

Designing with nature

Managed retreat is part of the design with nature approach that can reduce natural hazard risk and build community resilience and sustainability. It's contentious but should be considered in some areas.

BY CHRISTINA HANNA AND PROFESSOR IAIN WHITE, UNIVERSITY OF WAIKATO, AND
PROFESSOR BRUCE GLAVOVIC, MASSEY UNIVERSITY

EXTREME EVENTS, the projected impacts of climate change and trends in urbanisation mean that more people are being exposed to natural hazard risks in the 21st century.

We can protect communities against some perils in the short to medium term, by building seawalls and improving early warnings. However, longer-term resilience and sustainability goals can only be achieved if we design with nature.

Managed retreat to become mainstream

The starting point is to avoid putting people and the things they value in harm's way. But when historical development is in high-risk localities, a design with nature approach highlights that we can move at-risk buildings, neighbourhoods and even towns.

This policy of relocation or managed retreat is not widely used and is highly contested. Given legacy development patterns and 21st century trends, we can



Shoreline erosion, Cape Palliser, in the Wairarapa.

PHOTO - JAY BAKER

expect managed retreat to become a mainstream policy approach soon.

Consequently, we must investigate the circumstances in which managed retreat becomes an option and determine how it can be implemented in a way that works for the communities at risk.

Natural hazard risk in New Zealand

In New Zealand, natural hazards are actively managed, but growing populations, land use change, development intensification and climate change impacts mean natural hazard risk appears to be increasing faster than it is being managed.