

## UN Wildlife Meeting Pushes to Make Power Lines Safer for Birds

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**Two new international reports on the impact of power lines on migratory birds in the African-Eurasian region are being presented to delegates at a UN wildlife conference taking place 20-25 November 2011 in Bergen, Norway.**



*A Blue Crane killed after colliding with electricity power grid*

### **International Reports Address Impact of Power Lines on Migratory Birds, Offering Solutions to Avoid Collisions and Electrocutation**

**Bergen (Norway), 24 November 2011** - Two new international reports on the impact of power lines on migratory birds in the African-Eurasian region are being presented to delegates at a UN wildlife conference taking place 20-25 November 2011 in Bergen, Norway.

The two documents, *The Review of the Conflict Between Migratory Birds and Electricity Power Grids in the African-Eurasian Region* and the *Guidelines on How to Avoid or Mitigate the Impact of Electricity Power Grids on Migratory Birds in the African-Eurasian Region* will be reviewed by representatives from close to 100 governments and several key wildlife conservation organizations attending the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS), an international wildlife treaty administered by the United Nations Environment Programme (UNEP).

Power lines constitute one of the major causes of unnatural death for birds both through electrocution and fatal collisions. At end of 2010 there were 70.5 million kilometers of power lines throughout the world, constructed with minimal consideration of their environmental impact. This is expected to increase to 76.2 million kilometers by the end of 2015.

The review shows that in the African-Eurasian region alone, hundreds of thousands of birds die annually from electrocution and tens of millions of birds from collision with power lines. In general, large birds seem to be more affected.

For some large, slow reproducing bird species which migrate across this region, such as pelicans, storks, flamingos, birds of prey, cranes, bustards and owls, the death toll could possibly lead to population declines or local or regional extinction.

In South Africa, for example, 12% of Blue Cranes, South Africa's national bird, and 11-15% of Ludwig's Bustards are dying annually in collisions with a growing number of power lines.

According to the review, hotspots for electrocution are especially found in open habitats lacking natural perches or nesting trees for the birds, such as steppes, deserts and wetlands.

Bird collisions, on the other hand, occur in every habitat type in the region, with hotspots located in areas where large numbers of birds congregate, such as near water bodies or in migration corridors.

The international review presents the existing research and corrective measures undertaken by some countries and electricity power companies in the region to avoid bird mortality from collisions and electrocutions by power lines.

The guidelines contain a set of concrete recommendations for governments, electric power companies and conservation organisations on how to avoid and reduce the impact of electricity power grids on birds.

"The international guidelines present a number of appropriate legislative and policy actions and some creative technical measures on how to mitigate and reduce the vast number of unnatural bird mortalities caused by electricity power grids," said CMS Executive Secretary Elizabeth Maruma Mrema.

While the scope of the study was to review the situation across Europe, parts of Asia, the Middle East and Africa, the measures highlighted in the guidelines can be applied globally.

In northern Europe, for example, all low and medium voltage distribution lines have been placed underground in the Netherlands and similar measures are also being carried out in parts of Belgium, the United Kingdom, Denmark, Germany and Norway.

"Our experience from Norway is that there are various measures that can reduce the risks of collision and electrocution, such as the use of underground cables, removal of the top line and route selection, and that they are working," said Erik Solheim, Minister of the Environment and International Development of Norway.

Other less expensive measures include the insulation of dangerous electric parts of the lines, the installation of bird-friendly perching and nesting devices as well as the installation of markers or bird flight diverters in overhead wires.

"The relative lack of electrical infrastructure across the African continent to date provides an opportunity to avoid the mistakes made elsewhere when new infrastructure is constructed. In this respect, the guidelines are very timely and can make a significant conservation impact," said Jon Smallie from the Endangered Wildlife Trust of South Africa, one of the authors of the guidelines report.

"National authorities, electricity companies and organizations involved in bird conservation and research should use these guidelines as a first step to address the serious problem of bird mortality caused by electrocution and collision and work together to also better plan the locations of future power lines and jointly identify critical locations where existing power lines should be made safer for birds," said Marco Barbieri, Acting Executive Secretary of the African-Eurasian Migratory Waterbird Agreement (AEWA), a specialized treaty concluded under CMS.

"In the coming year, the Norwegian Government will spend 30 million kroner to reduce the overall threat on the highly endangered Eurasian Eagle Owl. Power lines pose a significant threat to the owl in Norway," added Mr. Solheim.

According to the review, electrocution is considered to be the most important mortality factor for the Eagle Owl and possibly the main reason for the decline of the population.

"This may also help to avoid electrocution of other species. We have a high focus on this topic in Norway and our experience is that these measures work but still there is a lot more to do," said Mr. Solheim.

"Electrocution of birds is not just a conservation issue. It also has economic and financial consequences, as power interruptions and the resulting need for reparations from outages are often caused by bird electrocutions," said Ms. Mrema.

"The Convention on Migratory Species along with its specialized treaties dedicated to the conservation of birds, such as AEWA and the Raptors' agreement have an important role to play in bringing the different actors and perspectives together. As the international review and the guidelines show, there are already some lessons learned. But there is also a lot more we can do to address this growing conflict between power lines and birds," added Ms. Mrema.

The review and guidelines were commissioned by the UNEP/AEWA Secretariat to an international research consortium consisting of Bureau Waardenburg, Boere Conservation Consultancy (both from the Netherlands), the Endangered Wildlife Trust (South-Africa) and STRIX from Portugal.

The international review and the guidelines were made possible through the support from AEWA's cooperation partner RWE Rhein-Ruhr Netzservice, a company of the German energy supplier RWE. The company has developed a method of fitting preventive "bird-diverters" to high-voltage power lines in Germany and other European countries using a helicopter as a way to try to reduce the collision of large birds with power lines.

#### **Notes to Editors:**

#### **CMS COP10 Media Page:**

<http://www.cms.int/bodies/COP/cop10/media.htm#4>

#### **LINKS TO THE DOCUMENTS:**

#### **THE GUIDELINES (Incl. Executive Summary)**

[http://www.cms.int/bodies/COP/cop10/docs\\_and\\_inf\\_docs/doc\\_30\\_electrocution\\_guidelines\\_e.pdf](http://www.cms.int/bodies/COP/cop10/docs_and_inf_docs/doc_30_electrocution_guidelines_e.pdf)

#### **THE INTERNATIONAL REVIEW**

[http://www.cms.int/bodies/COP/cop10/docs\\_and\\_inf\\_docs/inf\\_38\\_electrocution\\_review.pdf](http://www.cms.int/bodies/COP/cop10/docs_and_inf_docs/inf_38_electrocution_review.pdf)

#### **LINK TO THE REVIEW & GUIDELINES PROJECT WEBSITE:**

<http://www.buwa.nl/en/aewareviewproject.html>

#### **CMS**

The Convention on the Conservation of Migratory Species of Wild Animals (CMS) works for the conservation of a wide array of endangered migratory animals worldwide through the negotiation and implementation of agreements and action plans. CMS is a growing convention with special importance due to its expertise in the field of migratory species. At present, 116 countries are parties to the Convention.

[www.cms.int](http://www.cms.int)

#### **AEWA**

The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) is an intergovernmental treaty developed under the auspices of CMS dedicated to the conservation of migratory waterbirds which use the African-

Eurasian Flyways. The Agreement covers 255 species of waterbirds, which are ecologically dependent on wetlands for at least part of their annual cycle. Of the 119 countries found in the AEWA region, so far 64 and the European Union have become Contracting Parties to the Agreement.

[www.unep-aewa.org](http://www.unep-aewa.org)

#### **BIRDS & POWER LINES (taken from the review)**

- Most above ground power lines (both medium voltage distribution lines and medium to high voltage transmission lines) present potentially fatal risks for birds through risks of collision with overhead wires and the risk of electrocution.

#### **COLLISION**

- A bird collision occurs when a flying bird physically collides with an overhead cable. The bird is typically killed by the impact of the cable, the subsequent impact with the ground, or dies from the resulting injuries.
- Bird collisions occur in every habitat type in the African-Eurasian region, with hotspots amongst others located in areas where large numbers of birds congregate, such as near water bodies or in migration corridors.
- Birds that are disturbed and panicking in the surroundings of power lines have a higher risk of colliding, as are birds that are in pursuit of mates.
- Low visibility due to twilight or weather conditions, or because the wire is too thin to be seen by the birds, creates an even higher risk.
- Bird Migration regularly occurs at higher altitudes, way above the height of the power lines. Therefore, the risk of collision is lower for migrating birds as opposed to local birds. However, the collision risk of migrating birds increases when weather conditions forces them to fly at lower altitudes, for they are less familiar with the landscape and obstacles than local birds.

#### **ELECTROCUTION**

- Electrocution of a bird occurs when it bridges the gap between two energized components or an energized and an earthed (grounded) component of the pole structure. This results in a short circuit, with electric current flowing through the bird's body, and electrocution, which is often accompanied by an outage of the electricity supply.
- Hot spots for electrocution are especially found in open habitats lacking natural perches or nesting trees, such as steppes, deserts and wetlands.
- Electrocution most often occurs with (poorly insulated) medium voltage power lines. The bird or nesting materials bridges the gap between wires of different voltages which creates a short-circuit. It is also known to happen while the bird is only touching one line.
- Electrocution of birds is not just a conservation issue; it also has economic and financial consequences. Power interruptions and the need for reparations are often the result of bird electrocution.

#### **MEASURES**

- It is relatively easy to minimize these negative impacts from power lines on birds. The CMS / AEWA guidelines report presents a broad suit of solutions and recommendations.
- The most effective measure to eliminate the possibility of both electrocution and collision is underground cabling. This has already been done in the Netherlands and in certain critical locations in Belgium, the United Kingdom, Norway, Denmark and Germany. This method is very costly and therefore not feasible for the whole African-Eurasian region.
- Another obvious way in which to prevent bird electrocutions and collisions is minimizing the construction of new power lines, through efficient network planning and dispersed power generators.
- Routing new power lines away from areas that are home to, or attract, bird species that are known to be susceptible to electrocution and collision, also taking into account landscape and vegetation features.
- Designing the location, route and direction of power lines on the basis of national zoning maps, avoiding, where possible, the construction in habitats of conservation importance, such as important bird areas, protected areas, Ramsar sites and other critical sites as identified by the Critical Site Network (CSN) Tool:  
<http://csntool.wingsoverwetlands.org/csn/default.html>
- The guidelines include many other technical measures for both electrocution and collision. These include insulation measures, line design or configuration, perch management techniques and a range of power line marking devices including spheres, swinging plates, bird flappers and others which make lines more visible to birds. The review also includes a summary assessment of the efficiency of such marking devices, sighting ongoing research in different countries, with some concluding that wire marking reduced bird mortality by 50-80%.

#### **RELATED SIDE EVENT AT CMS COP10**

A side event on the topic "**Challenges in mitigating bird electrocution**" (open to the press) will be taking place at the Venue of CMS COP10 at the **Scandic Hotel Room Hødden on Thursday, 24 November 2011 between 1800-2000 hrs**. The event will be chaired by Ms Heidi Sørensen - State Secretary for the Ministry of the Environment of Norway and is being organised by the Norwegian Institute for Nature Research/CEDREN in partnership with RWE Rhein Ruhr Netzservice GmbH and NABU (BirdLife Germany).  
[http://www.cms.int/bodies/COP/cop10/media/side\\_events/side\\_event\\_powerlines\\_24nov2011.pdf](http://www.cms.int/bodies/COP/cop10/media/side_events/side_event_powerlines_24nov2011.pdf)

**OPTIPOL** "Optimal design and routing of power lines; ecological, technical and economic perspectives"  
[www.nina.no/Publikasjoner/Publication.aspx?pubid=5428](http://www.nina.no/Publikasjoner/Publication.aspx?pubid=5428)

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