

qathet Regional Coastal Flood Adaptation Strategy

Presentation to the Committee
of the Whole

8 December 2022

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Source: qRD



Source: Derek Poole



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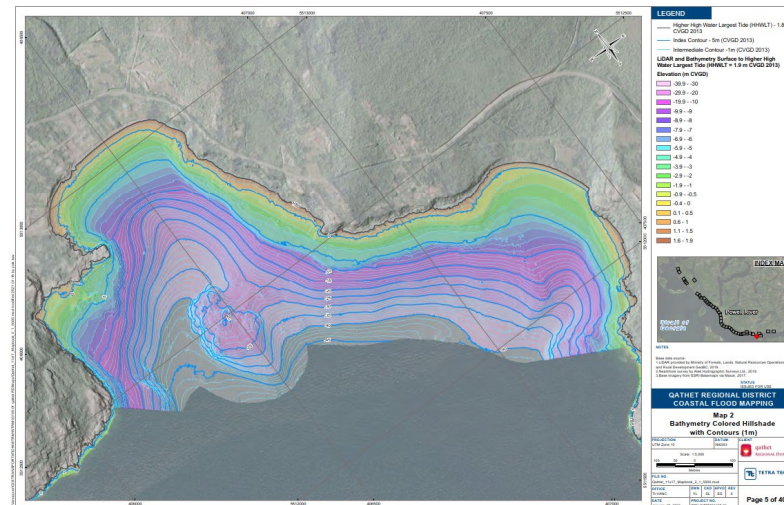


Source: Bud Graham (2017)

Overall Progress on Coastal Adaptation



- Foundational information
- Completed by Tetra Tech
- Finalized in March 2022



Overall Progress on Coastal Adaptation



Armed with an understanding of what flood hazards look like, the region was able to move forward and develop a strategy to reduce risk.

Project Goal:

To engage with partners and the public to develop a strategy that explores coastal flood adaptation options and charts a path for next steps in the region.



Iteration and Refinement

Supporting Tasks

Policy Review	Risk-Based Analyses	Decision Support
Considering the range of policy and planning tools	Assessing regional scale through archetypal areas	Informing choices by identifying tradeoffs

ENGAGEMENT ACTIVITIES
4 phases of media outreach, presentations, survey, and virtual and in-person workshops



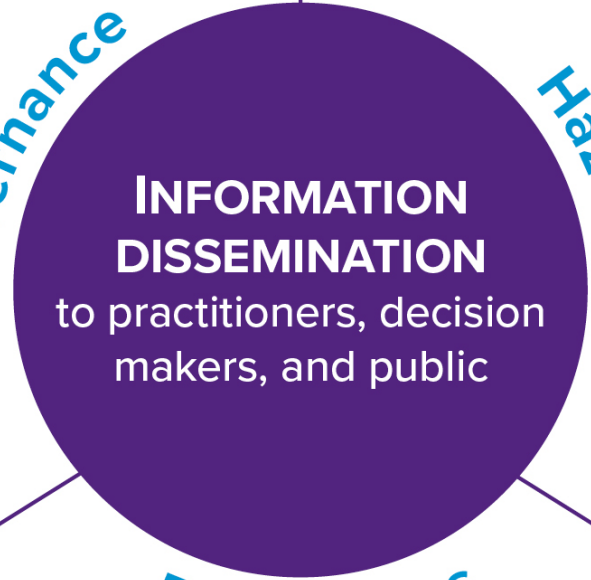


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Governance

Hazards



Sea level rise (SLR)



Coastal storm flood



Coastal erosion

Disciplines



Science



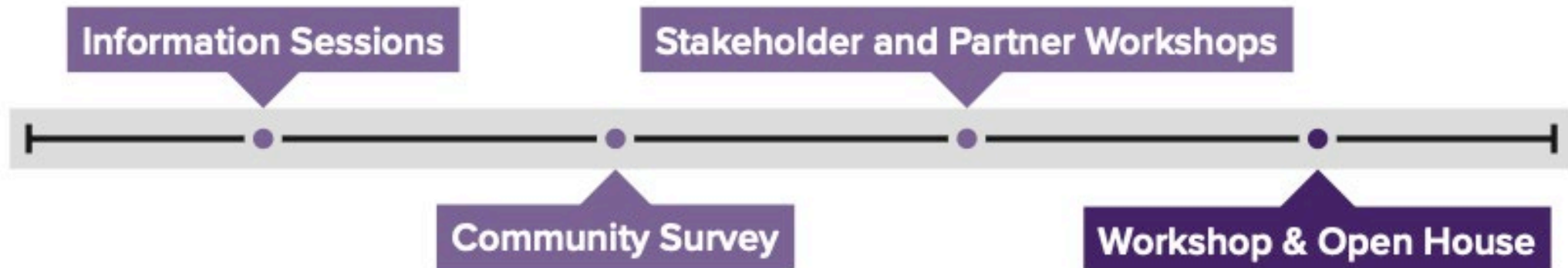
Engineering



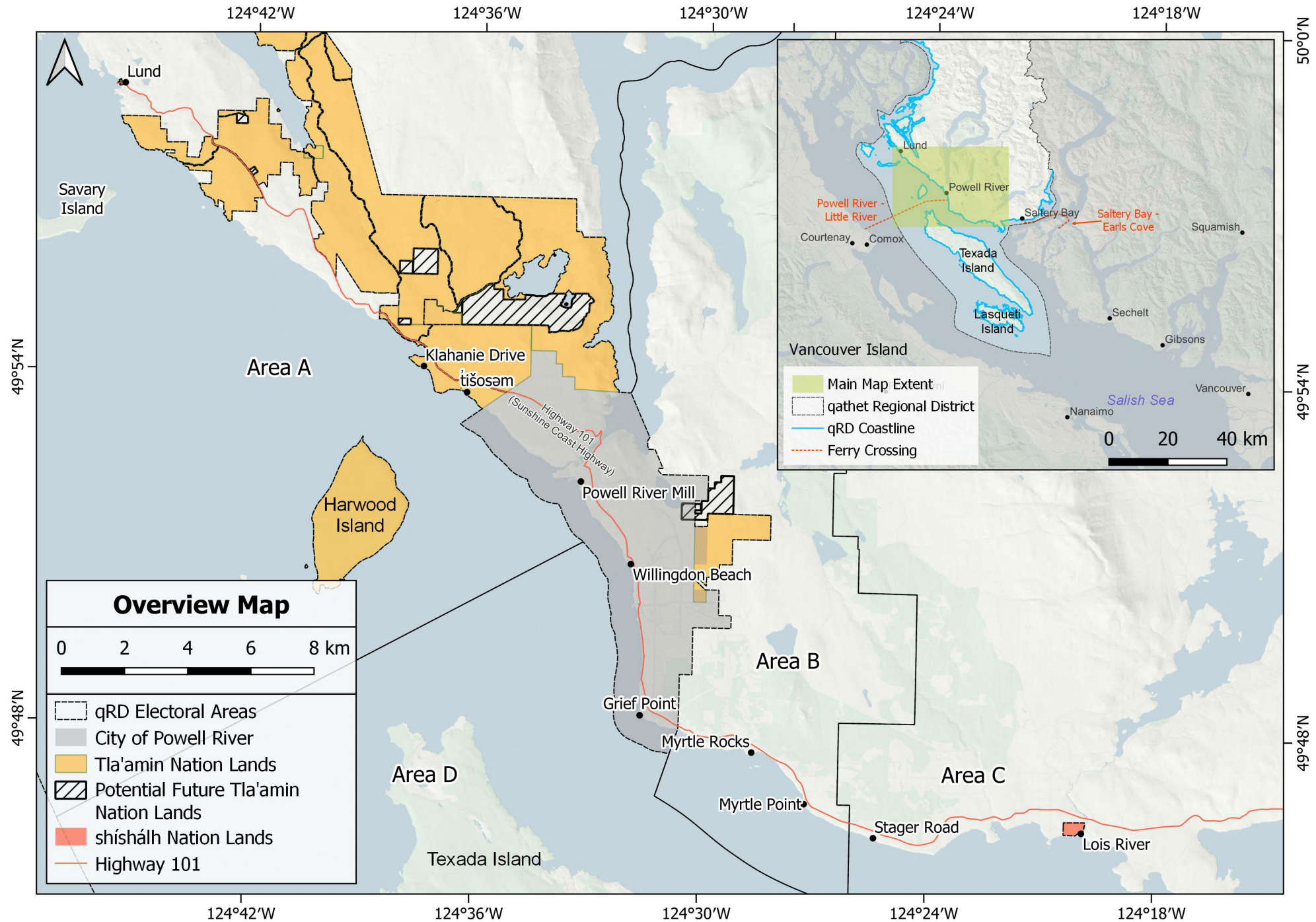
Planning

Community Engagement

- **41** Information session participants
- **67** Survey responses
- **21** Stakeholder and partner workshop participants



The region has a long, diverse coastline





Source: qRD



Source: Derek Poole



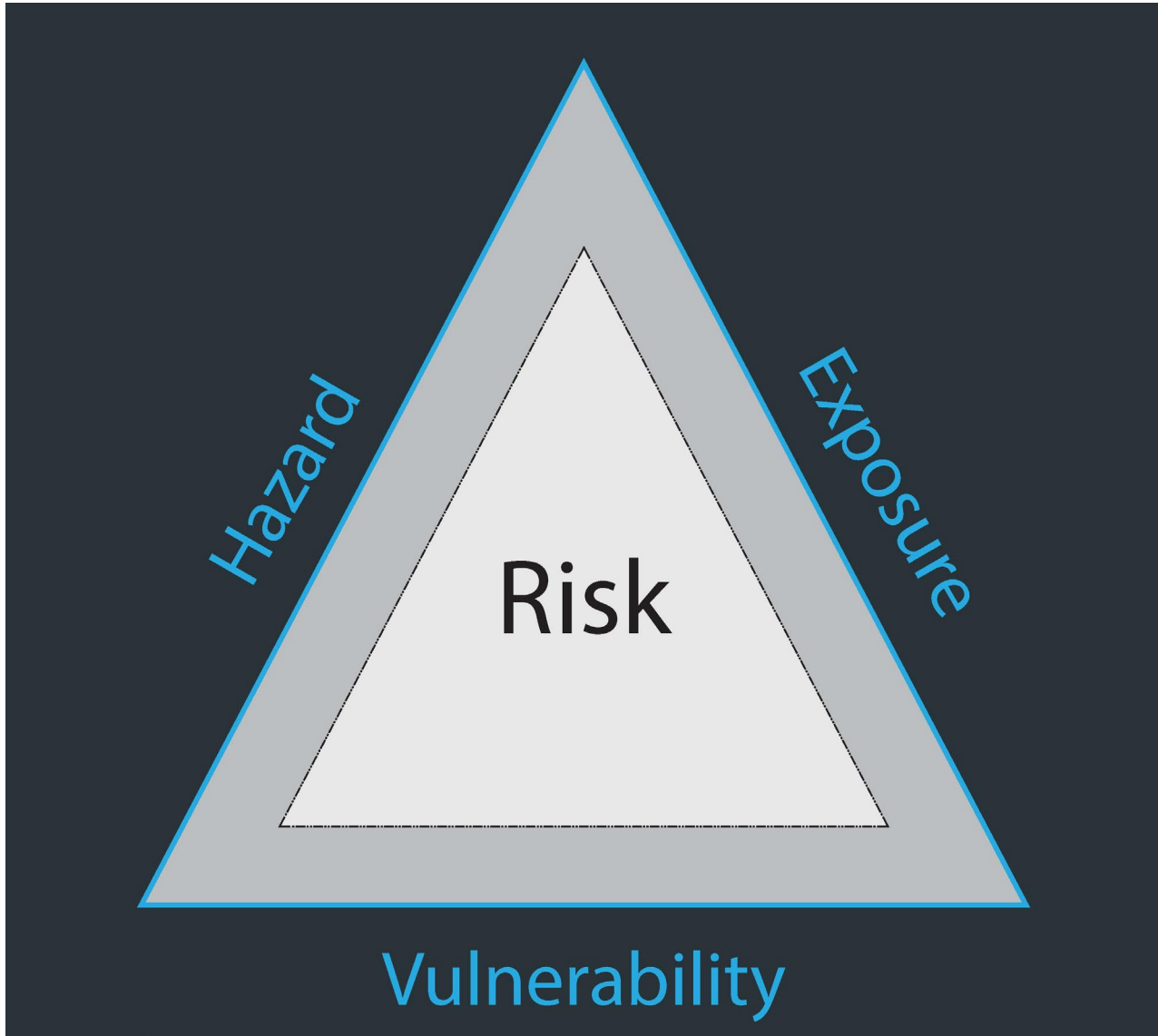
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Source: Bud Graham (2017)



Water isn't the
problem

Risk is the
*intersection of
hazard and the
things we care
about*

A range of conceptual adaptation options are available

PROTECT



Building “green” or artificial barriers to maintain the current location of existing developed areas (e.g. houses, settlements, infrastructure)

ACCOMMODATE



Adapting buildings, infrastructure and land uses to allow coastal areas to flood over time without causing negative impacts

MANAGED RETREAT



Exploring alternative locations to move homes and infrastructure back from affected shoreline areas and restore natural ecosystems

AVOID



Preventing new building, infrastructure or some land uses from happening in areas at risk of future flooding and erosion impacts

RESILIENCE-BUILDING



Investing in awareness, preparedness and response as a community, so that we can work together well to respond to challenges and bounce back from negative impacts

Risk-Based Analyses – Local Areas Example



People (many older) and homes exposed to small and large floods



Commercial properties (resort, shops) exposed to small and large flood



Regional transportation hub (water taxi service, helipad)

Sewer outfall infrastructure exposed to coastal storms



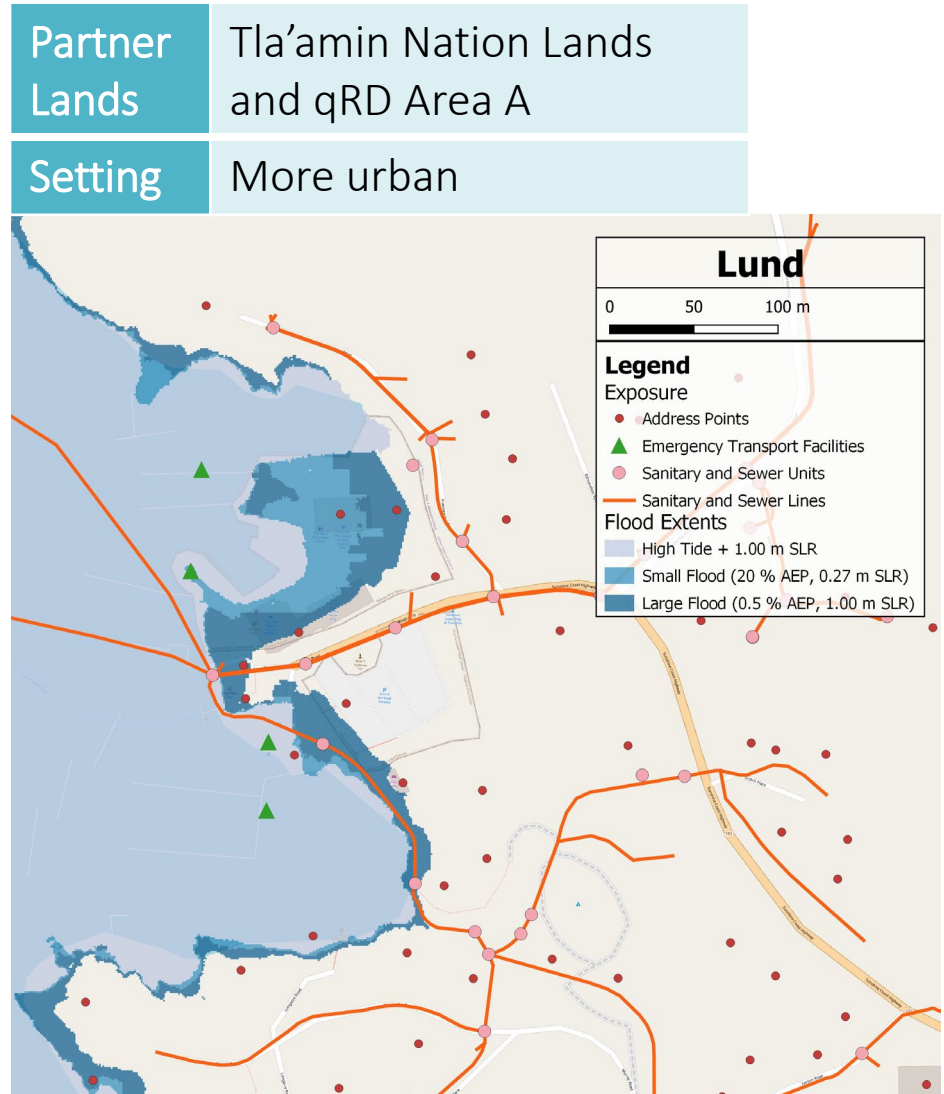
Important community and recreational hub



2001 storm. Source:
Water taxi operators



2018. Source: Tetra Tech



What We Heard

“My property is eroding, leading to the inevitable time when **I will have to move my house** at great cost. I am unsure if my well will keep producing enough water to live on.”

“We can let go of the ‘my property, my choice’ mentality and **work together** to determine what needs to be done to protect the land for future generations.”

“Preservation of personal property cannot be the priority over **public and natural resources** as the former is the risk of ‘living on the edge’.”



WATERFRONT

residents placed a higher value on:

- minimizing **environmental impacts** to shoreline habitats
- spread the **costs of protecting private property** across the community and across time



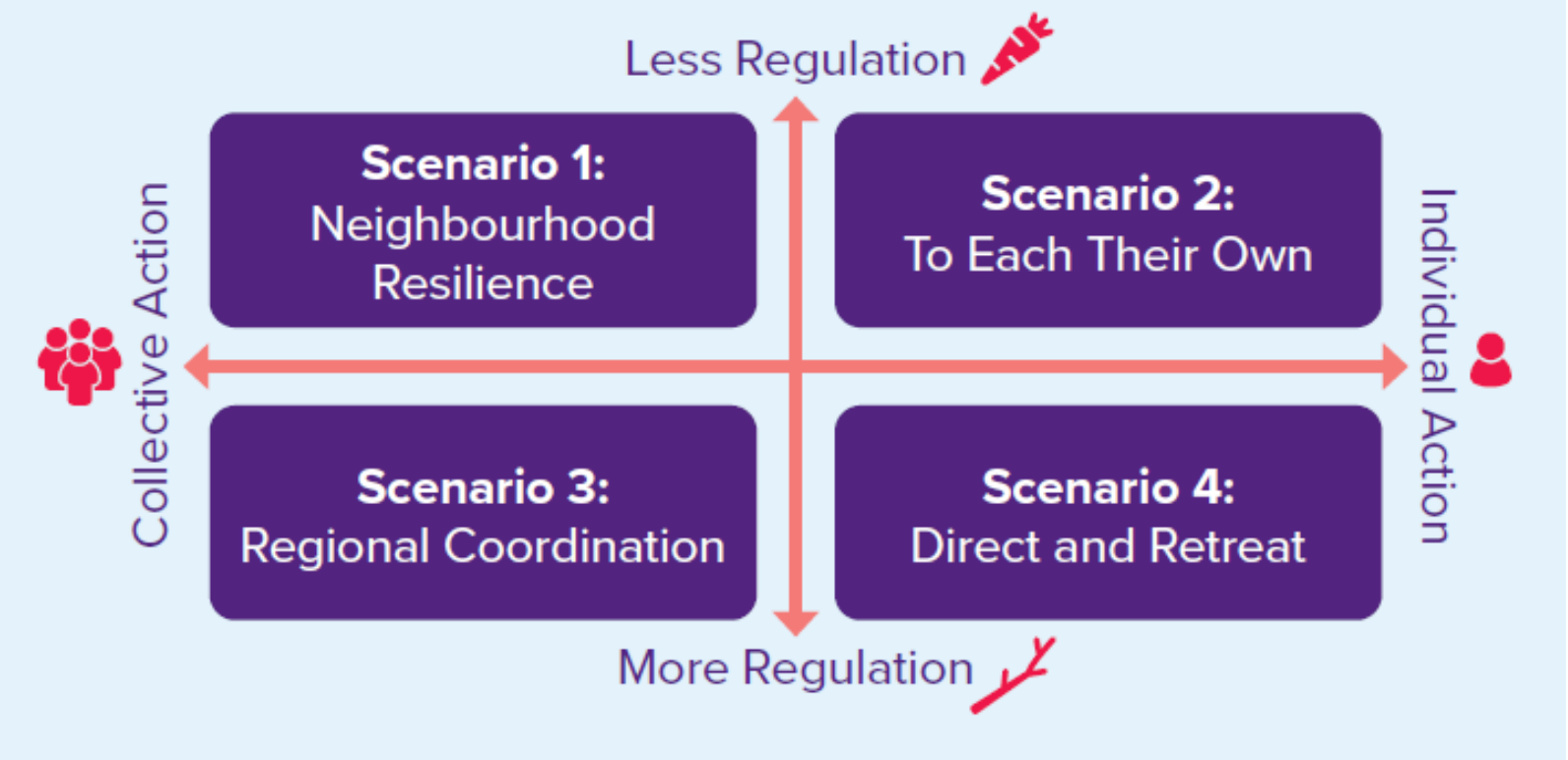
NON-WATERFRONT

residents placed a higher value on:

- maintaining **public access** to the waterfront
- allowing **natural processes** to take their course
- maintaining **individual choice** and responsibility for protecting personal property



Decision Support – Based on Feedback



“Coastal flooding is not best addressed at individual scale. The system is much larger than individual properties.”

“Individual responsibility feels right, but there’s no clear direction. Where do I go for answers? How do I know what to do?”

“People mostly want to do good things, We need to start with education.”

“[The scenarios do not] address concerns of future generations. People take the risks themselves.”

A coastal landscape featuring a wide, rocky beach in the foreground. The beach is covered with small, dark and light-colored pebbles. In the middle ground, there are several large, smooth boulders and pieces of driftwood. The background shows a calm sea meeting a distant shoreline with trees and hills under a sky filled with soft, grey clouds. The overall lighting is soft, suggesting late afternoon or early morning.

qathet Regional Coastal Flood Adaptation Strategy

- 1 Take a coordinated, consistent approach as a region.
- 2 Act in the best interests of future generations.
- 3 Collectively grow our ability to be flexible and adaptive in relation to coastal change.
- 4 Defend what cannot be replaced (e.g., ecosystems and cultural sites and uses).
- 5 Prioritize funding to protect things that benefit the most people or greatest good.
- 6 Enable and incentivize individuals to reduce their risk.
- 7 Take a phased approach over time.

Guiding Principles

Regional and Enabling Approaches

**Co-ordination and
Leadership**

Infrastructure

**Public Education
and Communication**

**Land Use and
Buildings**

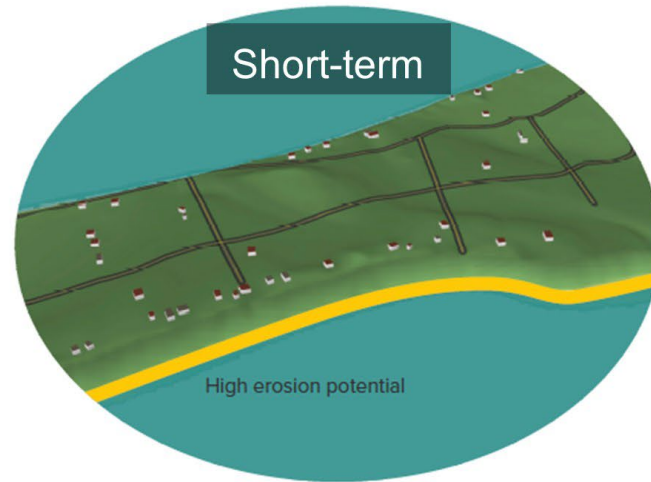
**Resilience and
Capacity Building**

**Monitoring
and Updates**

Approaches to Reduce Risk and Build Resilience

- Don't make it worse.
- Limit erosion by restoring and mimicking natural systems.
- Manage for current risk with temporary measures while reducing vulnerability over time.
- Retreat from high-risk areas over the long-term.

Example place- based adaptation actions



“ISLAND SANCTUARY”



Consider introducing erosion and flood management regulations as part of future Official Community Plan development.



Share guidance on products and best practices for erosion management with contractors and residents in the area.



Consider planting native species to stabilize slopes, guided by Tla’amin knowledge holders and in combination with other efforts to manage invasive species.



Next Step

The road ahead starts simply by **creating opportunities to work collaboratively**. This will give you the biggest **long-term impact** on the **region's risk and resilience**.



View south along Highway 101 (Sunshine Coast Highway) near Myrtle Rocks. Source: Tetra Tech

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Thank you!!!

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