



Working with Nature: Soft coastal protection practices in Aotearoa – an anthropological perspective

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Bremen
NatureCultures Lab

Outline



1. Introduction to the project & approach
2. Working with nature – a „sociotechnical imaginary“
3. Meaning sense of Nature: Examples from the fieldwork
 - * Coastal erosion control
 - * Biodiversity & Ecology
 - * Restoring/Reconstructing native nature
 - * Reclaiming the dunes as public space
4. The politics of nature

hard and soft protection



- what is soft?
- material, processes, scales of intervention, looks, removability

Soft protection – „working with nature“

- Hard structures protect the land to the detriment of sandy beaches
- **Global trend** toward soft coastal protection because of high costs and negative side-effects (coastal squeeze, access, visual effect)
- **New Zealand Coastal Policy Statement 2010, Policy 25 (e):** „discourage hard protection structures and promote the use of alternatives to them, including natural defences“





„An Anthropological Perspective“

- PhD project with INTERCOAST (U Bremen & U Waikato)
- Fieldwork in the Bay of Plenty in 2010/11
- Original research question meets messiness of the real world
- Listening, participating, interviews, reading
- Looking for connections: From soft coastal protection to pest control, weaving and back



Practices: What people do and why

- Interpretative approach
- Small scale - not representative but exemplary
- Following the soft protection community
- What do people call „soft“ protection?
- Who is involved?
- What do people actually do?
- Why do things matter to people

< ly adequate and no one set of answers is applicable to all sites. Each beach has its own set of natural and human use characteristics and you have to fit solutions to each site."

He details how his company specialises in the development and implementation of coastal hazard management strategies for local authorities. "We also do a lot of work for beachfront owners, so we know both sides of the fence."

"Usually, a strategy is composed of several separate measures, which when combined form an interlinking system. These strategies can be very effective in protecting the interests of both property owners and the wider community, while avoiding risk or liability on the local authority."

"The strategies generally have to be far-sighted – we look out as far ahead as 50-100 years to accommodate natural changes such as climate cycles or projected global warming as well as evolving community needs."

It is also critical to ensure that all the values and interests at stake are given adequate voice in development of the strategy. "A key aspect of this is to involve the community as much as practicable. If you don't get community buy in, you won't get implementation either," says Jim.

He notes that some sites have complex problems which have developed incrementally over decades. "In these areas, strategies may well require decades to be realised."

Sustainability has redefined the problem and brought new challenges. However, Jim is convinced it is the only way forward and that, with innovation and dialogue, real and practical solutions can be put together for almost any site. "But no silver bullets." ■



The natural harbour environment at Omaha – a marked contrast to 30 years ago when this beach resort was in danger of being washed away.

Need to work with – not against – nature

But resolving the 'how' is the challenge because no two erosion problems are alike.

"There has been a definite sea change in the way that the problem of coastal erosion is now being approached," says Richard Frankland. His pun carries a reassuring message to local authorities hard-pressed by beach-front ratepayers wanting to save their properties and houses from the sea.

And no one is better placed to know. As senior civil engineer at Beca, Mr Frankland has worked on numerous coastal conservation programmes. Among Beca's many such projects, two typically illustrate how this company's strategic approach has solved seemingly intractable problems.

Saving Omaha

In the mid 1970s the future of continuing development along the northern end of Omaha beach, north of Auckland, was threatened by sea that looked set to reclaim this sandspit.

Huge volumes of sand were being swept either offshore or deposited in the adjacent Whangateau Harbour.

The counter-measure, says Mr Frankland, was to construct three groyne – the northern and southern groyne and one in the centre of the beach called the swash groyne."

As Beca's consultant on the project, he has been involved in the conservation of this >

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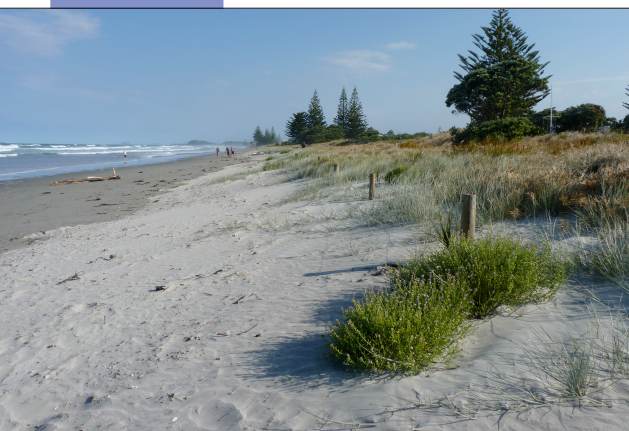
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Working with Nature: a sociotechnical imaginary

- Vision of a desirable future for society and of how it can be achieved (Jasanoff and Kim, 2013)
- **Example:** We should accept that coastal erosion is a natural process. Restored dunes with native plant cover make for more desirable coastal protection than a seawall.
- Has material consequences – links thought and action – helps making sense of what people do
- **Helpful to think about erosion control as well as other dune restoration projects.** Exists elsewhere as well – how does it work in Aotearoa New Zealand?



Coast Care / dune restoration and erosion control

- Native dune plants do assist dune recovery
- Prograding dunes
- DiY Coastal Protection
- „sacrificial plants“

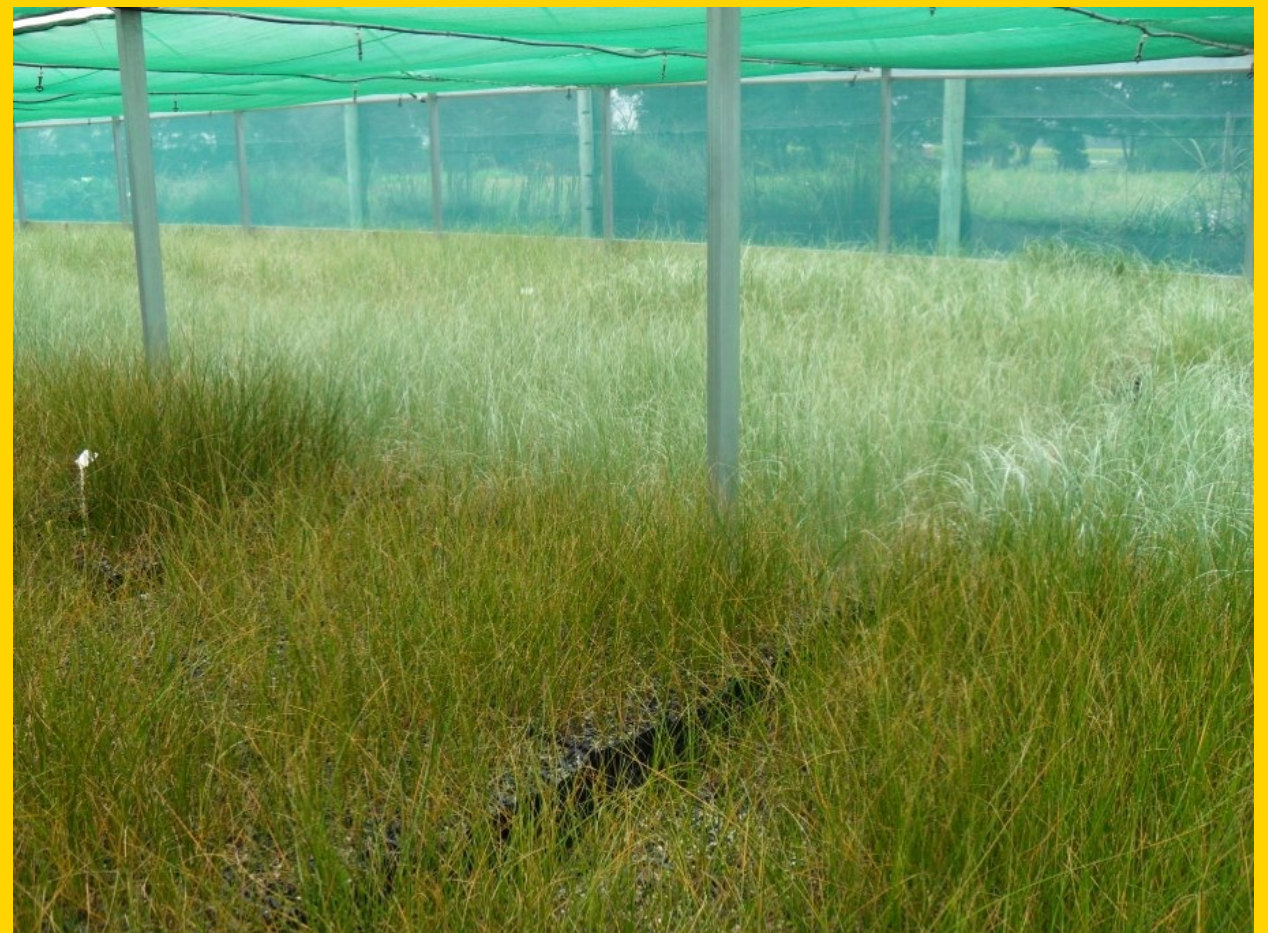
beach push-ups



- Speeding up nature at developed sites
- Accepting that erosion might occur again and scraping might need to be repeated

Biodiversity

- Protecting and restoring the natural succession of coastal ecosystems
- backdune plantings, pest control
- producing scientific knowledge, experimental
- horticultural perspective and eco-sourcing

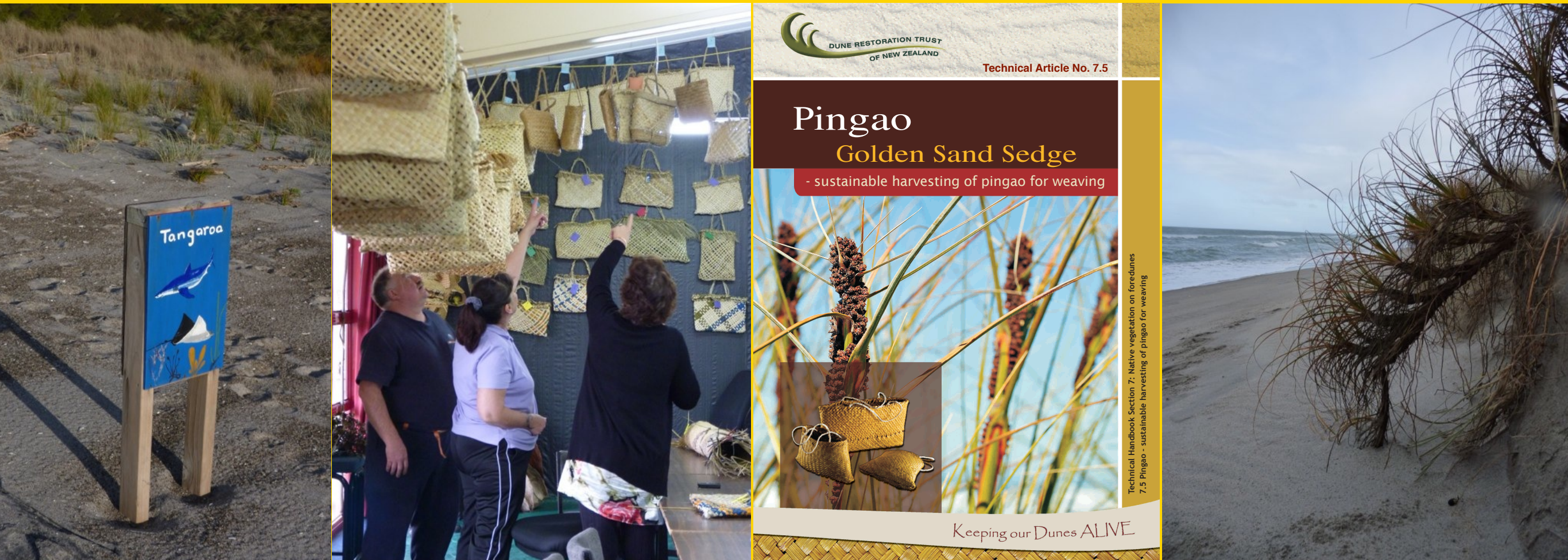


Connecting Conservation Work Worldwide



- Ecology: Protecting the NZ dotterel and the sand spit they inhabit
- International RAMSAR wetland convention
- Backdune trials, Pest control

Reconstructing Native Naturecultures



- Protecting native dune plants in their own right
- Pingao for weaving and coastal protection
- „Naturally and culturally good for Maori“
- Tane’s eyebrows: A story Pakeha Coast Carers love
- The bicultural future of Aotearoa New Zealand

Reclaiming the Dunes for the public



- Tauranga City Encroachment Policy
- Large-scale project; easy planting and quick progress important
- Economy of volunteer work
- Generally: access to paid work
- Dunes in suburban areas and non-encroachment areas

The politics of nature

- „Working with nature“ as entry point
- What is nature?
- Different things matter for different people and make nature meaningful: native nature and culture, rare species, distinctive landscapes, the beach as public space...
- Nature: A contested concept (think of seawalls, mangroves, pest control,...)



Conclusion:

Making coastal naturecultures



- „Working with nature“ is used as a framing for soft protection approaches, but it could also describe dune restoration in general
- All of these projects are also examples for humans having meaningful interactions with the material world
- People are making natures - but nature is not passive
- Close links between nature and society/culture: natureculture
- Meaningful natures are linked to other important values, ideas practices or imaginaries
- The political question: Which nature do you want?

„I used to say I wanted New Zealand to be like Aotearoa and not like a mini England, and that was what we worked on.”

(Mark Dean on Radio New Zealand National's „Our changing world“ program about the Dune Restoration Trust of New Zealand, 2 August 2012)

References:

Haraway, Donna. **When Species Meet**. Minneapolis: University of Minnesota Press, 2008.

Hull, R. Bruce, and David P. Robertson. **"The Language of Nature Matters: We Need a More Public Ecology."** In *Restoring Nature*, edited by Paul Gobster, 97-117, 2009.

Inman, Mason. **"Working with Water."** *nature reports climate change* 4, no. April 2010 (2010): 39-41.

Jasanoff, Sheila, and Sang-Hyun Kim. **"Sociotechnical Imaginaries and National Energy Policies."** *Science as culture* 22, no. 2 (2013): 189-96.

Trade Publications Ltd. **"Need to Work with – Not against – Nature."** *Asset Management* 4, no. 1 (2003): 4-6.

Please get in touch with any comments or questions!

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By FRITHA TAGG

This weekend's high tide and onshore wind caused havoc with the newly developed sand dunes at Waihi Beach near Elizabeth St.

The sea has eroded the dunes and washed the sand away which has left the beach access ramp swinging in mid-air with a drop of at least a metre.

Many Waihi Beach residents voiced concern at the state of the beach on Sunday morning after the high tide. Waihi Beach Community Board chair Murray Craig said the work to build up the dunes was not supported by local group Dune Care.

The work was done by a Tauranga landscape company.

The company dumped sand on top of rocks and existing eroded seawall. "Remnant old structures of steel planks and rocks were exposed and were clearly visible after Sunday morning's tide," said Mr Craig.

"These structures and rocks should have been completely removed prior to the sand placement and planting," he said.

"It is not surprising that sand loss has occurred as hard engineering is known to cause erosion when present in the breaking wave zone. The sea has used these hard points as a hold and washed the sand completely away."

Mr Craig felt the present state of the dunes and beach access was dangerous and has sent an email to the mayor of Western Bay of Plenty inviting him to come to the beach to see the situation.

GONE AWAY: The high tide on Sunday washed away the newly made dunes along with the sand supporting the beach access ramp.

PHOTO: SUPPLIED



Dune efforts washed away





Soft Engineering

- Working „in concert with natural processes“
- Addressing causes, enhancing nature
- Measuring, modeling, mimicking and harnessing coastal processes
- Advances in coastal science, computing and new materials, large-scale interventions, experimental
- Surfing ethos

