigation measures to ensure that the risk of significant adverse impacts on VMEs remains low under the proposed changes:

    a) Spatial: as noted above, AFMA proposes to continue to limit fishing by Australian vessels to its collective (all gears combined) distribution of historical fishing activity for the period 2002-2006.

---

[16] BFIA para 4.1.5.

[17] BFIA para 4.1.2.

[18] BFIAS para 6.1.

[19] BFIA para 4.1.2.

[20] BFIAS para 3.1.4.

[21] BFIA para 4.1.2.

Event: any proposed expansion of the spatial extent of Australian effort not made in conjunction with SPRFMO conservation and management measures.[22]

b) Effort: AFMA proposes to continue to monitor effort and catch by Australian vessels in the SPRFMO area.

Event: if catches in any year reach average annual levels over the period 1 January 2002 – 31 December 2006.[23]

c) Sustainability: while noting that quantitative stock assessments require estimates of the total catches for the SPRFMO Area (which are not yet available), the BFIAS seeks details of how fishing activities will be planned and managed to ensure the long term sustainability of deep sea fish stocks.[24] In addition to the historical trends of catch and effort over the period 2002-2009 set out in the BFIA, Australia is commissioning a study to assess the sustainability of harvest rates by Australian flagged vessels of target species in the high seas fisheries. It is anticipated the assessment will consider current harvest rates, limited assessments of key stocks such as Orange Roughy (*Hopostethus atlanticus*) and Alfonsino (*Beryx splendens*), and possible management measures. The assessment is limited to fishing by Australian flagged vessels.

Event: if the results of the assessment identify the need for a review of harvest rates of Australian vessels.

[22] This trigger addresses the review recommendation described in the BFIA at para 6.1.

[23] This trigger addresses the review recommendation described in the BFIA at para 6.1. Note also SPFRMO Interim Measures for Bottom Fisheries para 1 which provides that participants are to '*limit bottom fishing effort or catch in the Area to existing levels in terms of the number of fishing vessels and other parameters that reflect the level of catch, fishing effort, and fishing capacity*'.

[24] BFIAS para 7.1.5. See also United Nations General Assembly Resolution 64/72 para 119(d) regarding stock assessments and FAO Deepsea Guidelines regarding lower cost or innovative assessment techniques (para 40).