

Nature parks can save species as climate changes

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Retaining a network of wildlife conservation areas is vital in helping to save up to 90 per cent of bird species in Africa affected by climate change, according to scientists.

The research team - led by Durham University - including BirdLife International and the RSPB (BirdLife in the UK) looked at the effects of climate change on 815 bird [species](#) of [conservation](#) concern in sub-Saharan Africa and on the network of sites designated for them (termed Important Bird Areas).

Published in the journal *Ecology Letters*, the research - funded by the RSPB - demonstrates that a network of wildlife areas will be a crucial tool to help biodiversity survive future climate change. The findings suggest an urgent need for legislators to protect eco-systems and key wildlife areas in Africa. They show that, over the next 75 years, the biodiversity of some regions will suffer more than others as a result of climate change. They also underline the importance of providing 'green corridors' to help wildlife to move to find new climatically-suitable areas.

The team led by Dr Stephen Willis and Dr David Hole from the School of Biological and Biomedical Sciences at Durham University, used simulation models to see how climate change might affect birds in Important Bird Areas, in the coming decades under a scenario of moderate climate change.

The researchers looked at a network of 863 IBA sites across 42 countries and territories covering around 2,079,306 square kms (1,292,020 square miles) or 7 per cent of the African continent. The sites are identified as being critical for the conservation of birds, in particular, species that are globally threatened, restricted in range or restricted to particular biomes. Together, African IBAs are home to 875 of these species.

Climate change is not the only issue affecting wildlife in Africa. More than 40 per cent of African IBAs lack any form of legal protection under national or international law. Agricultural development, logging, invasive alien species, and unsustainable hunting and trapping are the main threats to [bird species](#) and IBAs across the African continent.

Dr Stephen Willis said: "We looked at bird species across the whole network of protected areas in Africa and the results show that wildlife conservation areas will be essential for the future survival of many species of birds.

"Important Bird Areas will provide new habitats for birds that are forced to move as temperatures and rainfall change and food sources become scarce in the areas where they currently occur. Protected areas are a vital conservation tool to help birds adapt to climate change in the 21st century."

The findings show that the biodiversity of particular areas is likely to change significantly. The turnover of species in some sites could be as high as 50 per cent, as established species leave to find more suitable climates or new food supplies, and new species move in to an area. The adaptability of birds will be an important factor, the experts say.

Dr Stephen Willis said: "The results show that 90 per cent of priority species in Africa will find suitable climate somewhere in the network of protected areas in future. However, one in ten birds will have to find new

places to live and breed so new sites will have to be added to the IBA network.

"The central regions of Africa should maintain many of their current species as long as the [protected areas](#) remain intact. By contrast, areas of the Afrotropical Highlands, which occur in countries such as Cameroon, South Africa and Ethiopia, will see enormous change with more than 40 per cent of species leaving."

The findings also show that some species are likely to struggle, and may even become extinct unless new populations can be established. A priority species might be lost from a particular IBA, but there may be other climatically suitable sites in the network for the species to move to. Many species will only survive if they adapt by moving across Africa to seek out new, climatically-suitable areas to inhabit.

Dr Stuart Butchart, Global Research Coordinator at BirdLife International, said: "The survival of much of the planet's biodiversity under climate change will depend upon adequate protection for biodiverse ecosystems, the IBAs within them, and support for the people who depend on them - so that local communities can participate actively in making their environment more resilient. It is essential that policy leads to adequate protection of IBAs and takes account of the critical role that ecosystems play in helping wildlife and people adapt."

Ruth Davis, head of climate change at the RSPB, said: "Looking after IBAs is vital for the future of our wildlife. Protecting the natural resources and services provided by these ecosystems is vital for people too. Healthy ecosystems are the first line of defence against the impacts of [climate change](#) for many of the world's poorest people."

One example, is the Gola Forest Transboundary Peace Park, on the borders of Sierra Leone and Liberia, uniting existing protected IBAs and

encompassing additional forest to provide corridors for the movement of wildlife between them. It protects one of the largest remaining blocks of intact forest in the Upper Guinea Area of West Africa.

Source: Durham University

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