

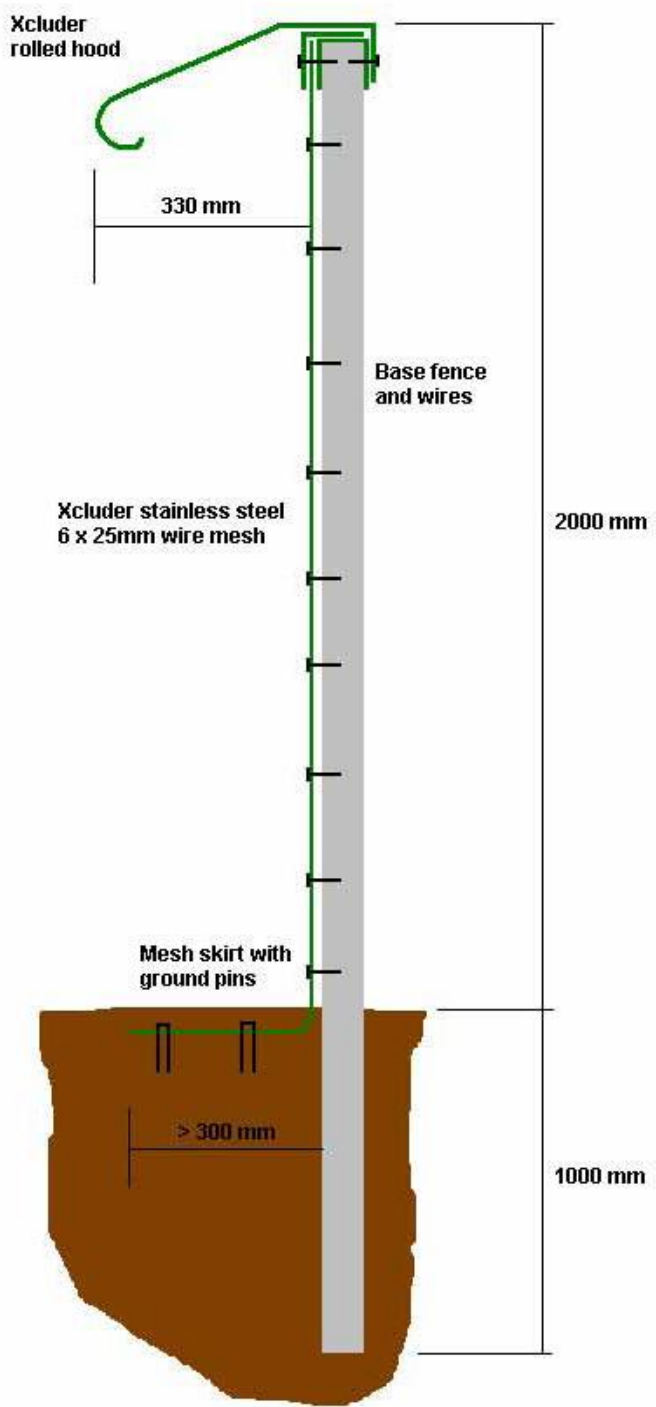
The background of the slide is a photograph of several albatrosses in a grassy field. Two birds in the foreground have their heads tilted back, showing their red-tipped bills. Another bird is visible in the background to the left. A wooden fence runs across the middle ground, and a blue structure is partially visible on the right. The sky is overcast.

Kauai Seabird Fences

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www.pacificrimconservation.org



Kauai Predator Fences

Yellow: under construction
Orange: starting construction
Red: planned

Legend

 25 km

 Feature 1

 KPNWR full fence



Kauai fences summary

Location	Length (ft)	Area (acres)	Funder	Purpose	Status
Nihoku	2025	6	NFWF- mitigation	Translocation	Completed 2014
Pohakea	1000	3	NFWF	Social attraction	Under construction
Honopu	1896	3	NFWF- REPI	Social attraction	Under construction
Kahuamaa	2842	9	KSHCP- mitigation	Social attraction	Under construction
KPNWR	10,500	250	FWS invasive species	In-situ	Starts Fall 2021
Upper Manoa	16896	194	KIUC- mitigation	Social attraction	Permitting
Upper Limahuli	18480	363	KIUC- mitigation	In-situ	Permitting

Kauai Predator Fences

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Honopu final alignment

Write a description for your map.

Honopu

Legend

 Honopu final alignment



Google Earth

Image © 2021 Maxar Technologies

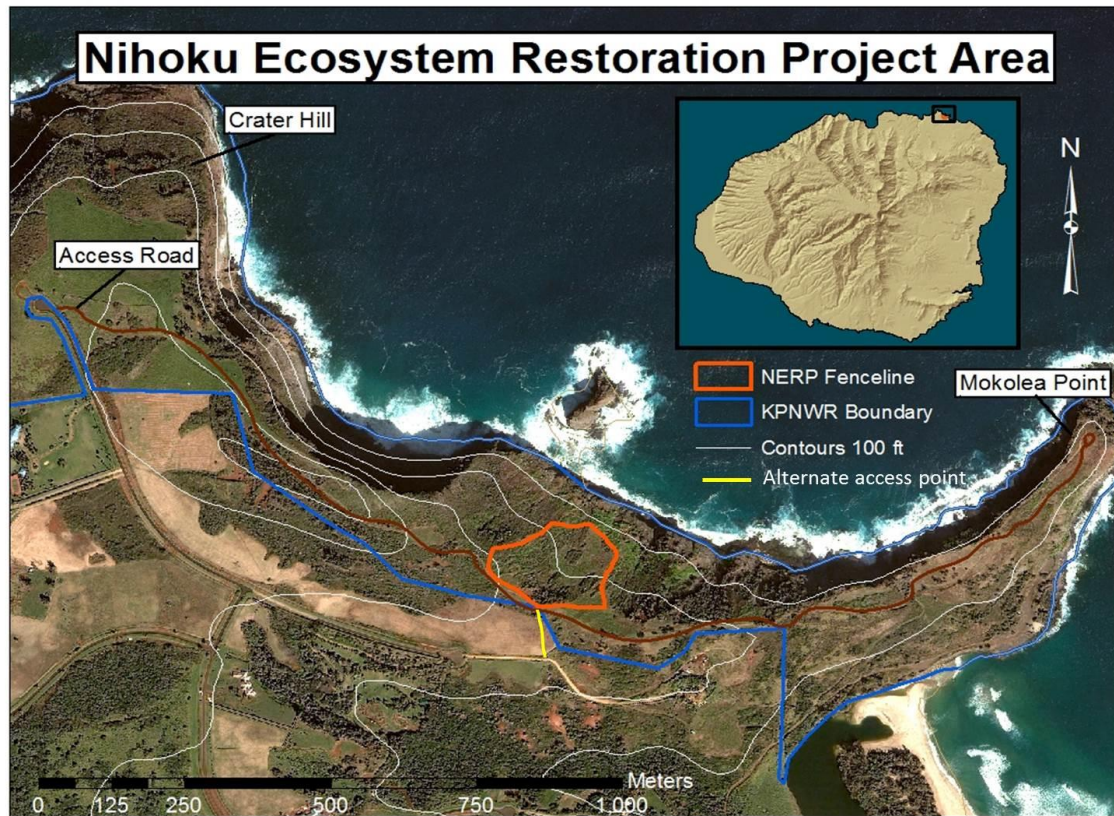


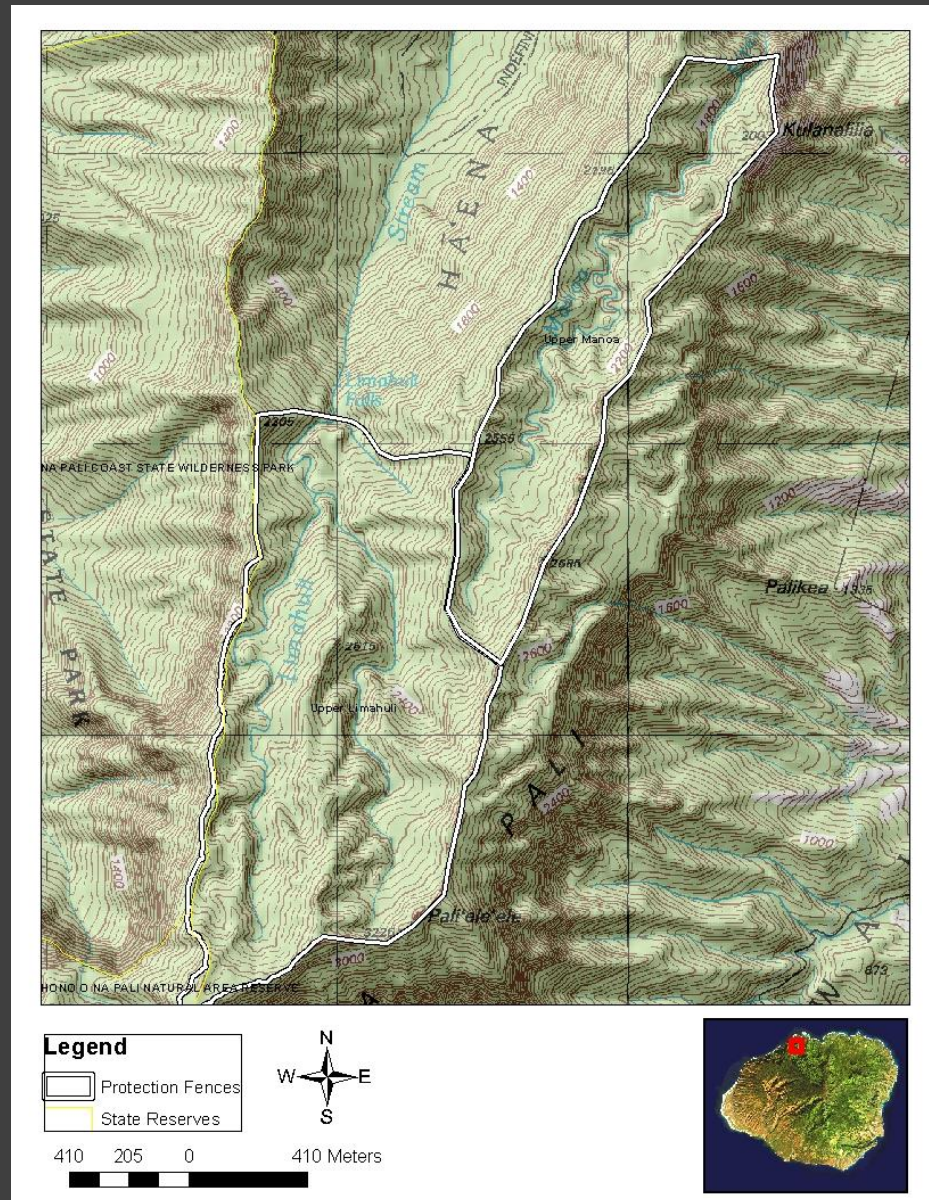
800 ft

Pohakea



Nihoku and KPNWR



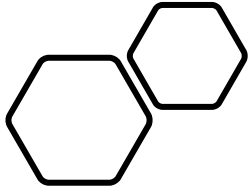


Upper Limahuli and Upper Manoa

Purpose

- **In-situ:** protecting existing colonies. Without existing colonies, there are no sources colonies to draw birds from
- **Social attraction:** creating new colonies by attracting birds from nearby colonies to nest in a new location

****Social attraction (and translocation) are entirely dependent on having protected in-situ colonies to act as sources of birds****

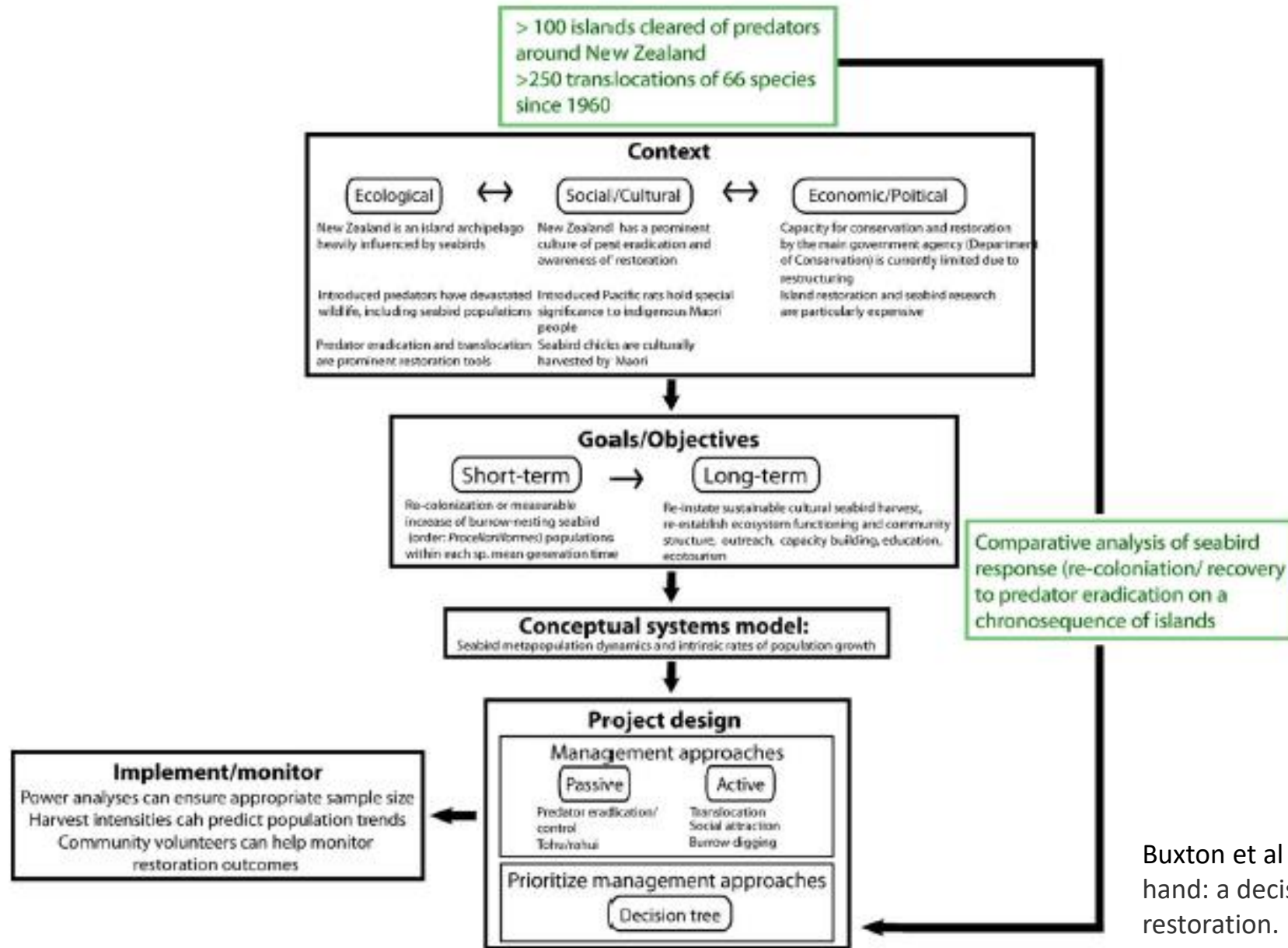


Social attraction

- Using cues to lure in seabirds
- Acoustic- sound attraction by broadcasting sounds
- Visual- using decoys

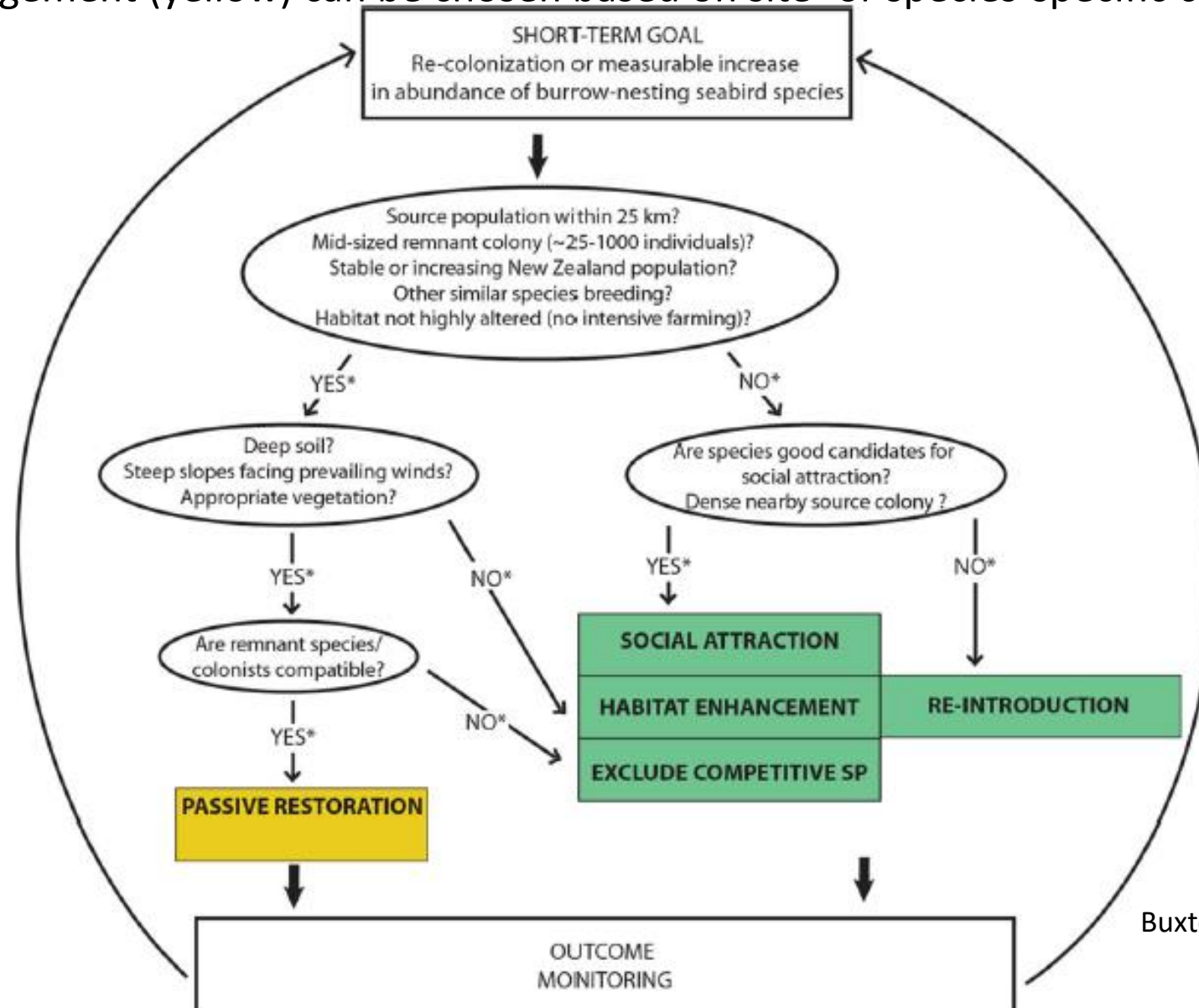


New Zealand decision framework for seabird restoration



Buxton et al 2016. Deciding when to lend a helping hand: a decision-making framework for seabird island restoration. *Biodiversity and Conservation* 25:467–484

Ecological decision tree to guide management interventions for burrow-nesting seabirds based on the probability of natural recovery following predator eradication. Active (green) versus passive management (yellow) can be chosen based on site- or species-specific characteristics.



Buxton et al 2016.

Distance to source colony

- Main determinant of success is recruitment (nesting) at the attraction site
- Probability of nesting decreases exponentially with distance from a source population
- Re-colonization is unlikely without a colony within **25 km** (Oro and Pradel 1999; Buxton et al. 2014).
- To avoid drawing from the same source colony, NZ Dept of Conservation does not recommend (or issue permits to) social attraction projects be located closer than **100 km** of each other



Source colony size

- Seabird colony growth is regulated by both positive and negative density dependence
- **Positive density dependence**- birds are attracted to settle in larger pre-existing colonies
- **Negative density dependence**- crowding decreases habitat quality at higher densities
- Thus recovery is more likely in a mid-sized remnant colony (*25–100 breeding pairs; Buxton et al. 2014).



Questions?