

Australia Bushfire Recovery Response Project

June 2020 - Ongoing



The Rainforest 4 Foundation is a registered not-for-profit organisation and a registered charity with the Australian Charities and Not-for-profits Commission. Rainforest 4 Foundation's ABN is 49 628 358 323.

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THE 2019-2020 AUSTRALIAN BUSHFIRES

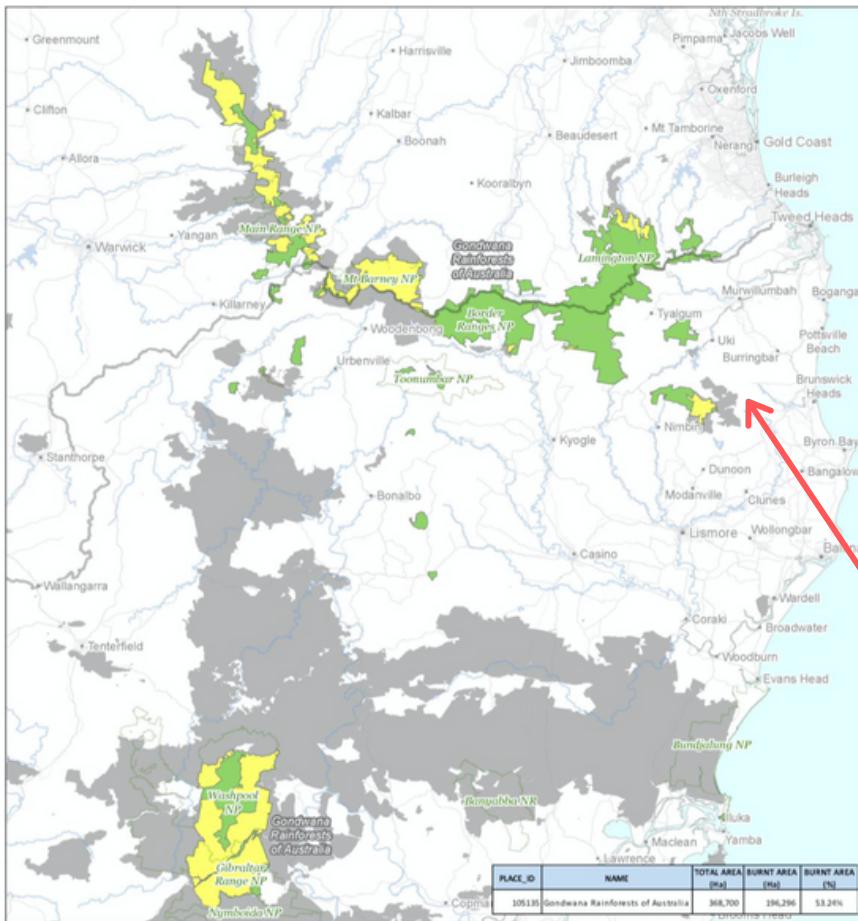
The 2019-2020 bushfires were the most devastating bushfires Australian wildlife and ecosystems have experienced in the last 50 years. The bushfires followed a prolonged period of drought that contributed significantly to creating ecological conditions favourable to bushfires.

In the Byron Shire region of Northern NSW, fires came through in November and December 2019 and burnt over 5,500 hectares of already threatened subtropical rainforest. These fires were named the Mt Nardi fires and will not be forgotten by the local community who are still repairing and recovering from what was lost.

The Mt Nardi fires burnt through Nightcap National Park and the surrounding areas including the communities of Huonbrook and Wanganui inland from Byron Bay where residents and landowners were faced with the flames and the aftermath. Both World Heritage National Park and rainforest on private property burnt. All of this rainforest is ecologically significant with the second highest biodiversity value in Australia. As the fires approached private properties the

residents of the valley had to evacuate and when they returned it was to a new reality.

The fires mostly burnt the sclerophyll forest (the eucalyptus and other hard leaved plants), along the ridgetops, however, the extreme conditions also saw fire burn the edge of the rainforest where it was eventually extinguished.



Current working sites in the Byron Shire.

Map produced by: the Environmental Resources Information Network

Fire extent data sources:
 NSW Rural Fire Service – CC-BY
 QLD Fire and Emergency Service – CC-BY

Contextual data sources: from the Department of Agriculture, Water and the Environment, Geoscience Australia and PSMA Australia.

caveat: The information presented in this map has been provided by a range of groups and agencies. While every effort has been made to ensure accuracy and completeness, no guarantee is given, nor responsibility taken by the Commonwealth for errors or omissions, and the Commonwealth does not accept responsibility in respect of any information or advice given in relation to, or as a consequence of, anything contained herein.

Notes:
 - "Burnt" refers simply to the area that is fire affected, no indication of fire intensity or other qualitative measure of impact
 - Percentage Burnt is the area burnt as the percentage of the individual Heritage Property or Place total area
 - Area Burnt is per individual Heritage Property or Place

Bushfire burnt areas as at 2020-02-12

- World Heritage Areas Unburnt
- World Heritage Areas Burnt
- Burnt areas (Outside World Heritage Areas)

Australian Government
 Department of Agriculture, Water and the Environment

12/02/2020

ON THE ROAD TO RECOVERY: WHAT WE HAVE LEARNT SO FAR

On the burnt areas we have seen, and the sites we have been working on, the aftermath of fires is large open areas with burnt debris. The fire creates openings in the rainforest by burning through plants and trees and this lets amounts of sunlight into an area that should be shaded, moist, and dense - as rainforests should be.

When there are openings in a rainforest it invites invasive weed species to spread through these open areas. When fast growing (and spreading) weeds inundate an area it inhibits native seeds from germinating and from native rainforest from regenerating as it covers the ground taking all light and nutrients. Invasive weeds also provide very little food or habitat for native wildlife.

We need to remove these weeds to rebuild this rainforest and recover the damage from the bushfires. Removing these weeds and planting trees on these thousands of hectares will rebuild beautiful, functional, rainforest.

If no action is taken, the thousands of hectares of burnt subtropical rainforest will become a breeding ground for invasive weed species. This will reduce the strength and biodiversity in an already vulnerable forest ecosystem.



Burnt debris remains throughout the area. All living plants seen in this image are weeds that are quickly growing amongst the debris. These weeds were soon waist height and spreading rapidly through this site.

ECOLOGICAL SIGNIFICANCE OF THE GONDWANA RAINFOREST

The subtropical rainforest of Northern NSW is called 'The Big Scrub'. The Big Scrub used to be an expansive rainforest however the majority was cleared throughout the 1800's and 1900's for agriculture and residential development.

The remaining rainforest patches that have survived years are internationally important. This rainforest has outstanding examples of significant ongoing geological processes and outstanding examples of major stages in the Earth's evolutionary history as well as ongoing evolutionary processes. Hence these patches are referred to as 'The Gondwana Rainforest'

These areas contain an outstanding number of songbird species, including lyrebirds, scrub-birds, treecreepers and bowerbirds and catbirds, belonging to some of the oldest lineages of passerines that evolved in the Late Cretaceous. The rainforests have been described as 'an archipelago of refugia, a series of distinctive habitats that characterise a temporary endpoint in climatic and geomorphological evolution'.

Ecosystems of the wider Gondwana Rainforests contain significant and important natural habitats for species of conservation significance, particularly those associated with the rainforests. The wider Gondwana Rainforests protects the largest and best stands of rainforest habitat remaining in this region.



Inside Nightcap National Park, internationally recognised biodiversity hotspot and ecologically significant due to outstanding examples of major stages in the Earth's evolutionary history.

WHY AUSTRALIAN RAINFORESTS NEED OUR HELP RECOVERING

What we learned from the devastating bushfires is that rainforest does not recover like other Australian forests. The rainforest that burnt still needs our help, so do the species that call it home.

There are many plants in Australia classified as "Pyrophiles", plants requiring fire in order to complete their cycle of reproduction, such as opening seed pods when burnt. Rainforest plants do not have this response to fire. In the first case, it should not burn, however the 2019-2020 bushfires came after a severe drought that caused the rainforest to become drier than it usually is and extremely vulnerable to fire given how many exotic species now inhabit the rainforest because of human intervention.

The impact of these fires in terms of both the size (of individual fires) and scale (numbers of fires across the landscape in one season) is considered an unprecedented event. While weather conditions resulted in areas being burnt at high intensity, there was a mosaic of fire intensity across the subtropical rainforest landscape.

The rainforest does not have the mechanisms to recover after fire. As we have noticed on our work sites, invasive weeds inundate a fire damaged landscape making it difficult for rainforest trees to establish themselves. Competition then exists between weed and baby tree. Weeds will win. Long term impacts are becoming visible including reduction in habitat and animal food sources, creek erosion, and the presence of poisonous invasive weeds dangerous to many animals.

Burnt rainforest needs assistance removing weeds and replanting large areas to re-establish a diverse and critically important ecosystem. We can do this by regeneration and tree planting.



Rainforest 4 Foundation CEO Kelvin Davies on a Bushfire Recovery work site between burnt trees.

OUR RESPONSE TO THE 2019-2020 AUSTRALIAN BUSHFIRES

Rainforest 4 Foundation began the *Bushfire Recovery Response Project* In April 2019.

We collaborated with ecologists, expert rainforest regenerators including Indigenous bush regenerators, landcare groups, landholders and local community. Firstly the burnt properties were identified, landholders contacted, and ecological site plans were made. Then we got to work and invited local volunteers and landholders to participate in the removal of burnt debris, invasive weed species and planting trees.

The Rainforest 4 Foundation Bushfire Recovery Response Project utilises scientifically proven methods of rainforest restoration including assisted natural regeneration and matrix-model tree planting.



Conservation Program Manager Zia at a tree planting day on a site in Wanganui.

ACHIEVEMENTS

The program is now one year in. Our incredible team has regenerated 10 hectares of fire affected land, establishing approximately 80,000 trees and they have planted 12,000 mixed species trees including endangered and critically endangered plant species and those that provide food and habitat for local wildlife.

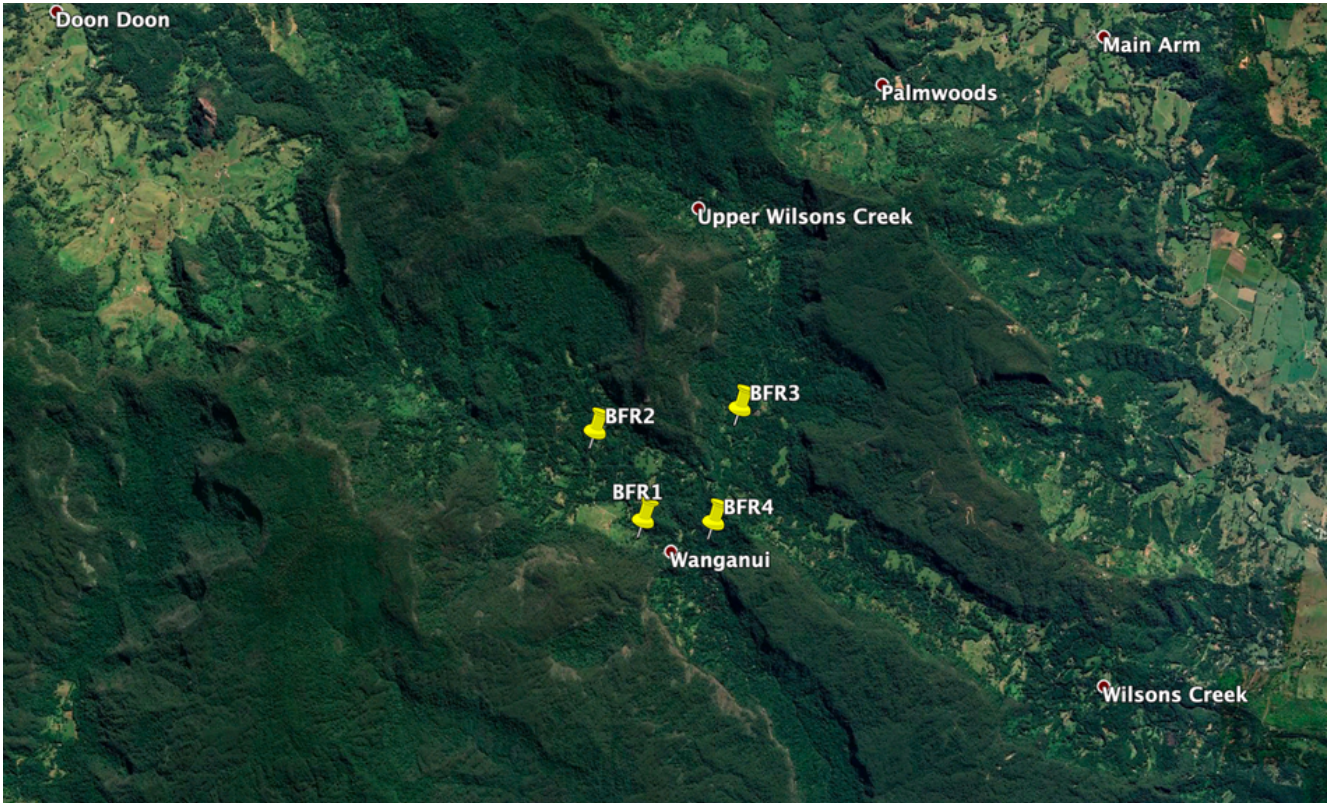


A volunteer (left) and staff (right) at a tree planting site in Wanganui.

ACHIEVEMENTS, WORK SITES AND GOALS

We are currently working on four sites within the Byron Shire. All four sites were affected in the bushfires and show tremendous opportunity for regeneration with intervention.

[BFR stands for Bushfire Recovery. Below are BFR sites 1, 2, 3, & 4]



Across all sites we have achieved 10 hectares of regeneration and 12,000 trees planted.

Our goal by the end of 2023 is 27 hectares regenerated and 35,000 trees planted.

We are one third of the way to our goal!

We have a long road ahead of us and many hectares of regeneration we can achieve.

We need your help to do this.

For only AUD\$1 / USD\$0.77 you can regenerate one square meter (10.7 square feet) of burnt rainforest land.

That means for AUD\$100 / USD\$77 you can regenerate 100 square meters (1076 square feet).

To make a donation please follow the global giving link below



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