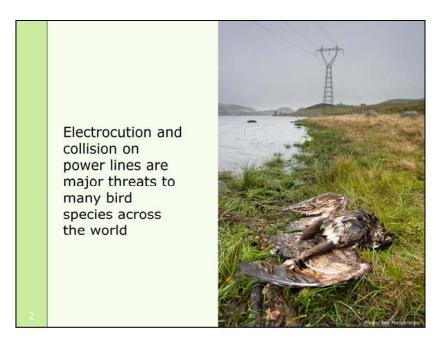


Welcome to this side event about electrocution of birds and collision with power lines.

This is a very important international issue, as we know that millions of birds die each year due to collision and electrocution.

**Electrocution** occurs when a bird comes in contact with two wires or when it perches on a conductive pylon (for example a metal structure) and comes simultaneously in contact with a wire.

**Collision with power lines** is another major problem. In Europe, millions of birds die in collisions with power lines. Hundreds of thousands of birds die annually in Norway. The problem particularly affects large, heavy birds with poor maneuverability.



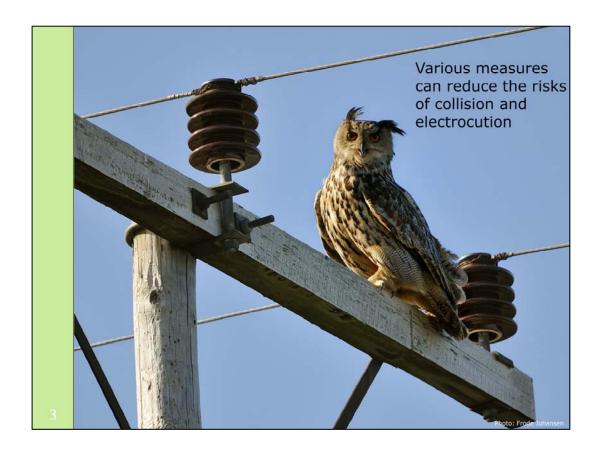
This picture shows an adult Eurasian Eagle-owl, killed by electrocution in Jæren, South-West of Norway. The owl had probably been dead and lying in water for a week. The only reason it was found, was that it was involved in a research project that investigated the owl's land use in relation to development of wind power in the area and it was a GPS transmitter on the bird's back.

**Electrocution** is a problem in many parts of the world. Mainly medium-sized and large birds of prey and owls + stork are affected. In the U.S. it is one of the main causes of death for the golden eagle. In South Africa, several hundred individuals of the vulnerable cape vulture are found dead. In Spain and other parts of southern Europe, there are several reports of findings of dead eagles.

In Norway, **collision with power lines** affects **stationary birds**, such as grouse, ptarmigan [rype], capercaillie [tiur+røy] and black grouse [orrfugl], and **migratory birds** such as

wading birds (eg golden plover [heilo]), ducks, swans, birds of prey

(eg white-tailed eagle [havørn], golden eagle [kongeørn], buzzard [musvåk],
rough-legged buzzard [fjellvåk], and osprey [fiskeørn]).



Non-insulated cables can be a death trap for owls and other large birds of prey as they often use such spots when on lookout during the hunt.

Our experience from Norway is that there are various measures that can reduce the risks of collision and electrocution.

Relevant measures are for instance:

route selection

or use of underground cable.

Requirements for specific technical solutions at the cord's design, such as the marking of lines and removal / burial of the top line.

Our experience is that these measures work, but still there is a lot more to do.



Power cords pose a significant threat to the Eurasian Eagle-owl in Norway. Power lines at lower voltages (less than 66/132 kV) are most dangerous.

The Norwegian Government will spend 30 million kroner next year to reduce the overall threat on the Eurasian Eagle—owl, which is listed as endangered at the IUCN Red List of Threatened Species.

Helping the Eurasian Eagle-owl, will give us valuable experience and knowledge about how to prevent collision and electrocution of many other species as well!



I can assure you, we have high focus in Norway on electrocution and bird's collision with power lines.

I look forward to hear more about challenges and possible measurement to reduce the risk of collision and electrocution.