

# WE MAKE THE POWER LINES ALONG THE DANUBE RIVER SAFE FOR BIRDS

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## LIFE DANUBE FREE SKY (2020-2026)

One of the biggest threats for the wild living species of birds is electrocution and collisions with power lines causing thousands of avoidable deaths and injuries. These threats are targeted by the LIFE Danube Free Sky project, representing a unique example of wide transnational cooperation along with one of the most important migration corridors, stop-over sites, and wintering places for many bird species in Europe - the Danube river.

A total of 15 partners (electricity companies, nature conservation authorities, non-governmental organisations, railway company) from 7 countries are cooperating on implementation of the project to achieve common goals. Our mission is to increase safety of power lines in 25 Special Protection Areas (SPAs) and 9 Important Bird Areas (IBAs) along the Danube river not only for 12 priority target bird species: *Anser erythropus*, *Aquila heliaca*, *Botaurus stellaris*, *Branta ruficollis*, *Clanga clanga*, *Clanga pomarina*, *Coracias garrulus*, *Crex crex*, *Falco cherrug*, *Falco vespertinus*, *Otis tarda*, *Pelecanus crispus*, but also for many other bird species that are at risk of electrocution and/or collision.



82 trained field assistants.

A field survey was carried out (01/2021 - 10/2022), covered almost 1,580 km of 8 types of the above ground power lines (10 kV, 20 kV, 22 kV, 35 kV, 110 kV, 220 kV, 400 kV, and electric railway lines) and 12,535 poles in 25 SPAs and their adjacent areas located in Austria, Slovakia, Hungary, Croatia, Bulgaria, Romania, and in 9 IBAs in Serbia.

For 1,833 individuals belonging to 93 species and 18 orders, it was possible to determine the exact cause of death. Electrocutions accounted for 55% (1,009 ind.), belonging to 35 bird species; collisions accounted for 45% (824 ind.), involving 78 bird species.

The eurasian magpie (*Pica pica*) was the most frequently detected and associated with 27 % (n=193) of all electrocutions. The second highest mortality was observed for the common buzzard (*Buteo buteo*) with 22% (157 ind.). The mute swan (*Cygnus olor*) was the most common bird detected with 20 % (155 ind.) of all identified collisions.

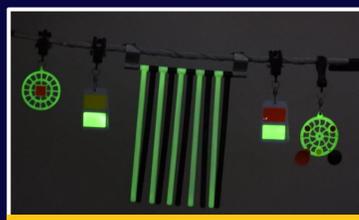
More than 2,100 bird carcasses were found from 103 species.



Several types of bird flight diverters were used, new types were developed and tested.



Almost 270 km of power lines were identified as a priority for increasing the visibility via installation of bird flight diverters and use of insulated conductors.



The glow in the dark effect of some of the installed diverters.



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Using a special drone to install the diverters reduces conflicts between the farmers and the electricity companies. There is no need to pay compensation for destroyed crop. At the same time, there is no need to shut down the line during the installation of the diverters.



Different methods of installation of bird flight diverters were applied.



More than 4,000 utility poles insulated or modified to avoid electrocution. The elements must be installed properly to ensure safety for birds.



**Danube River – European Amazon**  
Attracts millions of birds from hundreds of species  
✿ migration  
✿ breeding and roosting sites, foraging areas



Thousands of birds saved each year!



Safe railway lines in Austria.



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Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.

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