



Australian
Seed Bank
Partnership

Native seed & ecological restoration

Challenges for scaling up

AIUCN Ecosystem Restoration Workshop

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Safeguarding Australia's flora, through a
national network of germplasm collections



Outline

**Conservation
context**

**Australian
Seed Bank
Partnership**

**Native seed
sector**

**Issues and
opps for
'scaling up'**

Plants under threat

- 23,000+ Australian plants.
- 10% are threatened >1450 sp.
- 200 CE + over 100 TEC's
- Threats -> habitat loss, fire regimes, climate change, invasives & disease.
- Plant biodiversity loss increasing – coinciding with loss and fragmentation of native vegetation from urban and agriculture uses.



International and National context



- Seed and plant conservation is foundational for restoration
- Key to achieving 5 of the 6 National targets to meet our global GBF commitments, for CBD COP 16 in Cali, next month.
- Updated Global Strategy for Plant Conservation for adoption at COP16
- ‘Plant Blindness’ much more invested in vertebrate conservation
- Plant conservation more affordable on a cost per sp. basis
- Arguably our highest priority, plants as key components of ecosystems and critical habitat resources + high endemism 84%
- Losing taxonomic expertise -> biology smarts for conservation action



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Australian Network for
Plant Conservation Inc

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Our focus is to deliver a national effort that contributes to the conservation of Australia's native plant diversity through



**Sustainable
seed banking**



**Seed
science**



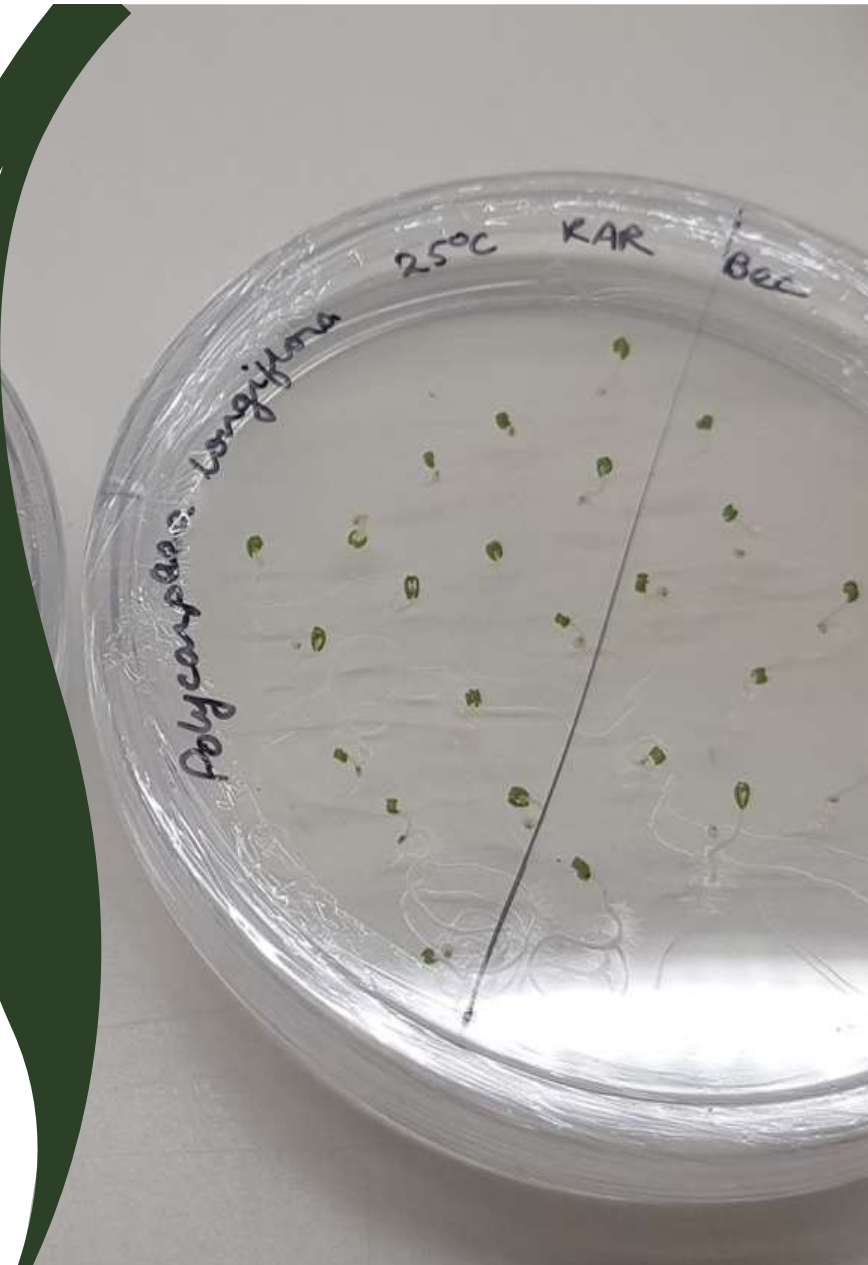
**Knowledge
sharing**



**Use of
collections**

Plant science & restoration capacity

- Seed Banks are pivotal for landscape recovery but lack capacity, core funds
- 31,500 collections ~50% EPBC listed sp
- 30% are small collections
- < 2% re-tested post banking.
- Retesting only for seed requests and specific projects
- More time chasing funds than in field/lab





Native seed sector

- Advocacy and research by NGO partners ANPC and GA – industry surveys/reports
- National Seed Strategy post Black Summer
- Dumped, no coord and enabling investment
- Europe and US way ahead on native seed supply - vast production areas driving grassy ecosystem restoration.
- GA actively engaging to address seed supply chain via peak ag seed body (ASF)
- Ditto Landcare NSW: regional analysis et al.



Native seed sector

- Sector is fragmented - many small operators and no peak body to advance the industry
- Demand is unpredictable – funding/project driven
- Seed supply chain is under-valued and users not prepared to pay true cost of providing quality seed
- Seasonal conditions affecting supply
- Licensing is limiting supply (state permitting)
- Ageing workforce and no succession planning
- No standards – quality assurance, competencies, accreditation -> ethical/sustainable collecting
- No shared data systems to record, report and track

Issues for restoration

Seed availability and diversity of sp. for provenance & climate resilience ~ 20-30 sp. used, need 150-200 sp

Local knowledge to optimise collection efforts

Lead time to improve/scale-up supply via SPAs

Producing by yrs 3-5, depending on sp. & conditions -
+ need enough seed banked for low production years

Govt's generate demand but not investing in sustainable supply options or, building capability and capacity:

- funding and using public land for SPA's
- setting standards; licensing; training
- improved design of programs - timing and ecological outcomes
- supply info /knowledge/practice portals



Managing risks to scale up

With no industry scaffolding -> perverse outcomes

- Overharvest wild plant populations
- Undermine reputable seed suppliers and nurseries
- Purchasers take whatever – ecology/geography
- Big commercial carbon/ biodiversity schemes suck up available seed and distribution/control
- Rogue operators no checks on seed extraction
- Poor landscape and biodiversity outcomes:
 - species survival, landscape function and resilience;
 - monocultures; in-breeding; and
 - potential invasives etc.





Growing the sector

Leadership – coordination, planning, best practice regulation and delivery

Enable, utilise, and support current seed businesses, landcare networks/ landholders and indigenous participation in industry

Identification of opportunities to fill gaps and develop local SPAs, and other infrastructure

Regionally coded database tracking system

Share risks, provide program continuity and investment aligned to task (~10 years)

SOUTH WEST SLOPES REVEGETATION GUIDE

NORTH AND SOUTH OF THE MURRUMBIDGEE RIVER



SECOND EDITION



NATIVE VEGETATION GUIDE FOR THE RIVERINA

NOTES FOR LAND MANAGERS ON ITS MANAGEMENT AND REVEGETATION



SECOND EDITION

CASE STUDY: Reapplication not reinvention Murray Riverina

Final thoughts

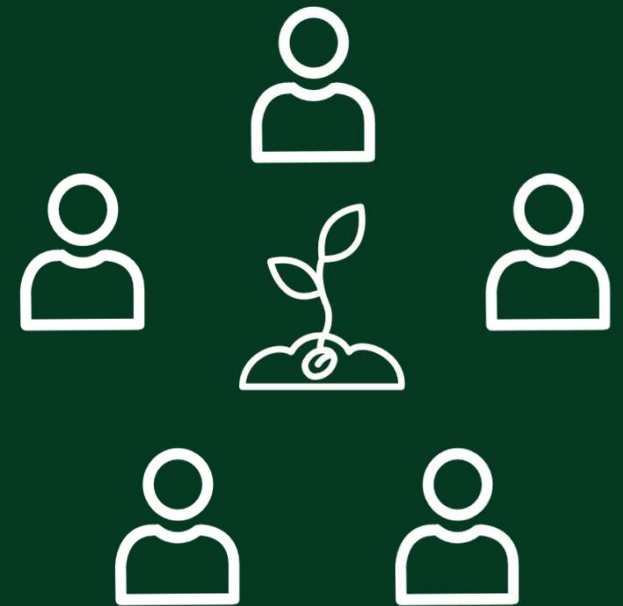
Overcome policy inertia and fragmentation

Active curation of our conservation seed banks
> representation and genetic diversity to grow
collections and research for future recovery

National leadership, coordination, planning
standards, data systems for native seed sector

Build on restoration knowledge, veg plans and
resources -> central repository and CoP's

Enable regional/local networks, indigenous
industry participation -> rebuild trust & p'ships





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