

Environmental Decisions Hub

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Monitoring endangered species to death

Three leading Australian environmental scientists have called for a substantial change to the way the world responds to wildlife that is going extinct.

In a paper provocatively entitled “Counting the books while the library burns”, the researchers produce evidence that many wildlife programs round the world are monitoring species to the point of extinction – often without taking the necessary action to save them.

Professor David Lindenmayer and Dr Maxine Piggott of the ARC Centre of Excellence for Environmental Decisions (CEED) and the Australian National University, and Assoc. Professor Brendan Wintle of CEED and the University of Melbourne warn in the journal *Frontiers of Ecology* that some conservation programs are standing by and watching species die out.

Their work, funded through Australia’s National Environmental Research program (NERP), highlights the growing challenge of saving almost 20,000 endangered animals, birds and reptiles from extinction – and proposes a new action plan.

“Of the 63,837 species assessed worldwide using the International Union for Conservation of Nature (IUCN) Red List criteria, 865 are extinct or extinct in the wild and 19,817 are listed as critically endangered, endangered, or vulnerable to extinction,” the researchers say. “Since the start of the 21st century alone, at least 10 species of vertebrates are known to have gone extinct, although this is likely to be a substantial underestimate.”

Prof. Lindenmayer says that monitoring is vital to effective conservation, to understand the ecology as well as the numbers of a species – but monitoring alone is not enough, especially if it shows the species is in decline.

The team’s study cites 34 cases – mainly mammals and amphibians – from all around the world where the species became locally or totally extinct while it was being monitored. Examples include the Channel Island Fox, the Vancouver Island Marmot, the West African Black Rhino and the Christmas Island Pipistrelle bat.

They also used the case of Booderee National Park, in NSW, where the greater glider – which was originally quite common, underwent a disastrous decline and disappeared totally in 2007. This followed the local extinction of the yellow-bellied glider in the same park in the 1980s.

“The original monitoring plan for Booderee did not include trigger points for action – maybe because of lack of resources or uncertainty over why these animals were becoming extinct. But on the basis of this experience we feel it is possible to include triggers in many future conservation monitoring programs,” Prof. Lindenmayer says.

The team is now recommending a new approach be adopted globally:

- All conservation monitoring programs should contain well-defined trigger points for pre-planned action
- Management intervention should occur when it becomes clear that a monitored species is in decline
- Conservation science should document and learn from cases where there was a failure to save a species.

“We have drawn attention to some cases where a species was monitored passively until it suffered local, regional, or global extinction due to the absence of a pre-planned intervention program,” the team say.

“This is not meant as a criticism of ecological or conservation monitoring, since these are critical for understanding the ecology of a species, determining its threat status, and evaluating conservation options. However, our analysis indicates that many existing conservation monitoring programs are not as effective as they could be at collecting information and prompting relevant actions.”

In future, they recommend, all monitoring programs should be designed to trigger specific management action designed to save the species at risk.

The Environmental Decisions Hub is funded by the Australian Government’s National Environmental Research Program (NERP). The Hub’s research aims to assist Australian governments in their environmental management and decision making.

CEED is the Australian Research Council Centre of Excellence for Environmental Decisions. CEED’s research tackles key gaps in environmental decision making, monitoring and adaptive management

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