

Risk-Based Targeted Surveillance For Forest Invasive Spp.

- Can the network develop and implement surveillance activities for early detection to minimise the spread and impact of invasive spp. across the region?

Objectives

- Share experiences, aims and needs for surveillance (Early Detection) what are our common interests as a network
- How to balance the need for early detection surveillance with constraints of resources
 - Identify and share practical methodologies/tools that can be used to increase your chances of early detection
 - Identify and share what is needed to underpin surveillance

Objectives

- We are all members of the network and each of us have much to contribute so lets learn together.
 - Presentations/Discussions
 - Practical Demonstrations
 - Field Trip
- Relate back to your situation and explore how you might try and conduct early warning surveillance using the tools and concepts discussed

Objectives

- Identify and develop some practical network activities to start to conduct targeted early warning surveillance
 - Network Guidelines/”Tool Box”
 - Develop a project proposal (s) to follow on from this workshop
 - Case studies/trials
 - Identify linkages to other activities and resources
 - Diagnostics
 - Databases
 - Programs



Australian Government

Department of Agriculture, Fisheries and Forestry

Increasing Our Chances For Early Detection-What Can We Do?



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WHY

Limited resources, capacity ,capability

VS

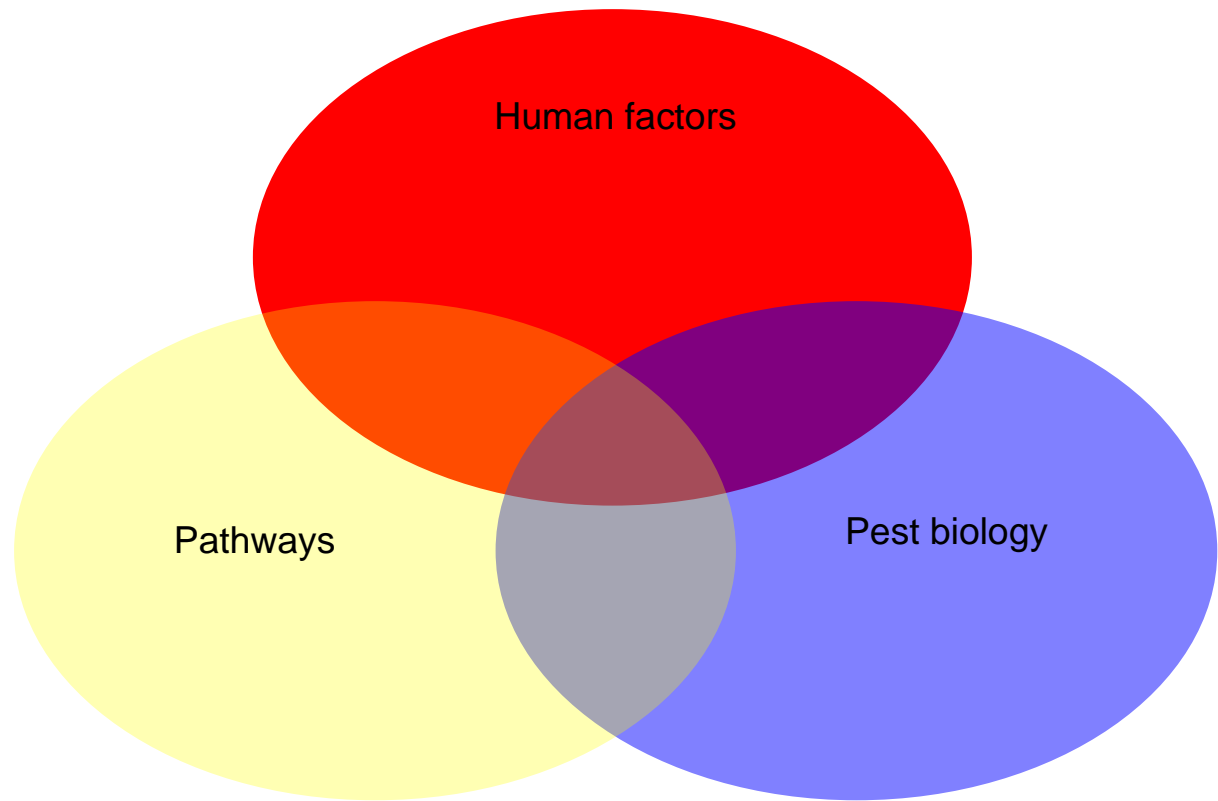
**Need for early detection for more effective incursion
response/management of exotic pests**

Linkage To Production, Trade, Environment, Social impact
mitigation



Influences on Pest Detection

- Arrival
- Establishment
- Detection



What To Look For

Impact

Why is it important

- Production, Trade, Environment, Social

Detectability

How good are methodologies

Eradicability/Management

What can you do with it once detected



Where to Look

Key Elements

Pest Biology

Host Plants

Climatic/Environmental Suitability

Areas of more movement



When to Look

Pest Biology/Life Cycle

Host Biology/Life Cycle



How to Look-Specific Surveys

Specific Surveys

Specified pests

Specified sample

Specified time

Statistical basis (number unit number, confidence etc.

Sample Survey Methodology

(Lures/Traps, plant sampling, visual inspection

Diagnostic procedures, reporting/recording)



How To Look-General Surveillance

Identify/Use a range of surveillance sources

Non-Government

- Industry/consultants, Arborists, Universities, Public, Special Interest groups such as garden clubs etc.

Government

- Quarantine, Agriculture, Forestry, Local Government



How To Look-General Surveillance

Identify stakeholder network (interested people, linkages, coverage)

Establish two way communication to keep engaged and promote

Develop and maintain appropriate training

Develop and maintain a reporting system to capture information



Surveillance In Australia

- Specific Surveys
 - NAQS
 - National AGM Program
 - National Hazard Site Surveillance
 - State Forest Surveillance programs
 - Industry Forest Surveillance programs



Forests and Timber:

A Field Guide to Exotic Pests and Diseases

Surveillance In Australia

General Surveillance

- General Public -National
 - National Awareness Programs- “Spot the difference “
- General Public- Regional
 - Queensland Tramp Ant Awareness Program-Tramp Ant Call Center
 - North Queensland Biosecurity Community Engagement
- Targeted (smaller number/more motivated, higher level of awareness)
 - Forest Pest Awareness timber industry and pest control operators, arborists, quarantine workers
 - Weed Spotters Network-links to herbaria

Tools

- Pest awareness material-Forest Pest Field Guides
- Website, e-communications (Discussion groups, e-newsletters, subscription lists etc)
- National Plant Pest Hotline
- Meetings



Forests and Timber:

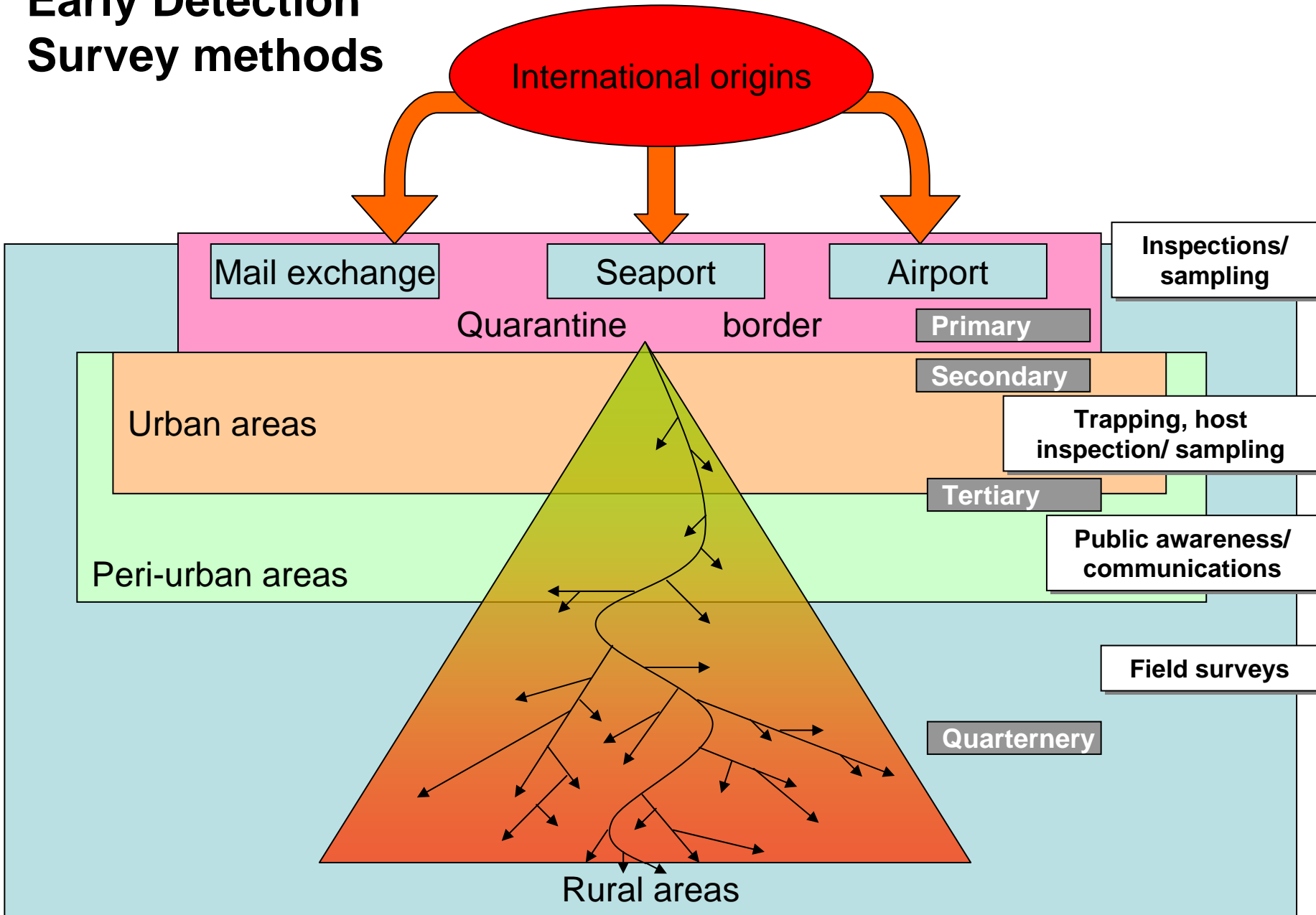
A Field Guide to Exotic Pests and Diseases

Hazard site urban surveillance



- Early detection close to point of introduction.
 - Pest targets – based on likely pathways.
 - Site Selection – sites identified through movements and

Early Detection Survey methods



Risk Based Site Targeting

Where is pest more likely to be first detected look at pathways and rate

Capacity of material potentially harbouring pests

Source of material potentially harbouring pests

Volume of material potentially harbouring pests

Suitable Habitat for Establishment



Example Risk Sites

(Connection to potential points of entry)

Primary

Port/ Port Environs

Secondary

Loading/Unloading areas

Quarantine facility areas

Tertiary

Transport Corridors

Botanic Gardens

Military Facilities

University Campuses

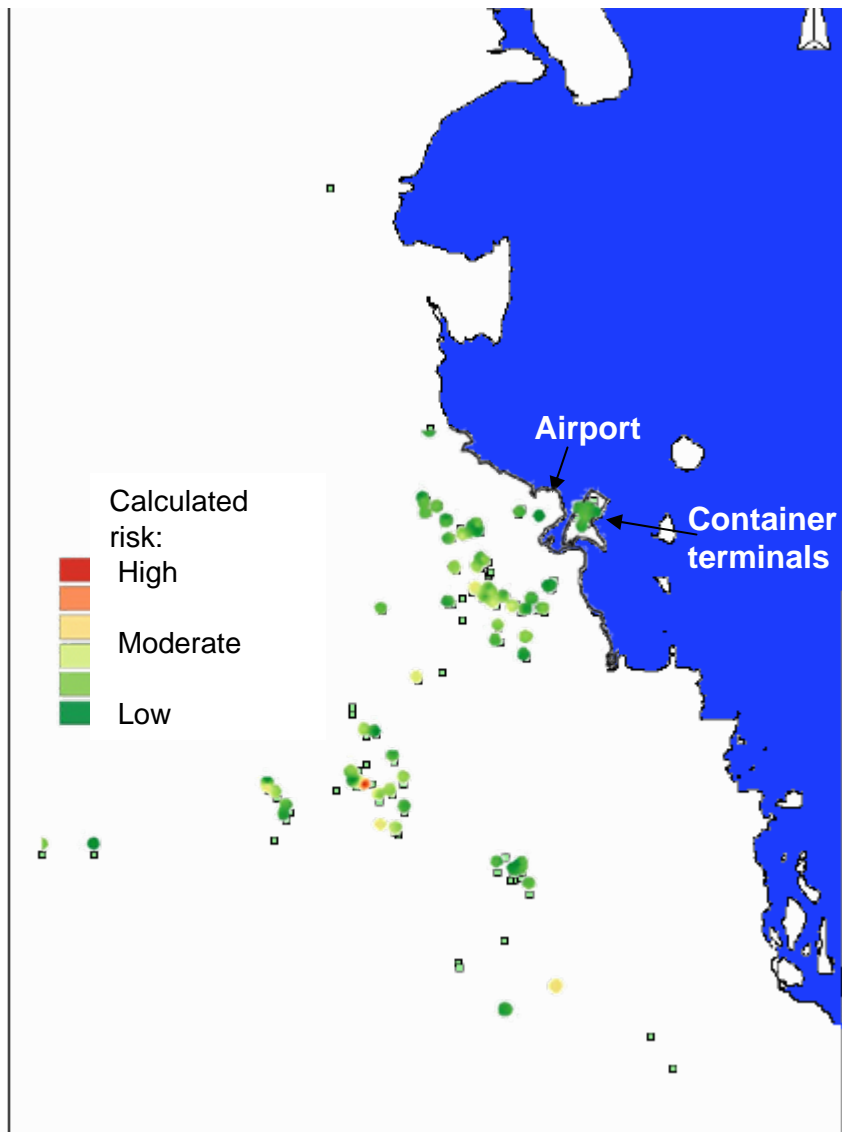
Quaternary

Urban forests



Targeted Urban (Hazard Site) Surveillance Program

Brisbane Secondary Risk Sites – Premises where imported commodities are delivered and unpacked



Factors used to determine risk:

- Cargo source
- Cargo volume
- Vegetation
- Habitat
- Cleanliness

Target Pests in Hazard Site Program

Forest Health Examples

Asian Longhorn Beetle- trap/host inspection

Pine Wood Nematode-vector trap/ host inspection

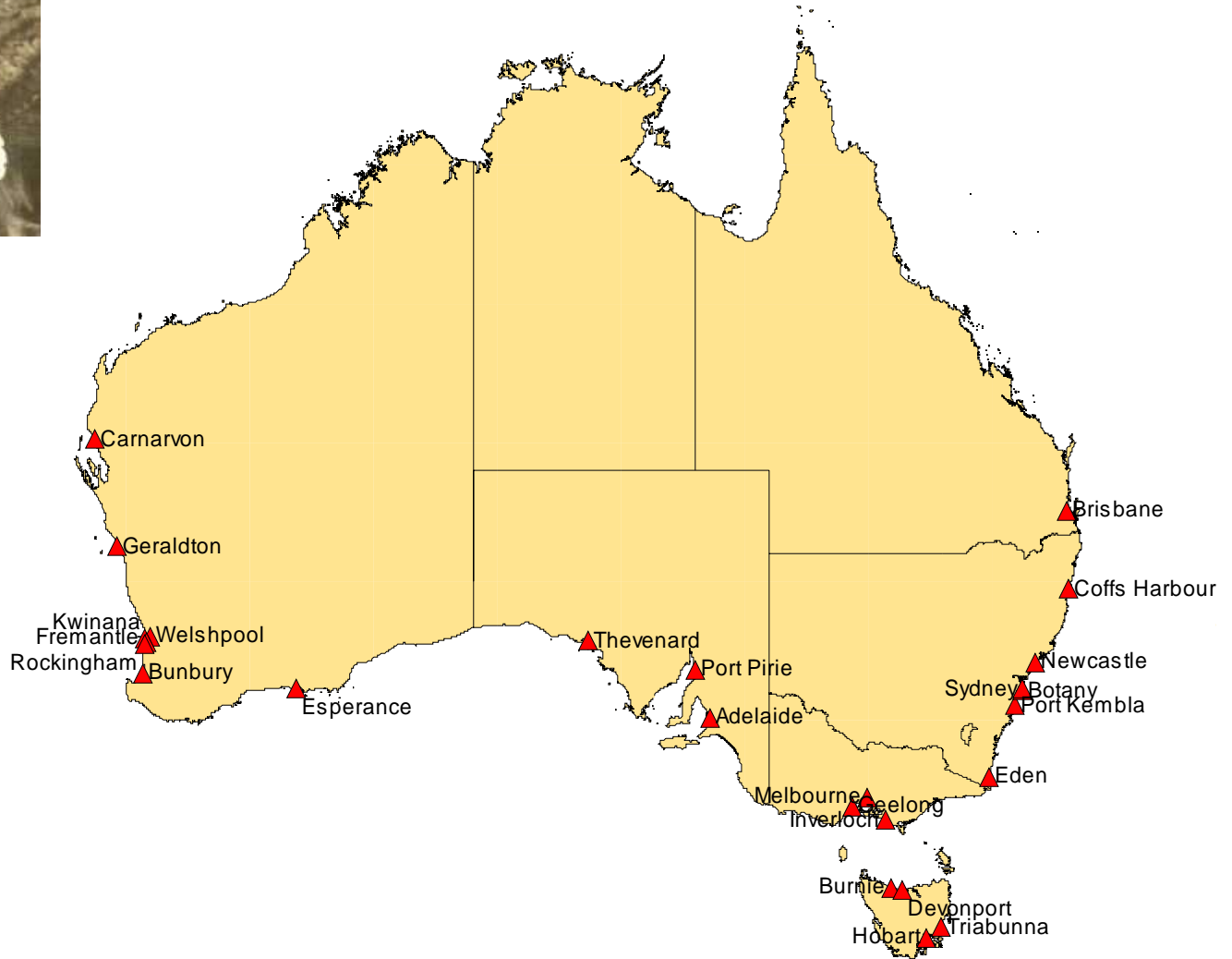
Pine Pitch Canker- host inspection

Asian Gypsy Moth-trap

Eucalyptus Rust- host inspection



Asian Gypsy Moth Trapping Grid



Underpinning Issues

Training/Education

Develop training material/extend

Appropriate Sample/Survey Methodology

Analyse and select from a range of options (traps, plant inspection etc.)

Reporting and Recording

Map sites, recording keeping/database



Underpinning Issues

Identification/Diagnostics

Arrangements for initial screening and confirmation

Linkage to an action upon detection

Incursion response

Management



What Can We Do In The Network?



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Getting Some Activity Going

What pests to look for?

What methodologies can be used?

What can you/we do to make use of or add to current activities (networks, general and specific surveillance)?

How can we link to other aims?

What is the reason for early detection?

What are we going to do after detections?



Getting Some Activity Going

How can we underpin surveillance?

Develop training?

Database/Recording?

Diagnostics?

Practical and appropriate methodologies?

Other things that we need to do?????



Getting Some Activity Going

What are some practical activities to start with?

How might this be accomplished in your country?

What do you need or would help from the network?

What would be an appropriate follow-up action(s) from this workshop?





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