



Environmental Plantings Method

A Greening Australia Perspective

Who is Greening Australia?

Founded 1982

Focus on land degradation



From the archives: planting at Melville Forest in south-west Victoria. Date unknown.

2000–2015

Innovation and research partnerships greatly increase the variety of species and habitats (e.g. grasslands)



Late 1990s

Direct seeding unlocks scale & habitat creation becomes a realistic objective



Tree planting maintenance 20 August, 1985.



2015–2025

Funding consistency from Carbon and emerging markets facilitate scale: land access, SPA development and strategic planning for impact



Our Carbon Projects



A subsidiary for-purpose company that specialises in environmental markets. Any profit is reinvested into creating healthy and productive landscapes for people and nature.

High integrity environmental
credits

- Delivering high-impact, **biodiverse Restoration** projects
- To address twin crises of climate change & biodiversity loss
- Carbon as a means to fund restoration for biodiversity & ecosystem repair outcomes
- One of the largest producers of ACCUs under the Environmental Plantings method



Environmental Plantings – Fast Facts

Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2024 (the '2024 EP Method')

Objective: to sequester carbon by reforestation of native species on cleared land (25 or 100 years 'permanence')

Activities:

- Planting area must be at least 0.2 ha
- Trees and shrubs (woody) with potential to reach 2 m in height and 20% crown cover
- Composition derived from a pool of species comprising the vegetation community prior to clearing
- Additional (infill) planting is **now allowed**, to support ecological outcomes
- Access to 20% of mature plantings for seed harvest



Realising Opportunity: Can we restore biodiversity and repair degraded land while generating carbon credits?



An environmental crisis – climate extremes

2019/20

Almost 3 billion animals affected by Australian bushfires, report shows

'Unprecedented' globally: more than 20% of Australia's forests burnt in bushfires

More than 100 Australian plant species entirely burnt in Black Summer bushfires, study finds

WA bushfires linked to climate change as at least five homes lost

Wildfires projected to grow by 50 percent, but governments are ill-prepared

2021/22

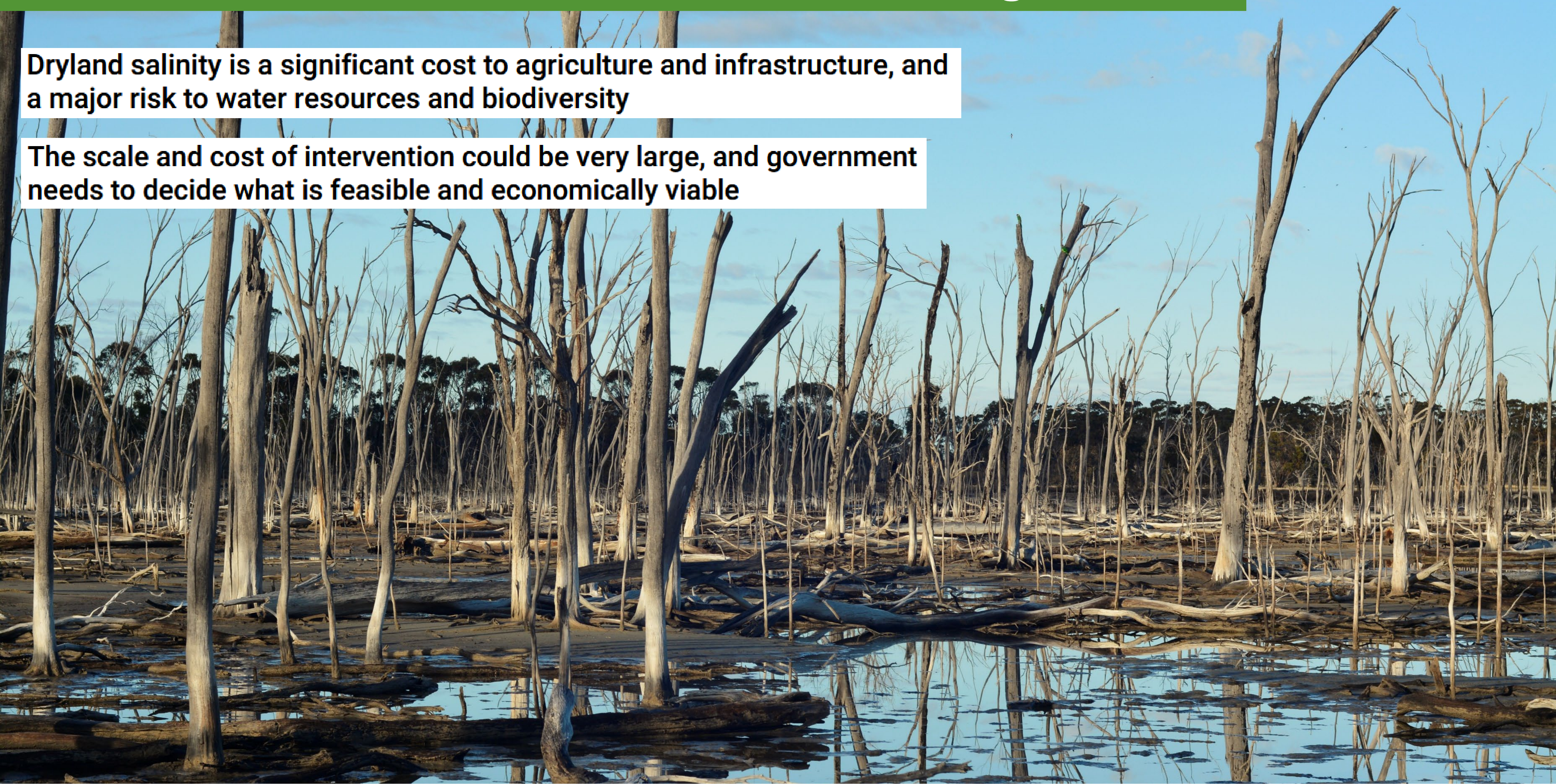
2021/22

'Heartbreaking': Australia's east coast reels from worst floods in living memory

An environmental crisis – chronic land degradation

Dryland salinity is a significant cost to agriculture and infrastructure, and a major risk to water resources and biodiversity

The scale and cost of intervention could be very large, and government needs to decide what is feasible and economically viable



An environmental crisis – widespread loss of biodiversity

20 more species added to Australia's threatened wildlife list

Wed 4 Sep 2024 01:00 AEST

More Australian wildlife added to threatened species list in 2023 than ever before, conservationists say

Mon 22 Jan 2024 01:00 AEDT

'Existential threat to our survival': see the 19 Australian ecosystems already collapsing

February 26, 2021 6:04am AEDT

Eucalyptus viminalis, Monaro NSW



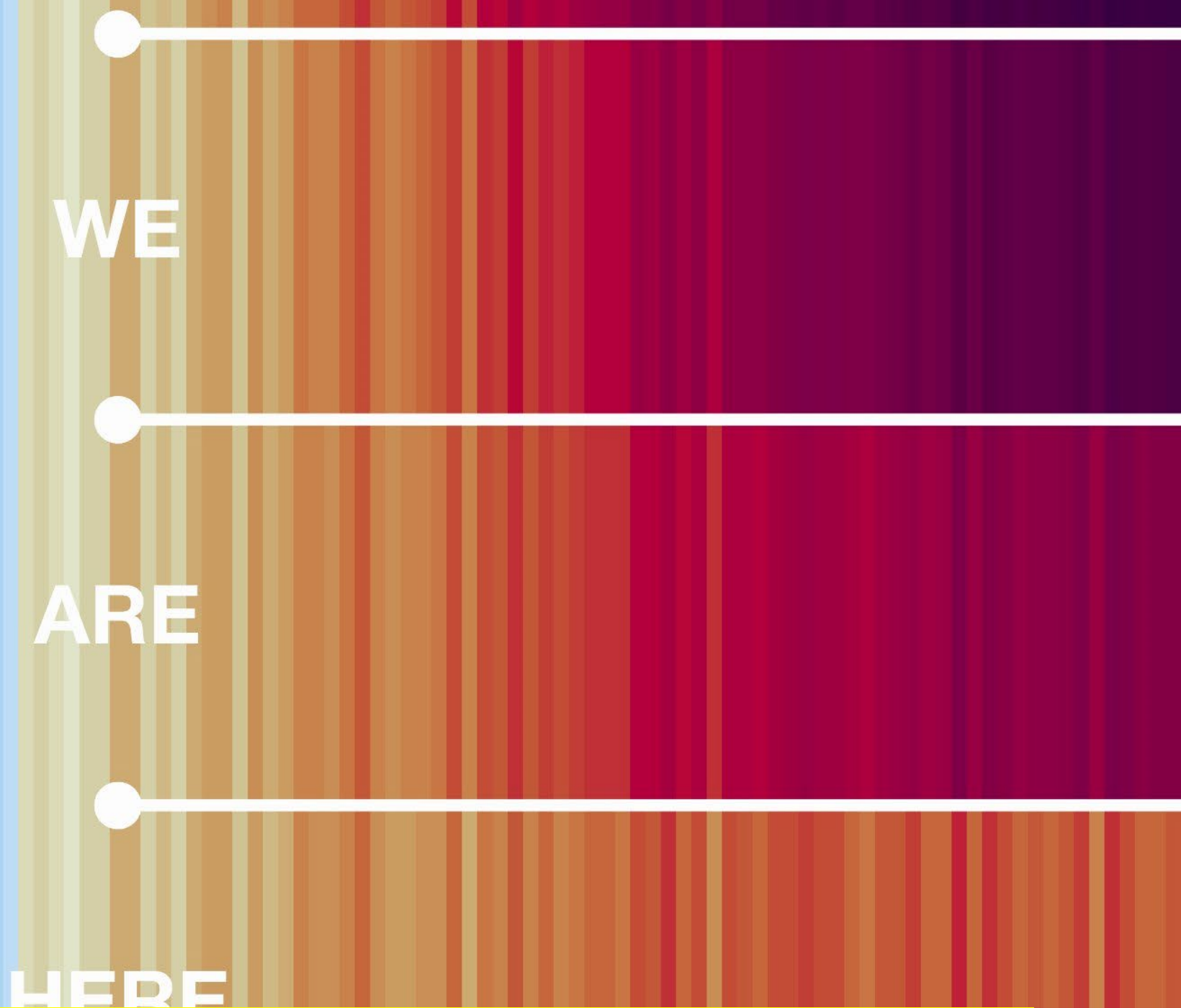
UNITED NATIONS DECADE ON
**ECOSYSTEM
RESTORATION**
2021-2030



THE BIODIVERSITY PLAN
E. Life E. Land E. Oceans

13 MILLION HECTARES IN 5 YEARS

WE HAVE LIMITED TIME, NATIVE SEED AND LAND



What is 'effective' restoration?

Impact Objectives:

1. Increase total **area** restored, aiming for **reconnection of areas** under native cover
2. Increase **representativeness** of biodiversity restored (species, structural and genetic)
3. Increase **condition, resilience** and **longevity** of restored sites

Location – where it's needed most, most effective for ecological change – biodiversity & connectivity potential

Size – large enough to make a difference, i.e. block versus linear, larger % of property, aggregation potential



Aligning Stakeholder Impact Objectives

Our Clients (project investors)

1. Carbon credit generation
2. Carbon sequestration
3. Enhancing native biodiversity, restoring ecosystem function
4. Social benefits (e.g. local and/or traditional owner employment)
5. Restoring degraded land (e.g. addressing salinity, erosion, increasing water retention)

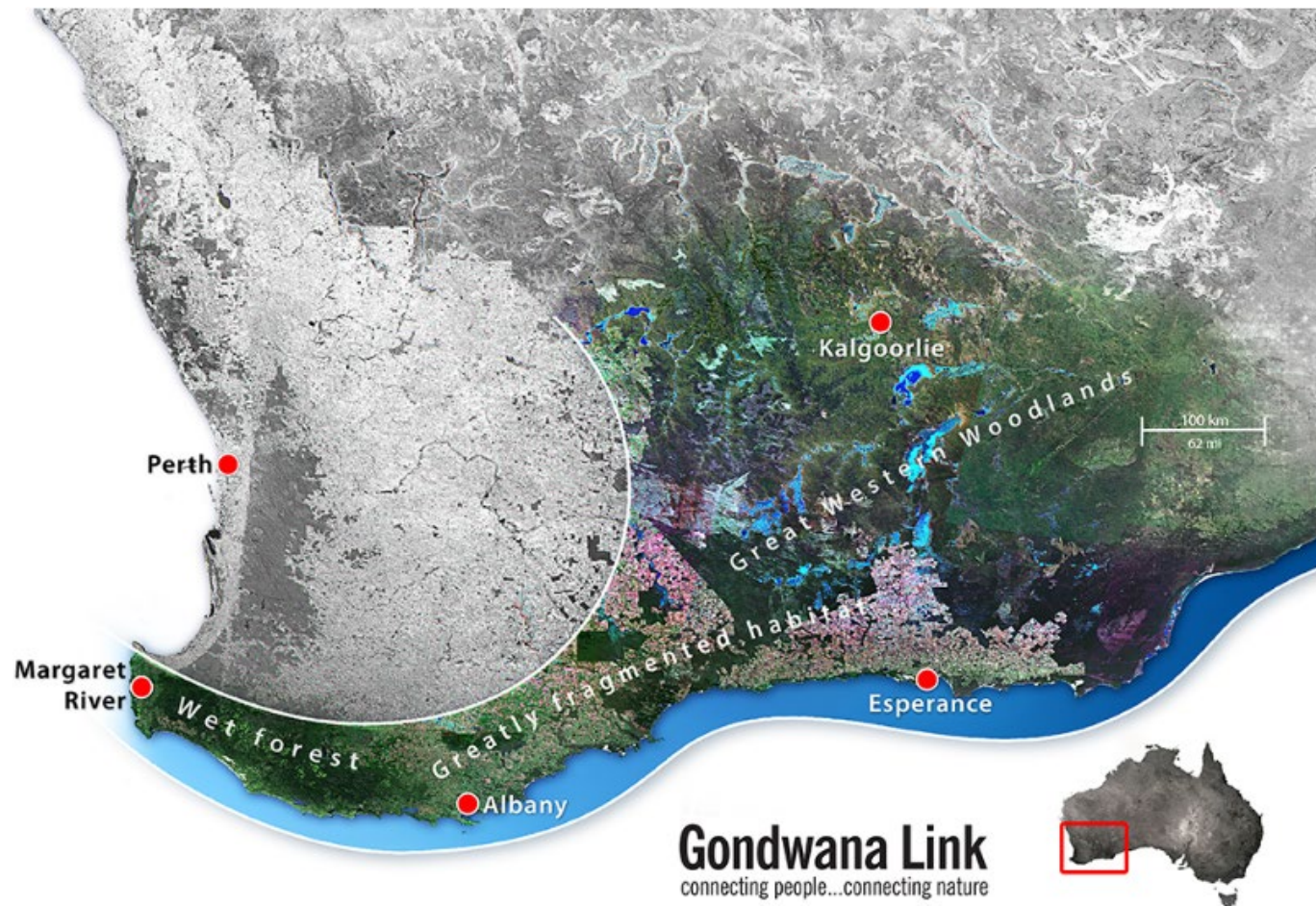
Landholders/Land Managers

1. Enhancing native biodiversity, restoring ecosystem function
2. Improved productivity (e.g. shade, shelter, fodder)
3. Restoring degraded land (e.g. addressing salinity, erosion, increasing water retention)
4. Social benefits (e.g. community support)
5. Carbon credit generation (Income diversification)
6. Carbon sequestration



Examples – land manager influence on outcomes

1. NGO land manager - High impact objectives, increased opportunity



Area and Connectivity

- 600 ha at Ediegarrup Reserve
- Connecting habitat corridor between Fitzgerald River & Stirling Range National Parks in southern WA

AstraZeneca

Bush Heritage
Australia

Greening Australia

*“We’re striving to build **high-end restoration** in an **ecologically strategic location** and make use of **multiple environmental markets** to support this work. Together, we’re going above and beyond in terms of design, implementation and experimental trials that aim to enhance the quality of habitats being established.”*



Biodiversity, Function & Resilience

- 150 species of native trees and shrubs
- Critical habitat resources for Carnaby’s Black Cockatoo & Malleefowl
- Sequestering ~85,000 tonnes Carbon
- 100 year permanence

Traditional Owner design & delivery

- Local Nowanup & Badgebup Aboriginal Rangers planting seedlings
- Incorporate species of bush foods found in the local area



Impact Objectives – effective restoration

Impact Objectives:

1. Increase total **area** restored, aiming for **reconnection of areas** under ☒ native cover
2. Increase **representativeness** of biodiversity restored (species, ☒ structural and genetic)
3. Increase **condition, resilience** and **longevity** of restored sites ☒

Location – where it's needed most, most effective for ecological change – biodiversity & connectivity potential ☒

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Examples – land manager influence on outcomes

2. Production-based landholder, reduced opportunity realisation

“At the moment, we’re not really getting any grazing value ... so anything we get off the land at this point is going to be a bonus,” said Clint. “We’re getting Greening Australia in and we’re planting that land in [shelter belts using native species](#) – salmon gum, white gum and then saltbush through the salty country – to basically regenerate the land.”



Old Man Saltbush (Atriplex nummularia) is an unsung multi-tasking hero. Saltbush helps rehabilitate salt-affected soils, is a fodder plant for stock, and forms an important part of biodiverse, carbon-storing ecosystems.

Clint is planning to put stock back in the revegetated area for grazing once the trees are established in five or so years.

On the other side of the country, farmers like Tim Annand – a cattle grazer in NSW – are also working with Greening Australia to implement biodiverse carbon plantings for [erosion control](#), [livestock shelter and improved pasture management](#).

“My aim was to get the stock out of the gullies and stabilise them, with reduced run-off raising those gullies and raising the water table. The planting is of great benefit, and if carbon’s going to help pay for it, it just adds up,” says Tim.



Strategically designed native carbon plantings on Tim Annand's property (pictured) will help reduce erosion and raise the water table. Image credit: Toby Peet.

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Have carbon markets helped restoration?

Land Access

- Increase in the size and number of projects > **No Cost** for landholders to plant and maintain native trees and shrubs
- Landholder Eligibility Criteria were initially very strict – these have relaxed resulting in greater uptake
- Direct access to market is an issue – monitoring costs put this out of reach for most land managers
- New market – seen as risky; regulatory impacts on re-sell, inter-generational implications
- Most land-access is smallholder aggregations and landscape connectivity difficult to realise at scale



Have carbon markets helped restoration?

Biodiversity

- Consistency of funding > critical capacity building in the sector (e.g. seed production areas, SPA) to deliver species and genetic diversity
- Method improvements that trade off carbon in favour of biodiversity (e.g. woody weed removal)
- Very low bar for biodiversity – no lower limit to number of species planted
- Only woody plants >2m contribute to carbon accounting:
 - No incentives for including key habitat strata of understorey and groundcover plants – usually most expensive to include
 - Reduces the types of vegetation communities and ecosystems that can be restored under carbon methods (e.g. no grasslands, heathlands)



Have carbon markets helped restoration?

Condition and longevity

- Native trees and shrubs:
 - Step-change in condition trajectory from converted, simplified systems to native cover;
 - Addresses components of ecosystem function that have been lost (e.g. erosion control, water retention, reduced wind and heat impacts)
 - Provides structure for a subset of wildlife
- Regulatory requirements to protect the plantings once they're installed – reduces occurrence of degradation & improves long-term outcomes
- Only woody plants >2m contribute to compliance:
 - Critical vegetation components missing, impacts ecosystem function (soils, water, nutrient cycling), self-regenerating stands
- Limited ability for ongoing management for ecological outcomes after establishment (e.g. cool burns, thinning)



Environmental Plantings Impact

13 million hectares of restoration to meet our national targets

10 years of Carbon markets ~200,000 ha



Markets alone won't solve systemic barriers to scale

Critical lack of native seed supply – Demand coordination across the sector is lacking

Coordination and communication of demand signals across the sector
Untied funding for seed collectors, seed storage and species/genetic diversity

Land – access depends on landholder decision to grant it

Government investment in people on the ground
Co-design aligned with collective strategy
Better access to funding

Implementation – Good restoration is getting harder and outcomes more variable

Governance to support restoration success (e.g. landscape threat abatement)
Science and practice input into policy

Government Investment Blueprint

Yes, Australia's environment is on a depressing path – but \$7 billion a year would transform it

Published: July 24, 2024 1.01pm AEST

David Crosling/AAP

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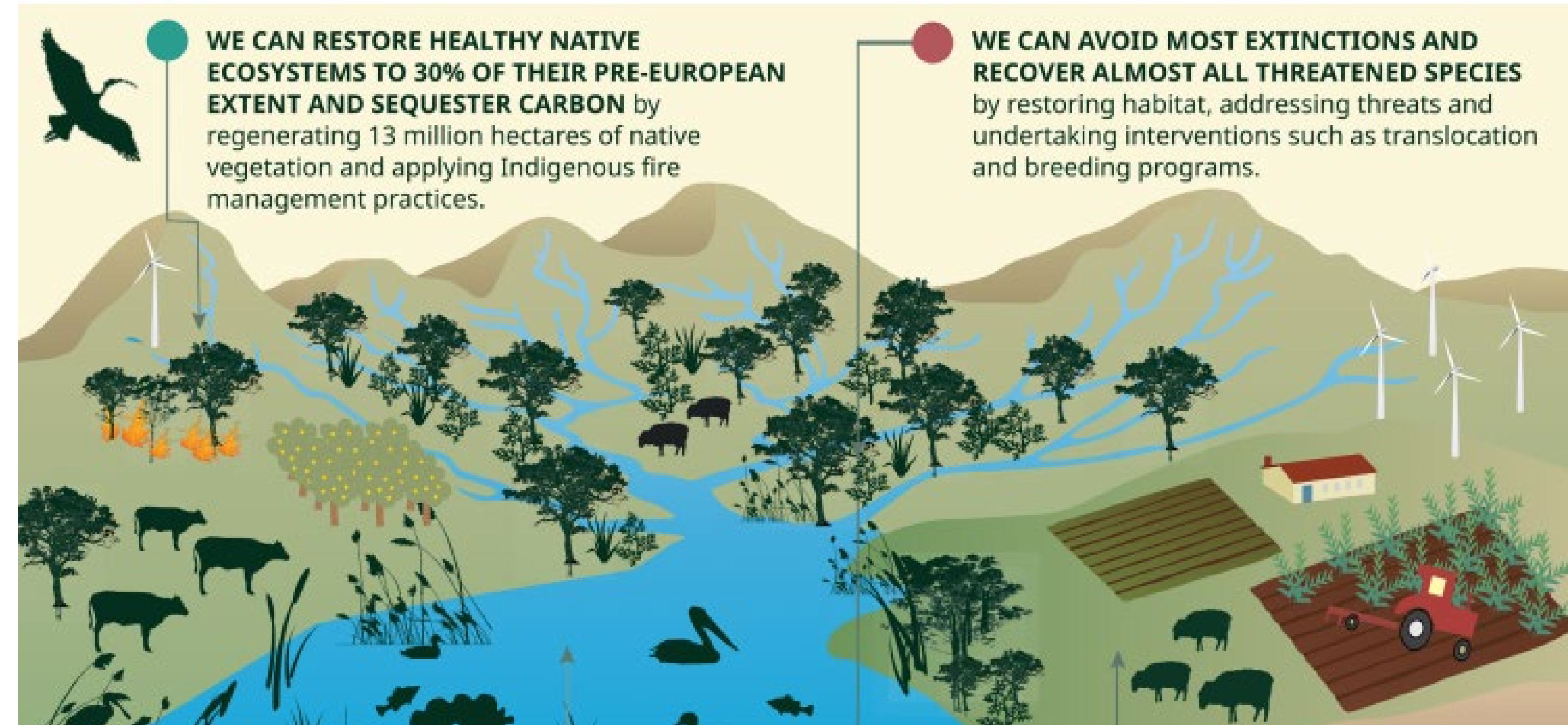
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The condition of Australia's environment [continues to decline](#). Many Australians wonder if it's possible to reverse this depressing trajectory – and our landmark assessment released today shows the answer is yes.

Our [report](#), launched today by the Wentworth Group of Concerned Scientists, demonstrates how repairing Australia's landscapes is not only achievable and affordable, it's in the national interest.

Using the best available science and expert advice, we identified 24 actions worth



“The inspiration element of this process is critical as restoration is not merely a top-down process. It is strongly driven by grass roots motivation from landholders, community groups, including Indigenous groups, businesses and agencies. But without government backing, motivation will flounder.”

