

Investigations of Bird Collisions in 2 Wind Farms

F. Jánoska

University of West Hungary, Faculty of Forestry
Institute of Wildlife Management and Vertebrate Zoology
H-9400 Sopron, Ady E. u. 5., Hungary
e-mail: janoska@emk.nyme.hu

Abstract: Wind energy is now recognized as the fastest growing energy technology in the world. Wind farms are sited in exposed areas to ensure high average wind speeds to maximize energy capture. Such locations often comprise some of the most important and sensitive habitats, so there is a need to ensure that potentially damaging effects are avoided or, if not possible, minimized or mitigated.

However, concerns have been raised about the possible environmental impact of these turbines on birds, especially after endangered raptors were observed being injured and killed after flying into wind turbines in California. Beside raptors migrating songbirds are also considered at risk because they are known to fly into human-made structures (e.g. office towers, TV/microwave towers) causing, on occasion, mass kills of thousands of individuals. Some large bird species (e.g. Bustard, Storks, and Geese) are also endangered or disturbed by wind power supplies, too.

What kind of risks do wind turbines pose to birds?

- Bird collisions;
- Change of migration routes and local flight paths;
- Direct habitat loss and disturbance.

Problems in Hungary:

- we have no enough information from Hungarian situations, because we have no many wind farms, so we have no relevant investigations
- adaptation of the results of foreign investigations is questionable
- the detection of the killed small birds is difficult
- we have no information about the attitude of our most important species against wind turbines / e.g. Saker (*Falco cherrug*), Imperial Eagle (*Aquila heliaca*)/

It is very important, careful sighting studies, pre-construction avian researches to make in all places, where occurrence of migratory birds is frequent.

We investigated on two wind farm places the flying patterns and feeding attitude of birds, especially geese species. Between November 2010 and November 2011 in 2 two-week periods we visited the researched places and checked up the flying altitude, the flying direction and the feeding places of birds. We investigated the bird collisions, caused by wind turbines in this two wind farms, too.

These information's served as basis for nature conservancy to bring a verdict in the enabling process.