

# The Impacts of Wind and Solar Power Plants on Wildlife

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The area occupied by wind and solar power plants is increasing rapidly, as policies around the world encourage the transition to renewable energy sources. However, such a scale of infrastructural interventions can affect biodiversity significantly at both the local and regional levels. Therefore, to support this development while also protecting wildlife, we need to understand what these impacts are and how to mitigate them. In this presentation, we provide a review of studies examining the various impacts of wind and solar power plants on wildlife.

The negative impacts of wind power plants can be direct (e.g. habitat destruction and fragmentation), or indirect (e.g. changes in interspecific relationships). They cause various types of disturbances that can lead to changes in behaviour, physiology, or space use in some species. A review of the existing literature shows that the responses of individual species vary, depending on their ecological niche and level of adaptability (e.g. Skarin et al. 2015; Bounas et al. 2025).

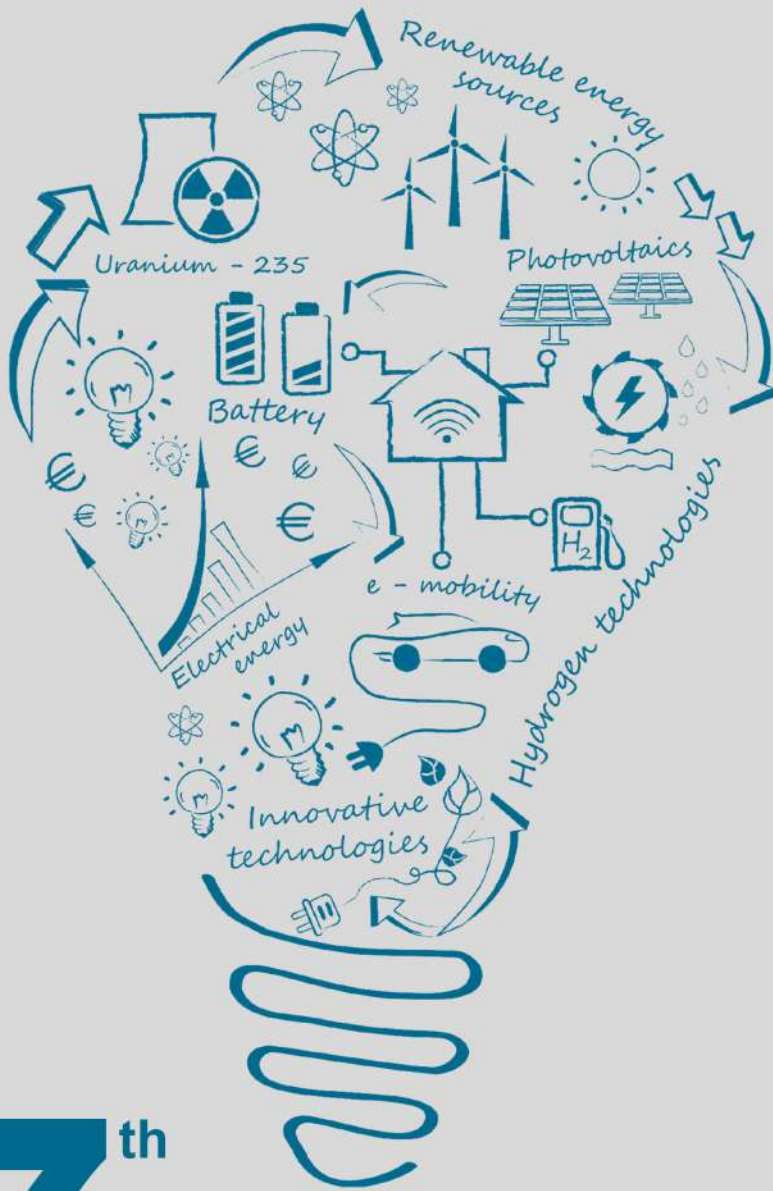
Solar power plants alter habitats through loss and fragmentation, changes in the microclimate, and the creation of new structures in the landscape. In connection with solar power plants, the so-called “lake effect” is also discussed often, as solar panels resemble and give a similar impression to calm water visually, which can, for example, confuse birds or bats in their perception and attract them as potential water surfaces, thereby increasing the risk of collisions and mortality (Fleming 2025).

The impacts on wildlife are multifaceted, species-specific and dependent on various factors.

**Keywords:** wind power plants, solar power plants, renewable resources, wildlife, disturbance

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