



**CONVENTION ON
MIGRATORY
SPECIES**

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Agenda Item 28.7

ScS-SC8 CRP 11.7

LIGHT POLLUTION

(Prepared by the Scientific Council)

Summary:

This document reports on progress to implement Decisions 14.221 and 14.222 *CMS International Light Pollution Guidelines for Migratory Species*, ~~and~~ It proposes amendments to Resolution 13.5 (Rev.COP14) *CMS international light pollution guidelines for migratory species*, and the deletion of ~~these~~ Decisions 14.221 and 14.222.

LIGHT POLLUTION

Background

1. The CMS Conference of the Parties first addressed light pollution at its 13th meeting (COP13) through the adoption of Resolution 13.5 *CMS international light pollution guidelines for migratory species*, which highlighted the growing global prevalence of light pollution and its adverse effects on wildlife and ecosystems. Australia presented their own national guidelines on light pollution, laying the foundations for developing international guidance.
2. At COP14, new CMS [International Light Pollution Guidelines for Migratory Species](#) were adopted as part of [Resolution 13.5 \(Rev.COP14\)](#). These Guidelines contain technical appendices relating to migratory marine turtles, seabirds, shorebirds, landbirds and bats. The Guidelines detail the adverse impacts of light pollution on wildlife, provide a framework for managing light pollution, and offer practical recommendations for addressing the issue.
3. The following Decisions were adopted by COP14:

Decision 14.221: Directed to the Scientific Council

The Scientific Council is requested, subject to the availability of resources, to consider the issues under Decision 14.222 in the 7th or 8th Meeting of the Sessional Committee, including possible new evidence of impacts and developments concerning mitigation methods, and provide recommendations to COP15 and advice to the Secretariat on the implementation of Decision 14.222.

Decision 14.222: Directed to the Secretariat

The Secretariat shall:

- a) *subject to the availability of resources, consider the preparation of additional annexes to the CMS International Light Pollution Guidelines for Migratory Species for adoption by COP15 on how to effectively avoid and mitigate the indirect and direct negative effects of light pollution for those taxa not yet in the focus of the guidelines, such as fish, taking also into account other existing guidance as relevant;*
- b) *disseminate the CMS International Light Pollution Guidelines for Migratory Species widely, including to other multilateral environment agreements, regional agreements and programmes, intergovernmental organizations, Parties and other stakeholders; and*
- c) *subject to the availability of resources, support Parties and stakeholders in implementing the CMS International Light Pollution Guidelines for Migratory Species, through webinars and other activities*

Activities

4. The 7th meeting of the Sessional Committee of the Scientific Council concluded that an online expert consultation meeting on light pollution would be held to discuss implementation of Decisions 14.221 and 14.222.
5. A report of the online expert consultation meeting on light pollution is contained in the Annex to this document, and includes a list of activities that the experts involved in the meeting agreed to undertake.

6. To facilitate implementation of Decision 14.222 b), the Secretariat has made available the International Light Pollution Guidelines on a dedicated CMS [Light Pollution web page](#).

~~7.~~ Decisions 14.221 and 14.222 are thus considered implemented and are proposed for deletion.

~~7.8.~~ ScC-SC8 recommended to continue the work on light pollution and proposed amendments to the Resolution 13.5 (Rev.COP14) requesting the Secretariat to further promote the International Light Pollution Guidelines and inviting the Scientific Council to monitor new evidence of the impacts of light pollution and provide advice to the COP, as appropriate.

Recommended actions

~~8.9.~~ The Conference of the Parties is recommended to:

a) adopt the draft amendments to Resolution 13.5 contained in Annex 1 of this document;

~~a)b)~~ note the report of the expert consultation meeting contained in ~~the~~ Annex 2 to this document;

c) delete Decisions 14.221 and 14.222.

PROPOSED AMENDMENTS TO RESOLUTION 13.5

CMS INTERNATIONAL LIGHT POLLUTION GUIDELINES FOR MIGRATORY SPECIES

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

Acknowledging that artificial light is increasing globally by at least 2 per cent per year,

Recognizing that artificial light, particularly at night, is an emerging issue for the conservation of wildlife, astronomy and human health,

Further recognizing that when artificial light contributes to the brightening of the night sky it is called light pollution,

Alarmed that artificial light is known to adversely affect many species and ecological communities by disrupting critical behaviours in wildlife and functional processes, stalling the recovery of threatened species, and interfering with a migratory species' ability to undertake long-distance migrations integral to its life cycle, or by negatively influencing insects as a main prey of some migratory species,

Recognizing that artificial light at night also provides for human safety, amenity and increased productivity, and sometimes there are conflicting requirements for human safety and wildlife conservation,

Fully aware that there are both direct and indirect effects of artificial light that can be detrimental to many migratory species, including changing behaviour and/or physiology, reducing survivorship or reproductive output, or indirect effects on prey species, which has consequences for ecosystem functioning,

Noting that there are many documented instances of the negative effect of artificial light on migratory species, including avoidance by marine turtles of nesting on beaches that are artificially lit, migratory shorebirds using less preferable roost sites to avoid lights, and disruption in foraging and fledgling for a number of seabirds,

Recalling EUROBATS Resolution 8.6 on Bats and Light Pollution and its Guidelines for consideration of bats in lighting projects (Publication Series No.8), which encourages Parties to avoid or mitigate the negative impacts of light pollution on bats,

Noting with appreciation the endeavours of the Australian and New Zealand Governments in developing guidance in relation to managing light pollution, and which contributed to the development of the globally applicable CMS International Light Pollution Guidelines for Migratory Species, and

Also noting with appreciation that light pollution and its impact on migratory birds was the focus of the annual World Migratory Bird Day campaign in 2022, and *welcoming* in particular the cooperation with ICLEI – Local Governments for Sustainability in the context of the campaign that led to the development of an online *City Guide on Light Pollution* published by CMS and ICLEI,

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

1. *Confirms* that light pollution refers to artificial light that alters the natural patterns of light and dark in ecosystems;
2. *Acknowledges* that both humans and wildlife need the right light, in the right place, at the right time;
3. *Adopts* the CMS International Light Pollution Guidelines for Migratory Species (Guidelines) contained in the Annex to this Resolution designed to aid CMS Parties by providing a framework for assessing and managing the impact of artificial light on susceptible wildlife in their jurisdiction, noting that the Guidelines do not seek to inhibit the benefits afforded by artificial light, where this is necessary for human safety or similar important public interests;
4. *Encourages* Parties, in instances where artificial light is impacting migratory species, to find creative solutions that meet both human requirements and wildlife conservation;
5. *Implores* Parties to manage artificial light so that migratory species are not disrupted within, nor displaced from, important habitat, and are able to undertake critical behaviours such as foraging, reproduction and migration;
6. *Urges* Parties to use the Guidelines to adopt appropriate measures and processes designed to assess if a lighting project is likely to negatively affect wildlife and identify management tools to minimise and mitigate that impact;
7. *Recommends* that non-Parties and other stakeholders, including the business sector, and non-governmental organizations use and promote the Guidelines to facilitate broad uptake of processes designed to limit and mitigate the harmful effects of artificial light on migratory species;
8. *Requests* the Secretariat to promote the Guidelines to the CMS Parties and stakeholders, as well as the CMS Family, including its subsidiary Agreements and Memoranda of Understanding, and more broadly to other relevant multilateral environment agreements, ~~as well as~~ relevant regional agreements and programmes;
9. *Recommends* that Parties, non-Parties and other stakeholders dedicate more attention to night sky brightness and its monitoring including energy costs linked to nocturnal illuminations; and
10. *Recommends* that Parties encourage and support scientific research on the impacts of artificial light on wildlife.
- 10-11. *Invites the Scientific Council to monitor new evidence of the impacts of light pollution and provide advice to the COP, as appropriate.*

SUMMARY OF THE FINDINGS OF THE EXPERT CONSULTATION MEETING ON LIGHT POLLUTION

The online expert consultation meeting on light pollution took place on 23 May 2025. Fifteen experts and two members of the CMS Secretariat participated in the meeting. The following issues were discussed:

- Potential additional annexes to the Guidelines – Decision 14.222 (a)
- Dissemination of International Light Pollution Guidelines for Migratory Species – Decisions 14.222 (b) and (c)
- Australia's experience implementing and disseminating the Australian National Light Pollution Guidelines for Wildlife.

Potential additional annexes to the Guidelines: Decision 14.222 (a)

The meeting discussed the potential inclusion of migratory marine mammals in the CMS Light Pollution Guidelines, as well as an adapted version of the 'ecological communities' appendix from the Australian National Light Pollution Guidelines for Wildlife. The CMS Energy Task Force is currently exploring whether there is sufficient research to justify an additional appendix for migratory marine mammals.

The inclusion of invertebrates was raised, with references made to relevant studies cited in the guidelines of the Agreement on the Conservation of Populations of European Bats (EUROBATS).¹

The Australian Government has developed work on how light pollution affects invertebrates and their role as food sources, which could be relevant for migratory species.

It was suggested that the upcoming Artificial Light At Night (ALAN 2025) Conference could provide an opportunity to consult with more experts.

Experts did not identify an urgent need for specific additional guidance or amendment of the existing guidelines, and no follow-up action was proposed for the next triennium. After CMS reviews the impacts of light pollution on marine mammals, and after canvassing ALAN 2025 experts, the issue of potential additional appendices can be revisited. For now, the primary focus should remain on disseminating the Guidelines.

Dissemination of International Light Pollution Guidelines for Migratory Species: Decision 14.222 (b) and 14.222 (c)

The length and technical nature of the Guidelines was identified as a key barrier to dissemination. A shorter summary (focusing on policy messages) was recommended as a more practical tool for government engagement. It was noted that the first 20 pages of the CMS Guidelines are technically the main body of the document, while the rest is made up of appendices. No single version of the Guidelines will suit all, and tailored outputs may be

¹ [EUROBATS Publication Series No.8 | UNEP/EUROBATS](#)

needed to target specific stakeholders (e.g. government, NGOs or specific sectors). Developing online training modules targeting specific groups was suggested.

Further opportunities for strategic outreach and successful dissemination of the Guidelines were also discussed, such as a presenting them at the upcoming light pollution ALAN 2025 Conference in Westport, USA, or seeking endorsement of the Guidelines through the European Union (EU), CMS-hosted webinars on the issue, and potential partnerships with the International Commission on Illumination (CIE) and LightingEurope. The expert consultation meeting also discussed promoting dissemination through National Focal Points to increase awareness of the Guidelines among CMS Parties. Further proposals included organizing a side event at CMS COP15, and raising the issue at meetings of other relevant conventions – e.g., the Convention on Biological Diversity (CBD), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

Health concerns and energy efficiency were seen as promising entry points for motivating action. The importance of aligning with stakeholders' interests, such as public safety and energy conservation, was emphasized.

Concern was raised that some CMS Parties are not aware of the Guidelines despite their formal adoption by COP. It was suggested that CMS increase its internal efforts to ensure dissemination through National Focal Points and a CMS-hosted webinar.

Language accessibility was discussed, with a call to prominently display the Guidelines on the CMS website in the three languages of the Convention.

It was noted that lighting regulations often fall under national construction and safety codes, which rarely account for wildlife. Advocacy for wildlife-inclusive standards was proposed.

Further suggestions for disseminating the Light Pollution Guidelines more widely have been collected through email exchanges and include:

- a. preparing a concise two-page document (a 'How To' version) outlining the key considerations for assessing the impacts of artificial light at night (ALAN) on wildlife species, including a brief reference to relevant international instruments, such as the CBD Kunming-Montreal Global Biodiversity Framework;
- b. developing a short video series entitled 'CMS LP Guidelines 101', designed to explain what light pollution is, its impacts on wildlife, the purpose and content of the CMS Guidelines, and how they support light pollution mitigation efforts;
- c. identifying priority countries already taking action to reduce light pollution, and compiling a list of national contact points that can disseminate them;
- d. working with CMS Focal Points and Scientific Councillors to publicize the Guidelines within their government agencies, at both national and local levels (local councils, village heads);
- e. translating the Guidelines into the respective language of the countries they are published in (this could be done in stages – i.e., the first 20 pages, then relevant species-specific appendices as needed), including setting up a link to other languages on the CMS Light Pollution Topic Page;
- f. canvassing ALAN 2025 to determine if there are any gaps in the current CMS Guidelines;

- g. facilitating conversations with the CBD through National Biodiversity Strategies and Action Plans, as well as with the United Nations Framework Convention on Climate Change, to raise awareness of the CMS Guidelines and include them where relevant;
- h. promoting the [PLAN-B Horizon Europe Project policy brief on light pollution](#), which serves as a communication tool to raise awareness and provide guidance on light pollution mitigation within the EU and globally. The brief references the International Guidelines, urging the EU to use them as a framework for assessing ALAN impacts in environmental impact assessment;
- i. disseminating the Guidelines at the [20th International Bat Research Conference](#) in Cairns, Australia;
- j. publicizing the CMS Guidelines to local non-governmental organizations, industry groups, airports, ports and developers who are likely to be installing and responsible for lots of lights, as well as to local light suppliers and designers;
- k. approaching local universities to consider including the Guidelines as part of their course outlines for training environmental scientists, biologists, conservationists, lighting engineers, architects, lighting designers, etc.; and
- l. making the adoption of the Guidelines a requirement of World Bank (or equivalent if that is not appropriate) funding for international projects.

Experience with implementing and disseminating guidelines on light pollution

Australia presented their experience in implementing the Australian National Light Pollution Guidelines for Wildlife.

- a. They acknowledged encountering opposition, primarily at the local level, with some stakeholders perceiving areas like local beaches as not significant enough to warrant changes. Legislative guidelines were scaffolded, and public engagement is planned as part of the ongoing process.
- b. To address compliance issues, especially in multi-residential buildings, efforts such as introducing different types of light bulbs have been initiated.
- c. Concerns about personal perceptions of safety and normality were noted as significant barriers to implementation. Engagement with sites with bright light sources is conducted openly, often starting with requests to apply the Guidelines. If unsuccessful, impact monitoring and regulatory fines are considered.
- d. Leading by example is important; demonstrating compliance first before asking the public to participate helps build cooperation.
- e. Australia plans to develop a web-based platform with a user-friendly interface to allow non-experts to assess light pollution levels at any location and for any existing or proposed artificial light source. This could be relevant for CMS due to its potential to contribute to managing light pollution in conservation efforts for migratory species.

New Zealand shared their experience of using the International Guidelines, highlighting the effectiveness of collaborations with the tourism sector.