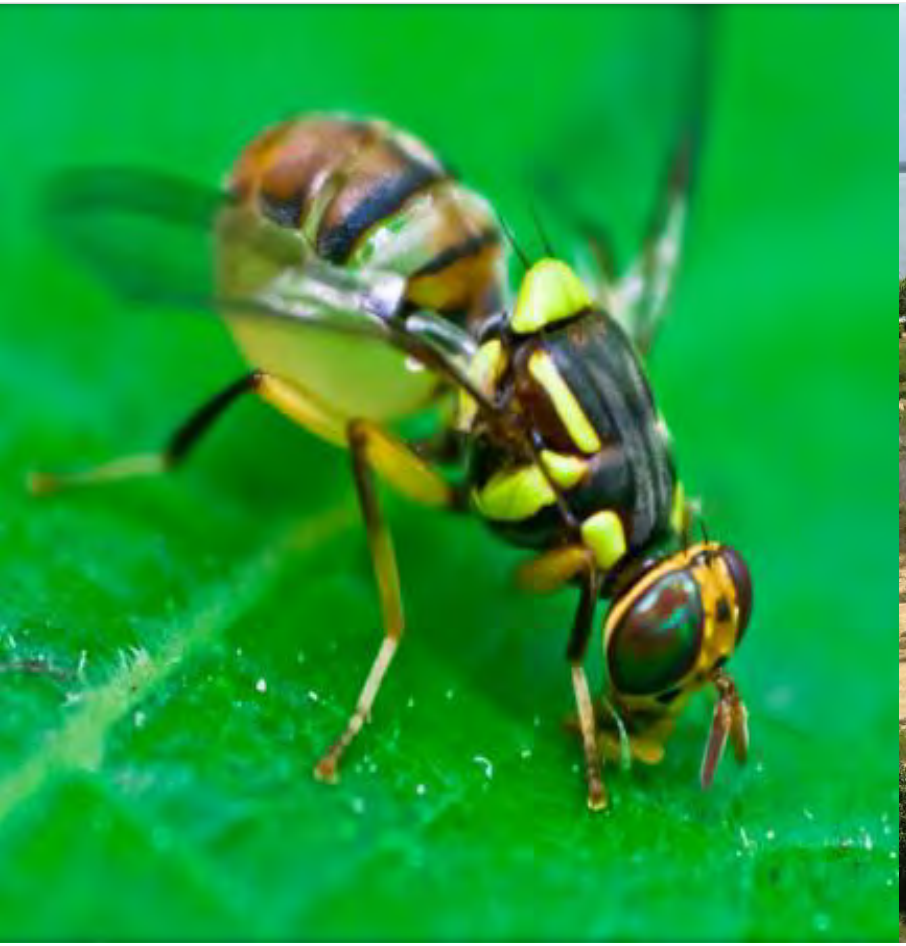


Review of Long-Term Containment Strategy for Exotic Fruit Flies in Torres Strait

Andrew Tomkins
Chair

The Torres Strait

- ***Zones protect biosecurity while enabling traditional movement of people and goods.***

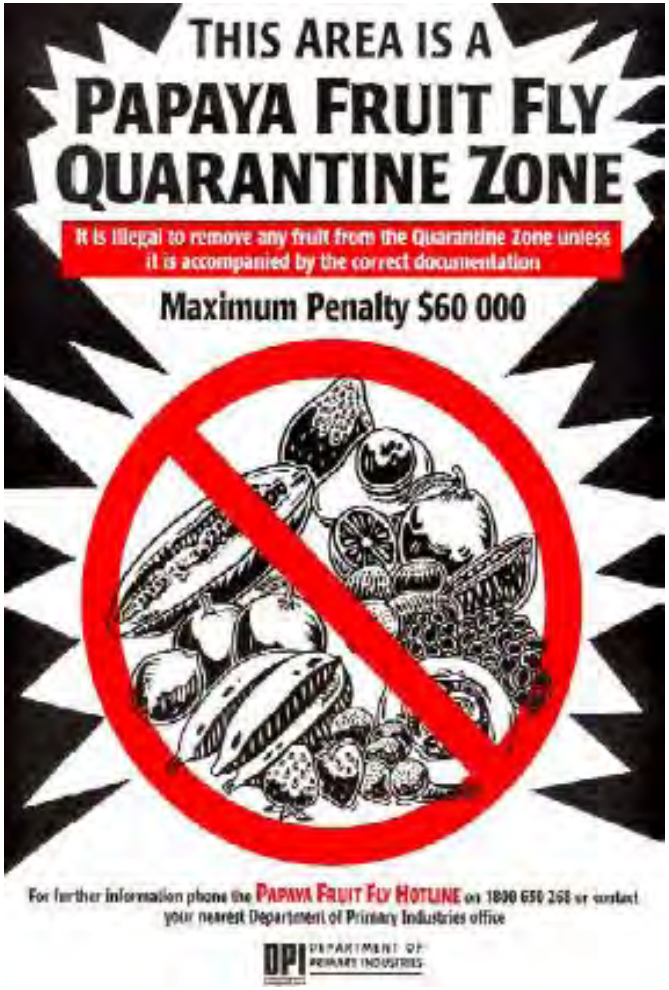
- ***Strategy complements the zones, strengthening Australia's biosecurity by detecting and eradicating windblown exotic fruit flies , before they reach the mainland***

Spread of Papaya fruit fly

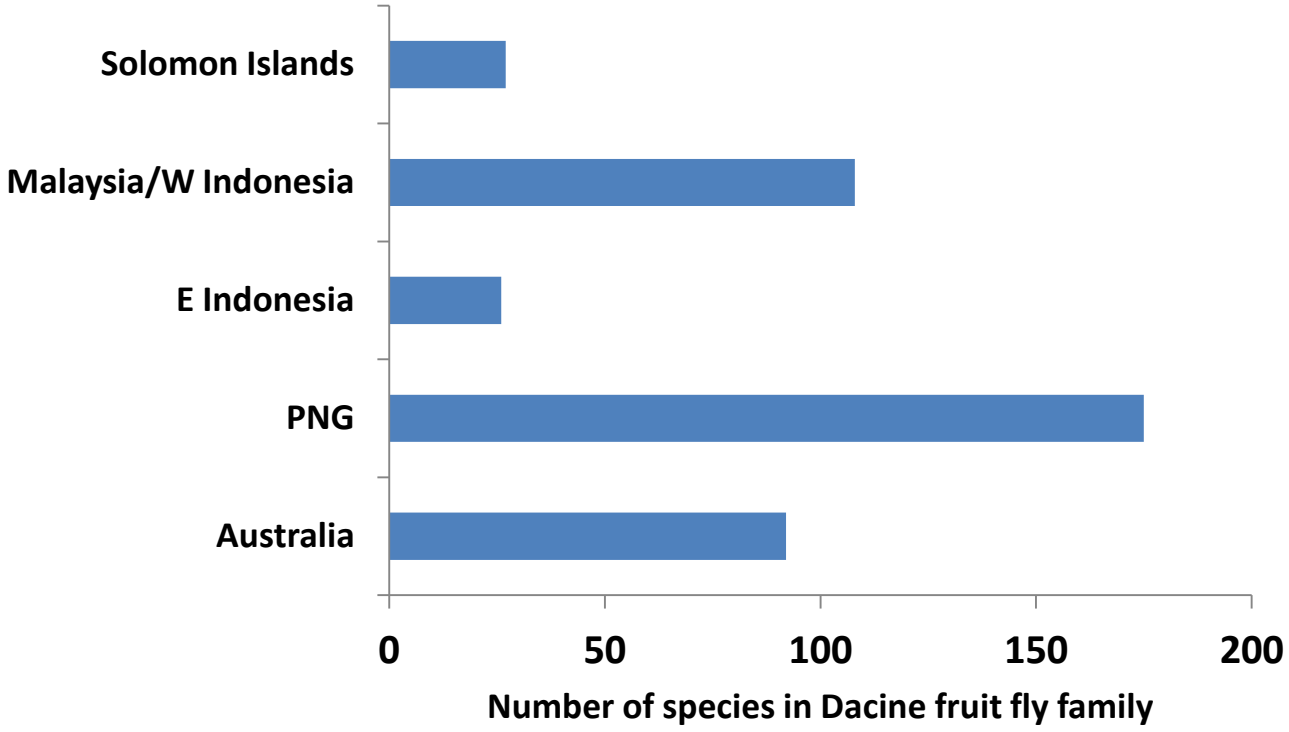
Courtesy: R. Ward, DAFF

1995 Papaya fruit fly outbreak

- **Eradication program:**
  - **4 years to eradicate at cost of $34 million**
- **Impact on industry:**
  - **Initial:**
    - **Loss of international market access e.g. mangoes to Japan**
  - **Access restored by:**
    - **Inspections – 161 320 consignments**
    - **Treatments**
      - **Reduced shelf life/quality - 10,000's of cartons of bananas dumped after fumigation damage**
    - **$7 500-$10 000 and up to $50 000 per grower for additional treatments**
  - **Estimated total cost to growers – $100 million**



Abundance of fruit fly species in Australia and our near neighbours

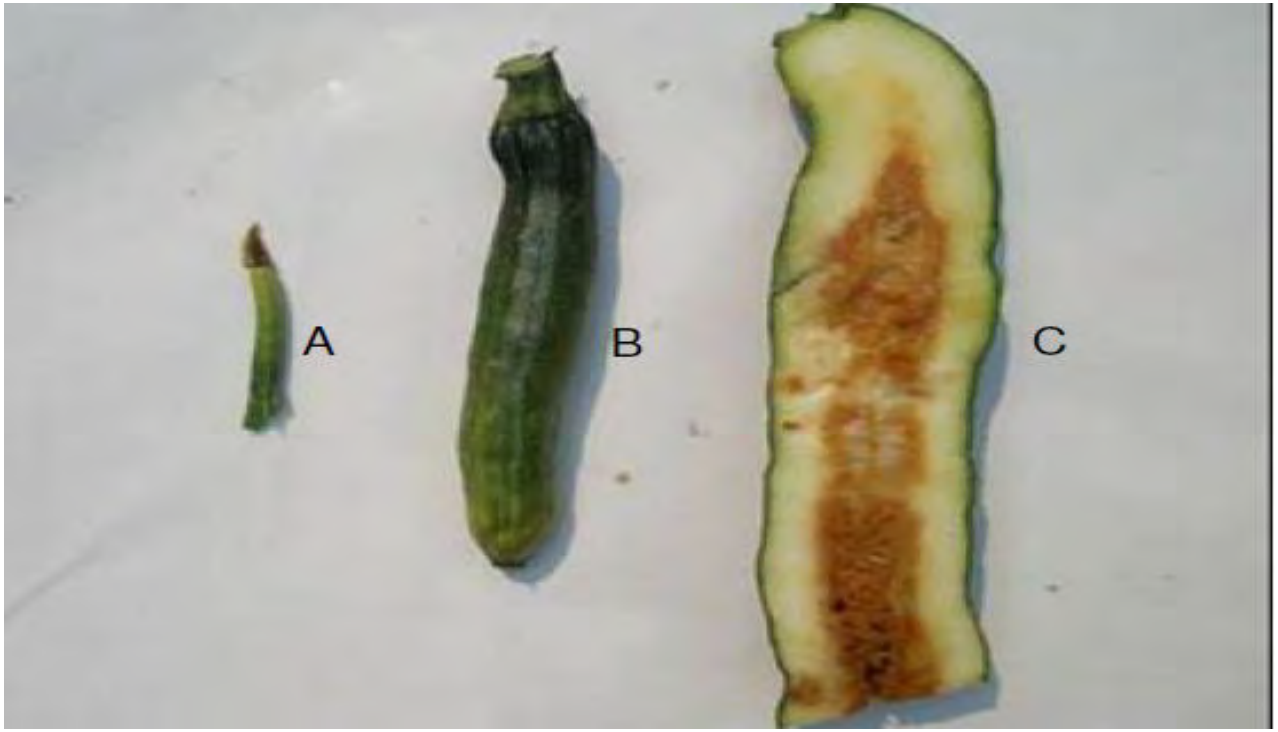


Lindner & McLeod (2008)

Species		Hosts **Bold** = known major hosts
Melon fly *(Bactrocera cucurbitae)*		Avocado, bean, cherry, cowpeas, cucumber, guava, **gourds**, **melon**, Navel orange, papaya, passionfruit, tomato, watermelon
Papaya fruit fly *(Bactrocera papayae)*		**Avocado, banana, bean,** capsicum, **carambola**, **cashew**, cherry, **coffee**, **cucumber**, **eggplant**, **grapefruit**, guava, **lemon, lime**, **mandarin**, **mango**, **navel orange**, **papaya**, **peach**, **passionfruit**, tomato
New Guinea fruit fly *(Bactrocera trivialis)*		**Chilli**, **grapefruit**, **guava**, **peach**, mango, orange

Melon fly damage

(A) Pre-set (B) Post-set (C) Mature cucurbits



Sapkota et al. 2010

"The impact of melon fly's establishment on Hawaii's agriculture was immediate and profound, especially devastating to vegetable and melon crops that have previously been abundant, easy to grow" **(Jang 2007)**

Strategy target species - % crop damage overseas

Species	Crop (stage)	Crop stage	% damage
Melon fly	Pumpkin	-	68-87%
	Squash	flowers	10%
		Immature and mature fruit	40%
	Watermelon	flowers	31-35%
		Immature fruit	26%
		Mature fruit	29-30%
Papaya fruit fly	Capsicums		80-90%
New Guinea fruit fly	Guava		13-45%
	Orange		9%

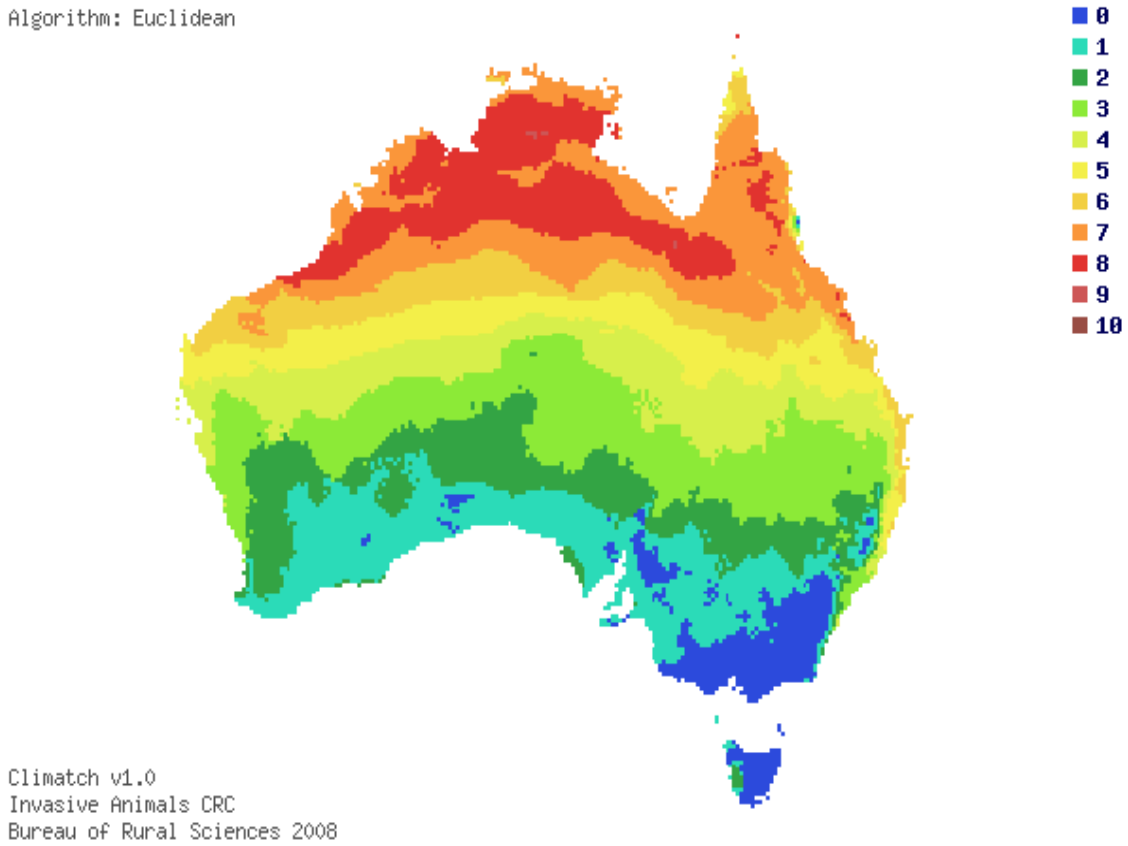
Source: Various

Papaya fruit fly

Predicted distribution

Prediction using CLIMEX during 1995 response:

- **Could establish in southern NSW**
- **Parts of Victoria and during warmer months in Tasmania**



Cost of Papaya fruit fly surveillance nationally

State	Direct cost
NSW	$273 000
Queensland	$209 000
Northern Territory	$113 000
Western Australia	$78 500
South Australia	$62 400
Victoria	$88 800
Tasmania	$26 500
Torres Strait	$529 300
TOTAL	$1 381 000

Kompas & Che 2009

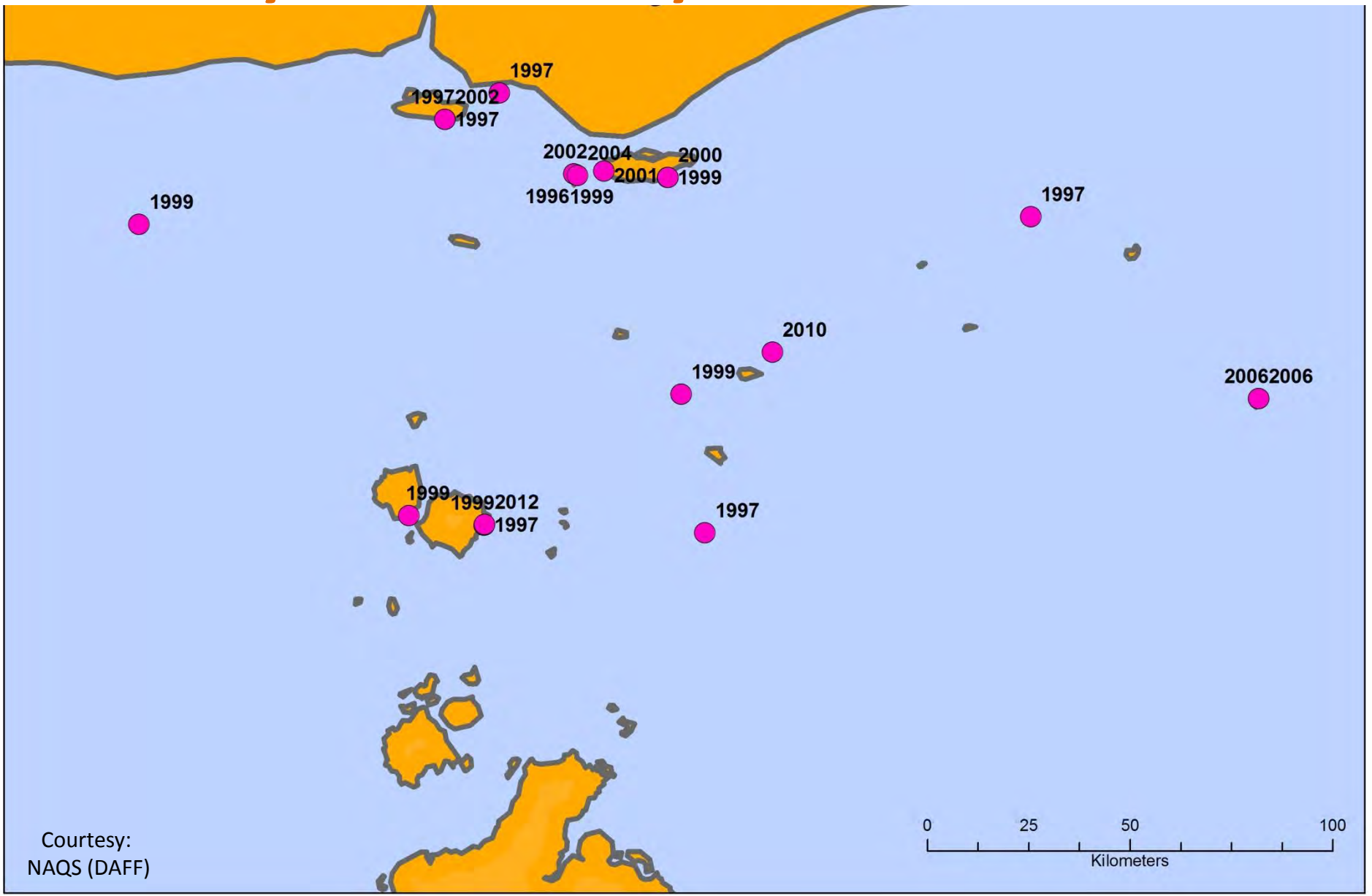
What is the strategy?

- Began after 1995 Papaya fruit fly outbreak in Cairns
- Prevents exotic fruit flies establishing permanently in Torres Strait
- Reduces risk of exotic fruit flies spreading to mainland
- Includes surveillance, trapping and eradication activities in Torres Strait and northern Cape York Peninsula

Courtesy: QDAFF

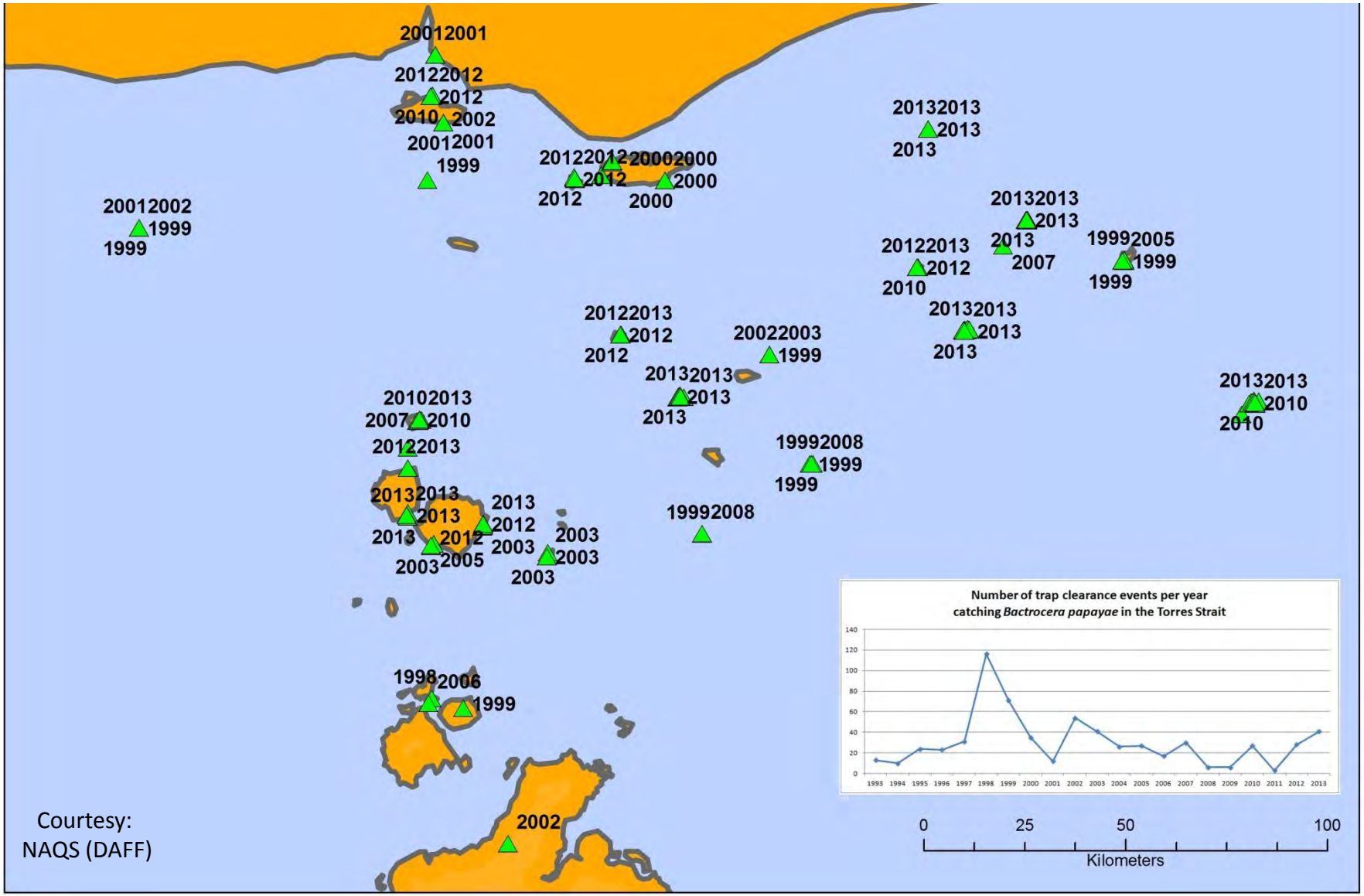
There have been no outbreaks of exotic fruit fly on mainland since implementation of the Strategy

Melon fly detections by NAQS in Torres Strait



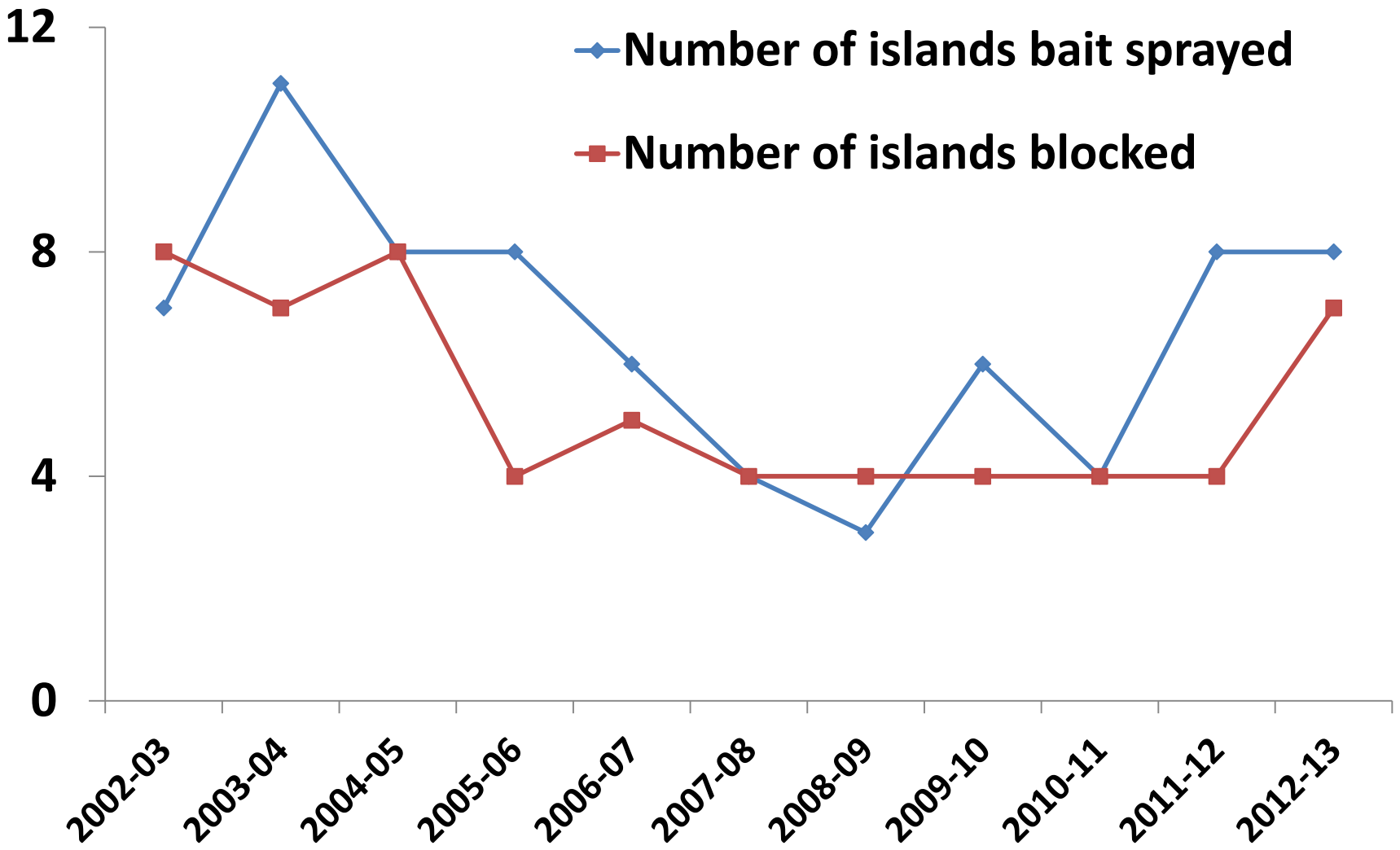
Courtesy:
NAQS (DAFF)

Papaya fruit fly detections in Torres Strait



Courtesy:
NAQS (DAFF)

Strategy operations



Courtesy: NAQS (DAFF)

Why is the Strategy being reviewed?

- **Pre-dates EPPRD establishment**
- **Currently only governments administer and share cost of the Strategy**
- **Secure long term delivery of the Strategy**
- **Gain consistency across all areas of biosecurity in line with the one biosecurity approach**

Queensland Government

Australian Government
Department of Agriculture, Fisheries and Forestry

Review - Terms of reference

1. **The relationship of the response elements of the strategy to the provisions and intent of the Emergency Plant Pest Response Deed (EPPRD).**

2. **Options for cost sharing and administering the program with beneficiary industries.**

Are the current cost sharing arrangements appropriate and consistent with the intent of the EPPRD given the nature of the strategy?

Courtesy:
NAQS (DAFF)

Benefits of the Strategy

- **Benefit of at least $228 per dollar invested in the Strategy**
- **If Papaya fruit fly had established, affected crops predicted potential cost increases were:**
  - **Sprays - $27-46/ha/spray, with up to 12 extra sprays**
  - **Disinfestation -$79-100/t**

Benefits of the Strategy

- **Without Strategy, first mainland incursion likely within 2 years**
- **Outbreak of an exotic fruit fly species would require development of new or revised fruit fly control measures – HAL has invested $21.6 million on this for existing species in last 10 years**

Courtesy: A Jessup, NSW DPI

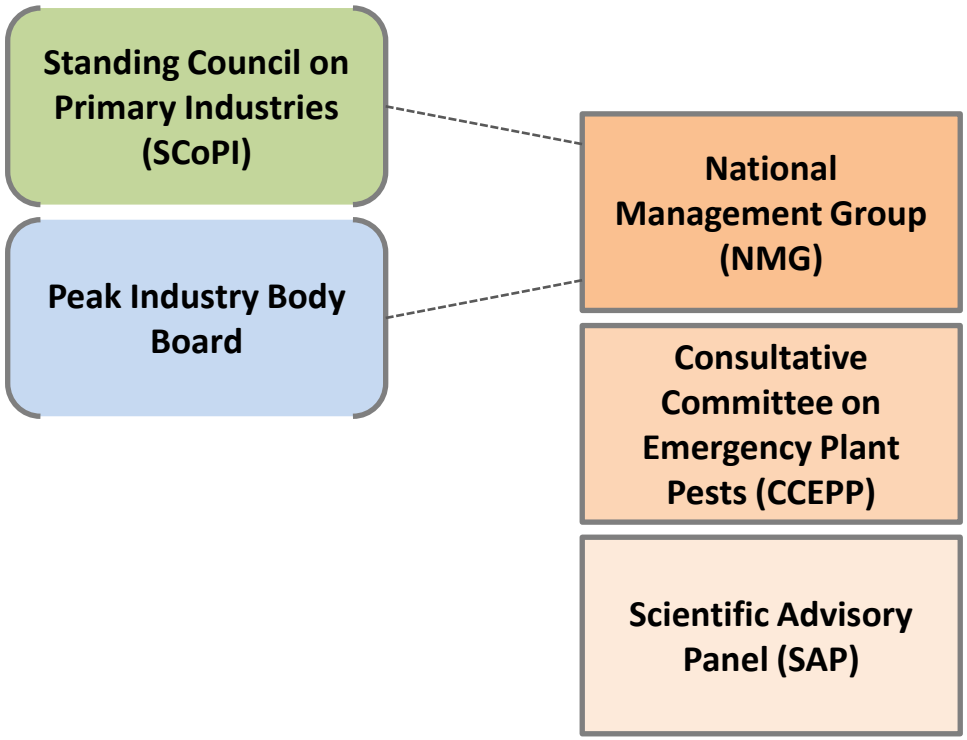
High Priority Pests in Industry Biosecurity Plans

Fruit fly species	Industry Biosecurity Plan
Melon fly	Avocado, Papaya, Passionfruit, Summerfruit, Tropicals, Vegetable
Papaya fruit fly	Avocado, Citrus, Mango, Papaya, Passionfruit, Summerfruit, Tropicals
New Guinea fruit fly	Citrus, Tropicals

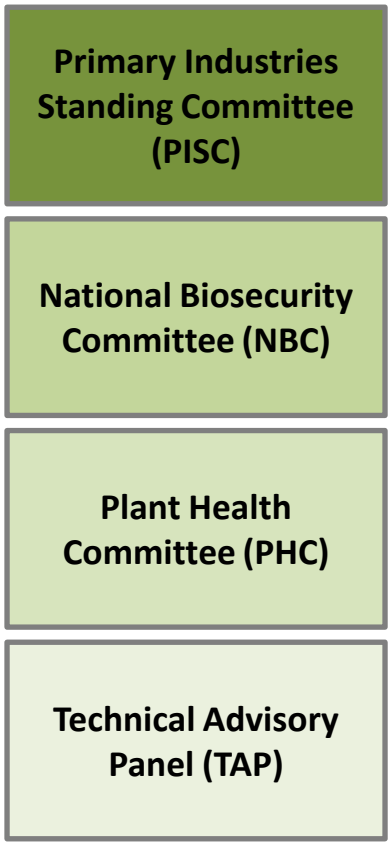
Note: The Tropicals IBP was developed in 2006 however there is currently no industry body representing this sector.

Governance

Emergency Plant Pest Response Deed (EPPRD)



Torres Strait fruit fly Strategy



Review panel

- Andrew Tomkins, Department of Primary Industry and Fisheries, Northern Territory (Chair)
- Trevor Dunmall, Australian Mango Industry Association Ltd
- David Daniels, Citrus Australia Ltd
- Jay Anderson, Australian Banana Growers Council
- Rod Turner, Plant Health Australia
- Geoff Raven, Primary Industries and Resources South Australia
- Stuart Holland, Department of Primary Industries, Victoria
- Margot Ricardo, Queensland Department of Agriculture, Fisheries and Forestry (QDAFF)
- Rebecca Sapuppo, Response Incident Coordinator, QDAFF
- Louise Clarke, Department of Agriculture, Fisheries and Forestry (DAFF)
- Barbara Waterhouse, NAQS, DAFF

Preliminary findings of the review

- **Strategy benefit and success is clear but little general awareness**
- **Torres Strait is part of Australia and therefore covered by the same cost-sharing Deeds**
- **Governance of responses under Strategy is already closely aligned with EPPRD**
- **Operating under EPPRD is one of a limited number of options for cost sharing and administering the Strategy**
- **Cost sharing to focus on main (3) exotic fruit fly species involved**
- **Further consultation will be required**

Options

- Align with the EPPRD
- New cost sharing agreement / arrangement
- Voluntary contributions
- Fee for service
- Status quo (current arrangements)
- Discontinuing the Strategy

Advantages/disadvantages of EPPRD option

- Familiar
- Involves industry in decisions
- Consistent response
- Pre-agreed cost sharing
- Flexible
- Awareness

- Not all species categorised
- Some beneficiaries not signatory or too small
- Timeliness
- Administrative burden

Cost sharing

- **Average annual cost $200k p.a., with an agreed cap of $400k p.a.**

- **Currently cost shared 50:50 between Australian and state / territory governments**

- **Potential for an 80:20 split between government and industry under EPPRD**
  - **Government: $160k - $320k**
  - **Industry: $40k – 80k**

- **At least 16 affected industry representative bodies identified**

Next steps

- **Feedback from this meeting incorporated into draft recommendations**
- **Plant Health Committee to consider draft report and recommendations in June 2013**
- **Final report to be considered by PISC in November 2013**
- **Depending on decision, further consultation with industry on any changes to the Strategy**

Courtesy: NAQS (DAFF)