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Nature of Australia to dramatically shift under climate change

A research report on biodiversity and climate change commissioned by the federal government has provided compelling evidence of the need to protect Australia's natural environment for future generations – not only from climate change, but from vegetation clearing and the impact of invasive species.



Credit: ScienceImage/John Coppi

The report confirmed that Australia's iconic natural areas such as the Great Barrier Reef and the Kakadu Wetlands were at risk. It also highlighted that Australia has a high proportion of native species – about 85 per cent of terrestrial mammals, 91 per cent of flowering plants and 90 per cent of reptiles and frogs – that will potentially be at risk from climate change.

Professor Will Steffen, Executive Director of the Climate Institute at The Australian National University and the report's lead author, said the assessment takes a comprehensive view of future biodiversity under a rapidly changing climate.

'With a worst case scenario, our ecosystems would face a shift in climate equivalent to the transition from the last ice age to the present warm period. That transition took thousands of years; this one would occur in just 100 years.'

'Biodiversity intrinsically has low adaptive capacity to rapid change. This means a continuing focus on national parks and other protected areas as reservoirs of well-functioning ecosystems, but it also means an increasing emphasis on off-reserve conservation.'

'Australians may well need to change our fundamental views of the natural world around us. Species may no longer exist in places we expect them to, some of our most valued ecosystems and biomes will change, and novel ecosystems will develop.'

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