

## **Terms of Reference for Fisheries Assessment Working Groups (FAWGs) in 2011**

### **Overall purpose**

For fish stocks managed within the Quota Management System, as well as other important fisheries in which New Zealand engages:

to assess, based on scientific information, the status of fisheries and fish stocks relative to MSY-compatible reference points and other relevant indicators of stock status; to conduct projections of stock size under alternative management scenarios; and to review results from relevant research projects.

Fisheries Assessment Working Groups (FAWGs) evaluate relevant research, determine the status of fisheries and fish stocks and evaluate the consequences of alternative future management scenarios. They do not make management recommendations or decisions (this responsibility lies with MFish Fisheries Management and the Minister of Fisheries).

### **Preparatory tasks**

1. Prior to the beginning of the main sessions of FAWG meetings (January to May and September to November), MFish fisheries scientists will produce a list of stocks for which new stock assessments or evaluations are likely to become available prior to the next scheduled sustainability rounds. FAWG Chairs will determine the final timetables and agendas.
2. At least six months prior to the main sessions of FAWG meetings, MFish fisheries managers will alert MFish science managers and the Chief Scientist to unscheduled special cases for which assessments or evaluations are urgently needed.

### **Technical objectives**

3. To review any new research information on stock structure, productivity, abundance and related topics for each fish stock under the purview of individual FAWGs.
4. To estimate appropriate MSY-compatible reference points<sup>1</sup> for selected fish stocks for use as reference points for determining stock status, based on the Harvest Strategy Standard.
5. To conduct stock assessments or evaluations for selected fish stocks in order to determine the status of the stocks relative to MSY-compatible reference points<sup>1</sup> and associated limits, based on the "Guide to Biological Reference Points for the 2009-10 Fishery Assessment Meetings", and the Harvest Strategy Standard.
6. In addition to determining the status of fish stocks relative to MSY-compatible reference points, and particularly where the status is unknown, FAWGs should explore the potential for using existing data and analyses to draw conclusions about likely future trends in biomass levels and/or fishing mortality (or exploitation) rates if current catches and/or TACs/TACCs are maintained, or if fishers or fisheries managers are considering modifying them in other ways.

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<sup>1</sup> MSY-compatible reference points include those related to stock biomass (i.e.  $B_{MSY}$ ), fishing mortality (i.e.  $F_{MSY}$ ) and catch (i.e. MSY itself), as well as analytical and conceptual proxies for each of the three of these quantities.

7. Where appropriate and practical, to conduct projections of likely future stock status using alternative fishing mortality (or exploitation) rates or catches and other relevant management actions, based on noting the Harvest Strategy Standard and input from the FAWG, fisheries plan advisers, and fisheries managers..
8. For stocks that are deemed to be depleted or collapsed, to develop alternative rebuilding scenarios based on the Harvest Strategy Standard and input from the FAWG, fisheries plan advisers, and fisheries managers..
9. For fish stocks for which new stock assessments are not conducted in the current year, to review the existing Fisheries Assessment Plenary report text on the “Status of the Stocks” in order to determine whether the latest reported stock status summary is still relevant; else to revise the evaluations of stock status based on new data or analyses, or other relevant information.

### **Working Group reports**

10. To include in the Working Group report information on commercial, Maori customary, non-commercial and recreational interests in the stock; as well as all other mortality to that stock caused by fishing, which might need to be allowed for before setting a TAC or TACC.
11. To provide information and advice on other management considerations (e.g. area boundaries, by-catch issues, effects of fishing on habitat, other sources of mortality, and input controls such as mesh sizes and minimum legal sizes) required for specifying sustainability measures.
12. To summarise the stock assessment methods and results, along with estimates of MSY-compatible reference points and other metrics that may be used as benchmarks for assessing stock status.
13. To review, and update if necessary, the “Status of the Stocks” sections of the Fisheries Assessment Plenary report for all stocks under the purview of individual FAWGs (including those for which a full assessment has not been conducted in the current year) based on new data or analyses, or other relevant information.
14. For all important stocks, to complete (and/or update) the Status of Stocks template provided on pages 30-31 of the 2010 May Plenary document, following the associated instructions on pages 30-33.
15. It is desirable that full agreement amongst technical experts is achieved on the text of the FAWG reports, particularly the “Status of the Stocks” sections. If full agreement amongst technical experts cannot be reached, the Chair will determine how this will be depicted in the FAWG report, will document the extent to which agreement or consensus was achieved, and record and attribute any residual disagreement in the meeting notes.

### **Working Group input to the Plenary**

16. To advise the Chief Scientist, Ministry of Fisheries, about stocks requiring review by the Fishery Assessment Plenary and those stocks that are not believed to warrant review by the Plenary. The general criterion for determining which stocks should be discussed by the Plenary is that new data or analyses have become available that alter the previous assessment, particularly assessments of recent or current stock status, or projections of likely future stock status. Such information could include:

- new or revised estimates of MSY-compatible reference points, recent or current biomass, productivity or yield projections
- the development of a major trend in the catch or catch per unit effort
- any new studies or data that extend understanding of stock structure, fishing patterns, or non-commercial activities, and result in a substantial effect on assessments of stock status

### **Membership and Protocols for all Science Working Groups**

17. Membership of Working Groups is open to all interested parties who agree to the following standards of participation. Participants must commit to:

- participating in the discussion
- resolving issues
- following up on agreements and tasks
- maintaining confidentiality of Working Group discussions and deliberations (unless otherwise agreed in advance, and subject to the constraints of the Official Information Act)
- adopting a constructive approach
- avoiding repetition of earlier deliberations, particularly where agreement has already been reached
- facilitating an atmosphere of honesty, openness and trust
- respecting the role of the Chair
- listening to the views of others, and treating them with respect

18. Key roles are:

- Chair: MFish scientist – required. The Chair is an active participant in Working Groups, who also provides technical input, rather than simply being a facilitator. The Chair is responsible for: setting the rules of engagement; promoting full participation by all members; facilitating constructive questioning; focussing on relevant issues; reporting on Working Group recommendations, conclusions and action items, and ensuring follow-up; and communicating with the MFish Chief Scientist, relevant MFish Fisheries Management staff, and other key stakeholders
- Research providers – required (may be the primary researcher, or a designated substitute capable of presenting and discussing the agenda item)
- Other scientists not conducting analytical assessments to act in a peer review capacity
- Representatives of relevant MFish Fisheries Management teams

19. Working Group participants will be asked to declare any relevant affiliations.

#### *Working Group papers:*

20. Working group papers will be posted on the MFish website prior to meetings if they are available. As a general guide, Powerpoint presentations and draft or discussion papers should be available at least 2 working days before a meeting, and near-final papers should be available at least 5 working days before a meeting if the Working Group is expected to agree to the paper. However, it is also likely that many papers will be tabled during the meeting due to time constraints. If a paper is not available for sufficient time before the meeting, the Chair may provide for additional time for written comments from Working Group members.

21. Working Group papers are “works in progress” whose role is to facilitate the discussion of the Working Groups. They often contain preliminary results that are receiving peer review for the first time and, as such, may contain errors or preliminary analyses that will be superseded by more rigorous work. **For these reasons, no-one may release the papers or any information contained in these papers to external parties. In general, Working Group papers should never be cited.** Exceptions may be made in rare instances by obtaining permission in writing from the MFish Chief Scientist and the authors of the paper.
22. Participants who use Working Group papers inappropriately, or who do not adhere to the standards of participation, may be requested by the Chair to leave a particular meeting or, in more serious instances, to refrain from attending one or more future meetings.
23. Meetings will take place as required, generally January-April and July-November for FAWGs and throughout the year for other working groups (AEWG, BRAG, Marine Amateur Fisheries and Antarctic Working Groups).
24. A quorum will be reached when the Chair (a Ministry of Fisheries scientist), the designated presenter, and three or more other technical experts are present. In the absence of a quorum, the Chair may decide to proceed as a sub-group, with outcomes being taken forward to the next meeting at which a quorum is formed.
25. The Chair is responsible for deciding, with input from the entire Working Group, but focussing primarily on the technical discussion and the views of technical expert members:
  - The quality and acceptability of the information and analyses under review
  - The way forward to address any deficiencies
  - The need for any additional analyses
  - Contents of Working Group reports
  - Choice of base case models and sensitivity analyses to be presented
  - The status of the stocks, or the status/performance in relation to any environmental standards or targets
26. The Chair is responsible for facilitating a consultative and collaborative discussion.
27. Working Group meetings will be run formally, with agendas pre-circulated, and formal records kept of recommendations, conclusions and action items.
28. A record of recommendations, conclusions and action items will be posted on the MFish website after each meeting has taken place.
29. Other principles guiding the operation of all MFish Science Working Groups include:
  - Data upon which analyses presented to the Working Groups are based must be provided to MFish in the appropriate format and level of detail in a timely manner (i.e. the data must be available and accessible to MFish; however, data confidentiality concerns mean that such data are not necessarily available to Working Group members)
  - Methods of analysis must be technically sound
  - Working Groups will seek to draw on the best available expertise, and will encourage and seek peer review
  - Working Groups will maintain high standards of professional integrity and science ethics
  - Working Groups will operate with openness and transparency

30. The outcome of each Working Group round will be evaluated, with a view to identifying opportunities to improve the Working Group process. The Terms of Reference may be updated as part of this review.
31. MFish scientists and science officers will provide administrative support to the Working Groups.

### **Record-keeping**

32. The overall responsibility for record-keeping rests with the Chair of the Working Group, and includes:
  - To keep notes on recommendations, conclusions and follow-up actions for all Working Group meetings, and to ensure that these are available to all members of the Working Group and the Chief Scientist, Ministry of Fisheries in a timely manner. If full agreement on the recommendations or conclusions cannot readily be reached amongst technical experts, then the Chair will document the extent to which agreement or consensus was achieved, and record and attribute any residual disagreement in the meeting notes.
  - To compile a list of generic assessment issues and specific research needs for each Fishstock or species or environmental issue under the purview of the Working Group, for use in subsequent research planning processes.

# **Terms of Reference for the Aquatic Environment Working Group (AEWG) in 2011**

## **Overall purpose**

For all New Zealand fisheries in the New Zealand TS and EEZ as well as other important fisheries in which New Zealand engages:

to assess, based on scientific information, the effects of fishing, aquaculture, and enhancement on the aquatic environment, including:

- bycatch and unobserved mortality of protected species (e.g. seabirds and marine mammals), fish, and other marine life, and consequent impacts on populations
- effects of bottom fisheries on benthic biodiversity, species, and habitat
- effects on biodiversity, including genetic diversity
- changes to ecosystem structure and function, including trophic effects
- effects of aquaculture and fishery enhancement on the environment and on fishing

Where appropriate and feasible, such assessments should explore the implications of the effect, including with respect to government standards, other agreed reference points, or other relevant indicators of population or environmental status. Where possible, projections of future status under alternative management scenarios should be made.

AEWG assesses the effects of fishing or environmental status, and may evaluate the consequences of alternative future management scenarios. AEWG does not make management recommendations or decisions (this responsibility lies with the MFish Fisheries Management Group and the Minister of Fisheries).

## **Preparatory tasks**

1. Prior to the beginning of AEWG meetings each year, MFish fisheries scientists will produce a list of issues for which new assessments or evaluations are likely to become available prior to the next scheduled sustainability round or decision process. AEWG Chairs will determine the final timetables and agendas.
2. The Ministry's research planning processes should identify most information needs well in advance but, if urgent issues arise, MFish fisheries or standards managers will alert MFish science managers and the Chief Scientist at least 3 months prior to the required AEWG meetings to other cases for which assessments or evaluations are urgently needed.

## **Technical objectives**

3. To review any new research information on fisheries impacts, and the relative or absolute sensitivity or susceptibility of potentially affected species, populations, habitats, and systems.
4. To estimate appropriate reference points for determining population, system, or environmental status, noting any draft or published Standards.
5. To conduct environmental assessments or evaluations for selected species, populations, habitats, or systems in order to determine their status relative to appropriate reference points and Standards, where such exist.
6. In addition to determining the status of the species, populations, habitats, and systems relative to reference points, and particularly where the status is unknown, AEWG should explore the

potential for using existing data and analyses to draw conclusions about likely future trends in fishing effects or status if current fishing methods, effort, catches, and catch limits are maintained, or if fishers or fisheries managers are considering modifying them in other ways.

7. Where appropriate and practical, to conduct projections of likely future status using alternative management actions, based on input from AEWG, fisheries plan advisers and fisheries and standards managers, noting any draft or published Standards.
8. For species or populations deemed to be depleted or endangered, to develop alternative rebuilding scenarios to levels that are likely to ensure long-term viability based on input from AEWG, fisheries plan advisers and fisheries and standards managers, noting any draft or published Standards.
9. For species, populations, habitats, or systems for which new assessments are not conducted in the current year, to review any existing Plenary report text in order to determine whether the latest reported status summary is still relevant; else to revise the evaluations based on new data or analyses, or other relevant information.

### **Working Group input to an “Aquatic Environment Plenary”**

10. To include in contributions to an analogue of the Fishery Assessment Plenary Report (the “Aquatic Environment Plenary”) summaries of information on selected issues that may relate to species, populations, habitats, or systems that may be affected by fishing. These contributions are analogous to Working Group Reports from the Fishery Assessment Working Groups.
11. To provide information and advice on management considerations (e.g. area boundaries, by-catch issues, effects of fishing on habitat, other sources of mortality, and input controls such as mesh sizes and minimum legal sizes) that may be relevant for setting sustainability measures.
12. To summarise the assessment methods and results, along with estimates of relevant standards, reference points, or other metrics that may be used as benchmarks.
13. It is desirable that full agreement among technical experts is achieved on the text of these contributions. If full agreement among technical experts cannot be reached, the Chair will determine how this will be depicted in the Aquatic Environment Plenary, will document the extent to which agreement or consensus was achieved, and record and attribute any residual disagreement in the meeting notes.
14. To advise the Chief Scientist, Ministry of Fisheries, about issues of particular importance that may require review by a plenary meeting or summarising in the “Aquatic Environment Plenary”, and issues that are not believed to warrant such review. The general criterion for determining which issues should be discussed by a wider group or summarised in the “Aquatic Environment Plenary” is that new data or analyses have become available that alter the previous assessment of an issue, particularly assessments of population status or projection results. Such information could include:
  - New or revised estimates of environmental reference points, recent or current population status, trend, or projections
  - The development of a major trend in bycatch rates or amount
  - Any new studies or data that extend understanding of population, system, or environmental susceptibility to an effect or its recoverability, fishing patterns, or mitigation measures that have a substantial implications for a population, system, or environment

- Consistent performance outside accepted reference points or Standards