

Raumati and Paekākāriki Adaptation Areas: Signals, Triggers and Adaptation Thresholds

CAP Meeting 20th March 2024

Information prepared by TAG



This workshop

This workshop session consists of:

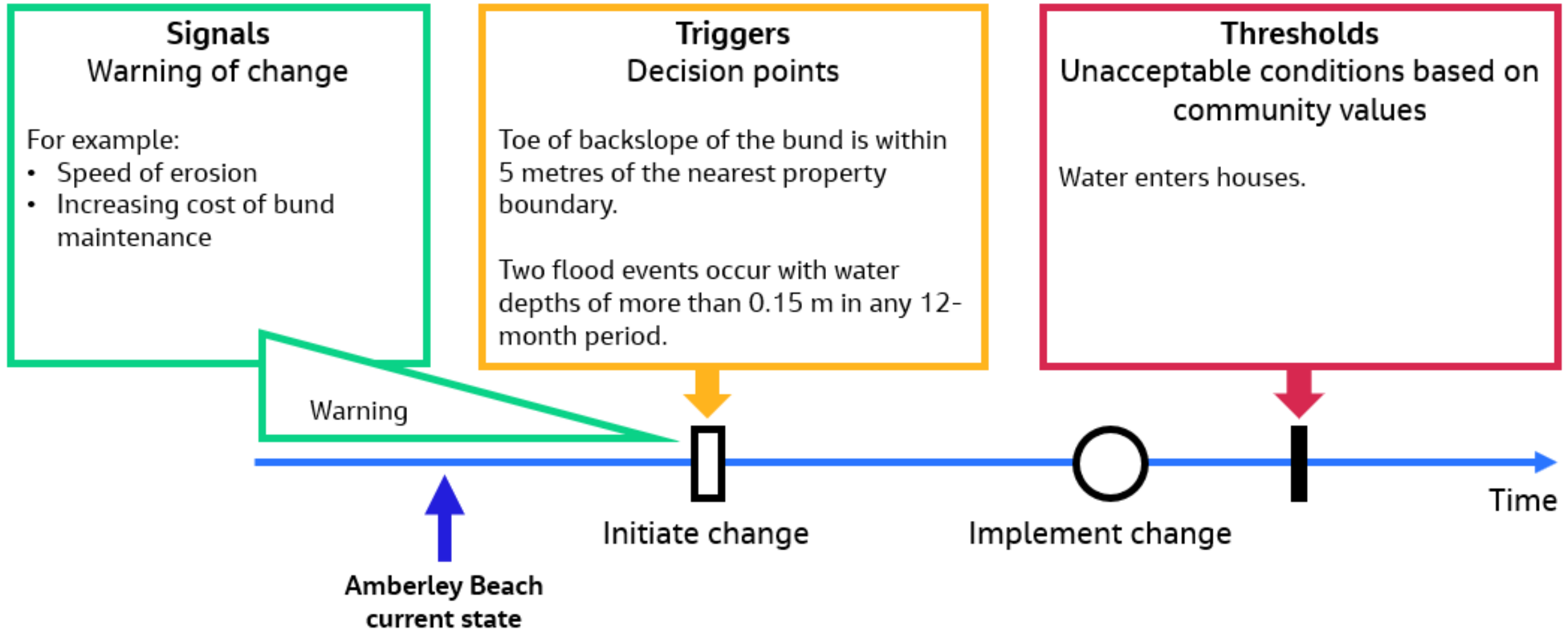
1. Principles of signals, triggers and thresholds
2. Development of Strawman Thresholds for RAA and PAA

Signals, Triggers and Adaptation Thresholds

- **Adaptation Thresholds** describe the situation where the management approach is no longer delivering the desired outcome. The thresholds need to respond to community values, risk exposure and agreed levels of service.
- **Triggers** are the point at which we need to progress a change in the management approach. They allow sufficient lead in time to ensure the new option can be undertaken prior to the threshold being met.
- **Signals** provide early warning that a trigger is approaching. They indicate that we should start thinking about early engagement on the change.

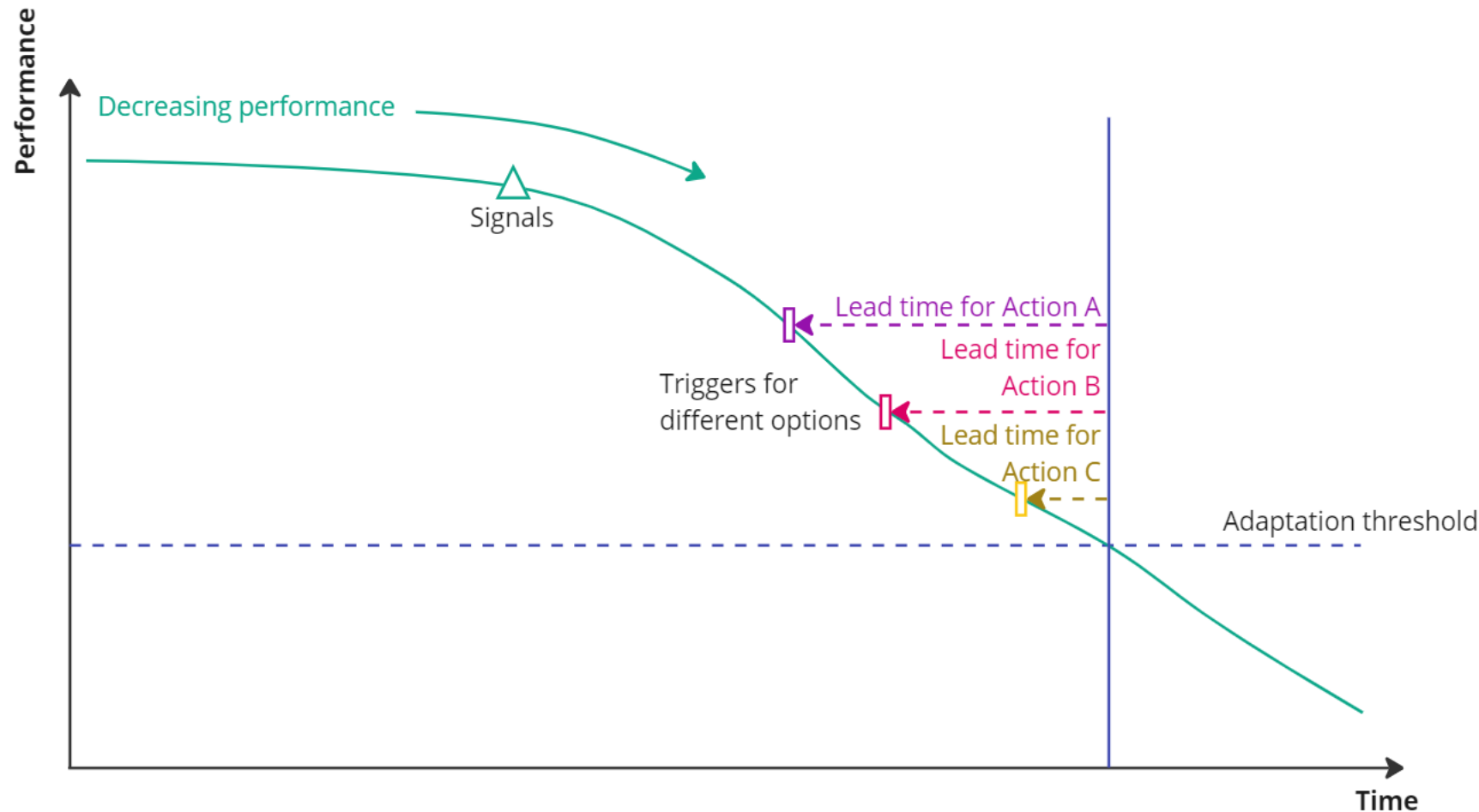
Signals, Triggers and Adaptation Thresholds in action

Example from Amberley Beach



Signals, Triggers and Adaptation Thresholds in action

Deteriorating effectiveness



Setting Adaptation Thresholds

Adaptation Thresholds describe the situation where the management approach is no longer delivering the desired outcome. It is what people do not want to happen. The thresholds need to respond to community values, risk exposure and agreed levels of service.

We need to determine the adaptation threshold prior to setting signals and triggers.

The Adaptation Threshold:

- Should quantify the situation we do not wish to reach
- Be independent of the adaptation action to be implemented
- Is personal to individual communities
- Covers a range of different values and risks.

Why develop strawman Adaptation Thresholds?

The strawman is intended to be an initial set of adaptation thresholds that can be tested, built on, or replaced after full engagement with the relevant community.

They are being developed to acknowledge that CAP cannot develop community adaptation thresholds without a full community engagement process.

The intention of the strawman is to develop the framework and ensure everyone has a common understanding of the concept.

Relationship with AWA (flood modelling) work

- Thresholds are likely to deal with the presence of water not the source of the water.
- Therefore, the pathways developed in Takutai Kāpiti may not address all proposed Adaptation Thresholds.
- CAP could make a recommendation that these thresholds are used as a starting point for any wider adaptation work.

CAP Recommendations Required: Strawman Thresholds

Triggers and Signals – Work Post Takutai Kāpiti and CAP

- CAP has the important job of defining strawman thresholds as part of their recommendation report for Council's consideration. These strawman thresholds could function as a key starting point for Council to directly engage with affected communities in the Kāpiti District after Takutai Kāpiti and the CAP.
- Post Takutai Kāpiti, it is likely Council will work with each Management Unit community to refine, build on, or replace these strawman thresholds.
- Triggers and signals cannot be developed until thresholds are developed. This will require community engagement. The detailed community engagement for signals and triggers for each Management Unit is anticipated to occur post Takutai Kāpiti.

Raumati Adaptation Area Objective

Develop and implement responses to coastal hazards that protects our whole community so we can stay in place for the long term while:

- *continuing to enjoy access to our coastline;*
- *maintaining and enhancing our natural environment and recreation spaces;*
- *maintaining and enhancing our public sea wall and other essential infrastructure for as long as practical; and*
- *keeping the community informed and involved about the types of solutions and associated costs.*

Paekākāriki Adaptation Area Objective

Protecting our unique community for as long as feasible from coastal hazards by maintaining essential infrastructure and ensuring that:

- *we continue to enjoy beach access for recreation and public use;*
- *our natural coastal environment is maintained;*
- *we are kept informed about coastal hazards, consulted on adaptation options; and*
- *we can increase our resilience to protect our properties, maintain our unique lifestyle, and keep our community safe.*

Thresholds Template

Possible Topics	Possible thresholds	Applicable?			
		RAA Erosion	RAA Inundation	PAA Erosion	PAA Inundation
Insurance	___ dwellings are unable to obtain insurance for coastal hazards.				
Frequency of coastal flooding	___ m or more of water ponds at _____ (specified location/s) for a continuous period of more than ___ days.				
Depth of flooding	Water enters ___ dwellings within _____(specified community) ___ times in ___ years.				
Water infrastructure	Critical water infrastructure is within ___m of Mean High Water Springs position				
Septic tanks	Septic system disposal fields are inundated for more than ____ days per year.				
Beach access	It is no longer possible to walk along the foreshore of _____ Beach during high tide.				
Seawall	Waves overtop the seawall ____ times per year on average over ____ years.				
	The toe of the seawall requires reinforcement.				

Thresholds Template (continued)

Possible Topics	Possible thresholds	Applicable?			
		RAA Erosion	RAA Inundation	PAA Erosion	PAA Inundation
Significant event	<p>Any serious injuries and/or fatalities that occur as a result of a coastal erosion or coastal inundation event.</p> <p>A coastal storm significantly compromises the effectiveness of the existing inundation (or erosion) protection structures.</p> <p>A coastal storm causes damage to more than __ dwellings in _____(specified community).</p>				
Cost to public - maintenance	<p>The overall cost of the current publicly funded (specified) management approach exceeds \$__ per year.</p> <p>A targeted rate of more than \$__ per year is required to fund the ongoing publicly funded maintenance of the current (specified) management approach.</p>				
Cost of private maintenance	The cost to maintain or replace privately owned seawall exceeds what ____ number of property owners are prepared to pay.				

Thresholds Template (continued)

Possible Topics	Possible thresholds	Applicable?			
		RAA Erosion	RAA Inundation	PAA Erosion	PAA Inundation
Recovery time between events	<p>_____ community is required to respond to __ significant coastal storms within __ years at _____ location.</p> <p>Emergency works costing \$__ are required _____ (frequency) to repair protection structures within a settlement.</p>				
Cultural					