联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura | منظمة الأغذية والزراعة للأمم المتحدة

FAO's WORK RELATING TO THE ELEMENTS OF A DRAFT TEXT 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

Second session of the Preparatory Committee on the 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
New York, 26 August-9 September 2016

Executive Summary

FAO is attending the preparatory process on the 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 Process) to provide fisheries relevant technical information and guidance to the delegations as required and upon request to inform the discussions.

Given the potential implications this process might have on the fisheries sector, the thirty-second session of the FAO's Committee on Fisheries (COFI) held in Rome from 11 to 15 July 2016, decided to discuss this issue under its agenda item 10: "Global and regional processes". The document COFI/2016/8/Suppl.1 was prepared by the FAO's Secretariat reporting on key fisheries related instruments, institutions and initiatives, including FAO's existing activities of relevance to the elements of the "2011 package".

OVERVIEW

1. The Food and Agriculture Organization of the United Nations (FAO) recognizes the sustainable use and conservation of marine living resources of the world's oceans, including fish stocks and associated species, as a priority. In the fisheries context, FAO works with States and other stakeholders to facilitate the development and implementation of international mechanisms and instruments, both binding and voluntary and facilitates the formulation of tools, provides technical advice, and compiles, disseminates and shares knowledge and good practices for sustainable use and conservation of marine living resources, including for areas beyond national jurisdiction (ABNJ).

2. Under its Constitution, FAO has a mandate to promote and, where appropriate, recommend national and international action on scientific, technological, social, and economic research relating to fisheries (Articles I and V)[1]. Over the years, FAO has been requested to undertake many activities with the aim of promoting the advancement of science and technology for the conservation and sustainable use of natural resources and the strengthening of related national, regional, and international mechanisms.

3. FAO collaborates with various partners, through its normative work and through extra budgetary supported programmes or projects, to provide support to States, regional fisheries management organizations or arrangements (RFMO/As), other regional fishery bodies (RFBs) and their members, as well as with other stakeholders for building State and regional capacity to address and develop effective solutions for ABNJ issues and to promote the sustainable use of living marine resources in the ABNJ.

4. An RFMO/A is an intergovernmental organization explicitly recognized under the United Nations Convention on the Law of the Sea of 1982 (LOSC) and the United Nations Fish Stocks Agreement of 1995 through which States and other entities cooperate in, inter alia, developing and implementing measures on the conservation and management of fisheries and related issues. The area of competence of most RFMO/As is the ABNJ, although some also encompass Exclusive Economic Zones (EEZ).

5. The international community has increasingly recognized that strengthening governance of shared fisheries is best achieved by enhancing the role of RFBs. There are 50 RFBs[2] worldwide, half of which have an advisory role towards their members. However, RFMO/As, an important subset of RFBs, do have a regulatory mandate and the capacity for their members to adopt binding conservation and management measures based on best scientific evidence. Moreover, 30% of these regional bodies (both RFBs and RFMOs) also have an aquaculture mandate, either exclusively or jointly with a fisheries mandate.

6. The PrepCom is to consider the four elements of the "2011 Package" identified in the annex of Resolution 66/231, namely: marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, and environmental impact assessments, capacity-building and the transfer of marine technology. There are a number of existing FAO activities that address the "2011 package". This brief provides an overview of some of these activities. The Annex to this brief refers to examples of implementation in the ABNJ through the RFMO/As. While the brief is not exhaustive, it is intended to provide delegates with the scope and content of current ABNJ initiatives that addresses issues of relevance to the PrepCom.

[1] Basic texts of the Food and Agriculture Organization of the United Nations. 2015. *Volumes I and II*. http://www.fao.org/3/a-mp046e.pdf.
[2] http://www.fao.org/fishery/rfb/en

FAO ACTIVITIES RELEVANT TO THE "2011 PACKAGE"

Marine genetic resources (including benefit-sharing questions)

7. FAO, as the UN organization working on fisheries as well as on biodiversity and genetic resources for food and agriculture, provides global information in relation to marine biological resources such as fish and their exploitation (e.g. *The State of World Fisheries and Aquaculture* 2014 (SOFIA)[3] and the *Review of the State of World Marine Fishery Resources*[4]) as well as on genetic resources for food and agriculture.

8. The definition of "marine genetic resources" is central to this component of the 2011 package. Article 2 of the Convention on Biological Diversity[5] defines "genetic resources" as genetic material of actual or potential value, while "genetic material" means any material of plant, animal, microbial or other origin containing functional units of heredity. Given the potential overlaps, it is important to clearly delineate and distinguish "marine genetic resources" from the broader biological resources, noting that "marine biological resource" is generally used in a very wide context - including in the context of fisheries. Marine fishery resources are subject to existing management regimes in the ABNJ through sectoral management schemes and regional bodies. RFMO/As use broad definitions of "fishery resources".

a. For example, the South Pacific Regional Fisheries Management Organisation (SPRFMO) Convention defines "fishery resources" as: "(f) ….all fish within the Convention Area, including: molluscs; crustaceans; and other living marine resources as may be decided by the Commission; but excluding: (i) sedentary species; (ii) highly migratory species listed in Annex I of the 1982 Convention; (iii) anadromous and catadromous species; and (iv) marine mammals, marine reptiles and sea birds…"

b. The Commission on the Conservation of Antarctic Marine Living Resources (CCAMLR) applies a wider definition: "Antarctic marine living resources means the populations of fin fish, molluscs, crustaceans and all other species of living organisms, including birds, found south of the Antarctic Convergence".

9. As part of its mandate on biodiversity and genetic resources for food and agriculture, FAO is in the process of preparing the first report on the *State of the World's Aquatic Genetic Resources for Food and Agriculture*. The report is prepared under the guidance[6] of FAO's Intergovernmental Commission on Genetic Resources for Food and Agriculture[7] in coordination with FAO's Committee on fisheries (COFI)[8], and it will contain country reports compiled and consolidated by the FAO Fisheries and Aquaculture Department. The scope of the publication focuses on "farmed aquatic species and their wild relatives within national jurisdiction" as well as nationally important aquatic genetic resources of capture fisheries within national jurisdiction"[9].

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[3] FAO. 2014. *The State of the World Fisheries and Aquaculture 2014*. Rome. 223 pp. (http://www.fao.org/3/d1eaa9a1-5a71-4e42-86c0-f2111f07de16/i3720e.pdf).

[4] FAO. *Review of the state of world marine fisheries resources*. FAO Fisheries and Aquaculture Technical Paper No. 569. Rome, FAO. 2011. 334 pp. (http://www.fao.org/docrep/015/i2389e/i2389e.pdf).

[5] https://www.cbd.int/

[6] Paragraph 75 of the Fourteenth Regular Session of the Commission on Genetic Resources for Food and Agriculture, 15-19 April 2013 (http://www.fao.org/docrep/meeting/028/mg538e.pdf). Paragraph (v) of the Global Policy and Regulatory Matters for Attention of the Conference at the thirtieth session of the Committee on Fisheries, 9-13 July 2012 (http://www.fao.org/3/a-i3105e.pdf).

[7] http://www.fao.org/nr/cgrfa/cgrfa-home/en/

[8] http://www.fao.org/fishery/about/cofi/en

[9] In 2013, FAO's Intergovernmental Commission on Genetic Resources for Food and Agriculture, "requested FAO to continue its work towards the preparation of The State of the World's Aquatic genetic resources for Food and Agriculture, taking care not to duplicate or assume the work of other UN agencies and recognizing in particular the UN General Assembly's central role in addressing issues related to the conservation and sustainable use of biodiversity in marine areas

10. The ad-hoc intergovernmental technical working group on aquatic genetic resources for food and agriculture at its first session in June 2016 reviewed a draft of the report.

11. With regards to access and benefit sharing regimes for genetic resources, the 2001 FAO International Treaty on Plant Genetic Resources for Food and Agriculture[10] might be considered as a possible model for the current BBNJ discussions. This treaty is a comprehensive international agreement that, in line with the Convention on Biological Diversity, recognizes the sovereign rights of States over their genetic resources. In exercising this right, parties to the Plant Genetic Resources Treaty have agreed to create a multi-lateral system of access and benefit-sharing which is addressed at four levels:

a. Information exchange;

b. Technology transfer;

c. Capacity building; and

d. Sharing of benefits arising from commercialization.

12. For materials falling under the Multilateral System of access and benefit-sharing[11], Contracting Parties have agreed to take the necessary legal and other appropriate measures to provide facilitated access through the Multilateral System. The Treaty sets out the terms and conditions under which materials under the Multilateral System may be accessed and benefits arising from their utilization have to be shared. Access is provided through a Standard Material Transfer Agreement (SMTA)[12] which was adopted by the Governing Body of the Treaty. The SMTA requires recipients of materials from the Multilateral System that commercialize plant genetic resources incorporating material from the Multilateral System to pay to share the benefits arising from the commercialization of their product with the Benefit-Sharing Fund[13] established by the Governing Body.

Area-based management tools/measures (including marine protected areas)

13. Area-based management measures, including in the ABNJ, are tools commonly used for managing fisheries to protect target fish stocks, non-target fish stocks, as well as specific habitats and vulnerable marine ecosystems (VMEs) from undesired impacts from fishing operations. In the ABNJ, the implementation of area-based management tools has been primarily through RFMO/As.

14. The 1995 FAO Code of Conduct for Responsible Fisheries (CCRF)[14] promotes the use of management measures that takes wider ecosystem considerations into account, and recommends the use of management measures such as, but not limited to, temporal and spatial closures and reserved zones.

15. Accordingly, FAO has worked on the principle of exploring the full range of spatial management measures and area closures in a broader sense with relevance to fisheries, taking into account regional and

beyond national jurisdiction, especially through its Ad-hoc Open ended Informal Working group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction, established by the General Assembly (CGRFA-14/13/Report, para76).

[10] http://www.planttreaty.org/content/texts-treaty-official-versions

[11] http://www.planttreaty.org/content/what-multilateral-system

[12] http://www.planttreaty.org/content/what-smta

[13] http://www.planttreaty.org/node/3072

[14] FAO. Code of Conduct for Responsible Fisheries. Rome, FAO. 1995. 41p. (http://www.fao.org/3/a-v9878e.pdf)

national definitions with the FAO Technical Guidelines for Responsible Fisheries supplement 4 on Marine Protected Areas and Fisheries[15].

16. In the ABNJ, area-based measures have been used both in the context of protecting VMEs and in controlling mortality on certain fish stocks or life stages.

17. RFMO/As with the mandate to manage deep-sea fisheries[16] have implemented spatial measures under which the use of certain gear types, in particular bottom contact gear, are restricted or not allowed in order to protect benthic habitats such as vulnerable marine ecosystems (VMEs)[17]. The FAO VME DataBase[18], which was developed by FAO in collaboration with RFMO/As in response to UNGA resolution 61/105 (para. 90) contains information on management measures taken to reduce current or potential impacts where VMEs are known or likely to occur. The VME DataBase is an online repository and interactive map of all existing VME closures and other managed areas in the ABNJ, as managed by the deep-sea RFMO/As and other multi-lateral bodies. The criteria for identifying VMEs as outlined in the FAO Deep-sea Fisheries Guidelines and examples of regional processes and practices for identifying and protecting VMEs from some RFMO/As are provided in Annex 1. The FAO Technical Paper Vulnerable Marine Ecosystems: Processes and Practices in the High Seas[19] provides an overview of the process and practices in each ocean region with respect to identifying and designating VMEs.

18. FAO recognizes that the applicability of area-based measures is specific to different fisheries, and while area-based tools may be beneficial for some species, this is not necessarily the case for other species which are highly migratory in nature (such as for tuna and tuna-like species). However, some RFMO/As with the mandate to manage tuna and tuna-like species have utilized area-based management measures to take advantage of specific opportunities provided by the distribution of the fish from temporal heterogeneities. Examples include the prescribed seasonal closure by the Inter-American Tropical Tuna Commission of the Eastern Pacific Ocean to the purse-seine fishery[20], the Indian Ocean Tuna Commission and the International Commission for the Conservation of Atlantic Tuna[21]; and the closure or special management in high seas areas by the Western and Central Pacific Fisheries Commission[22].

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15 FAO. Fisheries Management. 4. Marine protected areas and fisheries. *FAO Technical Guidelines for Responsible* Fisheries. No. 4, Suppl. 4. Rome, FAO. 2011. 198p. (http://www.fao.org/docrep/015/i2090e/i2090e.pdf)

16 The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has a mandate to manage the fisheries under its jurisdiction (CCAMLR Convention, Article I) and therefore in the context of deep-sea fisheries CCAMLR is included with the other RFMO/As.

17 While some national laws have defined VMEs, the FAO Deep-Sea Fisheries Guidelines defines characteristics used as criteria in the identification of VMEs (For the VME criteria see paragraph 42 and Annex of the Guidelines).

18 http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/

19 FAO. (in press). Thompson, A.B.; Sanders, J.S.; Tandstad, M.; Carocci, F.; Fuller, J.; eds. Vulnerable Marine Ecosystems: Processes and Practices in the High Seas. FAO Fisheries and Aquaculture Technical Paper No. 595. Rome, Italy.

20 IATTC Resolution C-13-01 Multiannual Program for the Conservation of Tuna in the Eastern Pacific Ocean during 2014-2016. (https://www.iattc.org/PDFFiles2/Resolutions/C-13-01-Tuna-conservation-in-the-EPO-2014-2016.pdf)

21 Recommendation by ICCAT on a Multi-Annual Conservation and Management Program for Tropical Tunas [Rec. 15-01](www.iccat.int/Documents/Recs/compendiopdf-e/2015-01-e.pdf); Recommendation Amending the Recommendation by ICCAT to Establish a Multi-Annual Recovery Plan for Bluefin Tuna in the Eastern Atlantic and Mediterranean [Rec. 14-04] (www.iccat.int/Documents/Recs/compendiopdf-e/2014-04-e.pdf); Recommendation by ICCAT Amending the Supplemental Recommendation by ICCAT Concerning the Western Atlantic Bluefin Tuna Rebuilding Program [Rec. 14-05]; (www.iccat.int/Documents/Recs/compendiopdf-e/2014-05-e.pdf)

22 WCPFC CMM 2015-01 Conservation and Management Measure for bigeye, yellowfin and skipjack tuna in the Western and Central Pacific Ocean (https://www.wcpfc.int/doc/cmm-2015-01/conservation-and-management-measure-bigeye-yellowfin-and-skipjack-tuna-western-and); WCPFC CMM 2008-01 Conservation and Management Measure for bigeye and yellowfin tuna in the Western and Central Pacific Ocean; WCPFC CMM 2010-02 Conservation and

Environmental impact assessments

19. Awareness, both within the fisheries sector and among the public, has been increasing on the need to assess environmental impacts of fishing activities and a number of international and regional instruments contain provisions on impact assessments, of which some are important to deep-sea fisheries. For example, under the Code of Conduct for Responsible Fisheries the fisheries sector is expected to reduce its impacts in ways that are also compatible with its own sustained existence.

20. FAO has developed technical guidelines for fisheries management focusing on the ecosystem approach to fisheries (EAF)[23]. The EAF framework includes a risk-based framework to address impacts of fishing, including environmental impacts and call for appropriate management measures where high or moderate risk level are identified. This framework also provides for explicitly addressing external impacts, both natural and human induced, that may impact set management objectives in relation to fisheries, and could serve as a strategic tool to identify possible cumulative effects. The EAF-Toolbox provides information on the different steps of the framework and helps users chose appropriate tools.

21. In the specific context of the ABNJ, FAO has produced guidance for impact assessments in relation to vulnerable marine ecosystems, through the International Guidelines for the Management of Deep-sea fisheries in the High Seas (FAO Deep-sea Fisheries Guidelines, paras 47-53)[24]. Paragraph 47 provides that Flag States and RFMO/As: should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area. The FAO Deep-sea Fisheries Guidelines also provides information on what the impact assessment should address (Annex II).

22. Many of the deep-sea RFMO/As have developed procedures for impact assessments and assessment standards in relation to areas within and beyond spatially-defined existing fishing areas, such as in their protocols for exploratory fishing[25]. Exploratory fisheries occur when the impacts on the stock or ecosystem

Management Measure for the Eastern High-Seas Pocket Special Management Area (https://www.wcpfc.int/doc/cmm-2010-02/conservation-and-management-measure-eastern-high-seas-pocket-special-management-area).

23 FAO Fisheries Department. The ecosystem approach to fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 2003. 112 p. (http://www.fao.org/3/a-y4470e.pdf).

24 FAO. International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Directives internationals sur la gestion de la pêche profonde en haute mer. Directrices Internacionales para la Ordenación de las Pesquerías de Aguas Profundas en Alta Mar. Rome/Roma, FAO. 2009. 73p. (http://www.fao.org/docrep/011/i0816t/i0816t00.HTM)

25 See: South East Atlantic Fisheries Organisation: Conservation Measure 30/15 on Bottom Fishing Activities and Vulnerable Marine Ecosystems in the SEAFO Convention Area <http://www.seafo.org/Management/Conservation-Measures>; Commission on the Conservation of Antarctic Marine Living Resources Conservation Measure 22-06 (2015) Bottom fishing in the Convention Area <https://www.ccamlr.org/en/measure-22-06-2015>; North East Atlantic Fisheries Commission: Recommendation 19 2014: Recommendation on the Protection of Vulnerable Marine Ecosystems in NEAFC Regulatory Area as Amended by Recommendation 09:2015 <http://www.neafc.org/system/files/Rec_19-2014_as_amended_by_09_2015_fulltext_0.pdf> ; North Pacific Fisheries Commission: New Mechanisms for Protection of Vulnerable Marine Ecosystems and Sustainable Management of High Seas Bottom Fisheries in the Northwestern Pacific Ocean < http://nwpbfo.nomaki.jp/IM-maintext.pdf> and Science-based Standards and Criteria for Identification of VMEs and Assessment of Significant Adverse Impacts on VMEs and Marine Species < http://nwpbfo.nomaki.jp/IM-Annex1.pdf>;
South Pacific Regional Fisheries Management Organisation CMM 4.03 Conservation and Management Measure for the Management of Bottom Fishing in the SPRFMO Convention Area <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/CMM-4.03-Bottom-Fishing-2016-4Mar2016.pdf > and the Bottom Fishery Impact Assessment Standard <https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-06-2008/a-Miscellaneous-Documents/SPRFMO-Bottom-Fishing-Impact-Assessment-Standardagreed-Vanuatu-Fri23Sep2011-1140am.pdf> ; Northwest Atlantic Fisheries Organisation: NAFO Conservation and Enforcement Measures 2015, NAFO/FC Doc. 15/01, Chapter II (Articles 15 – 24).

are unknown or poorly known. They include fisheries outside of identified existing fishing areas or when there have been significant changes within an existing fishery. Deep-sea RFMO/As provide specific definitions of exploratory fisheries[26]. Key steps in protocols for exploratory fishing normally include: a pre-assessment of fishing impacts on the environment and related resources by the proposing contracting party, an assessment of the pre-assessment by the competent body (often a scientific body), and a final decision by the RFMO/A on whether or not to permit the proposed exploratory fishing.

23. In May 2015, FAO organized a multi-stakeholder technical workshop to look at regional experiences in the application and use of the RFMO/A protocols in relation to impact assessments for deep-sea fisheries in the ABNJ[27]. The workshop formulated a set of general observations on the use of current impact assessment procedures (Annex II). In general terms it was noted that the FAO Deep-sea Fisheries Guidelines has been used for guidance to develop regional protocols relating to impacts from deep-sea bottom fisheries.

24. RFMOs with a mandate to manage tuna and tuna-like species routinely conduct assessments of the impact of fishing operations on the environment, in particular, the incidental catch of non-target, associated and dependent species. These assessments have led to a number of conservation measures intended to restrict retention practices for fish species that are vulnerable, or to mitigate practices to reduce the incidental mortality of non-commercial species (e.g. birds in longline operations; marine mammals in the eastern Pacific Ocean). The ABNJ Tuna Project[28] of the Common Oceans Programme supports efforts at evaluating previously unknown environmental impacts of operations such as the gillnet fisheries in the northern Indian Ocean, as well as promoting mitigating practices in key tuna fisheries.

25. Finally, from a strategic environmental assessment perspective, it should be noted that RFMO/As are subject to performance reviews. Generally, such reviews encompass, inter alia, the constitutive instrument and measures including plans, policies and programmes, as well as the status of the stocks, effectiveness of conservation and management, decision-making processes, cooperation arrangements and relations with other RFMO/As[29].

26. In response to the challenges faced by the international community to ensure the sustainable use of fishery resources, RFMO/As are taking measures to strengthen their performance through the conduct, and implementation of, the results of performance reviews. FAO provided an overview of independent

[26] See: SEAFO (CM 30/15, Article 2(c): "exploratory bottom fishing" means all commercial bottom fishing activities outside area closures and existing bottom fishing areas, or fisheries within existing bottom fishing areas when a new fishing method and/or strategy are attempted to be used); NEAFC (Recommendation 19/2014 as amended by Recommendation 9/2015, Article 2(d): "exploratory bottom fishing" means all commercial bottom fishing activities outside area closures and existing bottom fishing areas, or if there are significant changes to the conduct and technology of bottom fishing activities within existing bottom fishing areas); NAFO (CEM 2015, Chapter II, Article 15.2: "exploratory bottom fishing activities" means bottom fishing activities conducted outside the footprint, or within the footprint with significant changes to the conduct or in the technology used in the fishery); CCAMLR (CM 21-02, paragraph 1(i): an exploratory fishery shall be defined as a fishery that was previously classified as a 'new fishery', as defined by Conservation Measure 21-01); NPFC (Northwestern Pacific Ocean Interim Measures Annex 1, paragraph 1, Northeastern Pacific Ocean Interim Measures Annex 3, paragraph 1: From 1 January 2009, all bottom fishing activities in new fishing areas or with bottom gear not previously used in the existing fishing areas, are to be considered as "exploratory fisheries" and to be conducted in accordance with this protocol); SPRFMO (Convention, Article 22: A fishery that has not been subject to fishing or has not been subject to fishing with a particular gear type or technique for ten years or more).

[27] FAO. (in press). *Report of the FAO workshop on encounter protocols and impact assessments.* 5 – 8 May 2015.

[28] http://www.commonoceans.org/tuna-biodiversity/en/#c158976

[29] See for example: Performance Review Panel Report of NEAFC (http://archive.neafc.org/reports/annual-meeting/am_2006/docs/2006-31_review-vol_1.pdf); NAFO Performance Assessment Review 2011 (http://www.nafo.int/publications/PAR-2011.pdf); and SEAFO Report of the Performance Review Panel 2010 (http://www.seafo.org/media/0f02e6be-2f45-45e1-8cb4-36b50afb18f8/SEAFOweb/pdf/COMM/open/eng/Performance%20Review%20English%20Report-2010_pdf).

performance reviews of RFBs from 2004 to 2014 and of the steps that RFBs have undertaken to implement the recommendations of their performance reviews[30]. Moreover, in the recent years, some RFBs, especially those with limited mandate in their constituent instruments, have reviewed their mandate and scope to address international concerns. These actions are aimed to support RFMO/A members and other States in the implementation of international instruments for fisheries management and conservation.

Capacity building and the transfer of marine technology

27. FAO, as the UN specialized organization dealing with fisheries, has spearheaded a number of capacity development initiatives largely through the Fisheries and Aquaculture Department and with other units as appropriate, aimed at supporting sustainable use and conservation of fisheries resources, including some initiatives specifically developed to address ABNJ issues, a few of which are highlighted here:

a. The Common Oceans ABNJ programme[31] aims to promote the efficient and sustainable management of fisheries resources and biodiversity conservation in the ABNJ. The programme consists of four projects, one of which is specific to capacity development in the ABNJ:

   i. The ABNJ Capacity project[32], is co-led by FAO and the Global Oceans Forum and is devoted to capacity development at the policy level, including for cross-sectoral policy dialogue, knowledge management, and outreach. Since the start of the project, the main activities have included two international workshops held in Rome and Grenada, which aimed at building capacity in the management of ABNJ and two ABNJ Regional Leaders Program initiatives, both held in New York in the margins of BBNJ, which aimed at strengthening the capacity of regional leaders to effectively participate in regional and global ABNJ discussions.

   ii. The ABNJ Deep-seas project[33] of the Common Oceans ABNJ programme, co-lead by FAO and UNEP, also contains many activities for regional capacity development in relation to the management of deep-sea fisheries. The project provides capacity development opportunities for, among others, policy and legal issues, the ecosystem approach to fisheries, vulnerable marine ecosystems, species identification, stock assessments, and area-based planning.

   iii. The ABNJ Tuna Project[34] implemented by FAO aims at achieving efficiency and sustainability in tuna production and biodiversity conservation in the ABNJ and harness the efforts of a large and diverse array of partners, including the five tuna RFMOs, governments, inter-governmental organizations, non-governmental organizations and private sector. The Project supports capacity development in various areas, in particular: (i) workshops and collaboration between scientists and managers to advance the development of science-based harvest strategies for all major tuna stocks; (ii) a certification-based training program that offers a new career path for enforcement and compliance officers; (iii) strengthening initiatives and developing and trailing new tools and innovative electronic monitoring systems to improve compliance by RFMO developing member States; and (iv) workshops

[30] FAO. 2015. The implementation of performance review reports by regional fishery bodies, 2004–2014, by Péter D. Szigeti and Gail L. Lugten. FAO Fisheries and Aquaculture Circular No. 1108. Rome, Italy. (http://www.fao.org/3/a-i4869e.pdf)

31 www.commonoceans.org

32 http://www.commonoceans.org/strengthening-capacity/en/

33 http://www.commonoceans.org/deep-seas-biodiversity/en/

34 http://www.commonoceans.org/tuna-biodiversity/en/

to manage and conduct analyses of bycatch data and the effectiveness of bycatch mitigation measures for seabirds, turtles and sharks.

b. FAO organizes and implements a number of regional workshops[35] for awareness raising, the exchange of best practices and knowledge-sharing in different regions related to the protection of vulnerable marine ecosystems (VMEs). Several regional workshops to raise awareness and promote best practice in deep-sea fisheries, which include looking at the use of VME criteria and appropriate management actions, have been organized in recent years and two additional workshops are planned for 2016. Regional workshops and training on taxonomy and the use of species identification guides for the identification of vulnerable deep-sea species, such as sharks, which are supplemented by the FAO species identification and data programme (FishFinder)[36] are also organized and constitutes an important integral part of the capacity development programme on deep-sea fisheries.

c. FAO has a long-standing collaboration with Norway through the EAF-Nansen project[37] which supports the implementation of the ecosystem approach to marine fisheries management, mainly in African EEZs. The availability of a specialized research vessel has allowed initiatives to be undertaken, in collaboration with the Norwegian Institute for Marine Research[38], to improve the knowledge of fisheries resources and ecosystems in developing countries. In early 2015, the research vessel conducted deep-sea fisheries surveys in the Convention Area of the South East Atlantic Fisheries Organization (SEAFO)[39]. A new phase of the project in 2017 will allow for opportunities to be expanded for improving knowledge on marine ecosystems through capacity strengthening and the improvement of strategic partnerships.

d. FAO also supports the implementation of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (Port State Measures Agreement)[40],

[35] See *inter alia*: FAO. Report of the Workshop on Deep-sea Species Identification, Rome, 2–4 December 2009. *FAO Fisheries and Aquaculture Report No. 947*. Rome, FAO. 2011. 209 pp. (http://www.fao.org/docrep/015/ba0088e/ba0088e.pdf); FAO. Report of the FAO Workshop on the Implementation of the International Guidelines for the Management of Deep-sea Fisheries in the High Seas – Challenges and Ways Forward, Busan, Republic of Korea, 10–12 May 2010. *FAO Fisheries and Aquaculture Report. No. 948*. Rome, FAO. 2011. 74p. (http://www.fao.org/docrep/014/i2135e/i2135e00.pdf); FAO. 2013. Report of the Regional Workshop on Vulnerable Marine Ecosystems (VMEs) in the Indian Ocean, Flic en Flac, Mauritius, 25–27 July 2012. *FAO Fisheries and Aquaculture Report. No. 1030*. Rome. 49 pp. (http://www.fao.org/3/a-i3311e.pdf); FAO. 2013. Report on the FAO Regional Workshop on the Development of Species Identification Guides for Deep-sea Cartilaginous Fishes of the Indian Ocean, Flic en Flac, Mauritius, 16–18 January 2013. *FAO Fisheries and Aquaculture Report No. 1050*. Rome. 31 pp. (http://www.fao.org/docrep/018/i3376e/i3376e.pdf); FAO/Western Central Atlantic Fishery Commission. 2015. Report of the first meeting of the WECAFC Working Group on the Management of Deep-sea Fisheries, Christ Church, Barbados, 30 September–2 October 2014. *FAO Fisheries and Aquaculture Report No. 1087*. Bridgetown, FAO. 61 pp. (http://www.fao.org/3/a-i4329e.pdf); FAO. 2015. Report of the Regional Workshop on Vulnerable Marine Ecosystems in the Southeast Atlantic Ocean, Swakopmund, Namibia, 15–17 April 2013. *FAO Fisheries and Aquaculture Report No. 1085*. Rome, Italy. (http://www.fao.org/3/a-i4923e.pdf); FAO. 2016. Report of the FAO Regional Workshop on Vulnerable Marine Ecosystems (VMEs) in the North Pacific Ocean, 11–13 March 2014. *FAO Fisheries and Aquaculture Report. No.1121*. Rome, Italy. (http://www.fao.org/3/a-i5319e.pdf).

[36] http://www.fao.org/fishery/fishfinder/about/en

[37] http://www.fao.org/in-action/eaf-nansen/en

[38] http://www.imr.no/en

[39] http://www.seafo.org/About/Convention-Area

[40] FAO. 2016. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Accord relative aux mesures du resort de l'État du port visant à prévenir, contrecarrer et éliminer la pêche illicite, non déclarée et non réglementée. Acuerdo sobre medidas del Estado rector del Puerto destinadas a prevenir, desalentar y eliminar la pesca illegal, no declarada y no reglamentada. Rome/Roma, Italy/Italie/Italia. (http://www.fao.org/3/a-i5469t.pdf).

with programme activities aimed at facilitating the entry into force of the Agreement and its implementation. Several regional workshops have been organized that contribute to the development of national capacity in order to maximize the benefits available through the effective use of the Port State Measures Agreement and promote bilateral, sub-regional, and/or regional coordination.

e. Finally FAO, in collaboration with UNDOALOS, manages the Assistance Fund under Part VII of the United Nations Fish Stocks Agreement (UNFSA)[41], which plays an important role in assisting developing State Parties to UNFSA with the implementation of this instrument.

28. All of these efforts are embedded in the FAO Blue Growth Initiative[42] supporting capacity development throughout the range of issues relating to fisheries through work at the global, regional, and national levels.

EXISTING INSTRUMENTS AND INITIATIVES

29. Binding and voluntary instruments that have been negotiated or developed under the auspices of the FAO to support the sustainable management of marine living resources in the ABNJ are based on relevant rules of international law, including those reflected in the United Nations Convention on the Law of the Sea of 10 December 1982 (LOSC)[43].

30. In relation to the sustainable use and conservation of marine living resources in ABNJ, the instruments identified may be categorized broadly as: providing general policy guidance, supporting the management of deep-sea fisheries, and enhancing monitoring, control and surveillance. These instruments include:

a. Code of Conduct for Responsible Fisheries[44] (and its technical guidelines):

i. FAO Technical Guidelines on the Ecosystem Approach to Fisheries[45]

ii. FAO Technical Guidelines on Marine Protected Areas[46]).

b. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement)[47].

c. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing (Port State Measures Agreement)[48].

[41] http://www.un.org/depts/los/convention_agreements/fishstocktrustfund/fishstocktrustfund.htm
[42] http://www.fao.org/3/a-mk541e/mk541e02.pdf
[43] http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf
[44] FAO. Code of Conduct for Responsible Fisheries. Rome, FAO. 1995. 41p. (http://www.fao.org/3/a-v9878e.pdf)
[45] FAO. Fisheries Department. The ecosystem approach to fisheries. *FAO Technical Guidelines for Responsible Fisheries*. No. 4, Suppl. 2. Rome, FAO. 2003. 112p. (http://www.fao.org/3/a-y4470e.pdf).
[46] FAO. Fisheries Management. 4. Marine protected areas and fisheries. *FAO Technical Guidelines for Responsible Fisheries*. No. 4, Suppl. 4. Rome, FAO. 2011. 198p. (http://www.fao.org/docrep/015/i2090e/i2090e.pdf)
[47] FAO. 1995. Agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas. Rome, Italy. (http://www.fao.org/docrep/meeting/003/x3130m/X3130E00.htm).
[48] FAO. 2016. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Accord relative aux mesures du resort de l'État du port visant à prévenir, contrecarrer et éliminer la pêche illicite, non déclarée et non réglementée. Acuerdo sobre medidas del Estado rector del Puerto destinadas a prevenir, desalentar y eliminar la pesca illegal, no declarada y no reglamentada. Rome/Roma, Italy/Italie/Italia. (http://www.fao.org/3/a-i5469t.pdf).

d. Voluntary Guidelines for Flag State Performance[49].

e. International Guidelines for the Management of Deep-sea Fisheries in the High Seas (FAO Deep-sea Fisheries Guidelines)[50].

f. International Guidelines on Bycatch Management and Reduction of Discards[51]

31. The Code of Conduct for Responsible Fisheries[52] contains general principles defined in accordance with the relevant rules of international law, for responsible fishing and related activities, taking into account all their relevant biological, technological, economic, social, environmental and commercial aspects (Articles 6 and 7). Responsibilities of States in relation to fishing operations are set out in the instrument, particularly in Article 8. Provisions of the Code are supplemented by technical guidelines such as the guidelines on the application of the ecosystem approach and on marine protected areas.

32. For deep-sea fisheries, the FAO Deep-sea Fisheries Guidelines were developed in order to assist States and RFMO/As in sustainably managing deep-sea fisheries and in implementing the United Nations General Assembly Resolution 61/105, paragraphs 76-95, concerning responsible fisheries in the marine ecosystem.

33. The FAO Deep-sea Fisheries Guidelines call upon States and RFMO/As to establish measures to prevent significant adverse impacts on vulnerable marine ecosystems, and as such provides advice on impact assessments (paragraphs 42 – 53 and Annex).

34. RFMO/As that manage deep-sea fisheries have, under the recommendations of related UNGA resolutions, the FAO Deep-sea Fisheries Guidelines, and the general provisions of the LOSC, established conservation and management measures, recommendations, and resolutions for the sustainable use of deep-sea fisheries and the conservation of VMEs[53].

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[49] FAO. 2015. Voluntary Guidelines for Flag State Performance. Directives volontaires pour la conduit de l'État du pavillon. Directrices Voluntarias para la Actuación del Estado del Pabellón. Rome/Roma. 53pp. (http://www.fao.org/3/a-i4577t.pdf).

[50] FAO. International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Directives internationals sur la gestion de la pêche profonde en haute mer. Directrices Internacionales para la Ordenación de las Pesquerías de Aguas Profundas en Alta Mar. Rome/Roma, FAO. 2009. 73p. (http://www.fao.org/docrep/011/i0816t/i0816t00.HTM)

[51] FAO. International Guidelines on Bycatch Management and Reduction of Discards. Directives internationales sur la gestion des prises accessoires et la réduction des rejets en mer. Directrices Internacionales para la Ordenación de las Capturas Incidentales y la Reducción de los Descartes. Rome/Roma, FAO. 2011. 73 pp. (http://www.fao.org/3/a-ba0022t.pdf).

[52] FAO. Code of Conduct for Responsible Fisheries. Rome, FAO. 1995. 41p. (http://www.fao.org/3/a-v9878e.pdf)

[53] See: CCAMLR Conservation Measure 22-06: Bottom fishing in the Convention Area (https://www.ccamlr.org/en/measure-22-06-2015); GFCM Resolution GFCM/37/2013/1 on area based management of fisheries, including through the establishment of Fisheries Restricted Areas (FRAs) in the GFCM convention area and coordination with the UNEP-MAP initiatives on the establishment of SPAMIs (http://www.fao.org/3/a-ax392e.pdf); NAFO Conservation and Enforcement Measures Chapter II: Protection of vulnerable marine ecosystems (VMEs) in the regulatory area from bottom fishing activities (http://archive.nafo.int/open/fc/2015/fcdoc15-01.pdf); NEAFC Recommendation 19:2014: Protection of VMEs in NEAFC Regulatory Area as Amended by Recommendation 09:2015 (http://www.neafc.org/system/files/Rec_19-2014_as_amended_by_09_2015_fulltext_0.pdf); NPFC Main text of the interim measures Annex 2 (Northwestern Pacific Ocean): Standard of identification of VMEs and assessment of impacts on VMEs (http://nwpbfo.nomaki.jp/IM-Annex2.pdf) and Annex 1 (Northeastern Pacific Ocean; http://nwpbfo.nomaki.jp/IM-Annex2.pdf); SEAFO Conservation Measure 30/15 on Bottom Fishing Activities and Vulnerable Marine Ecosystems in the SEAFO Convention Area (http://www.seafo.org/media/8933d489-854c-4c99-895e-66573c7010a4/SEAFOweb/CM/open/eng/CM30-15_pdf); SPRFMO Conservation and Management Measure 4.03: Bottom fishing in the SPRFMO Convention Area (https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/CMM-4.03-Bottom-Fishing-2016-4Mar2016.pdf).

35. These measures include, but are not limited to, catch and effort limits for targeted deep-sea fisheries, gear regulations for the reduction of bycatch, specific measures to reduce the incidental mortality of associated species such as seabirds, sea turtles, and marine mammals, and VME-related measures (including the designation of VME closures or other fishery closures).

36. On monitoring, control and surveillance, the Port State Measures Agreement, Guidelines on flag State performance, and Compliance Agreement are pertinent. The Port State Measures Agreement is designed to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) fishing through the implementation of effective port State measures. Minimum standards prescribed in this instrument promote a level of uniformity in the application of port State measures. The Port State Measures Agreement entered into force on 5 June 2016.

37. The Compliance Agreement is a binding instrument which specifies flag States' responsibility in respect of fishing vessels entitled to fly their flags and operating on the high seas, including the authorization by the flag State of such operations, as well as through strengthened international cooperation and increased transparency through the exchange of information on high seas fishing.

38. In contrast, the Guidelines on flag State performance are voluntary but certain elements are based on relevant rules of international law including those reflected in the LOSC. The guidelines aim to promote the effective implementation of flag State responsibilities.

39. Moreover, measures of RFMO/As also include comprehensive provisions for the monitoring, control and compliance of fishing vessels operating in their respective areas of competence, as well as protocols for data reporting and research.

40. Finally, each of these instruments contain provisions on the recognition of the special requirements of developing States including the development of capacity. Article 21 of the Port State Measures Agreement includes the establishment of an ad hoc working group that periodically reports and make recommendations to the Parties on the establishment of funding mechanisms including a scheme for contributions, identification and mobilization of funds, the development of criteria and procedures to guide implementation, and progress in the implementation of funding mechanisms.

ANNEX I: AREA-BASED MEASURES AND VME CRITERIA

Area-based measures in RFMO/As

1. Provisions for area-based measures in RFMO/As are varied, however in most cases the RFMO/As have adopted certain procedures taking measures in areas where VMEs are known or likely to occur. All current VME closures are presented in the online VME DataBase[54]. In some cases, VME closures are implemented as precautionary measures until more scientific knowledge is known and analyzed on the potential risks of negatively impacting VMEs in the closed area whereas in other regions measures have been taken based on scientific inputs.

2. If evidence of VMEs are encountered during the course of normal bottom fishing operations in existing fishing areas, a general response by the relevant management body is to temporarily close the area until the relevant scientific body determines the impacts of the fishing activity on VMEs known or likely to occur in the area. If no impact is determined, the area is reopened to fishing. If an impact is determined and it is considered to be significantly adverse on the VME, the area remains closed to bottom fishing activities until further consideration. In general, many VME closures are designated as precautionary measures until further research can be conducted in the area. The FAO Deep-sea Fisheries Guidelines note that: "…In circumstances of limited information, States and RFMO/As should apply the precautionary approach in their determinations regarding the nature and duration of impacts." (paragraph 20).

3. CCAMLR has measures for both VME closures and other protected areas. Under the general framework for the establishment of CCAMLR MPAs (CM 91-04)[55], CCAMLR MPAs will be established on the basis of the best available scientific evidence and following advice from the Scientific Committee. As such, CCAMLR MPAs will be established for the achievement of certain objectives that include inter alia the protection of representative examples of marine ecosystems, biodiversity and habitats, and key ecosystem processes. In establishing these MPAs, the Commission will adopt conservation measures to include the specific objectives of the MPA, spatial boundaries of the MPA, activities that are restricted or prohibited in the MPA, the period of designation, and priority elements for a management plan and a research and monitoring plan.

4. In the GFCM area, Fisheries Restricted Areas (FRAs) are established to ensure the protection of deep-sea sensitive habitats in delimited areas. FRAs regulate or restrict human activities in these areas by either introducing closures or prohibiting the use of certain gears. Additionally, in 2005 the GFCM endorsed the decision to prohibit bottom-trawling activities in waters deeper than 1 000 m in order to protect the deep-sea benthic environments of the Mediterranean and Black Sea.

5. The FAO Deep-sea Fisheries Guidelines provide guidance on identifying VMEs and assessing significant adverse impact (SAI). The guidelines provide a list of characteristics that should be used as criteria in the identification of VMEs, which include (paragraph 42):

i. uniqueness or rarity; an area or ecosystem that is unique or that contains rare species whose loss could not be compensated for by similar areas or ecosystems; These include:

- habitats that contain endemic species;
- habitats of rare, threatened or endangered species that occur only in discrete areas; or
- nurseries or discrete feeding, breeding, or spawning areas.

[54] http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/
[55] https://www.ccamlr.org/en/measure-91-04-2011

ii. functional significance of the habitat: discrete areas or habitats that are necessary for the survival, function, spawning/reproduction or recovery of fish stocks, particular life-history stages (e.g. nursey grounds or rearing areas) or of rare, threatened or endangered marine species.

iii. fragility: an ecosystem that is highly susceptible to degradation by anthropogenic activities.

iv. life history traits of component species that make recovery difficult- ecosystems that are characterized by populations or assemblages of species with one or more of the following characteristics:

- Slow growth rates;
- Late age of maturity;
- Low or unpredictable recruitment; or
- Long-lived.

v. structural complexity: an ecosystem that is characterized by complex physical structures created by significant concentrations of biotic or abiotic features. In these ecosystems, ecological processes are usually highly dependent on these structures systems. Further, such ecosystems often have high diversity, which is dependent on the structuring organism.

6. The Annex to the Guidelines also give examples of potentially vulnerable species groups, communities, and habitats, as well as features that potentially support them. This includes examples of species groups, communities and habitat forming species that are documented or considered sensitive and potentially vulnerable to DSFs in the high-seas, and which may contribute to forming VMEs as well as examples of topographical, hydrophysical or geological features, including fragile geological structures, that potentially support the species groups or communities.

7. Following this guidance, some RFMO/As have developed species lists for VME indicator species[56].

[56] NAFO identification guide for coral, sponge, and other vulnerable marine ecosystem indicators (http://www.nafo.int/publications/studies/vme-guide.html); CCAMLR VME taxa classification guide (https://www.ccamlr.org/en/document/publications/vme-taxa-classification-guide); SEAFO identification guide for corals and sponges for use by sea-going observers in the SEAFO Convention Area (http://www.seafo.org/media/99e0a982-a325-49d4-af88-97c0f484e3c8/SEAFOweb/pdf/SC/open/eng/SEAFO%20Sponges%20and%20Coral%20Guide%20Ramos%20et%20al%202009SEAFOFINAL_pdf).

ANNEX II: ENVIRONMENTAL IMPACT ASSESSMENTS

1. The FAO Deep-sea Fisheries Guidelines also contain specific provisions detailing information necessary for an impact assessment in ABNJ deep-sea fisheries (paragraph 47):

> 47. Flag States and RFMO/As should conduct assessments to establish if deep-sea fishing activities are likely to produce significant adverse impacts in a given area. Such an impact assessment should address, inter alia:
>
> i. type(s) of fishing conducted or contemplated, including vessels and gear types, fishing areas, target and potential bycatch species, fishing effort levels and duration of fishing (harvesting plan);
>
> ii. best available scientific and technical information on the current state of fishery resources and baseline information on the ecosystems, habitats and communities in the fishing area, against which future changes are to be compared;
>
> iii. identification, description and mapping of VMEs known or likely to occur in the fishing area;
>
> iv. data and methods used to identify, describe and assess the impacts of the activity, the identification of gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment;
>
> v. identification, description and evaluation of the occurrence, scale and duration of likely impacts, including cumulative impacts of activities covered by the assessment on VMEs and low productivity fishery resources in the fishing area;
>
> vi. risk assessment of likely impacts by the fishing operations to determine which impacts are likely to be significant adverse impacts, particularly impacts on VMEs and low-productivity fishery resources; and
>
> vii. the proposed mitigation and management measures to be used to prevent significant adverse impacts on VMEs and ensure longterm conservation and sustainable utilization of low-productivity fishery resources, and the measures to be used to monitor effects of the fishing operations.

2. Of the seven RFMO/As in force with the mandate to manage deep-sea fisheries in the ABNJ, six have conservation measures in place with provisions for environmental impact assessments in the context of exploratory fisheries (SEAFO, CCAMLR, NEAFC, NPFC, SPRFMO, and NAFO).[57] In general, these impact

[57] See: South East Atlantic Fisheries Organisation: Conservation Measure 30/15 on Bottom Fishing Activities and Vulnerable Marine Ecosystems in the SEAFO Convention Area <http://www.seafo.org/Management/Conservation-Measures>; Commission on the Conservation of Antarctic Marine Living Resources Conservation Measure 22-06 (2015) Bottom fishing in the Convention Area <https://www.ccamlr.org/en/measure-22-06-2015>; North East Atlantic Fisheries Commission: Recommendation 19 2014: Recommendation on the Protection of Vulnerable Marine Ecosystems in NEAFC Regulatory Area as Amended by Recommendation 09:2015 <http://www.neafc.org/system/files/Rec_19-2014_as_amended_by_09_2015_fulltext_0.pdf> ; North Pacific Fisheries Commission: New Mechanisms for Protection of Vulnerable Marine Ecosystems and Sustainable Management of High Seas Bottom Fisheries in the Northwestern Pacific Ocean < http://nwpbfo.nomaki.jp/IM-maintext.pdf> and Science-based Standards and Criteria for Identification of VMEs and Assessment of Significant Adverse Impacts on VMEs and Marine Species < http://nwpbfo.nomaki.jp/IM-Annex1.pdf>;
South Pacific Regional Fisheries Management Organisation CMM 4.03 Conservation and Management Measure for the Management of Bottom Fishing in the SPRFMO Convention Area <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/CMM-4.03-Bottom-Fishing-2016-4Mar2016.pdf > and the Bottom Fishery Impact Assessment Standard

assessments draw upon the relevant paragraphs of the FAO Deep-sea Fisheries Guidelines for environmental impact assessments (paragraphs 47 – 53). In these cases, individual States undertake the impact assessments as part of the initial process for conducting exploratory fisheries. Paragraph 48 of the FAO Deep-sea Fisheries Guidelines states that: "Risk assessments […] should take into account, as appropriate, differing conditions prevailing in areas where [deep-sea fisheries] are well established and in areas where [deep-sea fisheries] have not taken place or only occur occasionally."

3. In general, the impact assessment provisions for the RFMO/As include requirements for Contracting Parties to gather relevant data to facilitate assessments of exploratory bottom fishing by the relevant scientific body of the RFMO/As. The measures provide that such data would include information from sea-bed mapping programmes (e.g. echo-sounders, multi-beam sounders).

4. Broadly, the Contracting Party wishing to conduct exploratory bottom fishing in the competence area must first submit to the Secretariat of the relevant regional organization a Notice of Intent to undertake exploratory bottom fishing, providing information on the harvesting plan, a mitigation plan, a catch monitoring plan, a sufficient system for recording/reporting of catch, a fine-sale data collection plan on the distribution of intended tows and sets, a data collection plan to facilitate the identification of VMEs in the area fished, plans for monitoring bottom fishing activities using gear monitoring technology, and monitoring data. Once the required information is submitted to the relevant scientific body, the data is reviewed and if it is determined that no SAIs will occur on VMEs in the proposed area, permission will be granted for the proposed fishing to commence.

5. To date, SEAFO, CCAMLR, and NEAFC have all considered impact assessments submitted by Members for exploratory fishing, and all have been granted permission to proceed with the activity. In some other regions where the RFMO/A was not yet in force at the adoption of UNGA res. 61/105, a part of the resolution applied which calls upon flag States to either adopt or implement measures in accordance with paragraph 83 in ABNJ (paragraph 86). As such, prior to the entry of SPRFMO into force Australia and New Zealand developed individual impact assessment protocols for use in what is now the SPRFMO Convention Area. Currently, SPRFMO has Conservation and Management Measure 4.03, which contains provisions for assessments of bottom fishing (paragraphs 10 and 11) that are in accordance with the FAO Deep-sea Fisheries Guidelines.

Examples of regional activities

South East Atlantic

6. In the SEAFO Convention Area, Japan undertook impact assessments prior to the commencement of exploratory bottom longline fisheries in a new fishing area for Patagonian toothfish in 2012-2013. In this case, the results were reviewed by the Scientific Committee[58], which determined that no SAIs would occur on VMEs, and the proposed areas were opened to bottom fishing[59].

<https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-06-2008/a-Miscellaneous-Documents/SPRFMO-Bottom-Fishing-Impact-Assessment-Standardagreed-Vanuatu-Fri23Sep2011-1140am.pdf> ; Northwest Atlantic Fisheries Organisation: NAFO Conservation and Enforcement Measures 2015, NAFO/FC Doc. 15/01, Chapter II (Articles 15 – 24).

[58] SEAFO. 2013. Report of the SEAFO Scientific Committee, 30 September – 11 October 2013, Swakopmund, Namibia. (http://www.seafo.org/media/00bfc878-a115-4573-a016-ee776f876332/SEAFOweb/pdf/SC/open/eng/SC%20Report%202013_pdf).

[59] Decision 6.3.3 of the SEAFO Annual Commission Report, 9 – 12 December 2013, Swakopmund, Namibia (http://www.seafo.org/media/37233d87-8b52-45ea-8c24-56a01ae0b169/SEAFOweb/pdf/COMM/open/eng/Annual%20Commission%20Report%202013).

North East Atlantic

7. In the NEAFC Regulatory Area, impact assessments have been conducted by Spain as part of collaborative research initiatives between scientists and fishermen. The Spanish Institute of Oceanography (IEO) led two of these initiatives for the Hatton Bank (under the old NEAFC protocol), and the Central Barents Sea (under the new NEAFC protocol). In the Hatton Bank impact assessment, habitat mapping surveys, as well as bottom trawl and bottom longline exploratory surveys were conducted, which resulted in the identification of several VME areas, which were subsequently closed to fishing.

South Pacific

8. Before the entry into force of the SPRFMO Convention, interim measures existed with guidance on impact assessments in the SPRFMO area for exploratory bottom fisheries. During this time, New Zealand developed Bottom Fishery Impact Assessment procedures[60] as required by those interim measures. Broadly, the procedures specify that the type of information to be provided will include a description of proposed fishing activities, mapping and description of proposed fishing areas, evaluation of expected interaction with VMEs and ecosystem impacts, status of the deepwater stocks to be fished, information gathering and reporting, management and mitigation measures, and environmental impact assessments for the identification of potential adverse impacts on benthic VMEs and other vulnerable species. Australia also conducted a bottom fishery impact assessment for Australian vessels fishing in the area of application of SPRFMO (prior to its entry into force), using data from the 2002-2009 period[61]. The assessment focused primarily on the risk of direct impacts by bottom fishing on VMEs, and considered impact and risk, and defined the dependency of these elements on spatial and temporal scales. The assessment concluded that the overall risk of SAIs on VMEs by Australian vessels fishing with bottom trawls and bottom-set auto-longlines was low at the time of the assessment.

<u>Some experiences from the use of environmental impact assessments in the ABNJ</u>

9. In May 2015 FAO organized in Arendal, Norway a technical expert workshop looking at, amongst others, the experience with the use of impact assessments in the context of assessing impacts on VMEs in deep-sea fisheries in the ABNJ. Some of the observations that emerged from the workshop with regards to impact assessments are included here:

i. The general components of an effective environmental impact assessment (EIA), according to the CBD, include: screening, scoping, analysis and evaluation, reporting, review, decision-making, monitoring, compliance and enforcement, and auditing. Earlier analyses have concluded that the FAO Deep-sea Fisheries Guidelines are in line with the CBD Impact Assessment Guidelines for Biodiversity.

ii. The FAO Deep-sea Fisheries Guidelines have been used for guidance to develop regional protocols relating to impact assessments for deep-sea bottom fisheries by the RFMO/As and their members and cooperating non-contracting parties (CNCPs).

[60] New Zealand Ministry of Fisheries. 2008. *Bottom fishery impact assessment: bottom fishing activities by New Zealand vessels fishing in the high seas in the SPRFMO Area during 2008 and 2009*. Ministry of Fisheries, New Zealand. (http://www.fish.govt.nz/NR/rdonlyres/344F062B-5331-481B-ADD7-FBF244566A96/0/NewZealandBottomFisheryImpactAssessmentv11cDec20082small.pdf).

[61] CSIRO. 2011. Bottom Fishery Impact Assessment. *Australia report for the South Pacific Regional Fisheries Management Organisation (SPRFMO)*. (https://www.sprfmo.int/assets/Meetings/Meetings-before-2013/Scientific-Working-Group/SWG-10-2011/SWG-10-DW-01a-Australian-BFIA-Final-Report.pdf).

iii. Most of the existing regional bodies responsible for the management of deep-sea bottom fisheries have developed protocols and processes in support of assessing the impacts of bottom fisheries. In areas where RFMO/As are not yet fully operational or not established, some flag states have established such protocols and processes as interim unilateral arrangements.

iv. Key steps in the assessment process for exploratory fisheries are: pre-assessment by the proposing "State Party", assessment of the pre-assessment by the competent body (often the scientific body) followed by a decision of the RFMO/As to allow or not allow the exploratory fishery to proceed, Assessment of the conducted exploratory fisheries and decision on possible action by the RFMO/As. There is limited experience with reviewing the different steps of the exploratory impact assessments, with the exception of the CCAMLR, very few proposals for exploratory fishing have been put forward.

v. While tailoring to regional needs is necessary, it should be an aim to achieve higher level of consistency in the way impact assessment are conducted across RFMO/As.

vi. There are key challenges with respect to developing, using and implementing regional and national impact assessment frameworks and in addressing the elements of paragraph 47 of the FAO Deep-sea Fisheries Guidelines. The challenges include: (i) access to adequate information and data to explain baseline situations with regards to status of fish resources, ecosystems, habitats and communities against which future changes can be measured; (ii) mapping of areas likely to contain VMEs, and (iii) evaluation of impacts including the need for having a transparent approach for assessing risks and incorporating uncertainty adapted to the regional situation.

vii. The experience from CCAMLR shows that with a growing number of initial proposals and reviews, there is a high time demand on existing structures to analyze the pre-assessment and conduct the required reviews of the impact assessments. The additional work associated with a rigorous impact assessment process may also be a particular burden for newer RFMO/As, such as the South Pacific Regional Fisheries Management Organisation (SPRFMO), the Southern Indian Ocean Fisheries Agreement (SIOFA) and the North Pacific Fisheries Commission (NPFC), and their members and CNCPs (which will include a number of developing countries) who may struggle to have the capacity to address all of the different aspects with the human and financial resources at hand.

viii. Many developing countries and small island developing states (SIDS) lack the capacity to develop pre-assessments. The FAO Deep-sea Fisheries Guidelines recognizes the special requirements for developing countries and this should be addressed when developing new or amending existing frameworks in order to ensure the equal possibility for all countries to participate.