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MANAGEMENT OF MARINE DEBRIS

(Prepared by the Secretariat)

Summary:

CMS Resolution 10.4 on Marine Debris and Resolution 11.30 on Management of Marine Debris provide a strong basis for the Convention's work on this subject. However, the knowledge base on marine debris sources, pathways and impacts has increased significantly over the past years. To reflect this, and in line with developments in other fora, additions are proposed to the now consolidated resolution on Management of Marine Debris.

This document should be read in conjunction with UNEP/CMS/COP12/Doc.21.2.13 concerning resolutions to be consolidated.

Implementation of the draft Resolution and Decisions will contribute towards meeting targets 5 and 7 of the Strategic Plan for Migratory Species 2015-2023.

MANAGEMENT OF MARINE DEBRIS

Background

1. Since the adoption of CMS Resolution 11.30 on Management of Marine Debris in 2014, the issue has continued to receive much international attention, including through Resolution 2/11 on Marine Plastic Litter and Microplastics adopted by the second session of the United Nations Environment Assembly (UNEA-2).
2. Much research has also been published, allowing a better understanding of the sources of debris, both on land and at sea, the pathways it takes to the ocean, and the impacts on the ocean ecosystems, including migratory species.
3. In 2016, UNEP published the report "*Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change*".¹ The report concludes that "*while prevention is key, improving waste collection and management is the most urgent short-term solution to reducing plastic inputs, especially in developing economies. Long-term solutions include improved governance at all levels as well as behavioural and system changes, such as a more circular economy and more sustainable production and consumption patterns.*" The report's recommendations relevant to policy include points relating to strengthening the implementation and enforcement of existing international and regional frameworks, making use of multi-stakeholder approaches, improving monitoring and assessment strategies, considering the economic, social and environmental costs of marine litter in investments and the development of waste management policies and practices, or strengthening education and awareness measures on marine litter.

Macroplastics

4. The largest component of marine debris is plastic, making up over three quarters of total quantities according to estimates, and of this fraction, larger plastic items or fragments (macroplastics) have been the original focus of international attention. Significant input to the oceans comes from land-based sources, such as construction, household goods, packaging, coastal tourism, and food and drink packaging. Waste from shipping, abandoned, lost or otherwise discarded fishing gear (ALDFG), and other marine industries also contribute to the total amount of plastic debris in the ocean.
5. As was described in detail in the report "*Knowledge Gaps in Management of Marine Debris*" published as UNEP/CMS/COP11/Inf.27, macroplastics and other marine litter negatively impacts migratory marine wildlife, including many species of birds, turtles, sharks and marine mammals listed on CMS Appendices. The two major associated risks for marine species are entanglement in and ingestion of marine debris. Both are equally conservation and welfare concerns.

'Ghost Gear'

6. Abandoned, lost or otherwise discarded fishing gear (ALDFG) forms a sub-category of macro-litter, but at the same time is a source for secondary microplastics in the oceans. An estimated ten per cent of global marine litter falls into this category.
7. Of all litter types, it is generally thought to carry the highest risk of entanglement of marine species. Addressing this problem effectively is therefore of high importance to conservation.

¹ UNEP (2016). Marine plastic debris and microplastics – Global lessons and research to inspire action and guide policy change. United Nations Environment Programme, Nairobi.

Microplastics

8. Microplastics, generally defined as items smaller than 5mm, have been especially in focus of discussions and research in recent years. While there are no reliable global estimates of the total quantities of microplastics entering or found in the ocean, it is clear that they come from a variety of sources. Some are manufactured as such (primary microplastics), and used for example in personal care products or in plastics manufacturing (pre-production plastics). Others are fragments from disintegrating larger pieces, or they are generated from other sources such as fibres from washing clothes and particles originating from car tyres (secondary microplastics). Microplastics are very widespread in marine and coastal environments.
9. A 2015 report of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) entitled "*Sources, fate and effects of microplastics in the marine environment: a global assessment*"² was the first major report on this issue at global level. The authors recommended as urgent actions to: a) identify the main sources and categories of plastics and microplastics entering the ocean; b) utilize end-of-plastic as a valuable resource rather than a waste product; and c) promote greater awareness of the impact of plastics and microplastics in the marine environment.
10. The 2016 UN Environment report¹ explains that "*plastics have similar properties to natural fats, acting as a 'sponge' to remove and concentrate contaminants from the water column. If an animal, such as a fish, bird or marine mammal, ingests plastic particles then there is the potential for transfer of these absorbed chemicals into the tissue. Because of the persistence of such compounds, humans and other animals continue to be exposed long after a chemical has been withdrawn from production (e.g. PCBs).*"
11. This potential to increase the bioavailability of toxic substances to organisms is a major concern in relation to microplastics, and may have impacts on all parts of the food chain. Some apex predator species listed on CMS, such as Orcas and Polar Bears, have been shown to have extremely high contaminant loads, impacting their health and reproductive capacity.
12. The ability of microplastics to transport toxins into the marine food chain means that the risks they pose can be disproportionately high relative to the overall amount. Their potential impacts on aquatic life, biodiversity and human health are a worldwide concern.

Discussion and analysis

13. The impacts of marine debris on CMS-listed species clearly remains a serious concern. Thanks to the multiple initiatives at global, regional and local levels, the knowledge base on marine debris sources, pathways and impacts has increased significantly over the past years.
14. In the short term, it is urgent especially in developing economies to minimize marine litter inputs through improved waste collection and management. However, at the same time, a long-term sustainable solution needs to be developed. A more circular economy, in which waste, including plastic waste, is minimized by being designed out of the production cycle, is what UN Environment promotes with the 6Rs concept: Reduce (raw material use) – Redesign (design products for re-use or recycling) – Remove (single-use plastics when practical) – Re-use (alternative uses or for refurbishment) – Recycle (to avoid plastics going to waste) – Recover (re-synthesise fuels, carefully controlled incineration for energy production).¹

² GESAMP (2015). "Sources, fate and effects of microplastics in the marine environment: a global assessment" (Kershaw, P. J., ed.). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 90, 96 p.

15. Different UN entities, other international organizations, national institutions, regional and local governments and municipalities, the private sector and civil society all have a role to play in addressing this problem. While other frameworks, such as the Regional Seas Conventions and Action Plans, are the appropriate instruments for addressing litter monitoring and management itself, the role of CMS and the CMS Family is to regularly review the specifically species-related aspects, to provide relevant information and recommendations to the work streams under UN Environment, the Regional Seas Conventions and Action Plans and other relevant frameworks, and to encourage and support implementation of recommended measures by Parties.
16. The Secretariat's engagement in the work of other entities has resulted in exchange of information and closer cooperation, and has served to highlight the need for some updates and enhancements to the resolutions adopted by the Tenth and Eleventh Meetings of the Conference of the Parties, as presented for Parties' consideration in Annex 1 of this document.

Attached Resolution

17. In order to incorporate recent developments and emphasize the relevance of microplastics and abandoned, lost or otherwise discarded fishing gear (ALDFG), revisions have been made to the consolidated resolution contained in Annex 2 of document UNEP/CMS/COP12/Doc.21.2.13. For background on the consolidation process please refer to documents UNEP/CMS/COP12/Doc.21 and UNEP/CMS/COP12/Doc.21.2.

Recommended actions

18. The Conference of the Parties is recommended to:
- a) adopt the Resolution contained in Annex 1.

ANNEX 1

DRAFT RESOLUTION

MANAGEMENT OF MARINE DEBRIS

NB: This draft Resolution should be read in conjunction with Document 21.2.13, Annex 2. Proposed new text is underlined. Text to be deleted is ~~crossed-out~~.

Recalling CMS Resolution 10.4 on Marine Debris and Resolution 11.30 on Management of Marine Debris and *reiterating* the concern that marine debris has negative impacts on many species of migratory marine wildlife and their habitats,

Concerned that marine debris, including abandoned, lost or otherwise discarded fishing gear (ALDFG) and microplastics, negatively impacts substantial numbers of migratory marine wildlife, including many species of birds, turtles, sharks and marine mammals that are threatened with extinction,

Aware that entanglement in and ingestion of marine debris are both conservation and welfare concerns,

Also aware that microplastics have the potential of increasing the bioavailability of toxic substances to marine organisms, which may have impacts on all parts of the marine food chain,

Noting that concerted effort needs to be made in upstream locations and estuaries and other systems where marine debris can enter the marine and coastal environment and impact upon migratory species listed under the Convention,

Welcoming the United Nations Environment Assembly (UNEA) Resolution 1/6 on Marine Plastic Debris and Micro Plastics (2014), and Resolution 2/11 on Marine Plastic Litter and Microplastics (2016), ~~adopted by more than 150 countries at the first United Nations Environment Assembly (UNEA), concluded on 27 June 2014,~~

Recalling that in the outcome document of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, in June 2012, entitled “The Future We Want”, States committed “to take action to, by 2025, based on collected scientific data, achieve significant reductions in marine debris to prevent harm to the coastal and marine environment”,

Recalling the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development adopted in September 2015 by the United Nations General Assembly, and especially Goal 14 to *Conserve and sustainably use the oceans, seas and marine resources,* which includes the following targets:

- By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution;
- By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans;
- Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission’s Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries;

Recognizing Resolution 60/30, Oceans and the law of the sea, adopted by the United Nations General Assembly, which emphasizes the importance of protecting and preserving the marine environment and its living marine resources against pollution and physical degradation,

Acknowledging the substantial work on this subject being undertaken by other regional and global instruments, including *inter alia* the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA-Marine), the Regional Seas Conventions and Action Plans (RSCAPs), the Global Partnership on Marine Litter (GPML), the Global Partnership on Waste Management (GPWM), the International Convention for the Prevention of Pollution From Ships (MARPOL), the International Maritime Organization (IMO), the Convention on Biological Diversity (CBD), the International Whaling Commission (IWC), the London Convention, London Protocol, the Food and Agriculture Organization (FAO), the International Organization for Standardization (ISO), and the Inter-American Convention for the Protection and Conservation of Sea Turtles,

Further acknowledging actions undertaken by States to reduce the negative impacts of marine debris in waters within their jurisdiction,

Noting the formulation of the Honolulu Commitment and the ~~ongoing~~ development of the Honolulu Strategy which aims to reduce the impacts of marine debris over the next ten years,

Noting with gratitude that the extensive reviews called for in CMS Resolution 10.4 have been carried out with financial support from the Government of Australia,

Recognizing that information on marine debris remains incomplete, especially regarding the quantity present in the ocean and entering the ocean annually, as well as its sources, pathways, prevalence in different sea compartments, and fate in terms of fragmentation, decomposition, distribution and accumulation,

Concerned that currently available information is not sufficient in order to generally understand which populations and species are the most affected by marine debris, especially the specific effects of marine debris on migratory as opposed to resident species, and that population level effects of marine debris are unknown in many cases,

Emphasizing that preventing waste from reaching the marine environment is the most effective way to address this problem, and that moving to a more circular economy reducing the amount of waste generated is the only sustainable solution,

Recognizing the key role of industry and Governments in establishing a circular economy that prevents waste and implementing actions that eliminate sources of marine debris,

Further emphasizing that despite the knowledge gaps relating to marine debris and its impacts on migratory marine wildlife, there is clear evidence of adverse impacts and immediate action should be taken to prevent debris reaching the marine environment,

Aware that a significant proportion of marine debris is the result of discharges of ship-generated waste and cargo residues into the sea, abandoned, lost or abandoned otherwise discarded fishing gear (ALDFG), and that the protection of the marine environment can be enhanced significantly by reducing these,

Recognizing that a range of international, regional and industry-based measures exist to manage waste on board commercial marine vessels and prevent the disposal of garbage at sea,

Further noting the adoption by the International Maritime Organization of amendments to Annex V "Prevention of Pollution by Garbage from Ships" of the International Convention for the Prevention of Pollution from Ships (MARPOL) which ~~will~~ prohibits the discharge of all garbage from ships into the sea from 1 January 2013, except in very limited circumstances,

Also recognizing that the International Maritime Organization is the authority regulating shipping on the High Seas, and

Conscious that a wide range of target audiences needs to be addressed through effective public awareness and education campaigns in order to achieve the behavioural change necessary for a significant reduction of marine debris,

*The Conference of the Parties to the
Convention on the Conservation of Migratory Species of Wild Animals*

Interpretation

1. *Considers* marine debris to include any anthropogenic, manufactured or processed solid material, irrespective of its size, ~~discarded, disposed of or abandoned~~ present in the marine environment, including all materials discarded into the sea, on the shore, or brought indirectly to the sea by rivers, sewage, storm water or winds;
2. *Takes note* of the reports on Management of Marine Debris published as UNEP/CMS/COP11/Inf.27, Inf.28 and Inf.29, which cover (i) Knowledge Gaps in Management of Marine Debris; (ii) Commercial Marine Vessel Best Practice; and (iii) Public Awareness and Education Campaigns;
- 2 bis. Stresses the importance of the precautionary approach according to which lack of full scientific certainty should not be used for postponing cost-effective measures to prevent environmental degradation, where there are threats of serious or irreversible damage;

Knowledge Gaps in Management of Marine Debris

3. *Encourages* Parties to identify coastal and oceanic locations where marine debris aggregates to identify any potential areas of concern;
4. *Further encourages* Parties to work collaboratively with regional neighbours to identify and address the sources and impacts of marine debris, acknowledging that marine debris is not constrained by sovereign borders;
5. *Requests* that Parties provide available information on the amounts, impacts and sources of marine debris in waters within their jurisdiction on marine species listed on Appendix I and II of the Convention in their National Reports;
6. ~~Encourages~~ Requests Parties to ~~consider~~ establish or continue within any monitoring programmes ~~established giving particular regard~~, using standardized methodologies, that give particular regard to:
 - a) the prevalence of all the types of debris that may, or are known to, have impacts on migratory species;
 - b) sources and pathways of these types of debris;
 - c) geographic distribution of these types of debris and identification of hot spot areas;
 - d) impacts on migratory species, within and between regions; ~~and~~
 - e) identification of the most threatened species or most vulnerable populations in view of densities and seasonal distribution of marine debris;
 - f) the presence and effects of micro- and nanoscale plastics, including sub-lethal effects;
 - g) population level effects on and welfare of migratory species as appropriate to national circumstances;

7. *Encourages* the Scientific Council, with support from the Secretariat, to promote the prioritization of research into the effects of microplastics on the species ingesting them, and support research on the significance of colour, shape or plastic type on the likelihood of causing harm, ~~in order to be able to focus management strategies in future;~~
- 7 bis. *Further encourages* the Scientific Council to promote harmonization or standardization of protocols for the analysis of marine litter, including microplastics, in stranded organisms;
8. ~~*Invites*~~ *Requests* the Secretariat, subject to availability of resources, to work with the UNEP Regional Seas Programme to support standardization and implementation of methods for studies monitoring impacts in order to produce comparable data across species and regions that will allow robust ranking of debris types for risk of harm across different species groups;
9. ~~*Further*~~ *Requests* that working groups established under the Scientific Council incorporate the issue of marine debris where relevant, drawing on the work already undertaken by the Convention;

Commercial Marine Vessel Best Practice

10. ~~*Strongly encourages*~~ *Calls upon* Parties and *invites* other stakeholders to address the issue of abandoned, lost or otherwise discarded fishing gear (ALDFG), by following the strategies set out under the Food and Agriculture Organization's Code of Conduct for Responsible Fisheries;
- 10 bis. *Further encourages* Parties and *invites* other stakeholders to work towards achieving Goal B of the Global Framework for Prevention and Management of Marine Debris, agreed as part of the Honolulu Strategy: "Reduced amount and impact of sea-based sources of marine debris, including solid waste; lost cargo; abandoned, lost, or otherwise discarded fishing gear (ALDFG); and abandoned vessels, introduced into the sea";
- 10 ter. *Invites* Parties to MARPOL Annex V to review and improve, if required, provisions regarding applicability to fishing vessels and deliberate abandonment of fish aggregating devices (FADs) and other types of fishing gear that contain plastics;
11. ~~*Further*~~ *Encourages* Parties to promote measures such as the Clean Shipping Index and marine environmental awareness courses among shipping operators;
- 11 bis. *Calls upon* Parties to require of their shipping operators adherence to national obligations also when in areas beyond national jurisdiction;
12. *Invites* the United Nations Environment Programme to continue and increase its leading role in acting as a moderator between the different stakeholders in the maritime industry, and facilitating coordination to enable best practice measures to be implemented;
13. *Encourages* shipping operators, ports and other key industries involved with the international transport of goods to drive environmental demands, including adopting ~~the indirect fees systems in ports that incentivise waste delivery through an indirect fee and deposit-refund system,~~ supporting the improvement of port waste reception facilities in general, requiring fishing equipment to be subject to mandatory deposit-and-refund schemes under extended producer responsibility, ~~adopting, where possible, the use of waste-to-energy systems~~ waste prevention measures on vessels and implementing relevant ISO standards;

Industry Action, Public Awareness and Education Campaigns

14. *Invites* industry bodies and other entities in the private sector to give high priority to debris prevention measures and to promote debris prevention such measures across their industries; including through the following priority actions:
- a) progressive elimination of single-use plastics;
 - b) re-design of products and packaging for reuse and implementation of new delivery and collection models based on reusable packaging;
 - c) introduction of design changes that ensure high-quality, economic recycling;
 - d) establishment of after-use systems, collection and sorting infrastructure;
 - e) elimination of microplastic ingredients;
 - f) establishment of measures that prevent loss of pre-production plastics (pellets, flakes and powders) to the marine environment;
15. *Encourages Requests* Parties to establish public awareness campaigns in order to assist in preventing waste from reaching the marine environment and set up management initiatives for the removal of debris, including public beach and underwater clean-ups, such as 'fishing for litter' or 'dive against debris' schemes;
16. *Strongly encourages* Parties to note the examples of successful campaigns provided in UNEP/CMS/ScC18/10.4.3 when considering campaigns to address the most pressing needs in their area of jurisdiction, and to support or develop national or regional initiatives that respond to these needs;
17. *Recommends* that Parties planning to implement regulatory measures or economic instruments in order to reduce the amount of waste entering the environment to accompany these with behavioural change campaigns aiding their introduction by communicating the rationale for introducing the measure, and therefore increasing the likelihood of support;
18. *Encourages* Parties and the Secretariat to cooperate with organizations currently campaigning on marine debris, and seek to engage organizations dealing with migratory species to promote campaigns and raise awareness of marine debris amongst their members;
19. *Further encourages* Parties, the Secretariat and stakeholders to develop marine debris campaigns of specific relevance to migratory species;
20. *Calls on* campaigning organizations to survey the campaign reach, message recognition and impact upon the target behaviour or levels of marine debris in order to evaluate the success of a campaign and readily share that information to enable future campaigns to be effective;

Collaboration and Policy Interventions

- 20 bis. Calls upon Parties to establish and implement policies, regulatory frameworks and measures consistent with the waste hierarchy and the circular economy concept to achieve prevention and environmentally sound management of waste, and develop incentives for the private sector to consider the circular economy concept in their approach;
- 20 ter. Requests Parties to cooperate regionally and globally on clean-up actions of hotspots of marine debris, with particular attention given to areas where migratory species are at higher risk, and to follow best available techniques and responsible environmental practices for the removal and sound disposal of debris;
21. *Recommends that Urges* Parties to develop and implement their own national plans of action which should address the negative impacts of marine debris in waters within their

jurisdiction, ~~and which could also elaborate the benefits of including the establishment~~ ing of domestic programmes for the management of marine debris, particularly in relation to lost, abandoned, and otherwise discarded fishing gear (ALDFG) and the problems of 'ghost fishing' that arise from these;

22. *Encourages* Parties and organizations to build capacity in and support the efforts of Parties with limited resources in the development and implementation of their national plans of action for marine debris;
23. *Calls upon* Parties to incorporate quantitative marine debris reduction targets when developing marine debris management strategies, including targets relating directly to impacts on migratory species, and to ensure that any marine debris management strategies plan for and carry out evaluation;
24. *Invites* Further calls upon Parties, in partnership with the private sector and civil society, to ~~consider implementing cost-effective market-based instruments or other measures~~ making use of incentives for the prevention of debris, such as:
 - a) levies or bans on single-use carrier bags and other single-use plastics;
 - b) deposit refund systems for beverage containers;
 - c) extended producer responsibility;
 - d) establishment of new business models based on reusable products and packaging;
 - e) ~~and~~ obligations for the use of reusable items at events as appropriate to national circumstances;
 - f) phasing-out of disposable plastics;
 - g) phasing out of primary microplastics in products such as personal care-products, industrial abrasives, printing products, and their replacement with organic or mineral non-hazardous compounds;
 - h) facilitating of technical solutions to prevent the entering of synthetic laundry fibres into the waste water;
 - i) promoting technical material innovations to halt microplastics from tyre abrasions entering the environment;
 - j) subjecting fishing gear to mandatory deposit-and-refund schemes;
 - k) promoting waste delivery in ports through an indirect fee and deposit-refund system;
- 24 bis. Also calls upon Parties to report on measures taken and their relative success;
25. *Encourages* Parties that have not yet done so to join other relevant Conventions such as MARPOL Annex V and the London Protocol, to join Protocols to Regional Seas Conventions on Pollution from Land Based Sources, and to include the prevention and management of marine debris in relevant national legislation;
26. *Further encourages* the Parties to engage, as appropriate, with other global marine initiatives such as the UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA-Marine), the Regional Seas Programmes, the Global Partnership on Marine Litter (GPML), the Global Partnership on Waste Management (GPWM);
27. *Further encourages* Parties to continue working on the issue of management of marine debris in order to reach agreed conclusions on this subject;
28. *Requests* the Scientific Council, with support from the Secretariat, to further the Convention's work on the marine debris issue and investigate the feasibility of—close cooperation with other biodiversity-related agreements by means of a multilateral working group;

28 bis. Invites CMS Family Agreement Secretariats to submit data related to the impacts of marine debris, including microplastics, on migratory species covered by these Agreements for the consideration of the Scientific Council;

28 ter. Requests the Secretariat to engage actively in the Global Partnership on Marine Litter (GPML) and to promote the consideration of migratory species-related aspects in all activities;

29. *Further requests* the Secretariat, subject to availability of resources, to foster linkages with relevant regional and other international instruments, such as IMO, FAO, UNEP Regional Seas Conventions and other fora, to promote synergies, to avoid duplication, to share information and to maximize efforts to reduce the impact of marine debris on migratory species; and

Final Provisions

30. *Repeals*

- a) Resolution 10.4, Marine Debris; and
- b) Resolution 11.30, Management of Marine Debris.