



**CONVENTION ON  
MIGRATORY  
SPECIES**

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Agenda Item 26.4

**IMPACTS OF PLASTIC POLLUTION ON  
AQUATIC, TERRESTRIAL AND AVIAN SPECIES**

*(Prepared by the Secretariat)*

Summary:

This document seeks to raise to the attention of the Conference of the Parties emerging issues regarding the impacts of plastic pollution on non-marine species. It also proposes the adoption of Decisions as contained in the Annex.

## Background

1. The Conference of the Parties at its 12<sup>th</sup> meeting (COP12, Manila, 2017), adopted Resolution 12.20 *Management of Marine Debris*. The Secretariat has been engaged in numerous activities to support implementation of this Resolution. The Secretariat has also been tracking international developments on plastic pollution in other international bodies, such as the United Nations Environment Programme (UNEP). At the same time, the Secretariat has become aware of a number of studies that indicate that plastic pollution may also pose threats to non-marine species, including terrestrial and freshwater species. Thus, the Conference of the Parties may wish to take further actions in this area, as discussed below.

## Activities since COP12

2. The main focus of the Secretariat in this period has been on outreach and communication activities to raise awareness about the impacts of marine debris. This includes outreach through the 2019 World Migratory Bird Day (WMBD), in collaboration with the Secretariat of the Africa-Eurasian Waterbird Agreement and key WMBD partner Environment for the Americas. The 2019 campaign had the theme of *Protect Birds: Be the Solution to Plastic Pollution*. In total 558 events were organized in 70 countries across the world. The campaign was mentioned in 11,500 social media posts and an estimate shows that it reached approximately 128 million people<sup>1</sup>.

## International policy developments since COP12

3. Since COP12, there have been a number of major developments with regards to the international policy on plastic pollution. Notably, the Fourth Session of the UN Environment Assembly (UNEA)<sup>2</sup> adopted the [Ministerial declaration on innovative solutions for environmental challenges and sustainable consumption and production](#)<sup>3</sup>, calling for the reduction of the production and use of single-use plastic products.
4. At the same session, UNEA adopted [Resolution 4/6 marine plastic litter and microplastics](#)<sup>4</sup>. The resolution, *inter alia*, requested the Executive Director of the United Nations Environment Programme to strengthen scientific and technical knowledge on marine litter including by [C]*compiling available scientific and other relevant data and information to prepare an assessment on sources, pathways and hazards of litter, including plastic litter and microplastics pollution, and its presence in rivers and oceans; scientific knowledge about adverse effects on ecosystems and potential adverse effects on human health; and environmentally sound technological innovations*<sup>5</sup>.
5. UNEA further decided to strengthen coordination and cooperation mechanisms by establishing a multi-stakeholder platform within the United Nations Environment Programme to take immediate action towards the long-term elimination of marine litter, through life-cycle approach, including by [E]*establishing and maintaining a database of technical and scientific information related to marine litter, such as inventories of discharges into the marine environment, scientific studies and innovations to address marine litter*<sup>6</sup>.

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1 See <https://www.cms.int/en/news/world-migratory-bird-day-2019-sparks-major-support>

2 UNEP/Ea.4/HLS.1

3 UNEP/Ea.4/HLS.1

4 Operative Paragraph 1

5 UNEP/Ea.4/Res.6 Paragraph 2(b)

6 UNEP/Ea.4/Res.6 Paragraph 3(d)

6. During the intersessional period of the Assembly, the ad hoc open-ended expert group<sup>7</sup> will, inter alia, *take stock of existing activities and action by governments, regional and global instruments, international organizations, the private sector, non-governmental organizations and other relevant contributors to reduce marine plastic litter and microplastics<sup>8</sup> and analyse the effectiveness of existing and potential response options and activities with regard to marine litter and microplastics at all levels to determine the contribution that they make to solving the global problem<sup>9</sup>.*
7. These activities under UNEA including the new assessment on sources, pathways, and hazards of marine litter and microplastics<sup>10</sup> will help Parties address the impact of marine debris on migratory species in line with CMS Resolution 12.20.
8. Another significant development was the adoption of several amendments to the Annexes to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) to include plastic waste<sup>11</sup> (COP14, Geneva, 2019). A working group of the Basel Convention Partnership in Plastic Waste<sup>12</sup> was also established to improve and promote the environmentally sound management of plastic waste at the global, regional and national levels and prevent and minimize their generation.

#### Impact of plastic waste on migratory species living in terrestrial and freshwater ecosystems

9. Historically, scientific research on plastic pollution has focused on impacts on marine species. Studies examining the impact of plastic pollution on those species that live in terrestrial and freshwater ecosystems have been relatively scarce.
10. At the same time, the vast majority of marine debris is generated through land-based human activities<sup>13</sup>. Jambeck et al (2015)<sup>14</sup> estimated that annually between 4.8 and 12.7 million tons of land-based plastic waste end up in the ocean, and rivers carry 1.15 to 2.41 million tons of plastic waste to the ocean every year. Plastics are also discarded in landfills and in informal waste dumps. Thus, there is a strong likelihood that plastics may impact terrestrial and freshwater systems and species.
11. A number of recent studies demonstrate that plastics, including microplastics, can interact with species in terrestrial and freshwater ecosystems<sup>15</sup>. Digestion of plastics and microplastics has been observed in terrestrial, avian and aquatic species including African Elephants<sup>16</sup>, Storks<sup>17</sup>, and freshwater fish<sup>18</sup>. Further scientific research is needed to better understand the scale and extent of the impact of plastic waste on CMS-listed species living in terrestrial and freshwater ecosystems.

7 Established by UNEA resolution 3/7. The mandate was extended until the fifth session of UNEA through UNEA resolution 4/6.

8 UNEP/Ea.4/Res.6 Paragraph 7(a)

9 UNEP/Ea.4/Res.6 Paragraph 7(c)

10 Pursuant to UNEP/EA.4/Res.6 paragraph 2.(b), an assessment on sources, pathways, and hazards of litter including plastic litter and microplastic pollution will be prepared

11 UNEP/CHW.14/28 BC -14/12: Amendments to Annexes II, VIII and IX to the Basel Convention

12 UNEP/CHW.14/28 BC -14/13: Further actions to address plastic waste under the Basel Convention. Paragraph 24

13 GESAMP. Sources, fate and effects of microplastics in the marine environment: part two of a global assessment (eds Kershaw, P. J. & Rochman, C. M.). (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 93, 220 (2016).

14 Jambeck, J. R., Geyer, R., Wilcox, C., Siegler, T. R., Perryman, M., Andrady, A., ... & Law, K. L. (2015). Plastic waste inputs from land into the ocean. *Science*, 347(6223), 768-771.

15 de Souza Machado, A. A., Kloas, W., Zarfl, C., Hempel, S., & Rillig, M. C. (2018). Microplastics as an emerging threat to terrestrial ecosystems. *Global change biology*, 24(4), 1405-1416.

16 See <https://www.enca.com/life/vic-falls-elephants-die-after-eating-plastic>

17 Sazima, I. and Angelo, G. B. D., Handling and intake of plastic debris by wood storks at an urban site in south-eastern Brazil: possible causes and consequences. *North-West. J. Zool.*, 2015, 11, 372-374.

18 Sanchez, W., Bender, C., & Porcher, J. M. (2014). Wild gudgeons (*Gobio gobio*) from French rivers are contaminated by microplastics: preliminary study and first evidence. *Environmental research*, 128, 98-100.

### Discussion and analysis

12. In light of recent developments, stronger cooperation with the United Nations Environment Programme and other multilateral environmental agreements is needed to enhance synergies with ongoing efforts to prevent and reduce the impacts of plastic pollution on CMS-listed species.

#### *a) Cooperation with the United Nations Environment Programme*

13. As per UNEA Resolution 4/6, CMS Parties, non-Party Range States and partner organisations have an opportunity to submit information related to the implementation of CMS Resolution 12.20 as part of their submissions to the United Nations Environment Programme including the following:
- a. Technical and scientific information related to marine litter, such as inventories of discharges into the marine environment, scientific studies and innovation to address marine litter (CMS Resolution 12.20 paragraph 6, 7 and UNEA Resolution 4/6 Paragraph 2.(b), 2.(d)) ; and
  - b. Existing activities which aim to prevent and reduce marine plastic litter and microplastics (CMS Resolution 12.20 under sections *Commercial Marine Vessel Best Practices, Industry Action, Public Awareness and Education Campaign, and Collaboration and Policy Interventions* and UNEA Resolution 4/6 Paragraph 7.(a)).
14. Further cooperation between the Scientific Council and other scientific mechanisms will help exchange scientific and other relevant data and information related to the prevention and reduction of the impact of plastics on migratory species<sup>19</sup>.

#### *b) Impact of plastic waste on migratory species living in terrestrial and freshwater ecosystems*

15. Given the knowledge gap on the impact of plastic waste on CMS-listed species living in terrestrial and freshwater ecosystems, as a first step, an examination of existing scientific literature on the impact of plastic pollution on those species is needed. Based on the findings, it would be useful to identify gaps and areas where additional focus would be warranted, as well as guidance on effective measures to prevent negative impacts of plastic pollution on avian, freshwater and terrestrial migratory species listed on CMS may be required. Such measures may include the improvement of waste management in and around nature reserves since some wildlife species are known to feed in or around dumpsites<sup>20</sup>.

### Recommended actions

16. The Conference of the Parties is recommended to adopt draft Decisions as contained in the Annex of this document.

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<sup>19</sup> See UNEA Resolution 4/6 paragraph 3.(e)

<sup>20</sup> Katlam, G., Prasad, S., Aggarwal, M., & Kumar, R. (2018). Trash on the menu: patterns of animal visitation and foraging behaviour at garbage dumps. *CURRENT SCIENCE*, 115(12), 2322.

## DRAFT DECISIONS

**IMPACTS OF PLASTIC POLLUTION ON  
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13.AA Parties are invited to:

- a) Submit relevant information on the implementation of Resolution 12.20 as part of their responses to the requests made by the United Nations Environment Programme in relation to UNEA Resolution 4/6;
- b) Encourage further research on the impact of plastic pollution on freshwater and terrestrial CMS-listed species, by academia, research organizations and other relevant stakeholders.

***Directed to the Scientific Council***

13.BB The Scientific Council is requested, subject to the availability of resources, to:

- a) Develop a concise report summarizing the status of knowledge on the impact of plastic pollution on CMS-listed species that inhabit in terrestrial and freshwater ecosystems, and submit the report to the Conference of the Parties at its 14<sup>th</sup> meeting, as well as a summary of existing guidance on measures to address such threats;
- b) Based on the report to be developed under paragraph 13.BB (a), recommend possible next steps for addressing this threat on CMS-listed species;
- c) Collaborate with other scientific mechanisms such as those under the International Whaling Commission, the United Nations Environment Programme and other multilateral environmental agreements to exchange available scientific and other relevant data and information related to the prevention and reduction of the impact of plastics on migratory species, including the report developed under paragraphs (a) and (b).

***Directed to the Secretariat***

13.CC The Secretariat shall:

- a) Strengthen cooperation and work with the United Nations Environment Programme to ensure that the process established under UNEA Resolution 4/6 will contribute to the efforts under CMS Resolution 12.20 to address the impact of marine debris and plastic pollution more broadly on migratory species; and
- b) Subject to the availability of resources, support the work of the Scientific Council pursuant to Decision 13.BB.