

# Report to the Collaborative Stakeholder Group – for Agreement and Approval

**File No:** 23 10 12

**Date:** 24 November 2014

**To:** Collaborative Stakeholder Group

**From:** Interim Chairperson – Bill Wasley

**Subject:** Proposal for methodology to be used by CSG to support policy instrument(s) choice

**Section:** **Agreement and Approval**

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## 1 Purpose

The purpose of this report is to propose the Collaborative Stakeholder Group (CSG) start assessing which primary policy instrument(s)<sup>1</sup> will form the basis for testing with landowners and adjustment and refinement throughout 2015, by using a methodology called 'Policy Choice Framework' (PCF).

### Recommendations:

1. That the report "Proposal for methodology to be used by CSG to support policy instrument(s) choice" (Doc 3220314 dated 24 November 2014) be received for information.
2. That the Collaborative Stakeholder Group confirms:
  - a. While the CSG's Policy Selection Criteria provides a useful 'check', the CSG needs a methodology that will make sure policy instrument(s) are technically feasible and can be justified in the section 32 analysis.
  - b. That the primary policy instrument(s) chosen by the CSG may need some refinement following testing with landowners and the community.
  - c. That the primary policy instrument(s) and supporting policy instruments will not be confirmed until b) has occurred, as well as information from the Technical Leaders Group about implications of possible limits and targets.
3. That the CSG use the 'Policy Choice Framework' outlined in this document, and discussed at day 2 of the CSG workshop 8 on 3 December, and agree an "all in" or small group process. The processes could be either:
  - a. A small group of CSG members work with staff and contractors and bring the results back to CSG 8, 9 and 10, or;
  - b. CSG request that staff do some initial analysis and report back for group input at CSG 8, 9 and 10.

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<sup>1</sup> A primary policy instrument can be seen as the 'base' instrument that is technically feasible and justifiable. Other supporting policy instruments can be added to increase the rate of behaviour change. One example already discussed by CSG is in Lake Taupo Catchment, where the primary policy instrument was a 'cap and trade' (diffuse nitrogen discharges were capped and transfers between properties allowed). Subsequently, other policy instruments were added (financial assistance, extension services).

## 2 Background

The Healthy Rivers Project process has been simplified into four major phases:

1. understand the issue from all sides;
2. develop limits and targets;
3. develop the options and policy mix; and
4. finalise the policy toolkit<sup>2</sup>.

These phases, plus feedback loops, generally describe a typical policy cycle, such as that shown in the diagram attached to the NPS-FM amendment.

The CSG has focused on phase 1 and will continue to seek input to understand what has value and meaning to people about the Waikato and Waipa River Catchment. A report on values and uses is included in the CSG workshop 8 in December 2014<sup>3</sup>.

At the last workshop, the CSG started moving into phases 2 and 3 of the project, around developing limits and targets and developing the options and policy mix. It will rely on information from the Technical Leaders Group for some aspects. As part of developing limits and targets, the CSG needs to be clear about overall objectives or 'outcome states' for the Plan Change.

The CSG's Focus Statement was intended to be a reference point as the Healthy Rivers Wai Ora project progresses:

### **Focus Statement for Healthy Rivers Wai Ora Project**

To come up with limits, timelines and practical options for managing contaminants and discharges into the Waikato and Waipa catchments to ensure our rivers and lakes are safe to swim in and take food from, support healthy biodiversity and provide for social, economic and cultural wellbeing.

The Focus Statement, and information about the problems in each Freshwater Management Unit, how contaminants contribute, and what could be achieved if these were managed differently, all form part of defining Plan Change objectives.

### **Policy process – terms used**

Regional plans are documents that seem impenetrable to most people. They contain rules that must be written tightly enough that if needed, can be enforced by the courts. Added to this, planners tend to use a lot of jargon. The following terms are commonly used:

An **attribute** *"is a measurable characteristic of fresh water, including physical, chemical and biological properties, which supports particular values"* (NPS-FM 2014, pg 7). Identifying values, attributes and attribute states, all contribute to formulating freshwater objectives.

**Objectives** are outcome states required to enable regional values and priorities to be met.

**Policies** are written as the course of action to achieve objectives.

A **policy instrument** aims to change the behaviour of people.

<sup>2</sup> For a simple description of what needs to go into a regional plan, see a report approved by the CSG at workshop 5 in August 2014, entitled Introduction to Planning Requirements (Part 2) Waikato Regional Plan Change 1 - Waikato and Waipa River Catchments and RMA Section 32 analysis. Document number 3119268.

<sup>3</sup> Report to CSG 8 2014, dated 24 November 2014, entitled "Values and uses of water: How they are incorporated in Waikato Regional Plan Change 1 - Waikato and Waipa River Catchments". Document 3208891.

A **primary policy instrument** can be seen as the 'base' instrument that is technically feasible and justifiable. The primary policy instrument chosen:

- Could promote voluntary change, such as the one:one extension service provided within the Upper Waikato Sustainable Milk Plan Project, or it
- Could create compulsory change in behaviour, such as rules for stormwater discharges or the cap and trade regulation in Lake Taupo catchment.

Supporting policy instruments can be added to increase the rate of behaviour change.

**Methods** are written to identify who will do what and by when. Methods can be non regulatory or rules.

### **Section 32**

Section 32 of the Resource Management Act 1991 requires an evaluation of the objectives, policies, and methods to be included in an RMA planning document. It includes an assessment of benefits and costs to ensure policies and methods are efficient and effective in achieving objectives.

## **3 How are policy instruments chosen?**

The National Policy Statement for Freshwater Management 2014 (NPS-FM) does not give any guidance on how policy instruments are chosen and there is no standard methodology used by councils as they develop RMA plans. A nationally-funded project to assist regional councils with tools to choose policy instruments for water noted:

*Choosing the policy instrument to use to improve environmental is a challenging decision. While economic and environmental impacts are important, the success of a policy really depends on the response to that policy instrument and its design.*

*Choosing the right instrument, refining its design and implementation process can improve policy uptake, policy performance and reduce economic impacts. There are few tools available that systematically allow a decision-maker to assess the appropriateness of a policy (and its design) to stakeholders and also consider the institutional capacity of the administering agency to implement a policy (Greenhalgh S, 2012, pers comm. Dec).*

Developing limits/targets and policy options are phases of the project that can be done in parallel to some extent. Policy instruments are chosen once objectives are defined. Because the process is complex and iterative, the primary policy instrument(s) may need to be changed or refined as more information is gathered. The Technical Leaders Group will assist with costing and describing implications of possible limits and targets. In addition, critical information about effectiveness comes from the people whose behaviour is expected to change. In this project, this includes landowners, and to a lesser extent, implementing agencies such as Waikato Regional Council.

## **4 Introduction to Policy Choice Framework**

The Policy Choice Framework (Kaine 2014) is a coherent and robust method for making policy decisions. The method starts once decision-makers have established the overall policy objective(s).

**Appendix 1** contains a short description of a few essential matters that need to be considered when making policy to change the use of natural resources.

Because it requires users to systematically assess information, the Policy Choice Framework highlights where information is lacking. It complements the Resource Management Act (1991) section 32 process<sup>4</sup>. The Policy Choice Framework essentially provides information about the effectiveness of options, and narrows down the set of options that need to be tested for efficiency. In some cases it may conclude that there is only one feasible intervention, and in others there will be two or more. In any case, there will still be significant decisions to make regarding the detailed design and implementation of the intervention.

It was developed particularly for situations involving agriculture. The PCF:

- Helps people to identify how the use of a resource is creating problems and the justification for taking action for correcting the problem.
- Helps people to distinguish criteria for choosing a policy instrument for correcting a problem with resource use, from criteria for allocating the resource among different uses and criteria for sharing the cost of change.
- Helps people to decide what policy instruments are most likely to succeed using knowledge of, for example, farm and forestry systems and farm and land use context to assess how people must change, how many must change and how quickly they need to change.
- Helps people to use information on what can be measured to decide which policy instruments may be feasible.
- Helps people to consider the consequences for policy success of voluntary or compulsory change.

In short, the PCF assists people to formulate and document policy in evidence-based and knowledge-based ways. Below is a short example of the application of the Framework.

## 4.1 Lake Taupo Catchment case study

The Policy Choice Framework was applied retrospectively to the problem of limiting nutrient emissions from agriculture into Lake Taupo (Kaine 2014; Young and Kaine 2009). The analysis indicated that the policy development process could have been shortened significantly if the PCF had been available to use in supporting the policy process. The PCF would have provided:

- Insights into the consequences of the change process for farmers much earlier in the policy process.
- Assisted decision makers to understand the context of those whose behaviour the policy hoped to change.
- Insights into the resources the Council (and other parties implementing the policy) needed to implement the policy.

The **policy outcome** sought was to protect the quality of the water in the Lake.

The primary instrument chosen was a **cap and trade**, with some supporting policy instruments in the form of financial assistance and extension.

In line with the **few essential matters** (see Appendix 1 for a description of each) that need to be considered when making policy to change the use of natural resources the decisions made for Lake Taupo were:

<sup>4</sup> Section 32 requires that an assessment of benefits and costs is undertaken to ensure policies and methods are efficient and effective in achieving objectives. It provides a process for critical evaluation of proposal and helps demonstrate that decision-makers have considered relevant matters and have considered competing factors.

## 1. Focus first on the use of the natural resource

- Farmers are using a resource, the Lake, to receive nitrates, which are a by-product of livestock farming. However, the use of the resource, the assimilative capacity of the Lake by farmers, by reducing water quality in the Lake, is creating non-exclusive costs for others<sup>5</sup>. That is the emitter gets the benefit of emissions without paying for costs placed on other water users. This is inefficient and distorting resource allocation in the economy reducing the wealth of the community as a whole.
- This forms the fundamental justification for government to intervene and change how natural resources (the assimilative capacity of the Lake) are used.

## 2. Problems with the use of natural resources are people problems

- The relevant behaviours were actions by farmers that resulted in the discharge of nitrates and so reducing the water quality of the Lake. In the absence of control on non-point source discharges farmers were making land management changes to increase production or changing land use, often times increasing nitrogen leaching. To protect water quality the policy sought to stop some of these actions.
- Therefore the council sought to reduce nitrate discharges from livestock farming

## 3. Resource use and equity are related but distinctly different matters – dimensions of the problem with the use of the resource

### *Correcting over use of the resource*

- In this instance, the desire to preserve the water quality in the Lake was sufficiently powerful to conclude that any further decline in the quality of water in the Lake was unacceptable therefore the rights of those bearing the non-exclusive costs, the community, took priority over the rights of those creating the non-exclusive costs, the farmers. Consequently, the change in farmers' behaviour, the reduction in nitrate emissions, was to be compulsory (Kaine 2014; Young and Kaine 2009).
- Creation of the public cost by individual farmers could be inferred inexpensively and with an acceptable degree of accuracy using simulation modelling of agricultural enterprises. Differences were apparent in the value to individual farmers of their emissions, particularly between dairy and other enterprises. Consequently, a market instrument was feasible to consider as the primary instrument. A cap-and-trade market was considered the most suitable form of market instrument. A cap placed an absolute limit on emissions and so provided confidence that water quality would be preserved no matter what changes occurred in the structure of the agricultural sector in the future (Kaine 2014, Young and Kaine 2009).

### *Acceptable sharing of costs of changing resource use*

- Selection of emissions allocation – allocating discharge permits on the basis of historical emissions was selected to somewhat reduce the private cost to farmers by sharing some of the cost between all farm enterprise types.

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<sup>5</sup> "When non-exclusive costs ...in production or consumption are present, an individual who benefits from producing or consuming a product or service does not experience the full costs of their production or consumption. In the case of nonexclusive costs in production, this will create an incentive for producers to use more of an input than is socially optimal. It may also create an incentive for producers to produce more of the products or services than is socially optimal. As a result, when non-exclusive costs in production are present, there will be a net private benefit in producers using more of an input than is socially optimal" Sandall et al. 2009.

- The community mostly bear the cost of removing nitrogen from livestock farming with the set up of the Lake Taupo Protection Trust.
- For the funding of the Trust the decision was made to share the cost between the Ministry for the Environment, Waikato Regional Council and the Taupo District Council.
- The governance body of the Trust agreed to fund the initial benchmarking costs to farmers.

## 5 Types of information used in the PCF

A broad range of information (including the groups experiences, research, industry knowledge etc) and criteria can be used when making policy, which the group has been digesting. The principles in the CSG's Policy Selection Criteria will provide part of the considerations for assessing options. In addition, the CSG has already had a few report that use methods from the various component of the PCF including:

- Taupo case Study 1 report<sup>6</sup> for CSG workshop 2.
- Dairy Grazing Practices report for CSG workshop 3<sup>7</sup> and discussion following George Moss farm visit.
- Drystock Grazing Practices report for CSG workshop 4<sup>8</sup> and discussion about drystock systems led by farming sector CSG members.

## 6 Next steps and timeline

The CSG has a session on day 2 of CSG 8 where it will:

- Discuss the key elements of the 'Policy Choice Framework' outlined in the document above with Dr Geoff Kaine (Led the development of the PCF).
- Work with the CSG independent facilitator to decide if the CSG will use the PCF to help it settle on a primary policy instrument and if so, agree a process to do so, that could result in the following timeline.

What	When
Initial assessment and decision to use PCF to choose Primary policy instrument, and agree process	3 December 2014 at CSG workshop 8
PCF used for each of the 4 contaminants and present initial findings about use of PCF to rest of CSG	February 2015 at CSG workshop 9
CSG discuss findings and decide next steps, including what method to use to find out landowner response to possible policy instrument(s)	March 2015 at CSG workshop 10
Run process to find out landowner response to possible policy instrument(s)	Mid March – mid May 2015
Changes or additions of other policy instruments following landowner response, community engagement and other implications of possible limits and targets following investigations	June – October 2015

<sup>6</sup> Case Study: Lake Taupo catchment property-level nitrogen discharge limits, Policy work stream report for discussion at CSG workshop 2 DM 3034258

<sup>7</sup> Outline of Waikato Regional Council dairy farming research. Policy work stream report for discussion at CSG workshop 3 DM2986745

<sup>8</sup> Outline of Waikato Regional Council sheep and beef farming grazing management practices research. Policy work stream report for discussion at CSG workshop 4 DM3027629

## 7 Summary

The CSG has an opportunity in the next three to four months, while technical investigations are progressing, to make interim decisions on primary policy instruments that are technically feasible and can be justified.

The primary policy instrument(s) will form the basis for testing with landowners and adjustment and refinement throughout 2015, before it becomes part of the recommendation for Plan Change 1 Waikato and Waipa River Catchments.

**Appendix 1** contains a short description of a few essential matters that need to be considered when making policy to change the use of natural resources. This will be presented and discussed at the beginning of day 2 on December 3<sup>rd</sup> 2014 CSG workshop.

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Project

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**Bill Wasley**  
Independent Chairperson, Collaborative  
Stakeholder Group

# References

Kaine G (2014). A Primer on the Policy Choice Framework. Geoff Kaine Research, Hamilton: New Zealand.

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Sandall, J, Kaine, G and Johnson F, 2009. Clarifying Economic Justifications for Government Intervention to Assist Agricultural Adaptation to Climate Change Practice Change Working Paper 02 / 09. Department of Primary Industries, Tatura.

Young J and Kaine G 2010. Application of the Policy Choice Framework to Lake Taupo Catchment. Waikato Regional Council Technical Report 2010/20.



# 8 Appendix 1 Choosing Policy Instruments to Change the Use of Natural Resources

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20 November 2014

## Introduction

Governments and communities create policy for two fundamental reasons. One reason is to change the distribution of wealth in the community. In other words, change the way the economic cake is shared. The justification for doing so is fairness. We use instruments like income tax, unemployment benefits and pensions to change the way the cake is shared.

The other reason is to improve the operation of the economy. The justification for doing so is that we can all be better off by making the economic cake bigger. Changing the way the economy works means changing how people behave in some way to correct a problem with the way the economy functions. The instruments we use to change how people behave include regulations, incentives, fees and charges.

So, with natural resources we use policy to make ourselves better off by helping the economy function better. We are trying to change the way natural resources are used provided, of course, the economic, social and cultural benefits of change outweigh the economic, social and cultural costs.

## Essential matters

The following are a few essential matters that need to be considered when making policy to change the use of natural resources.

1. Focus first on the use of the natural resource

The heart of the problem with natural resources is that, in the absence of government intervention, anyone can use them. This is because one person cannot prevent another person from using the resource. This property is termed non-exclusiveness.

This property of natural resources has the consequence that a person can use the resource in a way that creates losses for other people (perhaps they can no longer use the resource) and that person doesn't pay for the loss they create. As a result, natural resources can be over-committed to a particular use. This is termed misallocation and means the wealth of NZ is actually lower than it could be.

This is the fundamental justification for government to intervene and change how natural resources are used. Whether intervening is actually worthwhile depends on whether the benefits outweigh the costs.

2. Problems with the use of natural resources are people problems

The solution to this problem with the over-use of a natural resource is to find a method for changing how people use the resource. Finding an effective and lowest-cost method requires knowing who uses the resource (farmers, foresters and others), how they use it (practices), and why they use it the way they do (farm/land use context). This knowledge provides answers to questions such as how many people

can change, how they must change and how much it might cost to them, and how quickly they can change.

So successful policy is based on understanding why people do what they do. The over-use of natural resources is a people problem, not a science problem.

### 3. Resource use and equity are related but distinctly different matters

There are three fundamental dimensions to problems with the use of natural resources. Deciding on the most desirable mix of competing uses for the resource is one dimension (satisfactory allocation). The criteria for deciding on the most desirable mix of uses are community preferences about the relative value of different uses of the resource (such as beneficial cultural outcomes, resilient freshwater ecosystems).

How over-use of the resource occurs can be corrected is a second dimension (correcting exclusiveness). Key criteria for selecting a feasible policy instrument to correct over-use are:

- Whether the people can choose to change themselves (voluntary change) or be compelled to change (compulsory change).
- Whether individual use of the resource can be measured or estimated in some way. Some instruments like incentives, charges and cap-and-trade schemes only work if there is some way of measuring or estimating a person's use of the resource.

How the costs of changing the use of the resource should be shared among resource users and the broader community is the third dimension (acceptable sharing of costs). The criteria for deciding on the sharing of the costs of changing are community preferences about fairness (such as recognising efforts already made, minimising social disruption, contribute to solution in proportion to use).

Each of these three dimensions should be treated as independently as possible. Otherwise the risk of policy failure is high. That is, the end result will be an excessively costly, and possibly ineffective, policy.

## **The Policy Choice Framework**

Deliberating on these matters with clarity and precision is a difficult task. The Policy Choice Framework (PCF) is a tool that was developed to help people think about and debate these matters when they are choosing a policy instrument for correcting the over-use of a natural resource. It was developed particularly for situations involving agriculture.

The PCF:

- Helps people to identify how the use of a resource is creating problems and the justification for taking action for correcting the problem.
- Helps people to distinguish criteria for choosing a policy instrument for correcting a problem with resource use, from criteria for allocating the resource among different uses and criteria for sharing the cost of change.
- Helps people to decide what policy instruments are most likely to succeed using knowledge of, for example, farm and forestry systems and farm and land use context to assess how people must change, how many must change and how quickly they need to change.

- Helps people to use information on what can be measured to decide which policy instruments may be feasible.
- Helps people to consider the consequences for policy success of voluntary or compulsory change.

In short the PCF assists people to formulate and document policy in evidence-based and knowledge-based ways.

## **Reference**

Kaine G (2014) A Primer on the Policy Choice Framework, Geoff Kaine Research, Hamilton: New Zealand