

Science for Environment Policy

Cost of reducing species extinction threats calculated

Reducing the extinction risk to all threatened bird species by at least one category on the IUCN Red List by 2020 would cost US\$0.875 - 1.23 billion (€0.671-0.94) per year, according to a recent study. To achieve this level of support would require an additional US\$0.769 - 1.08 (€0.59- 0.82) billion per year over and above existing conservation funding for threatened birds.

The results highlight the need for policymakers to increase conservation funding to meet global conservation targets, such as those adopted by Parties to the Convention of Biological Diversity (CBD). The study also emphasises the particularly urgent need for greater support for conservation efforts in developing countries.

The researchers investigated the cost of meeting two of the CBD's targets. Target 12 aims to prevent the extinction of known threatened species and improve their conservation status, for instance, by reducing their classification on the IUCN Red List of threatened species by one category of extinction risk. They also looked at the costs of meeting Target 11: effectively managing and expanding protected areas to cover at least 17% of terrestrial and inland water areas.

To calculate the global costs of conserving threatened species, the researchers chose a sample of 211 threatened bird species and asked experts to indicate current conservation spending and the cost required to improve each species' status by at least one IUCN Red List category. They then devised a model to estimate the costs for the remaining species. The researchers focused on birds and terrestrial Important Bird Areas (IBAs) as they are particularly well-studied.

They found that, for the 1115 globally threatened bird species on the 2011 IUCN Red List, the total cost of improving their conservation status by at least one category was US\$1.23 billion (€0.94 billion) annually between now and 2020. However, this assumes that actions for each species are independent. If, as is likely, some actions can benefit several species, the total annual cost could be as low as US\$0.875 billion (€0.671 billion). Between 43% and 49% of this expenditure would be required in lower-income countries. When the researchers estimated costs to cover all other threatened non-avian species, the combined total was estimated to be US\$3.41-4.76 billion (€2.61- 3.65 billion) annually.

For the 211 species in the original sample, current conservation spending was around US\$0.065 million (€0.049 million) annually for each species, and ranged from \$0 to \$15.2 million (€11.66 million) depending on the species. This covered only 12% of estimated annual requirements, on average. The researchers argued that, since birds tend to be relatively well funded compared to some other groups of plants and animals, the total percentage shortfall in funding for all globally threatened species could be greater than 90%. For Target 11, the researchers estimated the cost of expanding protected areas to cover all 11,731 IBAs worldwide. Protecting and managing these important sites would cost US\$65.1 billion (€49.94 billion) per year, requiring an additional US\$8.24-43.03 billion (€6.32-33.01 billion) from wealthy nations and \$2.78-18.68 billion (€2.13-14.33 billion) from lower-income nations. By including sites supporting other threatened animal and plant groups, the estimated cost increases to US\$76.1 billion (€58.40 billion), of which 29% would be required in lower-income countries.

Finally, the researchers estimated the combined cost of protecting both threatened species and important sites, given that some of the species-specific actions included site management. They found that the total cost could be around US\$78.1 billion (€59.95) a year, and noted that this may also contribute to achieving other CBD targets. However, the researchers noted that this investment would be dwarfed by the value of ecosystem services and benefits provided to people by biodiversity. For example, the total is just 1 to 4% of the value of ecosystem services lost each year through habitat destruction.

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