

Nations "failing to save earth's wildlife"

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The world can dramatically improve the rate at which it rescues imperilled species if it starts choosing the land set aside as protected areas more wisely, international scientists say.

New research shows that by choosing the least valuable lands as protected [areas](#), the world is doing a poor job of protecting its threatened birds, mammals and amphibians. The study also reveals that with a little compromise, nations can save five times more wildlife at 1.5 times the cost of the cheapest protected area options.

"One of the planet's greatest extinction crises is happening right now," says lead author Dr Oscar Venter of the ARC Centre of Excellence for Environmental Decisions (CEED) and The University of Queensland (UQ) who is presenting the study at the World Parks Congress this week.

"To stop the continuing decline in biodiversity, 193 countries have committed to meet the Aichi Biodiversity Targets – an international strategy aimed to reduce threats to biodiversity, and to protect the ecosystems, species and genetic diversity."

Dr Venter explains that the major Aichi Targets include expanding the world's terrestrial [protected areas](#) from 13 to 17 per cent by 2020, and stopping the loss of all known [threatened species](#).

And as the world undergoes the biggest expansion of protected areas in history, it needs to seize the opportunity to protect its imperilled wildlife within these protected areas, instead of focusing only on meeting targets

based on area, he says.

In the study, the researchers compared the distribution of threatened birds, mammals and amphibians such as frogs and salamanders with the distribution of existing protected areas. They found that out of around 4,000 species, only 15 per cent have enough of their range protected and 17 per cent do not have any of their range in a single protected area.

"The problem is these protected areas aren't in the right places to save the most [endangered species](#)," says Dr James Watson of CEED, UQ and Wildlife Conservation Society (WCS). "They are mostly in remote and arid zones, have little agricultural value, and are the cheapest lands to protect.

"Nations are clearly making a choice to go 'cheap and nasty', and are neglecting wildlife that dwell in other areas."

Using a simulation program, the scientists also projected the future of the threatened species when 17 per cent of the world's lands are reserved – the current Aichi target.

They found that if nations continue to protect the cheapest lands, the world will spend AU\$6.5 billion each year to protect 21 per cent – just 840 out of 4,000 threatened species. This is six per cent or 240 species more than that of currently protected areas.

On the other hand, securing land that protects all threatened birds, mammals and amphibians will cost AU\$49 billion every year – which might be viewed as too costly, the researchers say.

"These are the two extremes – we can reserve the cheapest lands and leave the majority of the threatened species unprotected, or we can try to protect them all, which may be economically or politically unfeasible,"

says Dr Venter.

"The good news is we've found a middle ground – a 'sweet spot' – between these two extremes. If we protect some areas that cover threatened species, such as tropical forest hotspots, we can save 1,200 more species, compared to 240 species."

"This amounts to 1,800 species at AU\$9.75 billion per year," Dr Watson adds. "We can save five times more species with just 1.5 times increase from the cheapest option – it's a great victory for conservation for not much more cost."

To identify the 'sweet spot', nations can use the same [simulation program](#) to identify both extremes, and determine the in-between, cost-effective options.

"As we expand the world's protected areas, we need to consider where the threatened [species](#) are as well," says Dr Watson. "If we don't ensure that these reserves also protect the planet's vanishing wildlife, there might not be another chance to do so in the future."

More information: "Targeting global protected area expansion for imperiled biodiversity" by Oscar Venter, Richard A. Fuller, Daniel B. Segan, Josie Carwardine, Thomas Brooks, Stuart H.M. Butchart, Moreno Di Marco, Takuya Iwamura, Liana Joseph, Damien O'Grady, Hugh P. Possingham, Carlo Rondinini, Robert J. Smith, Michelle Venter and James E.M. Watson is published at *PLoS Biology*. [DOI: 10.1371/journal.pbio.1001891](#)

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