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SUBSIDIARY BODY ON SCIENTIFIC,
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Item 3.1.3 of the provisional agenda*

**RECOMMENDATION ADOPTED BY THE SUBSIDIARY BODY ON SCIENTIFIC,
TECHNICAL AND TECHNOLOGICAL ADVICE AT ITS FOURTEENTH MEETING**

***XIV/3. In-depth review of the implementation of the programme of work on
marine and coastal biological diversity***

The Subsidiary Body on Scientific, Technical and Technological Advice

Invites the Executive Secretary to highlight at the United Nations General Assembly special high level meeting on biodiversity the importance of the marine and coastal biodiversity and ecosystem services for the mitigation of and adaptation to climate change and for reaching the Millennium Development Goals;

Recommends that the Conference of the Parties adopt a decision along the following lines:

The Conference of the Parties

***In-depth review of the progress made in the implementation of the elaborated programme of work on
marine and coastal biological diversity, as contained in annex I to decision VII/5***

1. *Expresses its appreciation* to Parties, other Governments and relevant organizations for submitting relevant information such as third and fourth national reports, voluntary reports and other relevant reports;

2. *Takes note* of progress made in the implementation of the elaborated programme of work on marine and coastal biological diversity, as contained in the annex I to decision VII/5, at national, regional and global levels and that implementation has been facilitated by the Executive Secretary as well as relevant United Nations agencies and international organizations, but *notes with concern* that these efforts have not been able to prevent the serious decline in marine and coastal biodiversity and ecosystem services;

3. *Recognizes and supports* the ongoing work under the United Nations to establish a legitimate and credible Regular Process for Global Reporting and Assessment of the State of Marine

* UNEP/CBD/SBSTTA/14/1.

Environment including Socioeconomic Aspects (GRAME), while building on existing regional assessments and avoiding duplication of efforts;

4. *Notes with concern* the slow progress towards achieving the 2012 target of establishment of marine protected areas consistent with international law and based on scientific information, including representative networks, and that despite efforts in the last few years, still less than 1 per cent of the ocean surface is designated as protected areas, compared to nearly 15 per cent of protected-area coverage on land;

5. *Requests* Parties to implement actions at national level and collaborate with activities related to the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA);

6. *Notes with concern* the adverse impact of climate change on marine and coastal biodiversity (e.g. sea level rise, ocean acidification, coral bleaching) and *recognizing* that the ocean is one of the largest natural reservoirs of carbon, which can significantly affect the rate and scale of global climate change, *requests* Parties, other Governments and relevant organizations to further integrate climate-change-related aspects of marine and coastal biodiversity into relevant national strategies, action plans and programmes including, *inter alia*, national biodiversity strategies and action plans (NBSAPs), national adaptation programme of actions (NAPAs), national integrated marine and coastal management programmes, the design and management of marine and coastal protected areas, including the selection of areas in need of protection to ensure maximum adaptive capacity of biodiversity, and other marine environment and resource management-related strategies;

7. *Stressing* the importance of marine and coastal biodiversity to the mitigation of and adaptation to climate change, *invites* Parties, other Governments, relevant organizations, and indigenous and local communities, to address climate-change adaptation and mitigation issues, in line with the decisions on the in-depth review of work on biodiversity and climate change (see SBSTTA recommendation XIV/5) by:

(a) Highlighting the role and potential of marine and coastal ecosystems such as tidal salt marshes, mangroves and seagrasses;

(b) Extending their efforts in identifying current scientific and policy gaps in order to promote sustainable management, conservation and enhancement of natural carbon sequestration services of marine and coastal biodiversity;

(c) Identifying and addressing the underlying drivers of marine and coastal ecosystem loss and destruction, and improving the sustainable management of coastal and marine areas; and

(d) Enhancing their efforts to increase the resilience of coastal and marine ecosystems, through, *inter alia*, improved implementation, towards achieving the 2012 target of establishing marine protected areas consistent with international law and based on scientific information, including representative networks;

8.

Option 1. [In accordance with the recommendation XIV/5, on biodiversity and climate change, *requests* the Executive Secretary to include the interaction between oceans and climate change in future collaboration between the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC), in particular with regard to the development of a joint work programme between the three Rio conventions;]

Option 2. [Requests the Executive Secretary to convene an expert workshop on oceans biodiversity and climate change with a view of assessing the potential impacts of climate change on ocean biodiversity and propose options for mitigating such impacts. Such a workshop should ideally involve the participation of the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC);]

Option 3. [Requests the Executive Secretary to invite the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) to jointly convene an expert workshop on oceans and climate change with a view of promoting better understanding of issues of common interest to the two Rio conventions;]

9. *Emphasizing* that the world's oceans host most of known phyla on Earth and contain between 500,000 and 10 million species, and that new oceanic species are continuously being discovered, particularly in the deep sea, *requests* Parties, other Governments and organizations to further enhance globally networked scientific efforts, such as the Census of Marine Life (CoML) and the Ocean Biogeographic Information System (OBIS) , to continue to update a comprehensive and accessible global database of all forms of life in the sea, and further assess and map the distribution and abundance of species in the sea, and *requests* Parties and other Governments to foster further research activities to explore marine communities where current level of knowledge is scarce or inexistent;

10. *Takes note* of the importance of collaboration and joint working with relevant regional initiatives, organizations, and agreements in identifying ecologically or biologically significant marine areas (EBSAs), in particular in enclosed or semi enclosed Seas, among riparian countries, such as Caspian Sea, Regional Organization for the Protection of the Marine Environment (ROPME) region, Baltic Sea and other similar sea areas and to promote conservation and sustainable use of biodiversity in those areas;

11. *Understanding* that regional progress has been made in analyzing the impacts of underwater noise on marine and coastal biodiversity, such as under the Convention on Migratory Species, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), the Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS), and the International Whaling Commission (IWC), and recognizing the role of the Convention on Biological Diversity in supporting global cooperation, *requests* the Executive Secretary, in collaboration with Parties, other Governments, and relevant organizations, to compile and synthesize available scientific information on anthropogenic underwater noise and its impacts on marine and coastal biodiversity and habitats, and make such information available for consideration at a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) as well as other relevant organizations prior to the eleventh meeting of the Conference of the Parties;

12. *Reaffirms* that the programme of work still corresponds to the global priorities but is not fully implemented, and therefore *requests* Parties to continue to implement these programme elements, *taking note that* the elaborated programme of work on marine and coastal biological diversity has been strengthened through subsequent decisions VIII/21, VIII/22, VIII/24, and IX/20, *requests* all actors to further strengthen implementation of the programme of work, and *endorses* the following guidance for enhanced implementation:

(a) Further efforts on improving the coverage, representativity and other network properties, as identified in annex II to decision IX/20, of the global system of marine and coastal protected areas, in particular identifying ways to support Parties with the aim of accelerating progress in establishing ecologically representative and effectively managed marine and coastal protected areas and achieving the

commonly agreed 2012 target of establishing marine protected areas consistent with international law and based on the best available scientific information, including representative networks;

(b) Making progress on marine and coastal biodiversity conservation and sustainable use in areas beyond national jurisdiction, including the development of scientific and technical guidance to the United Nations General Assembly and identification of ecologically or biologically significant marine areas (EBSAs) in open-ocean waters and deep-sea habitats, consistent with international law and based on the best available scientific information, considering the indicative list of activities contained in annex I to this recommendation;

(c) Addressing climate-change-related aspects of marine and coastal biodiversity, including the potential adverse impacts on marine and coastal biodiversity of ocean acidification as a direct consequence of the increased concentration of carbon dioxide in the atmosphere;

(d) Ensuring that no ocean fertilization takes place unless in accordance with decision IX/16 C;

(e) Avoiding potential adverse impacts on marine and coastal biodiversity of other human response to climate change;

(f) Further efforts on minimizing the impacts of destructive fishing practices, unsustainable fishing, and illegal, unreported and unregulated (IUU) fishing on marine and coastal biodiversity, in collaboration with the Food and Agriculture Organization of the United Nations (FAO), and relevant international and regional organizations, including regional fisheries management organizations (RFMOs), as appropriate in accordance with international law, aiming at the ecosystem approach, on the need to manage by-catches and reduce discards, in order to attain a sustainable exploitation level of marine fishery resources and contribute to a good environmental status in marine waters;

(g) Further efforts on minimizing the specific as well as cumulative impacts of human activities on marine and coastal biodiversity, e.g. shipping, extraction of living and non-living resources, bioprospecting, infrastructure, waste disposal, tourism and other human activities, and further emphasis on the contribution of environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) to further strengthening sustainable use of living and non-living resources both in areas within and beyond national jurisdiction;

(h) The valuation of marine and coastal biodiversity and ecosystem services and its integration into national accounting systems in order to increase sectoral integration;

(i) Further efforts on sea areas, that are affected by multiple direct and indirect anthropogenic influences originating from the watershed area, and where the biodiversity issues require an integrated holistic approach aiming to improve the water quality and restore the health and functioning of the whole ecosystem;

(j) Collaboration with the Regular Process for Global Reporting and Assessment of the State of Marine Environment including Socioeconomic Aspects (GRAME) [and Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), once established,] to prioritize scientific research on marine and coastal biodiversity;

(k) Further efforts on the improvement, integration and inter-operability of the best available marine and coastal biodiversity data sets, across the global, regional, and national scales, which are critical to effective implementation of the programme of work on marine and coastal biodiversity;

[(l) The new Strategic Plan of the Convention;] and

(m) Carrying out assessment on the status and trends of cold-water coral reef ecosystems, seamounts, and hydrothermal vents;

13. *Requests* the Executive Secretary to work together with other relevant bodies in order to better understand the management of invasive alien species in marine and coastal environment and to make the results of the collaboration available to Parties;

14. *Urges* Parties and other Governments to achieve long-term conservation, management and sustainable use of marine resources and coastal habitats, and to effectively manage marine protected areas, in order to safeguard marine and coastal biodiversity and marine ecosystem services, sustainable livelihoods, and to adapt to climate change, through appropriate application of the precautionary [principle][approach] and the ecosystem approach, including the use of available tools such as integrated coastal zone management and marine spatial planning;

15. *Decides* to align the targets of the programme of work on marine and coastal biodiversity with specific indicators and timelines that are using [the revised Strategic Plan of the Convention on Biological Diversity and the agreed post-2010 targets];

16. *Invites* Parties to link these indicators and timelines to national targets and indicators, and use this framework to focus monitoring;

17. *Urges* Parties and other Governments, as appropriate, to strengthen, and establish, where necessary, targets at national level for the implementation of the programme of work on marine and coastal biodiversity and to incorporate these into revised national biodiversity strategies and action plans with specific timelines, responsibilities and budgets, and means for implementation, as a contribution to [the revised Strategic Plan of the Convention];

18. *Requests* the Executive Secretary, in collaboration with the Ramsar Secretariat and the Scientific and Technical Review Panel, to review opportunities for strengthening implementation of the coastal components of the programme of the work on marine and coastal biodiversity, in relation to the actions requested in the recommendations from the fourteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, on the programme of work on inland water, as referred to in recommendation XIV/2, paragraph 16;

Identification of ecologically or biologically significant areas (EBSAs) and scientific and technical aspects relevant to environmental impact assessment in marine areas

19.

Option A

[19. *Reiterating* the key role of the United Nations General Assembly and the United Nations Convention on the Law of the Sea in facilitation of designation of ecologically or biologically significant marine areas (EBSAs) beyond national jurisdiction, *emphasizes* the process of identification of CBD's ecologically or biologically significant marine areas (EBSAs) is a scientific and technical step only, and it has no function on the policy and management responsibility];

Option B

[19. *Emphasizes* that it is important that the process of identification of CBD's ecologically or biologically significant marine areas (EBSAs) is understood to be separate from the process used to decide on the policy and management responses that are appropriate for providing the desired level of protection to those areas, and that the identification of areas that are ecologically or biologically

significant is a scientific and technical step that takes account of the structure and function of the marine ecosystem];

20. *Expresses its gratitude* to the Governments of Canada and Germany for co-funding, and Canada for hosting, the Expert Workshop on Scientific and Technical Guidance on the Use of Biogeographic Classification Systems and Identification of Marine Areas Beyond National Jurisdiction in Need of Protection, held in Ottawa, from 29 September to 2 October 2009, to other Governments and organizations for sponsoring the participation of their representatives, and to the Global Ocean Biodiversity Initiative (GOBI) for its technical assistance and support; and *welcomes* the report of this Expert Workshop (UNEP/CBD/SBSTTA/14/INF/4);

21. *Welcomes* the report on Global Open Oceans and Deep Seabed (GOODs) Biogeographic Classification published by the Intergovernmental Oceanographic Commission of the United Nations Educational, Cultural and Scientific Organization (IOC/UNESCO), which was submitted pursuant to paragraph 6 of decision IX/20, as a basis of identifying representative networks of marine protected areas (MPAs);

22. *Invites* Parties, other Governments and relevant organizations to use the scientific guidance on the use and further development of biogeographic classification systems, contained in annex V to the report of the Ottawa Expert Workshop (UNEP/CBD/SBSTTA/14/INF/4), in their efforts to conserve and sustainably use marine and coastal biodiversity, and to enhance ocean management at a large ecosystem scale, in particular to achieve the 2012 target of the World Summit on Sustainable Development to establish marine protected areas, consistent with international law and based on scientific information, including representative networks;

23. *Recalling* decision IX/20 and the outcome from the Ottawa Workshop, *invites* Parties, other Governments and relevant organizations to use, as appropriate, the scientific guidance on the identification of marine areas beyond national jurisdiction, which meet the scientific criteria in annex I to decision IX/20, as contained in annex II to this recommendation;

24. *Encourages* Parties, other Governments and relevant organizations to cooperate, as appropriate, collectively or on a regional or subregional basis, to identify and protect ecologically or biologically significant areas in open-ocean waters and deep-sea habitats in need of protection, including by establishing representative networks of marine protected areas in accordance with international law and based on scientific information, and to inform the relevant processes within the United Nations General Assembly, and *invites* the United Nations General Assembly to encourage the Ad Hoc Open-ended Informal Working Group established by the United Nations General Assembly resolution 59/24 to expedite its work in this area [on a process towards designation of marine protected areas in areas beyond national jurisdiction];

25. *Notes* that the Ottawa workshop (UNEP/CBD/SBSTTA/14/INF/4) identified a number of opportunities for collaboration between the Convention on Biological Diversity in its work on ecologically or biologically significant marine areas (EBSAs) (decision IX/20, annex I) and the FAO in its work on vulnerable marine ecosystems (VMEs);

26. *Requests* the Executive Secretary to work with Parties and other Governments, the Food and Agriculture Organization of the United Nations (FAO), and other relevant organizations and initiatives, such as the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC) and the Global Ocean Biodiversity Initiative (GOBI), to outline a process for creating and maintaining a CBD global inventory of ecologically or biologically significant areas (EBSAs) in marine areas beyond national jurisdiction, and to begin provisionally populate such an

inventory; and to develop information sharing mechanism with similar initiatives, such as FAO's work on vulnerable marine ecosystems (VMEs);

27. *Further requests* the Executive Secretary to report on the status of inventory and submit the proposed process for creating and maintaining the inventory for consideration and approval, to a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the eleventh meeting of the Conference of the Parties, and to inform the UN General Assembly as well as international competent authorities such as the Food and Agriculture Organization of the United Nations (FAO), International Seabed Authority (ISA) and the International Maritime Organization (IMO) of progress in this regard;

28. *Recalling* decision IX/20 paragraph 18, *invites* Parties to notify the CBD global inventory of ecologically or biologically significant marine areas (EBSAs) identified in areas within national jurisdiction before the eleventh meeting of the Conference of the Parties;

29. *Decides* to review the status in the identification of ecologically or biologically significant marine areas as part of its consideration of the implementation of the 2012 target related to marine protected areas;

30. *Requests* the Executive Secretary to explore, together with secretariats of regional initiatives, organizations and agreements mandated to promote sustainable use and conservation of biodiversity in enclosed or semi-enclosed seas, the possibility for developing of work plans, including the identification, development and implementation of targeted joint activities to support biodiversity conservation in those regions;¹

31. *Requests* the Executive Secretary to organize, depending on available funding, a series of regional workshops, prior to the fifteenth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), ensuring the participation of Parties and other Governments, as well as relevant organizations and regional initiatives, such as regional seas conventions and action plans, [regional fisheries management organizations] and the Food and Agriculture Organization of the United Nations (FAO), in order to facilitate their efforts in the identification of ecologically or biologically significant marine areas using the scientific criteria adopted in decision IX/20 [and other relevant scientific criteria as appropriate] as well as the scientific guidance on the identification of marine areas beyond national jurisdiction, which meet the scientific criteria in annex I to decision IX/20, as contained in annex II below, and to facilitate capacity-building of developing country Parties, in particular the least developed countries and small island developing States among them, as well as countries with economies in transition, as well as relevant regional initiatives. This may also contribute to facilitating efforts to share experiences related to integrated management of marine resources and the implementation of marine and coastal spatial planning instruments;

[32. *Invites* the Global Environment Facility to extend support for capacity-building to developing countries, small island developing States, least developed countries, and countries with economies in transition, in order to identify ecologically or biologically significant and/or vulnerable marine areas in need of protection, as called for in paragraph 18 of decision IX/20 and develop appropriate protection measures in these areas;]

33. *Requests* the Executive Secretary to prepare, in collaboration with the relevant international organizations, a training manual and modules, subject to the availability of financial

¹ In this respect the Secretariat of the Convention on Biological Diversity has been encouraged to initiate collaboration with regional initiatives, organizations and agreements such as Economic Cooperation Organization (ECO), Caspian Environment Programme (CEP) and Regional Organization on the Protection of the Marine Environment (ROPME).

resources, which can be used to meet the capacity-building needs for identifying ecologically or biologically significant marine areas using the scientific criteria in decision IX/20 (annex I to decision IX/20) [and other relevant scientific criteria as appropriate] as well as the scientific guidance on the identification of marine areas beyond national jurisdiction, which meet the scientific criteria in annex I to decision IX/20, as contained in annex II to the present decision;

34. *Requests* the Executive Secretary to bring the two sets of scientific guidance on scientific criteria and biogeographic classification systems, as referred to in paragraphs 22 and 23 and ongoing initiatives on the identification of ecologically or biologically significant marine areas (EBSAs) and vulnerable marine ecosystems (VMEs), to the attention of relevant United Nations General Assembly processes, and *requests* the Executive Secretary to collaborate with the United Nations General Assembly Ad Hoc Open-ended Informal Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction;

35. *Further requests* the Executive Secretary to bring the scientific criteria (annex I to decision IX/20) and these sets of scientific guidance on scientific criteria and biogeographic classification systems as well as ongoing initiatives on the identification of ecologically or biologically significant marine areas (EBSAs) and vulnerable marine ecosystems (VMEs) to the attention of relevant organizations, including the Food and Agriculture Organization of the United Nations (FAO), International Maritime Organization (IMO), International Seabed Authority (ISA), [regional fisheries management organizations (RFMOs)], as appropriate, and regional seas conventions and action plans, with a view to fostering compatible initiatives to identify and protect ecologically or biologically significant marine areas (EBSAs);

36. *Recalling* decision IX/20, paragraph 27, *requests* the Executive Secretary to undertake a study, within a context of Article 8(j) and related provisions, to identify specific elements for integrating the traditional, scientific, technical and technological knowledge of indigenous and local communities, consistent with Article 8(j) of the Convention, and social and cultural criteria and other aspects for the identification of marine areas in need of protection as well as the establishment and management of marine protected areas, and bring the findings to the attention of relevant United Nations General Assembly processes, including the 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;

37. *Invites* Parties and other Governments to foster research and monitoring activities to improve information on key processes and influences on the marine and coastal ecosystems which are critical for structure, function and productivity of biological diversity in areas where knowledge is scarce and to facilitate the systematic collection of relevant information in order to continue a proper monitoring of these vulnerable areas;

38. *Expresses* its gratitude to the Government of the Philippines and the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) for co-hosting, and the European Commission for providing financial support for, the Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction, held in Manila from 18 to 20 November 2009, and to other Governments and organizations for sponsoring the participation of their representatives, and *welcomes* the report of this Expert Workshop (UNEP/CBD/SBSTTA/14/INF/5);

39. *Requests* the Executive Secretary to facilitate the development of voluntary guidelines for the consideration of biodiversity in environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) in marine and coastal areas using the guidance in annexes II, III and IV to the Manila workshop report (UNEP/CBD/SBSTTA/14/INF/5), provide for technical peer review

of those guidelines, and submit them for consideration and approval to a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the eleventh meeting of the Conference of the Parties, *recognizing* that these guidelines would be most useful for activities that are currently unregulated with no process of assessing impacts;

40. *Urges* Parties and *requests* the Executive Secretary to pay attention to the Regulations on Prospecting and Exploration for *Polymetallic Sulphides* in the Area, and also *invites* the International Seabed Authority to consider inclusion of mandatory environmental impact assessments (EIAs) for prospecting or exploration activities;

Impacts of destructive fishing practices, unsustainable fishing, and Illegal, Unreported and Unregulated (IUU) fishing on marine and coastal biodiversity

41. *Expresses its appreciation* to the Food and Agriculture Organization of the United Nations (FAO) and to the United Nations Environment Programme (UNEP) for the financial and technical support, and the Fisheries Expert Group (FEG) of the Commission on Ecosystem Management (CEM) of the International Union for Conservation of Nature (IUCN) for technical support, provided for the FAO/UNEP Expert Meeting on Impacts of Destructive Fishing Practices, Unsustainable Fishing and Illegal, Unreported and Unregulated (IUU) Fishing on Marine Biodiversity and Habitats, which was organized in collaboration with the Secretariat of the Convention on Biological Diversity in pursuance of paragraph 2 of decision IX/20, at FAO, Rome, Italy, from 23 to 25 September 2009, and *takes note* of the report of this Expert Meeting (UNEP/CBD/SBSTTA/14/INF/6);

42. In view of identified information gaps and constraints in undertaking the scientific review due to limited resources available for the initial collaboration efforts with the Food and Agriculture Organization of the United Nations (FAO) and to the United Nations Environment Programme (UNEP), and *noting* an urgent need to further review the impacts of destructive fishing practices, unsustainable fishing, and illegal, unreported and unregulated (IUU) fishing on marine and coastal biodiversity and habitats, building upon the initial efforts, *requests* the Executive Secretary to collaborate with the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), regional fisheries management organizations (RFMOs), as appropriate in accordance with international law, IUCN-FEG (IUCN Fisheries Expert Group), and other relevant organizations, processes, and scientific groups, subject to the availability of financial resources, on *ad hoc* organization of joint expert meeting, where possible through existing assessment mechanisms, to review the extent to which biodiversity concerns are addressed in existing assessments and propose options to address biodiversity concerns and report the progress, of such collaboration at a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties;

43. *Encourages* Parties and other Governments to fully and effectively implement paragraphs 112 through 130 of the United Nations General Assembly resolution 64/72 on responsible fisheries related to preventing the destructive impacts of deep-sea fisheries on marine biodiversity and vulnerable marine ecosystems in areas beyond national jurisdiction, [in particular paragraphs 119 and 120 of the resolution calling on States to prevent bottom fishing on the high seas unless impact assessments consistent with the International Guidelines for the Management of Deep-Sea Fisheries in the High Seas of the Food and Agriculture Organization of the United Nations have been conducted, areas where vulnerable marine ecosystems are known or likely to occur have been closed, and the long term sustainability of deep-sea fish stocks (both target- and non-target stocks) can be ensured];

44. *Encourages* Parties and other Governments, as relevant, to ratify the FAO agreement on Port States measures to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing

and to implement the United Nations Fish Stocks Agreement, particularly in relation to the application of the ecosystem and precautionary approaches and the elimination of overcapacity, as well as relevant FAO's international plan of action (IPOAs) and develop national or regional plans of actions or equivalents in order to mitigate the impacts of overcapacity of fishing fleets, destructive fishing practices, unsustainable fishing and illegal, unreported and unregulated (IUU) fishing, including through their participation in regional fisheries management organizations (RFMOs), as appropriate;

45. [Requests the Executive Secretary to compile and synthesize available scientific information on the impacts of the exploitation of krill on marine and coastal biodiversity, and make such information available for consideration at a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the eleventh meeting of the Conference of the Parties];

Impacts of ocean fertilization on marine and coastal biodiversity

46. Welcomes the report on compilation and synthesis of available scientific information on potential impacts of direct human-induced ocean fertilization on marine biodiversity (UNEP/CBD/SBSTTA/14/INF/7), which was prepared in collaboration with United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the International Maritime Organization in pursuance of paragraph 3 of decision IX/20;

47. Recalling the important decision IX/16 C on ocean fertilization, reaffirming the precautionary approach, recognizes that given the scientific uncertainty that exists, significant concern surrounds the potential intended and unintended impacts of large-scale ocean fertilization on marine ecosystem structure and function, including the sensitivity of species and habitats and the physiological changes induced by micro-nutrient and macro-nutrient additions to surface waters as well as the possibility of persistent alteration of an ecosystem, and requests Parties to implement decision IX/16 C;

48. Notes that the governing bodies under the London Convention and Protocol adopted in 2008 resolution LC-LP.1 (2008) on the regulation of ocean fertilization, in which Contracting Parties declared, *inter alia*, that given the present state of knowledge, ocean fertilization activities other than legitimate scientific research should not be allowed;

49. Recognizes the work under way within the context of the London Convention and London Protocol to contribute to the development of a regulatory mechanism referred to in decision IX/16 C;

50. Notes that in order to provide reliable predictions on the potential adverse impacts on marine biodiversity of activities involving ocean fertilization, further work to enhance our knowledge and modelling of ocean biogeochemical processes is required;

51. Notes also that there is a pressing need for research to advance our understanding of marine ecosystem dynamics and the role of the ocean in the global carbon cycle;

Impacts of ocean acidification on marine and coastal biodiversity

52. Welcomes the compilation and synthesis of available scientific information on ocean acidification and its impacts on marine biodiversity and habitats (UNEP/CBD/SBSTTA/14/INF/8), which was prepared in collaboration with UNEP-WCMC in pursuance of paragraph 4 of decision IX/20;

53. Expresses its serious concern that increasing ocean acidification, as a direct consequence of increased carbon dioxide concentration in the atmosphere, reduces the availability of carbonate minerals in seawater, important building blocks for marine plants and animals, for example by 2100 it

has been predicted that 70 per cent of cold-water corals, key refuges and feeding grounds for commercial fish species, will be exposed to corrosive waters, *noting* that under business-as-usual scenario given current emission rates, it is predicted that 10 per cent of the surface waters of the highly productive Arctic Ocean will become under-saturated with respect to essential carbonate minerals by the year 2032, and the Southern Ocean will begin to become under-saturated with respect to essential carbonate minerals by 2050, with potential disruptions to large components of the marine food web;

54. *Takes note* of that many concerns exist regarding the biological and biogeochemical consequences of ocean acidification for marine and coastal biodiversity and ecosystems, and the impacts of these changes on oceanic ecosystems and the services they provide, for example, in fisheries, coastal protection, tourism, carbon sequestration and climate regulation, and that the ecological effects of ocean acidification must be considered in conjunction with the impacts of global climate change;

55. *Requests* the Executive Secretary to develop, in collaboration with the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC/UNESCO), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the United Nations Framework Convention of Climate Change (UNFCCC), the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC), the International Coral Reef Initiative (ICRI), and other relevant organizations and scientific groups, subject to the availability of financial resources, a series of joint expert review processes to monitor and assess the impacts of ocean acidification on marine and coastal biodiversity and widely disseminate the results of this assessment in order to raise awareness of Parties, other Governments and organizations, and *also requests* the Executive Secretary, given the relationship between atmospheric carbon dioxide concentration and ocean acidification, to transmit the results of assessment to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC);

56. *Calls on* Parties, other Governments and organizations to take account of emerging knowledge on ocean acidification to be incorporated into national biodiversity strategies and action plans (NBSAPs), national and local plans on integrated marine and coastal area management, and the design and management plans for marine and coastal protected areas;

Impacts of unsustainable human activities on marine and coastal biodiversity

57. *Further notes* an urgent need to further assess and monitor the impacts and risks of unsustainable human activities on marine and coastal biodiversity, building upon the existing knowledge;

58. *Requests* the Executive Secretary to work with relevant organizations which conduct marine assessments, including the Regular Process of the United Nations Division for Ocean Affairs and Law of the Sea, the Food and Agriculture Organization of the United Nations (FAO), the International Maritime Organization (IMO) and International Seabed Authority (ISA), and other relevant organizations and scientific groups, to ensure their assessments adequately address biodiversity concerns in marine and coastal commercial activities and management; and, as necessary where gaps are found, work with these agencies to improve the consideration of biodiversity in assessments; and report the progress of such collaboration at a future meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) prior to the eleventh meeting of the Conference of the Parties;

59. *Further requests* Parties, other Governments, and other relevant organizations, to mitigate the negative impacts and risk of human activities to the marine and coastal biodiversity;

60. *Requests* Parties, other Governments, and other relevant organizations to take into account the special characteristics of semi-enclosed seas, which are affected by multiple direct and indirect anthropogenic influences originating from the watershed area, and where the biodiversity issues require an integrated holistic approach aiming to improve the water quality and restore the health and functioning of the whole ecosystem;

61. *Urges* Parties to stop the degradation and loss of ecologically important habitats (such as coastal sand dunes, mangroves forests, salt marshes, seagrass beds, and biogenic reefs) due to coastal development and other factors in coastal area, to facilitate their recovery through the management of human impacts and restoration, where appropriate;

62. *Urges* Parties, other Governments and relevant organizations to adopt, in accordance with international law, complementary measures to prevent significant adverse effects by unsustainable human activities to marine and coastal areas, especially those identified as ecologically or biologically significant.

Annex I

INDICATIVE LIST OF ACTIVITIES UNDER PROGRAMME ELEMENT 2: MARINE AND COASTAL LIVING RESOURCES, AS CONTAINED IN ANNEX I TO DECISION VII/5

Indicative list of activities of operational objective 2.4

(a) To further compile, synthesize and analyse available information relevant to identifying areas of ecological or biological significance in open-ocean waters and deep-sea habitats beyond national jurisdiction, based on the CBD scientific criteria in annex I of decision IX/20 [and other relevant scientific criteria as appropriate], [including through the UNEP-WCMC Interactive Map (IMAP), as in decision IX/20 paragraph 5];

(b) To further compile, synthesize and analyze available information relevant to the design of representative networks of marine protected areas (MPAs), building on the annexes II and III of decision IX/20;

(c) To identify and assess threats to biological diversity in marine areas beyond national jurisdiction, including in areas identified as likely to meet the criteria for ecologically or biologically significant areas (annex I of decision IX/20) [and other relevant scientific criteria as appropriate];

(d)

Option A

[(d) Regarding the protection of areas of ecological or biological significance in areas beyond national jurisdiction, including the establishment of marine protected areas and representative networks of marine protected areas, to take measures to support such protection through, e.g., encouraging application of environmental impact assessments (EIAs) and strategic environmental assessments (SEAs), taking into consideration specificities in areas beyond national jurisdiction, as identified in the Manila Workshop report (UNEP/CBD/SBSTTA/14/INF/5)];

Option B

[(d) In order to avoid degradation or destruction of ecologically or biologically significant marine areas (EBSAs) in areas beyond national jurisdiction, to take measures to support the maintenance of their conservation status through, e.g. encouraging application of environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) taking into consideration specificities in areas beyond national jurisdiction, as identified in the Manila Workshop report (UNEP/CBD/SBSTTA/14/INF/5)];

(e) To further research and investigate the role of the ocean and its ecosystems in the carbon cycle.

*Annex II***SCIENTIFIC GUIDANCE ON THE IDENTIFICATION OF MARINE AREAS BEYOND NATIONAL JURISDICTION, WHICH MEET THE SCIENTIFIC CRITERIA IN ANNEX I TO DECISION IX/20**

1. There has been substantial experience at the national and regional level with the application of some or all of the criteria for identification of ecologically or biologically significant areas (CBD EBSAs) for multiple uses, including protection. While much of the experience is specifically within national jurisdictions rather than in areas beyond national jurisdiction and may not specifically use all the criteria in annex I to decision IX/20, the experience gained in national processes, and by other intergovernmental agencies (e.g. the FAO criteria for vulnerable marine ecosystems, FAO 2009) and NGOs provide guidance on the use of these criteria. Lessons learned about scientific and technical aspects of the application of the criteria within national jurisdictions are informative about likely performance of the criteria in areas beyond national jurisdiction, even if the policy and management responses might be developed through different processes.
2. There are no inherent incompatibilities between the various sets of criteria that have been applied nationally and by various United Nations organizations (e.g. FAO, the International Maritime Organization, the International Seabed Authority) and NGOs (e.g. BirdLife International and Conservation International). Consequently, most of the scientific and technical lessons learned about application of the various sets of criteria can be generalized. Moreover, some of the sets of criteria can act in complementary ways, because unlike the CBD EBSA criteria (annex I to decision IX/20), some of the criteria applied by other United Nations agencies include considerations of vulnerability to specific activities.
3. It is important that the process of *identification* of CBD EBSAs is understood to be separate from the processes used to decide on the policy and management responses that are appropriate for providing the desired level of protection to those areas. The *identification* of areas that are ecologically or biologically significant is a scientific and technical step that takes account of the structure and function of the marine ecosystem. The subsequent steps involve the *selection* of policy and management actions that take account of threats and socio-economic considerations as well as the ecological characteristics of the areas.
4. It is important to view the application of the criteria in annex I to decision IX/20 not only as an end in itself, but also as a contribution to a process that addresses the contents of annexes I, II, and III of this decision. In the application of the criteria in annex I to decision IX/20, scientific and technical information, and expertise are central considerations.
5. The application of the criteria should use all the information that is available on the area being considered. "Information" includes scientific and technical data, as well as traditional knowledge and knowledge gained through life-experience of users of the oceans. All information should be subjected to quality assurance methods appropriate for the type of information being considered.
6. Modelling approaches that use ecological relationships quantified in well-studied areas can be applied in more data-poor areas, and these can be an important source of knowledge for application of the criteria.
7. There is likely to be less information available on marine areas beyond national jurisdiction than in many areas within national jurisdiction and differences in the amount of information available between benthic and pelagic portions of particular marine areas and among marine areas around the globe. Recognizing the value of increased information, challenges due to data limitations in marine areas

beyond national jurisdiction may be addressed through a range of scientific information, tools and resources. A lack of information should not be used as a reason to defer actions to apply the criteria to the best information that is available. Substantial progress has been made in areas where information was quite incomplete. In all areas, the application of the criteria needs to be reviewed periodically, as new information becomes available.

8. An important lesson from national, regional and international experience is that although the process of applying the criteria needs to be flexible, an orderly and systematic approach to identification of EBSAs in need of protection is superior to an *ad hoc* approach. A systematic approach makes better use of whatever level of information and scientific and technical expertise is available, and is more likely to identify the areas that are most appropriate for enhanced conservation action, including for inclusion in regional networks of marine protected areas (MPAs). Therefore it is advised to take a structured step-wise approach to the evaluation of areas against the EBSA criteria (annex I to decision IX/20) and mapping of them in relation to each other, within a larger process that develops goals, objectives and targets; identifies gaps; considers conservation measures, including networks of protected sites; and has inclusive participation, feedback and revision.

9. Features of benthic and pelagic portions of marine ecosystems may differ in scale, dominant ecological processes and key structural properties, and the coupling of the benthic and pelagic portions of these systems is ecologically important, although often poorly characterized. In addition, there may be different amounts of information available on the benthic and pelagic portions of a system. As a consequence, application of the criteria should, to the extent possible, consider both the benthic and pelagic systems both separately and as an interacting system. Furthermore, ecosystems beyond national jurisdiction can have strong ecological connections to ecosystems *within* national jurisdictions. Evaluation of the CBD EBSAs beyond national jurisdiction needs to consider these connections.

10. The criteria for CBD EBSAs in annex I to decision IX/20 would usually be applied before the steps in annex II to this decision are undertaken. This means that CBD EBSAs generally would be identified before representative areas are selected. This order has two benefits:

(a) Where there is sufficient information to identify CBD EBSAs, selecting representative MPAs that include many significant areas allows more efficiency in management.

(b) Where information is incomplete and there is substantial uncertainty about the location of EBSAs, representative areas included in marine protected area (MPA) networks can provide some protection to ecological processes while information is being acquired to allow more targeted protection.

11. The criteria function to rank areas in terms of their priority for protection, and not as an absolute “significant – not significant” choice. As such, an application of absolute thresholds for most criteria is inappropriate.

12. In the subsequent steps of *selection* of areas for enhanced conservation, an area may be in need of protection if it is evaluated as ranking highly on only a single criterion. An area may also be a priority for protection if it ranks relatively highly on multiple criteria, especially if the features which make the areas relatively important are not common elsewhere in the area under consideration. The process of decision-making with multiple criteria is a complex field with a large body of scientific and technical guidance available.

13. It is likely that there will often be insufficient information to use the criteria to delineate the precise boundaries of a CBD EBSA. In such cases, the criteria can at least identify the general area in need of protection, with boundaries determined in the selection steps, applying precaution and taking account of potential threats to the features that meet the criteria.

14. Areas which emerge from application of the criteria as in need of protection at regional scales should be treated as conservation priorities in the selection process, even if at the global scale the area would be evaluated as not as important on these criteria. An area which would be a conservation priority at the global scale should be considered a conservation priority in regional selection processes, even if application of the criterion at a more local scale might not rank the area as a particularly high priority.

15. When applying the criteria at scales where there are very different amounts of information available in different subareas, care should be taken not to bias the evaluation to favour (or discriminate against) the more information-rich parts of the larger region.

16. There may be significant benefits in harmonization of conservation planning and management actions if different bodies with spatially overlapping areas of competence were to coordinate the application of their respective criteria for identification of CBD EBSAs, or areas in need of more risk-averse management. Such coordination would allow all the relevant bodies to start their conservation planning with complementary lists or maps of areas in need of protection.

17. The amount and quality of information that is available about an area, and the degree to which the available information has been brought together systematically affects the time and resources required for scientific and technical experts to apply the criteria. "Expert opinion" processes based on best available knowledge may produce initial indications of ecological values in a given area and can help prioritize the consolidation of available information such that a thorough and systematic planning approach can be taken.

18. In order to achieve consistency in the application of the criteria in annex I to decision IX/20, specific guidance on the use of each criterion is included in appendix 1 to annex VI to document UNEP/CBD/SBSTTA/14/INF/4. This guidance has been consolidated from the experience reported by Parties, United Nations organizations/IGOs, NGOs and experts who have used these or similar criteria in the identification of EBSAs in marine ecosystems. This body of experience also highlighted some generic issues in the application of these criteria, including: (i) scale; (ii) relative importance/significance; (iii) spatial and temporal variability; (iv) accuracy, precision and uncertainty; and (v) taxonomic accuracy and uncertainty. Guidance on approaches for addressing these issues is provided in appendix 2 to annex VI to document UNEP/CBD/SBSTTA/14/INF/4.
