



CENTRE FOR  
INVASIVE SPECIES  
SOLUTIONS

# National Coordination of Invasive Species Solutions

*Delivering end-to-end solutions at scale*

Shauna Chadlowe  
Chief Executive

# Who we are



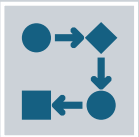
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Australia's only **independent, national not-for-profit** entirely dedicated to collaborative invasive species RD&E



***Purpose: protect Australia from invasive species through collaborative science, innovation and engagement***



**End-to-end delivery: discovery → adoption at scale**

# Members, Partners, Collaborators



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## MEMBERS



## ASSOCIATE MEMBERS



## PARTNERS



**+ 62 additional  
R&D bodies**

# National impact: digital platforms

**feral**SCAN 

Record and manage pests in your region

Visit [feralscan.org.au](https://feralscan.org.au)

**pest**SMART 

National Codes of Practice, training and resources

Visit [pestsmart.org.au](https://pestsmart.org.au)



**Digital Illegal Wildlife Trade:** automated detection of illegal wildlife trade

**weed**SCAN 

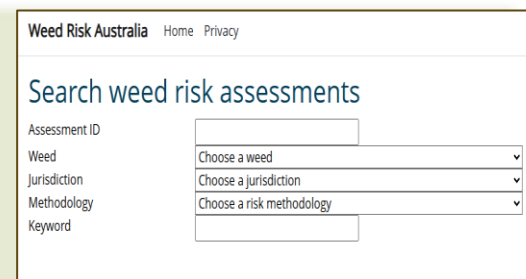
Use AI to identify and manage priority weeds

Visit [weedscan.org.au](https://weedscan.org.au)

**weeds**AUSTRALIA 

A hub for weed management, species info and tools

Visit [weeds.org.au](https://weeds.org.au)



Weed Risk Australia Home Privacy

Search weed risk assessments

Assessment ID

Weed

Jurisdiction

Methodology

Keyword

**Weed Risk Australia:** national platforms for weed risk assessment

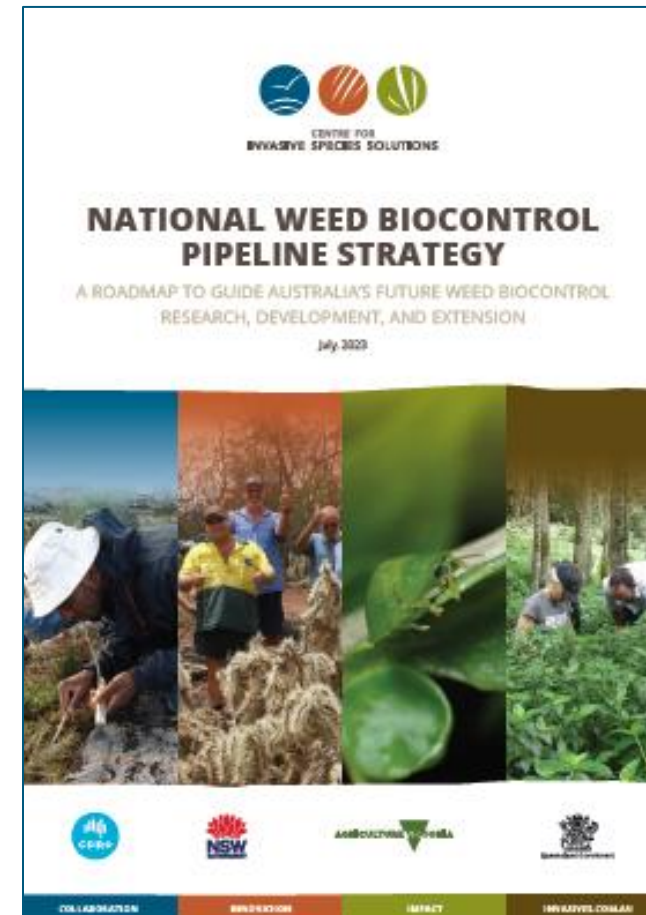
**weed**REMEED 

**WeedRemeed:** remote sensing/ AI weed detection technology

# National impact: Collaborative RD&E



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# National impact: People Power, COPS/ NATSOPs, Control tools



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National Coordination Programs



Best Practice Guidelines  
COPS/ NATSOPS



Control tools/ products





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# A high stakes challenge



**\$25 billion** annual cost of pests and weeds to Australia - NSW bears 26% of this cost (~\$1.9B. p.a.)



**> 1,250** or **80%** nationally listed threatened species at risk from invasive species



Invasive species have had a substantial role in **nearly all extinctions since 1961**



## Fighting plagues and predators

Australia's path towards a pest and weed-free future

November 2021

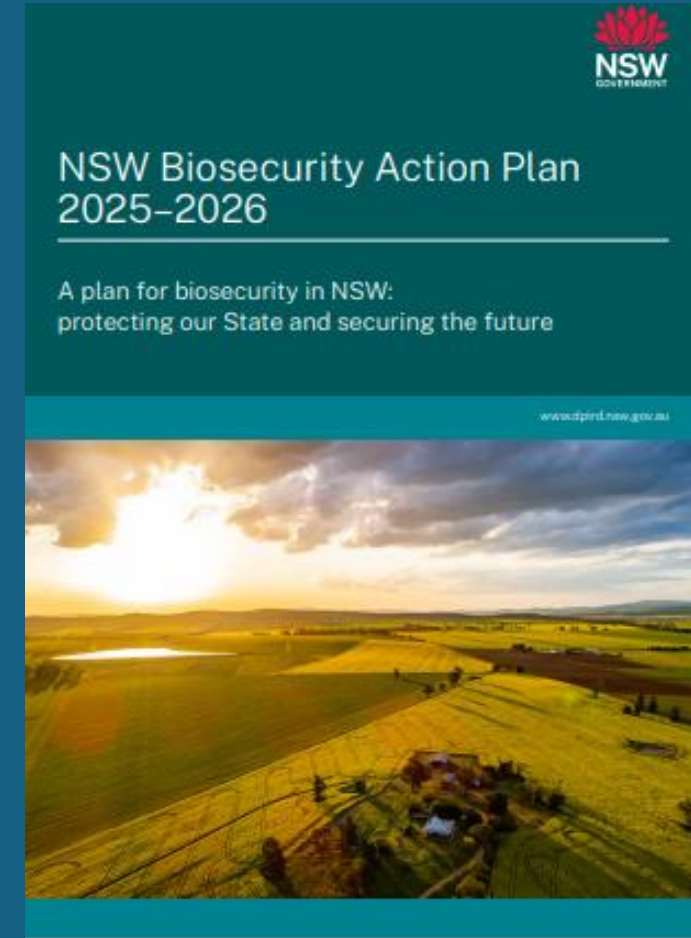
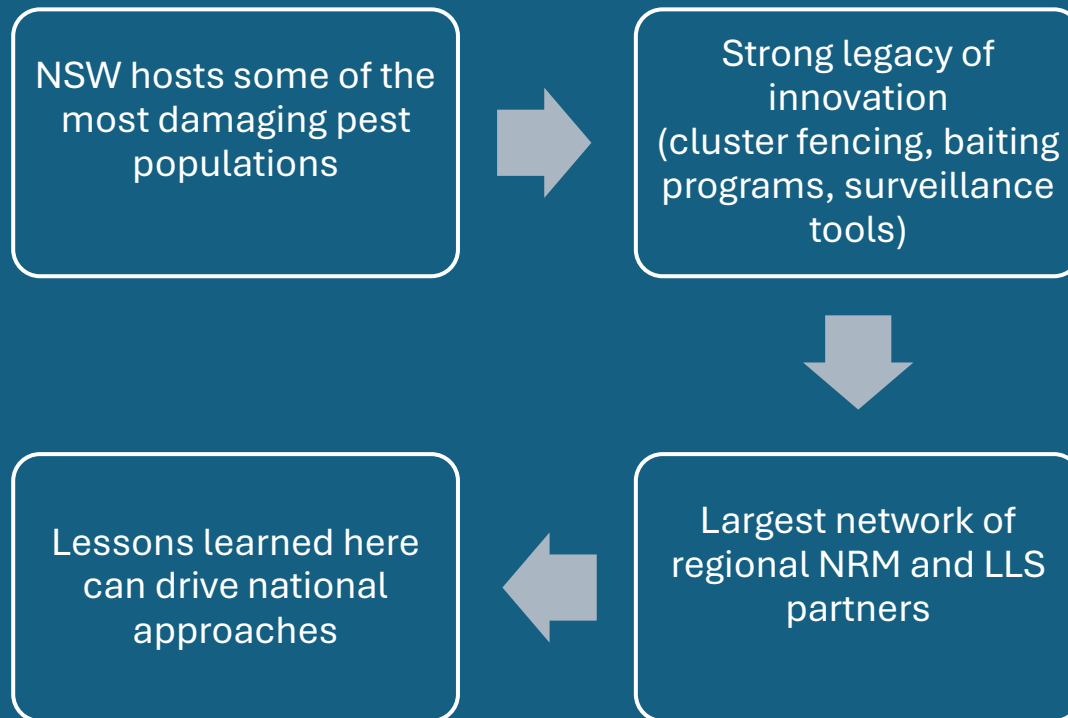


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# Strengthening our biosecurity system



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# Australia's National Coordinators



Heather Channon  
Feral Pigs



Greg Mifsud  
Wild Dogs



Gill Basnett  
Feral cats and foxes



Heidi Kleinert  
Rabbits

Jane McKenzie  
Feral deer



- The glue connecting Australia's invasive-species system
- Align science, policy and community action
- Build trust, drive adoption and collective impact
- ***ROI ≈ 19.6 : 1***

# Australia's National Coordinators

## Collaboration | Coordination | Commitment | Communication | Trust

### A strategic and practical approach:

- **Raise awareness** – about pest impacts and management options
- **Increase capacity** – enable access to training, seminars and practical resources — glovebox guides, fact sheets and management plans
- **Improve national standards** - promote and enable best-practice pest management across jurisdictions
- **Build partnerships and networks** – connect people with expertise, encourage collaboration and support collective action, translate science into practice
- **Protect important assets** - encourage prioritisation of resources to protect important assets
- **Build trust** – ensure we have social license to effectively control invasive species

# National Wild Dog Coordinator

## Collaboration | Coordination | Commitment | Communication | Trust

Commenced 2007

Emphasises humane, safe and effective wild dog management to reduce the impact on agricultural, environmental and social assets

Success of the National Wild Dog Action Plan and Coordinator position became the model for other pest species

Make information and tools accessible to landholders, NRM, LLS groups

Support collaborative projects

Support community led wild dog management



### Supporting Collaborative NRM and Industry Projects

#### Improved Beef Productivity through Effective Predator control



- Facilitated development of MLA Procurer Demonstration site
- Support workshops, field days and capacity building training
- Helped FBA support their landholder through access to best practice advice and community engagement
- Improve probability and sustainable agriculture within FBA region



#### Wild Dog Management Forum

Managing the impact of wild dogs on central Queensland businesses and biodiversity

**Saturday 13 July**  
8:30am - 4:00pm  
Maryvale Rural Fire Brigade  
Sutton  
3 Paddy's Swamp Road  
Bungaburra QLD 4703

Planning tea, lunch and afternoon  
presented tea included. Please bring  
a hat.

**RSVP by**  
**Friday 12 July**  
Vicki Morrison  
Land Management Coordinator

☎ 0415 160 517  
✉ [vicki.morrison@fba.org.au](mailto:vicki.morrison@fba.org.au)

#### Learn more!

FBA works closely with local people  
to deliver solutions for a healthy  
environment. Learn more about  
FBA's services at  
[fba.org.au](http://fba.org.au)

Get up to date information on wild dog  
management techniques and strategies to deliver  
effective management of wild dogs for increased  
beef production and protection of native fauna.

The day will include presentations and hands on demonstrations  
of wild dog management tools from the National Wild Dog  
Management Coordinator Greg Mifsud, verminicide pest  
management professional, Adam Sullivan and Longman Shire  
Council.

- Learn:**
- ✓ Wild dog impacts on CQ business and  
livestock
  - ✓ Basic wild dog ecology and biology
  - ✓ Best practice control techniques
  - ✓ Management strategies and objectives
  - ✓ How to monitor and evaluate programs
  - ✓ Trapping demonstration
  - ✓ Control pest species demonstration



# National Cat & Fox Coordinator

## Collaboration | Coordination | Commitment | Communication | Trust



National  
**Feral Cat and Fox**  
Management Coordination



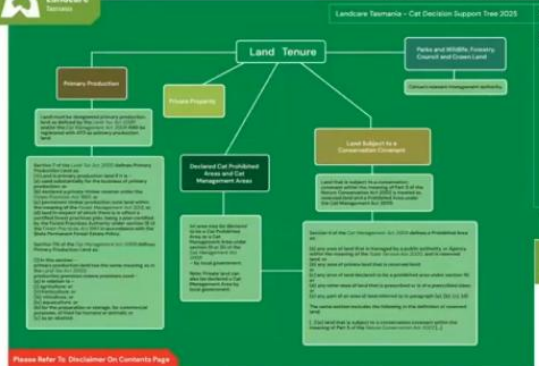
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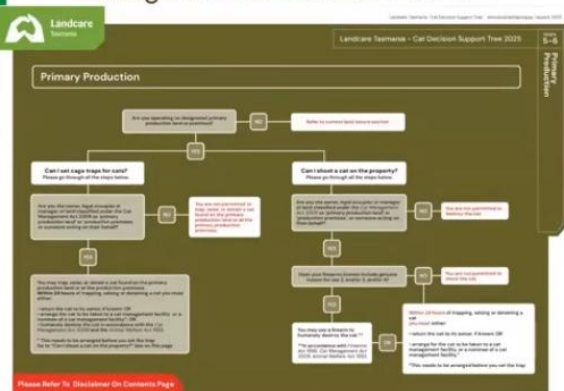
Gillian Bassett



Landcare  
Tasmania



Landcare Tasmania - Cat Decision Support Tree 2025



Landcare Tasmania - Cat Decision Support Tree 2025



THE LANDCARE TASMANIA  
PROJECT BANK

**Landcare Tasmania**

- Workshops and training
- Program advice, letters of support, material development and editing.
- Decision Guide for stray and feral cat management in Tasmania 2025



National  
**Feral Cat and Fox**  
Management Coordination

### Kangaroo Island Landscape Board

- Shared information
- Networks and linkages
- Relationships
- Promoted programs
- Project advice



# Case study: rabbits (why they matter)



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## Economic

- Cost **\$200M** in lost ag production a year.
- This is five times greater than the losses from wild dogs and almost ten times greater than the losses caused by foxes and mice.



## Environmental

A threat to **322** species of Australia's at-risk plants and animals — more than twice the number of species threatened by cats or foxes.



## Social

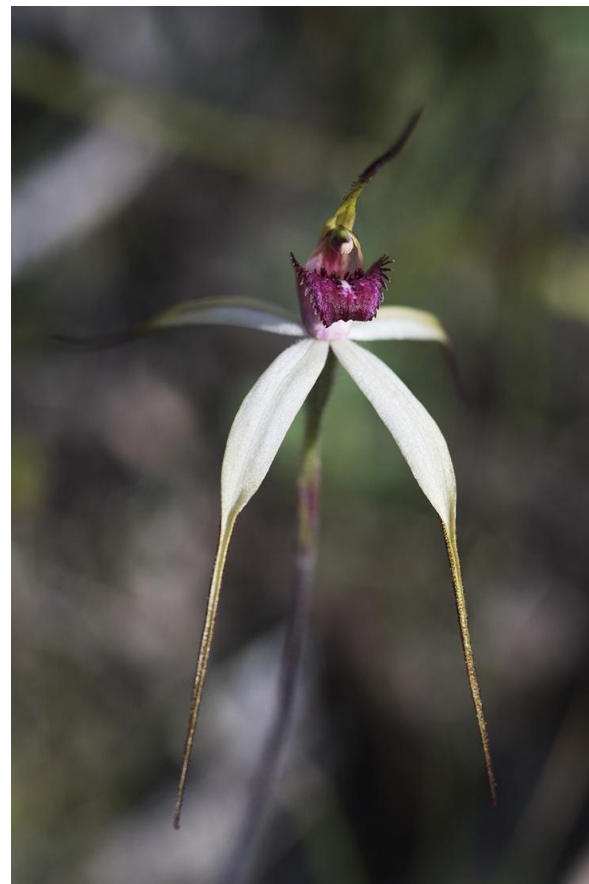
- Occupy **2/3** of Australia.
- Impact private & public assets.
- Damage culturally significant sites.
- Impact our mental health.

**Rabbits impact everyone, everywhere, everyday**

# A National Disaster for Australia's environment, flora & fauna



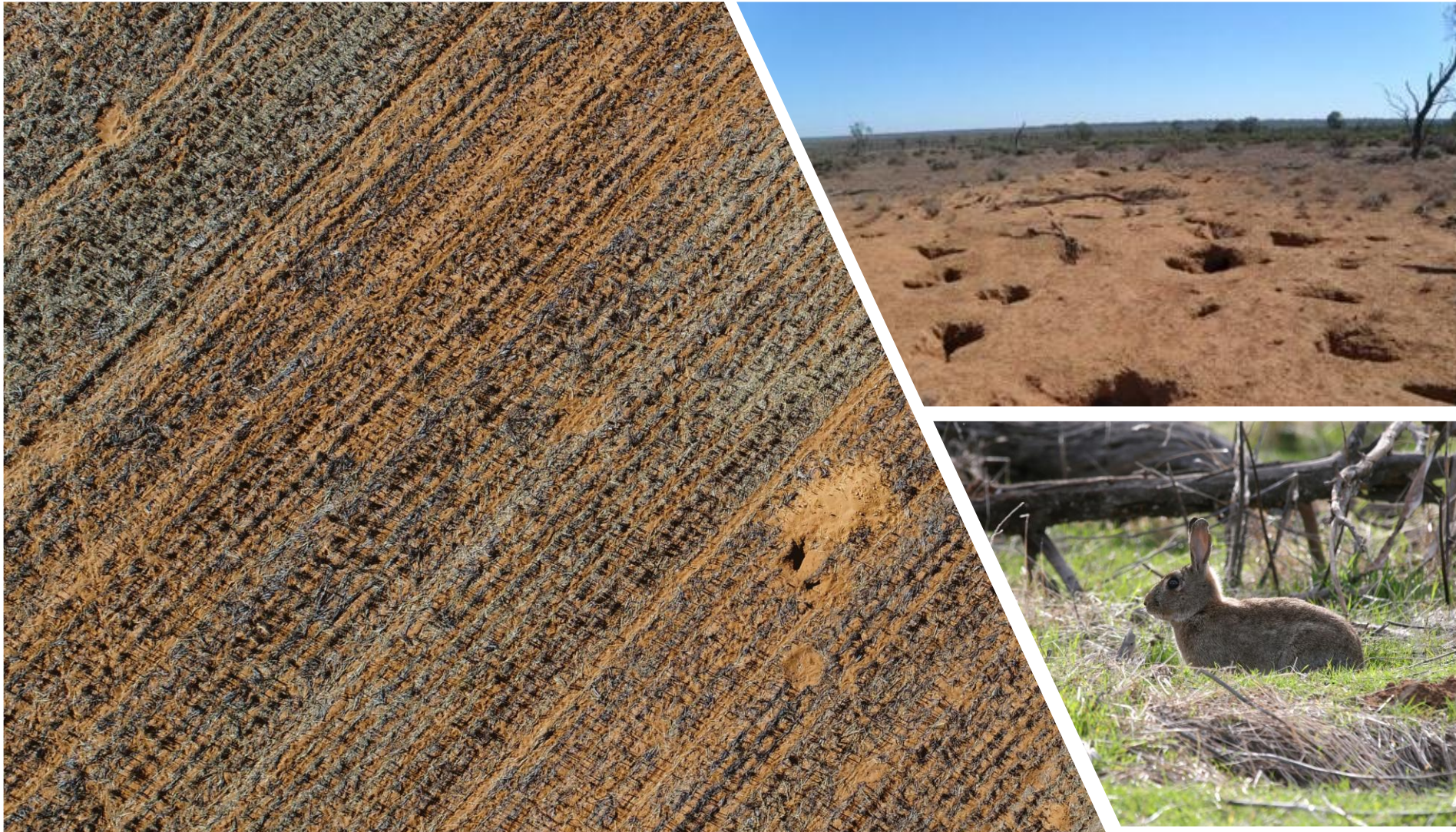
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# Long term landscape damage



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**A \$200  
million  
annual  
impact on  
agriculture  
each year**



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# Why are rabbits so successful?



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## Biology

- Very high breeding capability
- Rabbit populations boom and bust
- Developed a resistance to viruses

## Environmental

- Thrive and survive in hard-to-control habitats

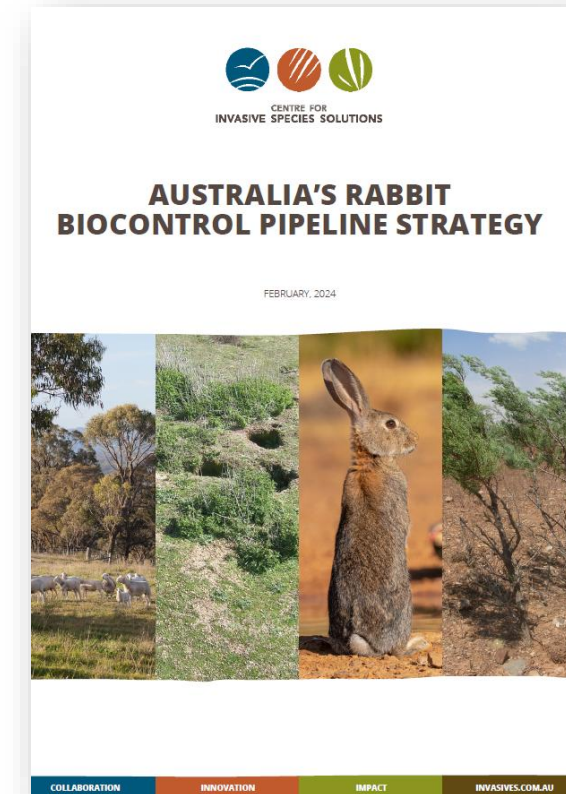
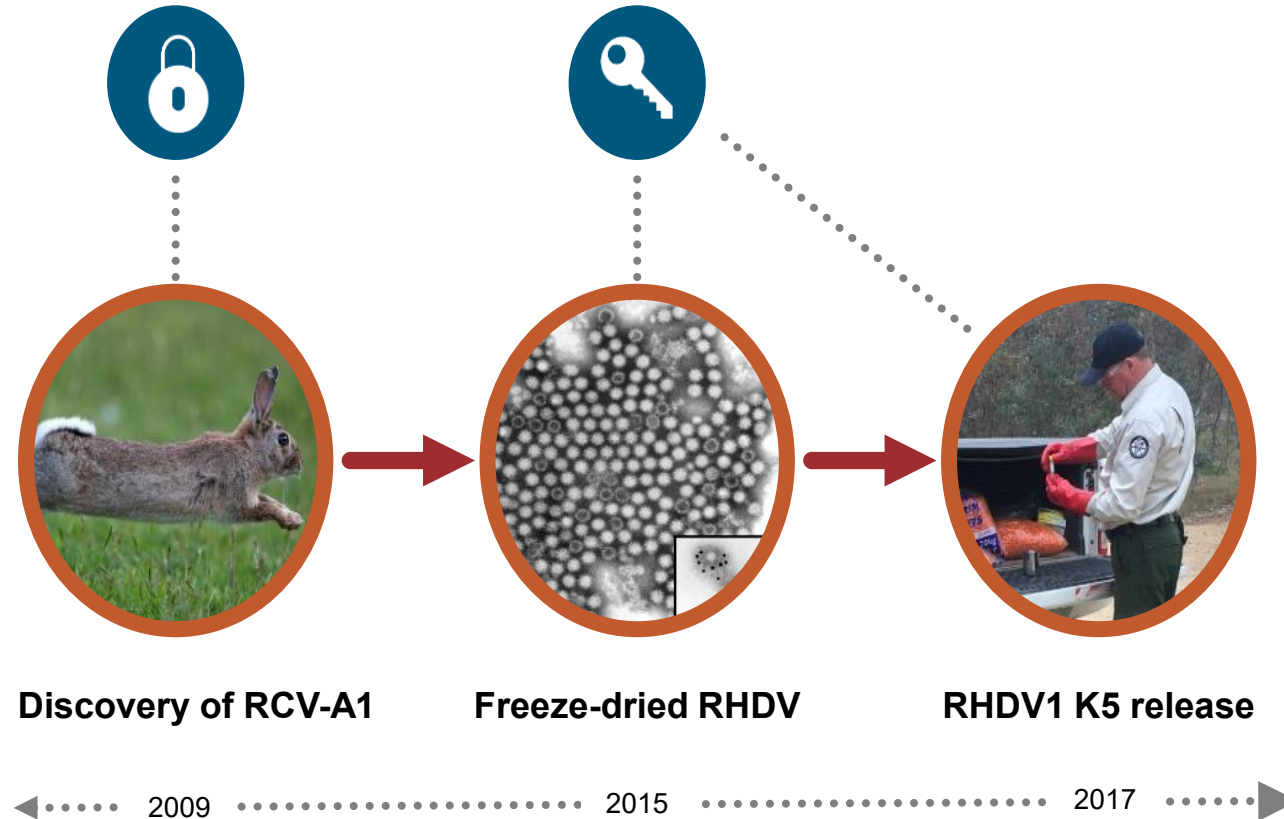
## Social

- Rabbit programs and neighbours are not working together
- A level of expertise is required. Best practice – right tools, right order at the right time are not always implemented
- Community attitude is changing regarding pest animal management

# Rabbit biocontrol pipeline – history to now



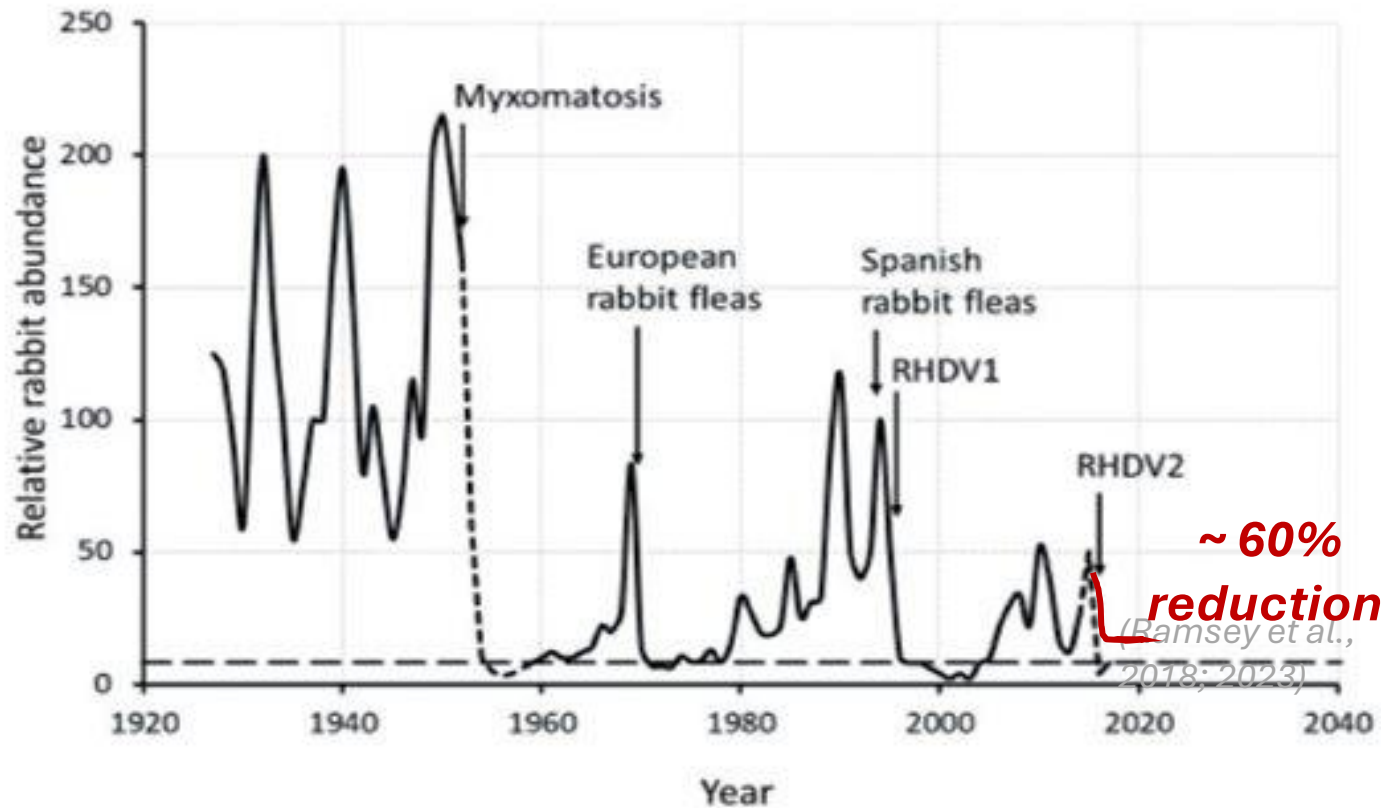
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# Where to next?



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- **AUD\$70 billion/60 years =** economic benefits of rabbit biocontrol:  
(1950-2010) (*Cooke et al., 2013*)
- **Current damage caused by historically low rabbit numbers:**
  - ~ 200 million p.a. damage to agriculture (ABARES 2022)
  - Threaten >300 native species and ecological communities

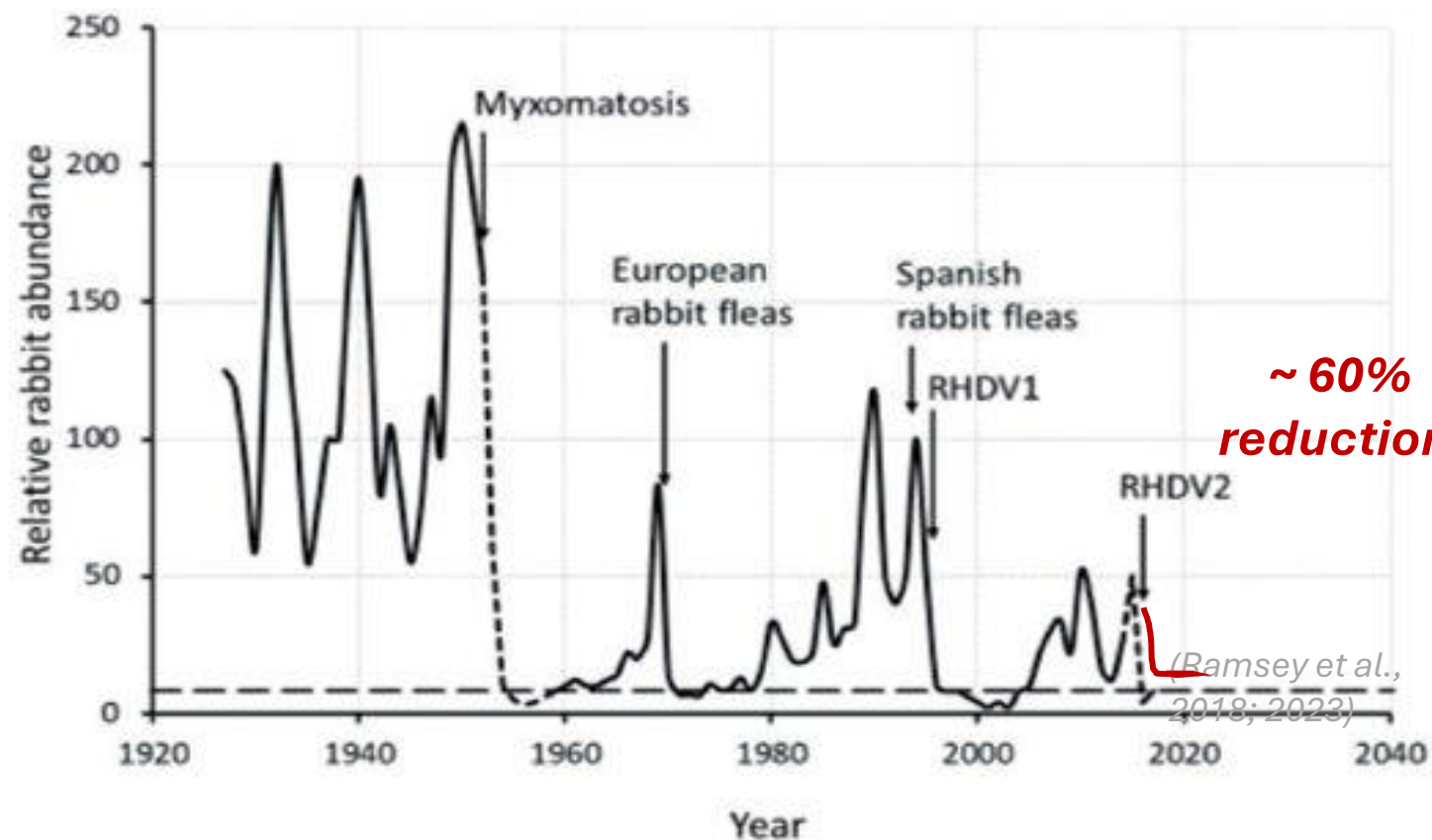


With permission: CSIRO/Tanja Strive

# Where to next?



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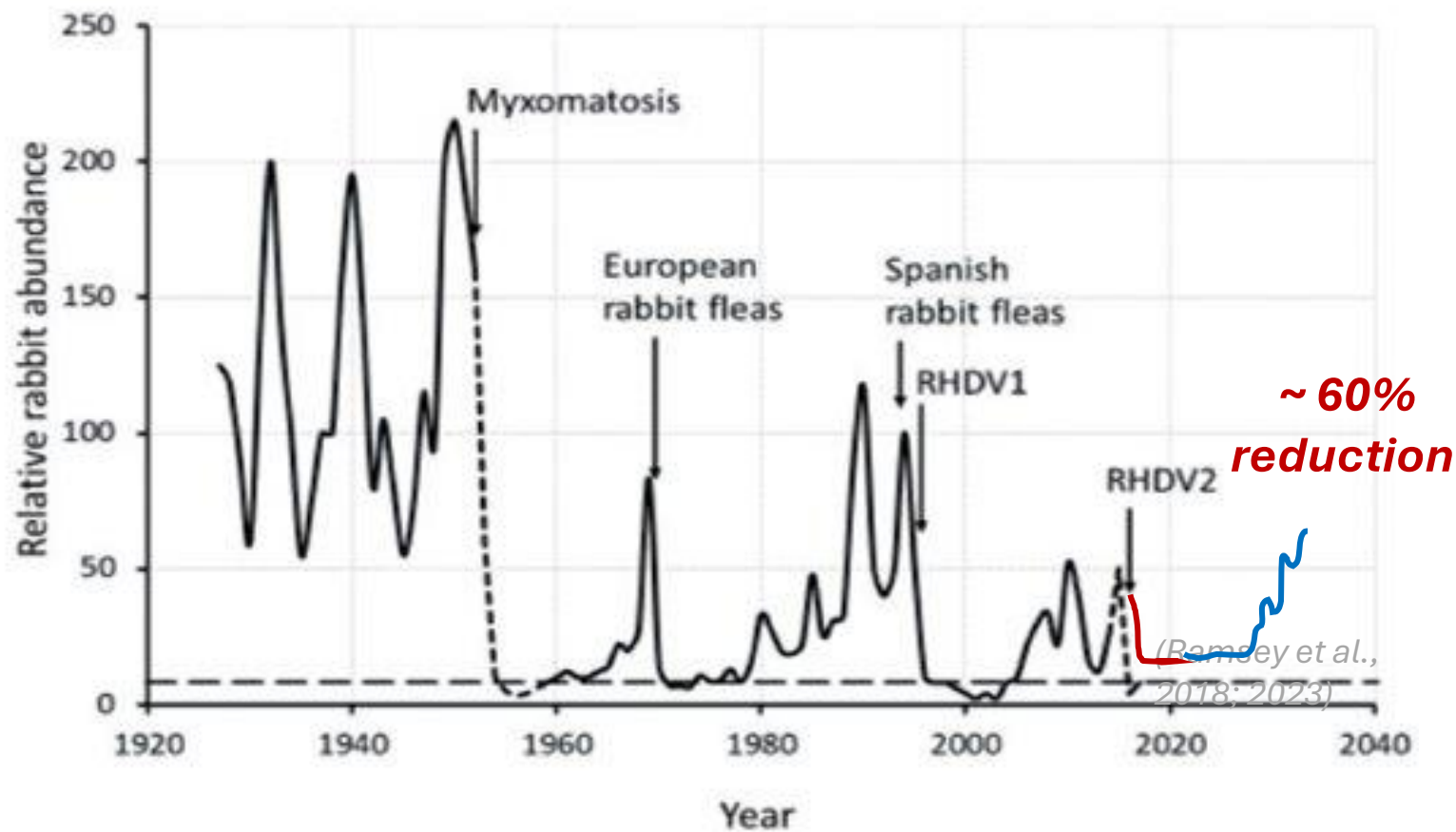
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# Where to next?



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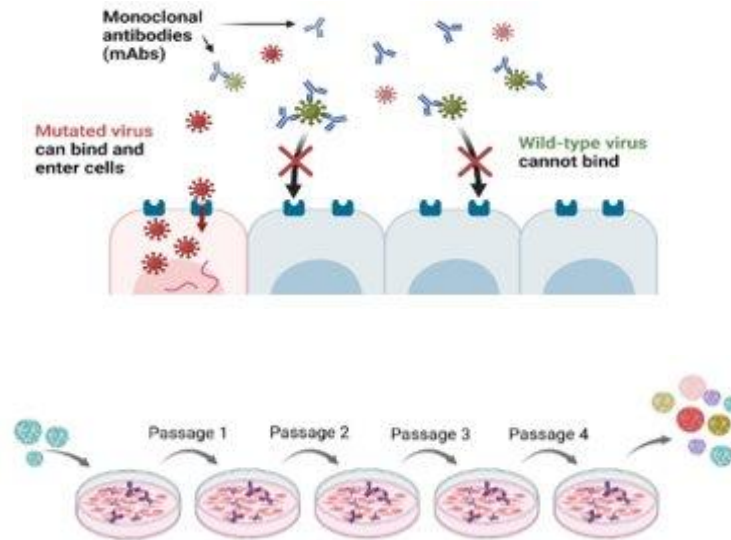
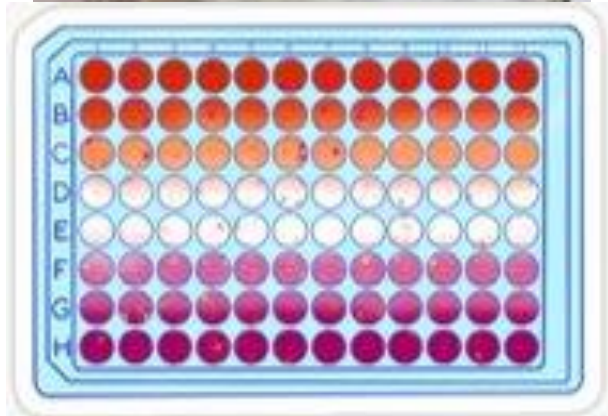


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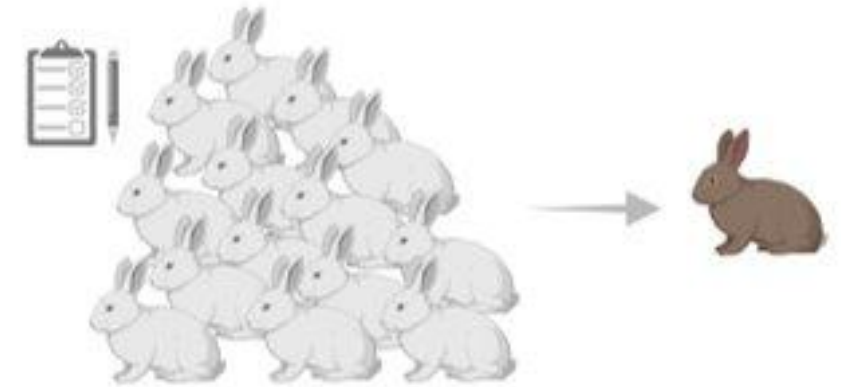


# RHDV-Accelerator – grown in cell cultures

## Phase 1: ~\$3.6 million / 3 years



=> repeatable



Significant reduction in laboratory  
animal testing

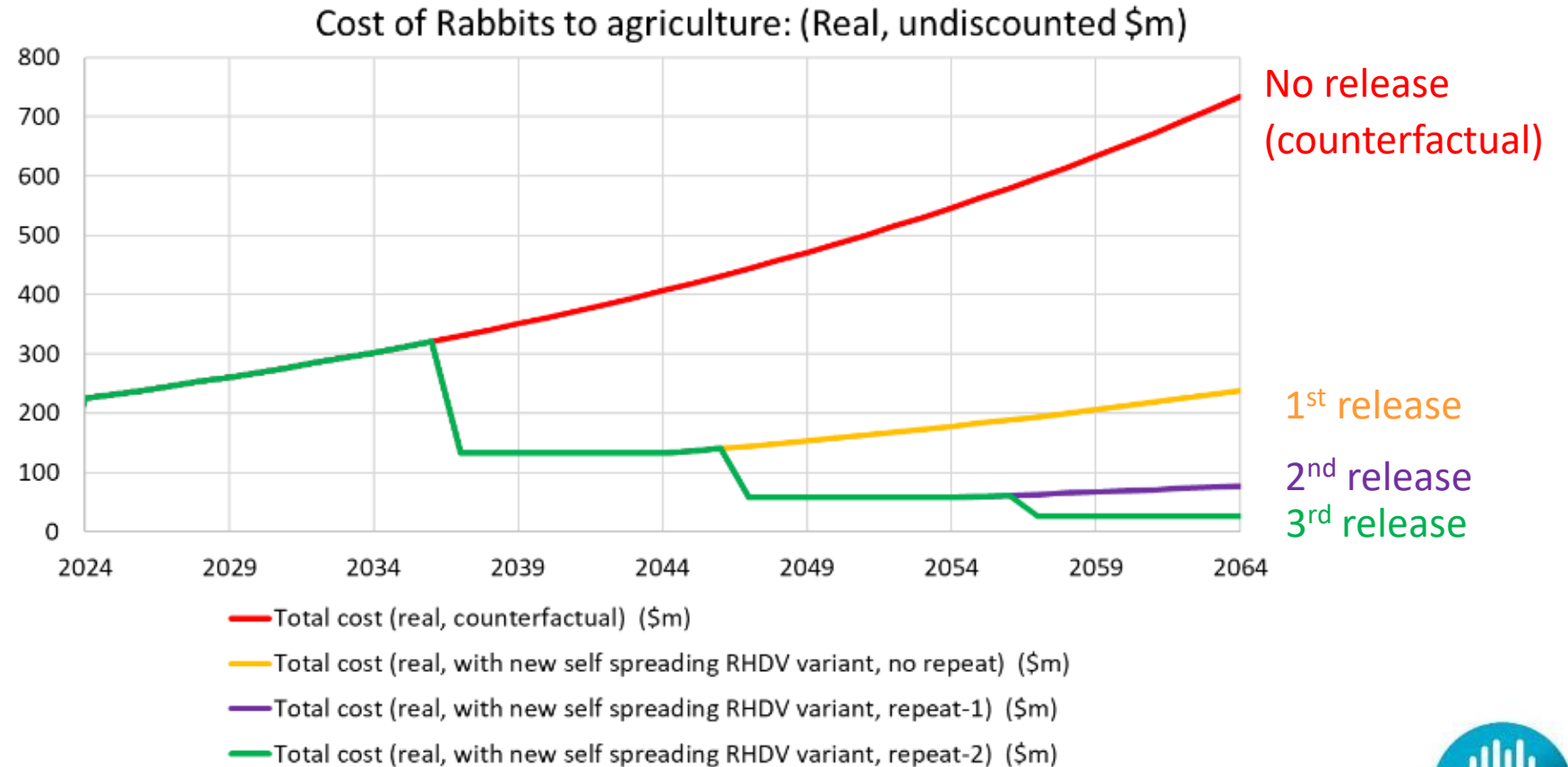
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# Impact at scale

**“Myxoma virus and RHDV are estimated to remove 85-90% of rabbits born each year”**

*B. Cooke, pers comm.*

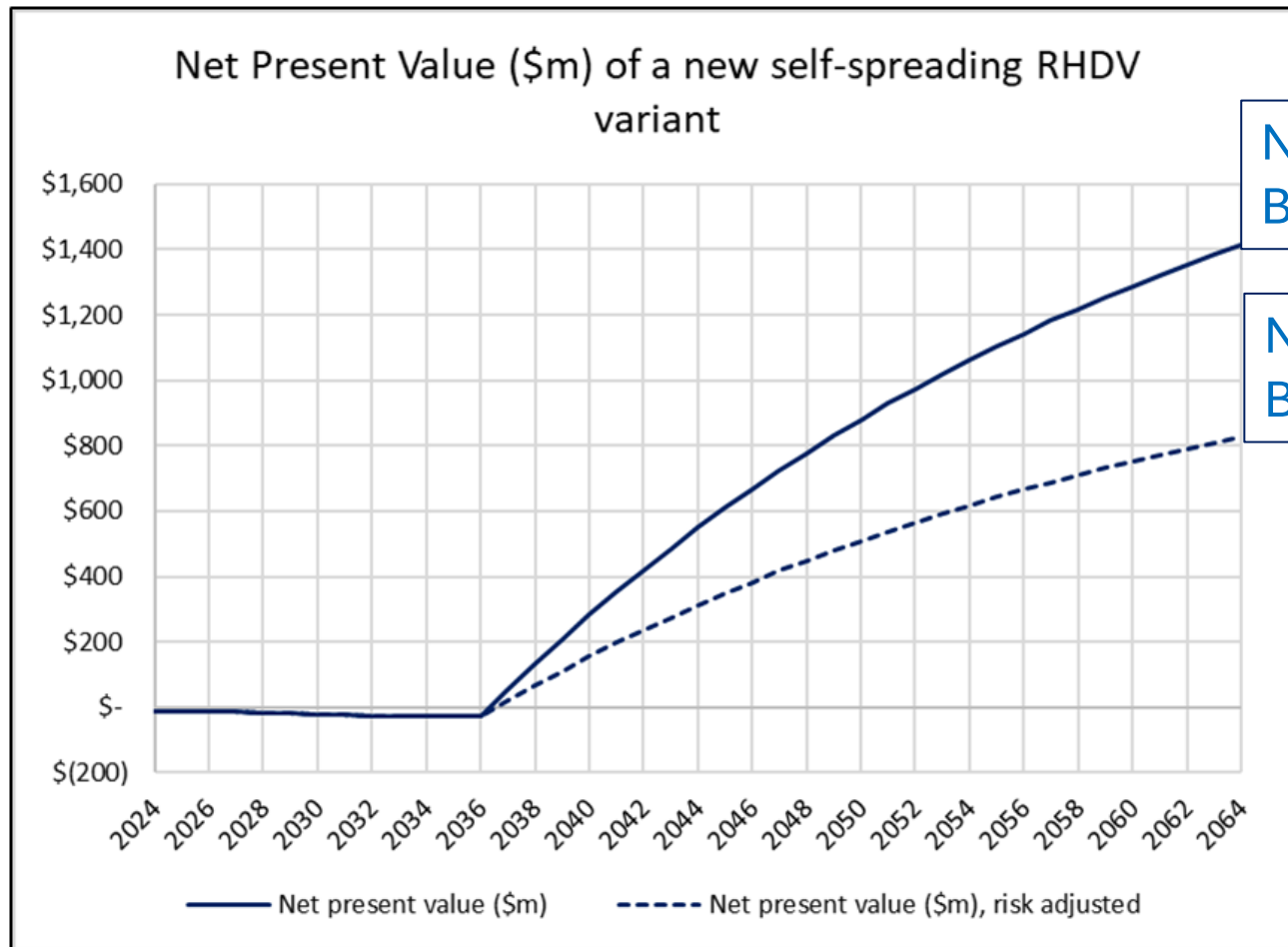
- Current headaches caused by the 10-15% of mostly immune survivors
- 200 million p.a. economic damage
- 300+ threatened native species



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CSIRO/Tanja Strive

# Economic assessment predicts high ROI

Model input informed by previous development and impacts of RHDV-based biocontrols



Net Present Value: \$1,570 M  
Benefit Cost Ratio: 97:1

Net Present Value: \$924 M  
Benefit Cost Ratio: 57:1 risk adjusted

- Development costs (\$27 million over 13 years, 2024 AUD terms) recovered within the first year of release
- Main risk = political: Australia as source of new virus

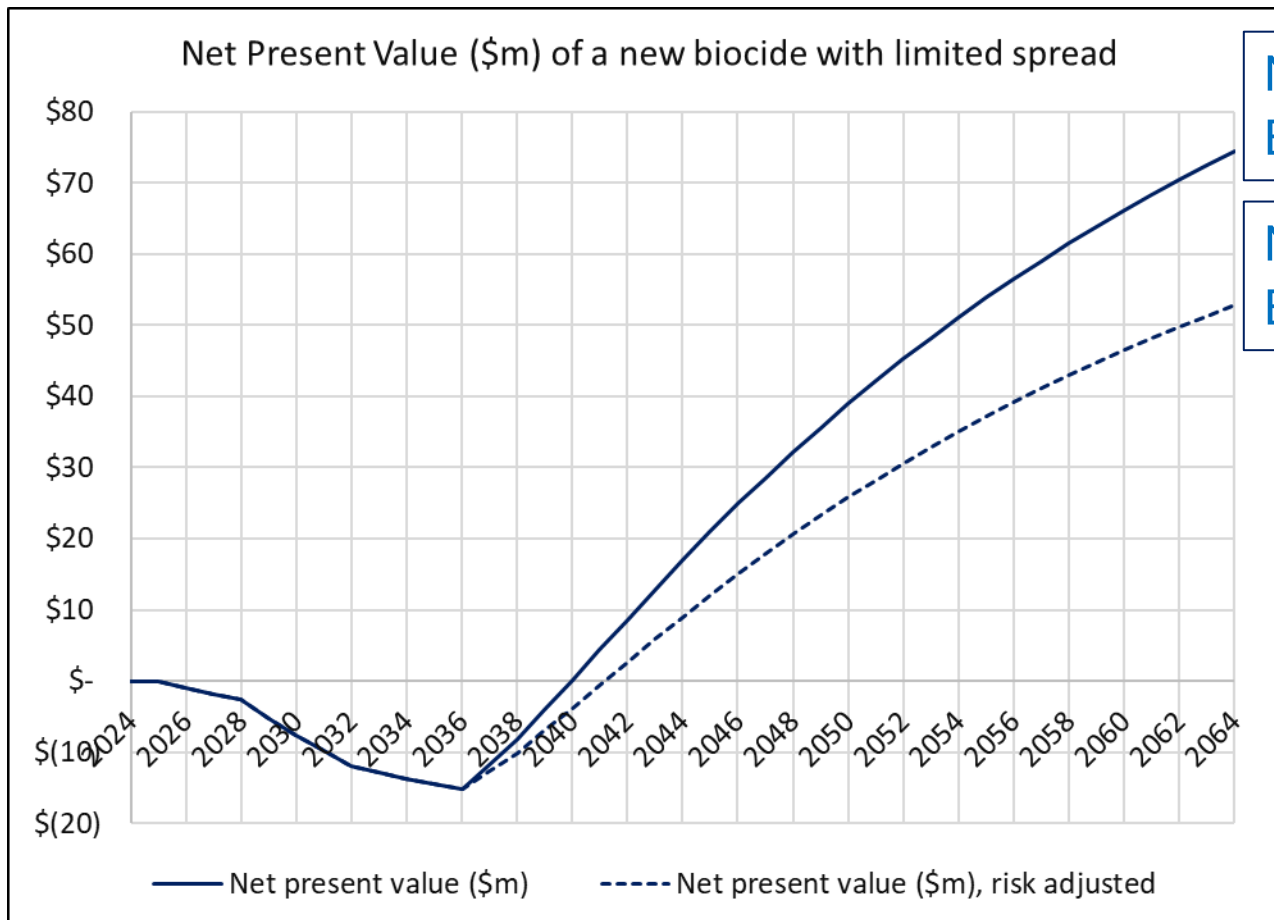
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# Economic assessment predicts high ROI



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Model input informed by previous development and impacts of RHDV-based biocontrols



Net Present Value: \$74 M  
Benefit Cost Ratio: 6:1

Net Present Value: \$53 M  
Benefit Cost Ratio: 4:1 risk adjusted

- **Investment: ~\$27 million over 13 years**  
(2024 AUD terms)
- Development costs recovered within first year of release
- Reduced risk profile
- Risk = political: Australia as source of new virus

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To **help people** better  
manage rabbits and  
reduce their negative  
impacts

# National Feral Rabbit Management Coordinator



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# Steering Committee Membership

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# Strategic Work Plan Goals



## 1. Raise awareness

Collect and share information on the rabbit issue in Australia, the impacts and what we can do



## 2. Increase capacity

Help people get access to information  
Improve PestSmart Rabbit tool kits  
Increase the adoption of best practice



## 3. Improve National Standards

Coordinate the review of the National Standard Operating Procedures & Codes of Practice  
Connect researchers and practitioners

# Strategic Work Plan Goals



## 4. Build partnerships

Connecting people with expertise or others  
working on the rabbit issue

Encourage collaboration and onground action  
to increase the extent of rabbit control



## 5. Protect important assets

Encourage prioritisation and resourcing of rabbit  
management projects to protect important  
assets.

Engage with stakeholders and advocate for a  
National rabbit survey

# System Challenges: rabbits

## Policy

- Invasive Curve – Rabbits are bottom of the list
- Shared responsibility
- Land manager responsibility

## Enviro & Ag Sectors

- Knowledge is lost in the system
- Attitude is changing regarding pest animal management tools
- People believe the virus will do the job

## Investment

- Considered a low-priority species
- Low investment in R&D pipeline & onground programs
- Short-term funding cycles for a long-term problem
- Programs delivered have a neutral benefit

# Key Challenges for all National Vert. Pest Coordinators



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Strong appetite for  
collaboration — but  
frustration with  
fragmentation

Duplication and  
wasted resources  
where coordination  
is weak

National coordinators  
often navigate  
complex regional  
systems  
7+ in NSW alone

Short-term grants  
drive poor timing and  
lost opportunities

Private landholders  
struggle to find  
consistent advice

# Social License

# Does National Coordination Work?

**Collaboration | Coordination | Commitment | Communication | Trust**

**National Vertebrate Pest Coordinators contribute to:**

- **Net reduction** in vertebrate pest damage and control costs
- **Reduced environmental impacts** (e.g., biodiversity loss, erosion)
- **Maintained social licence** for humane management
- **Increased regional capability** and community wellbeing
- **ROI of ~19.6:1**



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**It takes ~10  
years to  
develop,  
approve and  
release a new  
virus**



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**Best time to  
start investing in  
R&D was 10  
years ago.**

**Second best  
time is today.**