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Nature conservation and wind energy

Why are the Birds and Habitats Directives relevant to wind energy?

Climate change is the greatest long-term threat to biodiversity and a grave threat to the lives and livelihoods of millions of people. Without radical action to reduce emissions of greenhouse gases, we risk the potential extinction of at least one-third of land-based species. This is along with rising sea-levels, increased storminess, and severe droughts and floods, which will put massive strain on the world's food production resources and infrastructure.

The reduction of our energy consumption and an energy efficiency revolution is essential. At the same time, transforming the way we generate energy is critical to reducing our dependence on fossil fuels and reducing harmful emissions of greenhouse gases. Wind energy is an important part of renewable energy that has been making a growing contribution to energy generation worldwide, initially through onshore wind farms, but increasingly through offshore installations. BirdLife International supports the Renewable Energy Directive target (though it does not support the component required from renewable transport fuel) that 20% of the EU's energy supply must come from renewable energy sources by 2020.

However, energy generation, including from renewable sources, is not without potentially damaging consequences for nature conservation and ecosystems. These can include competition for areas of land with nature conservation value, and impacts on protected species, especially on large birds,

such as storks, pelicans and birds of prey. There is a need to ensure that wind developments are appropriately designed and sited, and to minimise any adverse effects on wildlife and their habitats. In the long term, maintaining nature's services is equally important as keeping climate change at bay.

What do the Directives say about wind energy?

The Birds and Habitats Directives set a balance between the need for development, including the construction of wind farms, and nature conservation. According to Article 6 of the Habitats Directive, if a development, including any wind farm, is likely to have a significant effect on the conservation objectives of a Natura 2000 site, an assessment of these impacts is required. If, from the assessment of impacts, it cannot be ascertained that there will not be an

adverse impact on the Natura 2000 site, then a development may only proceed if there are no alternatives available, and the development is necessary for "imperative reasons of overriding public interest"

Wind farms have the potential to have an adverse impact because of the space needed and potential collision and disturbance caused by the turbines. If the assessment of impacts showed this to be the case, the consideration of alternatives would include primarily other locations, but also alternative methods for renewable power generation, such as solar, or the upgrading (repowering) of existing wind farms. It is unlikely that an individual wind farm would give grounds for "imperative reasons of overriding public interest"

If a wind farm is proposed outside a Natura 2000 site, an assessment of impacts still might need to be undertaken, if the

Red-breasted goose, one of the species threatened by wind farm development in Bulgaria.



The UK's largest offshore wind farm at Scroby Sands, off Great Yarmouth.

development is likely to have a significant effect on any Natura 2000 site, for example, because the proposed wind farm is next to the Natura 2000 site, or because key bird species for which the Natura 2000 site was designated use the site for feeding.

How do wind farms affect birds?

There is evidence, e.g. from the US and Spain, that wind farms can cause serious problems for birds if they are not appropriately designed, sited and managed. The main potentially detrimental effects of wind farms on birds are:

- change to or loss of important habitats due to wind turbines and associated infrastructure
- collision with the moving turbine blades, with the turbine tower or associated infrastructure such as overhead powerlines, leading to bird deaths
- disturbance caused by the presence of the turbines, and/or by maintenance vehicles/vessels and people, as well as during the construction of wind farms, can result in birds avoiding the area of wind farms
- barriers to movement between feeding, wintering, breeding and moulting areas.

Wind farms can also have significant impacts on other species (e.g. bats and marine mammals).

What steps should be taken in developing new wind farms to prevent these impacts?

1 Strategic planning and impact assessment

Wind energy projects should be considered within a framework for sustainable development that integrates energy demand reduction and efficiency, a mix of renewable energy sources to meet an increasing proportion of overall energy demand and the protection of biodiversity.

National action plans for renewable energy should be consulted with relevant stakeholders and be subject to strategic environmental assessment, to ensure that nature conservation concerns are fully integrated into national decisions about meeting the EU targets. Such assessments should include "sensitivity mapping" of key species indicating the areas of highest vulnerability for wildlife that should be avoided. A strategic and collaborative approach is the best way to avoid implementation delays and opposition to individual wind energy projects.

2 Improved site selection

Wind farms must be located, designed and managed so that they minimise impacts on nationally or internationally important species of birds or their habitats. Given their exceptional biodiversity value and sensitivity, and the lack of reliable information on the impact of wind farms on wildlife, BirdLife International advises the precautionary avoidance of critical areas for bird conservation such as Special Protection Areas designated under the Birds Directive, or mountain passes and important wetlands along major migratory flyways of birds.

3 Research and monitoring

To improve our understanding of the impacts of wind farms on biodiversity, additional research and monitoring is needed, particularly with regard to offshore wind farms and wind farms along migration routes of birds and other animals. Incentives are needed to encourage technological development to maximise the efficiency of wind turbines and to reduce dependency on locations with high biodiversity interest.

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The RSPB speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing – help us keep it that way.

We belong to BirdLife International, the global partnership of bird conservation organisations.

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