



MIDCOAST
council

Property Resilience and Recovery Planning

**Weed control priorities and planning for native
vegetation after fire.**

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Post Fire Recovery



- **Fire** :Bush fires create conditions that favour the establishment of weeds, which can prevent native plants from re-establishing and thriving. After a bush fire, it's important to manage weed growth in bushland on your property.
- **Time**: Native vegetation may take several years to recover after bush fire and will change in composition over time. Australian native plants are adapted to recover after bush fire but it can take some time before your local bushland looks like the healthy vegetation community it was before the fire.
- **Observe**: For at least the first few months post-fire it is best to just observe the recovery process and allow the bushland to regenerate itself. In some situations, where natural regeneration is not progressing well, the planting of native vegetation or direct seeding may be required to stabilise soils and assist with the natural process of regeneration. If you are planting in recovering bushland, you should only use native plants grown locally, and only use locally collected seeds to maintain the integrity of the bushland.



Post Fire Recovery:



Number of critical factors influence recovery

1. Weed condition and densities, lifecycle, weed seed biomass at pre-fire.
2. Native vegetation type, condition, lifecycle, densities, position in landscape, connectivity, pre fire.
3. Post fire: native vegetation recovery types: via seedlings or resprouting.
4. Seedling types; canopy stored seeds eg; Allocasuarinas, soil stored eg wattles, imported seeds eg, insects, water ,birds.

Post Fire Recovery:



Number of critical factors influence recovery

1. Reprout mechanisms; Root suckers or rhizomes, lignotubers, epicormics shoots eg eucalypts, terminal aerial buds eg: grass trees, bulbs, corms and tubers eg lilys and orchids.
2. Other factors that will influence recovery include:
3. Amount of light penetration affecting bare soil, previous weed infestations.
4. Moisture holding capability of soil post fire, how much organic matter burnt.

Post Fire Recovery:

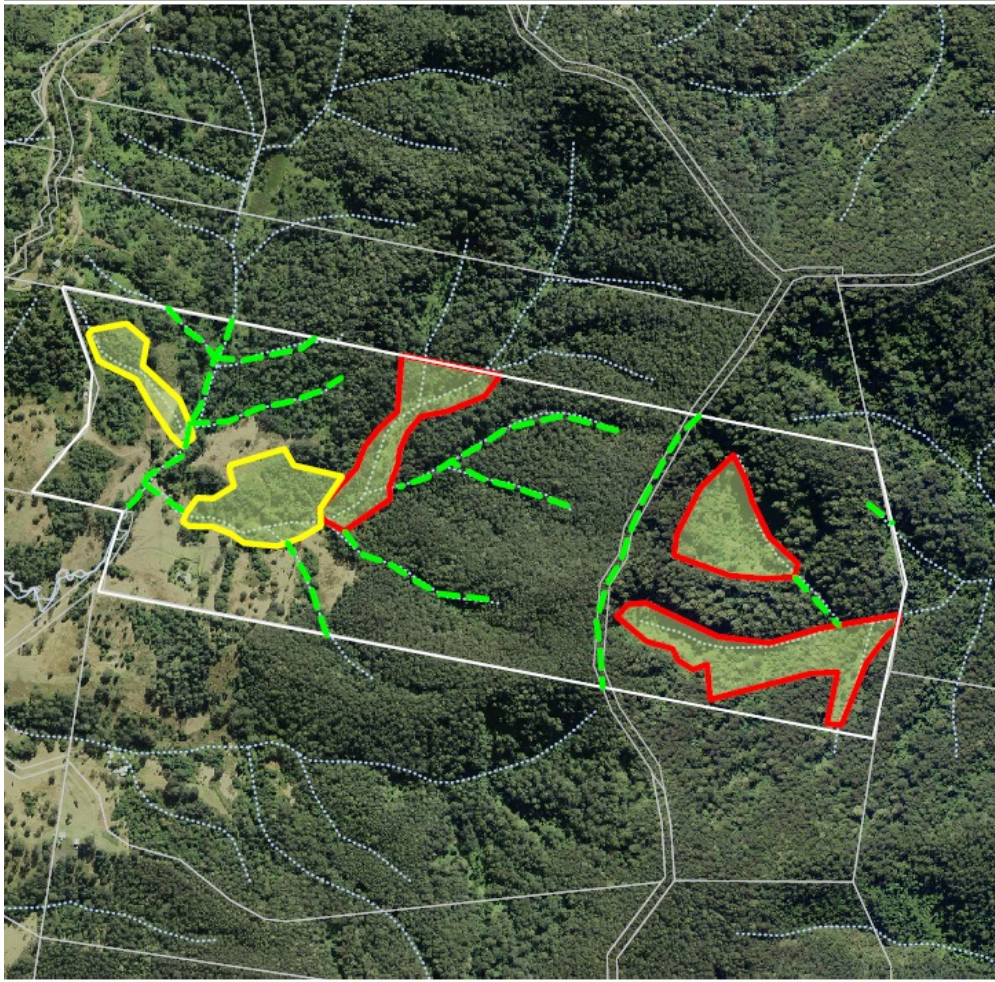


Number of critical factors influence recovery

1. Condition of mycorrhizal fungi post fire, fungi can survive long periods of wet and dry, some require host plants, fertiliser application does reduce fungi levels.
2. fire history and intensity levels
3. Soil organism level.
4. Over abundant herbivores and their impact on regenerating vegetation

Post Fire Planning:

Prioritisation



- Site Observations eg; haven't seen this plant before the fire.
- Site Recovery; what is doing well/ poorly and whats gone ballistic
- Tread lightly; there will be lots of critical regeneration potential hiding in amongst the explosion of annuals, exotic grasses and vines
- Make realistic outcomes, break the site into work zones, eg gullies, creeklines.

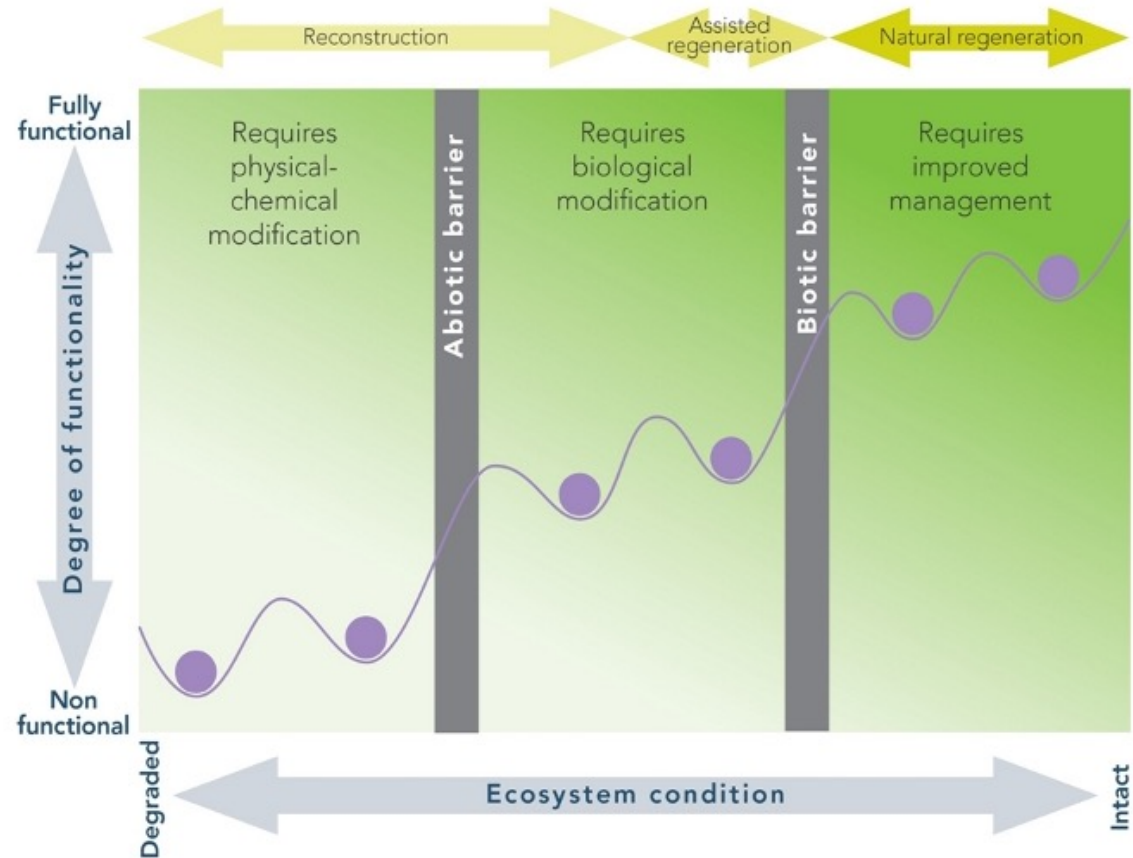
- APPROACHES-
Restoration inputs will be dictated by level of resilience and degradation

1. Natural
Regeneration

2. Assisted
Regeneration

3. Reconstruction

Post Fire Recovery: Prioritisation



Post Fire Recovery:



Prioritisation

- Target sites based on Plant community type eg; Weeping Lilly Pilly Forest in riparian zone.
- Prioritise based on weed condition and its life cycle stage – try to treat weeds before setting seed, use the flowering event as a reminder to prepare to treat. eg Privet .
- Where you have natives regenerating , release the natives from vines both native and weed vine species.
- Threatened Species recovery also prioritised eg: *Rhodomyrtus*

Post Fire Recovery:

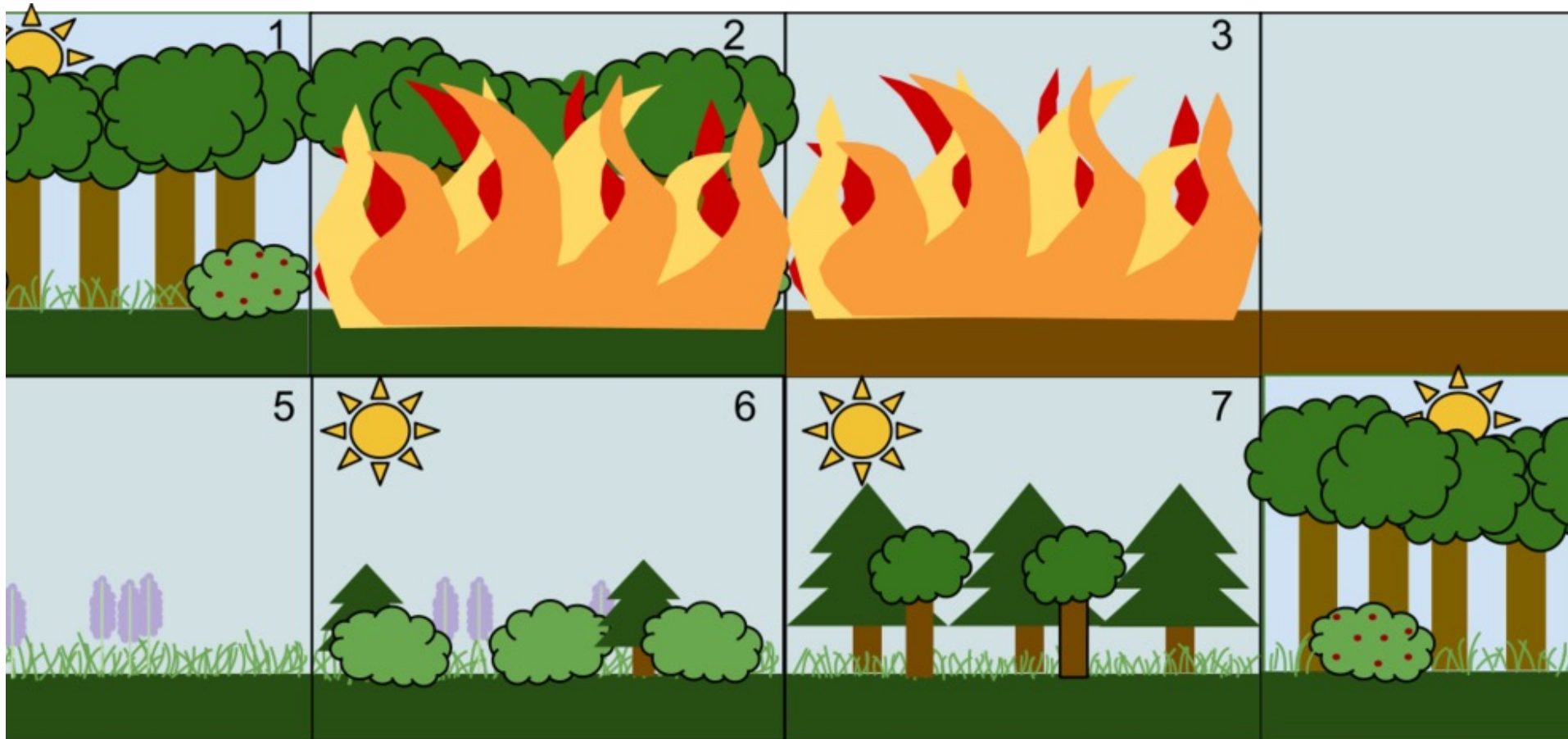


Prioritisation

- Target areas where you have canopy developing. Light penetration will be critical to having some control over weed management.
- Target areas where you have natural regeneration (resilience) occurring, noting what type of regeneration you have (successional stage):
 - Pioneers eg: wattles, kangaroo apple brush kurrajong
 - Secondary –Early & Late eg: Socketwood, White Beech.
 - Mature eg: Black Booyong

Post Fire recovery

Secondary Succession



Post Fire Recovery

Which Weeds to treat First ??

- General Biosecurity Duty obligations still apply .
- <https://weeds.dpi.nsw.gov.au/WeedBiosecurity?Areald=88>
- Weeds may offer soil stabilization, develop soil,+ OM, food & habitat for wildlife, nectar for bees, butterflies, attract other pollinators, provide shelter for growing plants
- After that 'Transformer Weeds' should be prioritized, these are weeds that are highly competitive, cause ecosystem change, impact soil seedbank, harder to treat. Eg: madeira vine, cats claw creeper, privet



Post Fire Recovery

Which Weeds to treat First ??



1. those inhibiting natural regeneration.
2. Species that you haven't seen before eg, ink-weed
3. Consolidate your edge/ dripline weeds .
4. Many annuals and exotic grasses can eventually be shaded out over time.

Post Fire Recovery



Which weeds to treat first?

1. Tobacco bush can be used as a 'nursery' plant for regenerating seedlings or revegetation to be removed at a later date once the others have established.
2. Castor oil plant should be removed and seed disposed of appropriately.
3. Crofton weed and Blue billy goat weed added to the to do list.
4. Planting should be used as 'last resort' , used as 'infill ' for gaps and 'local' species used only.

Post Fire Recovery



- **Other Rehabilitation considerations:**
- Leave woody debris in creek-line to retain water, fauna usage as well as physical barrier for weed seed dispersal.
- Install water stations for native birds and animals, food stations gradually reduced over time as food resources
- Install nest boxes and install cameras to monitor utilisation of boxes, feed and water stations.
- Feral animal control
- Regular monitoring and willingness to modify and adapt to changing conditions.

Useful references :



- https://youtu.be/M_0o-FpyRvc
- https://youtu.be/zaxro_vGKzc
- <https://www.midcoast.nsw.gov.au/files/assets/public/document-resources/environment-docs/trees-amp-plants/indigenous-plants-of-greater-taree-version-3.pdf>
- <https://www.midcoast.nsw.gov.au/files/assets/public/document-resources/environment-docs/trees-amp-plants/medium-res-garden-escapees-and-other-weeds-of-bushland-and-reserves-2015.pdf>
- <https://youtu.be/ZwD5YBWw7uc>
- <https://play.google.com/store/apps/details?id=com.readingroom.nswdpi.mobile>
- <https://youtu.be/ixzLkkysYzM>
- <https://weeds.dpi.nsw.gov.au/WeedBiosecurities?Aread=88>
- <https://www.environment.gov.au/biodiversity/bushfire-recovery/priority-plants>
- <https://www.environment.nsw.gov.au/research-and-publications/publications-search/fire-and-the-environment-2019-20-summary>

Spot the native ?

2020/10/28





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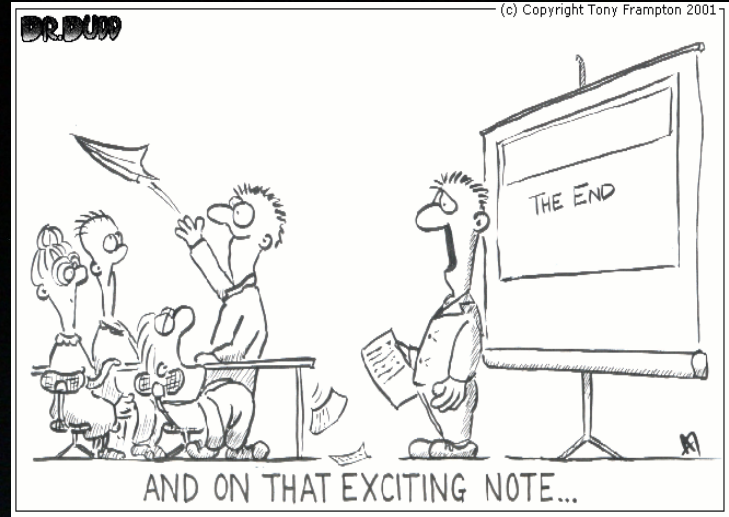
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