TAKING AVOIDING ACTION

ANDREW JENKINS

The value of SABAP to environmental impact assessments

As avian specialist consultants, we are often asked to survey birds in far-flung places: from new wind farms in the Namib Desert and power lines in the Kalahari to floating solar panels in Bangladesh. But SABAP doesn't reach quite that far, so we will focus on southern Africa.

The job of the specialist is to provide guidance to developers on the likely impacts of any proposed development and to suggest ways to minimise these impacts should the development go ahead. In recent years much of this work has centred on the renewable energy industry, a burgeoning growth point that will replace South Africa's heavy reliance on fossil fuels by exploiting wind and solar power. We are blessed with so much 'green' energy that it could power the entire region. Our job is to ensure that these developments have minimal impact on birds.

Power lines kill thousands of birds annually through collisions and electrocution and a recent review by researchers from the FitzPatrick Institute and BirdLife South Africa highlighted the very diverse range of bird species killed by wind turbines (Perold et al. 2020, *Ostrich* 91: 228–239). About a third of the wind-energy victims were raptors.

Strict guidelines now prevent wind farms from being built in sensitive areas, including near nests or roosts of the more collision-prone birds, such as vultures and migrant kestrels. These species often fly at heights swept by the giant turbine blades, which exceed 60 metres in length and can travel at more than 300 kilometres per hour at their tips. BirdLife South Africa recently produced guidelines to monitor, mitigate and manage the well-being of several threatened species susceptible to colliding with turbines: Cape Vulture, Verreaux's Eagle and Black Harrier.

When a site is proposed for a new wind farm, avian specialists are asked to conduct a scoping study – a desktop dip into what's known and what's not. The first port of call is the online SABAP database to determine which sensitive species occur at the site. Even incidental records are valuable and may trigger more stringent investigation, but full protocol cards are particularly important because the reporting rate from these cards indicates how often vulnerable species are likely to occur at the site.

Scoping is followed by site inspections, when specialists are able to directly assess the proposed site. Here again SABAP data are invaluable as they provide a much longer perspective than is possible from brief site visits. This is especially important in more arid areas, where species move in relation to rainfall and might not be present during a given visit.

Overall risk can be assessed by combining SABAP reporting rates with on-site measures such as the number of flights per hour and the time spent in the blade-swept area. This can then be combined with other tools such as species-specific models of habitat use to decide on the safest placement of turbines. Other mitigation measures, such as painting one of the three turbine blades black, also show great promise, reducing collision rates for large raptors such as eagles.

Our relationship with SABAP is not just one-sided. Any avian consultant worth their salt completes full protocol cards for all the remote pentads where they work, so that the next generation of developers and specialists can benefit from their experience, without the sunburn and frostbite.

ROB SIMMONS AND MARLEI MARTINS

We are extremely thankful for all the very generous donations that were received to help meet the SABAP budget shortfall in 2020. With SANBI support for SABAP in 2021 very much in question, we are especially grateful to the many donors who have pledged a monthly contribution to the running costs.

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BirdLasser
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above *SABAP2 data help wind farm developers identify sites that pose a high risk of turbine collisions for vulnerable bird species.*