Equitable and effective RIFA management at point source.

Simon O'Connor

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Overview

- Context - Risk of entry, establishment, and impacts
- Management options
- Site vs commodity based risk management
  - Pacific Island container exporter case study
- Operational research aim, results
  - Site based evaluations – RES
  - Site based risk management systems – RMS
- Where to from here?

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Pacific Ant Prevention Programme

- **Borne out of US led initiative**
- **USA, Australia and NZ biosecurity agencies are signatories to the Programme**

Goal: Protect biodiversity, livelihoods and lifestyles in the Pacific through the effective management of invasive ants.

Risk of entry, establishment, impacts

	New Zealand	Australia	Hawaii
Intercept data	5	3	1
Post Border Detection	1	0	0
Incursions	3	3	0
Eradication Cost	$13M NZD	$175M AU	??
Impacts	$665M NZD	$8.9B AU	$2.5B US

Intercept details

Date	Origin	Commodity	Details	Status	Genotype
2006	Texas, USA	Second hand power generation equipment	workers in mud daubers nest	Dead – sea freight	unknown
23/11/2005	Gainsville, Florida, USA	Yacht mast	100's workers only	Alive in a clump of soil attached to tube – sea freight	Monogyne?
09/05/2003	California, USA	Peaches, 1437kgs	workers	Alive – via airfreight	?
19/11/1982	USA	Tent	workers	Alive – via airfreight	?
19/11/1979	USA	Tent	workers	Alive- via airfreight	?

Post Border detections

Date	Origin	Commodity	Details	Status	Genotype
04/02/2007	Caribbean	Yacht	Nest in under flooring of vessel	Alive	monogyne

Incursions

Date	Origin	Location	Details	Genotype
2006	USA	Whirinaki	Second hand power generation equipment?	3 polygyne nests
23/01/2004	Australia or USA	Napier Port	Bricks or machinery?	1 monogyne nest in concrete crack at wharf edge
2001	Australia?	Auckland airport	Air can?	1 monogyne nest in lawn

Incursion No.3 - 2006

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Incursion No.2 - 2004


CAPITAL

Effective risk management??

- **Clearly the current risk management methodology across pathways is**
  - unacceptable
  - ineffective
  - unsustainable
- **Low frequency intercepts yet high establishment risk with high potential impacts**

Management Options

1. **Mop it up as it arrives!**
   - increase surveillance and incursion response
   - 650K/annum and $1M, $2M and $10M NZD
     incursions = nil support
   - highly risky strategy
2. **Mandatory inspections of RIFA country exports to NZ**
   - low likelihood of detecting RIFA
   - restricts trade as unfair on majority of compliant of exporters
3. **Mandatory fumigation of RIFA country exports to NZ**
   - restricts trade as unfair on majority of compliant of exporters
   - does not align with NZ MeBr reduction policy

MAFBNZ PROCESS FLOW

1. OFF-SHORE ACTIVITIES

Pre-clean Sea Container

2. IMPORT REQUIREMENTS - STANDARDS

Certification

3. RECEIVE IMPORT INFORMATION
   1. RELEASE
   2. FURTHER PROCESSING (MAFBNZ)
   3. DIRECT TO TREATMENT

High / Low Risk ?

4. APPROVED FACILITY - Industry

- INSPECTION
- TREATMENT
- RESHIP or DESTROY
- HOLD IN CONTAINMENT
- RELEASE

On-arrival actions

5. POST BORDER ACTIVITIES

- SURVEILLANCE
- INCURSION RESPONSE
- PEST MANAGEMENT

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Management Options contd.

4. Develop a system of point source risk management commensurate with risk at exporter site

- equitable
- majority of RIFA country exporters unaffected
- low cost to 'high risk exporters'
- effectively creates localised operational areas of "pest area freedom"

Pacific Island Point source based hygiene system

- **Empties (90%) FCL (10%)**
- **Site based risk management of hitch hikers**
- **Customised for hitch hiker species present**
- **Effective washing and prophylactic treatments**
- **Quality management system**
- **Same ant species causing incursions in NZ**
- **95% reduction in MAFBNZ intervention levels**

Case study – Samoa

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CASE STUDY – SAMOA

Sea container hygiene system

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Point source risk management

- Habitat reduction

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Point source risk management

- Habitat reduction

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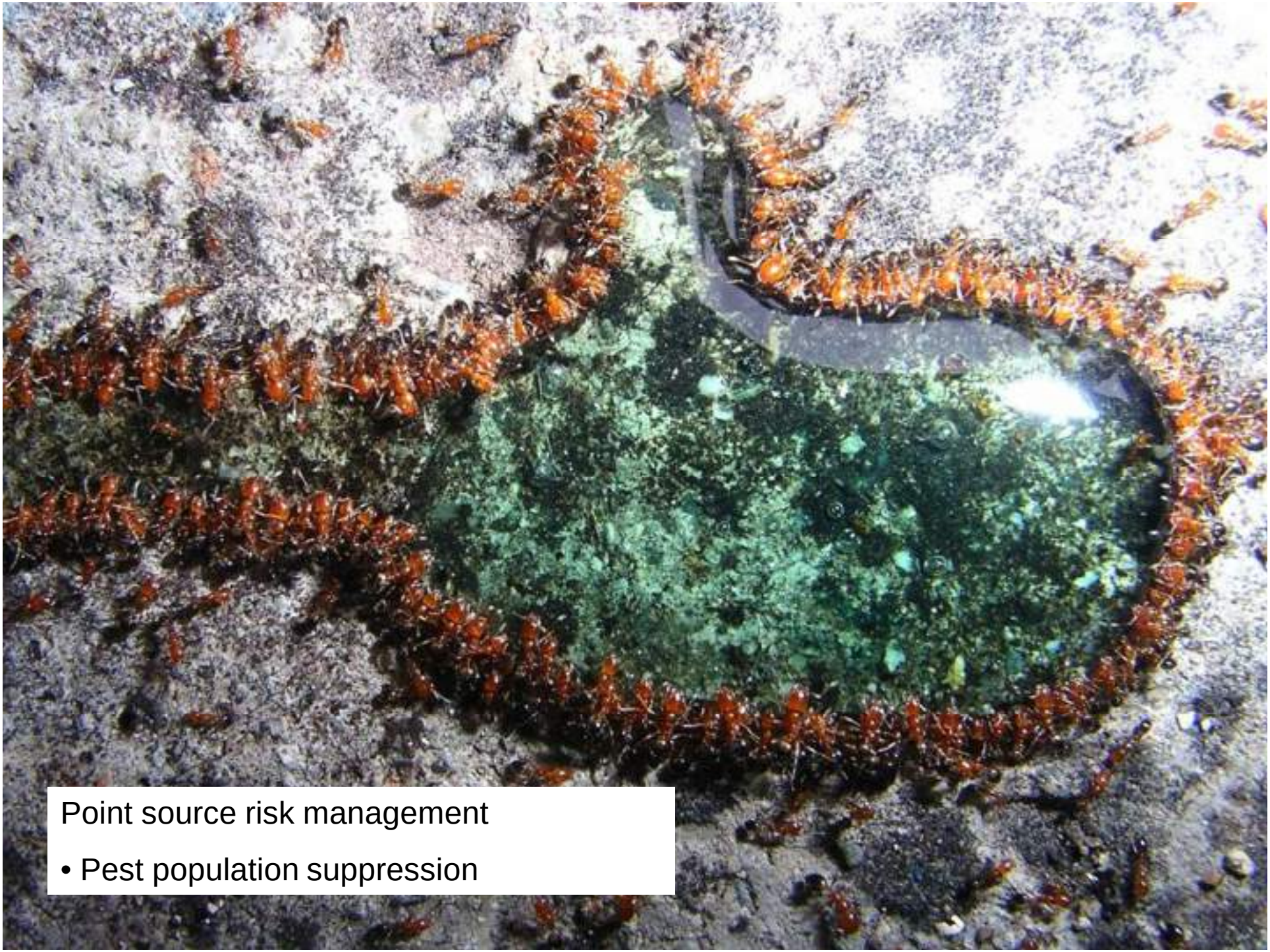
Point source risk management

- Container cleaning
- Pest population suppression



Point source risk management

- Pest population suppression

Point source risk management

- Prophylactic measures

Sea Container Hygiene System- Spray Protocols

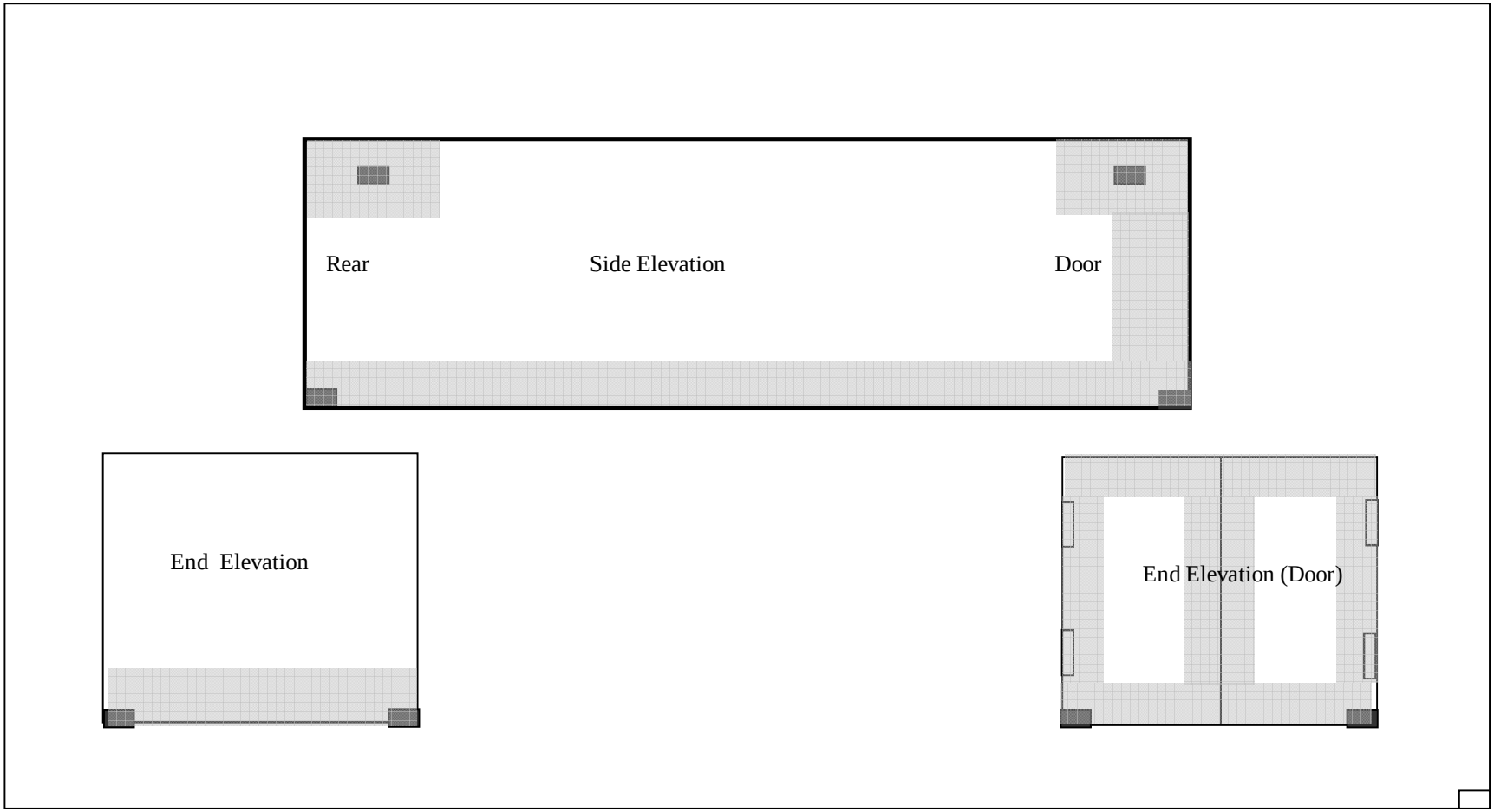


Diagram showing spray zones for containers.

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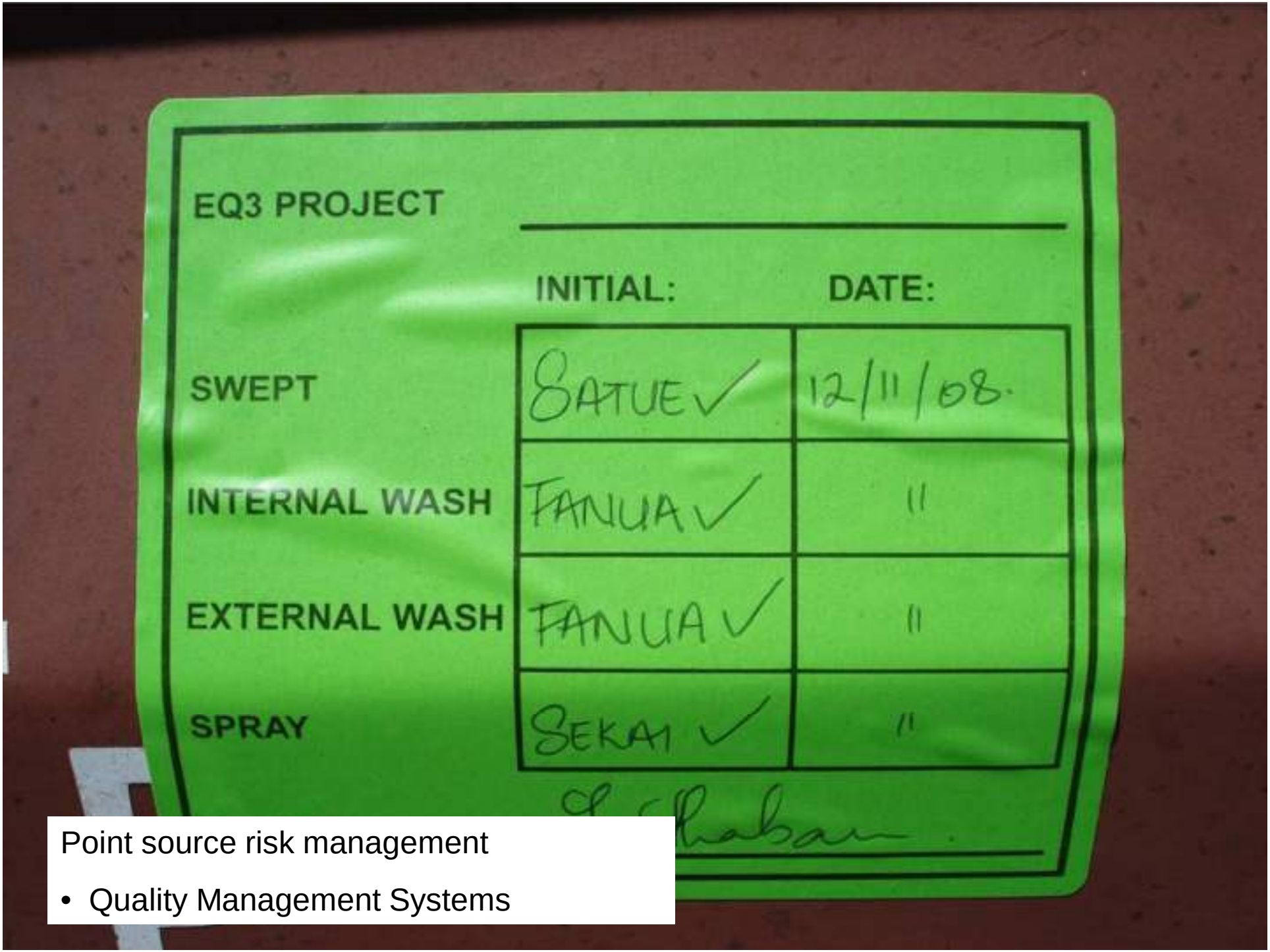

Point source risk management

- Quality Management Systems

MAF audit inspection
On-vessel segregation of system containers.

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FILE COPY

Operational Standards Team
MAF Biosecurity New Zealand

AUDIT REPORT

AUDIT OF THE SWIRE SHIPPING / MAF BIOSECURITY NEW ZEALAND OFFSHORE CONTAINER MANAGEMENT PROGRAMME - EQ2

1 - 6 DECEMBER 2007

SWIRE SHIPPING/MAF BIOSECURITY NEW ZEALAND

EQ2 SYSTEM OPERATING AT BONIARA, LAE, AND PORT MORESBY

SUMMARY REPORT – SEA CONTAINER CONTAMINATION RATES

AOTEAROA CHIEF 00975

Report Date: 12 December 2007 (Voyage arrived 8/9 December 2007)
Vessel and Voyage: Aotearoa Chief 00975

NZ Ports of Unloading: Napier and Tauranga

PORT OF LOADING	CONTAMINANT	NUMBER CONTAMINATED CONTAINERS	TOTAL NUMBER CONTAINERS	PERCENT CONTAMINATION PER VOYAGE
Lae	GENERAL	0	43	0 %
Lae	ANT	0	43	0%
POM	GENERAL	0	87	0 %
POM	ANT	0	87	0 %
Honiara	GENERAL	2	165	1.2 %
Honiara	ANT	0	165	0 %

Comments: Lae
There were 43 containers imported from Lae on this voyage. They consisted of a majority of empties and some FCLs. All the containers were compliant with absolutely no general contamination. In addition, there were no ants or Giant African Snails reported. The level of management displayed is excellent. Well done Phillip, Phil K, Ian and Team!

Comments: POM
There were 87 containers imported from Lae on this voyage. They consisted of a majority of empties and some FCLs. All the containers were compliant with absolutely no general contamination. In addition, there were no ants or Giant African Snails reported either. The level of management displayed is excellent. Well done Neil, Moira, Raywood, Anyleda, Dick and team!

Comments: Honiara
There were 165 containers imported from Honiara on this voyage. All were externally clean and compliant except for two empties which had small amounts of wheat found inside/on bundles (1.2 % general contamination overall). However, this percentage is well below the accepted threshold level of 5% for general material. There were no ants or Giant African Snails found either and this displays continued excellence in control. The level of extremely good work by Genaris, Temon and team continues, well done!

Container number		Consignment	Contamination?	Sticker?
1	CLHU7610882	Empty	YES – mixed wheat seeds	Yes
2	TGHU3923793	Empty	YES – mixed wheat seeds /bundles	Yes

Reporting to Stakeholders:
Audit and Ongoing Monitoring

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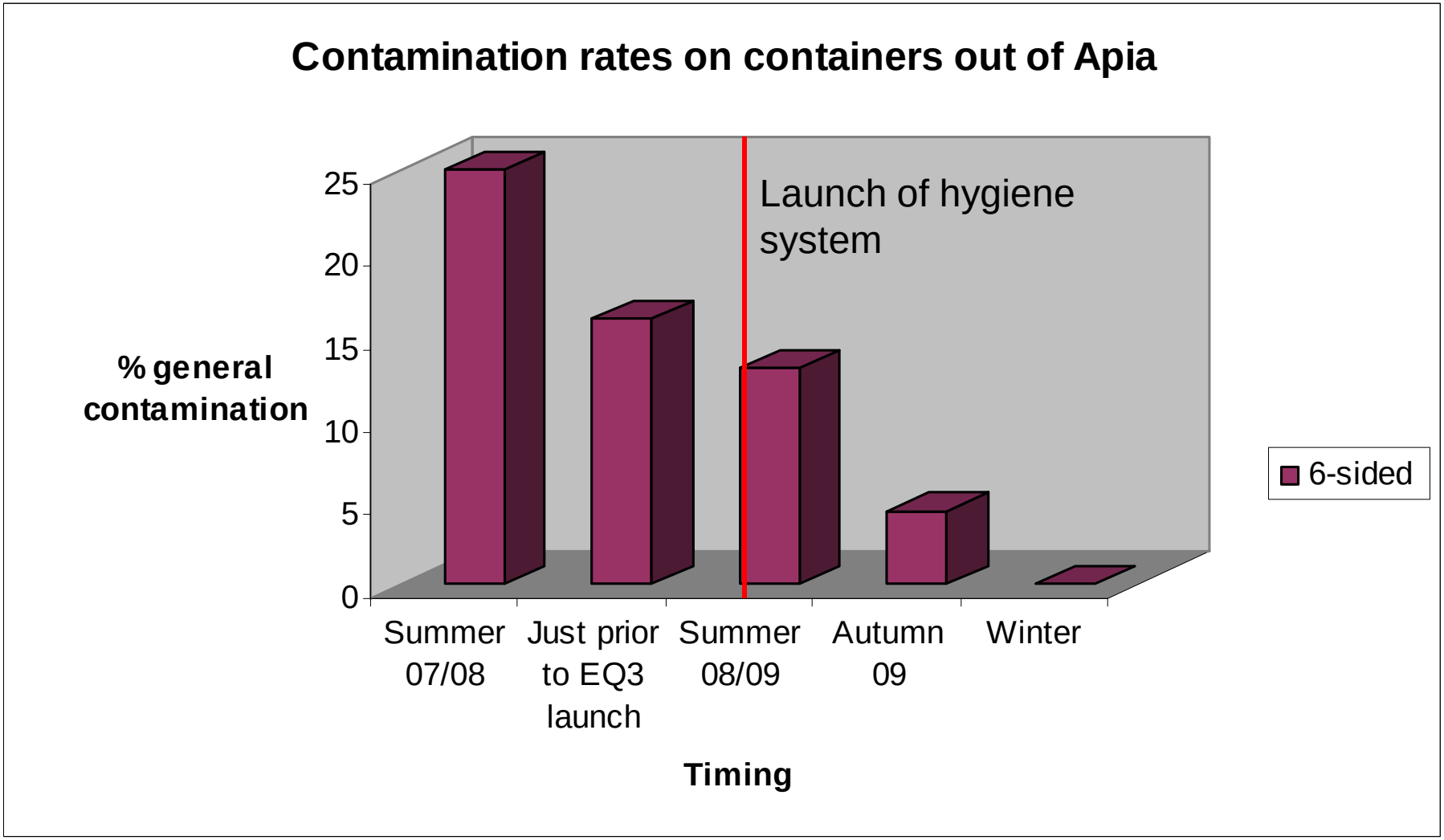

Case study – Samoa

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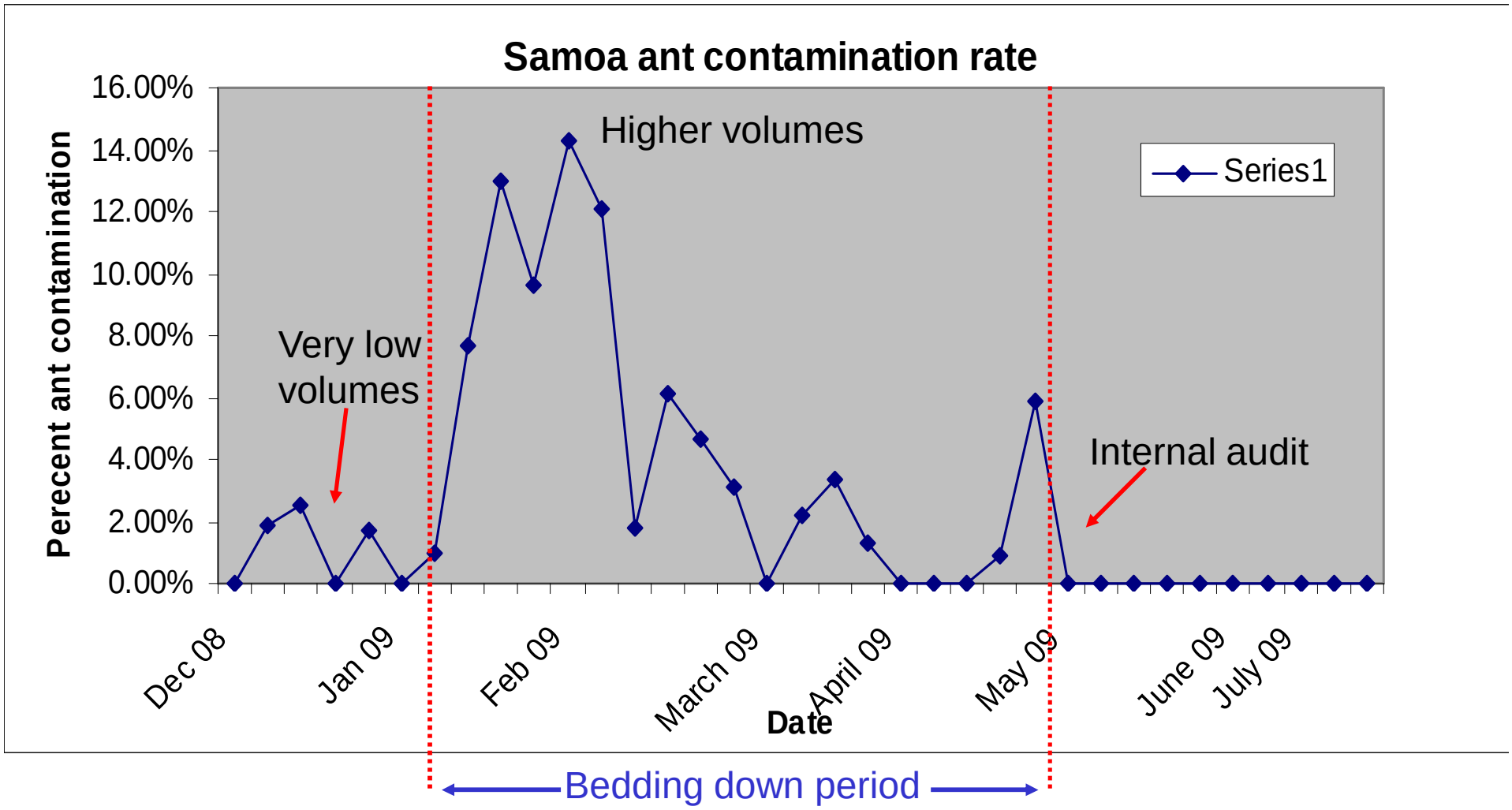

Case study – Samoa

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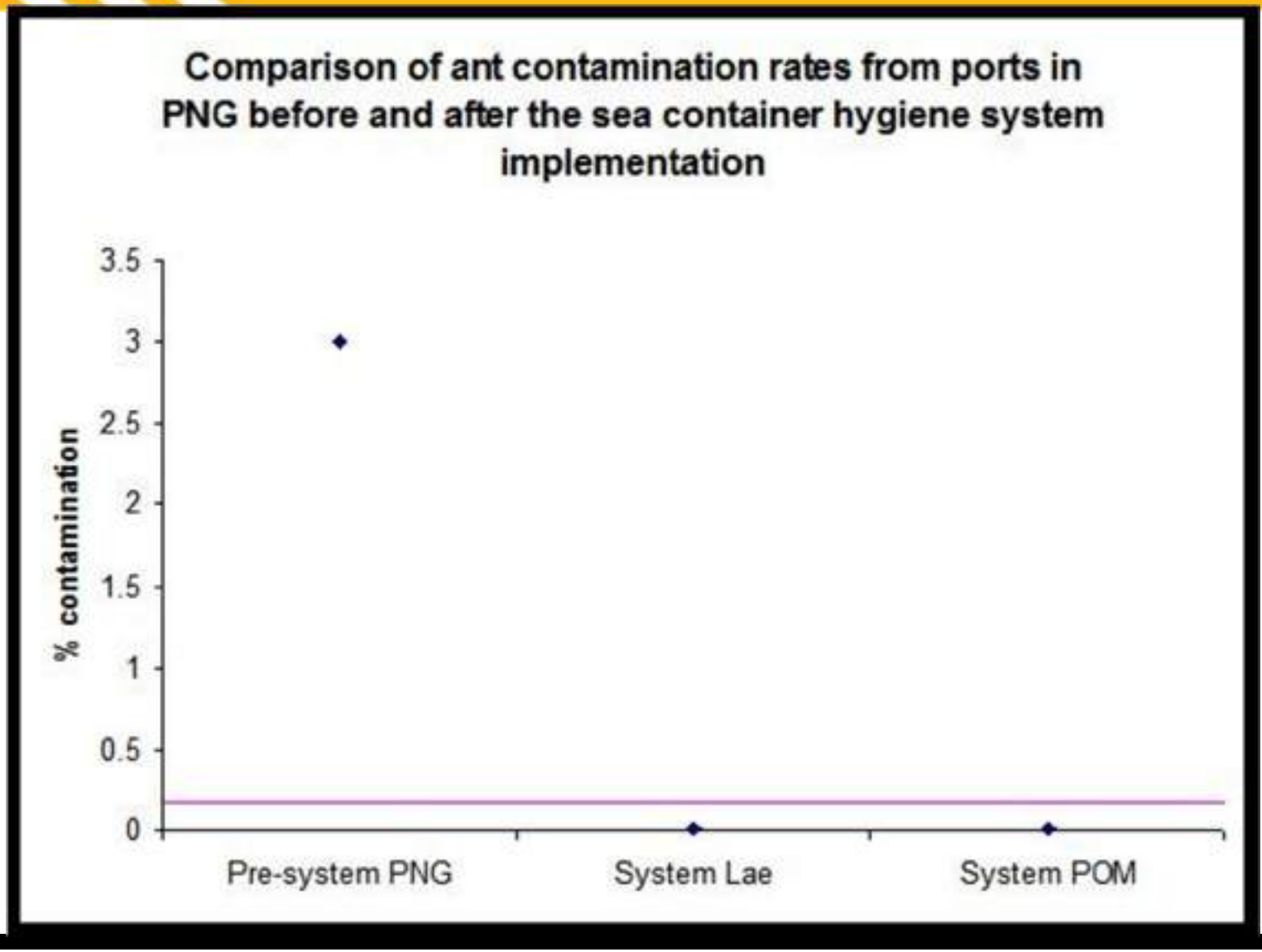

N=25,000 empty containers

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APPPC RSPM draft guidelines

- Container Cleaning
- Cleanliness of storage areas
- Prevention of re-contamination
- Verification of cleanliness
- Inspection of exterior
- Certification

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Operational Research - RIFA

Aim: to develop a generic risk evaluation and risk management framework for estimating and managing RIFA contamination risks for a given pathway and its vector items

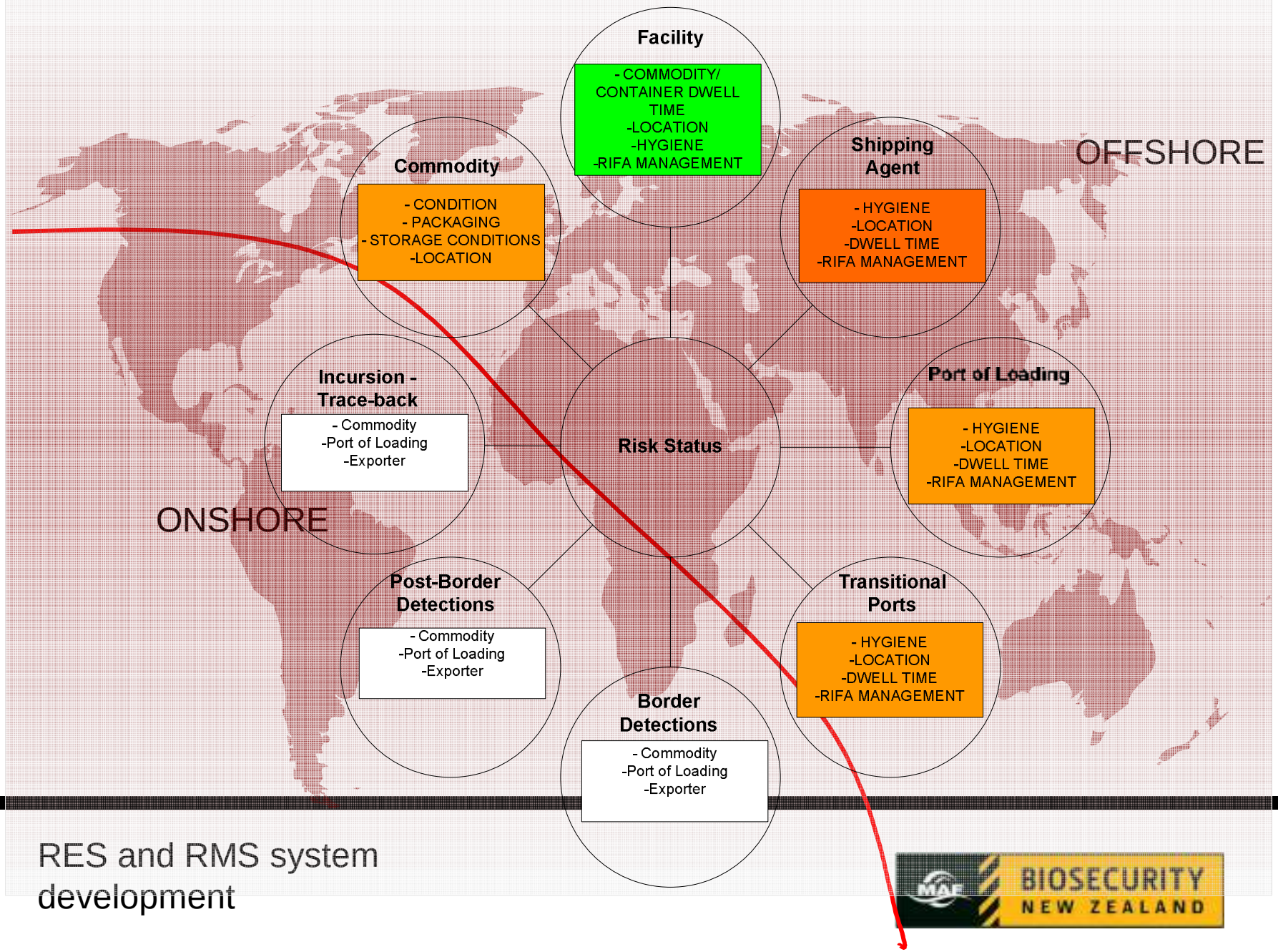
- **Research partner sought to study sea container based exports from southeastern USA to New Zealand**

Key Findings – Stage 1

- **79-85% of commodities known as RIFA vectors not assessed or in MAF Release Assessment or classified as low to med risk.**
- **Risk assessments for RIFA need to be site/operationally/environmentally based**
- **Not based on commodity type alone**
- **<u>Any</u> commodity/packaging/container is a risk if it has originated from a high risk site**

Risk Evaluation System

- Site and commodity based risk evaluations
- Lack of parametric data
- Rank-order scores assigned used to develop prototype
- Geographic location relative to known RIFA distribution
- RES score - site based on Risk factors



RES and RMS system development

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Key findings - Stage 1

- **RES – questionnaire focussing on commodity supply chain environment**
  - Is the exporter in a RIFA quarantine area?
  - Is there RIFA control or no control?
  - Is the commodity a risky one?
  - What is the storage infrastructure?
  - How long is the storage periods?

RES – Risk Factors

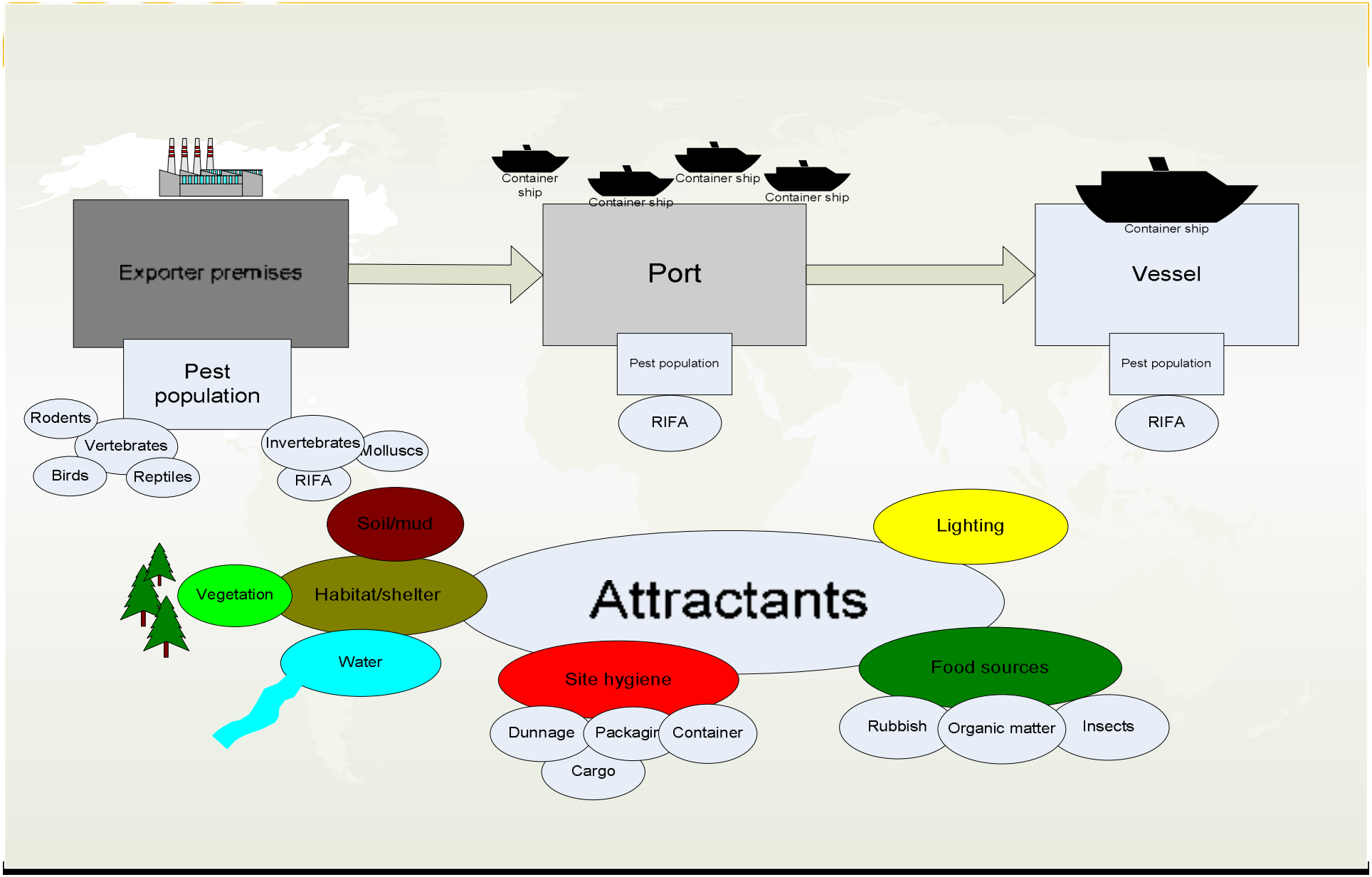
- **The commodity**
  - What it is
  - Where it came from
  - How its packed
- **The exporters site**
  - Likelihood of infestation
  - How containers are handled
  - Dwell time
- **The agent's site**
  - Likelihood of infestation
  - How containers are handled
  - Dwell time
- **The port**
  - Likelihood of infestation
  - How containers are handled
  - Dwell time

Some commodities/packaging are higher risk than others

Where is the nearest RIFA?
Commodity/container storage
Site hygiene

Are containers stored on trailers?

Are RIFA populations managed at the port?



Hitch hiker environment

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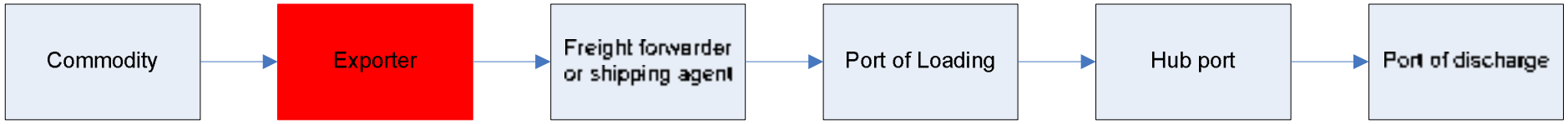
RES



Exporter = commodity + container

Exporter = easiest site to manage risk

Potential to manage risk here to cover subsequent sites

Offshore port access issues – know there are resident nests there.

RES – low risk sites

1 = very clean and tidy, no overgrown areas, no neglected areas, no rubbish piles,

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RES – High Risk sites

5 = very untidy, discarded packing material, broken machinery, ample ant habitat

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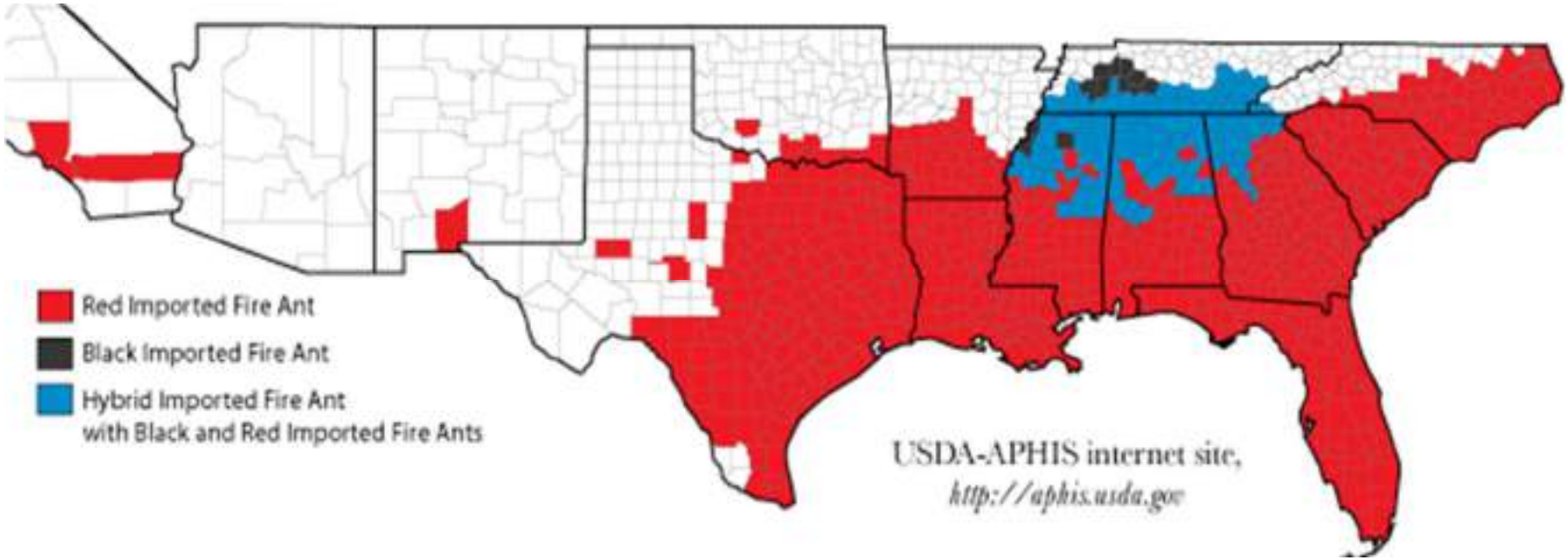
RES - Three Simple Questions

1. Is Exporter Site or Commodity Origin in RIFA-infested Area?



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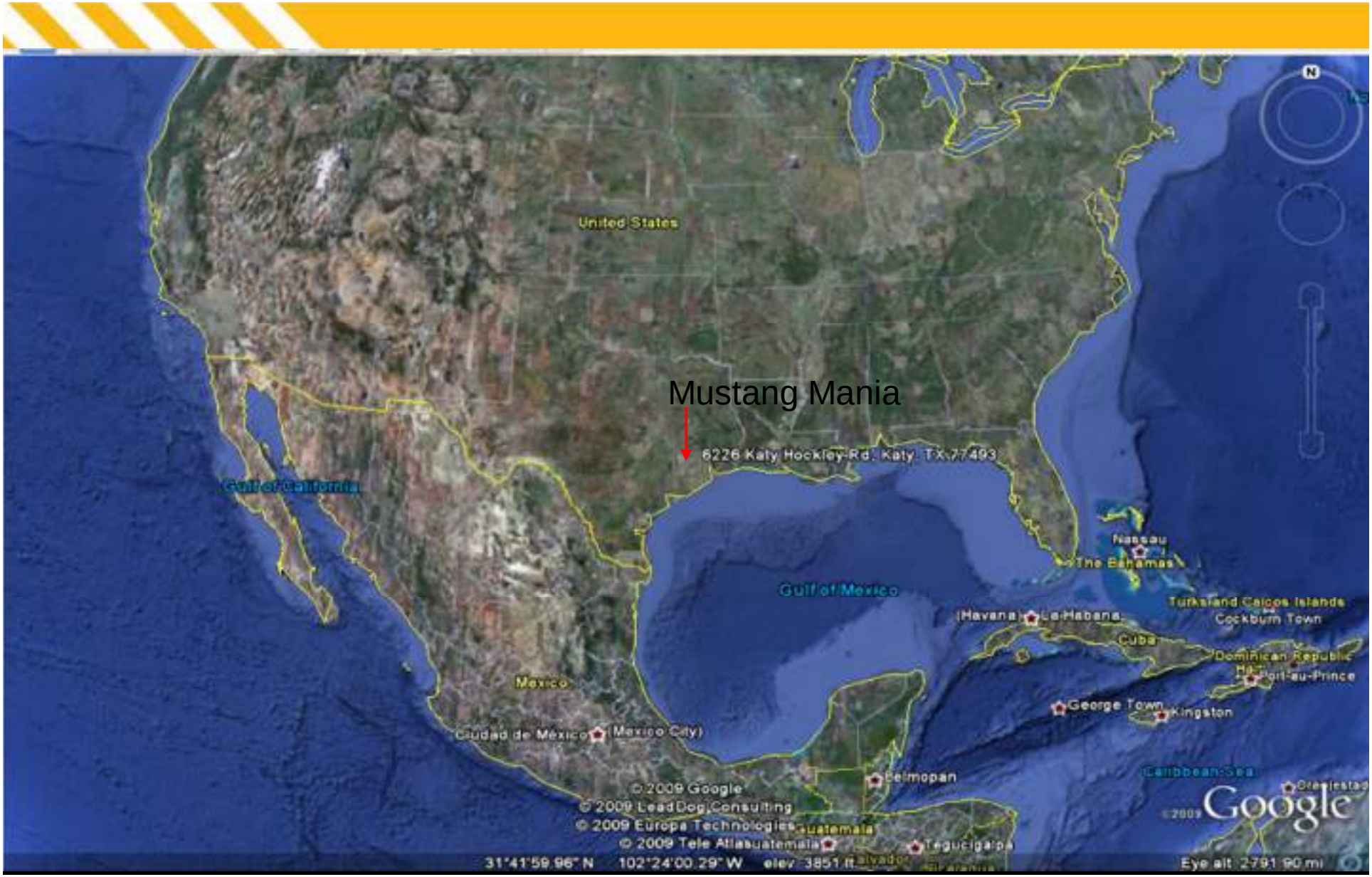

RES – Case Study: Mustang Mania

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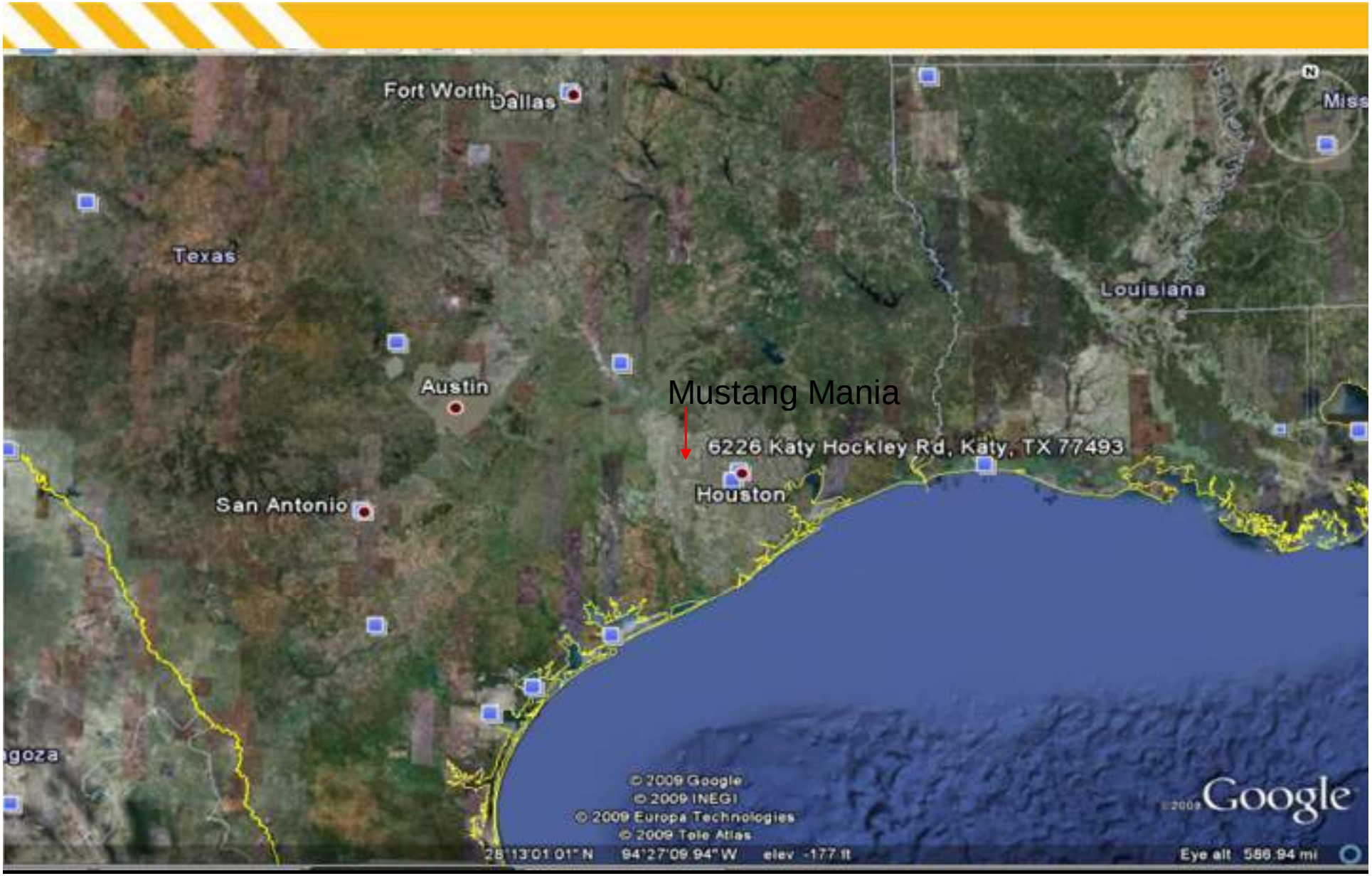

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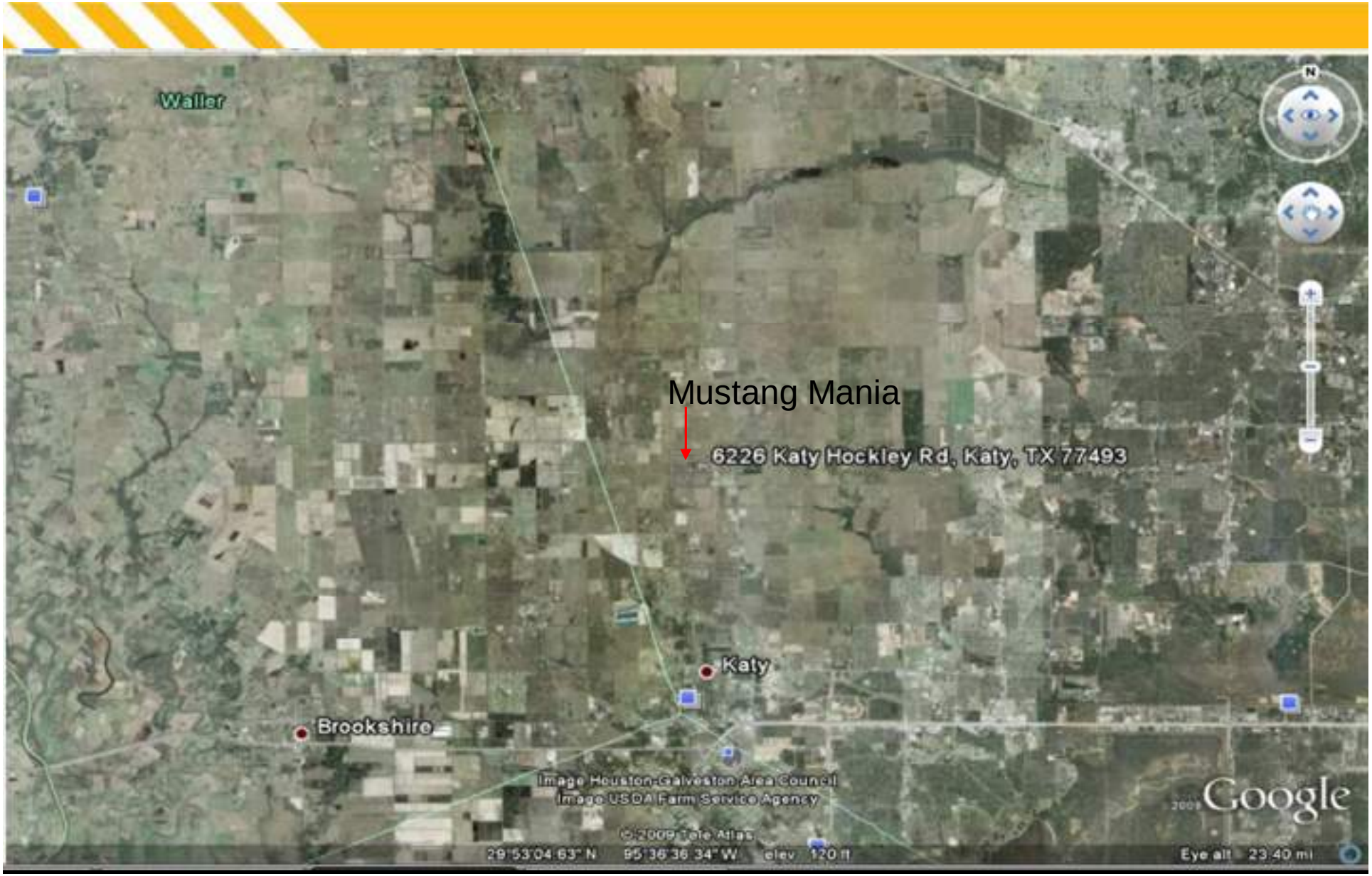

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