

NERP Tropical Ecosystems Hub Project Factsheet

Fire and rainforests

Project leader: Dr Dan Metcalfe (CSIRO)

Project summary

Little is known about the impacts of fire on rainforest vegetation or the animals which depend on it. Fire can control vegetation regrowth after cyclones and help regeneration of eucalypt species, but it may also be important in determining succession in drier rainforest types. Fire also poses a threat to animals relying on forest canopy habitat or sheltering in fallen timber. This project will investigate the positive and negative impacts of fire on rainforest vegetation and wildlife.

Why this research is needed

The information generated by this project will help in developing management strategies that consider the environmental impacts of fire on the rainforest in the Wet Tropics. Particularly, it will provide an evidence-base to underpin policy in relation to managing fire on the margins of rainforest.

Outcomes

The project will provide new data about the problems posed and solutions offered by fire. This information will underpin future policy advice and rainforest management approaches. Specific outputs will include:

- Initial assessment and potential long-term monitoring of impacts of Tropical Cyclone Yasi on mahogany glider habitat, levels of rainforest invasion, and impacts of fire on new vegetation.
- Mapping, assessment of areas of greatest concern, and understanding of impacts of fire on littoral rainforest and coastal vine thickets of eastern Australia; and advice on management.
- Assessment of the likelihood of fire and its impacts on threatened Mabi rainforest.
- Identification of key criteria to be used in assessing where and whether expansion of rainforest is desirable, together with mapping and assessment of where critical impacts of fire may occur.

Research Provider:



Find this project at www.nerptropical.edu.au

Theme 2: Understanding ecosystem function and cumulative pressures

Program 7: Threats to rainforest health

Project: 7.1



Is Mabi forest understorey dry enough that fire will be carried through the litter layer? Wilting turkey bush (*Hodgkinsonia frutescens*) on Hallorans Hill, Atherton.



Blady grass (*Imperata cylindrica*) invading littoral rainforest after canopy stripping by Severe Tropical Cyclone Yasi at Yandalinga Beach. Do fires in littoral rainforests promote regeneration or change the direction of succession?

Research-user focus

The project will deliver outcomes that are useful to a range of stakeholder organisations including local and state government bodies and conservation planners and managers. Research-user organisations include the Department of Sustainability, Environment, Water, Population and Communities, the Wet Tropics Management Authority, Terrain NRM and the Cassowary Coast Regional Council.

For more information about this project, contact:

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