Conclusions of the Permanent Committee on Management and Science
(PECMAS)
Regarding the Review of the NEAFC Regulation on Bottom Fishing
June 2012

Introduction

1. As a response to instruction from the NEAFC Annual Meeting in 2011, this
document provides the conclusions of PECMAS regarding the Review of the
NEAFC Regulation on Bottom Fishing.

2. The review uses as a point of departure the paragraphs in the United Nations
General Assembly resolutions (UNGA res.) that are most relevant in the context
of the NEAFC regulation on bottom fishing. The substantive points in the
resolutions are compared to the consolidated text of all NEAFC recommendations
on regulating bottom fishing (the NEAFC bottom fishing regulation), and
conclusions are made on whether the NEAFC regulation is consistent with them.
Furthermore, account is taken of the FAO International Guidelines for Deep-Sea
Fisheries in the High Seas (the FAO Guidelines), the scientific advice from the
International Council for the Exploration of the Sea (ICES) and other input into
the review process which has been provided by a number of organisations and
stakeholder groups. This includes information provided at the symposium that
PECMAS convened on 25 June 2012 for the purpose of further facilitating the
provision of written and oral input to the review process, where representatives of
stakeholders and international organisations made presentations and participated
in discussions.

3. Paragraph 80 of UNGA res. 61/105 contains a general call to take action to protect
vulnerable marine ecosystems (VMEs). The existence of the NEAFC bottom
fishing regulation being reviewed is a response to this call.

4. Paragraphs 113 of UNGA res. 64/72 and 121 of UNGA res. 66/68 echo the call in
paragraph 80 of UNGA res. 61/105. However, they are more specific in that they
state that the protection of VMEs should be done through implementing the FAO
Guidelines. In addition to the general commitment to take action to protect VMEs,
these paragraphs therefore call for the implementation of the FAO Guidelines.

5. NEAFC used the FAO Guidelines to generate the current bottom fishing
regulations. In general terms, compatibility with the Guidelines has been achieved
by NEAFC.

6. PECMAS has reached the conclusion that the NEAFC bottom fishing regulation is
in general consistent with the UNGA resolutions and the FAO Guidelines.
However, PECMAS also recognises a need for addressing some elements of the
regulation and the associated provisions. Furthermore, the current interim protocols must be reviewed and transformed into permanent regulations.

7. PECMAS considers that the bottom fishing regulation is not very clearly written, and would benefit from editorial improvements. PECMAS concludes that in making amendments to the regulation in the context of the current review, the opportunity should be used to also generally streamline the text of the regulation to add clarity and readability.

**Identification of VMEs, assessment of impacts, and area management**

8. Paragraph 83(a) of UNGA res. 61/105 contains a call to assess on the basis of the best available scientific information whether individual bottom fishing activities would have significant adverse impacts on VMEs, and to ensure that if it is assessed that these activities would have significant adverse impacts, they are managed to prevent such impacts, or not authorised to proceed.

9. Paragraph 83(b) contains a call to identify VMEs and determine whether bottom fishing activities would cause significant adverse impacts on them.

10. Paragraph 83(c) contains a call to close areas where VMEs are known to occur or are likely to occur, and not allow bottom fishing to proceed unless measures are in place to prevent significant adverse impacts on VMEs.

11. The whole of paragraph 83 is reaffirmed in both UNGA res. 64/72 and UNGA res. 66/68, where the relevant entities are furthermore urged to ensure that the implementation is consistent with the FAO Guidelines.

12. NEAFC received advice from ICES regarding the identification and location of VMEs, i.e. information relevant to assessing where VMEs occur or are likely to occur. Such advice has been requested and received repeatedly and is an element of the recurrent request to ICES. In response to this advice, NEAFC introduced bottom fisheries closures in all areas where VMEs were located or likely to occur. All the closures on the Rockall and Hatton Banks, where scientific evidence is relatively rich, were closed on the basis of such assessments.

13. However, in most of the NEAFC Regulatory Area (RA) the scientific information is much sparser, e.g. on the Mid-Atlantic Ridge (MAR). Despite insufficient evidence on exact locations of VMEs on the MAR, as well as on the Altair and Antialtair Seamounts, closures of large biogeographically representative areas were introduced as a precautionary measure. ICES advice confirmed the appropriateness of this approach.

14. In the NEAFC RA in the Norwegian Sea bottom fisheries are not conducted. In the NEAFC RA in the Arctic Ocean, no fisheries are conducted. The NEAFC RA
in the Barents Sea is a shallow, sedimentary and heavily fished area, and is classified as an existing fishing area. Hence closures were not considered to be needed in those northern subareas of the NEAFC RA.

15. Should VMEs be documented in areas outside closures on the MAR or elsewhere, and a closure be advised by ICES, then mechanisms are in place to introduce new closures or amend the boundaries of current closures. In cases where there is a need to respond quickly to new information, the NEAFC mechanism allows for a decision to be made through a mail vote in a short space of time, with a maximum deadline for a response of 30 days. Furthermore, temporary closures following an encounter with VMEs go into force without delay.

16. The appropriateness of individual or groups of closures is to be reviewed at predetermined time intervals or at a specific date. Based on new scientific advice this review might result in opening the closed areas, amendment of boundaries, or the maintaining of the closures unchanged. The current closures have a fixed duration, and PECMAS recommends that the NEAFC Commission considers whether this is appropriate.

17. In addition to bottom fishing closures, NEAFC has restricted bottom fisheries by classifying subareas of the RA into ‘existing bottom fishing areas’ and ‘new bottom fishing areas’. ‘Existing bottom fishing areas’ are subareas in which bottom fishing has been documented in at least two years during the reference period 1987-2007. The remainder of the RA is classified as ‘new bottom fishing areas’ where only exploratory fisheries may be conducted under an exploratory fisheries protocol.

18. Currently there is a mechanism facilitating amendments of ‘existing bottom fishing areas’ should new information on past fisheries become available. PECMAS recommends that the NEAFC Commission considers the utility of limiting the time period of submission of data from the reference period.

19. Area closures, as described above, have been introduced in both ‘existing’ and ‘new’ bottom fishing areas.

20. Subareas of ‘existing bottom fishing areas’ outside closed areas are those in which the best available scientific advice shows that VMEs do not occur or are unlikely to occur. These subareas were historically comparatively heavily fished and significant adverse impacts on VMEs are not likely to occur. Bottom fisheries may however only be conducted under certain regulations to prevent the unlikely, but still possible, significant adverse impacts on VMEs that were not previously recorded in such subareas.

21. In the subareas of the ‘existing bottom fishing areas’ that are outside closed areas there is currently no requirement for an impact assessment unless a new fishing gear or fishing method is introduced. In the latter case an assessment is required.
22. It is the conclusion of PECMAS that NEAFC has implemented the provisions of paragraph 83(a)-(c). Although the NEAFC regulation is consistent with the rationale of paragraph 83 (a)-(c), there is a potential question regarding if the assessment done by NEAFC was technically exactly as foreseen in sub-paragraph (a). The NEAFC assessment did not deal with each fishery individually, as stipulated in the sub-paragraph, but rather assessed where VMEs occur or are likely to occur and closed such areas to all bottom fisheries. The fishing activities are only allowed to proceed in areas where the best available scientific advice does not indicate that VMEs are likely to occur, and carrying out individual assessments of whether significant adverse impacts on VMEs are likely in areas where their occurrence is not considered likely are redundant. PECMAS therefore concludes that although there have not been assessments of individual bottom fishing activities in areas where the best available scientific advice does not indicate that VMEs occur or are likely to occur it is not in conflict with the conclusion that the NEAFC regulation is consistent with paragraph 83 (a)-(c).

23. It should be noted however that NEAFC requires assessments of individual bottom fishing activities in ‘new bottom fishing areas’, and also in ‘existing bottom fishing areas’ if new technology and methods are introduced.

24. The boundaries of current closed areas include buffer zones, as included in the advice from ICES. However, NEAFC should look further at the issue of buffer zones around closures in consultation with ICES. Advice on buffer zones should continue to form an integral part of the advice from ICES.

25. PECMAS considered whether the provisions on assessments in the interim exploratory bottom fishing protocol and the provisions on assessments in Annex 5 are consistent with the requirements for such assessments in the FAO Guidelines. The conclusion is that they are consistent with the FAO Guidelines. The difference that exist reflect the decision by NEAFC to focus separately on the issues of a) VME protection measures and b) conservation and management measures for deep sea fish species.

26. The ICES advice considers all provisions in Annex 5 appropriate, but also calls for fully quantitative assessments and some specific additional elements to Annex 5. The additional requirements are:

- Plans required for exploratory fisheries should specify times of intended fishing at the resolution of days, and months and endeavour to conduct exploratory fisheries at times when impacts are likely to have the least adverse impact on organisms other than the intended target species.
- Plans should include fine-scale data on the distribution of intended tow and sets, to the extent practicable on a tow by tow and set by set basis.
27. PECMAS recommends that these elements are added to Annex 5. This would result in the NEAFC rules regarding assessments going beyond what is included in the FAO Guidelines.

28. ICES furthermore provided additional guidance and suggestions with regards to how impact assessments and risk analyses may be conducted. PECMAS notes these recommendations as potentially useful and advises that this guidance from ICES is made available to any Contracting Party that intends to submit proposals for exploratory fisheries. Strict adherence to these recommendations should however not be made mandatory.

29. In conclusion, PECMAS considers the current system whereby the Regulatory area is split into subareas denoted ‘bottom fisheries closures’, ‘existing’ and ‘new’ bottom fishing areas and the associated regulations of activity to satisfy the requirements in the UNGA resolutions and the FAO Guidelines. It is recommended that this arrangement be maintained.

**Methods for identifying VMEs**

30. The call in paragraph 83(b) of UNGA res. 61/105 to identify VMEs identifies two methods for identification: 1) improving scientific research and data collection and sharing, and 2) new and exploratory fisheries.

31. As is pointed out in paragraph 131 of UNGA res. 66/68, different types of marine scientific research, including seabed mapping carried out in different parts of the oceans, have resulted in identification of areas where vulnerable marine ecosystems occur. Seabed mapping has been carried out in parts of the NEAFC RA, e.g. on the Hatton Bank. Further mapping should be encouraged.

32. ICES has advised that a good knowledge of the distribution of the seabed features and mega habitats (sedimentary drifts, rocky outcrops, ridges, canyons, etc.) in the fishing grounds may result in introduction of spatial management regimes that are more satisfactory than the current move on rule. In such areas, seabed mapping can provide a basis for developing management measures. An extensive mapping programme of the seabed (multi-beam, dredges, boxcorer, trawls, ground thruthing, etc.) in relation to the fishery footprint, can be an effective method to avoid significant impacts of the bottom fisheries on the VMEs.

33. In addition to ensuring swift data provision to science, PECMAS recommends that the NEAFC Commission encourages Contracting Parties to carry out joint relevant research such as mapping of comparatively unknown subareas of the RA where VMEs are unknown but may be likely to occur. These efforts could be co-ordinated by ICES, or should at least result in data immediately available to ICES and useful for generating ICES advice to NEAFC. An incentive to carrying out
such research should be that mapping of areas may facilitate enhanced fine-scale information on spatial distribution of VMEs and ensure spatially more exact management measures, pinpointing in an improved manner the exact areas where protection of VMEs is needed.

34. NEAFC regulations include provisions for new and exploratory fisheries in accordance with the exploratory bottom fishing protocol. As such fisheries have been identified by the UNGA res. as a method to identify VMEs, Contracting Parties should ensure that the data deriving from the exploratory fisheries will be immediately available to ICES and useful for generating ICES advice to NEAFC.

35. The NEAFC bottom fishing regulation includes an exploratory bottom fishing protocol for new bottom fishing areas, that was intended to be a provisional protocol that would apply until a long-term protocol is formulated and adopted. The protocol should be amended as proposed above and no longer be considered provisional. PECMAS will work on a draft amended protocol by correspondence with the aim of finalising it in time for it to be proposed to the 2012 Annual Meeting of NEAFC.

36. PECMAS concludes that co-ordinated mapping efforts and timely transfer and sharing of all relevant scientific data between Contracting Parties and ICES should be further encouraged. The rationale is that it is such data provided in a timely manner that may fill significant gaps in knowledge needed to provide reliable and updated advice. The same applies to data generated by new and exploratory fisheries. PECMAS is of the opinion that the institutional and procedural arrangements are in place to satisfy the FAO Guidelines in this regard, but that effort to derive new relevant information from the NEAFC RA can be improved further.

**Encounters with VMEs and move on provisions**

37. Paragraph 83(d) of UNGA res. 61/105, which is reaffirmed in both UNGA res. 64/72 and UNGA res. 66/68, contains a call to cease bottom fishing activities in areas where, in the course of fishing operations, VMEs are encountered, and to report the encounter so that appropriate measures can be adopted in respect of the relevant site.

38. NEAFC’s bottom fishing regulation deals with these issues, including with the encounter protocol. The most important issue for assessing if NEAFC is implementing the provisions of the UNGA res. in this context is therefore not if this has been addressed but if it has been addressed in an appropriate manner.

39. The threshold levels used in the definition of encounter are not based on scientific advice, but were originally adopted using the thresholds adopted by the Northwest Atlantic Fisheries Organisation (NAFO) as a model although the levels adopted in
NAFO had not been based on scientific advice. ICES has now provided NEAFC with scientific advice on the threshold levels.

40. In the context of the definition of encounters, corals and sponges are defined as VME indicator species in the NEAFC regulation. Having considered the relevant parts of the FAO Guidelines, and taking account of the circumstances in the NEAFC RA, PECMAS concludes that the current list of VME indicator species is comprehensive, but recognises that it is possibly not fully exhaustive. PECMAS proposes to ask ICES for further advice on this. Further advice should also be requested from ICES on hydrothermal vents and associated communities in the NEAFC RA.

41. No encounters have been reported. PECMAS takes note of the ICES evaluation that this possibly reflects a combination of a general decline in bottom fishing activity in the NEAFC RA, the recent introduction of closures that effectively exclude vessels from the areas most likely to produce encounters, and an enhanced awareness and capability of vessels to avoid coral and sponge areas. ICES further points out that it cannot be excluded that the lack of reports also reflects some failure to report actual encounters. Furthermore, PECMAS notes that the absence of encounters may also reflect that bottom fishing has only been conducted in ‘existing bottom fishing areas’ outside closures.

42. PECMAS concludes that, on the basis of ICES advice, the threshold levels in ‘existing bottom fishing areas’ for both coral and sponge should be reduced by 50% compared with the existing levels. ‘Existing bottom fishing areas’ outside closures are considered to have been fished extensively, and this proposal is based on the assumption that VMEs are unlikely to occur in these heavily fished areas.

43. PECMAS concludes that, on the basis of ICES advice, the threshold levels in ‘new bottom fishing areas’ for both coral and sponge should be reduced by at least 50% compared with the existing levels. This should apply to bottom trawling.

44. ICES recommends that special regulations should apply to longline fisheries and fisheries conducted in steep rugged areas and e.g. seamounts, but the advice is not very specific. PECMAS suggests that threshold levels for longlines as adopted in the South East Atlantic Fisheries Organisation (SEAFO) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) be considered as an alternative. ICES should be asked for further advice on this issue. In ‘existing bottom fishing areas’ and without more specific scientific advice PECMAS considers the risk of significant adverse impacts to be sufficiently low to justify maintaining current move on provisions.

45. In addition, PECMAS recommends that Contracting Parties that are planning exploratory fisheries should give preference to exploratory fisheries using fishing
gear and methods with the least bottom contact, and experiments in well-mapped waters.

46. The requirement for strengthened impact assessment was noted in the previous section, and PECMAS emphasises that assessments should be quantitative and comprehensive, utilising all relevant sources of information (including e.g. outputs from habitat suitability models of coral and sponge distributions, observational data from previous scientific surveys, knowledge gained from historical fisheries).

47. Additional new requirements are proposed for exploratory fisheries:
   - Pre-fishing bottom mapping of intended fishing sites using echosounders, if practicable multi-beam sounders.  
   - Monitoring of bottom fishing operations using gear monitoring technology, including cameras if practicable.

48. PECMAS recommend mandatory provision of these monitoring data to facilitate assessments of the exploratory fishery by PECMAS and ICES.

49. ICES has advised that the current move on rule is appropriate for sedimentary areas but is inappropriate in steep slopes and seamount areas and in ‘new bottom fishing areas’. The current move on rule in the NEAFC regulation requires vessels that encounter VMEs to cease fishing and move at least 2 nm away from the most likely position of the encounter, but it may not be possible to determine the position of the encounter. Therefore the effectiveness of the measure is debatable. In encounters when trawling, on possible alternative is closing a polygon area around the trawl path. ICES have advised the possibility of using a width of at least three times the water depth in the context of buffer zones, which might also be relevant in this context.

50. PECMAS considers that there is a need to further develop the current move on rule in steep slope, seamount areas and ‘new bottom fishing areas’. However, there are operational problems with the alternatives that have been suggested and PECMAS does not have specific proposals in this regard. Contracting Parties are encouraged to work on developing alternatives that would be operational. In the further development of the move on rule, it should be kept in mind that in some cases, especially when fishing in structured habitats (e.g. steep rugged terrain, seamounts), moving off a structural feature is more important and may require a longer move on distance than 2 nm in a specific direction.

51. To avoid repeated encounters in the same location, PECMAS recommends that the current provisions for temporary closures in ‘new bottom fishing areas’ be extended to ‘existing bottom fishing areas’. To this end it is recommended that alerts with detailed positional data of the encounter site and the temporary closure
is immediately conveyed to all Contracting Parties and posted on the NEAFC website. Contracting Parties should ensure that vessels flying their flag respect the temporary closure without delay. This would ensure that there is not undue delay in other vessels than the one that encountered the VME staying away from the area where the encounter took place.

### Making measures and assessments publicly available

52. Paragraph 84 of UNGA res. 61/105, which is reaffirmed in both UNGA res. 64/72 and UNGA res. 66/68, contains a call to make the measures adopted under paragraph 83 publicly available.

53. Paragraph 122(b) of UNGA res. 64/72 contains a call to make assessments of whether individual bottom fishing activities would have significant adverse impacts on VMEs publicly available.

54. All NEAFC management measures are publicly available on the NEAFC website. The assessments that have been carried out by NEAFC have been done within PECMAS, and all PECMAS meeting reports are available on the NEAFC website.

55. There have to date not been any exploratory fisheries conducted in new bottom fishing areas. It follows that no assessments on the basis of such exploratory fisheries have been carried out either, but the results of such assessments will be made publicly available.

56. PECMAS concludes that NEAFC’s policy of making all measures and reports of meeting where assessments are made publicly available is consistent with the UNGA res. However, the clarity of the publicly available information should be increased. A clear explanation of the approach that has been used in NEAFC, and the conclusions that have been reached, should be formulated and made publicly available.

### Collection and exchange of data

57. Paragraph 122 of UNGA res. 64/72 contains a call to enhance efforts to cooperate to collect and exchange scientific and technical data and information related to the implementation of the measures called for in the UNGA res.

58. Paragraph 123 of UNGA res. 64/72 contains a call to develop or strengthen data collection standards, procedures and protocols and research programmes for identification of VMEs, assessments of impacts on VMEs, and assessments of fishing activities on target and non-target species, consistent with the FAO Guidelines.
59. As is pointed out in paragraph 135(e) of UNGA res. 66/68, regional fisheries management organisations are invited to continue its work in creating a global database on information on vulnerable marine ecosystems as part of its on going programme for deep-sea fisheries. NEAFC note that the VMEs data base that ICES is currently undertaking includes inputs from its Contracting Parties. This work should be continued and the database further enhanced.

60. The NEAFC Contracting Parties collect and exchange various data that is relevant in this context, through national programmes and ICES coordinated work. However, NEAFC is not a scientific body and this is something that therefore should be addressed in cooperation with ICES.

61. PECMAS concludes that NEAFC should consider adopting specific requirements for collection and reporting of data, for vessels engaged in bottom fishing. This should result in various data from commercial fisheries being made available to ICES, including the absence of VME indicator species and the presence of VME indicator species that are lower than the threshold level for encounters, to the extent practicable quantified and classified by species. ICES should be asked for guidance regarding what type of data that can realistically be gathered in commercial fisheries would be most useful for scientific purposes. This should be considered in the context of the development of guides for the identification of corals and sponges in the NEAFC area.

62. PECMAS further concludes that NEAFC, and the NEAFC Contracting Parties, should make efforts to increase the availability to ICES of all data that are helpful in providing scientific advice to NEAFC.

**Further action to strengthen implementation, adopted by the UNGA after the last NEAFC Annual Meeting**

63. Paragraph 129 of UNGA res. 66/68 notes that the paragraphs in UNGA res. 61/105 and 64/72 on protecting VMEs have not been fully implemented in all cases, and states that in this regard further actions are needed to strengthen the continued implementation of these paragraphs. It is appropriate for NEAFC to consider implementing these points, regardless of whether NEAFC should be considered to be one of the entities that has not fully implemented the relevant paragraphs of UNGA res. 61/105 and 64/72.

64. Paragraph 129(a) of UNGA res. 66/68 contains a call to strengthen procedures for carrying out assessments to take into account individual, collective and cumulative impacts, and for making the assessments publicly available.
65. Paragraph 129(b) of UNGA res. 66/68 contains a call to establish and improve procedures to ensure that assessments are updated when new conditions or information so require.

66. Paragraph 129(c) of UNGA res. 66/68 contains a call to establish and improve procedures for evaluating, reviewing and revising, on a regular basis, assessments based on best available science and management measures.

67. Paragraph 129(d) of UNGA res. 66/68 contains a call to establish mechanisms to promote and enhance compliance with applicable measures related to the protection of vulnerable marine ecosystems.

68. UNGA res. 66/68 was adopted in December 2011, after the 2011 Annual Meeting of NEAFC, and account is therefore not taken of the paragraphs of that resolution in any conclusion of the NEAFC Annual Meeting. However, the current review of the bottom fishing resolution should still take appropriate account of these provisions.

69. The recurring request for advice from ICES does not explicitly request that the advice take into account individual, collective and cumulative impacts of fisheries on VMEs. It would be inappropriate for NEAFC to tell ICES what scientific methodology it applies. ICES' independence as a scientific body should be respected by NEAFC. However, NEAFC might bring the points in the UNGA resolution that relate to scientific work to the attention of ICES, such as taking into account individual, collective and cumulative impacts. This would be consistent with paragraph 129(a) of UNGA res. 66/68.

70. The ICES advice, the reports of PECMAS meetings where proposals are formulated and the reports of the NEAFC Annual Meetings where formal decisions are made are all publicly available. PECMAS considers that they should be promoted more, and made available in clearer form, but they are already publicly available as is called for in the UNGA res.

71. There is already a recurring request to ICES to provide advice on the basis of all available new information on distribution of vulnerable habitats in the NEAFC Convention Area and fisheries activities in and in the vicinity of such habitats. Assessments are updated whenever new conditions or information so require. PECMAS therefore concludes that the NEAFC regulation is already consistent with paragraphs 129(b) and (c) of UNGA res. 66/68.

72. NEAFC already has in place a system for compliance. PECCOE has been asked to evaluate if this is sufficient in the context of implementing the UNGA res. This document, containing the conclusions of PECMAS, should be forwarded to PECCOE to assist PECCOE in its deliberations regarding the consistency of NEAFC compliance regime with the UNGA res. and the FAO Guidelines. In particular, PECMAS invites PECCOE to consider the issues of possible non-
reporting of encounters with VMEs, possible bottom fishing in new areas, and fishing close to the boundaries of closed areas that might possibly include breaches of the boundaries.

73. PECMAS concludes that NEAFC can act consistently with paragraph 129(a) of UNGA res. 66/68 by bringing the relevant issues to the attention of ICES. Furthermore, PECMAS concludes that the NEAFC regulation is already consistent with paragraphs 129(b) and (c) of UNGA res. 66/68. NEAFC’s consistency with paragraph 129(d) of UNGA res. 66/68 will be considered by PECCOE.