

Do we stand and fight or retreat?

Senior coastal planner with the Beca Group LUCY BRAKE says with intense pressure on our coastlines from increasing development and public use, we need to get wiser in our management of the coastal environment.

Coastal hazards come about through the interaction of coastal processes with human use, property, or infrastructure.

If left alone there is nothing "hazardous" about these coastal processes - it is human interaction that creates the hazard. A fundamental and logical hierarchy of response options to address these hazards is promoted through the New Zealand Coastal Policy Statement (NZCPS). It is also incorporated in the philosophy of the Auckland Regional Coastal Erosion Management Manual (CEMM), as well as the more recent MfE Coastal Hazards and Climate Change guidance manual for local government in New Zealand.

And so, what is the "hierarchy of response options"?

The first step in any management of coastal erosion is to determine whether a long-term erosion problem exists. In some cases what the property owner believes is erosion is really the natural fluctuation of the coastal system.

The principles of coastal erosion management are to undertake non-structural options in preference to structural options, wherever possible. The philosophy ingrained in the hierarchy approach is to move away from the hazard - thus minimising risk to the community. However, this approach is increasingly difficult to put in place with higher levels of urban development on the coast.

How does this fit with the statutory framework?

Management of natural hazards is governed by the Resource Management Act 1991 (RMA) Part II. The RMA provides little guidance on the interface between protection of use and protection of the natural environment itself. In the context of coastal hazards it is extremely difficult to protect both to the same degree.

The hierarchy approach to the evaluation process means we are able to address the RMA's Part II obligations to preserve natural character, natural defences, etc, and provide a clear rationale before moving on to evaluate intervention options.

The NZCPS emphasises use of the most

practicable option for coastal hazard management, where there is existing subdivision use or development. Overall, the NZCPS promotes the use of natural protection measures and the adoption of the precautionary principle to avoid coastal hazards. Generally, the NZCPS provides limited guidance and the results of the current review will attract much attention from the industry.

The Local Government Act 2002 (LGA) requires councils to use consultative processes to promote sustainable community wellbeing across four broad and interrelated fronts - social, economic, cultural and environmental. This includes managing risk on a community.

The Civil Defence Emergency Management Act (CDEMA) 2002 seeks to promote sustainable management of hazards and to reduce community risk from various forms of hazard. The Act advocates a tiered, integrated management and planning structure involving national, regional and district agencies. Central Government also wants a holistic approach to civil defence and emergency management (including promoting a risk management approach to hazards) through emergency management sector reforms.

So what have we learned?

Regional and local councils are beginning to recognise and appreciate the wider impacts that different options for coastal protection bring beyond their immediate site of influence. Impacts can be both negative and positive and all factors should be considered when assessing the effects of different coastal hazard management options. Overseas research demonstrates that non-structural and soft-structural responses typically provide for better and more sustainable management of urban beaches and their adjacent communities, when measured against all four of the LGA's community wellbeing indicators mentioned above.

Current coastal erosion management projects put in place processes to identify the susceptibility of the human use system, using approved mitigation options to lower

the risk and therefore the hazard potential. This includes evaluation of impacts in both qualitative terms (using multi-criteria analysis) and in quantitative (monetary) terms (using cost-benefit analysis).

There is a need to move away from a statutory and site-specific focus on coastal hazard decision-making. This would allow a more co-operative choice based on long-term community and resource-sustainability perspectives, where all the information is available to the community. As the stewardship of the coastline is ongoing, communities must look much further into the future than the next few years. The property owner threatened by the sea will tend to be focused on the day-to-day changes, but the coastal processes doing the damage have much longer periods of advance and retreat. In the context of almost generational time-spans of the natural system, the non-structural options - such as managed retreat from the coastline - make more sense and are ultimately more achievable and sustainable. ■

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