
Advance and unedited version (English only)

Summary by the Moderator of the discussions held at the Workshop to discuss implementation of 113, 117 and 119 to 124 of resolution 64/72 and paragraphs 121, 126, 129, 130 and 132 to 134 of resolution 66/68 on sustainable fisheries, addressing the impacts of bottom fishing on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks*

1. Pursuant to paragraphs 162 and 163 of General Assembly resolution 69/109 of 9 December 2014 and paragraph 170 of General Assembly resolution 70/75 of 8 December 2015, the Workshop to discuss implementation of paragraphs 113, 117 and 119 to 124 of resolution 64/72 and paragraphs 121, 126, 129, 130 and 132 to 134 of resolution 66/68 on sustainable fisheries, addressing the impacts of bottom fishing on vulnerable marine ecosystems (VMEs) and the long-term sustainability of deep-sea fish stocks, was held at United Nations Headquarters on 1 and 2 August 2016.

2. The Workshop was attended by representatives of States, intergovernmental organizations, including regional fisheries management organizations and arrangements (RFMO/As), and non-governmental organizations. Osvaldo Urrutia (Chile) was appointed Moderator of the Workshop.

3. In accordance with its agenda and organization of work,¹ the Workshop consisted of five thematic segments, each of which was introduced by the presentations of relevant experts,² followed by a general discussion among participants. Summaries of each segment are presented in paragraphs 7 to 49, below.

4. Throughout the proceedings of the Workshop, participants reiterated the importance of the work of the General Assembly to address the impacts of bottom fishing on VMEs and the long-term sustainability of deep-sea fish stocks. They also noted the important role of States, RFMO/As and the Food and Agriculture Organization of the United Nations (FAO) in this regard.

* The summary is intended for reference purposes only and not as a record of the discussions.

¹ Available from www.un.org/depts/los/reference_files/Bottom_Fishing_Workshop_2016.pdf.

² The presentations of panellists at the Workshop are available from www.un.org/depts/los/reference_files/Bottom_Fishing_Workshop_2016_Presentations.pdf.

5. Participants welcomed the Workshop as an important forum to exchange information and views on the actions that have been taken to implement the resolutions, as well as on areas that require further work.

6. Participants took stock of the considerable progress that has been achieved at the global, regional and national levels since the adoption of resolution 61/105. However, it was noted that implementation remained uneven and that further efforts to strengthen implementation were needed.

Impacts of bottom fisheries on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks (segment 1)

7. In segment 1, presentations were made by: Pablo Durán Muñoz (Spanish Institute of Oceanography, Spain); Odd Aksel Bergstad (Institute of Marine Research, Norway); Matthew Gianni (Deep Sea Conservation Coalition); and Alastair Macfarlane (International Coalition of Fisheries Associations (ICFA)).

8. Panellists highlighted the scope of the adverse impacts of bottom fishing on VMEs and the sustainability of deep-sea fish stocks, making reference also to the First Global Integrated Marine Assessment. The importance of deep-sea ecosystems and biodiversity was emphasized, as well as the potential scope for damage to such ecosystems. It was noted that besides bottom trawling gear, it was now known that other types of gear could also impact the bottom of the ocean and therefore have significant adverse impacts on VMEs. However, a panellist noted that a comprehensive evaluation of the scale of impacts on benthic ecosystems was not feasible, due to the relative lack of data. Some panellists also pointed out that the scale of bottom fishing was declining and remained small in comparison with other fisheries. It was also noted that the number of flag States involved in bottom fishing was also small.

9. Attention was drawn to efforts being undertaken to enhance scientific knowledge and understanding through research programmes, but that further work was required to address remaining knowledge gaps, in particular with regard to conducting stock assessments and research on deep-sea fish stocks and VMEs. In this regard, it was noted that more needed to be known about the status and characteristics of many deep-sea fish stocks. The need for enhanced science-policy interface, including through the integration of the results of scientific research into management decisions at RFMO/As, and the application of the precautionary approach, where knowledge was incomplete, was also highlighted. It was considered that greater focus should be put on more research activities.

10. It was noted that over the past ten years, there had been significant progress in developing a regulatory framework for bottom fishing activities on the high seas. Panellists highlighted the steps taken to implement the provisions of General Assembly resolutions and the International Guidelines for the Management of Deep-sea Fisheries in the High Seas (the Guidelines), noting the considerable progress achieved. At the same time, unevenness in implementation and some specific areas where implementation still needed to progress were underscored, including in regards to assessments of cumulative impacts, seabed mapping, threshold-level determination, encounter protocols, footprint determination, and understanding of the nature of VMEs.

11. It was pointed out that, while there were still gaps in the coverage of RFMO/As for bottom fisheries, bottom fishing was not taking place in most areas lacking RFMO/As competent to regulate such activities. Although the South-West Atlantic was provided as an example of an area where bottom fishing was taking place despite a lack of RFMO/A coverage, some participants considered that the flag States of vessels fishing in the area had been taking the necessary measures to address the impacts of fishing activities. Other participants noted the lack of effective action by some flag States.

12. It was noted that the putting in place of effective VME encounter protocols was also dependent on the availability of data. The view was expressed that a small number of encounters were reported because of the relatively small-scale of bottom fisheries. Another panellist expressed the view that the current threshold levels were too high to effectively protect VMEs. The need to cautiously evaluate VME encounter thresholds and move-on rules for each region was emphasized. It was further noted that independent scientific observers on board could improve reporting. Furthermore, it was stressed that, regardless of the implementation of the move-on rules, the assessment of the impacts of bottom fisheries should be conducted.

13. It was noted that while area-based management tools were used in practice, including VME closures, the requirement for impact assessments had only been partially implemented.

14. Some participants stressed the importance of full implementation of the provisions of existing General Assembly resolutions and international law. In this regard, a panellist expressed the view that the relevant resolutions did not articulate the adequate level of protection provided to VMEs.

15. A participant preferred annual reporting by RFMO/As, rather than consideration of the issue of bottom fishing by the General Assembly, while other participants expressed a preference for the General Assembly to retain a broader oversight role in this regard.

Progress made by States in addressing the impacts of bottom fisheries on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, in particular through the implementation of relevant paragraphs of resolutions 64/72 and 66/68 (segment 2)

16. In segment 2, presentations were made by: Mindaugas Kisieliauskas, (DG MARE, European Commission); Jae-bong Lee (National Institute of Fisheries Science, Republic of Korea); Aurora Guerrero (Undersecretariat for Fisheries, Chile); and Kerrie Robertson (Australian Government Department of Agriculture and Water Resources).

17. Several States presented their experiences in implementing the relevant provisions of the General Assembly resolutions addressing the impacts of bottom fishing on VMEs and the long-term sustainability of deep-sea fish stocks. In this regard, some participants highlighted the progress made at the national level since 2011 in the development of legislative and regulatory frameworks for bottom fishing, inter alia, in response to the provisions of the relevant General Assembly

resolutions. The measures described included: requirements for fishing authorizations, capacity freezes, footprint restrictions, depth restrictions, gear restrictions, impact assessments, reporting and move-on rules, area closures, control measures, penalties, data collection, mapping and identification of VMEs, observer coverage, harvest control rules, and bans on fishing in areas not covered by RFMO/As.

18. Information was also provided regarding how national legislation for areas within national jurisdiction reflected the provisions of relevant General Assembly resolutions. Examples in this regard included: application of the precautionary and ecosystems approaches; the definition of VME; identification and prohibition of fishing on seamounts; establishment of marine protected areas; observer programmes; gear restrictions, seafloor mapping programmes, and the development of an ecological risk assessment framework.

19. The complexity of developing and implementing national legal frameworks was apparent, as panellists highlighted different decisions and approaches that were involved. For example, the policy and scientific bases of restricting bottom fishing activities starting at the depth of 800 metres were debated. Discussions also focused on decisions regarding the geographic scope of national measures, which could overlap with RFMO/A measures thereby creating a potential lack of coherence among the measures adopted.

20. Participants also reported on their efforts to implement the measures put in place by RFMO/As to address the impacts of bottom fishing.

21. Information was also provided on voluntary and interim measures put in place by States until the adoption of measures by new RFMO/As or pending the entry into force of their constitutive instruments. The need for all flag States fishing in areas not regulated by RFMO/As to undertake assessments and implement measures was highlighted. However, it was noted that the establishment of measures by flag States in relation to areas not currently regulated through RFMO/As was a continuing process, to be further refined on the basis of the best scientific information available as the knowledge base was expanded. Hope was expressed that precautionary measures would be put in place soon for the Arctic Ocean.

22. The need for improved implementation by States, and for sharing of information on the measures taken to implement the General Assembly resolutions at the national level was noted. In particular, the need to establish effective threshold levels, scientific observer coverage and enforcement was indicated. The need for additional research on VMEs and deep-sea fish stocks, including mapping, was also emphasized.

Focus on the experience and the special requirements of developing States in addressing the impacts of bottom fisheries on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, in particular through the implementation of relevant paragraphs of resolutions 64/72 and 66/68 (segment 3)

23. In segment 3, presentations were made by: Rankiri Pathirannahelage Prabath Krishantha Jayasinghe (National Aquatic Resources Research and Development

Agency, Sri Lanka); Merete Tandstad (FAO); and Mario Gilberto Aguilar Sánchez (National Commission of Aquaculture and Fisheries, Mexico).

24. During segment 3, attention was drawn to some of the progress, but also the challenges faced, by developing States in protecting VMEs from the impacts of bottom fishing, including in areas within national jurisdiction. Panellists highlighted the importance of sustainable fisheries for nutrition, food security and sustainable development in developing countries, as well as steps taken at the national level to develop bottom fisheries while protecting VMEs and the long-term sustainability of deep-sea fish stocks. Measures taken included the imposition of gear restrictions, the establishment of protected areas and ecologically and biologically significant areas, capacity control measures, data collection measures, the management of shark fisheries, awareness-raising programmes, the application of the precautionary and ecosystems approaches, as well as monitoring, control and surveillance mechanisms, including logbook reporting.

25. The need to enhance the capacity of developing States, including with regard to stock assessments, scientific and technical knowledge, financial resources, infrastructure and training, was underscored. The view was expressed that further efforts were also needed for the development of integrated management plans and data sharing at the regional level. The difficulty of building buy-in from fishing communities in developing States was also noted. The challenges associated with maintaining sufficient levels of employment while achieving maximum sustainable yield in fisheries were further underscored.

26. The significant potential value of participation in deep-sea fisheries for developing States was highlighted. In this regard, a panellist highlighted some of the challenges which could arise when developing countries acquired their capacity to participate in deep-sea fisheries. It was noted that integrating these new entrants would require changes to existing allocations of fishing opportunities, based on the principle of equity. At the same time, the maintenance of the long-term sustainability of deep-sea fish stocks and the protection of vulnerable deep-sea ecosystems also needed to be considered. Other challenges for developing States in relation to bottom fishing that were identified included the development of joint investigation programmes, the protection of areas important for biological connectivity and ensuring the implementation of regulations.

27. Information was provided regarding ongoing capacity-building and capacity-development programmes, including FAO's Deep-Seas Fisheries Programme, the Sustainable Fisheries Management and Biodiversity Conservation of Deep-sea Ecosystems in Areas Beyond National Jurisdiction (ABNJ Deep-Seas Project) supported by the Global Environment Facility and the EAF Nansen Programme. In this context, the different challenges faced in different regions and by States with different capacities were noted, as well as the opportunities for and potential benefits of cross-regional exchanges and information-sharing.

Progress made by regional fisheries management organizations and arrangements in addressing the impacts of bottom fisheries on vulnerable marine ecosystems and the long-term sustainability of deep-sea fish stocks, in particular through the implementation of relevant paragraphs of resolutions 64/72 and 66/68 (segment 4)

28. In segment 4, presentations were made by: Miguel Bernal (General Fisheries Commission for the Mediterranean (GFCM)); Ricardo Federizon (Northwest Atlantic Fisheries Organization (NAFO)); Stefán Ásmundsson (North-East Atlantic Fisheries Commission (NEAFC)); Dae Yeon Moon (North Pacific Fisheries Commission (NPFC)); Ben van Zyl (South East Atlantic Fisheries Organization (SEAFO)); and Johanne Fischer (South Pacific Regional Fisheries Management Organisation (SPRFMO)).

29. Panellists described the variety of actions that had been undertaken at the regional level through RFMO/As to implement the provisions of the General Assembly resolutions aimed at addressing the impacts of bottom fishing on VMEs and long-term sustainability of deep-sea fish stocks. These included: the establishment of the fishing footprint; exploratory fisheries protocols and impact assessments; VME identification and closures; development of encounter protocols; fish stock assessments; compulsory observer coverage; and the periodic review of adopted measures. Implementation of interim measures and voluntary measures in the context of newly established RFMO/As was also highlighted. The development of a regional strategy for the implementation of Sustainable Development Goals (SDGs) by one RFMO/A, which included the identification of VMEs, was noted. The practice of annual compliance reviews by RFMO/As was also highlighted.

30. The diversity of approaches amongst RFMO/As was underscored, including in relation to the science-policy interface. It was noted that diverse approaches were also being used by States in one RFMO in relation to encounter protocols.

31. Commonalities amongst the issues faced by RFMO/As in implementing the resolutions identified by participants included the paucity of scientific information, difficulties in the collection and sharing of data, and the challenges of ensuring an effective science-policy interface. The development of rules of procedure for the collection of data regarding catches and VMEs by on-board observers were highlighted as ways to address challenges in data collection. It was also noted that undertaking stock assessments could be challenging, given the limited knowledge regarding deep-sea species, in particular by-catch in mixed fisheries. Some participants underlined the need for collaboration among RFMO/As and between scientists across regions. The ongoing dialogue between scientists and managers, as well as the need to enhance such dialogue, was emphasized.

32. It was noted that more research was needed with regard to the effectiveness of fisheries closures for the improvement of ecosystem resilience.

33. The need to use the best scientific information available was stressed. It was pointed out that scientific advice was not always acted upon by RFMO/As. In response to a question regarding the possible use of objection procedures by States to opt out of conservation and management measures aimed at regulating bottom fishing, a panellist indicated that there had not been any objections to measures to

protect VMEs in NEAFC and that information on the use of the objection procedure in that organization was made publicly available.

34. The importance of integrating scientific information into management measures so as to prevent significant adverse impacts on VMEs was highlighted.

35. Participants commended the good progress made in implementing the relevant General Assembly resolutions at the regional level, as well as at the national level. A participant noted that the Preparatory Committee established by General Assembly resolution 69/292: Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ PrepCom) process should be made aware of these achievements. Another participant stressed the need to initiate discussion on the protection of VMEs in the context of the BBNJ PrepCom.

36. The importance of sharing information and experiences amongst different RFMO/As, as well as their member States, was underlined. Existing mechanisms for cooperation and enhancing such cooperation were highlighted, including informal cooperation at the secretariat level through the Regional Fishery Body Secretariats' Network (RSN) and through participation in the ABNJ Deep-sea Project, as well as formal bilateral cooperation amongst RFMO/As or with other bodies through memoranda of understanding (MOUs). It was pointed out that contracting parties also had a role to play in furthering cooperation. Other means of interaction included: bilateral cooperation in stock assessment and capacity-building, and sharing of information through the FAO VME database. The role of FAO in coordinating some of these efforts was noted.

37. A number of participants emphasized the need to focus on the implementation of the resolutions by all States and RFMO/As. Some participants expressed the view that the full implementation of the resolutions would be sufficient to protect VMEs and the long-term sustainability of fisheries resources.

38. Some participants raised questions as to how the framework for implementing the General Assembly resolutions could be further strengthened in some RFMO/As, including by reviewing threshold levels, the application of the precautionary approach and enforcement of adopted measures. Challenges in integrating multi-species management were also highlighted. Furthermore, the need for technical assistance and capacity-building, where the capacities of States participating in a fishery differed, was underscored.

39. A participant noted that it was important to encourage action at the global level, but emphasized different circumstances between regions. A number of participants considered that technical meetings, such as the Workshop, were useful. At the same time, a participant considered this issue to be a technical matter and more appropriate to be reviewed in the FAO.

40. It was noted that some bottom fishing occurred outside the established fishing footprint. In this regard, the secretariat of one RFMO/A indicated that it had been mandated to monitor the movement of fishing vessels to address this matter.

41. It was pointed out that human activities other than fisheries also affected marine ecosystems, and the need for action to address such impacts was noted, in particular, by conducting assessments of cumulative impacts. The importance of

cooperation between RFMO/As and regional seas programmes and action plans was underlined and, in this regard, activities similar to the ongoing cooperation between NEAFC and OSPAR were suggested for other regions.

Opportunities and challenges in further addressing the impacts of bottom fisheries on vulnerable marine ecosystems and long-term sustainability of deep-sea fish stocks (segment 5)

42. In segment 5, presentations were made by: Duncan Currie (Pew Environment Group); Alastair Macfarlane (ICFA); Ellen Kenchington (Fisheries and Oceans Canada); and Merete Tandstad (FAO).

43. Panellists and other participants highlighted the progress that had been made in the implementation of the relevant resolutions of the General Assembly (see also paras. 10, 17, 18, 24, 29 and 33).

44. Nonetheless, the view was expressed that the implementation of the General Assembly resolutions could still be significantly improved, particularly in some areas where less progress had been made. The need to strengthen the effectiveness of the measures in place on the basis of the best available scientific information available, the need to improve such information and to take a precautionary approach where such information was not available, was emphasized. Attention was also drawn to the need to apply an ecosystems approach, conduct assessments of cumulative impacts, undertake multispecies management which also addressed by-catch and gain a broader understanding of what constitutes a VME. In addition, specific recommendations for improving implementation were highlighted, including: improving assessments; closing VMEs to fishing unless environmental impact assessments were performed; performing assessments on slope sediment ecosystems; utilizing the full criteria in the Guidelines to define VMEs; allowing VMEs to recover; not authorizing fishing activities until measures are put in place; and establishing mandates for RFMO/As to protect biodiversity, including in cooperation with regional seas organizations. It was stated that further understanding was needed of the ecological role of VMEs and ecosystems services provided by such VMEs and VME species, as well as the timeline for VME recovery. It was noted that the resumed Review Conference on the 1995 United Nations Fish Stocks Agreement and the FAO Committee on Fisheries had also considered the progress achieved regarding the implementation of General Assembly resolutions related to bottom fishing and adopted recommendations in this regard.

45. Another view was expressed that the adverse impacts of bottom fishing on VMEs were more limited than previously thought and that it would be possible to institute measures to regulate such fishing while maintaining an acceptable level of impact. In this context, it was considered that more technical work was needed to refine the measures currently in place, as scientific understanding improved. In this regard, a view was expressed that the Guidelines could be reviewed to take into account experiences regarding the spatial dimensions of impacts and further refine the concept of significant adverse impacts. Another participant cautioned against reopening the Guidelines. Some participants noted that adverse impacts from bottom fishing might be underreported due to the lack of scientific understanding of deep-

sea ecosystems and species, and their interdependences. It was also noted that the recovery time for stocks and ecosystems had to be considered.

46. The difficulties of assessing significant adverse impacts on VMEs in light of the lack of sufficient scientific knowledge of such ecosystems and the species that inhabit them and the need for further research were underscored. It was noted that research, for example, had already helped understand the valuable role played by sponge fields in fostering biodiversity in benthic habitats. The limitations of predictive analysis and the length of time needed to validate scientific research were highlighted as some of the challenges to be addressed.

47. As regards strengthening the role of RFMO/As in addressing the impacts of bottom fishing on VMEs and the long-term sustainability of deep-sea fish stocks, it was noted that while regional differences necessitated tailored approaches, various FAO forums and projects provided avenues for the exchange of information and experiences between RFMO/As and with other relevant stakeholders. Information was also provided regarding ongoing initiatives at FAO to further technical work on the implementation of the Guidelines and the General Assembly resolutions, including cooperative initiatives.

48. Many participants drew attention to the important role played by the General Assembly in the progress made thus far and expressed the view that there was an ongoing need for the General Assembly to review implementation on a regular basis and emphasized the need for continued and improved reporting in this regard. Other participants expressed the view that further work should be technical in nature and be focused on the regional level. According to this view, the General Assembly had succeeded in filling the regulatory gap it had sought to address and could now leave it to other entities to fine-tune the regulatory framework it had established.

49. Many participants noted the usefulness of the Workshop and similar forums for the exchange of views and information amongst stakeholders. It was considered useful to also have such an exchange with national fisheries managers.

Summary segment

50. During the summary segment, the Moderator provided an oral summary of the principal elements of the discussion and indicated that he would prepare the present written summary for circulation as a document of the General Assembly on that basis.

51. Participants expressed their gratitude to the Moderator, and to the panellists for the high quality of their presentations. Appreciation was also expressed to the United Nations Secretariat, in particular to the Division for Ocean Affairs and the Law of the Sea of the Office of Legal Affairs, for the high standard of secretariat services and assistance provided during the planning and organization of the Workshop.