Greater Heretaunga and Ahuriri Land and Water Management Collaborative Stakeholder (TANK) Group

TANK

Meeting 39:
19 April 2018

HAWKE'S BAY
REGIONAL COUNCIL

Karakia

Karakia

Ko te tumanako

Kia pai tenei rā

Kia tutuki i ngā wawata

Kia tau te rangimarie

I runga i a tatou katoa

Mauriora kia tatou katoa

Āmine

Water is a taonga

Agenda

9:30am	Coffee & Welcome (Robyn)
9:50am	Objectives for today (Mary-Anne)
	Updates
10:00am	Deciding freshwater attribute states (Sandy)
11:00am	Sediment & Nutrient Management Discussion Paper
	Farmer Reference Group – management proposal (Peter Kay)
12:30pm	**LUNCH**
1:00pm	Reducing Nutrient Losses to Water (Mary-Anne)
3:00pm	**COFFEE BREAK**
3:30pm	Update from Treaty Partners Group (Mana Whenua Group) (Marei)
3:45 pm	Confirm Meeting records (Mtg 38)
4.20pm	Meeting 40 Agenda (15 May)
4:30pm	**CLOSE MEETING**

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Introductions
Apologies
Housekeeping
Recording

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Engagement etiquette

- Be an active and respectful participant / listener
- Share air time – have your say and allow others to have theirs
- One conversation at a time
- Ensure your important points are captured
- Please let us know if you need to leave the meeting early

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Ground rules for observers

- RPC members are active observers by right (as per ToR)
- Pre-approval for other observers to attend should be sought from Robyn Wynne-Lewis (prior to the day of the meeting)
- TANK members are responsible for introducing observers and should remain together at break out sessions
- Observer's speaking rights are at the discretion of the facilitator and the observer should defer to the TANK member whenever possible.

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Notices and announcements

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Meeting objectives

1. Agree Water Quality Objectives; Attribute States

2. Agree management framework and policy direction for sediment and contaminant management;
    - Farmer Reference Group Proposal and
    - Nutrient Management

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Action points- Meetings 38 & 37

ID	Action item	Person responsible	Status
38.1	HBRC staff to provide hard copies of the pre-circulated documents for each TANK member	Nazlee	This meeting
37.1	Recommendation table to be updated including recommendation 2.1, and circulated post-meeting. Members to email feedback to Ceri.	Ceri	Complete
37.2	Circulate electronic copies of the HDC and NCC presentations to the Group	Ceri	Complete
37.3	Final version of Meeting 33 record would be re-circulated to the Group via email with the amended Meeting 36 record. These would also be added to the portal and website.	Ceri	Complete
37.4	Circulate Draft Plan to members, with executive summary following meeting 37.	Ceri/Mary-Anne	Complete

WATER QUALITY OBJECTIVES; Providing for the Values

Attribute States ← **Attributes Table**

Farmer Reference Group
Meeting the sediment challenge *"reduction in sediment loss by 30%"*

Strawman –Nutrient and Sediment Loss Management Framework

Good Stewardship;
Contaminant loss management
Ecosystem Health

EAWG - Meeting the Nutrient challenge *"reduction in Nutrient loss by 10 - 50%"*

Strawman –Nutrient and Sediment Loss Management Framework

Nutrient Management Discussion Paper

Nutrient loads and allocation limits

WATER QUALITY OBJECTIVES; Providing for the Values

Attribute States

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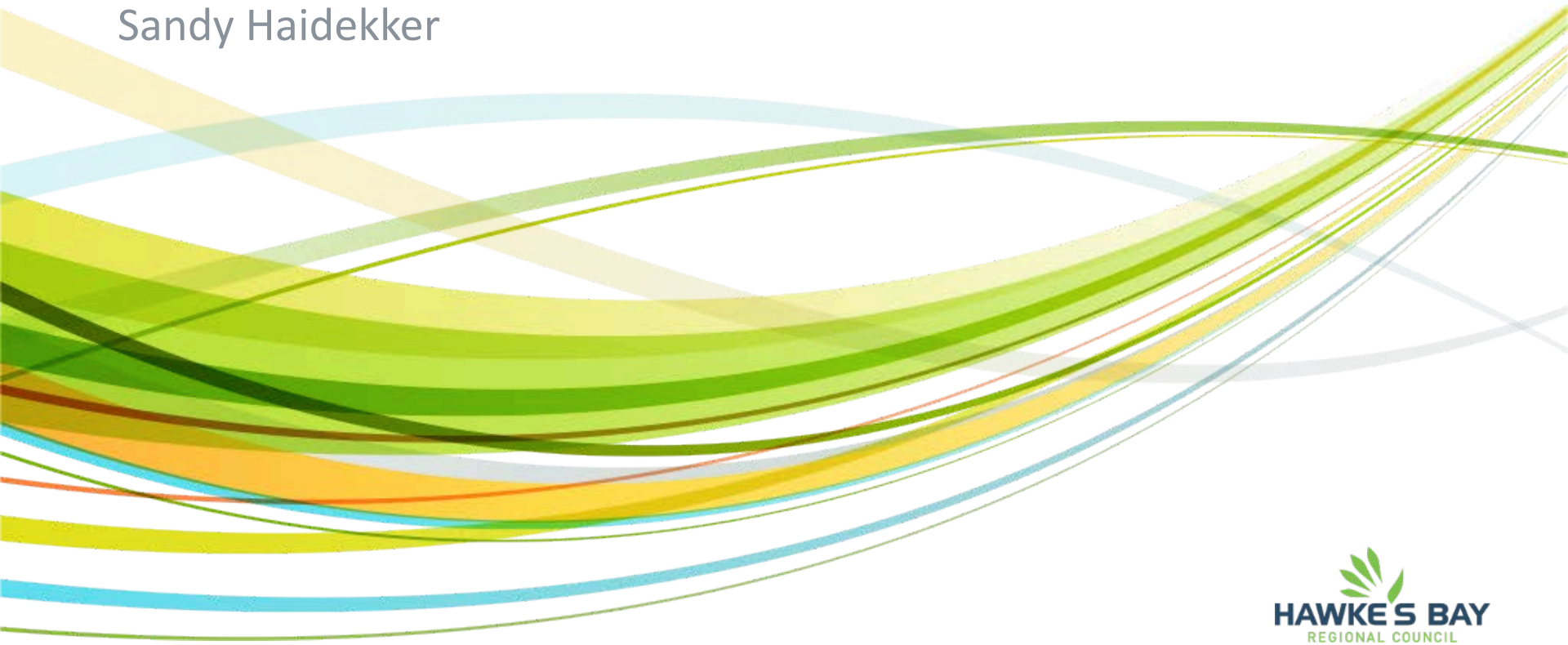
Good Stewardship;
Contaminant loss management
Ecosystem Health

Nutrient loads and allocation limits

Water Quality Objectives for Attributes States

Sandy Haidekker



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Water quality numerical objectives (guidelines)

1. Where did we get to? TANK 33: Decision table maintain - improve

2. Reasoning behind the numerical objectives (guidelines –GL)

   - Where do the guidelines come from?
   - Decision criteria

3. Proposed numerical values – with state update 2013-16 data

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Summary on desired states: TANK 33

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Sediment - turbidity	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
Sediment - clarity	Trout fishery recreation	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve >1.6 m**	**improve >1.6 m**	**improve >1.6 m**
Deposited sediment	Waitangi/Ahuriri estuaries	maintain current	maintain current	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**
Algae - cover	Ecosystem health	maintain current	maintain current	maintain current	maintain current	**improve ≤ 40%**	maintain **≤ 40%**	n/a	n/a	n/a
Algae - cover	Recreation	maintain current	maintain current	**improve < 30%**	**improve < 30%**	**improve < 30%**	**improve < 30%**	n/a	n/a	n/a
Macrophyte volume	Ecosystem health	maintain current	maintain current	n/a	n/a	**improve ≤ 50%**	n/a	**improve ≤ 50%**	**improve ≤ 50%**	**improve ≤ 50%**
MCI	Ecosystem health	maintain current	maintain current	maintain current **>100**	maintain current **>100**	maintain current	maintain current	maintain current >80	**improve ≥80**	**improve ≥80**
DIN	Algal growth/ estuary	maintain current	maintain current	maintain current	maintain current	**improve <0.295** mg/L	**improve <0.295** mg/L	**improve <0.444** mg/L	**improve <0.444** mg/L	**improve <0.444** mg/L
DRP	Algal growth/ estuary	maintain current	maintain current	maintain current	maintain current	maintain current	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L

Water quality numerical objectives (guidelines)

Where do guidelines come from?

- NPS – National Objectives Framework (*E.coli*, toxicity, algal biomass)
- Hawke's Bay Regional Resource Management Plan
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality
- NOF proposed thresholds and discussion papers
- Science papers with relationship between attribute and value

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Water quality objectives (guidelines)

Decision criteria for guidelines

1. National Objectives Framework

2. Direct attribute – value relationship
- With bands for state: excellent/good/fair/poor
- Single guideline

3. A statistical guideline
- Defines 'normal' in a range (percentile) → being outside means potentially a problem
- e.g. ANZECC, RRMP

4. The critical value is the most sensitive value for the water quality attribute and for which guidelines have been developed.

e.g. attributes: clarity, turbidity, suspended sediment to values: trout fishery, recreation

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Agreement on water quality objectives

Guideline values aim to represent the decisions taken on TANK 33

(maintain or improve)

→ Agree on numerical values (guidelines, limits) to describe the desired state

→ maintain or improve an attribute state ***in a zone***.

→ Where a water body's attribute state is better than that of a guideline, the objective is that the ***state*** is maintained.

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Agreement on water quality objectives

Considerations / uncertainties in determining the most appropriate guideline:

- One guideline: Broad categories, sometimes challenging to find the right attribute-value significance or relationship (ANZECC, RRMP)
- Within a zone variable attribute states → GL means improve for some, maintain current state for others
- One guideline, several statistics or no statistic defined
- Limited data available (continuous measurements e.g. oxygen and temperature)
- Data gaps: Not every tributary has data on all attributes
- Guidelines not available / not developed yet
- Statistics to calculate guideline not defined

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- Fill in values for ‘maintain current’
- Update: More (better) guidelines available
- Update: More recent data 2014-2016 dataset
- Update: Gap sites have 3 full years dataset

→ Monster table!

		Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
Attribute	Value/guideline	Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Sediment - turbidity	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
Sediment - clarity	Trout fishery recreation	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve >1.6 m**	**improve >1.6 m**	**improve >1.6 m**
Deposited sediment	Waitangi/Ahuriri estuaries	maintain current	maintain current	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**
Algae - cover	Ecosystem health	maintain current	maintain current	maintain current	maintain current	**improve ≤ 40%**	maintain **≤ 40%**	n/a	n/a	n/a
Algae - cover	Recreation	maintain current	maintain current	**improve < 30%**	**improve < 30%**	**improve < 30%**	**improve < 30%**	n/a	n/a	n/a
Macrophyte volume	Ecosystem health	maintain current	maintain current	n/a	n/a	**improve ≤ 50%**	n/a	**improve ≤ 50%**	**improve ≤ 50%**	**improve ≤ 50%**
MCI	Ecosystem health	maintain current	maintain current	maintain current **>100**	maintain current **>100**	maintain current	maintain current	maintain current >80	**improve ≥80**	**improve ≥80**
DIN	Algal growth/ estuary	maintain current	maintain current	maintain current	maintain current	**improve <0.295** mg/L	**improve <0.295** mg/L	**improve <0.444** mg/L	**improve <0.444** mg/L	**improve <0.444** mg/L
DRP	Algal growth/ estuary	maintain current	maintain current	maintain current	maintain current	maintain current	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L	**improve <0.0.15** mg/L

Summary on desired states

Discussion table

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Sediment - turbidity (NTU)	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
Sediment - clarity (m)	Trout fishery recreation	≥ 5	≥ 5	**≥ 1.6**	≥ 1.6	≥ 1.6	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**
Deposited sediment	Waitangi/Ahuriri estuaries	maintain current	maintain current	improve	improve	improve	improve	improve	improve	improve
Algae - cover (% PeriWCC)	Ecosystem hea								n/a	n/a
Algae - cover (% PeriWCC)	Recreation	≤30	≤30	≤30	≤30	≤30	≤30	n/a	n/a	n/a
Macrophyte volume (% CAV	Ecosystem health	n/a	n/a	n/a	n/a	**(≤ 50)**	n/a	**≤ 50**	**≤ 50**	**≤ 50**
MCI	Ecosystem health	≥ 120	≥ 120	≥ 100	≥ 100	≥ 100	≥ 100	≥ 80*	**≥ 80***	**≥ 80***
DIN	Algal growth/ estuary	< 0.05	< 0.05	< 0.15	< 0.15	**< 0.3**	**< 0.3**	**< 0.444**	**< 0.444**	**< 0.444**
DRP	Algal growth/ estuary	<0.003	<0.003	<0.015	<0.015	<0.015	**<0.015**	**<0.015**	**<0.015**	**<0.015**

White: all SOE sites meet GL = maintain
Grey: One or more SOE sites don't meet GL

Summary on desired states

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Sediment - turbidity (NTU)	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
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Deposited sediment	Waitangi/Ahuriri estuaries	maintain current	maintain current	improve	improve	improve	improve	improve	improve	improve
Algae - cover (% PeriWCC)	Ecosystem health	≤20	≤20	≤40	≤40	**≤40**	≤40	n/a	n/a	n/a
Algae - cover (% PeriWCC)	Recreation	≤30	≤30	**≤30**	**≤30**	**≤30**	**≤30**	n/a	n/a	n/a
Macrophyte volume (% CAV	Ecosystem health	n/a	n/a	n/a	n/a	**(≤ 50)**	n/a	**≤ 50**	**≤ 50**	**≤ 50**
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DIN	Algal growth/ estuary	< 0.05	< 0.05	< 0.15	< 0.15	**< 0.3**	**< 0.3**	**< 0.444**	**< 0.444**	**< 0.444**
DRP	Algal growth/ estuary	<0.003	<0.003	<0.015	<0.015	<0.015	**<0.015**	**<0.015**	**<0.015**	**<0.015**

Clarity AND turbidity necessary?

No guidelines yet

Summary on desired states

Whanawhana d/s of Taruarau, Kuripapango is a NIWA site

		Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Attribute	**Value/guideline**									
Sediment - turbidity (NTU)	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
Sediment - clarity (m)	Trout fishery recreation	≥ 5	≥ 5	**≥ 1.6**	≥ 1.6	≥ 1.6	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**
Deposited sediment	Waitangi/Ahuriri estuaries	maintain current	maintain current	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**	**improve**
Algae - cover (% PeriWCC)	Ecosystem health	≤20	≤20	≤40	≤40	**≤40**	≤40	n/a	n/a	n/a
Algae - cover (% PeriWCC)	Recreation	≤30	≤30	**≤30**	**≤30**	**≤30**	**≤30**	n/a	n/a	n/a
Macrophyte volume (% CAV	Ecosystem health	n/a	n/a	n/a	n/a	**(≤ 50)**	n/a	**≤ 50**	**≤ 50**	**≤ 50**
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Summary on desired states

Attribute	Value/guideline	Zone 1 Upper catchments: Ngaruroro	Zone 1 Upper catchments: Tutaekuri	Zone 2 Mid-low main stem: Ngaruroro mid - low	Zone 2 Mid-low main stem: Tutaekuri mid - low	Zone 3 Hill country tributaries: Ngaruroro	Zone 3 Hill country tributaries: Tutaekuri	Zone 4 Lowland tributaries: Ngaruroro	Zone 4 Lowland tributaries: Karamu	Zone 4 Lowland tributaries: Ahuriri
Sediment - turbidity (NTU)	Trout fishery ANZECC	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	maintain current	**improve ≤ 5.6 NTU**
Sediment - clarity (m)	Trout fishery recreation	≥ 5	≥ 5	**≥ 1.6**	≥ 1.6	≥ 1.6	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**	**≥ 1.6**

TANK 33 decision: maintain current

ANZECC / RRMP recreation
All flows → improve

Summary on desired states

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
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Algae - cover (% PeriWCC)	Recreation	≤30	≤30	**≤30**	**≤30**	**≤30**	**≤30**	n/a	n/a	n/a

- Data update 2013-16
- Tutaekuri: small gravel at SOE sites

Summary on desired states

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- New guidelines (Matheson *et al.*): related to algal cover (PeriWCC),

  → risk of algae to reach 30% cover

- Better related to algal growth attribute

Summary on desired states

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DRP	Algal growth/ estuary	<0.003	<0.003	<0.015	<0.015	<0.015	**<0.015**	**<0.015**	**<0.015**	**<0.015**

- No nutrient concentration guideline related to macrophyte growth
- Nutrient management for estuary: no guidelines either

→ ANZECC, RRMP guidelines to be used until estuarine trigger values available

Summary on desired states

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
Macrophyte volume (% CAV	Ecosystem health	n/a	n/a	n/a	n/a	**(≤ 50)**	n/a	**≤ 50**	**≤ 50**	**≤ 50**

- Maraekakaho at Kereru road: should be algae on gravel bed

  → switches between algae and macrophytes or both

Summary on desired states

Attribute	Value/guideline	Zone 1 Upper catchments		Zone 2 Mid-low main stem		Zone 3 Hill country tributaries		Zone 4 Lowland tributaries		
		Ngaruroro	Tutaekuri	Ngaruroro mid - low	Tutaekuri mid - low	Ngaruroro	Tutaekuri	Ngaruroro	Karamu	Ahuriri
MCI	Ecosystem health	≥ 120	≥ 120	≥ 100	≥ 100	≥ 100	≥ 100	≥ 80*	**≥ 80***	**≥ 80***

- TANK 33: maintain current
- MCI slightly below in Ngaruroro (95/99)
- MCI below in Tutaekuri (86/92)
- Hill country tributaries Ngaruroro: only Maraekakaho <100

Proposal: Attribute States

Objectives for attribute states as provided in spreadsheet

1. Do you agree with the attributes states as out-lined?

or

2. Agree but with conditions?
3. Do you disagree ? – why

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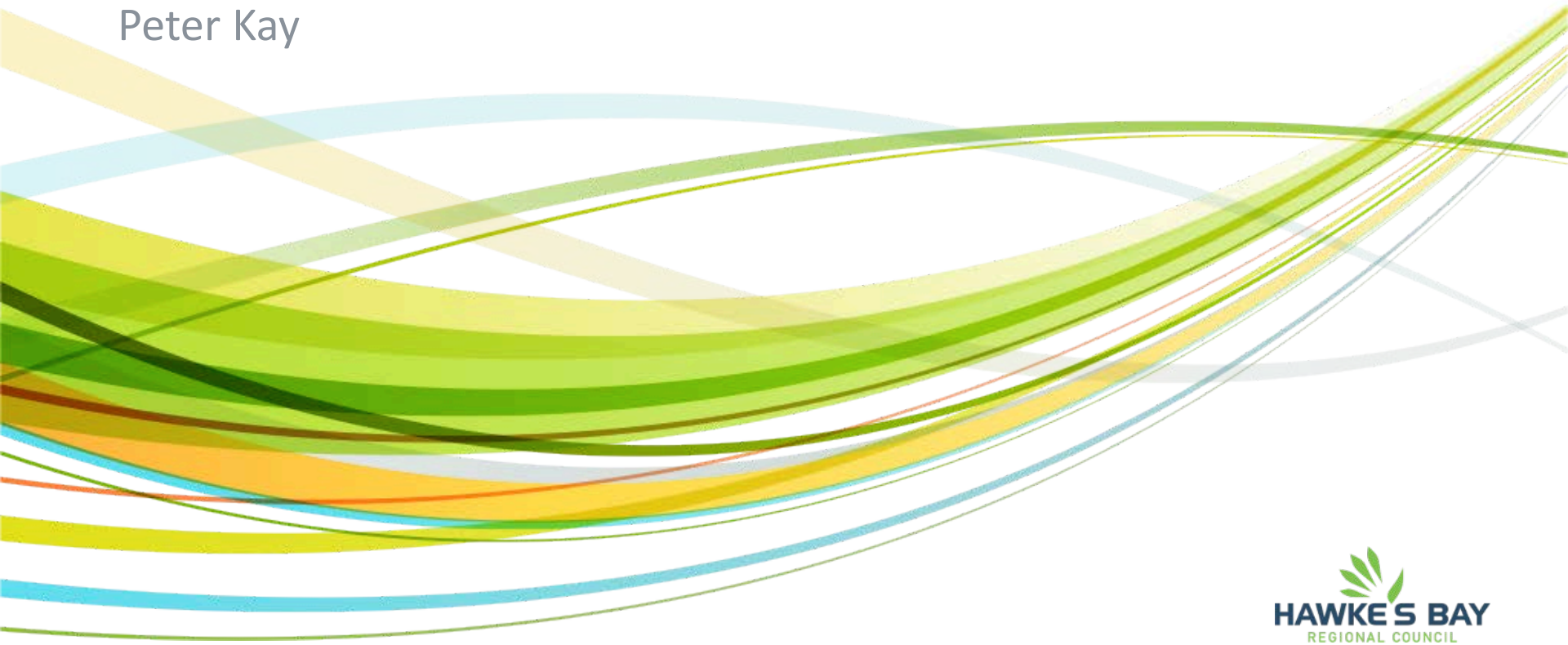
Farmer Reference Group – Management Framework Proposal

Peter Kay



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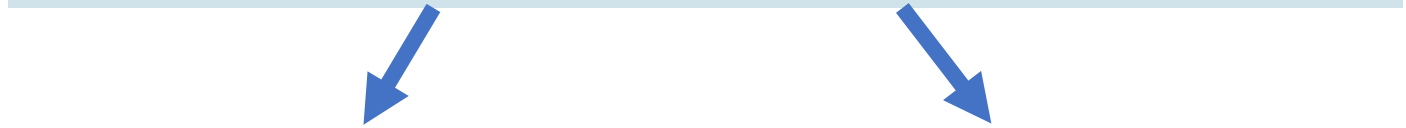
TANK Nutrient and Sediment Management Proposal



Collective/Industry Approach

Permitted

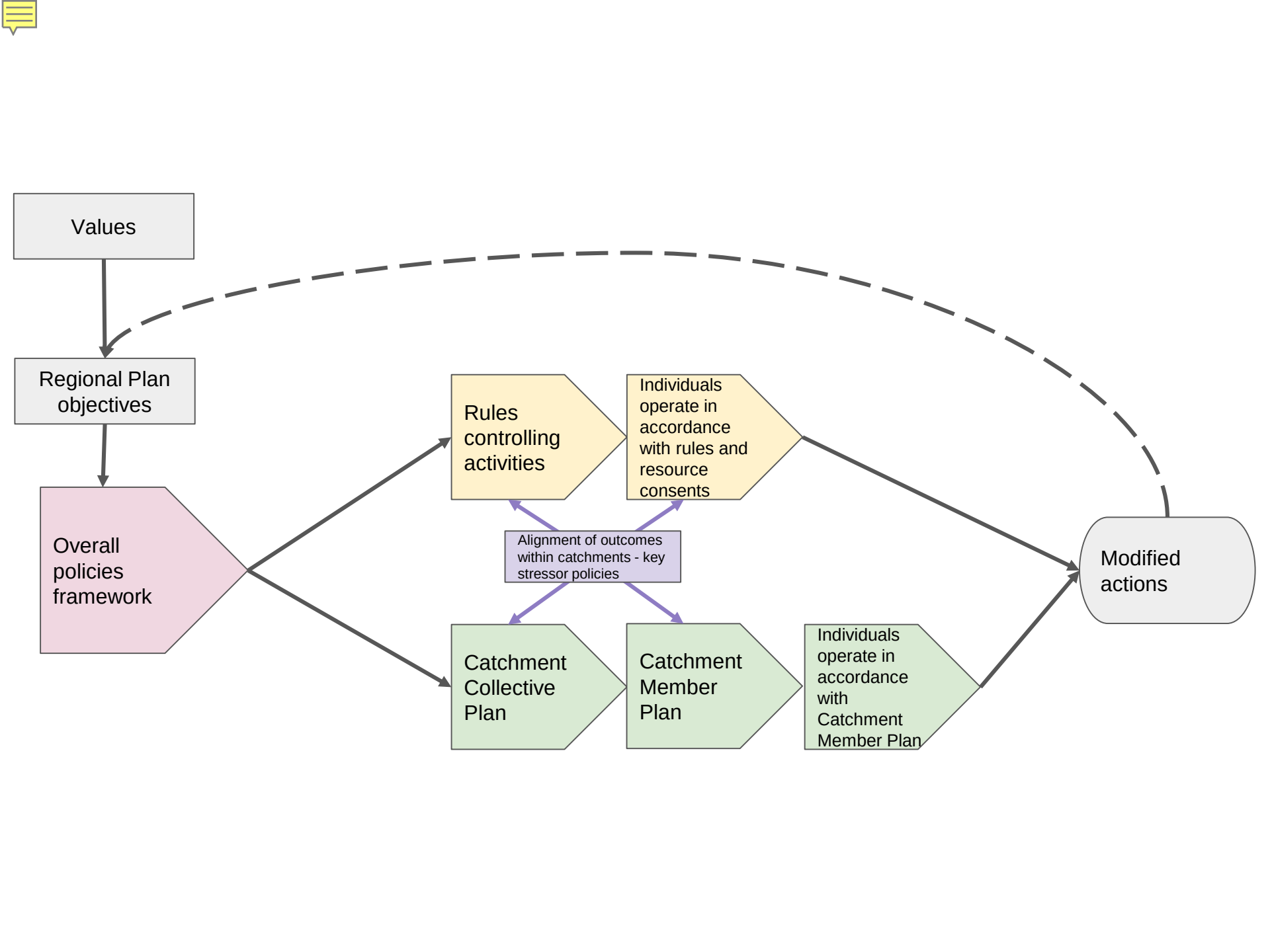
- Collective Identifies Water Quality Issues & Develops Plan to address issues
- Council Approves the Plan
- Collective Implements and Reports on Progress
- Programme and implementation audited (Council or third party)
- Collective Reviews Plan

Adaptive, flexible innovative

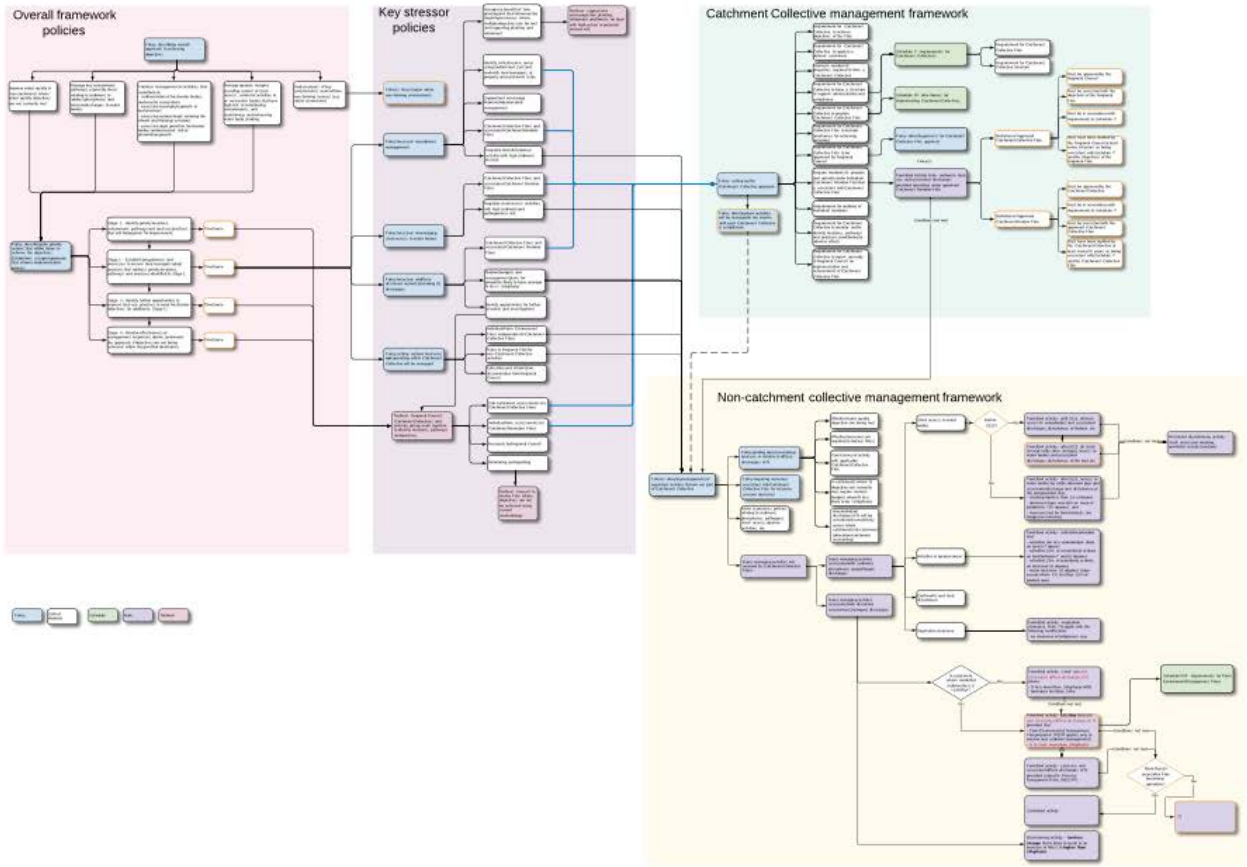
Individual Approach

Controlled

- Consent with conditions
- Rules – stock exclusion Setbacks, cultivation
- Monitoring and compliance by Council


Values
Regional Plan objectives
Overall policies framework
Rules controlling activities
Individuals operate in accordance with rules and resource consents
Alignment of outcomes within catchments - key stressor policies
Catchment Collective Plan
Catchment Member Plan
Individuals operate in accordance with Catchment Member Plan
Modified actions

Farmer Reference Group Draft Strawman Policy Framework



Big-picture - Key Features

- Builds on collaborative model for implementation
- Obligations are specified;
  - Meeting water quality objectives specified at sub-catchment level
  - Membership of programme or farm plan
  - Rules for specific activities
- Council approval of catchment and farm plans
- Priority approach
  - Targeted catchments
  - Key stressors/pathways

Big-picture

Key features:

- Milestones specified for plans and implementation
  - Reporting on implementation of programmes
  - Related to plan timeframes
- Monitoring at catchment scale
- Auditing required
- Allows for innovation/flexibility to meet objectives

Proposal: Management Framework

Do you agree with the management framework as presented by the pastoral Framer Reference Group - including provisions for nutrient and riparian land management for other land uses?

1. Do you agree with the framework as out-lined?

or

2. Agree but with conditions?
3. Do you disagree ? – why

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Discussion Paper:
Reducing Nutrient Losses to Water, Water Quality Attribute States

Do you have feedback or questions in relation to the discussion paper?

1. Do you agree with the conclusion reached?

or

2. Agree but with conditions?
3. Do you disagree ? – why

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Next meeting – 15 May 2018

Economic Assessment
- Low Flow Trigger
- Mitigation Measures

Report back from Drinking Water Group

Tutaekuri Values

Draft Plan & Rules (Implementation plan)

Social & Cultural Impact Assessment

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Closing Karakia

Nau mai rā

Te mutu ngā o tatou hui

Kei te tumanako

I runga te rangimarie

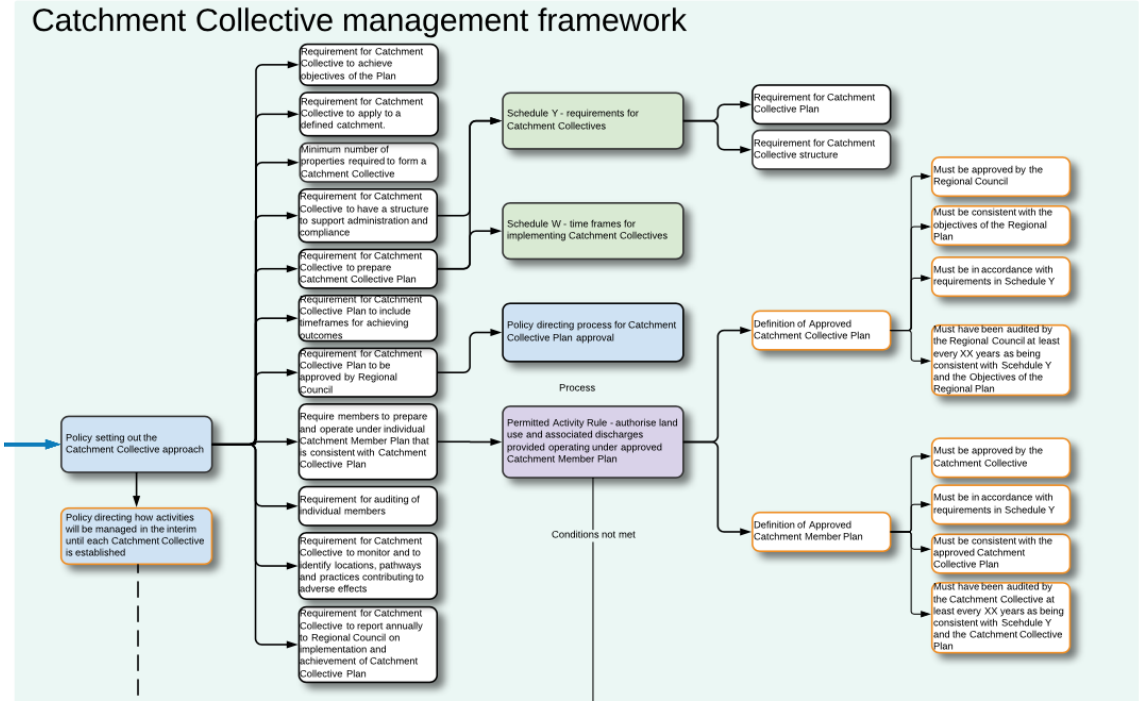
I a tatou katoa

Kia pai to koutou haere

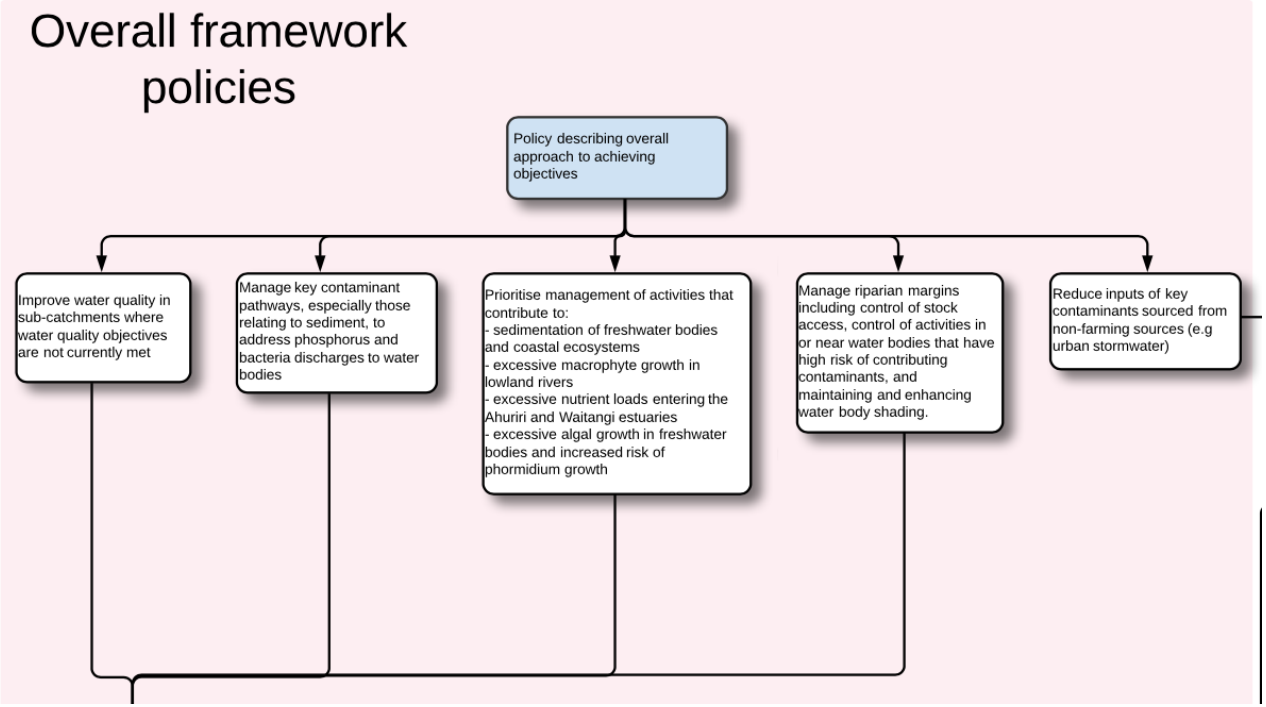
Mauriora kia tatou katoa

Āmine

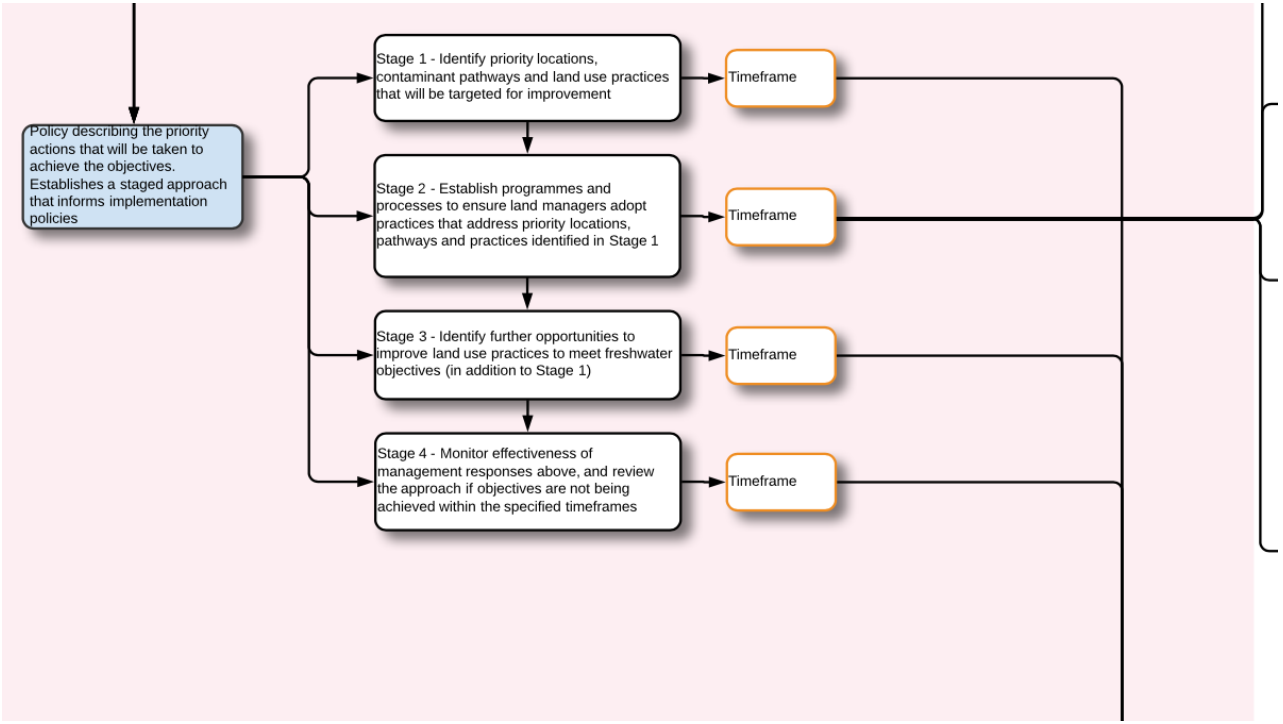
Catchment collective framework



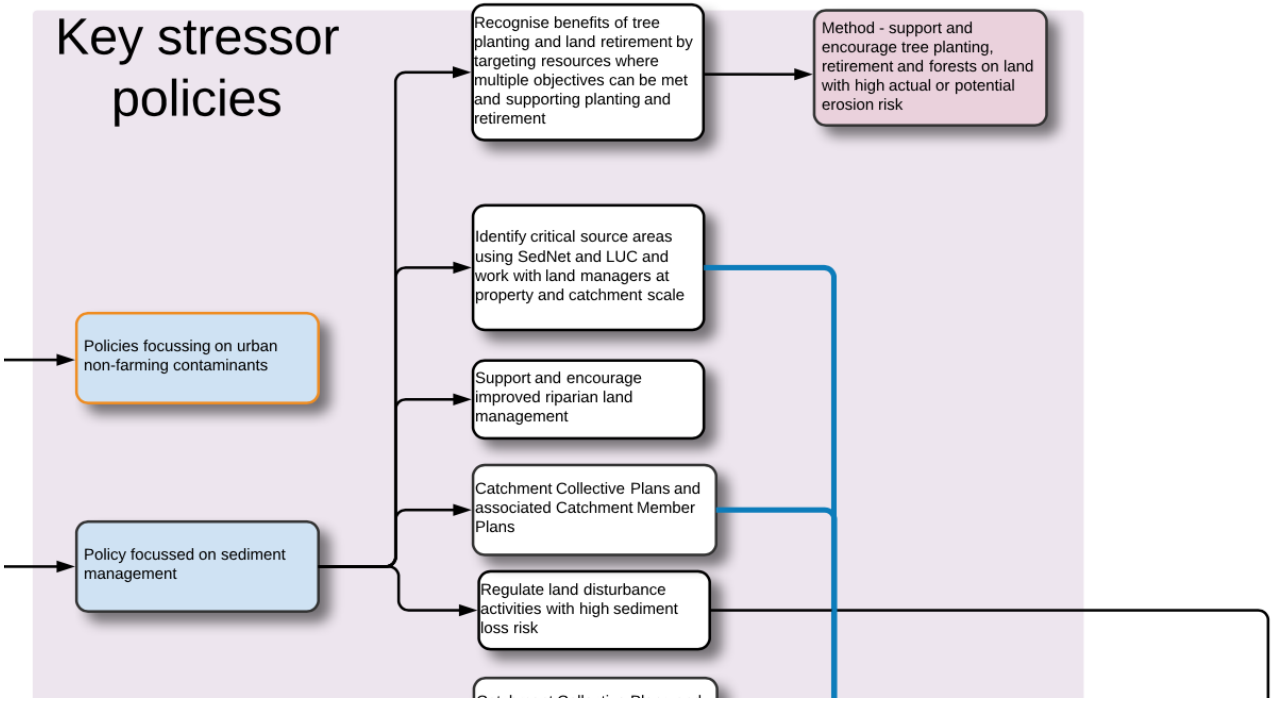
Overall management approach



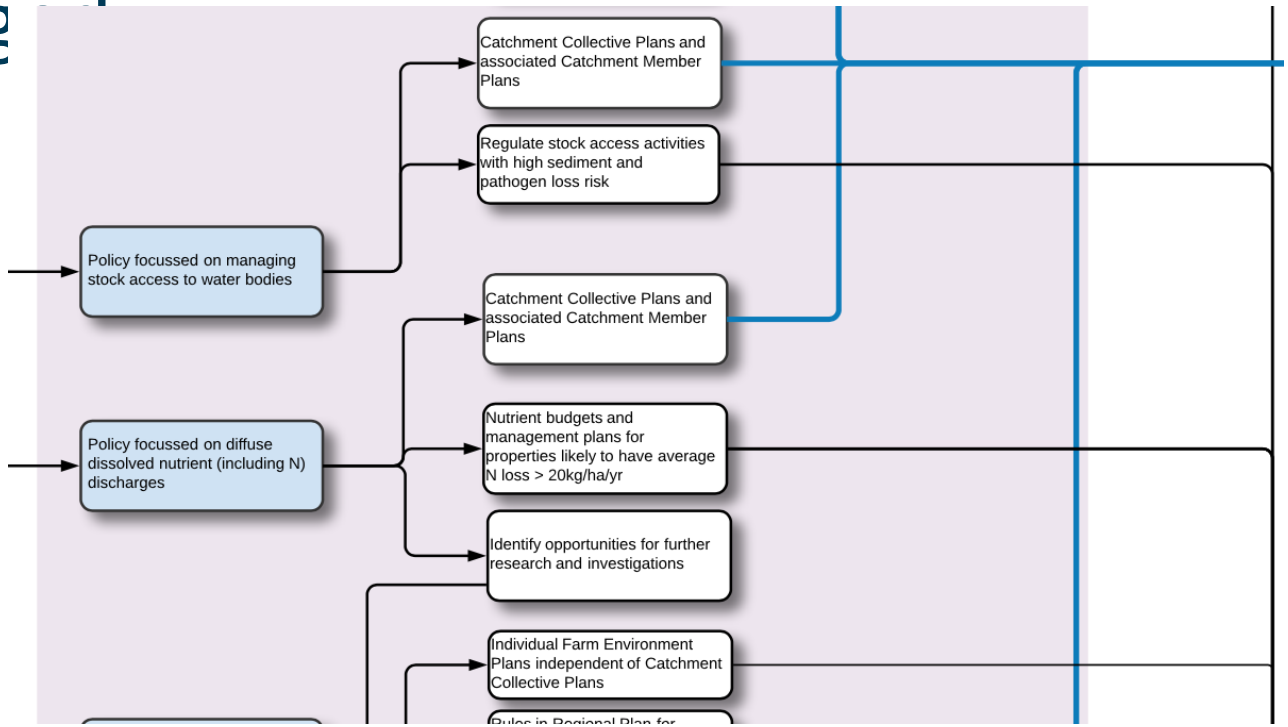
A staged approach



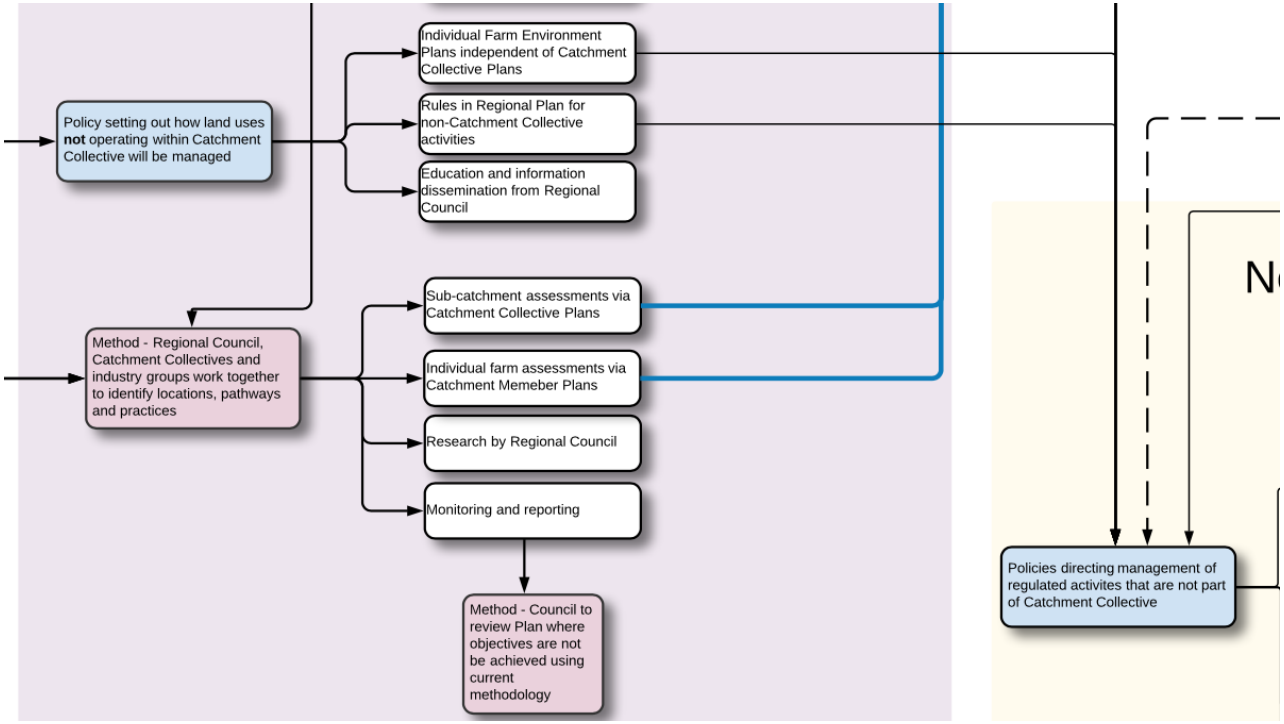
How will sediment discharges be managed



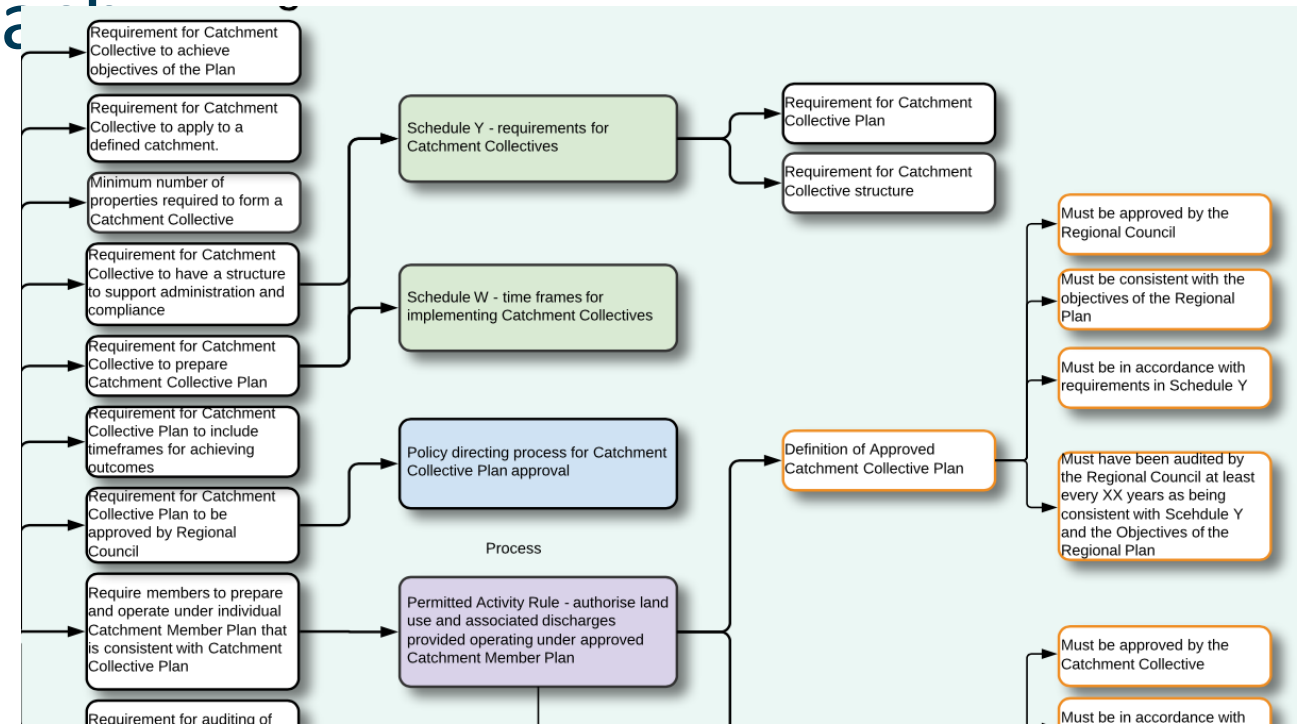
How will stock access and Nitrogen be manag



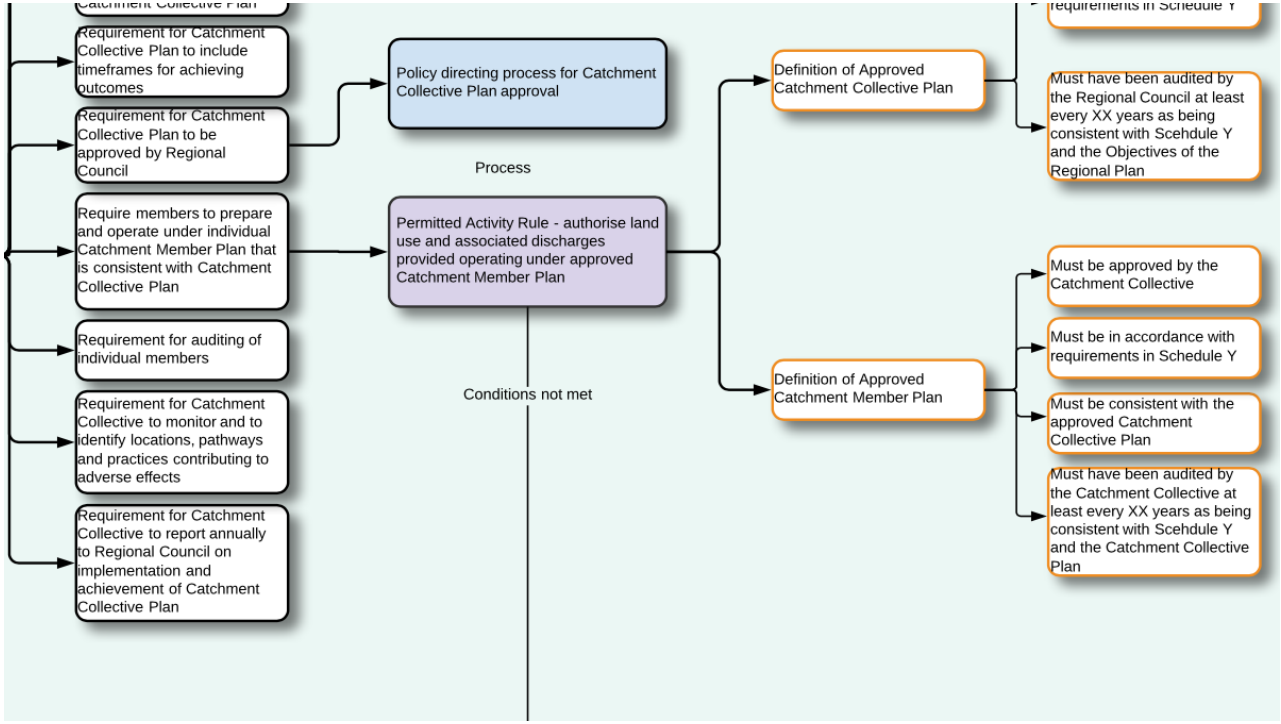
Non-catchment collective activities



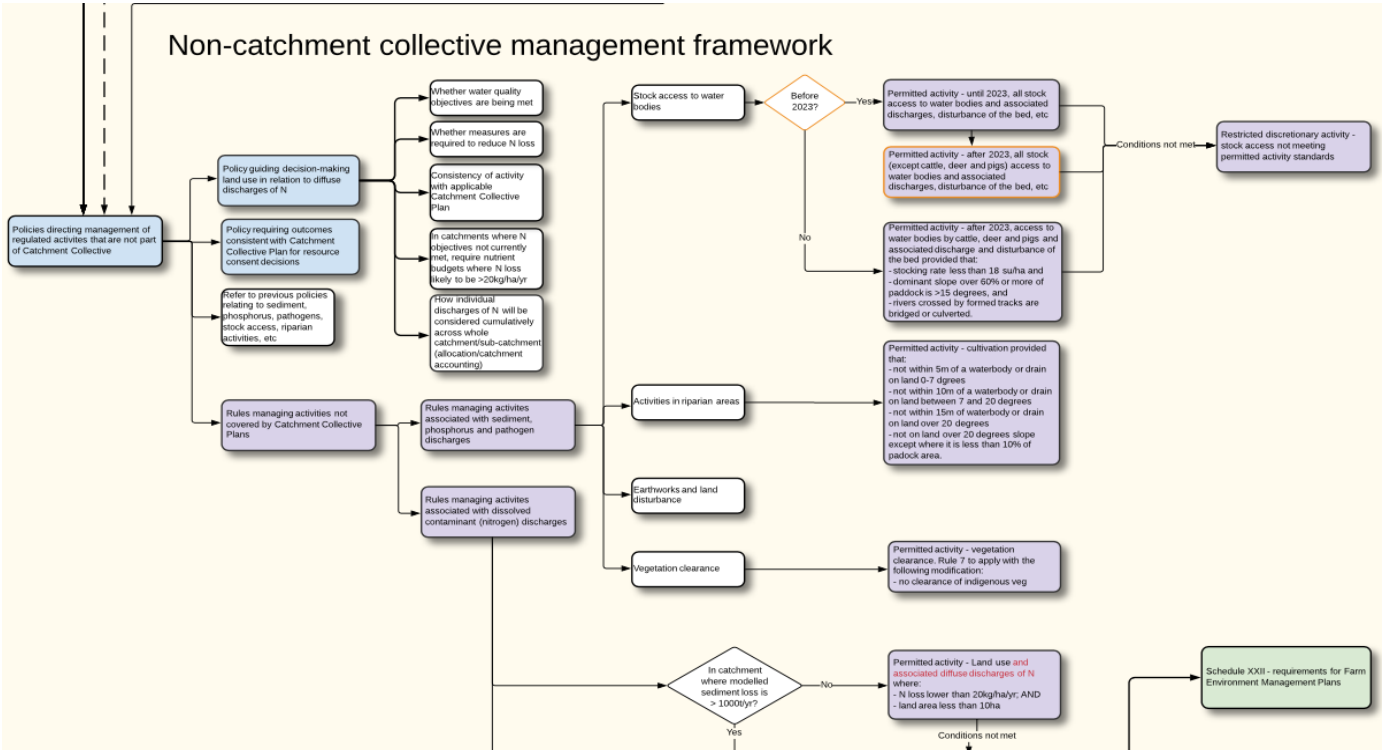
Key components of Catchment Collective approa



Key components continued…



Non-catchment collective approach - regulation



Nitrogen management approach