



# The crucial importance of biodiversity

## By the Convention of Biological Diversity (CBD)

The term ‘Biodiversity’ derived from “biological diversity,” refers to the diversity of life on Earth at all scales, from genes to ecosystems, and can include the ecological, evolutionary, and cultural processes that support life. The systems that sustain all life on Earth, including humans, depend on biodiversity. We cannot have the healthy ecosystems that we depend on to give us the air we breathe and the food we consume without a diverse variety of animals, plants, and microorganisms.

Like many different sectors impacting biodiversity, the aviation sector can have adverse effects on biodiversity in a number of ways, including habitat loss when airports and airfields grow, the dispersal or management of wildlife for practical purposes, and the effects of light and noise pollution on particular species. The impacts of aviation on biodiversity many times are addressed in the context of airport planning and thus it is important that the environmental assessments put more effort in identifying sensitive habitats, relevant risks and appropriate climate change mitigation (i.e. aircraft technologies, operational improvements, relocation/re-creation of habitats elsewhere to provide home for flora and fauna upon expansion, etc.)

In the context of pollution from aviation; fish, mammals, reptiles, amphibians, and invertebrates can all be extremely susceptible to light and noise pollution. According to a study (Brumm et al, 2019)<sup>1</sup>, even very low levels of human noise disruption can have a negative effect on an animal’s capacity to communicate and reproduce. By interfering with natural day-night rhythms and nighttime behaviours, light pollution affects biodiversity by interfering with many different animal species’ reproductive, feeding, and migratory cycles. Artificial lights can make migratory birds

confused, deplete their energy supplies, and undermine their chances of survival. Light pollution can increase the amount of time daytime feeders spend seeking, which can over-prey on some nocturnal species. When combined, noise and light pollution from traffic, shipping, urban development, and aviation can seriously disrupt the life of animal populations.

To cover all aspects of biological diversity across different sectors, including the aviation sector, the Convention of Biological Diversity (CBD) is a global agreement to conserve biodiversity with an overall objective of encouraging actions which will lead to a sustainable future. The convention has three main goals: the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the use of genetic resources.

The consequences of the aviation section on biodiversity can be further extrapolated with actions showcasing transformative actions from all stakeholders from this sector to help with climate change mitigation and adaptation and protection of biodiversity. As such, the Sharm El-Sheikh to Kunming Action Agenda for Nature and People (Action Agenda) is spearheaded by the Governments of China and Egypt, with support of the Secretariat of the Convention on Biological Diversity. It was created to foster engagement with non-state actors to inform, inspire and showcase voluntary commitments for biodiversity. The Action Agenda works with non-state actors to raise awareness on the urgency, ambition and concrete actions, across different sectors that can reduce the drivers of biodiversity loss and enable the needed shifts to halt and reverse biodiversity loss aligning to the post-2020 global biodiversity framework.

<sup>1</sup> <https://books.google.ca/books?hl=en&lr=&id=O5lnDwAAQBAJ&oi=fnd&pg=PA254&dq=noise+pollution+and+conservation,+encyclopedia+of+animal+behavior&ots=nOVeVkyDzU&sig=N0TAoQsBdQaOa7RHeGXiJosHlMO#v=onepage&q=noise%20pollution%20and%20conservation%2C%20encyclopedia%20of%20animal%20behavior&f=false>



There is an urgent need for international partners come together to halt and reverse the alarming loss of biodiversity. Hence, the 15<sup>th</sup> Conference of the Parties (COP15) meeting of the Convention on Biological Diversity (CBD) aims to bring together the world's governments to agree a new deal on halting the loss of animals, plants and habitats globally by 2030. This pivotal global biodiversity summit is set to be held in Montreal, Canada, in December 2022. On this road to COP 15, it is of an utmost importance to have joint collaboration between CBD, ICAO and all relevant partners and showcase to become part of this exciting opportunity

to adopt the global agreement that will kickstart the much needed transformation to halt and reserve biodiversity loss and taking actions to ensure minimal loss of biodiversity is affected by the aviation industry.

**References:**

Brumm, Henrik, and Andrew G. Horn. "Noise pollution and conservation." *Encyclopedia of animal behavior*, 2nd 1 (2019): 254-259.