GROWING AND PROTECTING
NEW ZEALAND

MPI Surveillance and Incursion Investigation

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Ministry for Primary Industries
Manatū Ahu Matua

Overview

- NZ's biosecurity system
- Surveillance: why? how?
- Some examples of MPI's targeted Surveillance programmes
- HRSS (High Risk Site Surveillance): what? Synergies with FHS

New Zealand's biosecurity system

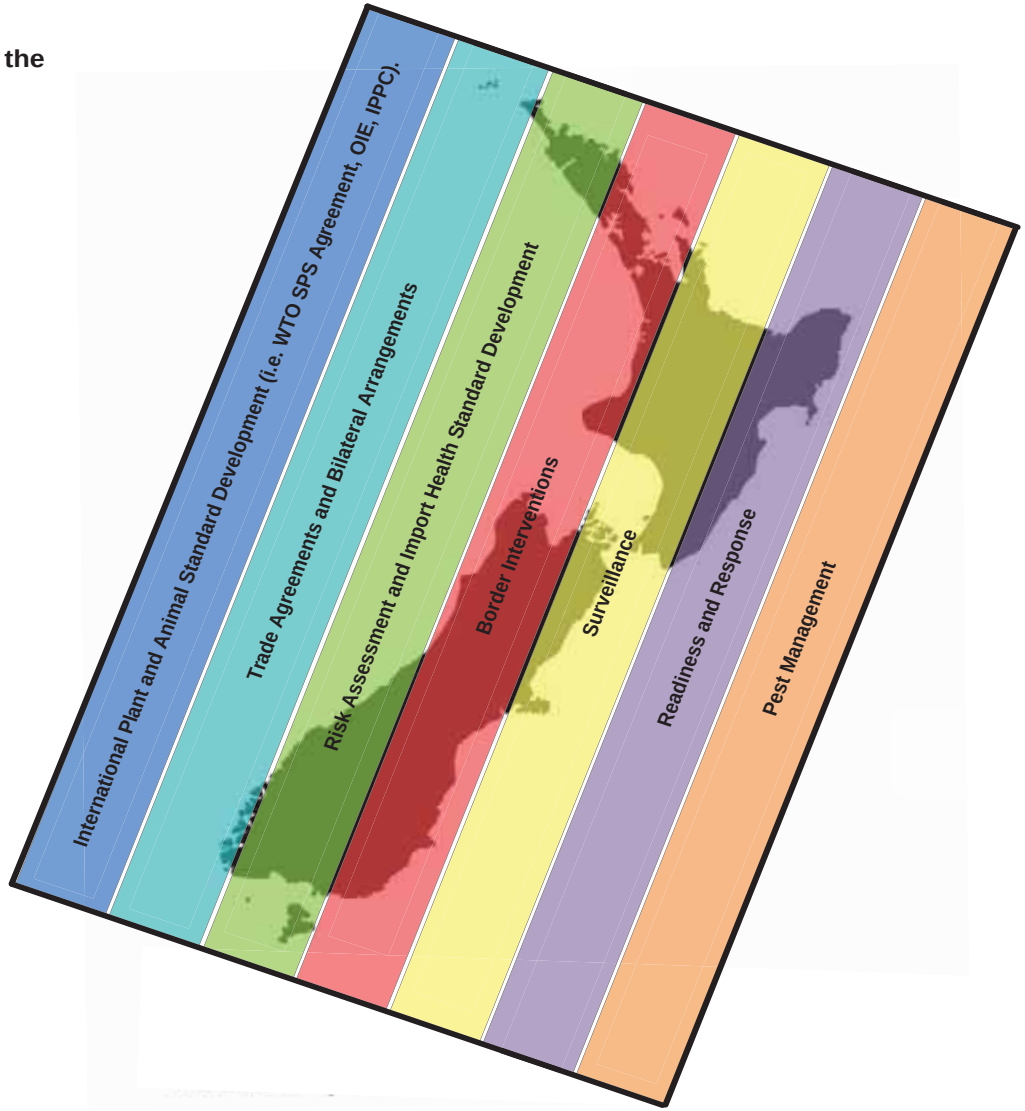
Biosecurity pressures on the border

Passengers

Cargo & Mail

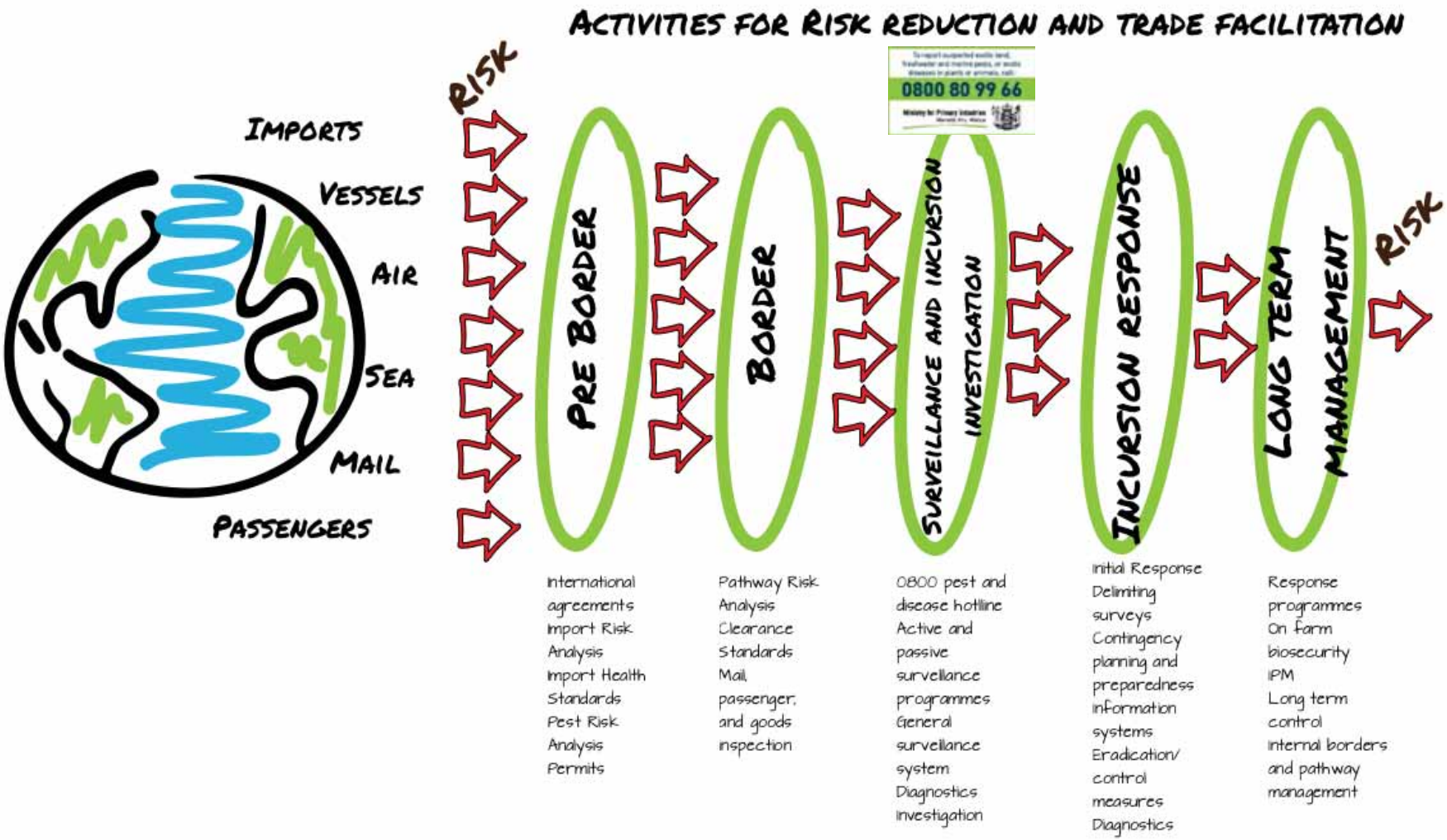
Craft

Wind, tidal currents, rain



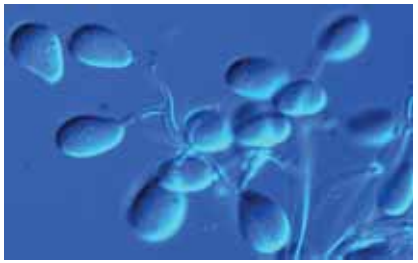
'Assured' New Zealand Exports

The Biosecurity System – Defence in Depth



Investigation & Diagnostic Centres and Response (IDCR) is responsible for

- Surveillance
- investigating, diagnosing & responding (including mgt) to incursions of pests & diseases affecting agriculture, horticulture, forestry & the aquatic/terrestrial environment
- enabling imports and exports by providing accurate pest identification
- providing scientific advice to support trade-related and compliance programmes



Surveillance and Incursion Investigation

- Surveillance programmes
- Incursion investigation
- International reporting

"The power of zero"

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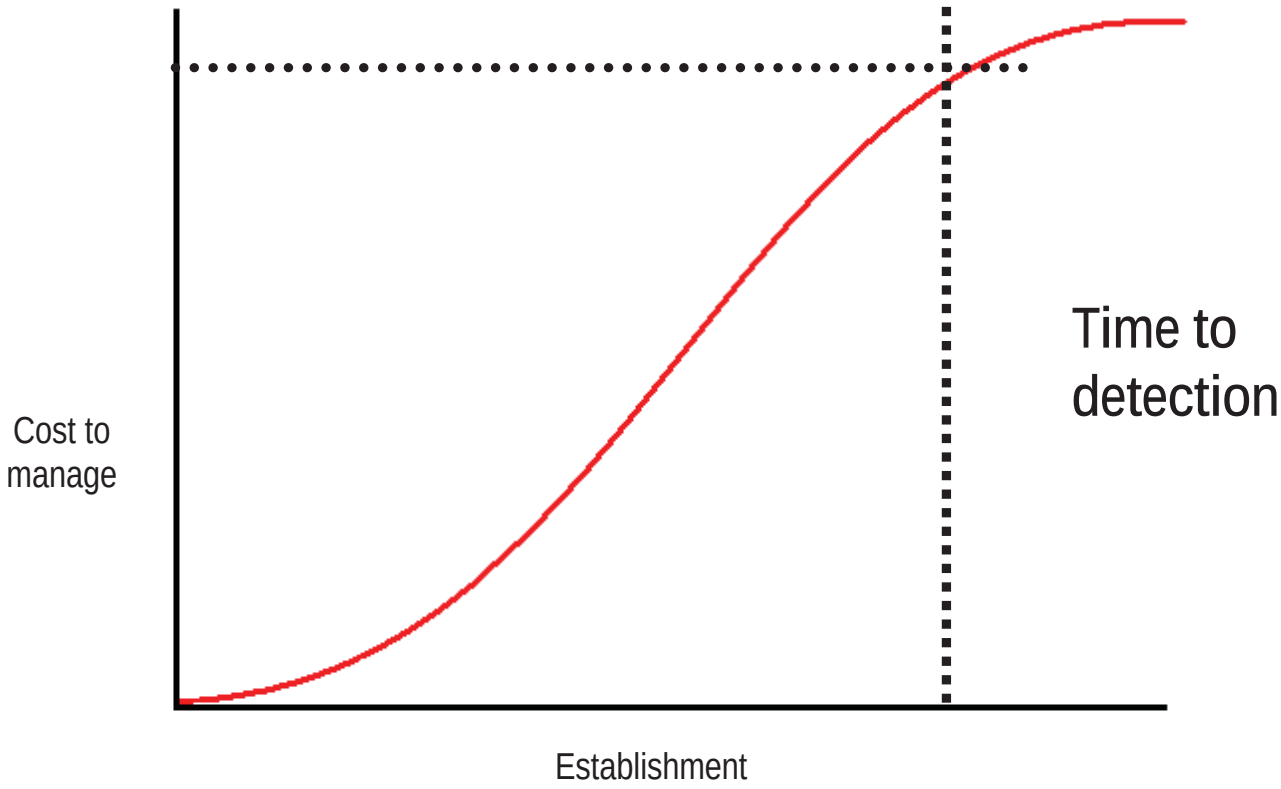
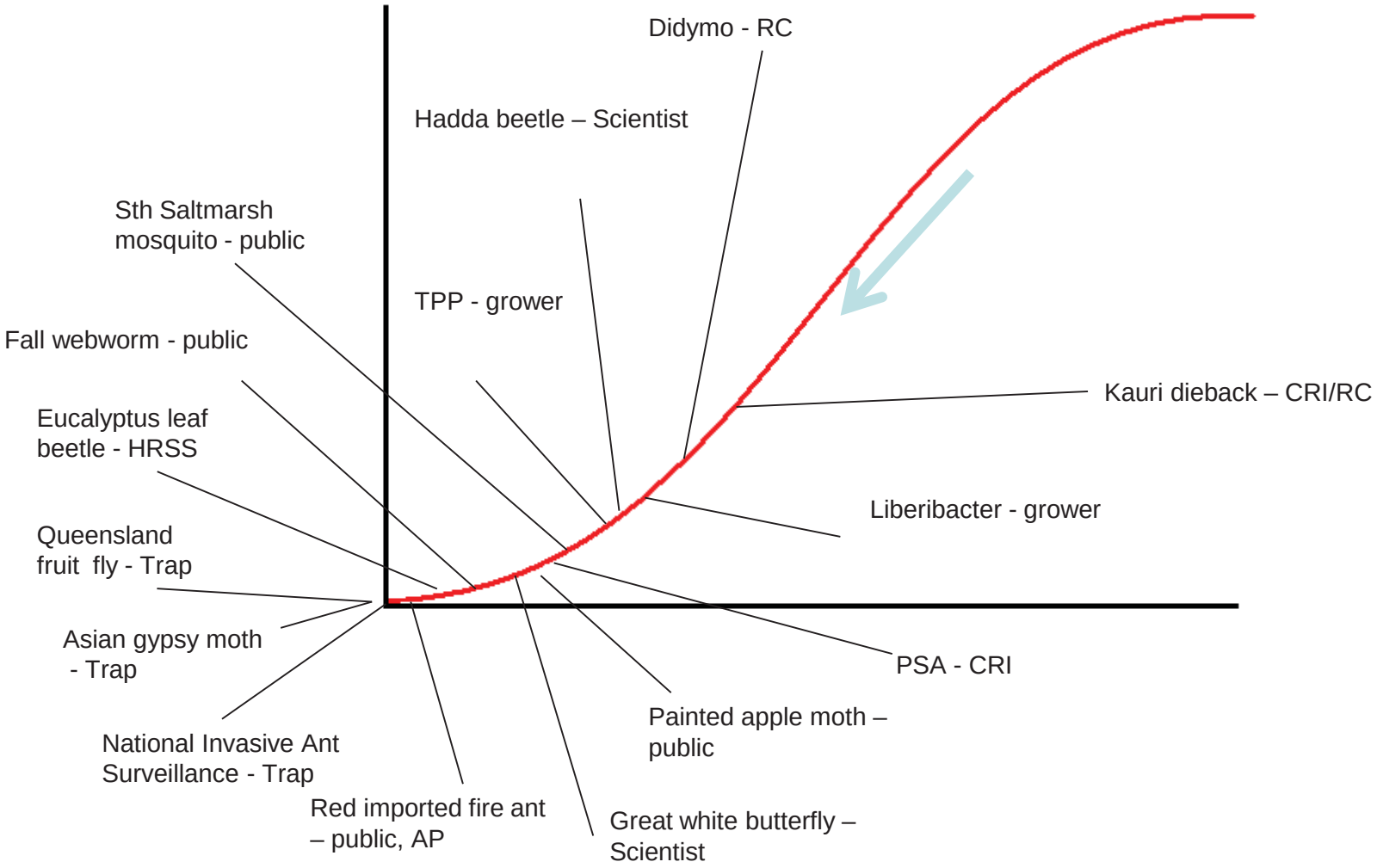
Early Detection



Improving first detection



MPI Surveillance programmes

Active/targeted surveillance programmes:

- TSE Surveillance Programme (0)
- Animal Health Information (0)
- Arbovirus Surveillance Programme (0)
- National Fruit Fly Surveillance Programme (2/7500)
- National Invasive Ant Surveillance Programme (19/48,500)
- Forest High Risk Site Surveillance Programme (2/7000)
- National Mosquito Surveillance Programme (0/12,000)
- Avian Influenza Surveillance Programme
- Gypsy Moth Surveillance Programme (0/1,500)
- Apiary Surveillance (0/350)
- Marine High Risk Site Surveillance Programme (4/5723)

Passive/General Surveillance:

Trigger


















To report suspected exotic land, freshwater and marine pests, or exotic diseases in plants or animals, call:
0800 80 99 66
Ministry for Primary Industries
Manatū Ahu Matua

0800 Calls

Category	2011/2012	2012/2013	2013/2014
0800 calls - Total	10253	9160	11562
Notifications - SIIG	1523	1500	2532
Stood down - SIIG	770	795	1725
Investigated - SIIG	753	705	807
Investigations managed through destruction or treatment - SIIG	144	149	142
Response initiated	48	26	29

Incursion Investigation

Incursion Investigation:

- To investigate the presence of risk organisms, risk goods and risk pathways into NZ
- Describe & define the biosecurity risk
- Implement urgent measures
- Make recommendations to Response Group if a biosecurity risk remains (Rapid Assessment Report)
- Participate in Responses

Who's Reporting

1 July 2011 – 30 June 2014

Sector reporting	% Positive	Count Positive	% Negative	Count Negative	% of Total Plant Pest Reports
Science community	45	35	55	42	3%
Biosecurity service providers	42	140	58	193	11%
Central or Local Government	27	54	73	148	7%
Industry	13	7	87	46	2%
General public	8	172	92	2109	77%

Enhanced notifications project plan

Phase 1: identify barriers and motivators to reporting

- ***Step 1:*** growers, farmers and industry groups
- ***Step 2:*** intermediate notifiers (including grower intermediaries, veterinarians and pathologists)

Phase 2: develop an action plan

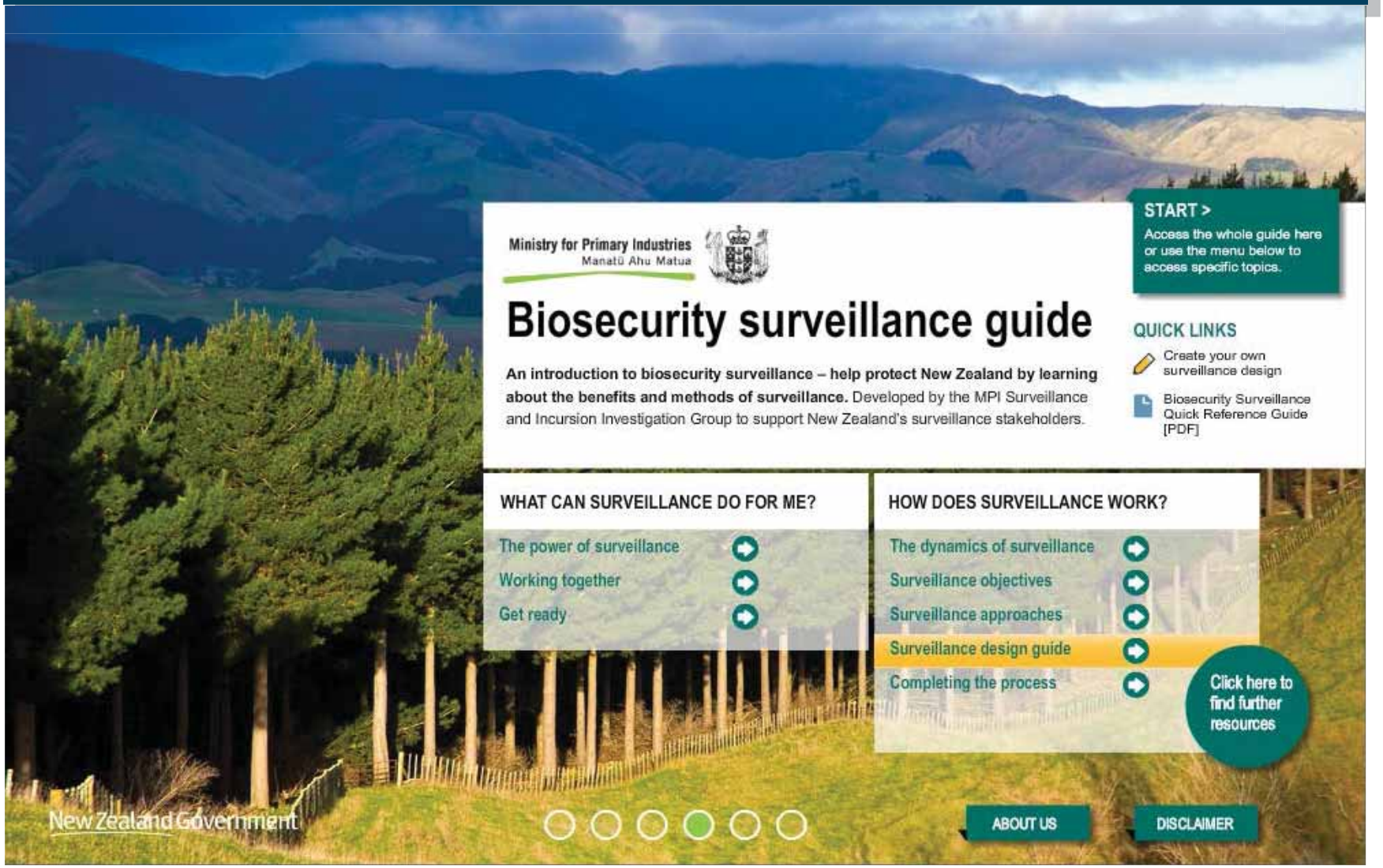
- To identify and implement business steps to improve MPI's passive surveillance around biosecurity risk organisms
- By enhancing the quality and timeliness, and where necessary quantity, of notifications.

Progress made

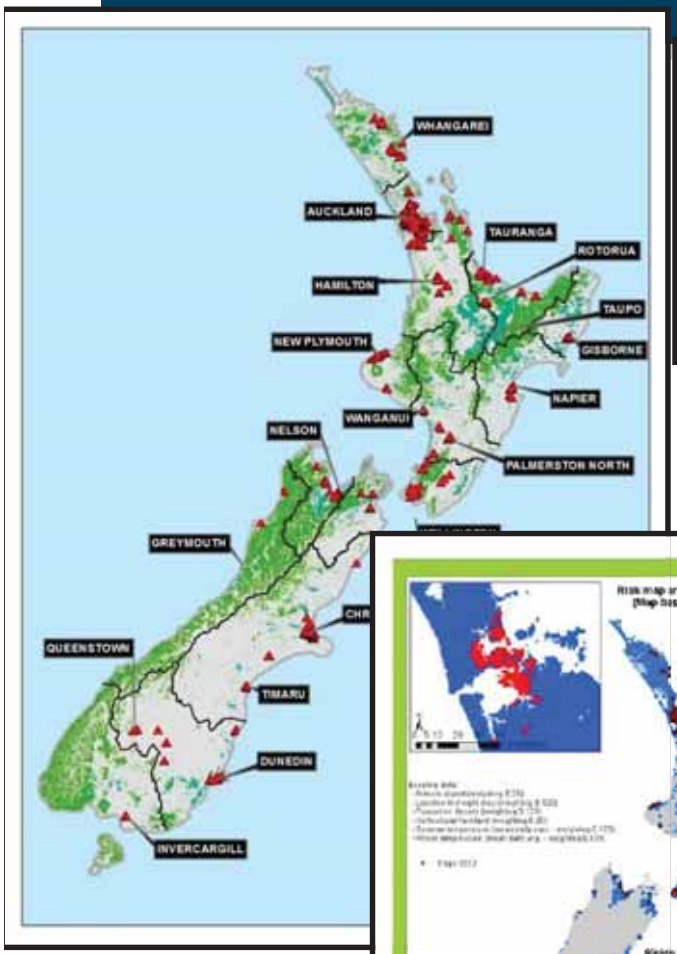
- Enhance notification process
  - Reviewed current notification process including documenting the process
  - Developing an enhanced screening process to receive and triage calls
  - Promoting' smartphone app development
- Reinforce intermediary stakeholder relationships and communications
  - Regional Councils HRSS pilot (SPS Biosecurity & HRSS).
  - Engagement with TradeMe incl single point of contact established.
  - Banner placed onto NatureWatch (http://naturewatch.org.nz/)
  - Articles in magazines and technical journals
  - Engagement with Department of Conservation.
  - Plant industry liaison
- Improve information provision and public awareness
  - Awareness and reinforcement of 0800 80 99 66 number:
    - MPI presentations
    - GIA workshops
    - Conferences presentations
    - Conference sponsorship
    - Industry articles
    - Grower and The Orchardist magazines

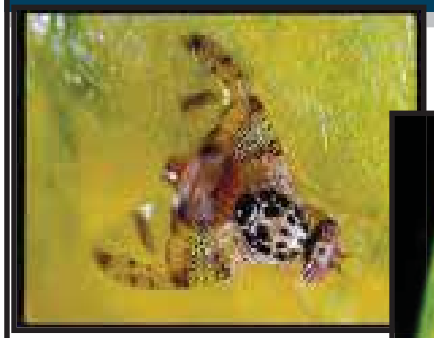
Surveillance E-Guide

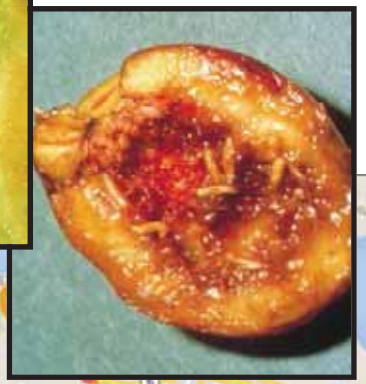
http://www.biosecurity.govt.nz/pests/surv-mgmt/surv

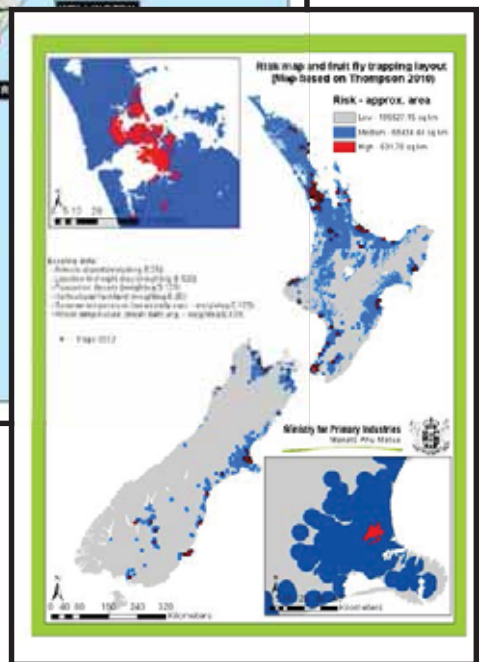


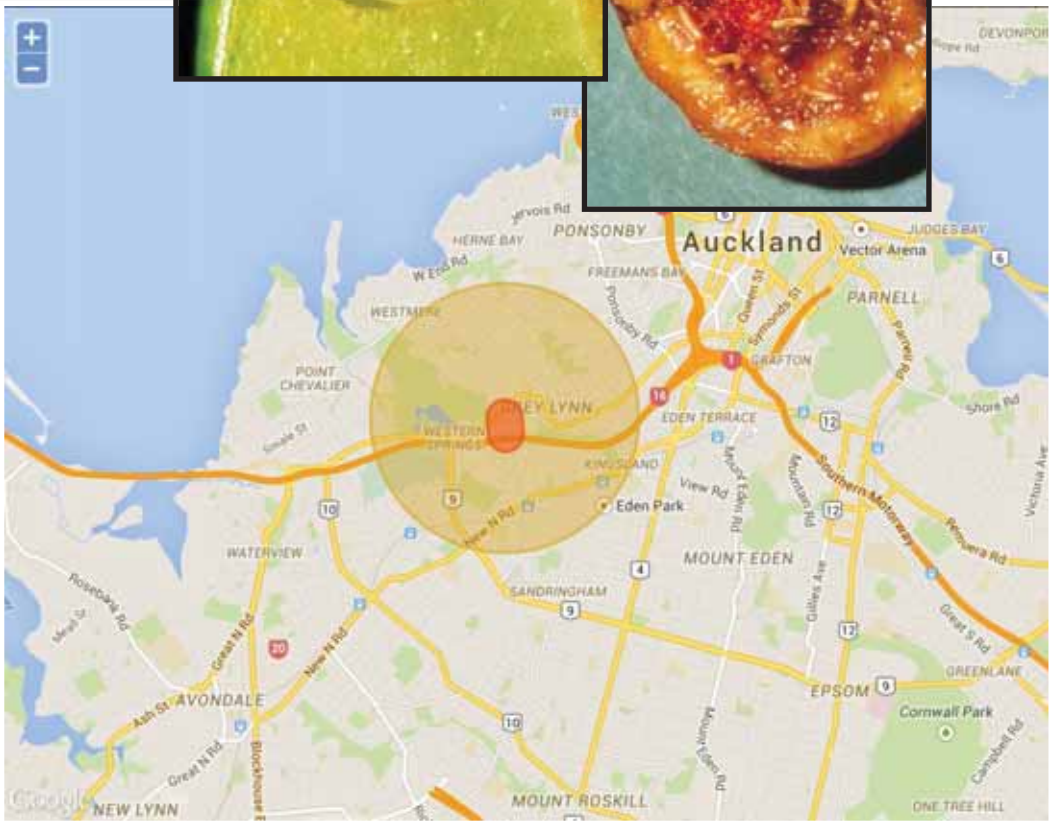
Fruit Fly Surveillance











National Invasive Ant Surveillance Programme (NIAS)

- To detect newly established nests at high risk sites around New Zealand
- To identify changes in distribution of introduced ants in New Zealand
- Pathway focused
- 19 exotic ants nests found and destroyed last season

Other MPI surveillance programmes

- Gypsy moth surveillance:
  - To provide early detection and area freedom support;
  - Consists of seasonal monitoring for the presence of Gypsy Moth through the use of Lure Traps placed on specific hosts at strategic locations;
  - Has found Lymantrid moth leading to eradication.
- MPI carries out surveillance for Arhopalus:
  - To assist exports to Australia;
  - Consists of monitoring insect numbers at ports to determine flight season;
  - Reduces burden of treatment costs on exporters.

High Risk Site Surveillance

Primary function:

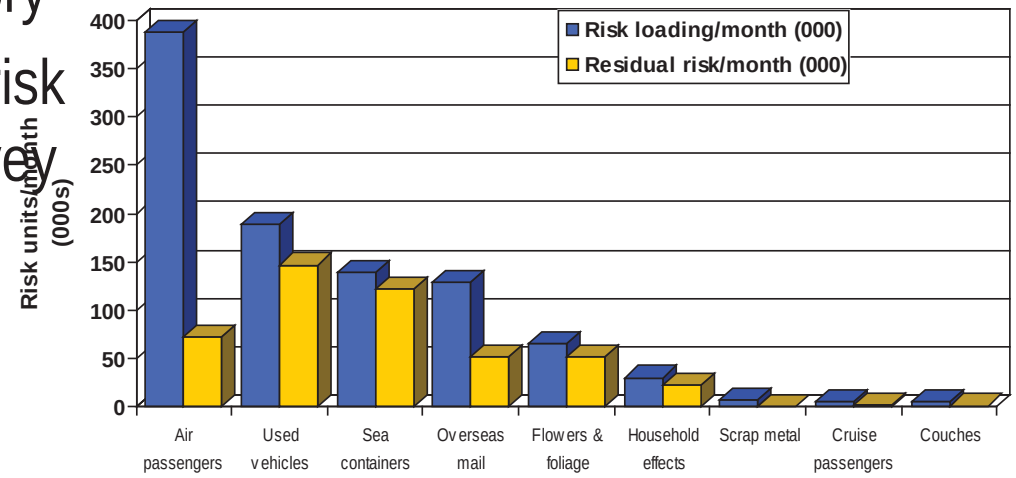
- provide effective detections of new to New Zealand organisms (i.e. exotic pests) affecting arborescent species

Secondary functions:

- record host plants (changes in behaviour, risk?);
- monitor pest distributions (using Crosby regions);
- provide justifiable claims of pest free status or area freedom to trade partners.

High Risk Site Surveillance – Allocating surveillance based on risk

- Significant risk pathways
  - Sea container
  - Used vehicles/machinery
  - International Travellers
- Delivery points for significant numbers of risk goods mapped
- Annual review of risk by category
- Criteria weighted by assumed risk loading based on slippage survey data
- Allocation of risk units to RSAs



Improvements coming with HRSS

- Improvements coming with HRSS
  - FHS methodology shifting to closer alignment;
  - Bayesian models used to improve FHS will also feed into HRSS;
  - Possible more efficient use of resources.
- Directly linking field data capture to GIS:
  - ArcGIS for smartphones and tablets;
  - Navigate maps, collect and report data, and perform GIS analysis using custom applications

How HRSS benefits forestry/synergies with FOA FHS

"...*the probability of a pest first establishing in a forest is very much less than that of establishing near ports and devanning sites. This is borne out by the fact that between 1 January 2003 to 31 December 2007, most new to New Zealand pests have been detected firstly in high risk site surveillance or special surveys (14) compared with just 2 within forests (Lindsay Bulman, Scion, Forest Health Database, unpub. data)*". [Kriticos et al 2008]

New Zealand Forest Health Surveillance Review - 2007
"*The current surveillance program in commercial forests nicely compliments programs for surveillance of high-risk areas conducted by MAF*" - Andrew Liebhold/Brenda Callan

Current situation

FOA FHS

- Even sampling (mix of regular & random)
- 1.1 million hectares of plantation forest
- Aerial, drive through and sample plots
- Budget: $830K

MPI HRSS

- Allocation of surveillance based on calculated risk of pest exposure
- Urban areas & multiple tree species
- Transect inspection
- Budget: $1,100K

Overlapping field staff and diagnostics labs

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SCION forests · products · innovation




Thank-you








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Visit www.mpi.govt.nz for more information on exotic pests, diseases and biosecurity issues in New Zealand