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Agenda Item 28.8

INSECT DECLINE AND ITS THREATS TO MIGRATORY INSECTIVOROUS ANIMAL POPULATIONS

(Prepared by the Scientific Council)

Summary:

This document reports on progress to implement Decisions 14.216–14.217 *Insect Decline and its Threat to Migratory Insectivorous Animal Populations*. It proposes amendments to Resolution 13.6 *Insect decline and its threat to migratory insectivorous animal populations,* and the deletion of Decisions 14.216–14.217.

The amended Resolution 13.16 would support the achievement of Targets 1.1–1.3, 2.1–2.3, 3.4, 4.1 and 5.3 of the Samarkand Strategic Plan for Migratory Species 2024–2032.

INSECT DECLINE AND ITS THREATS TO MIGRATORY INSECTIVOROUS ANIMAL POPULATIONS

Background

1. There is consensus among the scientific community on the vital role of insects in the proper functioning of many of the world's ecosystems and their services, and on the fact that insect biodiversity and biomass are declining dramatically around the world. This is substantiated by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services' (IPBES) global assessment report on biodiversity and ecosystem services, which also highlights rapid declines in insect biomass and abundance.

2. Insects represent an essential food resource for numerous vertebrate species, many of which are migratory species. Insect decline can therefore have a significant impact on a range of migratory species, especially bird and bat species.

3. The 13th meeting of the Conference of the Parties (COP13) adopted Resolution 13.6 *Insect Decline and its Threat to Migratory Insectivorous Animal Populations*. The Resolution, inter alia, calls upon Parties to support scientific research on the impact of insect decline on migratory insectivorous animal populations and promote continued collaboration between scientists, professionals, stakeholders and international bodies whose work is related to insect decline.

4. The report, 'Insect Decline and its Threat to Migratory Insectivorous Animal Populations', prepared for the CMS Secretariat by the Leibniz Institute for the Analysis of Biodiversity Change in 2023, with funding from the Australian and German governments, reviewed scientific literature on insect population declines, key drivers, and their direct and indirect impacts on migratory insectivorous species. The key messages and recommendations from the report were presented to COP14 as document UNEP/CMS/COP14/Doc.30.4.2/Rev.1, with the full report available as UNEP/CMS/COP14/Inf.30.4.2.

5. After considering the report, COP14 adopted Decisions 14.216–14.217 *Insect Decline and its Threat to Migratory Insectivorous Animal Populations*, which read as follows:

> ***14.216 Directed to the Scientific Council***
>
> *The Scientific Council is requested, subject to the availability of resources, to consider and, as appropriate, to provide recommendations to COP15 on:*
>
> *a) the findings of the report "Insect Decline and its Threat to Migratory Insectivorous Animal Populations";*
> *b) prioritizing the main factors causing the established loss of insect biomass;*
> *c) collecting additional relevant information regarding the current insect decline, and assessing its cascading effects on migratory insectivorous animal species, including the role of insects in connectivity;*
> *d) developing guidelines for the prioritized actions identified.*

14.217 Directed to the Secretariat

The Secretariat is requested, subject to the availability of resources, to:

a) disseminate the report on "Insect Decline and its Threat to Migratory Insectivorous Animal Populations" to relevant stakeholders, and raise awareness of its findings and recommendations in appropriate forums;

b) support the Scientific Council in reviewing the findings and recommendations of the report and in implementing any follow-up actions as part of its programme of work.

Activities

6. In response to Decision 14.217, the Secretariat published and disseminated the report as part of the World Migratory Bird Day 2024 campaign, with the theme "Protect Insects, Protect Birds". The report was used to develop key messages and other campaign materials, such as a webinar on insects held on 12 October 2024.

7. In its consideration of the report, the 7th meeting of the Sessional Committee of the Scientific Council (ScC-SC7) recognized the complexity of the issue, the need for further research, and the potential for collaboration with other working groups established under the Scientific Council on related topics such as light pollution and poisoning.

8. To implement Decision 14.216, ScC-SC7 formed a Consultative Group on Insect Decline and Migratory species to bring in external expertise.

9. The Consultative Group met three times between January and July 2025 to review the findings of the report, in line with paragraph (a) of Decision 14.216. The Group also proposed revisions to Resolution 13.6. A summary of the main findings of the Consultative Group is contained in Annex 2.

Recommended actions

10. The Conference of the Parties is recommended to:

    a) adopt the draft amendments to Resolution 13.6 contained in Annex 1 of this document;

    b) note the summary of the findings of the Consultative Group on Insect Decline and Migratory species contained in Annex 1 of this document;

    c) delete Decisions 14.216 and 14.217.

ANNEX 1

PROPOSED AMENDMENTS TO RESOLUTION 13.6

INSECT DECLINE AND ITS THREAT TO MIGRATORY INSECTIVOROUS ANIMAL POPULATIONS

NB: Proposed new text is underlined. Text to be deleted is ~~crossed out~~.

Recalling that Article II of the Convention acknowledges the need to take action to avoid any migratory species becoming endangered,

Deeply concerned about the dramatic declines in insect biomass and the potential negative effects on migratory insectivorous animal populations, such as many bird and bat species, as outlined in the report 'Insect Decline and its Threat to Migratory Insectivorous Animal Populations',

Acknowledging Article VII of the Convention on Migratory Species, which states that the Conference of the Parties may make recommendations to the Parties for improving the effectiveness of the Convention,

Aware that environmental impact assessment is foreseen in other conventions concerned with biodiversity conservation, and in CMS Agreements,

Recalling that some CMS family instruments address the issue of insect decline and migratory species,

Welcoming EUROBATS Resolution 8.13 *Insect Decline as a Threat to Bat Populations in Europe*, and the urgent need for guidelines for prioritized action.

~~*Recalling* the Rio 15 principle,~~

Recalling Resolution 11.15 (Rev.COP12) *Preventing Poisoning of Migratory Birds*, which adopts the Guidelines to Prevent the Risk of Poisoning to Migratory Birds (contained in Annex 1 to UNEP/CMS/COP11/Doc.23.1.2) ~~including "[r]ecommendations to prevent risk to birds from insecticides used to protect crops"~~ as well as ~~"[n]oting the objectives of~~ the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, which promotes the environmentally sound use of hazardous chemicals and shared responsibility to protect the environment from harm~~"~~,

Further recalling Resolution 11.17 (Rev.COP12) which adopts the Action Plan for Migratory Landbirds in the African-Eurasian Region (AEMLAP) including a number of actions addressing intensive agriculture,

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

1. *Calls upon* the Parties and stakeholders, subject to the availability of resources, to:

   ~~a) encourage and support scientific research on the impact of insect decline on migratory insectivorous animal populations, e.g. birds, bats and freshwater fish; including identifying the gaps in research, species specific data collection and monitoring, making use where appropriate of existing monitoring methods, such as those developed by FAO or recognized by IUCN;~~

   b) avoid the detrimental effects of pesticide use on non-target insects to preserve insect biomass as a food resource of migratory insectivores in and around areas that are important for the conservation of these species, including by reducing the use of pesticides and related risks;

   c) promote action programmes for the conservation of insects and restoration of their habitats in consideration of their vulnerability, aiming at the known causes of insect decline, including pesticide usage and habitat loss;

   d) take a precautionary approach, in line with Principle 15 of the Rio Declaration, with respect to the use of pesticides, including enhancing efforts to promote sustainable agricultural practices;

   e) raise awareness regarding the concerns mentioned above with land managers and other stakeholders;

   f) promote continued cooperation and collaboration between scientists, professionals, stakeholders and international bodies, whose work is related to insect decline;

   g) work with CBD and other multilateral environmental agreements to promote conservation of insects as a food source for migratory species;

   h) promote scientific research on:

      i. the effects of insects on the functioning of ecosystems,
      ii. the impact of insect decline on the life cycle and migration cycle of migratory species (including species that are partially insectivorous during migration, or species that become facultatively insectivorous during breeding seasons),
      iii. the cascading effects of insect decline on food webs and connectivity for migratory species such as birds of prey that feed on small insectivorous or frugivorous species.

ANNEX 2

SUMMARY OF THE FINDINGS OF THE CONSULTATIVE GROUP ON INSECT DECLINE AND MIGRATORY SPECIES

The Consultative Group met three times between January and July 2025 to review the findings of the report, 'Insect Decline and its Threat to Migratory Insectivorous Animal Populations', in line with paragraph (a) of Decision 14.216.

The Consultative Group also undertook a number of activities in response to Decision 14.216 b)-d).

Decision 14.216 c): Collecting additional relevant information regarding the current insect decline, and assessing its cascading effects on migratory insectivorous animal species, including the role of insects in connectivity

The Consultative Group reached out to the Secretariats and contact points of CMS Agreements and Memoranda of Understanding, requesting information on:

1. whether insect decline is considered a threat to migratory insectivorous species listed under their respective instruments,

2. how this issue is being addressed through Decisions, Resolutions or Actions, and

3. if data is available on the impact of insect decline on migratory insectivorous species, or if any gaps in data or research have been identified.

With regards to the report's finding and the responses from the other CMS family bodies, the Consultative Group concluded the following:

a) Among the CMS-listed species (species groups), currently landbirds and bats are most likely to be affected by the ongoing insect decline and resulting lack of available food resources. Migratory freshwater fishes might also be severely affected by the lack of insect biomass but currently only a few species are listed on the CMS appendices. Insect species themselves can be highly migratory; however, currently only one species of migratory insect is listed on the CMS appendices.

b) Some CMS tools and measures are likely already (in parts) mitigating either the drivers of insect decline and/or the impact on for instance, the recommendations of the Preventing Poisoning Working Group include actions on agricultural pesticides. Other areas could incorporate insect decline in their programmes of work – the Convention's work on connectivity, for example, could be used to evaluate the lack of biomass in food-web interactions. Although, these areas are not specific to insects, the issue of insect decline might be best discussed within a broader scope.

Decision 14.216 b): Prioritizing the main factors causing the established loss of insect biomass

The Consultative Group acknowledged that there are important knowledge gaps. The Group recommended that Parties and organizations commission future studies to focus on:

a) **Broadening the scope of the research to other effects of insects on the functioning of ecosystems**, beside their role as a food source – e.g., habitat formation and habitat connectivity. This could include identifying synergies with the European Union Pollinator

Initiative,[1] to examine where a loss of insect species has an effect on the whole ecosystem and other species.

b) **Different interactions depending on the stage in the life/seasonal cycle of migratory species**, noting that the approach by the IUCN to classify insectivorous species (www.iucnredlist.org) or by the GBIF (www.gbif.org) misses some species that are partly insectivorous during their seasonal cycles, such as birds that become facultatively insectivorous during the breeding season (e.g. yellow-breasted bunting (*Emberiza aureola*; App. I) and yellow bunting (syn. Japanese yellow bunting; *Emberiza sulphurata*; App. II)) or outside the breeding season (e.g. red-footed falcon (*Falco vespertinus*; App. I), steppe eagle (Aquila nipalensis; App. I) and sooty falcon (*Falco concolor*; App. II)).

c) **Trophic cascading effects on other species not directly assessed**. The impact of the loss of food due to insect decline could cascade up the food chain to higher trophic levels such as bird of prey, thus multiplying the importance of insect decline.

Decision 14.216 d): developing guidelines for the prioritized actions identified

The Consultative Group concluded that certain animal groups (birds, fishes, mammals) are directly or indirectly affected by insect decline. For species from these groups listed in CMS, there are conservation measures in place under specific CMS instruments, such as Eurobats, the Landbirds Action Plan and the Raptors Memorandum of Understanding. The latter has an Action Plan for Sooty Falcon which identifies locust and quelea control operations as a threat to the species, and is developing an Action Plan for the Steppe Eagle which includes research on diet in Africa.

While the Consultative Group agreed that Resolution 13.6 provides an adequate general framework for Parties to address the issue of insect decline and migratory species, it proposed amendments to provide more detail on certain elements.

More specific actions are needed for selected groups of species, and these should be taken by the relevant agreements in the CMS family, or by relevant working groups. These could include:

a) a workstream on pesticides targeting insects in other relevant working groups,

b) consideration of trophic cascading effects and the lack of food resources within the connectivity or climate change working groups,

c) an overview of which CMS-listed species are particularly vulnerable to trophic cascading effects as they rely on insectivorous prey (small birds and bats) throughout their life cycle (e.g. as many raptors do),

d) consideration of whether it might be necessary to list migratory species impacted by insect decline on the CMS appendices in the future.

1 https://environment.ec.europa.eu/topics/nature-and-biodiversity/pollinators_en