

INTERNAL MOBILE CHARADRIIFORMES SHOREBIRDS IN NEW ZEALAND: A REVIEW OF THEIR SEASONAL MOVEMENTS AND THREATS



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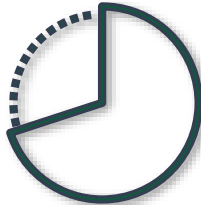
Wildlife
Management
International



Department of
Conservation
Te Papa Atawhai



INTRODUCTION



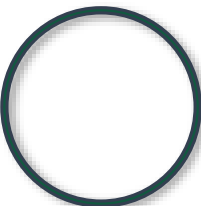
CURRENT KNOWLEDGE



MOVEMENTS



THREATS



RESEARCH PRIORITIES

INTRODUCTION

Aims of the review:

- 1 Summarise known **seasonal movements**
- 2 Summarise known **threats** on their flyways and wintering grounds
- 3 Review what aspects from the above need **further research**

Nationally Vulnerable

Migratory



Nationally Critical

Migratory/Dispersal



At Risk: Declining

Migratory



At Risk: Recovering

Sedentary/Dispersive





Nationally Vulnerable

Migratory

At Risk: Recovering

Sedentary/Dispersive



A seabird, possibly a booby, is shown in flight against a cloudy sky. The bird has a reddish-brown breast and belly, a white head and neck, and large white wings with dark tips. It is captured in a dynamic pose with its wings spread wide and its tail feathers visible.

Nationally Critical

Migratory

A seabird, likely a booby, is shown in profile on a rocky beach. It has a black cap, a white body, and long, grey wings. Its beak is bright orange and is open. The bird is standing on dark sand and small rocks. In the background, there are larger grey rocks and a body of blue water.

Nationally Endangered

Dispersive

A white seabird, likely a booby, is shown in profile, facing right. It has a bright red eye and a long, dark, hooked beak that is open. Its wings are white with black tips. The bird is standing on a nest made of dry twigs and sticks, which is situated among smooth, grey and brown rocks. In the background, other similar birds are visible but out of focus.

Nationally Critical

Dispersive

Nationally Critical

Dispersive



Not Threatened

Migratory/Dispersive



Nationally Vulnerable

Dispersive





At Risk: Declining

Migratory/Dispersive

Naturally Uncommon

Dispersive



At Risk: Declining

Dispersive



Species Name	Threat classification (Robertson et al. 2017)	Scale of movements	Type of movement
E N D E M I C			
Wrybill/Ngutuparore	Nationally Vulnerable	National	Migratory
Black stilt/Kāki	Nationally Critical	National/Regional	Migratory/Dispersive
South Island pied oystercatcher/Tōrea	At Risk: Declining	National	Migratory
Variable oystercatcher/Tōrea pango	At Risk: Recovering	Local/Regional	Sedentary/Dispersive
Banded dotterel/Tūturiwhatu	Nationally Vulnerable	National/Trans-Tasman	Migratory
Northern NZ dotterel/Tūturiwhatu	At Risk: Recovering	Regional	Sedentary/Dispersive
Southern NZ dotterel/Tūturiwhatu	Nationally Critical	Regional	Migratory
Black-fronted tern/Tarapirohe	Nationally Endangered	National	Dispersive
Black-billed gull/Tarāpuka	Nationally Critical	National	Dispersive
Fairy tern/Tara iti	Nationally Critical	Local/Regional	Dispersive
N A T I V E			
Pied stilt/Poaka	Not Threatened	National/Regional	Migratory/Dispersive
Caspian tern/Taranui	Nationally Vulnerable	National	Dispersive
White-fronted tern/Tara	At Risk: Declining	National/Trans-Tasman	Migratory/Dispersive
Black-fronted dotterel	Naturally Uncommon	Regional	Dispersive
Red-billed gull/Tarāpunga	At Risk: Declining	National	Dispersive

CURRENT KNOWLEDGE

MOVEMENTS



Sedentary



Dispersive



Migratory

CURRENT KNOWLEDGE

MOVEMENTS

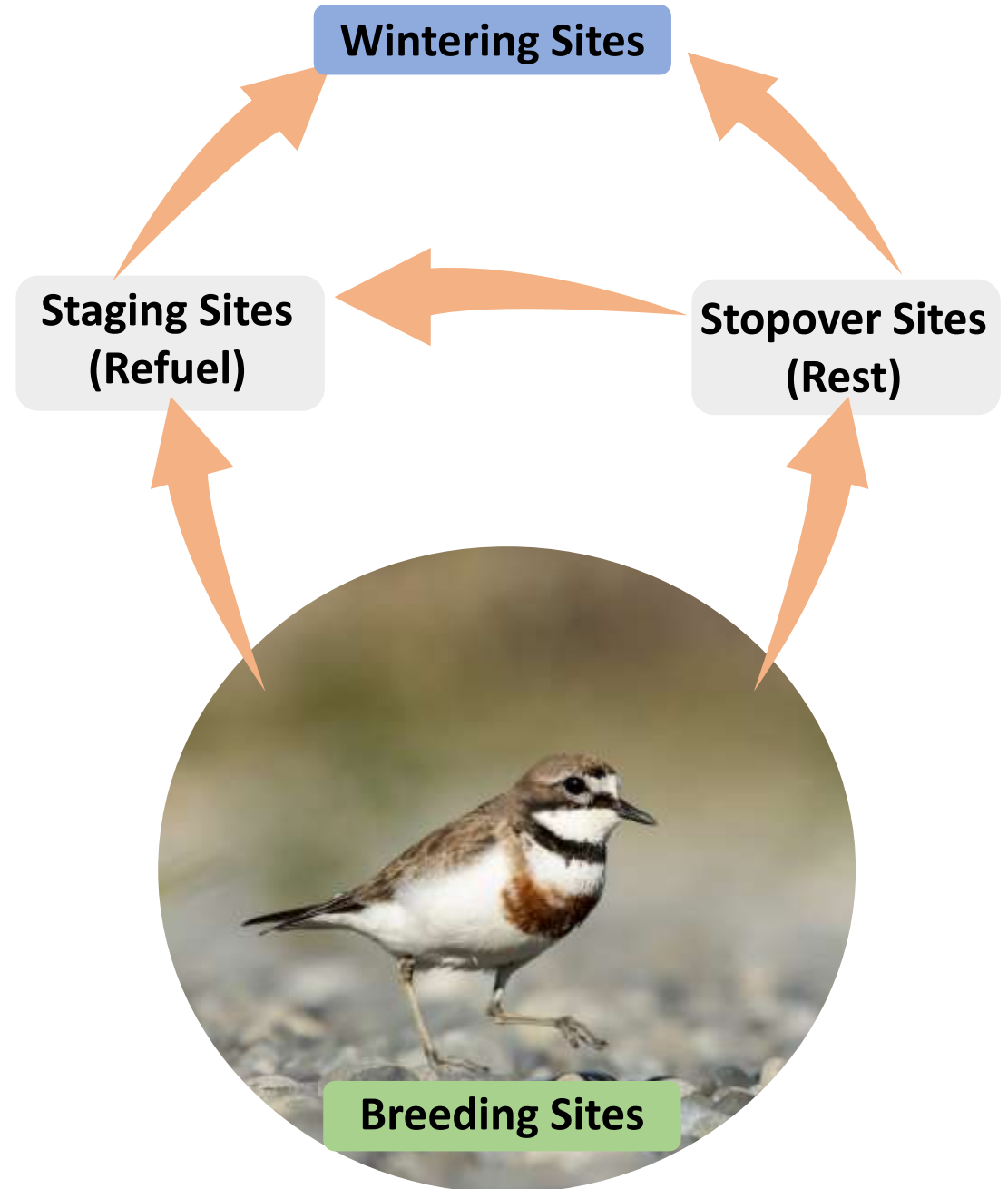


“Distinct lack of extensive research on endemic shorebird species movements through the year in New Zealand”

CURRENT KNOWLEDGE

MOVEMENTS

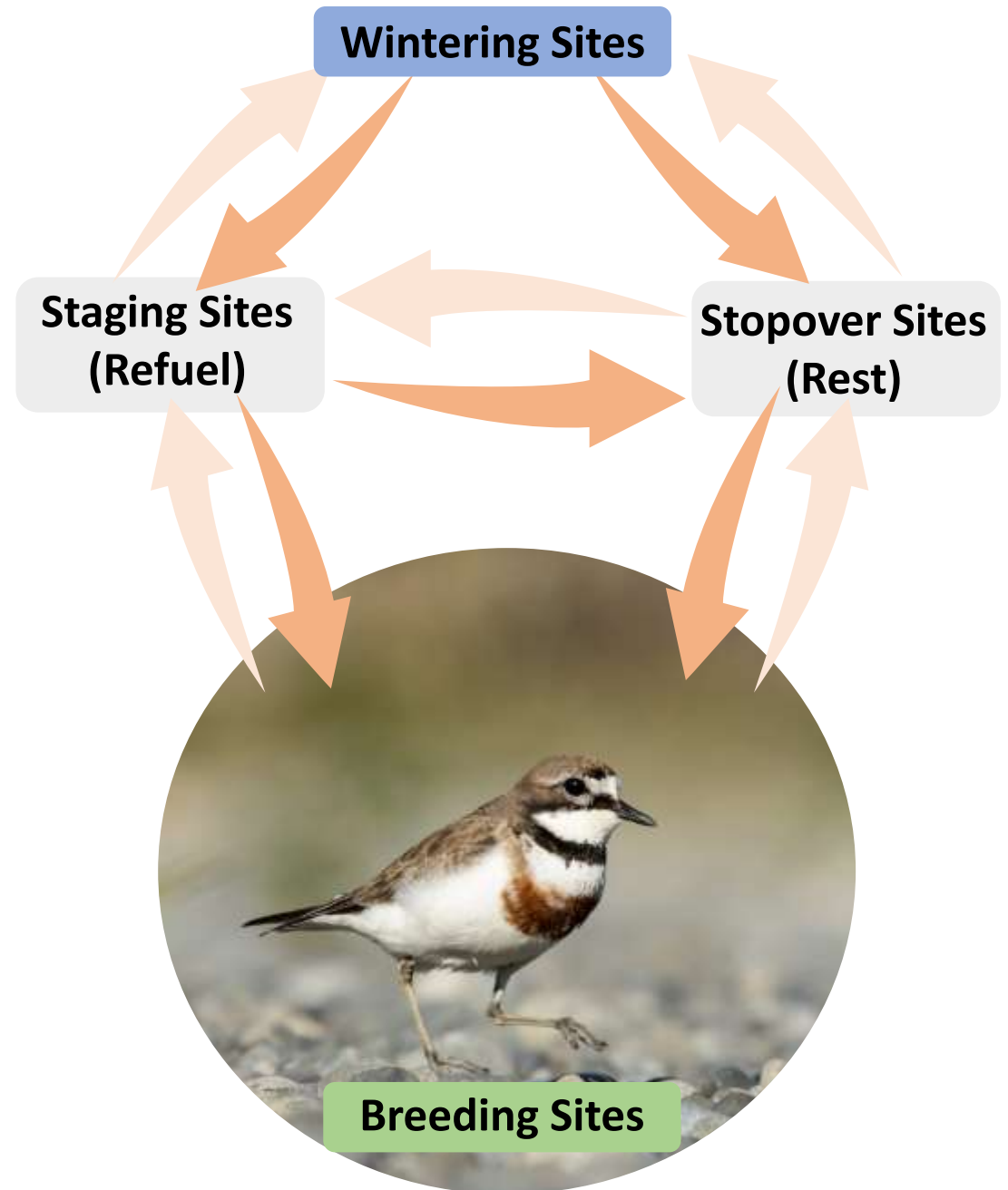
Why is this so important?



CURRENT KNOWLEDGE

MOVEMENTS

Why is this so important?



CURRENT KNOWLEDGE

MOVEMENTS



Variable Oystercatcher

Sedentary



CURRENT KNOWLEDGE

MOVEMENTS



Black-billed Gull

Dispersive

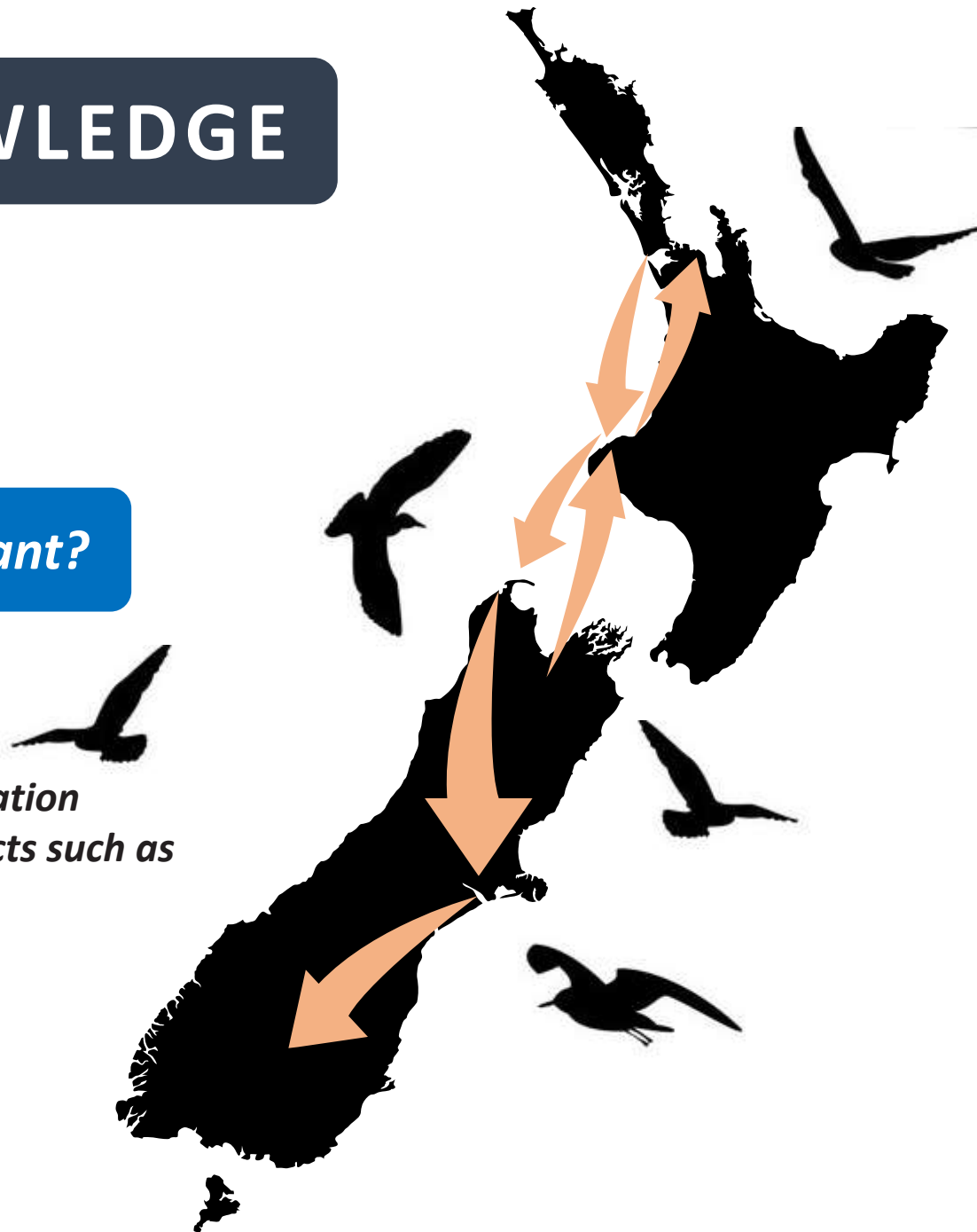


CURRENT KNOWLEDGE

MOVEMENTS

Why is this so important?

Essential for assessing population declines resulting from impacts such as habitat loss



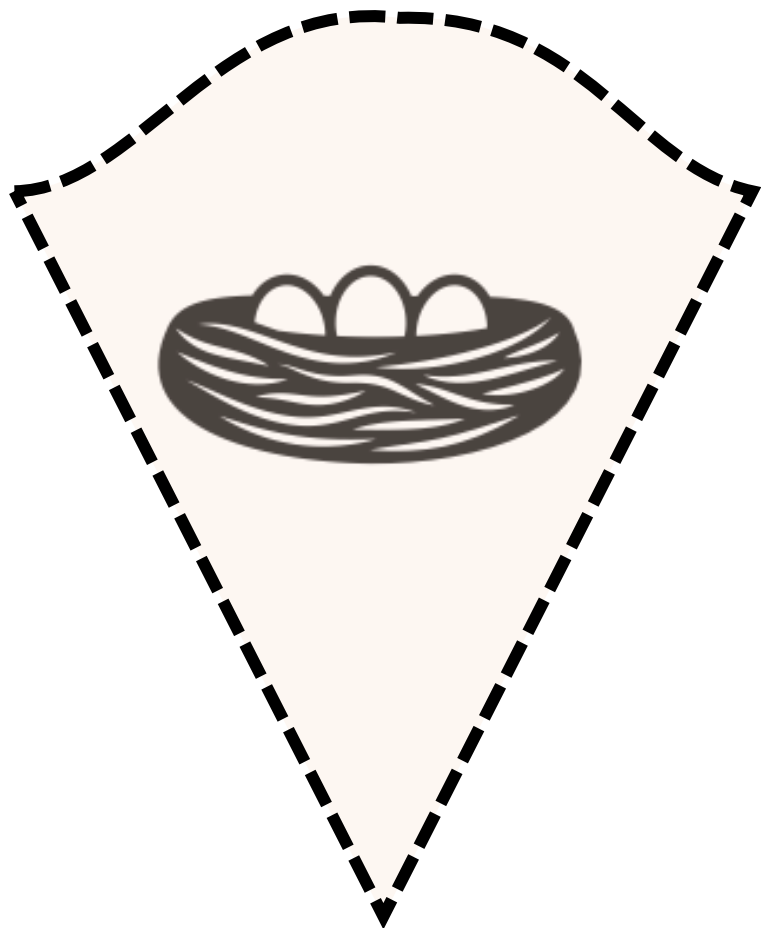
CURRENT KNOWLEDGE

THREATS



CURRENT KNOWLEDGE

THREATS



CONSERVATION FOCUS
(TO DATE)

CURRENT KNOWLEDGE

THREATS



“Little work on identifying or managing threats on flyways and wintering grounds, where shorebirds spend >50% of their lives”

THREATS

1 – Invasive Species

2 – Human Activities

3 – Landuse

4 – Resource Extraction

5 – Energy production + distribution

6 – Pollution

7 – Natural Events

8 – Climate Change

THREATS

1 – Invasive Species

Mammalian Predators

Weed Encroachment

Marine Organisms

THREATS

1 – Invasive Species

Mammalian Predators



THREATS

1 – Invasive Species

Weed Encroachment

Marine Organisms



THREATS

2 – Human Activities

Human Presence

Vehicles

Pets

Illegal Hunting/Persecution

Recreational Fishing

Conservation Activities



© Andrew Crossland



THREATS

2 – Human Activities

Human Presence

Vehicles

Pets

Illegal Hunting/Persecution

Recreational Fishing

Conservation Activities



THREATS

3 – Landuse

Wetland Reclamation

Flood Control Measures

Coastal Development

Agriculture

Plantation Forestry



THREATS

4 – Resource Extraction

Sand Mining

Gravel Extraction

Commercial Fishing

Aquaculture



THREATS

5 – Energy Production + Distribution

Wind Farms

Transmission Lines

Hydro-electric Development



© Colin O'Donnell

THREATS

6 - Pollution

Pesticides

Air Pollution

Water Pollution

Noise Pollution

Plastic Pollution

Light Pollution



THREATS

6 - Pollution

Oil spills

Electromagnetic Pollution

THREATS

7 – Natural Events

Weather Events

Earth Movements

Disease

Genetic Swamping



THREATS

7 – Natural Events

Weather Events

Earth Movements

Disease

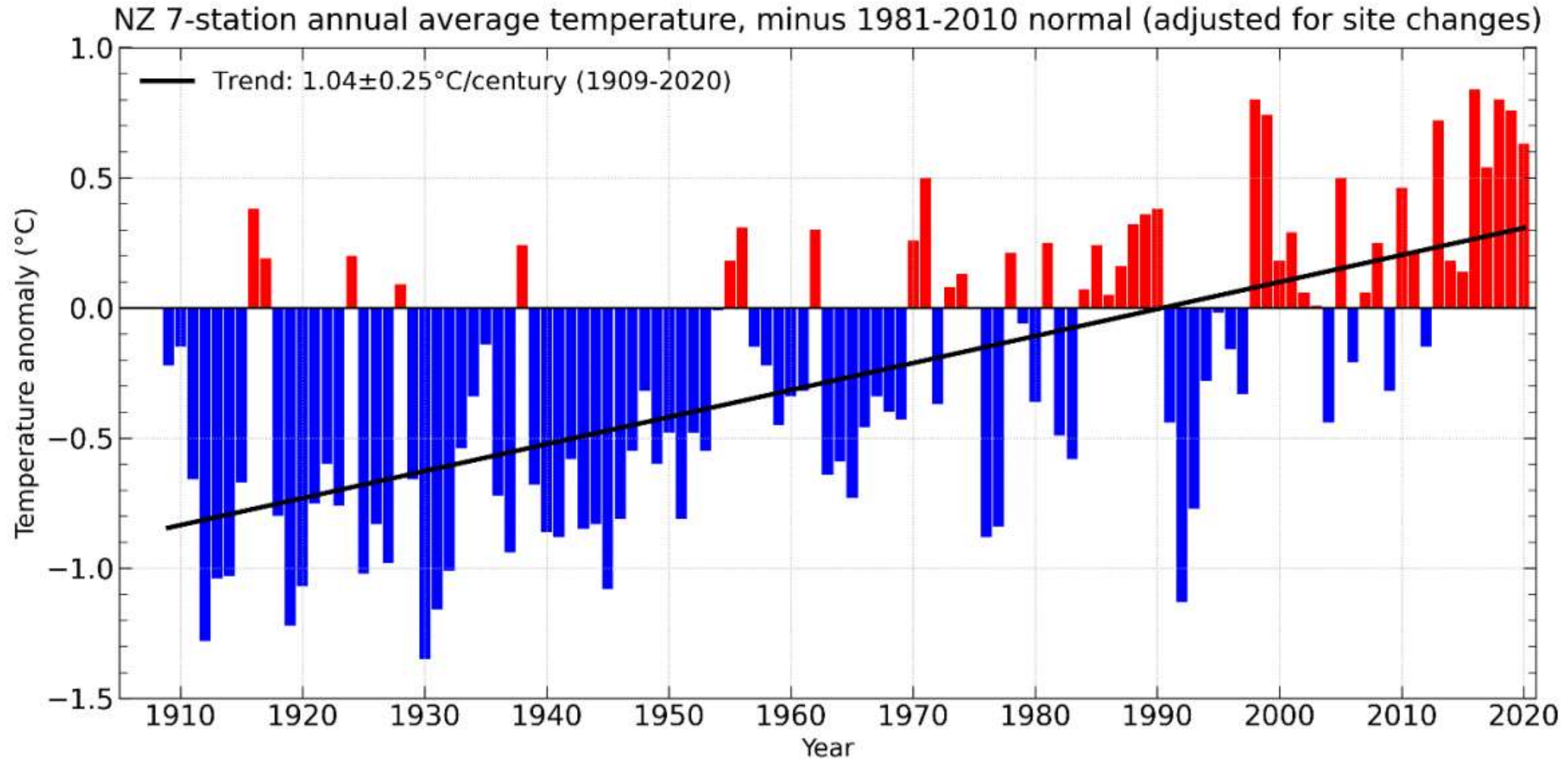
Genetic Swamping



© Rachel Hufton

THREATS

8 – Climate Change



Historical nation-wide annual temperature anomalies (degrees above or below the 1981-2010 normal) from NIWA's seven-station temperature series which begins in 1909. Six of the past eight years have been among New Zealand's warmest on record.

THREATS

Invasive Species

Human Activities

Landuse

Climate Change

Pollution

Resource Extraction

Energy P+D

Natural Events

THREATS

Invasive Species

Human Activities

Landuse

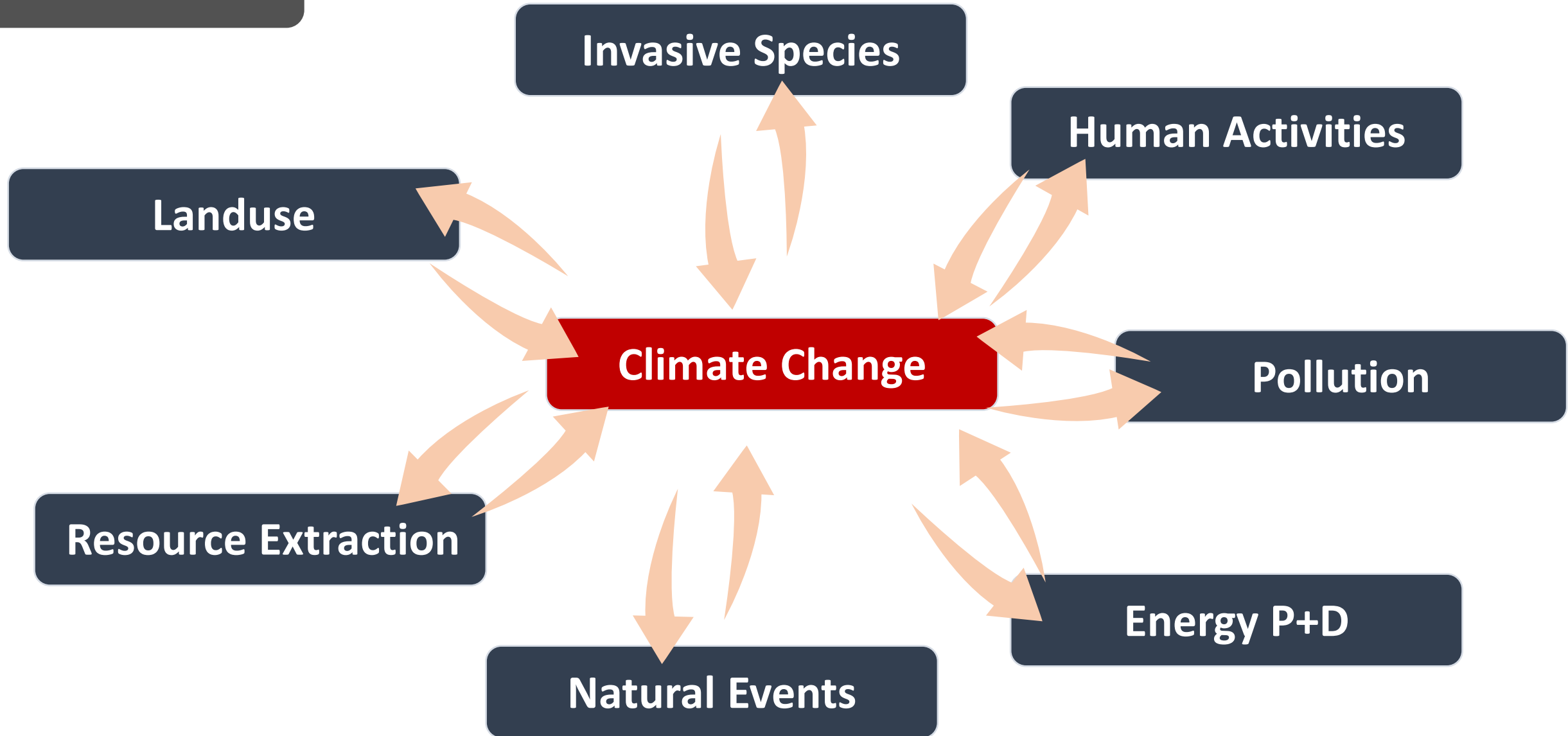
Climate Change

Pollution

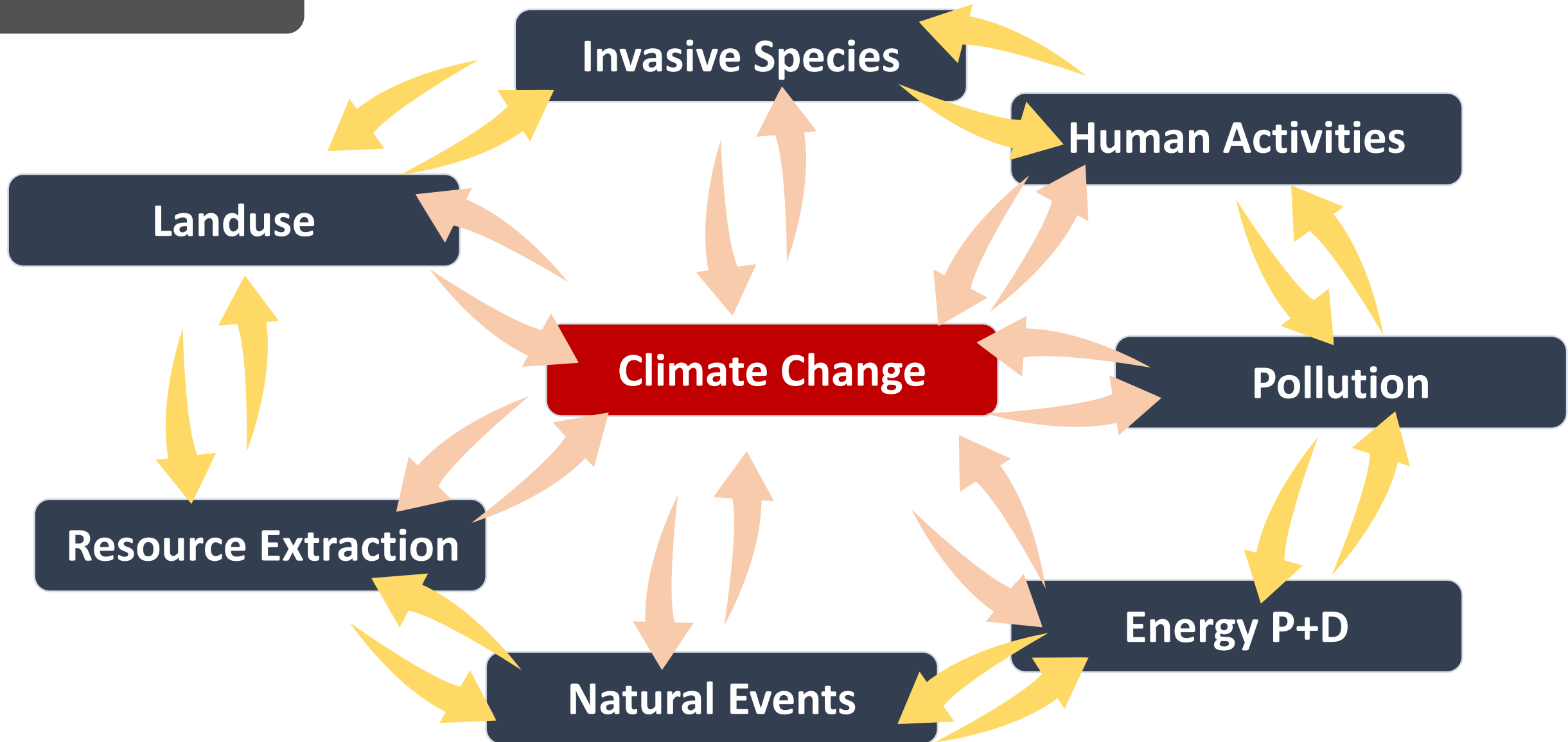
Resource Extraction

Energy P+D

Natural Events



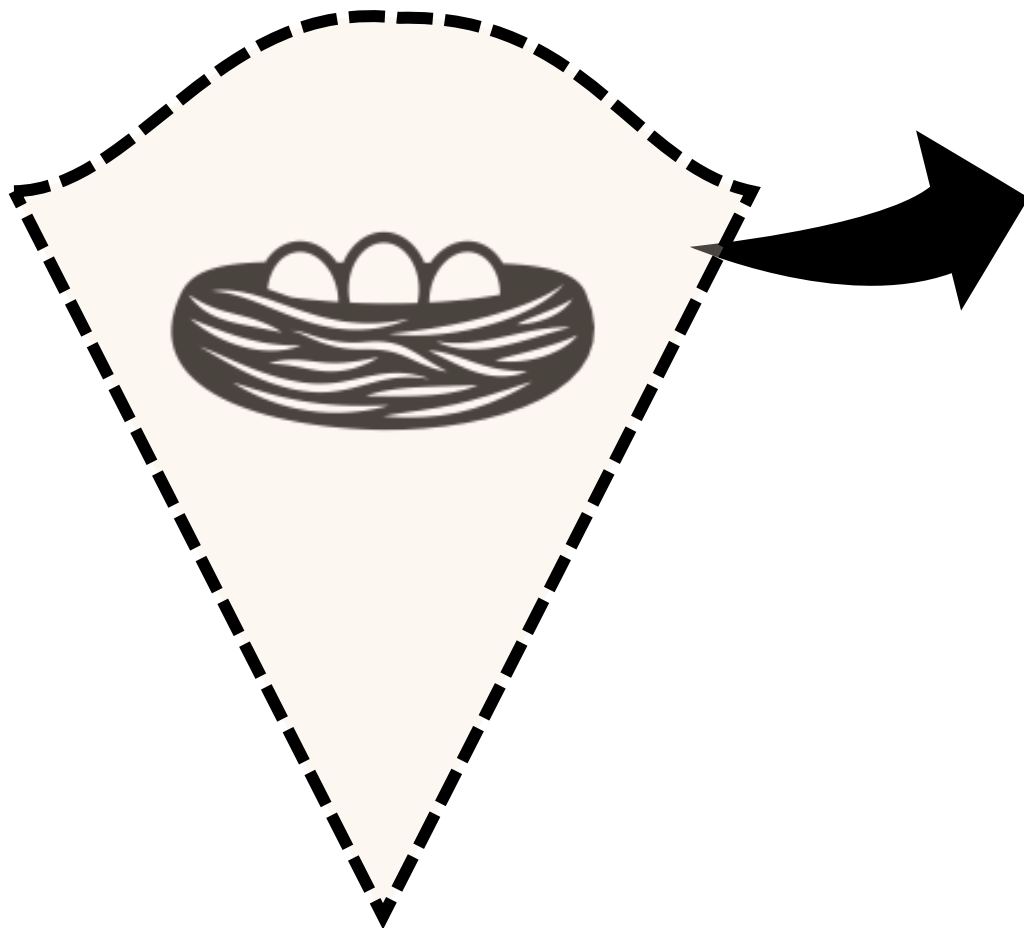
THREATS



RESEARCH PRIORITIES



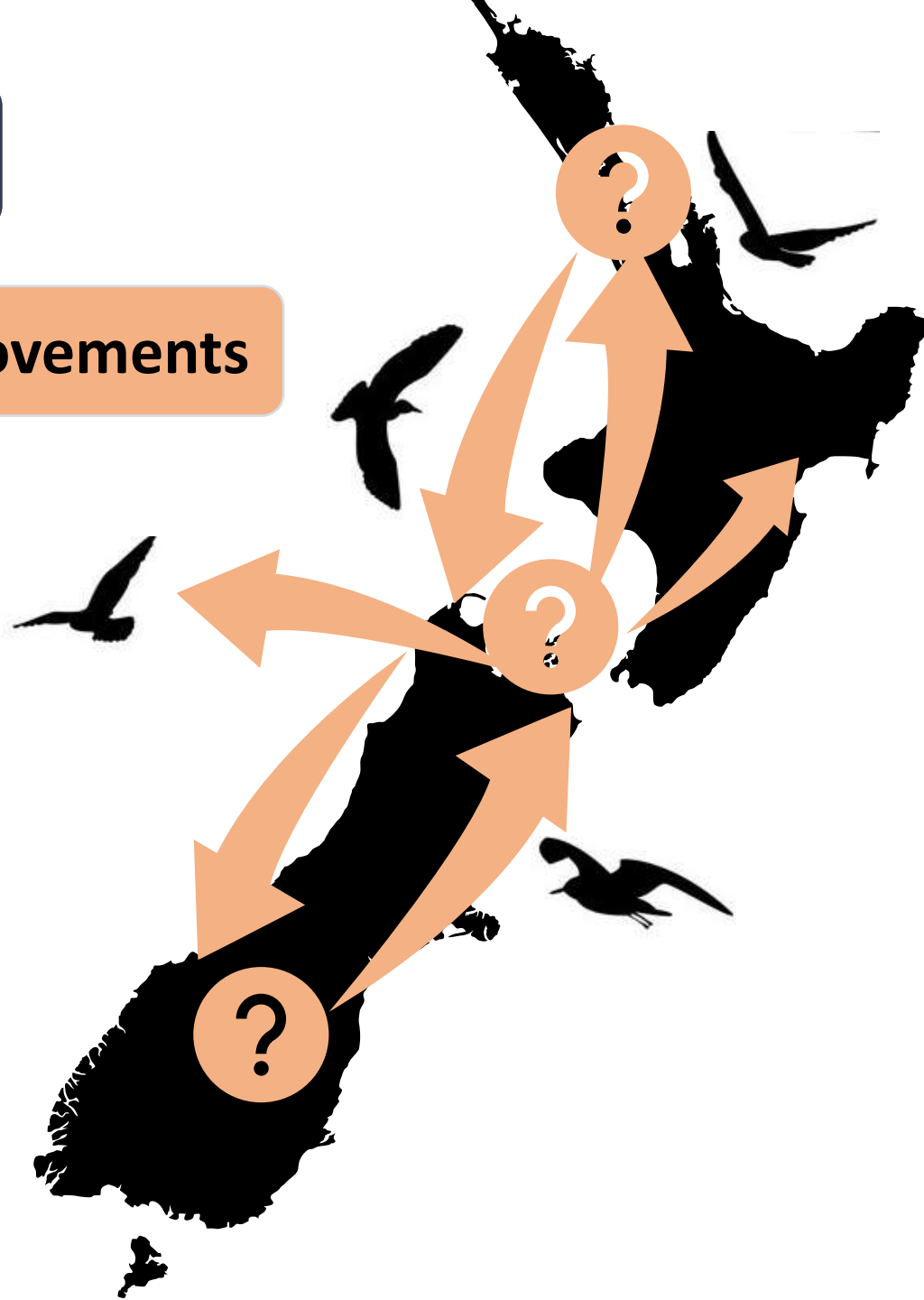
RESEARCH PRIORITIES



CONSERVATION FOCUS (TO DATE)

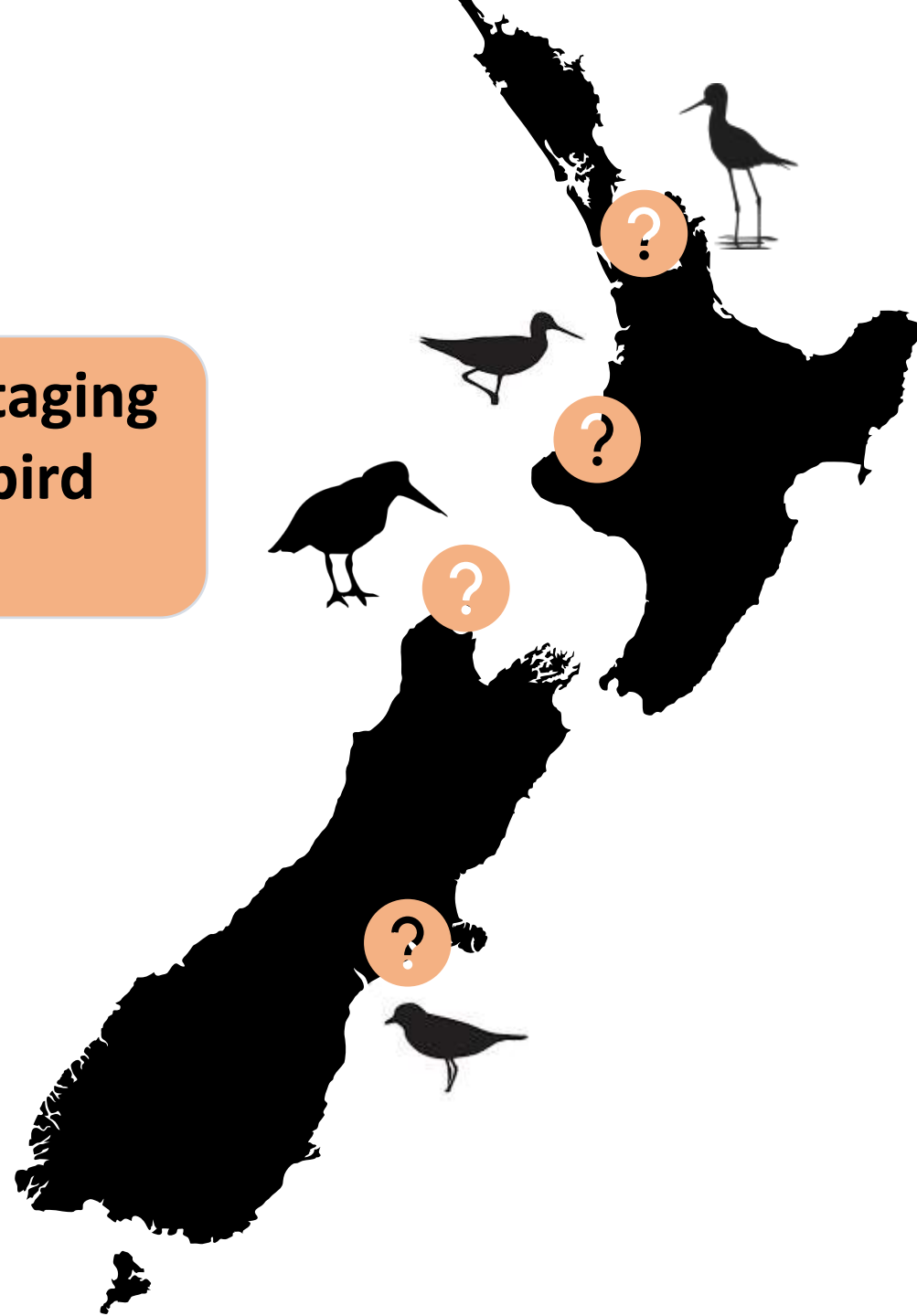
RESEARCH PRIORITIES

Understanding shorebird movements



RESEARCH PRIORITIES

**Understanding importance of staging
and stopover points to shorebird
flyways**



RESEARCH PRIORITIES

Importance of threats along shorebird
flyways and on wintering grounds



RESEARCH PRIORITIES

Impacts of climate change on shorebirds in New Zealand



ACKNOWLEDGEMENTS



Department of
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Colin O'Donnell

Mike Bell

QUESTIONS

