Scaling up Restoration in Australia

A Greening Australia Perspective

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What does ‘scale’ mean for Restoration?

‘Effective restoration’ - IMPACT

Impact Objectives:

1. Increase total **area** restored, aiming for **reconnection of areas** under native cover

2. Increase **representativeness** of biodiversity restored

3. Increase **condition, resilience** and **longevity** of restored sites

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1. Native Seed Industry – barriers to scale

Demand coordination across the sector is lacking

Seed collection

Uneven Demand

↓

Can't forecast how much to collect (supply risk)

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Collection mainly project-driven = ad hoc, reactionary

↓

High-risk, specialised skills, ageing workforce

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Seed Industry

Low native seed storage of any volume

↓

Low diversity (both species and genetic)

→

Low capacity for biodiverse and climate resilient restoration

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WITHOUT SEED THERE IS NO RESTORATION

1. Native Seed Industry – ways forward

National coordination and investment

1. Coordination and communication of demand signals across the sector (e.g. coordinated **government** body overseeing restoration networks and making information available)
2. Untied **Funding** to support seed collectors and seed storage

3. Development of restoration **seed banks** and **SPAs** especially for rarer species and genetic diversity

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2. Land Access – barriers to scale

Land access depends on landholder decision to grant it

Landholder Objectives

- **Profitability –** what will this cost me?
- **Resilience –** will this benefit my land (& family) in the long term?
- **Productivity –** is this the best use of my land or will it trade-off against productivity?

Aligning Restoration Objectives with Landholder Objectives

Restoration Land Objectives (Impact)

- **Location -** where it's most effective for ecological change – connectivity & biodiversity potential
- **Size -** large enough to make a difference, i.e. block versus linear, larger % of property, aggregation potential

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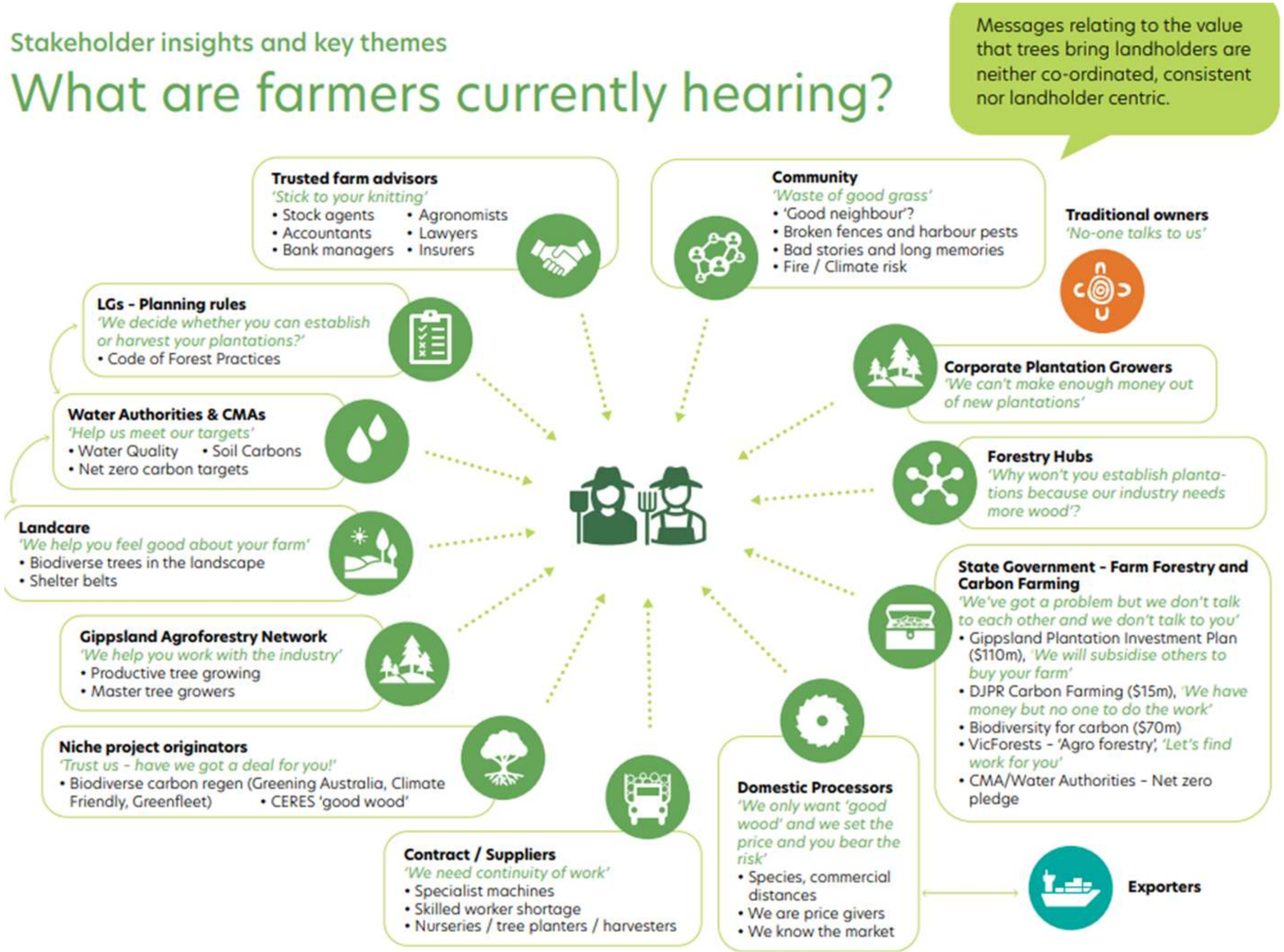
2. Land Access – barriers to scale



The Decision Space is complex:

- **Un-coordinated policies**

How do they compare? Which is best for me?

- **Immature markets**

Do I wait? What is my risk?

- **Family legacy and consensus**

Will this be a burden for my family down the track?

Source: Gippsland Forestry Hub (2022)

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2. Land Access – ways forward

Tip the balance so that landholders acting in private interest results in a pu

1.Effective Communication of Cost-Benefit Context

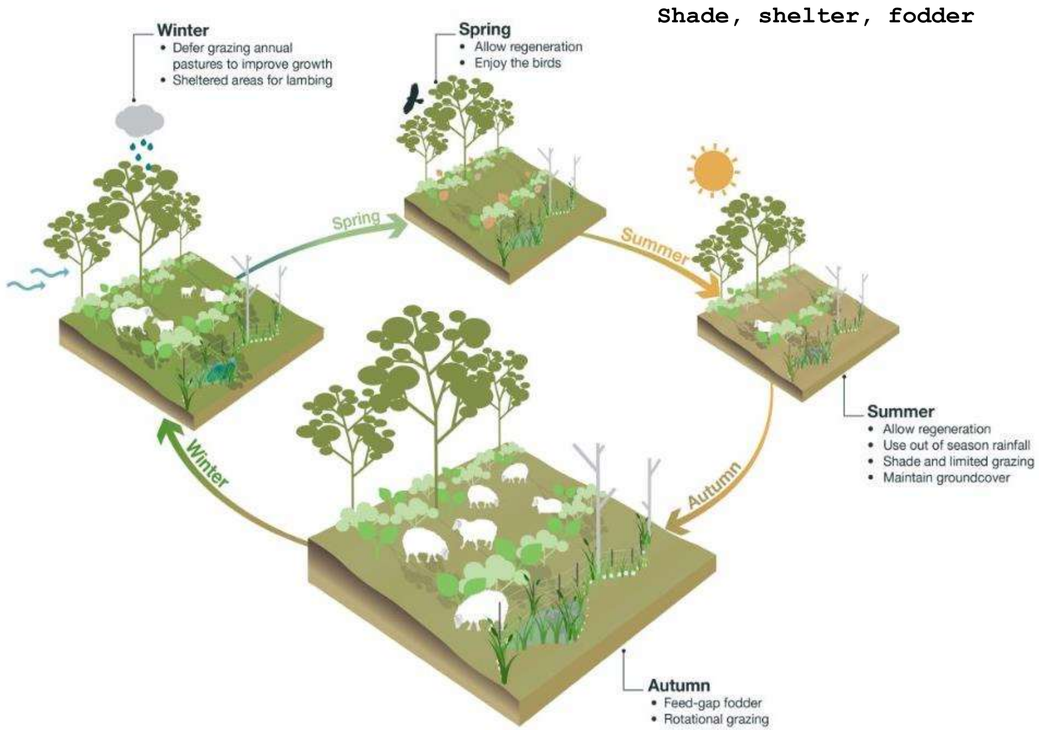
- Case studies, evidence (data) of Natural Capital farm benefits
- Access to Natural Capital Accounting tools (e.g. Farming for the Future)

2. Access Financial Capital

- Connect landholders to markets
- Benefit sharing – return carbon credits or revenue

3. Valuing Environmental Benefits

- Restoration **co-designed** and **people-centric** for shared value
- Align project outcomes with collective impact for a shared vision



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3. Restoration Implementation – barriers to

Good restoration is getting harder and outcomes more variable

1. Multitude of Threats to Overcome:

- Seasons changing and windows unpredictable
- Unprecedented frequency of shocks – drought, flood, fire
- Invasive species and pests are increasing
- Decision making under great uncertainty - what used to work once is not gu

2. Limited Knowledge Transfer:

- Short-term projects – delivery focus, fewer resources for M&E and research
- Ageing workforce – knowledge base
- Adaptive capacity is low

3. Private-sector Funding Supports INPUTS not OUTCOMES:

- Market-based funding selects more marginal and degraded starting states
- Mis-alignment between market compliance and implementation and ecological needs
- Funding instruments fall short of managing for spatial and temporal threats

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3. Restoration Implementation – ways forward

Enablers of Efficiency and Effectiveness

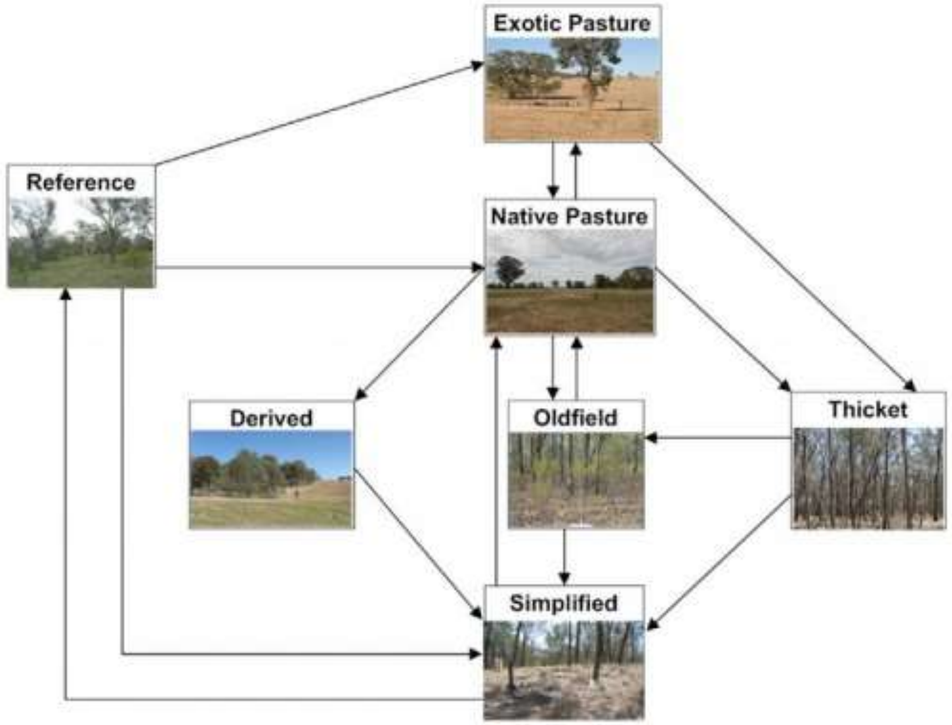
1.Governance to support restoration success

- Landscape-scale strategies to address threats beyond project-scale (e.g. invasive plants and pests)

2. Regulation and Standards – science and practice input into policy

Funding that rewards **best practise** and **effective** restoration

- **Conceptual Framework** of best practise
- **Theory of change models:**
  - **Knowledge transfer**
  - Predict time-bound "success" targets – **ecological evaluation**
  - Communicate **opportunities**, **uncertainty**, and guiding **actions**



A conceptual state-and-transition model for non-riparian woodlands
adapted from Rumpff et al 2010 *Biological Conservation*

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Summary

Seed - Demand coordination across the sector is lacking

Coordination and communication of demand signals across the sector

Funding for seed collectors, seed storage and species/genetic diversity

Land - access depends on landholder decision to grant it

Effective Communication of Cost-Benefit Context

Access Financial Capital

Co-design aligned with collective strategy

Implementation - Good restoration is getting harder and outcomes more variable

Governance to support restoration success

Science and practice input into policy