Transport Knowledge Hub Webinar Series 2020 30 November – 4 December 2020

### Wai Ora Cultural Monitoring Framework – A Māori innovation towards sustainability



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## How does a Well-being approach differ to Asset Management Approach?



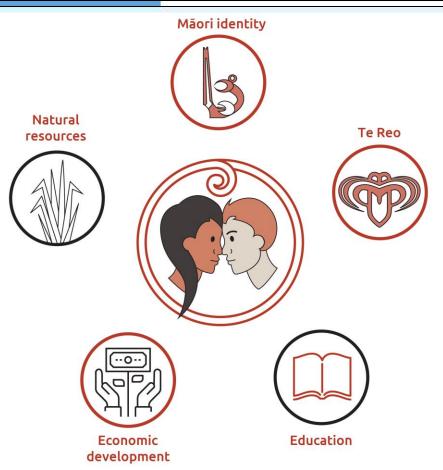
Auckland

Asset Management Approach	Common overlapping parameters	Wellbeing Approach
Value and Condition of the Asset	Ecological health	Value of People & Culture
Failure of the asset – eg. pipe cracked	Erosion	Access
Risk management -likelihood of failure -consequence of failure	Flooding	
	Contaminants	
Potential 'Better to Outcomes pipe it'		'Daylight streams'
Indicators that manage value, condition & risk of asset	Co-management	Indicators that manage community use & value - mauri

## Why a new mana o te wai approach?



- Traditional approaches do not incorporate Māori views
- Need to actively engage with Māori and communities, to understand Māori managemen 'asset'
- Need to develop a cultural monitoring framework that evaluates the value of awa
- Work towards a more sustainable future where Māori values are instrumental to decision making







### CMF Ōruarangi





Scoring of each variable:

1 (Very Poor) to 5 (Very Good)



Source: Ngā Kaihautū

EPA





# Example Rating of Water - Variable (4 of 9)



Scoring of Water variable:

Water



Indica tor	EPA Description	Very Poor	Poor	Fair	Good	Very Good
4	Water	1	2	3	4	5

Mahinga kai non existent, high number of pest species & kiatiaki access is prohibited Plentiful mahinga kai, species are thriving, good access, healthy wai, healthy kai for gathering.







### Ka Mua, Ka Muri Monitoring Scoring Matrix



Indic ator	EPA Description	Very Poor	Poor	Fair	Good	Very Good	Score
1	Vegetation	1	2	3	4	5	
2	Animals, birds, fish	1	2	3	4	5	
3	Soil	1	2	3	4	5	
4	Water	1	2	3	4	5	
5	Air	1	2	3	4	5	
6	Urban impact	1	2	3	4	5	
7	Special Places	1	2	3	4	5	
8	Sacred Places	1	2	3	4	5	
9	Metaphysical elements	1	2	3	4	5	
Total Score / 45							

#### Mua, Ka Muri Monitoring – Oruarangi Creek Scoring - Historic



Indic ator	EPA Description	Very Poor	Poor	Fair	Good	Very Good	1950 Score
1	Vegetation	1	2	3	4	5	3
2	Animals, birds, fish	1	2	3	4	5	4
3	Soil	1	2	3	4	5	3
4	Water	1	2	3	4	5	3
5	Air	1	2	3	4	5	4
6	Urban impact	1	2	3	4	5	3
7	Special Places	1	2	3	4	5	2
8	Sacred Places	1	2	3	4	5	3
9	Metaphysical elements	1	2	3	4	5	28
	Total Score / 45						

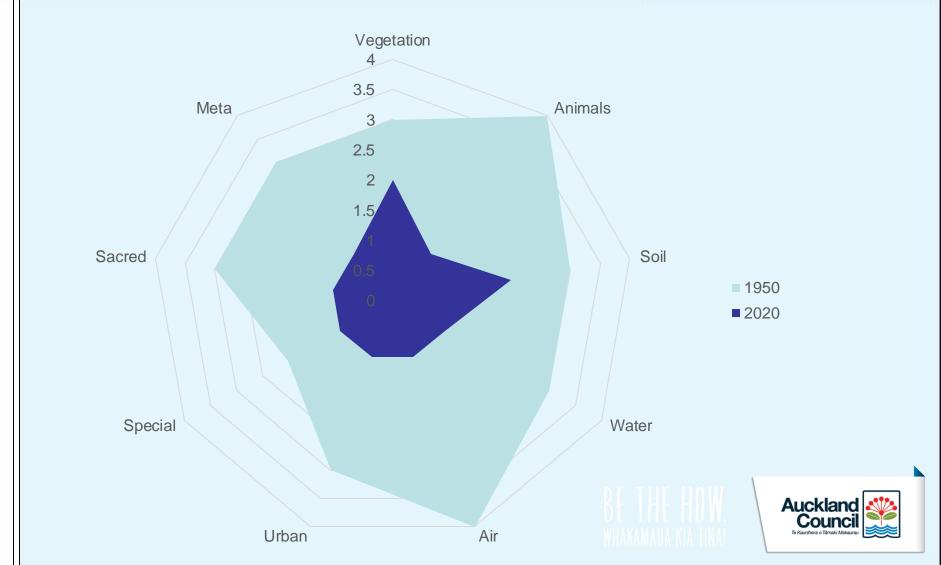
#### Ka Mua, Ka Muri Monitoring – Oruarangi Creek Scoring - 2020



Indic ator	EPA Description	Very Poor	Poor	Fair	Good	Very Good	2020 Score
1	Vegetation	1	2	3	4	5	2
2	Animals, birds, fish	1	2	3	4	5	1
3	Soil	1	2	3	4	5	2
4	Water	1	2	3	4	5	1
5	Air	1	2	3	4	5	1
6	Urban impact	1	2	3	4	5	1
7	Special Places	1	2	3	4	5	1
8	Sacred Places	1	2	3	4	5	1
9	Metaphysical elements	1	2	3	4	5	1
	Total Score / 45						

## Ka Mua, Ka Muri Monitoring Scenario 1: Oruarangi Creek Metrics 1950-2020





# Ka Mua, Ka Muri Monitoring Implementation



 Fieldwork with rangatahi, access, identify and measure using tuakana-teina approach developed by Te Ahiwaru





# Ka Mua, Ka Muri Monitoring Implementation



 Wananga with kaumatua and kuia and score evaluation framework for historic and current time periods



#### Conclusion



- There is presently, a lack of knowledge of what is required to enable Māori values in decision making
- The framework incorporates a mātauranga and science approach, focusing on an operational level of implementation within communities
- Implementation is resource intensive and requires joint ownership approach and is in line with strengthening capacity development.
- Framework enables Māori values to be included in Cadecision making without giving away IP

