

Kiwi Rescue Social Science and Economics

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Manaaki Whenua Landcare Research



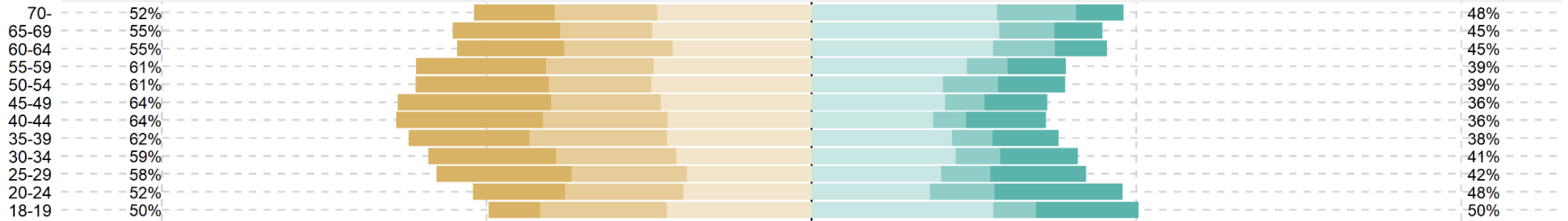
Novel Pest Control Survey



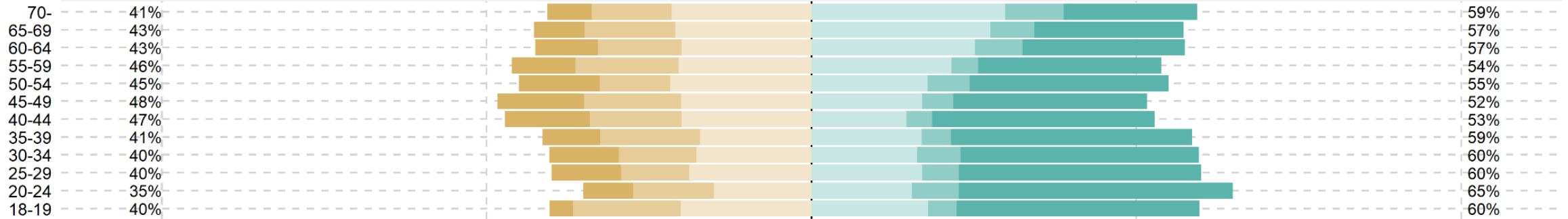
National Survey Administered through DOC/NSC

Small component – Choice Experiment.

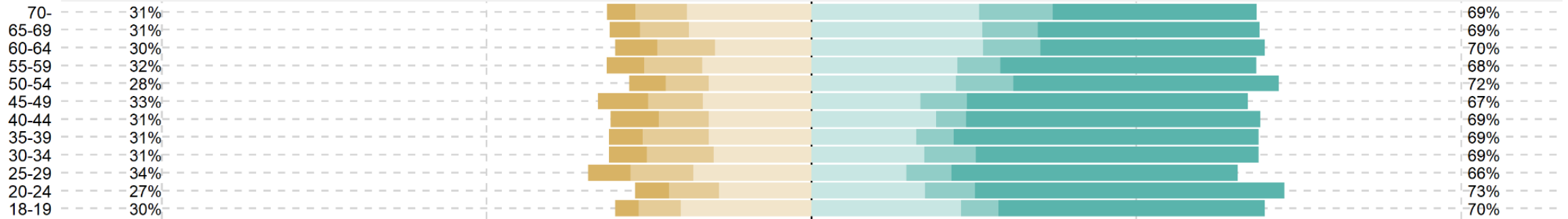
07. Genetic editing to produce mostly male offspring



08. Gene drive



09. Trojan female



100

50

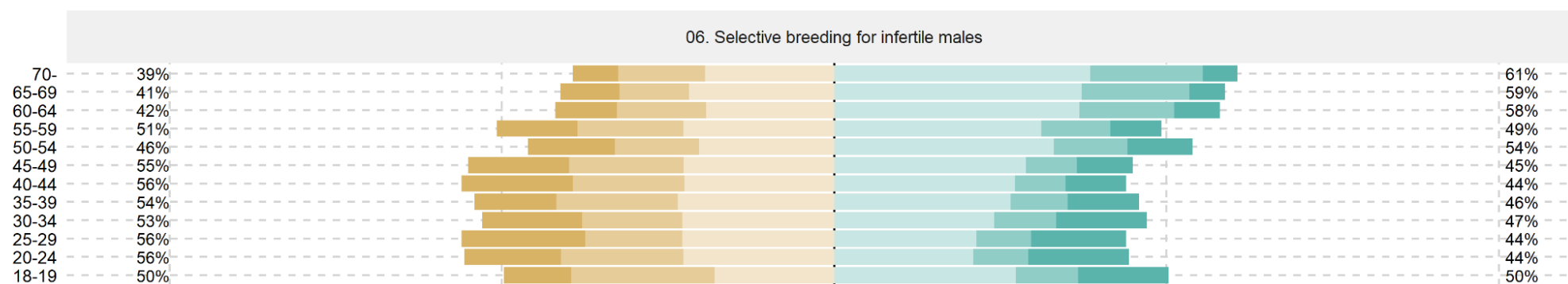
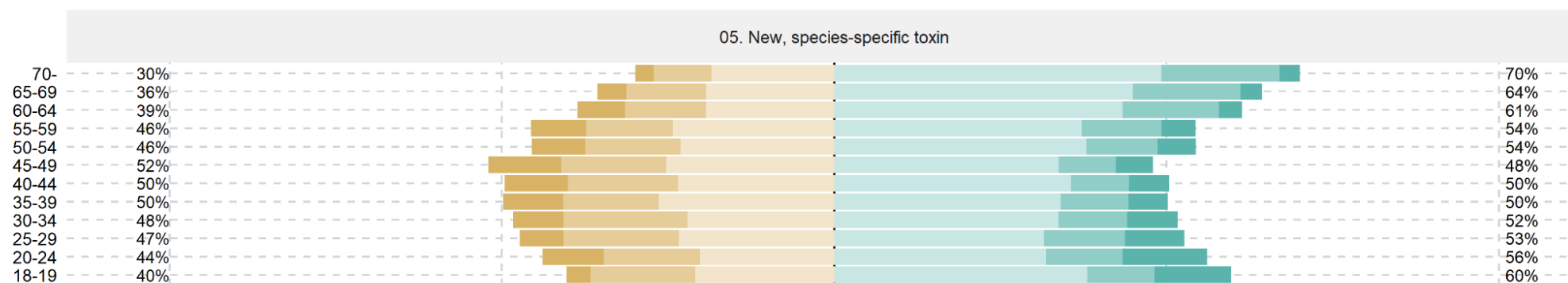
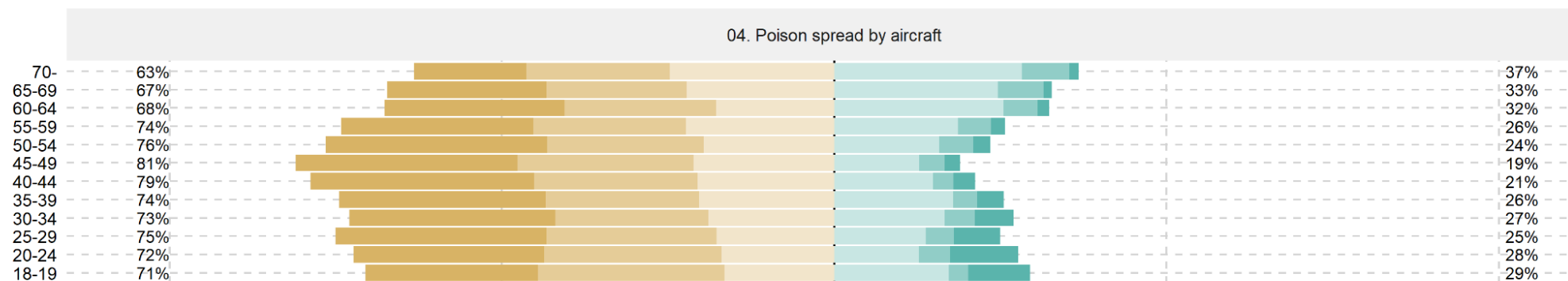
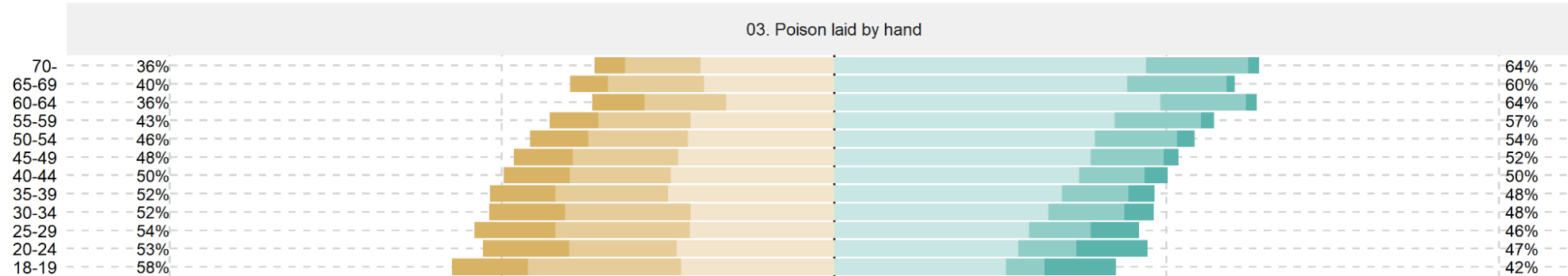
0

50

100

Percentage

■ Never use
 ■ Use only as a last resort
 ■ Uncomfortable but acceptable under appropriate controls
 ■ Comfortable and acceptable under appropriate controls
 ■ No concerns
 ■ Don't know





In the following questions, you will be asked choose between two different options. The set of circumstances for each option will vary. They will include:

The new pest control technique	<ul style="list-style-type: none">• New Toxin,• Trojan female• Gene Drive
The animal the new technique would control	<ul style="list-style-type: none">• Rats,• Wasps• Stoats
How the technique will be delivered	<ul style="list-style-type: none">• On the ground• From the air
What happens to the animal who interacts with the new method	<ul style="list-style-type: none">• Infertility• Death

Preliminary results



Gene drives are viewed negatively compared to trojan females and new, species-specific toxins

Death of pests is not a concern and in fact preferred over seemingly humane impacts such as gradual decrease of pest populations due to infertility

Messaging RCT

Implement a randomised control trial (RCT) to gauge the effectiveness of dog control messaging.

What kind of messages motivate dog owners?

Design a “quasi-experimental” survey.

- Randomly assign dog owners to treatment (messages) or control (no message) groups.



Dog attacks are a concern for our community, especially in areas with children, elderly residents, and vulnerable wildlife.

Knowing where dogs are helps prevent attacks and improves council planning efforts.

**Please register your dog(s)
using the enclosed form.**



You live near an area
inhabited by kiwi.

Knowing the number of nearby
dogs will help to plan kiwi
protection activities.

**Please register your dog(s)
using the enclosed form to
help with kiwi protection.**



**Please register your dog(s)
using the enclosed form.**

Nearly 8 out of 10 dogs in
the Far North District whose
owners receive this form are
registered before penalties
are applied.



Your dog is loyal to you.

Please register and microchip
it to return the same loyalty.

If lost, your registered and
microchipped dog will be
returned to you much quicker.

**Please register your dog[s]
using the enclosed form.**



RCT



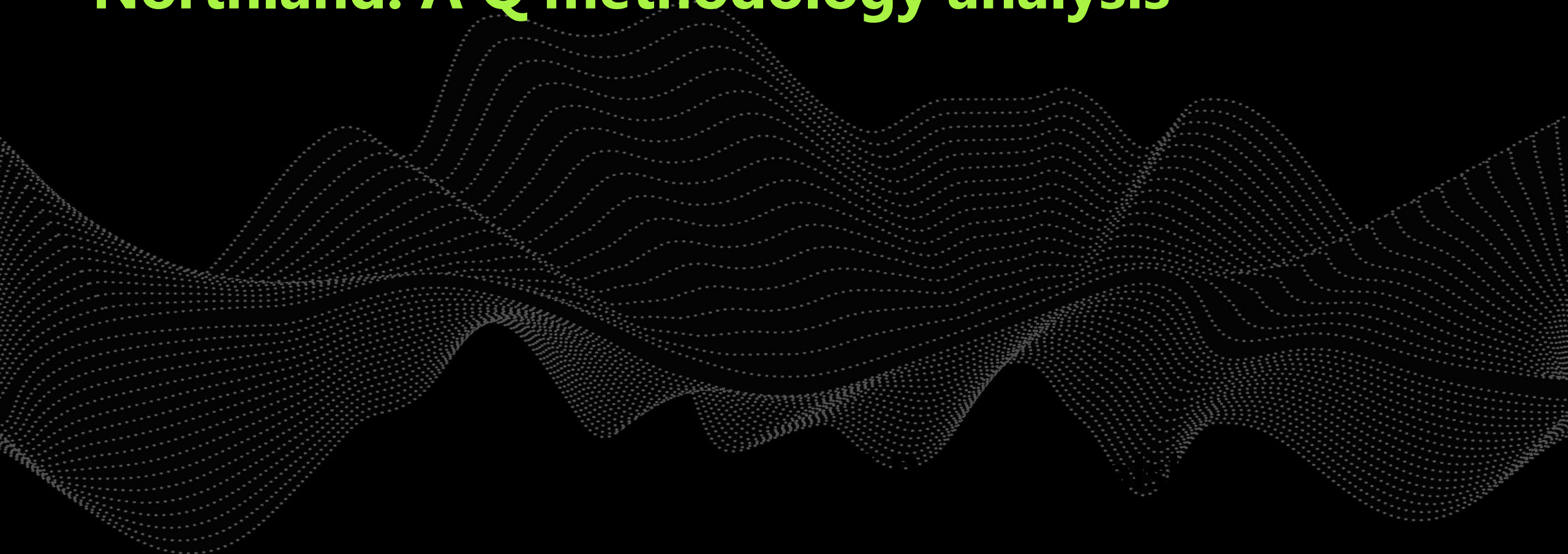
Messages went out at the end of July

Currently waiting on the results

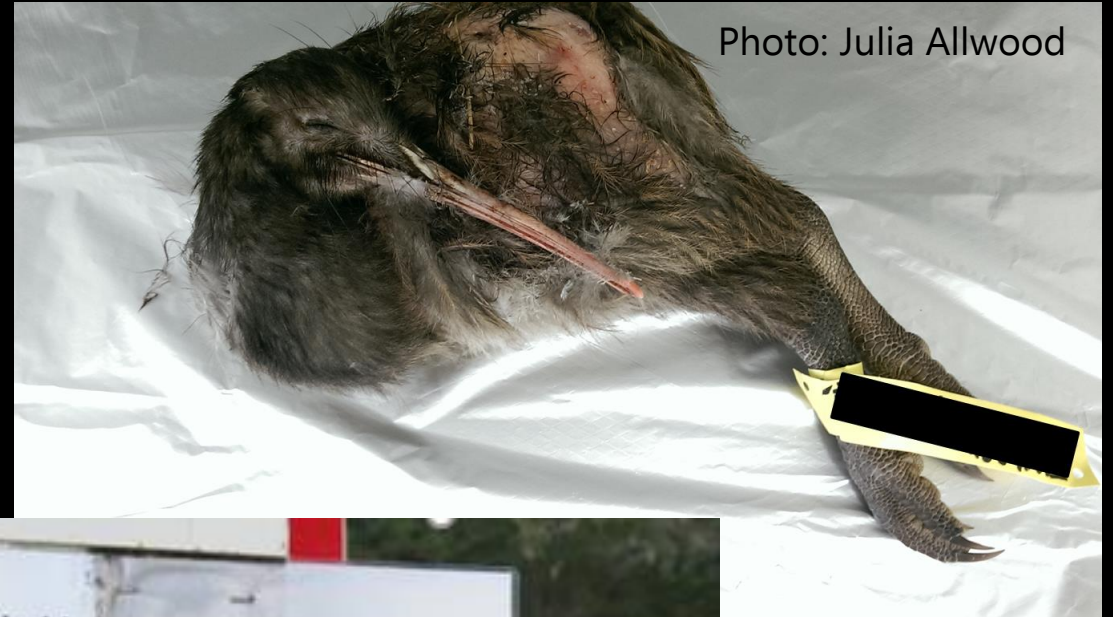


Manaaki Whenua
Landcare Research

Caring for kiwi and managing dogs in Northland: A Q methodology analysis



Dog attacks kill 7 kiwi in Kerikeri



Another kiwi lost to dogs at Waitangi

Dog owners warned after kiwi dies



Kiwi death in Bay of Islands a 'wake up call'
4/7/18



Background/Context

- Complex dog/kiwi interactions in Northland
- Stronghold for the North Island Brown Kiwi
 - Kiwi habitat
 - Dog behaviour
 - Working dogs, Pets (local and visiting), Pig hunting dogs, Communal dogs
- Lots of community involvement to care for kiwi (pest control and conservation)
- Kiwi avoidance (KA) training reduces risks for dogs killing kiwi
- Dog control legislation



Kaeo pig hunting prize-giving, July 2017



Dog Control Legislation

1. Dog Control Act 1996
2. Far North District Council (FNDC) Dog Control Bylaw 2006
 - 2016/2017 new draft Dog control by-law
 - Public push back by dog owners leading to tensions in local communities between dog owners, iwi and conservationists
3. **FNDC Dog Management Policy and Bylaw 2018**
 - Submissions due by 24 September 2018





Objective

To identify and examine the range of viewpoints held on the issue of “dogs preying on kiwis” in the Northland

Research method

- Q Interviews with a range of people with strong views on dogs, pig hunting, kiwi, pest control, conservation



Whangarei Heads kiwi release March 2018



- 27 participants sorted 53 statements relating to dogs and kiwi onto a grid
- 4 Viewpoints identified using factor analysis

Sorting Grid

[illegible]



Viewpoint 1 – Conservation Advocates (n=13)

- 8 dog owners
- Kiwi and other native species highly valued
- Advocates for pest control and monitoring kiwi
- Kiwi should be able to live where they have always lived
- Community buy-in is important for caring for kiwi
- Dogs should be excluded from kiwi habitat unless have a job to do
- Would buy in suburbs cat/dog prohibited
- Need more protection for wildlife and input from iwi



Viewpoint 2 Family centric – dogs with jobs (n=3)

- 22 dogs owned by 3 farmers who are also pig hunters
- Dogs highly valued and trained for their work – utilitarian role
- Strong bond with their dogs - part of family life
- Pig hunting important to feed family/whanau and for recreation
- Opposed to policy on suburbs that prohibit cats/dogs
 - weary of new FNDC by-law
- Don't like government agencies telling them how to control their animals on their land
- Care about kiwi so support pig dogs having ongoing KA training
- Believe dogs and kiwi can co-exist



Viewpoint 3 Dog centric – domestic dogs (n=3)

- 3 dog owners with 11 dogs
- Love all animals but prefer dogs over native species
- Couldn't live without their dogs
- Wouldn't buy a house in a cat/dog free suburb
- Strong distrust of government agencies telling them how to manage their animals on their land
- Disadvantaged by the new FNDC Dog control by-law
- Right to own a dog and need somewhere to exercise their dogs
- Dogs and kiwi should be able to co-exist



Viewpoint 4 – Dog control enforcer (n=3)

- 2 participants don't own dogs and 1 owns 4 working dogs
- Enforcement of the FNDC dog control bylaws to protect kiwi from dogs
- Prosecute people living in suburbs with cat/dog restrictions if break the law
- People don't have a right to own a dog or run free without a lead anywhere
- Russell peninsula could be dog free
- Economic benefits to Northland if kiwi numbers increase



Do kiwi belong in Sanctuaries or do they have a right to live where they have always lived?

Statement 13: Kiwi have a right to live where they have always lived

Viewpoint	Agreement	Quote
1. Conservation advocates	5	<i>Kiwi were here before humans...we have endangered kiwi's lives</i>
2. Family centric – dogs with jobs	-1	<i>Kiwi had to adapt</i>
3. Dog centric – domestic dogs	1	<i>Dogs have more of a right than kiwi – I want kiwi to survive but in protected areas... They are shy and nocturnal and should be left alone.</i>
4. Dog control enforcer	3	<i>I have a high regard for kiwi and they deserve to live in relevant safety and not be killed.</i>



Should kiwi live in sanctuaries or in the wild?

Statement 2: I am **not** very concerned about kiwi because the DOC is protecting kiwi in sanctuaries and the ones in the wild have to fend for themselves

Viewpoint	Disagreement	Quote
1. Conservation advocates	-5	<i>[kiwi] need gene diversity so kiwi need to be in private and public land</i>
2. Family centric – dogs with jobs	-3	<i>It is important to protect kiwi</i>
3. Dog centric – domestic dogs	-2	No relevant quote
4. Dog control enforcer	-2	<i>Kiwi can't escape [from dogs] ...they're a walking hamburger and smell good!</i>



Insights from dog preying on kiwi research

Northland requires a shift in dog ownership culture

- Responsible dog ownership programme/education
- Clear communication/messaging around dogs and kiwi
- Dog control and enforcement legislation
 - Fear of change, distrust in FNDC decision-making, regulations fit for purpose (Gluckman 2017)
 - Social licence needed for new FNDC 2018 Dog management and control bylaw to be passed
- Capacity to care for kiwi - get community engaged by linking to pest control and kiwi releases





Conclusions

- Dog management issue is not specific to kiwi and Northland. Applicable to:
 - to other wildlife, people and livestock
 - other regions in New Zealand
- Q Methodology
 - Insights used to inform dog control policy in FNDC
 - applicable to other environmental issues of concern e.g. kauri dieback, aerial 1080





Acknowledgements

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- Kiwis for Kiwi
- Reconnecting Northland
- DOC
- Workshop participants
- 27 Q sort interviewees
- Manaaki Whenua colleagues



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Reference

Gluckman 2017. <http://www.pmcsa.org.nz/wp-content/uploads/17-08-03-New-life-science-technologies-social-license-and-social-consensus.pdf>