

RESILIENCE  
TO NATURE'S  
CHALLENGES

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Te Ao Tūroa

# Enabling Coastal Adaptation

## Use of existing legislation

**While we wait for new legislation to better enable coastal adaptation, pressures for coastal housing and urban development are continuing within an inadequate planning and building framework.**

Urban development and supporting infrastructure continue to be located and intensified in areas that are prone to coastal erosion and flooding, hazards that are worsening with climate change and ongoing sea-level rise.

Dynamic Adaptive Pathways Planning (DAPP) is established as best practice for coastal planning under conditions of uncertainty.

Good practice is generally underpinned by a commitment to improve understanding of coastal hazards through sharing of knowledge about risks, exposure, and impacts between councils, communities, iwi and hapū and stakeholders using available guidance and research. This is essential to identify and resolve barriers to effective adaptation and is a prerequisite for the DAPP process.

However, it is difficult to implement adaptive planning within the current planning and development regime. Current plans and policies are inherently static and decisions have long lifetimes, which makes it challenging to develop appropriately in a changing risk context.

Recently, pressures have increased for new or infill development in low-lying coastal areas as part of wider pressures to find land for housing.

There is a hiatus between current practice and the expected direction of the new regime replacing the Resource Management Act.

In the meantime, we're seeing poor practices such as raising houses and filling land to stay above coastal flood levels and allowing intensification behind coastal protection structures. These practices can make problems worse by lulling people into a sense of misplaced security, and they also transfer large costs to future generations.



Figure 1. Waves overtopping the seawall along Tamaki Drive, Auckland.

## Barriers to adaptation

Several factors are compounding current problems:

- ◆ **Past decisions:** A reliance on legacy consents for subdivisions and developments that are not yet implemented and are now known to be in imminently at-risk locations.
- ◆ **Housing pressure:** The urgency for urban growth and intensification to address current housing pressures conflicts with due consideration of

current and future climate change hazards and impacts and the urban form necessary to help achieve the national climate change emissions budgets. The strongly directional language of the National Policy Statement on Urban Development, plus its processes, means that it is likely to trump the requirements of the New Zealand Coastal Policy Statement and further entrench the exposure of development to coastal hazard risks.

- ◆ **Familiar practice:** Despite known sea level rise risks and increasing

insurance industry warnings, current planning systems continue to prefer mitigation of climate change effects over the alternatives of 'avoid' or 'remedy' in decision making on resource consent applications. This involves the continued use of protection, accommodation practices and deference of difficult decisions (retreat or limitations on new development) to the next planning cycle. This delays the implementation of effective adaptation in the short term, creating social, cultural and economic costs in the long term.

A team of researchers in the *Enabling Coastal Adaptation* project of the Resilience to Nature's Challenges National Science Challenge examined multiple planning documents, evolving legislation and policy and investigated several case studies across Aotearoa New Zealand current planning practice to identify opportunities for better use of existing legislation and priorities for planning reform.

## Key findings

Researchers found more can be done under existing legislation to support the set-up phases of DAPP to better position local authorities for new planning legislation. These steps will help provide for clear and equitable progress toward

reduced risks from coastal hazards and climate change:

- ◆ Regional and district councils need to make sure their respective responsibilities are clear and are embedded in policy. Councils should also develop and maintain consistent approaches to collecting and applying hazard information.
- ◆ Greater use of Dynamic Adaptive Pathways Planning (DAPP) to enable a shift away from 'mitigation' of climate change effects using hard structures, to 'avoid' and 'remedy' in decisions on consent applications. Councils can collaborate to identify and prioritise areas where DAPP planning should be progressed.
- ◆ Action is needed to strengthen policy that supports risk reduction from sea-level rise over the lifetime of land-use activities. This can include reviewing the status of subdivision, land use, building and infrastructure rules to enable appropriate decisions on new activities in hazard areas.
- ◆ The use of strategic spatial plans across a region, more effective use of subdivision controls, and greater clarity regarding how many legacy subdivision and planning consents are not yet activated.

*Figure 2. Housing threatened by coastal erosion, Cape Palliser Road, Wellington.*



Mark Dickson

## Accelerating adaptive planning

Proposals for changes to accelerate the uptake of DAPP as the basis for effective adaptation recognise the capacity constraints of councils, the need for community involvement, and necessary institutional and behaviour changes. Researchers make the following recommendations:

- ◆ Put on hold changes in use and existing unimplemented consents (with the exception of infrastructure designations for managed retreat) within the “area of interest” (defined as a set distance, or modelled IPCC worst-case 100- or 150-year sea-level rise scenario, or sea-level rise increments from present shoreline) until a DAPP process is undertaken with the potentially affected community and the outcome is included in the plan.
- ◆ The provisions of the Climate Change Adaptation Act should override all other statutes that provide for use and development in the “area of interest” (except for the Marine and Coastal Areas Act), including for existing uses.
- ◆ Risk assessments should include risks that are known and that will impact decisions taken today on permanent activities, e.g. buildings and infrastructure which will be affected by coastal flooding from sea-level rise within their lifetimes.
- ◆ Each regional planning committee to provide the central government or supervisory agency with a report identifying coastal communities, their priority vulnerability, and a programme to undertake DAPP within a binding timeframe aligned with the Climate Change Response Act timelines for the monitoring of the National Adaptation Plan and the next National Climate Change Risk Assessment.
- ◆ Each regional planning committee to undertake a rolling programme of DAPP on a timetable agreed with central government or supervisory agency and implements DAPP by including the outcome in its statutory plan.
- ◆ The DAPP outcome with preferred pathways to be included in the statutory plan complete with agreed preferred pathway(s), signals, and triggers with limited opportunities to oppose due to the community engagement in their preparation.
- ◆ The plan must be able to move forward on the basis of the signals and new rules and actions implemented when the triggers are reached, based on the DAPP process previously undertaken with the affected community.
- ◆ Mechanisms under the Strategic Planning Act should enable forward planning of infrastructure or utility services that may not be required for decades as part of a managed retreat option under an adaptive plan using DAPP.
- ◆ Rules should have immediate effect, and adjusted rules become effective when signals or triggers are reached and the path changes.
- ◆ Regional council should establish a dedicated fund for land/property purchase/other works, and with a process and criteria agreed with central government for sourcing, securing, and using the funds on an equitable basis.

### FURTHER READING

Judy Lawrence, Sylvia Allan, Larissa Clarke (2021). Using current legislative settings for managing the transition to a dynamic adaptive planning regime in New Zealand. Wellington: Resilience to Nature’s Challenges National Science Challenge - Enabling Coastal Adaptation Programme. <https://resiliencechallenge.nz/outputs/enabling-coastal-adaptation/>

Judy Lawrence, Sylvia Allan, Larissa Clarke (2021). Inadequacy revealed and the transition to adaptation as risk management in New Zealand. *Frontiers in Climate*. <https://doi.org/10.3389/fclim.2021.734726>

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