Expanding forest pest surveillance

Highlighting risks, engaging partners & developing solutions

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Plant Health AUSTRALIA

NATIONAL FOREST BIOSECURITY

Acknowledgement

I acknowledge the Traditional Custodians of the land on which we gather today and pay my respects to their Elders past and present.

I extend that respect to Aboriginal and Torres Strait Islander peoples here today.

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Our approach

Highlight risks

↓

Engage stakeholders

↓

Develop solutions (RDE)

↓

Mitigate risk

KEY PRINCIPLES

- Collaborative, consultative approach
- Evidence based, leverage RDE
- Systematic implementation

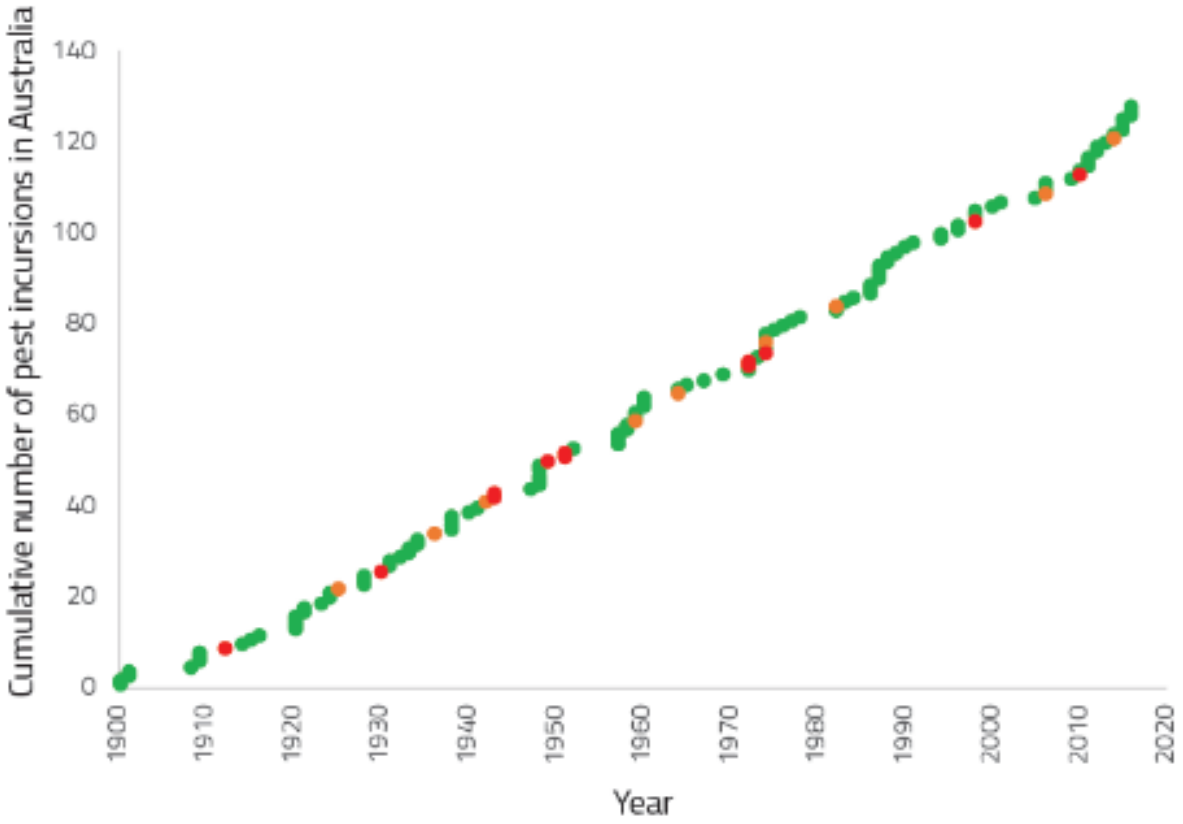
Evidence-based Program Design & Planning

Experiential learning, RDE publications, grey literature & expert elicitation

WHY?	- Is there a risk? To who?
WHAT?	– Risk mitigation approach?
WHERE?	– Focus areas
HOW?	– High risk site surveillance – Stakeholder surveillance

Why?

Forest pests are establishing



(A Carnegie & H Nahrung; 2019)

What?

Exotic forest pest detections

- Softwood and hardwood
- Native and exotic species
- Across tenures – government, private, public trees

Timber

European House Borer

Softwoods

Giant Pine Scale

Native species, hardwoods

Myrtle rust

Native, amenity

Polyphagous shot-hole borer

Our Partners

Australian Government

Australian Forest Products Association

NSW

Queensland Government

Tasmanian Government

Government of Western Australia

Victoria State Government

Government of South Australia

Northern Territory Government

NRM Regions Australia

invasive species council

Forest & Wood Products Australia

Plant Health Australia

National Forest Biosecurity

What?

Exotic forest pest detections

- 71% detected by passive/general surveillance
- 59% of pests in urban areas
- Increased expert surveillance resulting in detection
- **In most cases, pests had spread too far to eradicate**

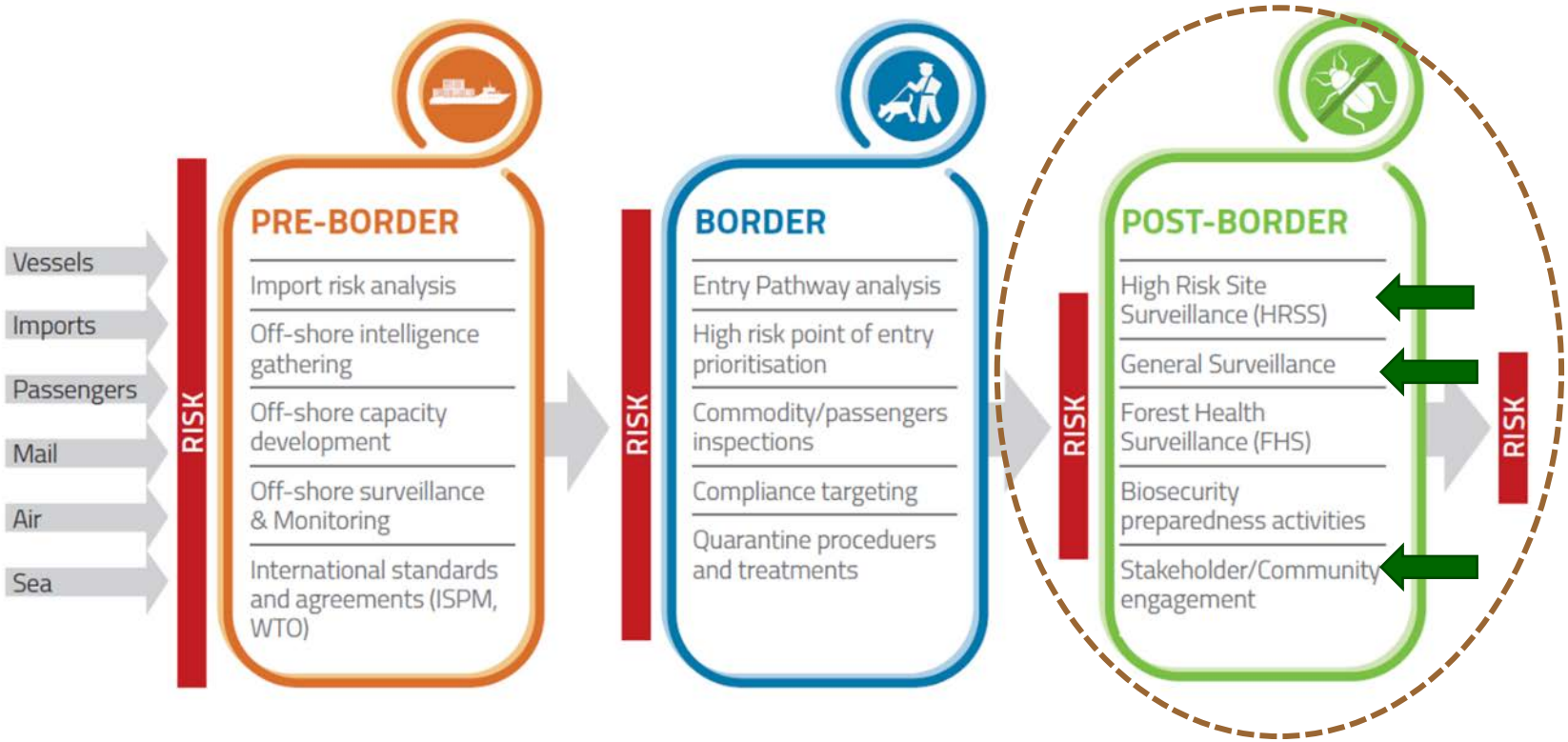
(A Carnegie & H Nahrung; 2019)

For eradication…
early detection is key

What?

Adding a layer to the biosecurity system

↑ **active surveillance**
↑ rates of **early detection**
↑ chances of **eradication**



Commonwealth

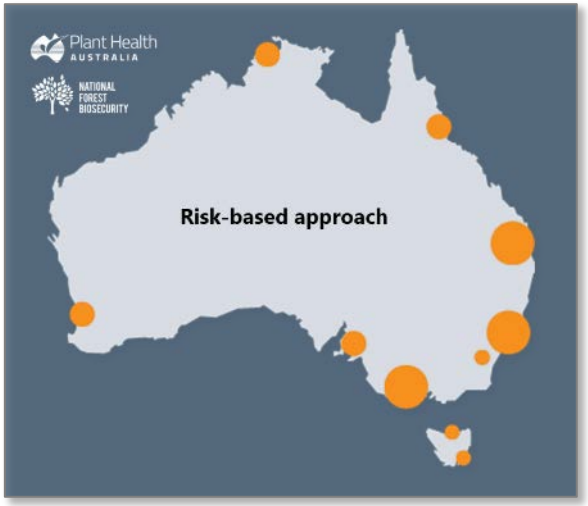
Commonwealth
States

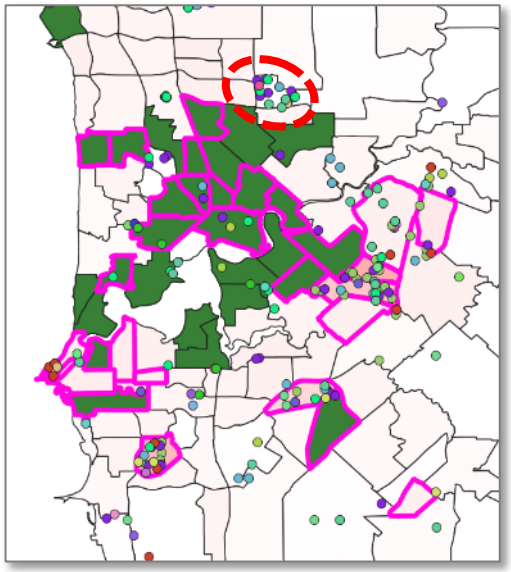
Commonwealth
States
Industry, community,
Local government

Where?

Pest Pathways Risk analysis

1. Expert elicitation
2. Location of previous detections
3. Mapping clusters of Approved Arrangements (i.e., Quarantine)
4. Pest pathways risk model (SPEAR) - Top 30 in each state





How?

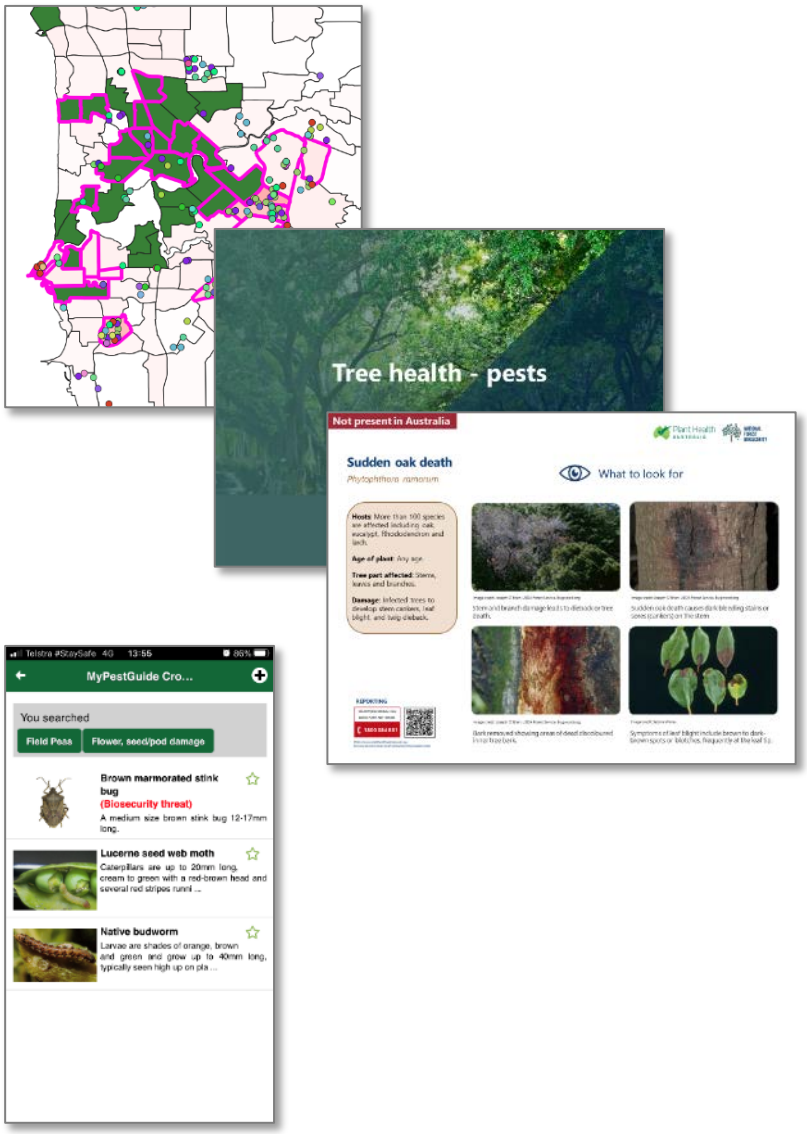
High risk site surveillance

1. **Literature analysis** to identify tree host to be monitored
2. **Spatial analysis** and **ground truthing** for identification of potential hosts
3. **Lure trials** for improved pest trapping

How?

Stakeholder Surveillance

1. **Target risk locations**: urban, peri-urban trees/forests
2. **Target tree stakeholders**: local government staff, arborists, botanic gardens, “friends of woody park”
3. **National training**: training packages, to develop workshops
4. **Tool development**
   – mobile app – MYPESTGUIDE TREES



Building capacity and capability

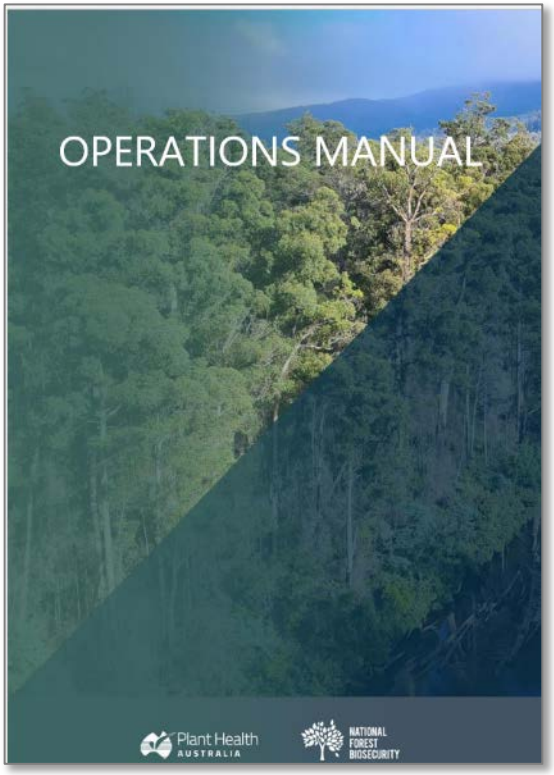
Annual expert & stakeholder training

Building capacity and capability

Agreed standards, harmonisation of procedures

Principles

- Science evidence and risk based
- Continuous improvement
- Balancing national outcomes vs regional delivery
- Balancing industry outcomes vs public good



Building capacity and capability

Strategic Engagement

- **Local governments (high-risk)**
  - Urban forest planning
  - Already invest in Remote Sensing

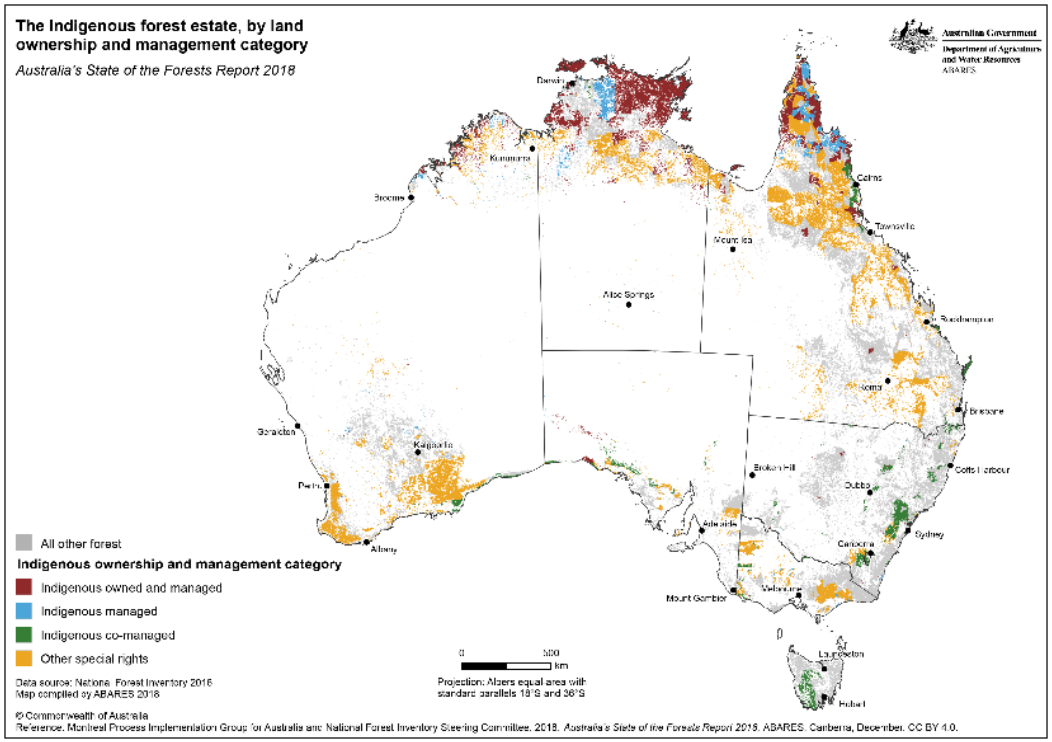
- **Program to provide**
  - Training to staff
  - Diagnostic support
  - Remote-sensing ‘stressed’ tree detection service

ArborCarbon

Building capacity and capability

Strategic Engagement

- **Indigenous engagement**
  - Largest forest owner group
  - Knowledge of endemic species
- **Program engagement**
  - Listen to stakeholder issues, concerns and needs



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- Gradual, systematic implementation

Researchers, contributors

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Thank YOU

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