

TOOLS FOR IMPLEMENTING THE FRESHWATER REFORMS



Second National Symposium 5th September 2016

Royal Society, Wellington



What to Expect from the Day

Chance to LEARN

Learn more about collaborative processes & science to underpin them

Learn more about our research

Chance to ENGAGE

Talk to others already on this journey

Ask questions

Engage with others around this topic



Values, Monitoring & Outcomes

Fresh Water:

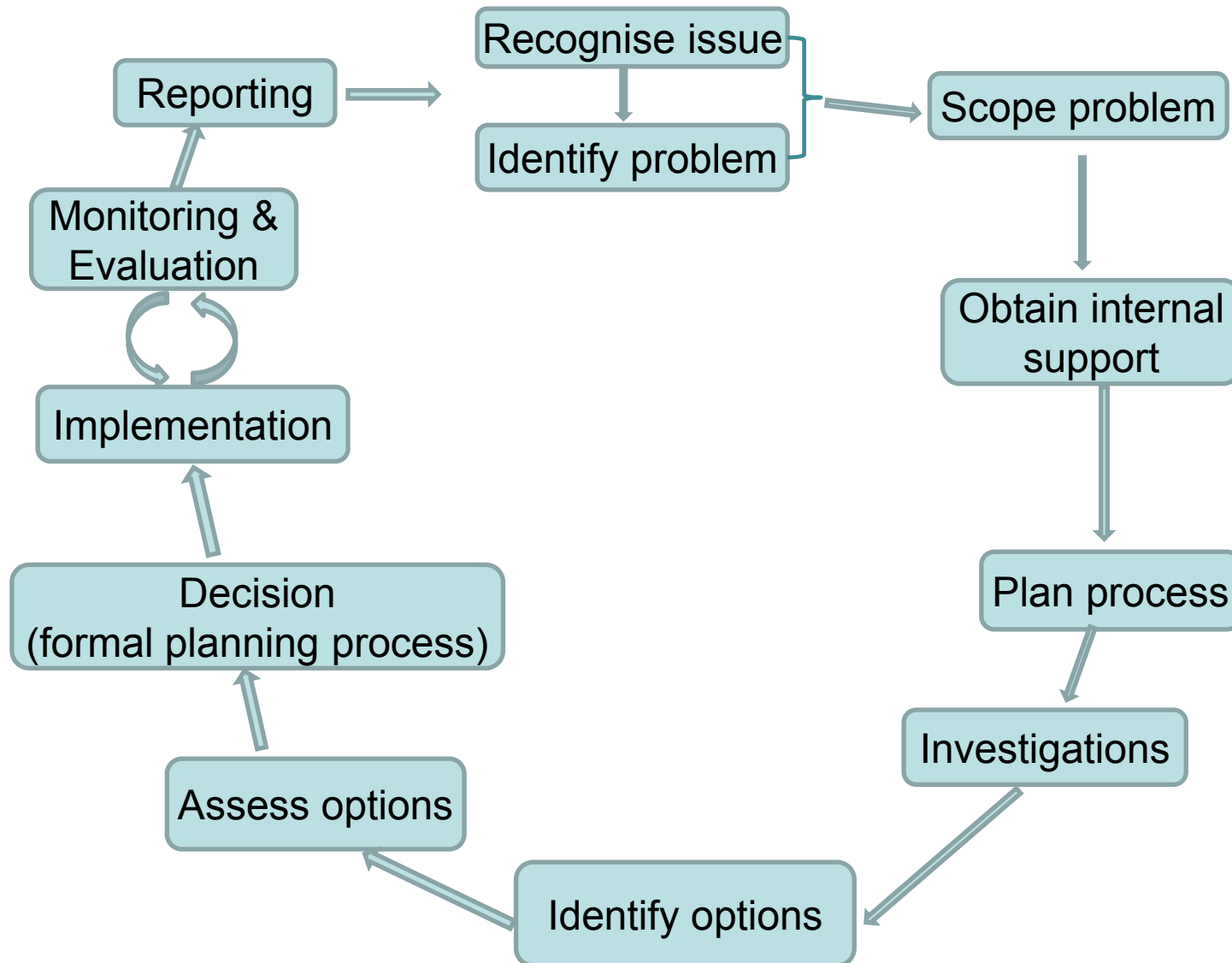
Many stakeholders, divergent views & competition for use

 conflicted decision making

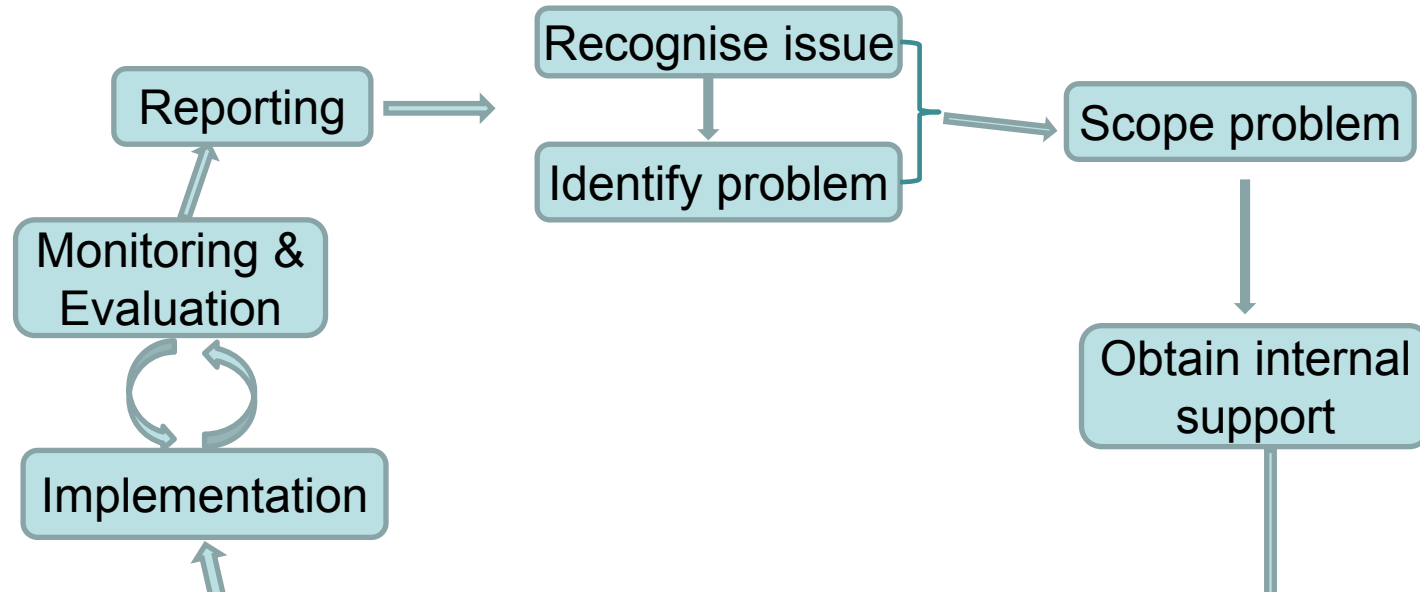
Three barriers

- Inconsistent methods to understand & balance competing resource demands (“values”)
- Gaps between monitoring & our ability to report progress against agreed outcomes
- Lack of tools to design effective policies, evaluate & communicate their effectiveness to adaptively manage

Decision-making cycle



Decision-making cycle





Role of Councils in Collaborative Processes

RECOMMENDATIONS
Regional councils hold a number of roles within a collaborative process. Articulation of these roles is necessary to ensure council staff and stakeholders understand when and what roles are being undertaken at any time. We offer the following recommendations for how councils can manage the many tensions between the various roles they can play in collaborative processes.

1.1.1.1 The role of leader should be filled by a councillor or senior staff member who champions the collaborative process, secures a mandate and resources and has sufficient authority to keep the process on track and the participants around the table. An effective leader is committed to finding an outcome that reflects a genuine consensus rather than a particular interest.

1.1.1.2 The role of facilitator should be filled by a senior staff member who oversees the collaborative process, secures a mandate and resources and has sufficient authority to keep the process on track and the participants around the table. An effective leader is committed to finding an outcome that reflects a genuine consensus rather than a particular interest.

Māori & Collaborative Planning



KEY POINTS
The Treaty of Waitangi of 1840 underpins legislation aimed at and used by the Bay of Plenty to ensure partners with regard to collaborative planning and decision-making processes.

It is recommended that, with consultation of collaborative planning partners, Māori be invited to support the development of a 'Tea' partner to bring the Council as a representative of Māori partners to the table. This would be involved in the selection of members, setting the terms of reference, ensuring opportunities for Māori to be heard, and ensuring that the process is transparent and that it can be identified as the basis for subsequent collaborative decisions.

Māori interests are not limited to 'cultural values'. Māori have unique rights and interests arising from the Treaty relationship that can be identified as the basis for subsequent collaborative decisions.

Collaborative processes will not always be the best way to take decisions. Where Māori are not directly involved in the process through traditional decision-making processes.



Evaluating processes

INTRODUCTION
Collaborative processes are being provided as an alternative decision-making process for complex freshwater resource issues. This is a new way of working that involves multiple stakeholders in a shared decision-making process. It is important to identify and evaluate the strengths and weaknesses of collaborative processes to ensure they are used effectively and to provide feedback for future use of the collaborative process.

WHY EVALUATE?
Collaborative processes are being provided as an alternative decision-making process for complex freshwater resource issues. This is a new way of working that involves multiple stakeholders in a shared decision-making process. It is important to identify and evaluate the strengths and weaknesses of collaborative processes to ensure they are used effectively and to provide feedback for future use of the collaborative process.



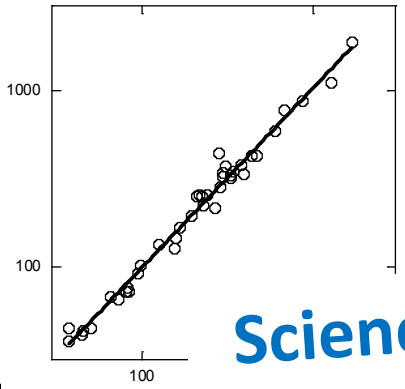
KEY POINTS
Structured Decision Making (SDM) provides a clear framework to identify values that relate to each water body and assess the consequences of alternative policy options.

SDM provides a clear framework for the consideration of alternatives, benefits and costs required by sections of the Resource Management Act.

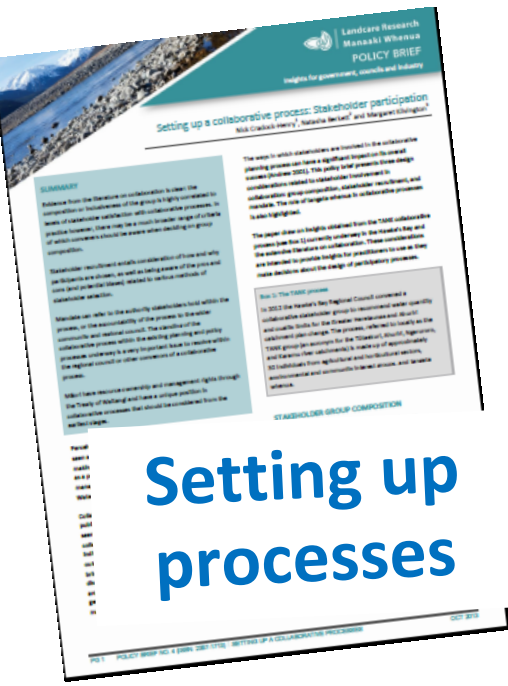
In SDM, all values are equally legitimate. The balancing process is left to the end so that participants can see clearly what the outcomes are.

SDM is a transparent and consistent process. Using SDM will take the time to ensure that participants can see clearly what the outcomes are.

Structured Decision Making for Collaborative Planning



Science & processes



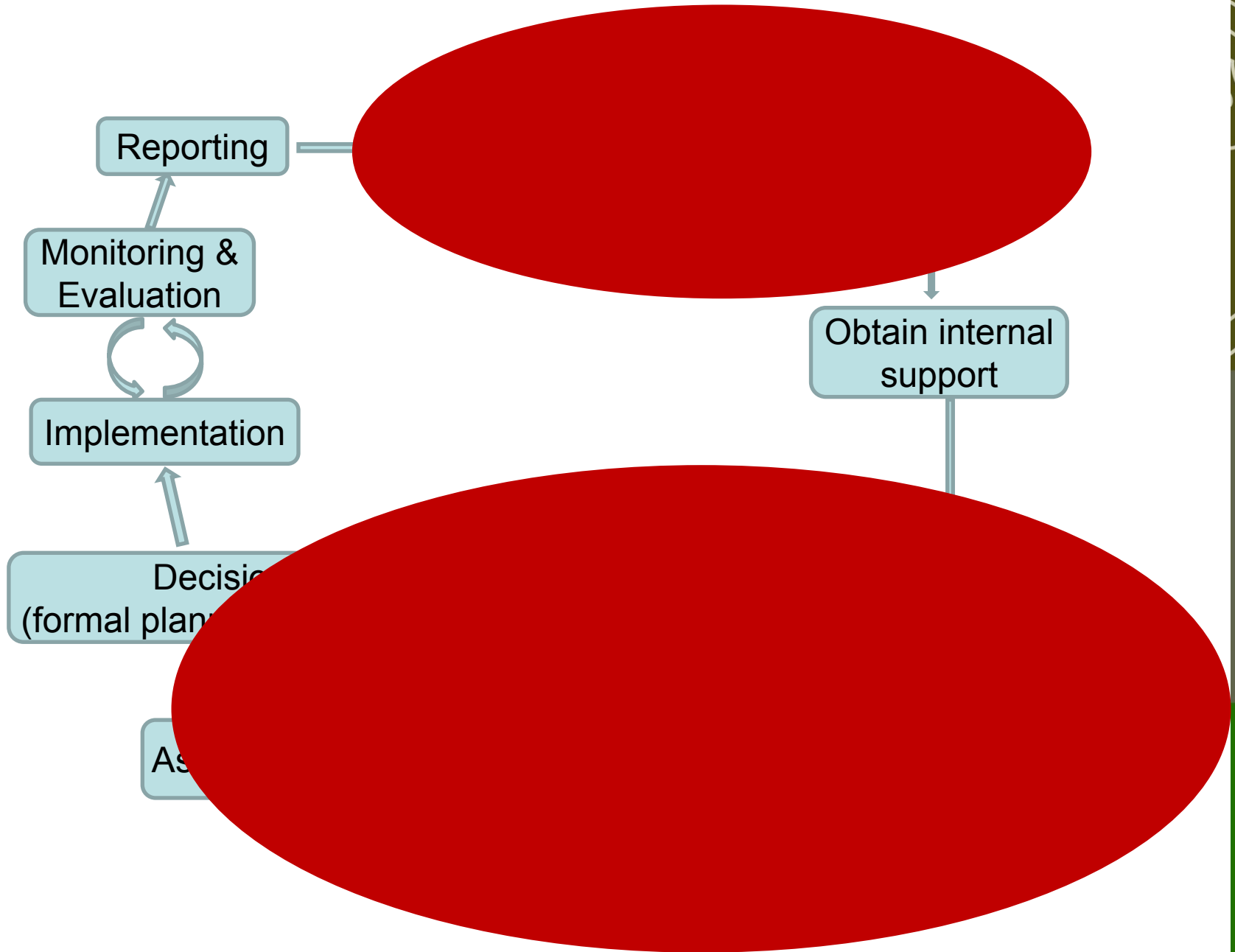
Setting up collaborative processes

INTRODUCTION
The aim of this document is to provide guidance on how to set up collaborative processes for freshwater resource management. It is intended to be used by regional councils and other stakeholders involved in collaborative processes.

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Decision-making cycle



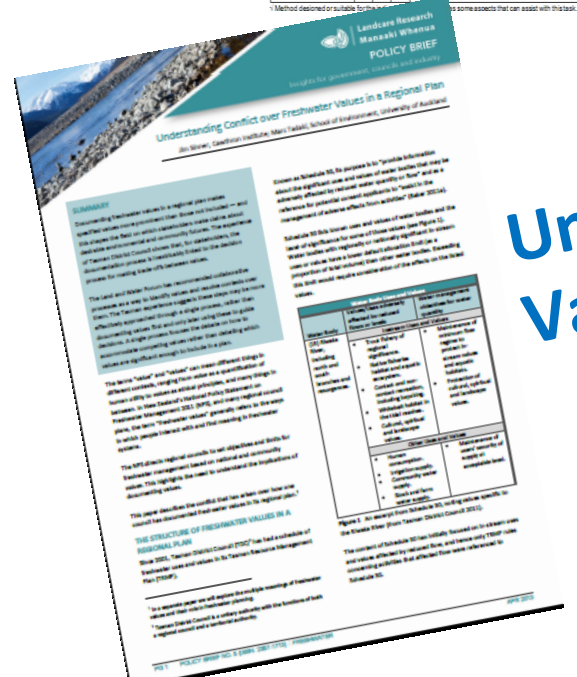
Tools for Working with Values



REPORT NO. 2569
TOOLS FOR WORKING WITH FRESHWATER VALUES

Table 1. Suitability of methods for identifying (I), understanding (U), assessing (A) and balancing (B) freshwater values.

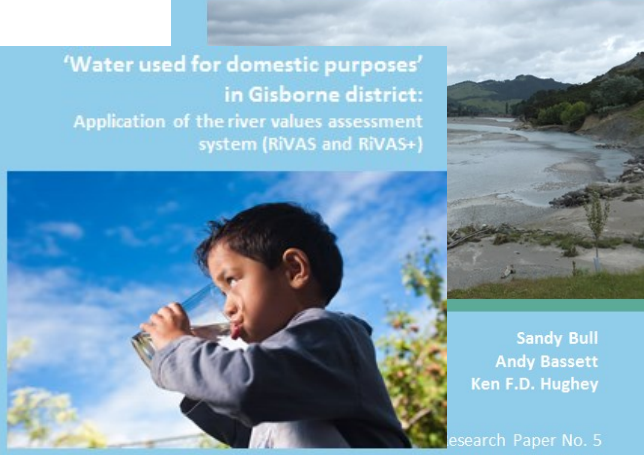
| Method | I | U | A | B | Notes |
|--|---|---|---|---|--|
| Participatory values mapping | ✓ | ✓ | | | Enables wide input, representative sample difficult, interest groups may try to influence results. |
| Watershed Talk | ✓ | ✓ | ✓ | | Top formal groups build understanding of alternative views. Good to use for water groups. |
| The Nature Step's ABCD method | ✓ | | ✓ | ✓ | Used to develop vision and action plan. Works best when participants have shared goals. |
| Foresight engine | ✓ | | ✓ | | Values are implicit. Largely untested as a tool for balancing values or achieving consensus. |
| 100% Pure Conjecture | ✓ | | ✓ | | Values are implicit. Largely untested as a tool for balancing values or achieving consensus. |
| Consentation modeling- Zonation | | ✓ | ✓ | | Developed for aquatic biodiversity only. |
| Bayesian networks | ✓ | ✓ | | ✓ | Can be simple or complicated. Work can be done as part of scientific investigations for plan change. |
| Decision Support system: UPLIFT | ✓ | ✓ | | | Designed for urban setting. Would need resources to adapt for other areas. |
| Decision Support system: WISE | ✓ | ✓ | | | Would need resources to adapt for other areas. Can be part of science for plan change. |
| Medical modeling | ✓ | ✓ | | | Needs resources, medical facilities as part of scientific investigations for plan change. |
| River Values Assessment System (RiVAS) | ✓ | ✓ | ✓ | ✓ | Use to assess rivers for specific values. Quick and inexpensive. Categories involve simplification. |
| Total economic value | ✓ | | ✓ | ✓ | Framework with categories of values for assessment using specific valuation methods. |
| Ecosystem services | ✓ | | ✓ | ✓ | Framework with categories of values for assessment using specific valuation methods. |
| Cost benefit analysis (CBA) | | ✓ | ✓ | ✓ | For a limited number of policy alternatives, where most values can be estimated in financial terms. |
| Market valuation | | ✓ | ✓ | ✓ | For market goods and services, e.g. as a component of CBA. |
| Revealed preference | | ✓ | ✓ | ✓ | For sites with features that influence financial decisions, e.g. as a component of CBA. |
| Stated preference | ✓ | ✓ | ✓ | ✓ | Can be used with CBA for non-market goods and services where values are pre-formed and stable. |
| Benefit transfer, e.g. (DSEI) | | ✓ | ✓ | ✓ | When estimates of local values are not available and resources for original study not available. |
| Hai | ✓ | ✓ | ✓ | ✓ | Consult tangata whenua regarding local protocols (see Glossary for definition of Maori terms). |
| Structured decision making | ✓ | ✓ | ✓ | ✓ | Comprehensive, complemented by other methods when dealing with complex systems. |
| Maatiki/tee | ✓ | ✓ | ✓ | ✓ | Complements other methods, e.g. expert modeling and structured decision making. |
| Subjective multi-criteria evaluation | ✓ | ✓ | ✓ | ✓ | Comprehensive, can work with other methods. Uses weighting to resolve value differences. |



Understanding Values

RiVAS

Native birdlife in Gisborne District: Application of the river values assessment system (RiVAS and RiVAS+)



'Water used for domestic purposes' in Gisborne district: Application of the river values assessment system (RiVAS and RiVAS+)

Sandy Bull
 Andy Bassett
 Ken F.D. Hughey

Research Paper No. 5
 March 2012

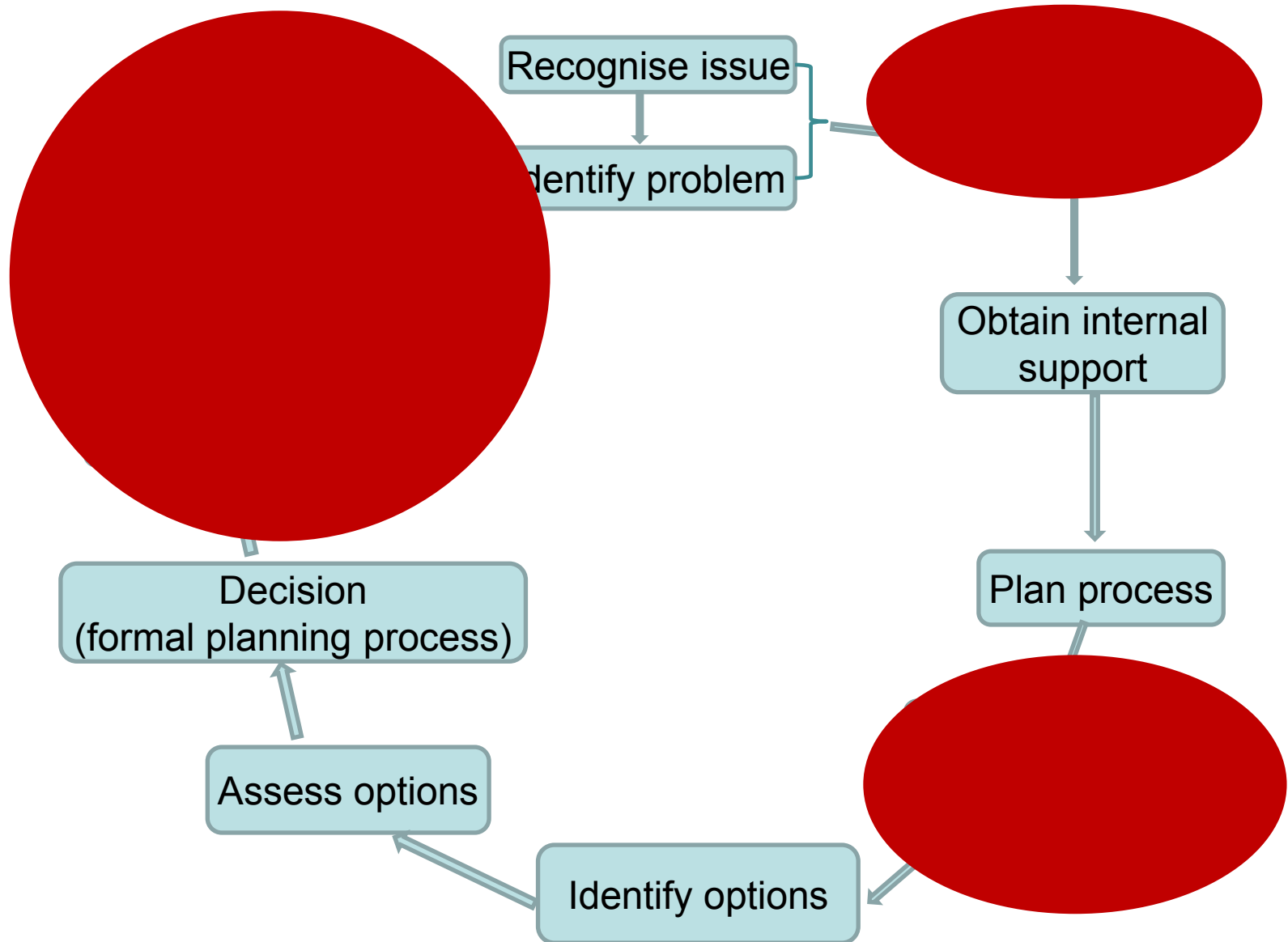
Peter Higgs
 Marcus Koll
 Dennis Crone
 Judith Robertson
 Keriana Wilcox-Taylor
 Bruce Duncan
 Ken F.D. Hughey

LEaP Research Paper No. 11
 May 2012



Maori values & perceptions

Decision-making cycle



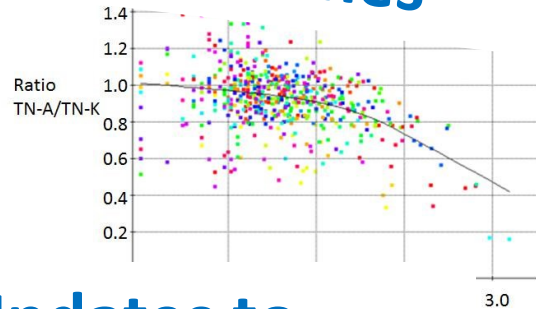
Water quality trends in New Zealand rivers: 1989–2009

Deborah J. Ballantine • Robert J. Davies-Colley

Community monitoring



New statistical approaches



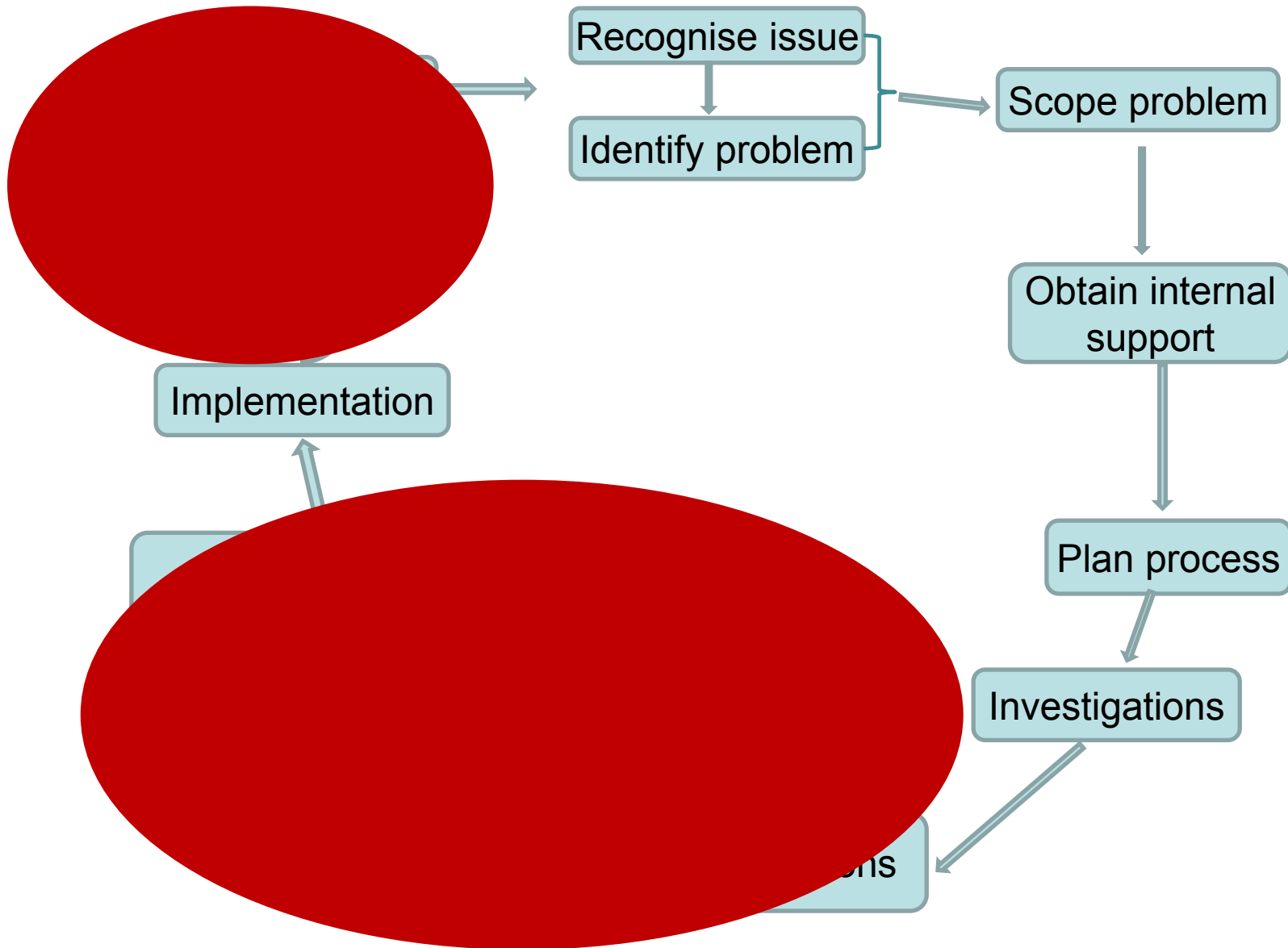
Updates to Time Trend tool

Rural Decision Makers
SUR✓EY2015



National Environmental Monitoring and Reporting

Decision-making cycle





KEY FINDINGS

The current 'first-come, first-served' approach to allocating nutrient loading between sources is inefficient and inequitable. It does not consider the different characteristics of different sources and the different benefits of different loading levels. A more equitable and efficient approach would be to allocate loading based on the relative benefits of different loading levels, taking into account the different characteristics of different sources and the different benefits of different loading levels.

Sharing the Pie: The dilemma of allocating nutrient loading between sources

Subir K. Kundu, Alan Dagnall and Charis Nematollahi

BACKGROUND

The National Policy Statement for Freshwater Management (NPS-FM) provides a framework for freshwater management in New Zealand. It sets out the objectives and principles for freshwater management and provides a framework for the allocation of freshwater resources. The NPS-FM is a key piece of legislation that governs freshwater management in New Zealand.

There are two main sources of nutrient loading: point sources and non-point sources. Point sources are sources where the discharge of nutrients is from a single, identifiable location. Non-point sources are sources where the discharge of nutrients is from a diffuse area, such as agricultural land. The NPS-FM requires that nutrient loading be managed in a way that protects the environment and provides for the sustainable use of freshwater resources.



Designing Policy to Change the Use of Natural Resources

POINTS

Designing policy with clarity and precision is a task. When it comes to complex policy, something is often unclear or ambiguous. This can be difficult to know where to start the policy design process. It is often not clear how to start the policy design process. It is often not clear how to start the policy design process. It is often not clear how to start the policy design process.

A design tool, the Policy Choice Framework, has been developed to help policy designers choose policy instruments to change the use of natural resources. The tool is based on a sound understanding of people's motivation in using natural resources and supports the second stage of policy design outlined in this policy brief.

INTRODUCTION

Defining an policy design with clarity and precision is a difficult task, even for professional experimental policy designers, primarily because, when it comes to design, everything is important and everything depends on everything else. This can make it difficult to know where to start the policy design process and how to start the policy design process.

There is a fundamental structure to policy problems: concerning the use of natural resources. This structure can be used to break the design process into three stages and to clarify the focus of each stage.

The three stages in designing policy to change the use of natural resources are: choosing the best use of resources, choosing an instrument to change use, and cost sharing. These stages feed into the policy design process, including collaborative processes, where deliberation can enrich each stage of the process.

Effective policy design is based on understanding why natural resources are used the way they are. The use of natural resources is generally a product of rational choice. However, rational choice is not always the best way to understand the collection of information to solve the problem and understand the collection of information to solve the problem.

Collaborative deliberation groups can help policy designers to understand the policy design space and to choose the best use of resources, choose an instrument to change use, and cost sharing.

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PG 1 POLICY BRIEF NO 11 2018

Performance Reporting Framework

TELLING THE PERFORMANCE STORY
POLICY PERFORMANCE MONITORING & REPORTING GUIDE
FOR FRESHWATER MANAGEMENT

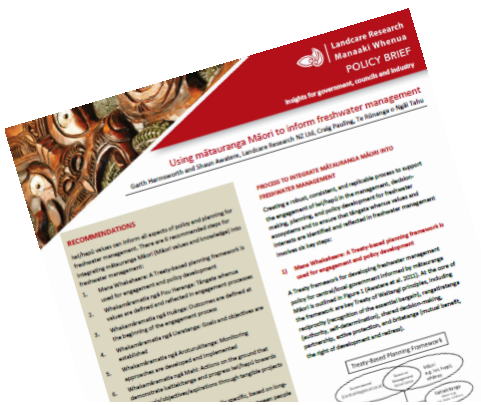


Steps to developing & monitoring the performance framework

- STEP 1.** Set the terms of reference & team
- STEP 2.** Define and describe the policies/programmes under evaluation
- STEP 3.** Verify the intervention logic of the policies/programmes
- STEP 4.** Populate the Order of Outcomes Framework
- STEP 5.** Undertake the baseline
- STEP 6.** Undertake the policy performance evaluation
- STEP 7.** Tell the performance story

Designing policy

Allocation



Using mātauranga Māori to inform freshwater management

Scott Matthews and Chanté Anderson, Landcare Research Ltd, Craig Parfitt, Te Whānau a Māori

RECOMMENDATIONS

1. The NPS-FM should include a specific objective to support mātauranga Māori in freshwater management. This objective should be to support mātauranga Māori in freshwater management.

PROCESSES TO ENGAGE MĀTAURANGA MĀORI INTO FRESHWATER MANAGEMENT

Creating a robust, consistent, and repeatable process to support mātauranga Māori in freshwater management is essential for freshwater management. This process should be based on the following principles:



A PRIMER ON THE POLICY CHOICE FRAMEWORK

Version 8.2

Mātauranga Māori for FW mgt

Policy Choice Framework

KEY CONTACTS



Landcare Research

Suzie Greenhalgh: greenhalghs@landcareresearch.co.nz

Cawthron

Jim Sinner: jim.sinner@cawthron.org.nz

NIWA

Rob Davies-Colley: r.davies-colley@niwa.co.nz

Geoff Kaine Research

Geoff Kaine: geoff@geoffkaineresearch.com

Lincoln University

Ken Hughey: [Ken.Hughey@lincoln.ac .nz](mailto:Ken.Hughey@lincoln.ac.nz)

Margaret Kilvington

Margaret Kilvington: Margaret.Kilvington@gmail.com

Web address

Search “VMO” on Landcare Research website or
www.landcareresearch.co.nz/science/portfolios/enhancing-policy-effectiveness/vmo

The logo for AQUALINC, featuring the word in a blue, 3D-style font with a shadow effect, set against a white background with a light blue border.

The “Wheel of Water”

A collaborative approach to Freshwater Management

GROUNDWATER

IRRIGATION

RESOURCE CONSENTS

LAND USE IMPACTS

WASTE TREATMENT

WATER MANAGEMENT

Sep 5th, 2016

Presenter / **John Bright**

WoW Research Programme

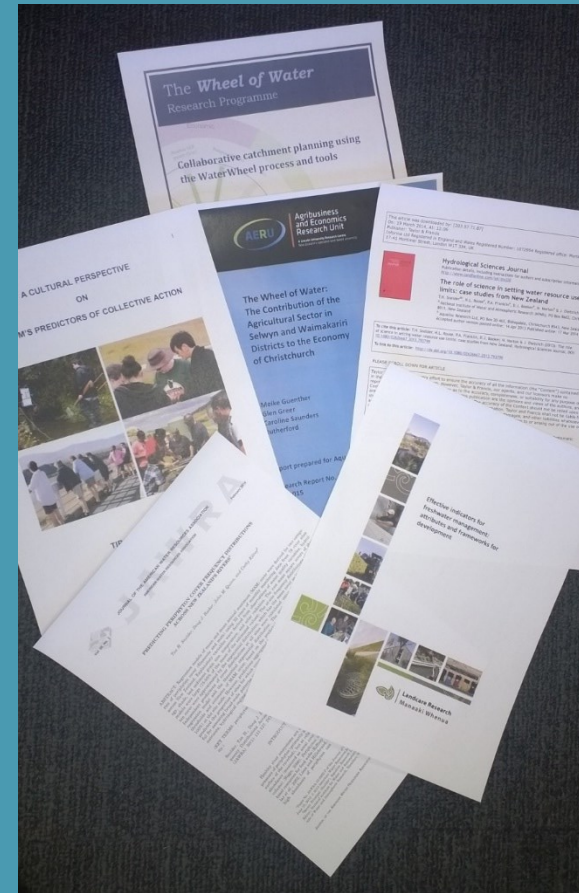


- Aims to improve decision making processes that set standards and limits for water flows and water quality.
- Processes and tools that help stakeholders to:
 - Work with whole system
 - Better visualise the System
 - Visualise interactions between values
 - Be adaptive (plan, act, reflect, re-plan)

Scope of WoW programme



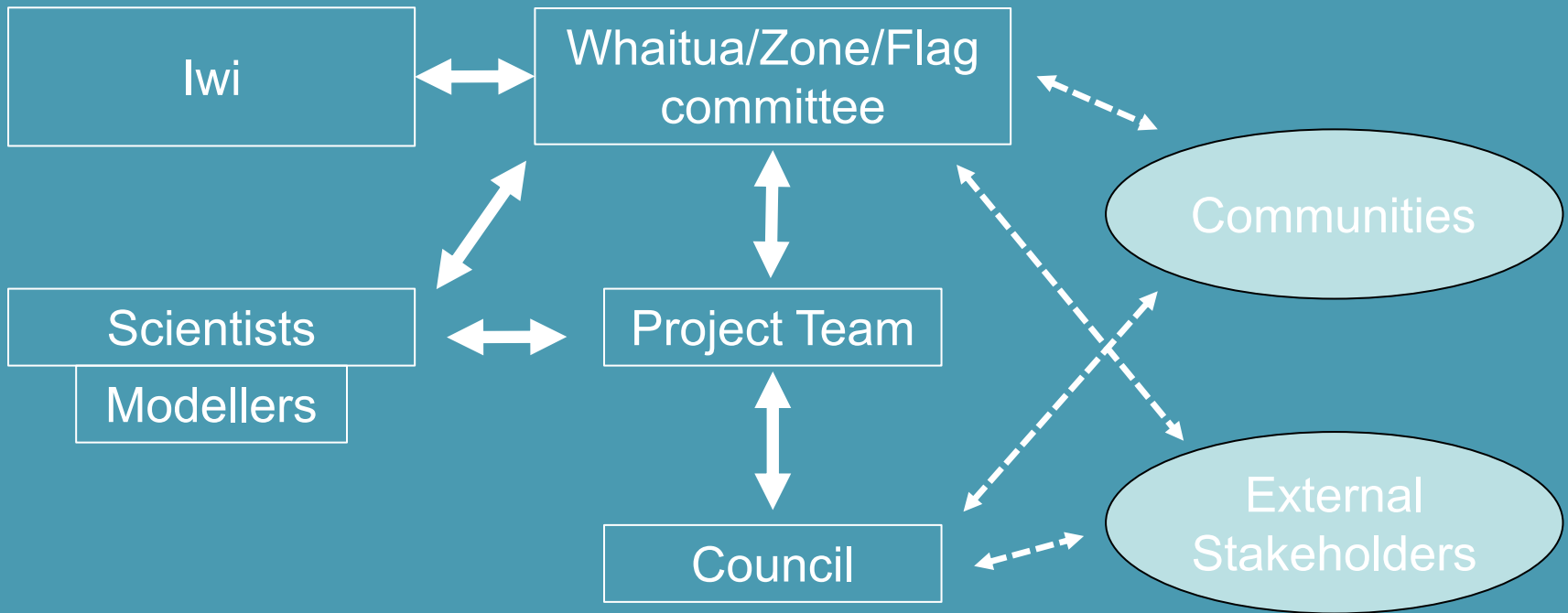
- Economics
- Iwi
- Modelling
- Collaborative processes



Wheel of Water Framework



Collaboration as multiple Negotiations



Key negotiations



Information exchange, mainly

Intentional Design



- Lots of work done on collaborative processes, guidelines etc.
- Despite this, which process to use for a FW management is an unresolved question... as Councils move to a more inclusive planning process.
- Neither feasible nor desirable to generate “rules” or a step-by-step template for ‘doing collaboration’
- Implementing effective collaborative process requires iterative design, tailored to the situation as it evolves.

Design elements



Design elements that are our ‘work on’:

- Systems thinking – understanding the big picture
- Scenario design – a lot more than modelling....
- Moving the parties from output thinking (eg WIP) to outcomes and the capacity to achieve them.
- Process reflection and re-design
- Adaptive management
- Visualising interactions between Values/Attributes

Further Information....



<https://wheelofwater.wordpress.com/design/documents/>