

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p>Sixth Meeting of the Population and Conservation Status Working Group</p> <p><i>Virtual meeting, 24 – 25 August 2021 (UTC+10)</i></p> <p>Light pollution guidelines for wildlife</p> <p><i>Karen Arthur, Kerry Steinberner & Jonathon HS Barrington</i></p>
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Attachment: Commonwealth of Australia. 2020. *National light pollution guidelines for wildlife including marine turtles, seabirds and migratory shorebirds*, Department of the Environment and Energy, Canberra. <https://www.environment.gov.au/biodiversity/publications/national-light-pollution-guidelines-wildlife>.

SUMMARY

Australia has developed light pollution guidelines for wildlife. The guidelines identify the potential effects of artificial light on wildlife and provide a framework for assessing and managing impacts on susceptible wildlife. Best practice light design principles are outlined that are applicable in marine and terrestrial settings. The guidelines provide specific information about the potential effects of artificial light on marine turtles, seabirds and migratory shorebirds. For seabirds, information is provided about the way in which artificial light may affect birds, approaches for conducting an environmental impact assessment specific to artificial light, as well as a seabird light mitigation toolbox. The guidelines facilitate adaptive management of artificial light near susceptible wildlife. The light pollution guidelines were considered and endorsed by the 13th Conference of Parties to the Convention on the Conservation of Migratory Species of Wild Animals: Gandhinagar, India, 17–22 February 2020.

RECOMMENDATIONS

1. That PaCSWG reviews the light pollution guidelines for wildlife and their applicability to seabirds.
2. That PaCSWG considers recommending the light pollution guidelines for wildlife as an aid for assessing and managing the impact of artificial light on seabirds including albatrosses and petrels, noting the relevance of the guidelines to other susceptible wildlife.

Directrices sobre contaminación lumínica respecto de la vida silvestre

RESUMEN

Australia ha elaborado directrices sobre la contaminación lumínica respecto de la vida silvestre. En ellas, se identifican los posibles efectos de la luz artificial sobre la vida silvestre y se proporciona un marco para evaluar y gestionar los impactos sobre las especies silvestres susceptibles. Se describen principios de mejores prácticas de diseño lumínico aplicables en entornos marinos y terrestres. Las directrices proporcionan información específica sobre los posibles efectos de la luz artificial en las tortugas marinas, las aves marinas y las aves costeras migratorias. En el caso de las aves marinas, se describen la forma en que la luz artificial puede afectarlas, los enfoques para realizar una evaluación de impacto ambiental específica sobre luz artificial y las herramientas de mitigación de la contaminación lumínica respecto de las aves marinas. Las directrices facilitan la gestión adaptativa de la luz artificial cerca de las especies silvestres susceptibles. Las directrices sobre contaminación lumínica fueron examinadas y refrendadas por la 13.^a Conferencia de las Partes en la Convención sobre la Conservación de las Especies Migratorias de Animales Silvestres, celebrada en Gandhinagar, India, del 17 al 22 de febrero de 2020.

RECOMENDACIONES

1. Que el GdTPEC revise las directrices sobre contaminación lumínica respecto de la vida silvestre y su aplicabilidad a las aves marinas.
2. Que el GdTPEC considere recomendar las directrices sobre contaminación lumínica respecto de la vida silvestre como una ayuda para evaluar y gestionar el impacto de la luz artificial en las aves marinas, entre ellas, albatros y petreles, señalando la importancia de las directrices para otras especies silvestres susceptibles.

Lignes directrices relatives à l'impact de la pollution lumineuse sur les espèces sauvages

RÉSUMÉ

L'Australie a élaboré des lignes directrices concernant l'impact de la pollution lumineuse sur les espèces sauvages. Lesdites lignes directrices recensent les effets potentiels de la lumière artificielle sur les espèces sauvages et fournissent un cadre pour l'évaluation et la gestion des impacts sur les espèces vulnérables. Elles décrivent des principes de bonnes pratiques pour l'aménagement de l'éclairage qui sont applicables aux milieux marins et terrestres. Elles fournissent des informations détaillées sur les effets potentiels de la lumière artificielle sur les tortues de mer, les oiseaux marins et les oiseaux côtiers migrateurs. Concernant les oiseaux marins, elles recensent les effets de la lumière artificielle sur ces espèces, indiquent des méthodes pour mener une évaluation de l'impact sur l'environnement spécifique à la lumière artificielle et fournissent une boîte à outils pour l'atténuation de l'impact de la lumière sur ces oiseaux. Ces lignes directrices permettent une gestion adaptée de la lumière artificielle dans les milieux des espèces sauvages vulnérables. Les lignes directrices sur la pollution lumineuse ont été examinées et adoptées par la treizième conférence des parties de la Convention sur la conservation des espèces migratrices appartenant à la faune sauvage : Gandhinagar, Inde, 17-22 février 2020.

RECOMMANDATIONS

1. Le GTSPC est invité à examiner les lignes directrices relatives à l'impact de la pollution lumineuse sur les espèces sauvages et leur applicabilité aux oiseaux marins.
2. Le GTSPC est invité à examiner la possibilité de recommander lesdites lignes directrices comme outil pour évaluer et gérer l'impact de la lumière artificielle sur les oiseaux marins, notamment sur les albatros et les pétrels, au regard de leur pertinence sur d'autres espèces sauvages vulnérables.

1. BACKGROUND

The PaCSWG has encouraged the development of guidelines for mitigating the impact of light pollution on seabirds, both on land and at sea (see discussion at PaCSWG4 and PaCSWG5). Complementary discussions have been occurring under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS).¹

Globally, artificial light is increasing by around two per cent per year. It is an emerging issue for the conservation of wildlife, recognising that artificial light is needed for human safety, increased productivity and amenity. Artificial light can, among other things: disrupt critical

¹ *Convention on the Conservation of Migratory Species of Wild Animals*, done 23 June 1979, 1651 UNTS 333 (entered into force 1 November 1983), 'CMS'.

behaviours in wildlife; stall recovery of threatened species; interfere with the ability of migratory species to undertake long-distance migrations integral to the life cycle of the affected species; change behaviour and/or physiology, reducing survivorship or reproductive output; indirectly effect the availability of habitat or food resources; and attract predators and invasive pests.

The potential for artificial light to adversely affect seabirds including albatrosses and petrels is well known. Artificial light on land or at sea can, among other things: disorient seabirds, potentially causing injury and/or death through collision with vessels and infrastructure; disrupt foraging, hampering the ability of seabirds to prepare for breeding or migration; and ground fledglings that are attracted to lights.

2. LIGHT POLLUTION GUIDELINES FOR WILDLIFE

Australia has been considering the emerging issue of artificial light and its impacts on susceptible wildlife and has developed [National light pollution guidelines for wildlife including marine turtles, seabirds and migratory shorebirds](#). The guidelines facilitate adaptive management of artificial light near susceptible wildlife. The guidelines identify the potential effects of artificial light on wildlife and provide a framework for assessing and managing impacts on susceptible wildlife. Best practice light design principles are outlined that are applicable in marine and terrestrial settings. The guidelines provide specific information about the potential effects of artificial light on marine turtles, seabirds and migratory shorebirds.

The guidelines recognise the potential for conflicting requirements of light for human safety and wildlife conservation. The guidelines do not seek to inhibit the benefits afforded by artificial light, but aim to allow for human safety, while limiting unintended consequences on wildlife. The technology around lighting hardware, design and control is dynamic, and biological responses to artificial light vary by species, location and environmental conditions. Accordingly, the guidelines take an outcomes based approach to assessing and mitigating the effect of artificial light on wildlife, as it is not possible to set prescriptive limits on lighting.

The guidelines are applicable to new projects, lighting upgrades, and where there is evidence of wildlife being affected by existing artificial lighting. Best practice lighting design is recommended to reduce light pollution and minimise the effect on susceptible wildlife. Undertaking an environmental impact assessment for effects of artificial light on wildlife is recommended for species for which artificial light has been demonstrated to affect behaviour, survivorship or reproduction.

For seabirds, specific information is provided in the guidelines about the effects of artificial light, approaches for conducting an environmental impact assessment, as well as a seabird light mitigation toolbox. Adopting the light pollution guidelines for wildlife will aid in assessing and managing the impact of artificial light on seabirds including albatrosses and petrels, noting the relevance of the guidelines to other susceptible wildlife.

The light pollution guidelines for wildlife were considered and endorsed by the 13th Conference of Parties to the Convention on the Conservation of Migratory Species of Wild Animals: Gandhinagar, India, 17–22 February 2020 under [Resolution 13.5](#).