

PROJECT PHOENIX



SUCCESSFUL INTERNATIONAL RESTORATION SYSTEMS



PROJECT SUMMARY

JUNE 2021

Across all of our Project Phoenix activities and actions we pay respect to the Traditional Owners and Custodians of the lands and waters on which we work. We honour the resilience and continuing connection to country, culture and community of all Aboriginal and Torres Strait Islander people across Australia. We recognise the decisions we make today will impact the lives of generations to come.

First published 2021
Project Phoenix
Greening Australia (National Office)
Level 3, 349 Collins Street
Melbourne VIC 3000
Tel: 1300 886 589
Email: phoenix@greeningaustralia.org.au
Website: www.greeningaustralia.org.au

ISBN: xxx-x-xxxxxx-xx-x (Book)
xxx-x-xxxxxx-xx-x (epub)

Author: Dr Lucy E. Commander, Project Manager, FloraBank Guidelines,
Australian Network for Plant Conservation
Title: Successful international restoration systems

Copyright © Project Phoenix 2021
Cover by Kerry O’Flaherty, Design Consultant
Internal design by Kerry O’Flaherty, Design Consultant
Proofread by Puddingburn Publishing Services

This report is copyright. Except for private study, research, criticism or reviews, as permitted under the *Copyright Act 1968* (Cth), no part of this report may be reproduced, stored in a retrieval system or transmitted in any form or by any means without prior written permission. Enquiries should be made to phoenix@greeningaustralia.org.au.

Project Phoenix is supported by the Australian Government’s *Wildlife and Habitat Bushfire Recovery program* and coordinated by Greening Australia.



Australian Government



ACKNOWLEDGEMENTS

Greening Australia would like to acknowledge the hard work and dedication of the Project Phoenix Management Team: Samantha Craigie, Patricia Verden, Brian Ramsay, Irene Walker, Courtney Sullivan, Rowan Wood, Paul Della Libera, Kim Philliponi and Ella Campen.



CONTENTS

EXECUTIVE SUMMARY 5

 About the project 5

 Scope 5

 Introduction 6

 Issues 7

 Comments 7

 Key output 7

 Outcomes 7

 Findings 8

 Evidence 8

RECOMMENDATIONS 9

WANT TO KNOW MORE? 12



EXECUTIVE SUMMARY

About the project

The report *Successful international restoration systems* investigates if there are international models that have been used and evaluated as to their effectiveness to inform economic development and build national industry capacity.

Scope

The scope of this project was to undertake a review of existing systems across other sovereign nations to identify if there are suitable models that may guide the development of a viable national restoration program.



Introduction

As Australia begins to recover from the catastrophic bushfires in 2019–20, as well as drought and floods, we have much to learn about how to better restore our environment to ensure it is resilient to climatic events such as fire, floods and temperature extremes, as well as how to increase our capacity to plan, implement and sustain restoration.

The economic benefits of nature-based solutions to environmental problems are in the order of thousands to millions of dollars per year. Hence, we need to value and invest in our natural capital.

This review outlines international climate change and biodiversity agreements, the economics of restoration and case studies of world-wide restoration programs. Recommendations for a future national restoration program in Australia are proposed.



Issues

Although few issues were encountered in the development of this report, there are a couple of limitations to the report.

- firstly, the short timeline precluded any collaboration with other authors and
- secondly, while case studies are sourced from all continents except Antarctica, there was not an opportunity to investigate national restoration programs in all countries of the world.

Comments

Each of the countries in this report are at a different stage of their restoration journey. Some are still in the planning phase, while others have decades of experience. Some have experienced much success, whereas others have achieved comparatively little so far.

There are also different socioeconomic conditions, different drivers and motivations for restoration (both at a government and an individual level), different types of funding available and different levels of capacity.

But one constant remains: nature is essential for human wellbeing, as well as having intrinsic value.

Key output

The key output is the report *Successful international restoration systems*.

Outcomes

- Report produced.
- Reviewed existing systems across other sovereign nations to guide development of a suitable national restoration program within Australia.
- Identified successful international economic models to support restoration programs in Australia.



Findings

The two key findings from this review are:

1. Put a value on ecosystem products and services to help value restoration. This can be done through natural capital accounting.
2. Invest in capacity to implement a National Restoration Program which complies with international agreements and increases the value of Australia's natural capital. This program should include:
 - establishment of leadership and coordination
 - assessment of current vegetation condition
 - spatial planning and prioritisation for restoration (a variety of economic tools and models are available)
 - identification of sources of funding
 - production of national guidelines for restoration of each biome including an outline of appropriate restoration approaches and
 - capacity building to enable restoration implementation.

Evidence

The data sources include:

- peer-reviewed literature from journals
- reports
 - e.g. *The Economics of Biodiversity: The Dasgupta Review* (Dasgupta 2021)
 - *Enabling Factors to Scale Up Forest Landscape Restoration: The Roles of Governance and Economics Full Report with Case Studies* (Mansourian 2020)
 - *The Economics of Ecosystems and Biodiversity for National and International Policy Makers — Summary: Responding to the Value of Nature* (TEEB 2009)
- online newspaper articles
- national guidelines
- books
- international agreements
- international strategy documents
 - e.g. *National Seed Strategy for Rehabilitation and Restoration (USA)* (Plant Conservation Alliance 2015b)
- websites.

Refer to the full report *Successful international restoration systems references* for all references and resources.



RECOMMENDATIONS

Without sound economic models, restoration projects may not receive adequate funding. This lack of funding could lead to projects not being seen to completion (e.g. no follow up planting), cost-cutting measures leading to restoration failures (e.g. if fencing is not installed and grazing animals destroy planted seedlings, or there is a lack of site preparation), lack of follow-up care and maintenance (e.g. ongoing weeding) and no long-term monitoring and reporting to determine success or otherwise.

Economic factors that will need to be included in, contribute to, or considered in future restoration programs include:

RECOMMENDATIONS

1

Direct and indirect costs of restoration:

- Cost of establishing a restoration network or national body
- Cost of restoration and land use planning
- Cost of ecosystem assessments, both on ground and remote sensing
- Cost of seed collection and seedling production including research into propagation
- Cost of implementation, e.g. weeding, fencing, planting
- Cost of maintenance, monitoring and reporting
- Cost of infrastructure including nurseries and seed stores
- Cost of training programs and communication strategies
- Cost of establishing field trials and demonstration sites
- Opportunity costs (e.g., if land is restored, it can't be used for other purposes such as housing)
- Payments for ecosystem services

2

Funding sources:

- Federal, state and local government
- Private donors
- Carbon offset schemes



RECOMMENDATIONS

- Taxes, levies, tax exemptions, soft loans, micro-credit
- Matching schemes (matching government and private funding, or matching funding with in-kind support)
- Public–private partnerships
- International funding
- International NGOs
- Nature-based tourism
- Combining funding from several government agencies, or several private organisations
- Fiscal stimulus packages addressing the impact of COVID-19
- Aligning restoration with other government priorities

3

Natural capital accounting (e.g. UN’s System of Environmental Economic Accountingⁱ (SEEA)), which calculates stocks and flows of natural resources, can:

- Measure the condition of environmental assets (i.e. natural capital)
- Demonstrate improvements in condition and show trends over time
- Compare the relative condition of different assets
- Aggregate information at different scales (regional, state, national)
- Produce an asset table
- Prove sustainability claims to consumers and investors to open new markets and funding opportunities (e.g. access to premiums for products or access to investors selecting sustainable investments)
- Prove that investment or funding has had an environmental impact
- Lead to performance-based grant funding

4

Restoration benefits:

- Creation of local jobs through restoration industry and tourism industry
- Creation of jobs for Indigenous Australians



RECOMMENDATIONS

- Increased availability of native plant species for the general public to purchase through native nurseries
- Improved ecosystem services
- Increased availability of ecosystem products (e.g. fisheries, forest products)
- Lower government and insurance payouts due to reduction in impact of extreme weather events
- Prevention of species extinctions
- Improved agricultural yields

5

Socioeconomic factors to consider:

- Population pressure
- Off-farm economy (e.g. secondary and tertiary industry)
- Rural economy (e.g. grain yield, area of arable land)
- Landowner aspirations
- Capital and resource flows
- Socioecological resilience
- End user objectives
- Market volatility, risk and contract structure



WANT TO KNOW MORE?

For further information read the full report *Successful international restoration systems*.

Related project

- *International options to incentivise the Native Seed Sector*

This project contributes to the evidence base for a ten-year strategy to guide the native seed and landscape sector. The document, which is untitled until endorsement in September 2021, is referred to as the Strategy in all Project Phoenix publications.



PROJECT PHOENIX

