

A statement from the Board of the Wet Tropics Management Authority regarding serious climate change impacts on the Wet Tropics of Queensland World Heritage Area

Concerning new evidence has shown an accelerating decline in the Wet Tropics of Queensland World Heritage Area's unique rainforest animals as a result of climate change.

The Board of the Wet Tropics Management Authority (the Board) has now become aware that, following the hottest summer ever recorded, some of the key species for which the Wet Tropics World Heritage Area was listed are at imminent risk of extinction.

The Wet Tropics World Heritage Area is the world's oldest rainforest and land of the world's oldest living culture. It is ranked by the International Union on the Conservation of Nature as the second most irreplaceable World Heritage Area on earth, and the sixth most irreplaceable protected area, largely because of its endemic species. It provides economic benefits to the region of more than \$5.2 billion per annum, significantly through visitation and tourism which enables people to experience and understand this important tropical wonder.

Climate change was identified as the most significant threat to the Wet Tropics in the [2015-16 State of the Wet Tropics Report on ancient, endemic, rare and threatened vertebrates of the Wet Tropics](#) (the Report). Based on long term monitoring, the Report identified that the biodiversity of the Wet Tropics World Heritage Area was declining with many rainforest species already reduced in both distribution and population size, largely as a result of climate change.

Professor Steve Williams from the Centre for Tropical Environment and Sustainability Science at James Cook University, and co-author of the Report, has been monitoring rainforest biodiversity for over 20 years across the whole Wet Tropics region. The long-term monitoring of the rainforest vertebrates conducted by Prof Williams has observed a systematic decrease in the abundance and distribution of many Wet Tropics endemic species. Normally found at elevations over 600 metres, these cool adapted species have progressively moved to higher elevations, leaving alarming population declines at the lower elevation areas of their distribution.

The lemuroid ringtail possum, a species for which the Wet Tropics World Heritage Area is renowned, has been steadily declining now for more than a decade. Prof Williams' recent monitoring has identified that the declines in possum and bird species have continued at a rate similar to the predictions made more than a decade ago and are now reaching alarming levels. If the trends continue, populations at sites that previously had the highest density of lemuroid ringtail possums in the region could become locally extinct as early as 2022. This species is currently not even classified as endangered.

There are similar trends for species such as the Herbert River ringtail possum and green ringtail possum, as well as bird species such as the tooth-billed bowerbird—species which only occur in the Wet Tropics World Heritage and for which it was World Heritage listed.

A model, using 400,000 data points collected over the past 10 years, predicted that the World Heritage Area could be facing the extinction of more than half of its endemic species by the end of this century. The latest rates of decline suggest that these extinctions are happening even sooner.

Since its appointment in 2015, the Board made it a key priority to pursue climate change adaptation and mitigation strategies to protect the Wet Tropics World Heritage Area. In June this year it will release a draft Climate Adaptation Plan, informed by the best available science. However, given the gravity of the new evidence, the Board feels that decisive action is needed now.

The 2017 International Union on the Conservation of Nature [Outlook Report on the Wet Tropics](#) also cautioned that "The Wet Tropics of Queensland World Heritage Area is particularly vulnerable to the impacts of climate

change. Climate change threatens to disrupt the finely balanced ecological and climatic conditions that support the distinctive assemblage of plants and animals and may result in rapid and catastrophic changes.”

These scenarios are increasingly proving true, not only here but around the world, with measurable and rapidly growing impacts from climate change being experienced. In the Wet Tropics World Heritage Area this is exacerbated by introduced pests like pigs and myrtle rust also gaining access to higher altitudes due to a warming climate. Strong intervention is required immediately to secure the future of the Wet Tropics World Heritage Area.

While, understandably, the Great Barrier Reef has received significant funding to address climate change impacts in recent years, investment in terrestrial World Heritage Areas has not been commensurate with the urgency for mitigating climate impacts on their World Heritage values.

Extreme heat is the Wet Tropics World Heritage Area’s coral bleaching event equivalent, with some mountain adapted species, like the lemuroid ringtail possum, unable to survive even a day of temperatures above 29 degrees Celsius. Mount Bartle Frere, (the highest mountain in the Wet Tropics), recorded an unprecedented 39 degrees Celsius at its peak on six days this past summer.

The Board is convinced that, given the evidence, these key species endemic to the Wet Tropics World Heritage Area are under severe and immediate threat from climate change. This is occurring now, not in the future, and requires an immediate response. With current trends, the world is locked into 20 years of increasing temperatures. Action and significant investment is needed to reduce other threats now to ensure these areas are as robust as possible to withstand those increasing temperatures.

Australia has the resources and expertise to be a leader in responding to local climate change challenges. The Board is optimistic that the measures listed below will improve the resilience of the Wet Tropics World Heritage Area’s internationally significant values, together with strong global action to reduce emissions.

The World Heritage Convention is about protection, conservation and presentation of World Heritage areas—but it is also about transmission of these values to future generations. The Board is determined to meet this obligation but it will take considerable effort, across all sectors, all governments and all people who cherish the best of the best natural and cultural significant areas Australia has to offer.

Action is needed now, before it is too late.

Signed:

Ms Leslie Shirreffs PSM, Chair

Prof Iain Gordon, Director

Dr Leah Talbot, Director

Mr Phil Rist, Director

Mr John Courtenay, Director

Ms Anne Clarke, Director

Climate change in the Wet Tropics: a 10-point plan
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Urgent action and investment from governments is needed to improve the resilience and protection of the Wet Tropics of Queensland World Heritage Area. Such actions include

1. **Land restoration.** Enhance resilience through restoration and enhancement of wildlife corridors and buffering of refugia.
2. **Monitoring.** Re-initiate and expand monitoring to increase information of the impacts on World Heritage Values / Outstanding Universal Value and identify potential refugia.
3. **Pest management.** Immediate and aggressive control of feral pigs and myrtle rust to prevent spread into the higher altitude refugia.
4. **Research and innovation.** In-depth assessment of possible measures, examples could include biobanking, genetic editing or potential for *ex-situ* conservation (e.g. captive breeding) and assisted migration in collaboration with Rainforest Aboriginal Peoples.
5. **Threatened species listing.** Urgent discussions with relevant agencies to nominate at risk species and ecosystems for listing under the Australian threat lists (Nature Conservation Act, Environmental Protection and Biodiversity Conservation Act, IUCN).
6. **Fire.** Assess vulnerability and reduce threats from increased risk to rainforests from fire.
7. **Partnerships and engagement.** Rainforest Aboriginal peoples, the tourism industry and the community to collaborate in the response.
8. **Cooperation.** Work with the Australian World Heritage Advisory Committee (AWHAC) and other Queensland terrestrial world heritage properties on cooperative research and responses.
9. **Climate Adaptation Plan.** Finalise the Wet Tropics Climate Change Adaptation Plan as a matter of urgency.
10. **Mitigation.** Call for urgent action on reducing global emissions.