

# CATCHMENT GROUPS: FIGHTING THE WATER QUALITY BATTLE

What place do catchment groups have in the rural industry and how do they assist in fighting the water quality battle?



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## Executive Summary

There is no denying that New Zealand has a declining water quality issue that needs addressed sooner rather than later. And there is no denying that both rural and urban communities are at fault. But what resources are out there to help mitigate the declining water quality?

The Resource Management Act 1991, as our main piece of legislation, oversees how the environment is managed. The idea is sustainable management of New Zealand's resources and helps manage the natural and physical resources at a national, regional and local level.

The National Policy Statement for Freshwater Management is a policy that encourages New Zealander's to have discussions about where we, the current generation, want and expect water quality to resemble for the future generations.

The way we use the land differs across New Zealand so the impacts on our fresh water, whether positive or negative, are often specific to a catchment or region. This makes it difficult to paint a national picture. It can also take decades for water (and any contaminants it contains) to cycle from the earth's surface through the ground to aquifers, and back to surface water systems. This means some effects we see today are legacies of past activities, and the impact of our activities today, both positive and negative, may not be seen in our waters for a long time.

Leaders and organizations are acknowledging that even their best individual efforts can't stack up against today's complex and interconnected water quality problems. A diverse group of local leaders are putting aside self-interests and collaborating to challenge conventional wisdom and fix problems that they have a vested interest in. Often, they lack the formal authority to solve the problem and don't have an obvious 'plug and play' solution. a willingness to embrace new ways of working together. And, this movement is yielding promising results.

Change leadership is the ability to influence and enthuse others through personal advocacy, vision and drive, and to access resources to build a solid platform for change. This is what catchment groups need to be successful.

It's about engaging with the community; passing on information to farmers and the public about the current water quality situation and monitoring and improving water quality.

Catchment management comes down to strong leadership, considering values of New Zealand's citizens in terms of social, economic, and cultural aspects. Communication and conversations that stay 'above the line' creates evolved thinking to the stage of curiosity, learning, problem solving and eventually positive action.

**“Instead of controlling the environment for the benefit of the population, perhaps it is time we control the population for the survival of the environment” – David Attenborough**

## Acknowledgements

I was required to prepare this paper for the Kellogg Rural Leadership Programme. It has been a privilege to complete this study on catchment groups which has allowed me to find a passion around water quality.

I became interested in this topic while dairy farming on a property that ran alongside the Aparima River in Southland. Farming alongside a river has its difficulties at the best of times, but the introduction of the Southland Water and Land Plan 2020 only highlighted that changes not only were going to be made but they needed to be made to be able to protect the future generations.

I have attempted to create a document which is both critical and unbiased.

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## Table of Contents

Executive Summary.....	2
Acknowledgements.....	4
Contents Page.....	5
<b>1</b> Introduction.....	6
<b>2</b> Catchment Definition.....	9
<b>2.1</b> Estuary Importance.....	10
<b>3</b> Literature Review.....	12
<b>3.1</b> The Resource Management Act 1991.....	12
<b>3.2</b> National Policy Statement for Freshwater Management.....	16
<b>4</b> Aims and Objectives.....	18
<b>5</b> Freshwater Values.....	19
<b>5.1</b> Cultural Values.....	19
<b>5.2</b> Economic Values.....	20
<b>5.2.1</b> Water for Agriculture.....	20
<b>5.2.1</b> Water for Industrial Use.....	20
<b>5.3</b> Recreational and Social Values.....	21
<b>6</b> About Catchment Groups.....	22
<b>6.1</b> Southland Catchment Groups.....	24
<b>7</b> Good Management Practice in the Rural Industry.....	27
<b>8</b> Catchment Management.....	31
<b>8.1</b> Collaboration.....	31
<b>8.2</b> Leadership.....	32
<b>8.3</b> Governance.....	33
<b>8.4</b> The Grief Cycle and Change Leadership.....	34
<b>8.5</b> Above the Line Leadership.....	36
<b>9</b> Limitations.....	38
<b>10</b> Conclusions.....	40
<b>11</b> Recommendations.....	41
<b>12</b> References.....	43

# 1. Introduction

New Zealand has always been marketed as 'clean and green' - snow-capped mountains with fresh and clean water and unspoiled pastures. And New Zealand is relatively clean and green by world standards.



Figure 1 Picture -<https://www.odt.co.nz/news/national/new-zealands-clean-green-image-mirage>

However, over the years, we have been slowly damaging our soil, air and water to a point where we were going to be unable to restore it back to its natural state.

We are exposed to environmental problems that are serious enough to potentially challenge the sustainability of the value of New Zealand. Areas of concern are:

- Poor and deteriorating air quality
- Erosion on steeper landscapes and the visual impact of some land-use practices
- Degraded freshwater quality, especially from intensive agricultural land use
- Degraded marine environment in estuaries and harbours near main population centres

Fresh water is essential to New Zealand's economic, environmental, cultural and social wellbeing. Fresh water gives our primary production, tourism, and energy generation sectors their competitive advantage in the global economy. Fresh water is highly valued for its recreational aspects and it underpins important parts of New Zealand's biodiversity and natural heritage. Fresh water has deep cultural meaning to all New Zealanders. New Zealand's lakes, rivers and wetlands are iconic and well known globally for their natural beauty and fundamental values.

Fresh water supports almost every aspect of life. We use fresh water to drink, enjoy it for recreation, and use it to produce goods and services. Māori tribal identity is linked to fresh water, for whom each water body has its own mauri (life force).

It also recognises the connections between people and communities, people and the land, and people and water.

As a society, we have seen a clearing of native vegetation, the draining of wetlands, farming, forestry, and urbanisation, which have all placed increasing pressure on our water bodies and their ecosystems. As our population and agriculture-based economy grow, our need for fresh water is likely to increase in the future.

All New Zealanders, both rural and urban, have a common interest in ensuring the country's freshwater lakes, rivers, aquifers and wetlands are managed wisely. New Zealand faces challenges in managing our fresh water to provide for all the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh waters are under threat. To respond effectively to these challenges and issues we need to have a good understanding of our freshwater resources, the threats to them and how they impact New Zealand's economic growth and environmental integrity. Our nations, as well as our individual wealth and growth have been created by what we walk on.

Given the vital importance of freshwater resources to New Zealand and New Zealanders, and to achieve the purpose of the Resource Management Act 1991 (the Act), the Crown recognises there is a need for clear central government policy to set a national direction, though the management of the resource needs to reflect the catchment level variation between freshwater bodies and different demands on the resource across regions. This includes managing land use and development activities that affect fresh water so that growth is achieved with a lower environmental footprint<sup>1</sup>

Water quality issues do not respect property boundaries. If a creek running through your property has problems then you can be sure that your neighbours will be impacted too. The best way to improve water quality in the creek is to get everyone who lives along it

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<sup>1</sup> <http://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014>

together, identify problems and come up with collective solutions. The simple philosophy is at the very core of community catchment management<sup>2</sup>

Positive actions have already been undertaken in the primary sector. Actions such as developing environmental and quality management systems, food safety systems and encouraging best practice and the support offered through the Sustainable Management Fund<sup>3</sup> and the Sustainable Farming Fund<sup>4</sup>

But what's next? How do we maintain our good effort so far, to generate a country and environment that our children and our children's children can grow up in and get pleasure from?

Enter catchment groups.

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<sup>2</sup> [www.landcare.org.nz/News-Features/Catchment-Mangement-Working-Together](http://www.landcare.org.nz/News-Features/Catchment-Mangement-Working-Together)

<sup>3</sup> <https://www.mpi.govt.nz/funding-and-programmes/farming/sustainable-farming-fund>

<sup>4</sup> [www.mpi.govt.nz/funding-and-programmes/farming/sustainable-farming-fund/](http://www.mpi.govt.nz/funding-and-programmes/farming/sustainable-farming-fund/)



## 2. Catchment Definition

Catchment area is defined as the area from which water flows into a river or stream<sup>5</sup>. A catchment is the area of land feeding a river system. All the water deposited on the ground within the catchment combines and flows down to form a single interconnected network of water bodies including streams, rivers, lakes, wetlands and aquifers.

A catchment is a basin shaped area of land, bounded by natural features such as hills or mountains from which surface water flows into streams, rivers and wetlands. The outlet of a catchment is the mouth of the main stream or river. The mouth may be where it flows into another river or stream, or the place where it empties into a lake, estuary, wetland or ocean.

The upper catchment is the headwaters. Streams begin their journey to the sea in the upper reaches of the catchment. If the stream is steep it will be fast-flowing and energetic. This means that it has the energy to carry large amounts and large sized pieces of rock and gravel which have been eroded from stream beds and banks. The headwaters of a river stream can be very important to the health of the entire river.

The middle catchment is where the land is generally flatter and the flow of the stream is slower. The channel has widened into a 'U' shape and you can, as a rule, detect a flood plain (a flat area beside the stream bank). The stream regularly overflows onto this area, slows, and then dumps its load of sediment.

The lower catchment is a deeper channel which meanders through a flat flood plain. The stream travels very slowly and deposits the large quantities of sediment it has been carrying from further upstream. At its mouth, the stream or river empties into another body of water and carries its remaining load of sediment, debris and other substances. Lakes and estuaries gather these, which can damage them. Estuaries are particularly sensitive environments and their role as a nursery for fish is easily disturbed.

## 2.1 Estuary Importance

Estuaries are important because “He taura whiri kotahi mai ano te kopunga tai no I te Pu au”<sup>5</sup> which means “from the source to the mouth of the river all things are joined together as one”. A wide range of habitats are found within estuaries from sub-tidal reefs, inter-tidal mud flats and sea grass beds to landward margin vegetation, including herb fields, saltmarsh, rush-land and sledge land. These habitats support a diverse range of life, birds, shellfish, fish and invertebrates with many species using estuaries for part, or all of their life cycle.

Estuaries have many values. Firstly, estuaries provide environmental values. They provide critical habitats for species that are valued commercially, recreationally and culturally. Birds, fish, insects and other wildlife depend on estuaries to live, feed, nest and reproduce. They provide stopovers for migratory bird species and many fish in NZ pass through them on their way up rivers. They filter contaminants from the land and so protect the nearby coastal environment and perform an important function for cycling nutrients, much like kidneys of the land.

Secondly, in terms of economic and recreational values, they also help keep waters clean and protect property from flood and storm damage. The plants and animals in estuaries take up excess nutrients from water and soil and use it for growth, effectively immobilising pollutants. Tidal marshes, with their dense vegetation and narrow, winding channels, effectively trap sediment and remove it from floodwaters. Estuaries are also important to the commercial and recreational fishing industry. They either provide essential nursery areas for many commercially and recreationally important fish and shellfish species or the species is reliant on clean estuary filtered water entering the near shore coast. Estuaries are important recreational areas. People visit estuaries year-round to boat, swim, watch birds and other wildlife and fish

Cultural values are a highly valued part of a catchment. For Maori, historically and today, estuaries, or Ngutuawa, provide a wide selection and abundance of mahinga kia (foods)

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<http://www.wcrc.govt.nz/Documents/Resource%20Management%20Plans/1.%20Introduction%20and%20Poutini%20Ngai%20Tahu%20Perspective.pdf>

which includes fish, shellfish and birds. Estuaries are breeding areas. They are pathways to the sea and inland for both people and fishes. These are the reasons why Maori built kainga (villages) beside them. The Ngai Tahu catchment management philosophy, ki uta ki tai (mountains to the sea) informs us all parts of the land and water within a catchment are connected. Poor estuary health and poor harvest can indicate the poor health of the river system. Kaitiakitanga, described as stewardship, is a responsibility of people to look after the treasures of the land, air, waters and sea for us and future generations. The message is simple. Treasure our estuaries.

Our coastal areas are coming under more pressure as the population increases. Estuaries often suffer from human activities such as run-off from agriculture and wastewater discharges. Sedimentation, excessive nutrients, toxic contaminants, disease risk and habitat loss are all major issues currently facing some estuaries in NZ.

Environment Southland is currently monitoring 6 estuaries. In 2000 monitoring began on the four largest estuaries on the south coast – Waikawa Harbour, New River, Jacobs River and Toetoes Estuaries. Haldine Estuary and Bluff Harbour were added by 2005 and in 2008, monitoring began in Waimatuku Estuary, Waiau Lagoon and Freshwater Estuary on Stewart Island. Freshwater Estuary is monitored as a ‘control’ or unmodified estuary, to compare the other estuaries too.

Environment Southland follows the estuary monitoring protocol. They measure the things below to give an indication of the overall health of the system<sup>6</sup>

WHAT WE MEASURE	INDICATORS
Sediment	Muddiness
	Area of soft mud
	Sedimentation build-up
Habitat Quality	Extent of seagrass bed
	Estuary invertebrates
Sediment Contamination	Heavy metal toxicity
Nutrient Enrichment	Macroalgae
	Sediment oxygen levels
	Sediment nutrients concentrations

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<sup>6</sup> [www.es.govt.nz/environment/estuaries/Pages/default.aspx](http://www.es.govt.nz/environment/estuaries/Pages/default.aspx)

### **3. Literature Review**

#### **3.1 The Resource Management Act 1991**

Our clean and green image has an elevated dollar value for our major export markets. This highlights the economic as well as the environmental importance of successful environmental management, including quality regulation. The Resource Management Act (RMA) provides for sustainable environmental management in New Zealand.

Under the RMA, local government oversees freshwater planning at a community and regional level. Regional councils are responsible for managing water quality and quantity through their plans. They may permit some activities and require consents for others such as taking water and the discharge of contaminants. Territorial authorities are responsible for managing land uses and generally provide drinking water, stormwater and sewage services. Local authorities have plans that permit some activities and require consents for others such as taking water, discharge of contaminants and the use of land.

Central government develops national policy for managing fresh water. It guides and directs regional councils under the RMA using tools such as: The National Policy Statement for Freshwater Management, national environmental standards and regulations for water metering.

The Resource Management Act is the main piece of legislation in New Zealand that governs how we manage our environment. The idea of sustainable management is what the RMA centres around. Sustainable management means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while:

- sustaining the potential of natural and physical resources (excluding minerals)
- to meet the reasonably foreseeable needs of future generations; and
- safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
- avoiding, remedying or mitigating any adverse effects of activities on the environment.

It's based on the idea of the sustainable management of our resources, and it encourages us (as communities and as individuals) to plan for our environment. But, don't go removing all your pollutant-causing components just yet. The RMA is more about managing the effects our activities have on our environment so the environment doesn't suffer<sup>7</sup>

The RMA establishes a hierarchy of policy documents from national instruments to regional policy statements, and regional and district plans. This 'hierarchy' and requirement to ensure consistency between plans, is to promote sustainable management and ensure integrated management of natural and physical resources at a national, regional and local level. The RMA established one integrated framework that replaced the many previous resource use regimes, which had been fragmented between agencies and sectors, such as land use, forestry, pollution, traffic, zoning, water and air<sup>8</sup>. It was also the first statutory planning regime to incorporate the principle of sustainability.

The RMA manages air, soil, fresh water and coastal marine areas. The RMA also standardises land use and the condition of infrastructure which are integral elements of New Zealand's planning system.

It was created in 1991 with the aim to achieve a more coordinated, streamlined and comprehensive approach to environmental management<sup>9</sup>. With its creation, it replaced or amended over 50 existing laws that related to town planning and resource management.

The RMA means that New Zealand's physical and natural resources can be managed in a sustainable framework. It allows communities to make decisions on how their environment is managed through regional and district resource management plans. Decisions on resource consents are made with consideration to these plans, national direction and the objectives in the RMA. It encourages us to look after the environment, is based on the idea of sustainably managing resources and gives us confidence to get involved in decisions about

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<sup>7</sup> <http://www.mfe.govt.nz/publications/rma/everyday-guide-rma-getting-act>

<sup>8</sup> Fisher, D. E. (1991), 'The resource management legislation of 1991: A judicial analysis of its objectives', in Resource Management, Brooker and Friend Ltd, Wellington, Vol. 1A, Intro 1–30. p 2, 2nd paragraph

<sup>9</sup> <http://www.mfe.govt.nz/rma/about-rma/introduction-rma>

our environment. The RMA encourages us (as individuals and communities) to plan for the future of our environment, which includes:

- Ecosystems, including people and communities
- Natural and physical resources
- Amenity values
- Social, economic and cultural matters that affect the above

The Resource Management Act seek to incorporate the management of air, land, fresh water and marine into one legislation. Prior to the RMA, the management of resources was fragmented between agencies. When the RMA was enacted over 80 statutes and regulations were revoked. Integrated management of these areas is sought to be achieved via a hierarchy of policies and plans prepared at the national, regional and district levels. In addition, national environmental standards developed under the Resource Management Act can require the adoption of consistent standards at the regional and district levels. Integration between decision makers is facilitated through the requirement for joint hearings, in most cases, where an activity requires resource consents from more than one agency.

The Resource Management Act encourages public participation in decision-making processes. The purpose of public participation is dual. First, it recognises and protects the rights and interests of those affected and more public interests. Second, it enhances the quality of decision making.

District and regional planning processes allow members of the public significant rights of participation, including the right to submit, present to a hearings committee, and appeal a decision to the Environment Court.

The Resource Management Act focuses on managing the effects of activities rather than regulating the activities themselves. The Resource Management Act adopts a more enabling approach which seeks only to intervene where activities are likely to result in unacceptable environmental impacts. In practice however, most planning documents still have a strong focus on activities themselves.

Environmental management under the Resource Management Act is to be guided, in the first instance, by the principles set out in Part 2 of the Act and the policies set out in any national and regional policy statements. Decisions on if to allow activities are made within the context of these principles and policies. Nationally applicable principles and policies play a vital role in ensuring the effectiveness of environmental management, although this is largely dependent on the quality of decision-making at local and regional levels.

Under the Resource Management Act, decision-making has been decentralised to local and regional levels in most cases. This is based on the principle that decision-making is best carried out at the level closest to the resources affected and better enables public participation in resource management decision-making. In general, decisions about land use are made at the territorial authority level and decisions about fresh water, soil conservation, air pollution and the coastal marine area are made at the regional council level. However, central government can direct how resource management decisions should be made through national policy statements and national environmental standards. Central government may also directly intervene in local decision making where consent is sought for a proposal of national significance.

District and regional plans are one of the most important aspects of the RMA. The RMA says that councils must prepare plans to help them manage the environment in their area. It is these plans that tell you what you can or cannot do as of right, and there are several different types. Regional policy statements set the basic direction for environmental management in the region. Regional plans tend to concentrate on parts of the environment, like the coast, soil, a river or the air. They set out how discharges or activities involving these resources will be managed to stop the resources being degraded or polluted. District plans concern the use and development of land and contaminated land and set out the policies and rules a council will use to manage the use of land in its area. By looking at these plans you will be able to find out if you need to get resource consent for the activity you want to do. When central government wants to give local councils a bit of direction on environmental issues, it can issue national policy statements or set national environmental standards<sup>10</sup>

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<sup>10</sup> <http://www.mfe.govt.nz/publications/rma/everyday-guide-rma-getting-act>

### **3.2 National Policy Statement for Freshwater Management**

Given the vital importance of freshwater resources to New Zealand and New Zealanders, and to achieve the purpose of the Resource Management Act 1991, there is a need for clear central government policy to set a national direction, though the management of the resource needs to reflect the catchment-level variation between freshwater bodies and different demands on the resource across regions. This includes managing land use and development activities that affect fresh water so that growth is achieved with a lower environmental footprint.

This national policy statement is to help direct local government to manage water in an incorporated and sustainable way. From this, economic growth within set water quantity and quality limits will take place<sup>11</sup>.

The national policy statement is a first step to improve freshwater management at a national level. It is vital to account for all freshwater takes and sources of relevant contaminants as demand for fresh water continues to increase. The freshwater accounting requirements of this national policy statement will provide information for councils to use in establishing freshwater objectives and limits and in targeting their management of fresh water<sup>12</sup>

“Freshwater quality accounting system” means a system that, for each freshwater management unit, records, and aggregates and keeps regularly updated information on the measured, modelled or estimated:

- loads and/or concentrations of relevant contaminants;
- sources of relevant contaminants;
- amount of each contaminant attributable to each source; and
- where limits have been set, proportion of the limit that is being used.

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<sup>11</sup> <http://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014>

<sup>12</sup> <http://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014>



It's about transparency. We need to clearly plan and define our freshwater objectives. Regional councils and communities need assistance in this. This is where this national policy statement outlines these objectives. We as New Zealanders generally aspire to high standards for the outcomes of our water quality.

The policy encourages us to have conversations within our communities about what we all want the state of our water to be in, in years to come. If communities want economic growth, it's apparent that we are going to need to set water quantity and quality limits.

## 4. Aims and Objectives

- Look at Freshwater Values – cultural, economic and recreational, and what they mean and how they are important to not only water quality, but also catchment group management
- Look at what a Catchment Group is and how they are like communities of practice and the importance of a vision and value within a group.
- Explore what Southland are doing in terms of Catchment Management and how the Southland Water and Land Plan 2020 has skyrocketed the formation of Catchment Groups.
- Compare what Good Management Practices exist over each rural industry in New Zealand;
- What makes a Catchment Group successful in terms of:
  - Collaboration
  - Leadership
  - Governance
  - Change Leadership
  - Above the Line leadership
- Limitations found with the Catchment Group model
- Conclusions based on findings within the report

## 5. Freshwater Values

Fresh water contributes greatly to our economy, and is highly valued by New Zealanders for cultural, social and recreational reasons. The provision and benefits of fresh water to meet economic, social, cultural and environmental needs are referred to as 'ecosystem services', and include water for:

- intrinsic cultural value and a source of mahinga kai;
- economic uses (agriculture (irrigation and stock use); industrial use; hydroelectric energy generation; fisheries; tourism);
- recreation and social amenity;
- sustaining our indigenous biodiversity, which in turn delivers its own set of ecosystem services.

All consumptive uses of water have some impact on the freshwater environment, even where water recycling is involved. With increasing use and demand for fresh water, it becomes harder to reconcile varying interests of households, agriculture and industry, and of communities that require other values be catered for, including those of conservation, recreation, tourism and of iwi.

### 5.1 Cultural Values

The national significance of fresh water for all New Zealanders is recognised in the National Policy Statement for Freshwater Management (NPS-FM), as is Te Mana o te Wai. Safeguarding the health of the water (te hauora o te wai), the health of the environment (te hauora o te taiao) and the health of people who come in contact with the water (te hauora o te tāngata) are essential objectives of the NPS-FM that support high-level 'national values' for fresh water – they are fundamental to meeting the needs of the nation and of all its citizens.

Water is a taonga to Māori; it is a source of mahinga kai<sup>6</sup> and it carries a life force (mauri). This is reflected in the concept of Te Mana o te Wai - the innate relationship between te hauora o te wai (the health and mauri of water) and te hauora o te taiao (the health and mauri of the

environment), and their ability to sustain te hauora o te tāngata (the health and mauri of the people)<sup>13</sup>.

Urban use extends to household, gardening and commercial use, and council use for irrigation of sports fields, etc. Even though not all of this needs to be treated water, in general the same supply and distribution system is used; only a few individual organisations and dwellings have separate rainwater collection and storage for non-potable use.

## **5.2 Economic Values**

### **5.2.1 Water for Agriculture**

Water is vital to our primary industries-based economy. In regions like Canterbury, Hawkes Bay, Tasman, Marlborough and Central Otago, water is relied on for irrigation purposes, sourced from both underground and surface supplies. But water is not just used by agriculture, viticulture and horticulture for irrigation – since the 19th century it has also been used for stock watering, and is used extensively in dairy farming for activities other than just growing grass (e.g. cleaning of milking sheds and equipment). Demand for irrigation water is high in spring and autumn for cropping farmers, but also in summer for dairy farmers as they seek to extend the ‘spring flush’ of grass growth.

### **5.2.2 Water for industrial use**

Industrial use of water for some industries (e.g., steel, horticulture, dairy and meat processing, manufacturing) has high value returns, often with relatively low commercial costs as the water is of sufficient quality to be used without treatment prior to use. However, there are potential environmental costs in terms of water quality impacts from industrial discharge.

### **5.2.2 Water for industrial use**

There are many native fish species that have no recreational or commercial value, but they have high conservation value. Once again habitat loss is an important threat, but so too are predation and competition from introduced trout and other predatory fish. Healthy waterways are critically important economically for tourism. A substantial proportion of domestic and

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<sup>13</sup> <http://www.pmcsa.org.nz/wp-content/uploads/PMCSA-Freshwater-Report.pdf>

international tourist activities in New Zealand occur in or adjacent to fresh water, especially in places like the central North Island, Mackenzie Basin and southern New Zealand including Queenstown – where wild and scenic rivers and streams are used for ‘adventure’ tourism – but there are also tourism values associated with some urban rivers like the Avon in Christchurch.

### **5.3 Recreational and Social Values**

Socially, our water bodies and their physical diversity provide a resource for mainly recreational users. It is hard to know what the most popular use of fresh water for recreation is, but swimming, boating, fishing and picnicking are the main uses. These values have been impacted over time, negatively in many places, by water and land resource development. This is most notable in lowland streams used for angling, in many lowland rivers and streams used for swimming, and in some rivers used for jet-boating and white-water kayaking

## 6. About Catchment Groups

Community can be defined as ‘the condition of sharing or having certain attitudes and interests in common’ or a ‘self-organised network of people with common agenda, cause or interest, who collaborate by sharing ideas, information, and other resources<sup>14</sup>

A group is a collection of individuals who have regular contact and frequent contact and interaction, mutual influence, common feeling of camaraderie, and who work together to achieve a common set of goals<sup>15</sup>

So, from this we can understand that a catchment group is essentially a group of individuals that come together regularly who share a common interest in their catchment area.

The issue or issues in each region or district are the objectives, resources, political environment and culture of the lead agency, the physical and ecological characteristics of the catchment, the social and economic conditions of its communities and the engagement and interests of iwi and stakeholders

Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. A community of practice is not merely a club of friends or a network of connections between people. It has an identity defined by a shared field of interest. Membership therefore implies a commitment to the field, and therefore a shared competence that distinguishes members from other people. In pursuing their interest in their field, members engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other. Having the same job or the same title does not make for a community of practice unless members interact and learn together. But members of a community of practice do not necessarily work together daily.

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<sup>14</sup> [www.businessdictionary.com/definitions/community.html](http://www.businessdictionary.com/definitions/community.html)

<sup>15</sup> [www.businessdictionary.com/definitions/group.html](http://www.businessdictionary.com/definitions/group.html)

Catchment groups need to be community-driven, not self-focused. They need to meet the needs of the community at the time. Everyone, both rural and urban, needs to stand up and take accountability. And the group's expectation levels should be aligned. They are a good place to have conversations. Everyone, both rural and urban communities need to be singing the same tune in terms of improving water quality.

The value of a clear vision statement to group can be enormous. A clear vision statement defines the direction the group is going, sets the stage for strategic plans, and illustrates exactly what a group stands for. It can also provide other significant benefits for the people in the group. A clear vision statement acts as a unifying force, and has a positive impact on group effectiveness. When members understand and buy-in to the groups vision statement, it brings them together. It focuses and aligns efforts so everyone is working towards the same understood goal. A clear vision statement can be motivating and inspiring. When an individual understands and aligns with the core values and vision of the group, they can readily commit to, and engage in, the group's efforts. Engaged and inspired members can go a long way in helping the group achieve its mission and goals. So, when you think of the value of a clear vision statement, yes, it can signal the direction for the groups future, provide a foundation for strategic planning efforts, and outline what the group stands for. However, it can also unify and enhance effectiveness, provide direction on action and decision making, and inspire and motivate as well<sup>16</sup>. Catchment groups, like any other community group, must have a purpose. What is it that the catchment group wants to achieve? The outcomes give vision to members so everyone knows the direction of which the group is heading. The first conversation we need to be having is getting to know where we are currently in terms of water quality. The second conversation is having an idea of where we want (and need) to be. A path need to be formed so the group, as well as individuals can move in a direction towards positive outcomes for the environment.

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<sup>16</sup> <http://www.cornerstonedynamics.com/3-big-benefits-of-a-clear-vision-statement/>

## 6.1 Southland Catchment Groups

In 2011, the government introduced the National Policy Statement for Freshwater Management. It aims to improve the management of freshwater throughout New Zealand. A key purpose of the policy statement is the setting of enforceable water quality and quantity limits. Limits include restricting the number of contaminants that can be discharged into waterways and how much water can be removed. Environment Southland have responded to the National Policy Statement through the Water and Land 2020 & Beyond project. It aims to prevent any further decline in water quality, and to help Southland, as a community achieve their goals for water. The Water and Land 2020 & Beyond project has three main components. The first includes 'focus activities' for good management practices. The second involves the forming of the new Water and Land Plan, which will replace the existing *Regional Water Plan for Southland*. The third component involves the limit setting process for the region's catchments. Ngai Tahu ki Murihiku is Environment Southlands lead partner for this project<sup>17</sup>, along with other external partners. Through this project Southlanders will be able to work together to improve their water quality and manage water quantity for future generations, while providing for Southlands economic, social and cultural well-being.

From late 2011 to 2014 the project steering group provided advice to Environment Southland around five focus activities, which were identified as agricultural activities which were having the largest impact on water quality in Southland. The five focus activities were:

- Hill and high-country development
- Nutrient management
- Intensive winter grazing
- Overland flow
- Riparian management

From this work, the Focus Activity Farm Plan programme was established, with land sustainability officers working with farmers of all stock types across Southland to encourage the adoption of good management practices.

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<sup>17</sup> <http://waterandland.es.govt.nz/about-the-project/background>



A Focus Activity Farm Plan is an environmental plan that provides farm-specific good management practice advice and recommendations for the property. It focuses on activities that can significantly affect water quality.

Environment Southland are currently reviewing the Regional Water Plan for Southland and the Effluent Land Application Plan with the goal of updating these to form the Southland Water and Land Plan. The aim of the new plan will be to prevent any further decline in water quality and help the community to achieve their goals for water.

The catchment limits work stream will address the limit setting requirements of the National Policy Statement for Freshwater Management. 'Limits' refer to the total amount of water that can be taken out of a water body, or the total amount of contaminants that can be discharged into it without affecting desired outcomes.

Catchment group development in Southland has been driven mainly from the reaction of the Water and Land Plan 2020. They have been mainly farmer driven, with some communities slow at getting on the water quality train. Southland farmers are waking up to the issues now they are entering the acceptance phase of the grief cycle over implementation of water quality plans.

Farmers are under pressure from regional councils, industry and environmental groups, and the public to minimise nutrient losses. Several national objectives through the National Policy Statement for Fresh Water and the Land and Water Forum are in place that will impact on farmers. These include the setting of nutrient load limits for catchments by regional councils and their requirements for farmers to have nutrient management plans. Industry partnerships, such as the Dairying and Clean Streams Accord, are focussing on reducing the impacts of dairying on fresh water quality.

It is essential that farmers understand the potential effect of their management practices on water resources, and that they use a range of practices to minimise nutrient losses to the environment. Nutrient management planning is a process that farmers can use to assess the

effectiveness of their nutrient management practices and the risk of environmental damage from nutrient losses from their land.

A "*top-down*" approach is where an executive decision maker or other top person makes the decisions of how something should be done. This approach is disseminated under their authority to lower levels in the hierarchy, who are, to a greater or lesser extent, bound by them<sup>18</sup>

A "*bottom-up*" approach to changes one that works from the grassroots-from many people working together, causing a decision to arise from their joint involvement. A decision by many activists, students, or victims of some incident to act is a "bottom-up" decision. A bottom-up approach can be thought of as "an incremental change approach that represents an emergent process cultivated and upheld primarily by frontline workers"<sup>19</sup>.

Positive aspects of top-down approaches include their efficiency and superb overview of higher levels. Also, external effects can be internalized. On the negative side, if reforms are perceived to be imposed 'from above', it can be difficult for lower levels to accept them. A bottom-up approach allows for more experimentation and a better feeling for what is needed at the bottom.

The concept of a bottom-up approach has been taken up until now, and now the next step is to implement a top-down approach to mirror farmer's efforts. Farmers have knowledge as they are exposed to the environment every day. Many know (whether they admit it or not) that change needs to happen if we are going to have any shot at improving water quality<sup>20</sup>

The collaboration between local council and farmers has been excellent to date. For effective engagement, integrating work requires participation from both decision-makers (council or other agencies making funding or regulatory decisions) and decision-takers (the people who must abide by these decisions). They have been having the conversations.

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<sup>18</sup> <http://www.thefreedictionary.com/bottom-up>

<sup>19</sup> Stewart, Manges, Ward, 2015, p. 241

<sup>20</sup> [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3456118/pdf/11524\\_2006\\_Article\\_171.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3456118/pdf/11524_2006_Article_171.pdf)

## 7. Good Management Practices in the Rural Industry

Good Management Practice in relation to water quality and the environment can be defined as practices, procedures or tools that are effective at achieving the desired performance while providing for desired environmental outcomes. Like anything, good management practice evolves through time and results in continuous improvement as new information, technology and awareness of issues are developed and distributed.

We need to implement good management practices on our farms. By doing this we reduce our environmental and business risk and result in a more sustainable farm and healthier environment. Expectations from our consumers and our communities are growing rapidly and we need to be able to stand up and say that our products are grown in an environmentally responsible manner. Being able to prove it is just as important. Farmers need to be able to open the farm gate and invite anyone and everyone in to show off the good work that is happening within individual farm systems.

Industry bodies in the rural industry have all come up with GMPs which focus mainly on water quality (notably nitrogen, phosphorus, sediment, and faecal contaminants). Examples are shown below:

- **Dairy**
  - Sustainable Dairying: Water Accord
  - DairyNZ FDE Guide to managing FDE and Guides to operating effluent irrigation system
  - FDE Design Code of Practice
- **Sheep and Beef**
  - Beef + Lamb New Zealand website
  - Land and Environment Plan (LEP)

### **Deer**

- The New Zealand Deer Farmers Landcare Manual 2012
- 1999 Deer Industry Guidelines for the Winter Enclosure of Deer

- Deer Industry New Zealand endorses the use of Beef + Lamb New Zealand's Land Environment Plan (LEP)
- **Horticulture**
  - Nutrient Management Code of Practice
  - Erosion and Sediment Control Guidelines
- **Arable**
  - FAR Focus 6 (2012): Nutrient Management
- **Outdoor Pigs**
  - EnviroPork (2005) Pork Industry Guide to Managing Environmental Effects

By having these GMP for each industry, every farmer can follow guidelines and know the standard in which they need to be meeting at a minimum. GMP's provide guidelines to help farmers identify areas that need worked on and aids in management decisions. The concept of GMP's are for farmers to understand the nutrient loss pathways on individual properties so then farmers can assess risks to water quality and then be able to manage them correctly. Recording management actions and reviewing these regularly allows modifications over time. It is also important to note that GMP's do not overrule any requirements of council consents, regional plans or any land management agreements.

Below I look in depth more at a GMP across each sector:

### **Dairy Industry – Sustainable Water Accord**

The Accord is an expression of the dairy sector's commitment to industry self-improvement. It recognises that the dairy sector's actions and expectations do not exist in isolation of other parties. Success in achieving the vision and delivering better water quality depends upon a range of parties working with a common understanding of the issues and challenges and pursuing shared vision and aligned actions. In this way the Accord is an expression of collective responsibility across the dairy sector and a wider range of stakeholders<sup>21</sup>. The purpose of the accord is to enhance the overall performance of dairy farming as it affects

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<sup>21</sup> <https://www.dairynz.co.nz/environment/in-your-region/sustainable-dairying-water-accord>

<sup>16</sup> <http://beeflambnz.com/lep/>

freshwater. The Accord commits to good management practices expected of all NZ dairy farmers and encourages dairy farmers to take up good management practices. By doing this, the dairy industry can responsibly contribute to improving New Zealand waterways. The Accord develops partnerships with other stakeholders, builds a positive culture of on-farm improvements, reduce the impact of existing dairy farms and implement good practice on new conversions.

### **Sheep and Beef – Land Environment Plans**

A Land and Environment Plan (LEP) is a tool that guides farmers through a recorded assessment of a farm's land and environmental issues, and helps farmers to develop a written plan outlining how those issues will be managed. It involves a stock-take of land, soil and water resources, an assessment of production opportunities and environmental risks, and development of a plan showing what actions are going to be undertaken, where they are being targeted, and when they will be implemented<sup>16</sup>. LEP's show that measurable actions are being taken to address environmental concerns. The LEP's also provide an understanding of the natural resources on sheep and beef farms.

### **Deer – The New Zealand Deer Farmers Landcare Manual 2012**

This revised edition (2012) is designed to help deer farmers further improve the Environment Management System they have for their property, and to progress the commitment to continuous improvement in all aspects of farm management and sustainability. The value of this resource is that it is principally based on farmer derived solutions and experiences. These are further supported through collaboration with New Zealand's leading environmental agencies to recommend best practice for all aspects of environmentally friendly farm management<sup>22</sup>

### **Horticulture – Nutrient Code of Practice**

This Code of Practice is designed for growers to understand and implement good and best management practices for nutrient management, particularly nitrogen, and to assist where resource consent is required from Regional Council. It is anticipated that the Code will be a resource for

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<sup>22</sup> [http://deernz.org/sites/dinz/files/NZ%20Deer%20Farmers%20Landcare%20manual%202012%20for%20web\\_0.pdf](http://deernz.org/sites/dinz/files/NZ%20Deer%20Farmers%20Landcare%20manual%202012%20for%20web_0.pdf).

<sup>18</sup> <http://www.hortnz.co.nz/assets/Uploads/Code-of-Practice-for-Nutrient-Management-v-1-0-29-Aug2014.pdf>.

council staff and other regulators when considering what growers can do to reduce nutrient losses. As it is the operation that will require resource consent the Code is written to address the whole operation but it is recognised that some management practices need to be assessed at the paddock level and combined to provide an operation overview<sup>18</sup>.

### **Arable – FAR Focus 6 (2012): Nutrient Management Plans**

A FAR nutrient management plan is a personalised business document for individual farms. It is unique to as every farm is different and every farmer has different business objectives. It is an individual plan and it needs to be developed and implemented to work for the individual.

The nutrient management plan will highlight practices which can be implemented to optimise the use of nutrients. Losses from leaching and run-off will be reduced to give the individual better cost efficiencies and better environmental outcomes<sup>23</sup>.

### **Pigs - EnviroPork (2005) Pork Industry Guide to Managing Environmental Effects**

The purpose of 'EnviroPork™: pork industry guide to managing environmental effects' is to provide pork producers, council officers, persons looking to enter into the pork industry, and other stakeholders a reference for acceptable practices to managing the environmental effects of pork production. Adopting these management practices will assist in meeting the anticipated requirements of the Resource Management Act (1991) in each region<sup>24</sup>

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<sup>23</sup> [https://www.far.org.nz/resources/publications/far\\_focus/2](https://www.far.org.nz/resources/publications/far_focus/2)

<sup>24</sup> [http://www.nzpork.co.nz/images/custom/enviropork\\_manual.pdf](http://www.nzpork.co.nz/images/custom/enviropork_manual.pdf).

## 8. Catchment Management

### 8.1 Collaboration

“Everyone is connected, but no one is connecting” – Armin van Buuren feat Lauren Evan 2013

As its Latin roots *com* and *laborare* suggest, collaboration reduced to its simplest definition means "to work together."<sup>25</sup> Or the action of working with someone to produce something. Synonyms include cooperation, alliance, partnership, participation and combination.

There are two parts to catchment groups. There is the local individual catchment and individual farmer level, and then there is the provincial level. Catchment groups need to encourage cultural and provincial shift, not an industry shift. Everyone needs to be on the same page. It's about sharing between councils, stakeholders, industry bodies, urban communities and individual farmers. Think of it as a three-legged stool approach. If one leg is removed, then the stool will fall over. It is about keeping the tension. The same principal applies to water quality. We need to have a collaborative approach if we want to notice any difference.

There are compelling reasons to promote extensive community participation in addressing community environmental problems. From a philosophical perspective, people living in democratic societies have a right to a direct and meaningful voice about issues and services that affect them. At a practical level, environmental issues that affect the health and well-being of people in communities cannot be solved by any person, group or sector working alone. These problems are complex, challenging easy answers. They affect diverse populations and occur in many kinds of local contexts. The local setting, in turn, is dependent on decisions made at regional and national level. Only by combining the knowledge, skills, and resources of a broad range of people and groups, can communities understand the underlying nature of these problems and develop effective and locally feasible solutions to address them. Responding to the promising potential of collaboration to give voice to people

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<sup>25</sup> <http://www.scottlondon.com/articles/oncollaboration.html>

in communities and to enhance the effectiveness and efficiency of achieving challenging health objective<sup>26</sup>

## 8.2 Leadership

The defining characteristic of every championship team is leadership. Leadership isn't a difference maker, it is **the** difference maker. Catchment groups are no different. Good catchment management comes down to the leadership bringing together coherency and transparency. A performance pathway looks something like this:

Leaders – Culture – Behaviour - RESULTS

Leaders create culture, culture drives behaviour, behaviour produces results<sup>27</sup>

The purpose of group leadership is to build and maintain the group and achieve its objectives. Leadership in groups can be a fluid concept. At various times in group development, different styles of leadership and types of leadership roles may be more appropriate than others and therefore all members of a group may have a leadership role at some time. However, as leadership is clear, there are characteristics common to effective leaders, including:

- a sense of responsibility for the group in all its sides (human, financial, task accomplishment) – that is, administrative as well as people skills
- being a risk taker and accepting the risks to maintain strong direction within the group
- being able to communicate clearly the goals and objectives
- using a leadership style appropriate to the situation, and which encourages support and cooperation from the members
- performing to a high personal standard as an example to promote high standards within the group.

Collaborative leadership leads to a good group dynamic, where members demonstrate a strong sense of purpose, and tasks are carried out enthusiastically. It is associated with a high rate of attendance at meetings and members who are willing to take on increasing levels of responsibility. One reason collaboration works as well as it does is that it empowers participants and creates a sense of ownership

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<sup>26</sup> <https://link.springer.com/article/10.1093%2Fjurban%2Fjtg014?LI=true>

<sup>27</sup> <https://coachsass.files.wordpress.com/2015/12/above-the-line-notes.pdf>



and "buy-in" within the group. When decisions are reached, they are the products group's own efforts. The process may be difficult and time-consuming, but it provokes more solid and enduring support than decisions made by a single person or a select few. Being a collaborative leader means you understand this instinctively. They move the process along by sharing inspiring visions, focusing on results, strengthening relationships, being open and inclusive, bringing out the best in others and celebrating achievement. Collaborative leadership is not a specific set of activities<sup>28</sup>. It means playing whatever role is necessary to bring about real change and lasting impact in the community. It means being a catalyst, a spark plug and channelling people's energies toward a common goal.

### **8.3 Governance**

Governance is huge when it comes to catchment group management. Good governance is important for several reasons. It not only gives the local community confidence and improves the faith. It leads to better decisions and helps provide an ethical basis for governance. Group member's views will be respected even if everyone doesn't agree with them. Decisions that are informed by good information and data, by stakeholder views, and by open and honest debate will generally reflect the broad interests of the community. This does not assume that everyone will think each decision is the right one. Fair and effective governance ensures that development benefits both the people and the environment. Because isn't that is what it is all about? Creating an environment that is positive in maintaining and sustaining our natural resources, alleviating poverty and improving overall quality of life for our future generations?

A team leader plays a different role which focuses on the mechanics of tasks, resources and budgets and schedules. Team leaders are often content experts with experience in similar projects but not necessarily skilled at facilitation.

There needs to be a facilitator, not a manager, at the helm of catchment groups. Leading a group requires facilitation skills; skills that combine experience and knowledge of both mission content and group dynamics. Having a skilled facilitator at the front means that the group will meet its objectives and goals more rapidly.

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<sup>28</sup> <http://www.scottlondon.com/articles/oncollaboration.html>

Past behaviours have got us to this point now, and to move forward in a more positive light, the next generation needs to bring changed expectations. Water quality and environmental issue demands continue to increase the complexity of the situation and someone who understands group processes and knows how to troubleshoot is a great personality to have. Neutrality is important as it will help be the bridge to build trusting relationships. There needs to be someone who can step up and take responsibility for guiding a group so that a synergy is created.

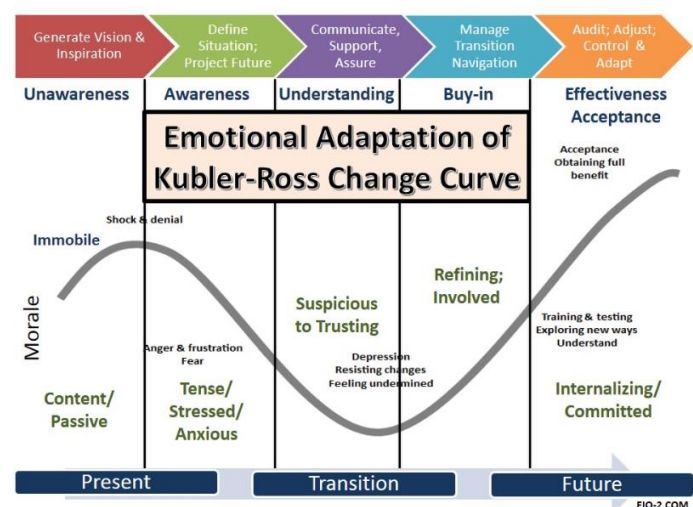
## 8.4 The Grief Cycle and Change Leadership

Change is the one constant in life. Individuals, teams and groups experience continuous transformation. Both internal and external environments are continuously in fluctuation. While shifts are inevitable, progress and improvement are optional. Learning, preparation and management allow for successful development and growth. Feelings and relationships are the catalysts for effectiveness.

Transition impacts a wide array of emotions. These are both conscious and subconscious but all have real impact. Positive emotions facilitate development and progress while the negatives hinder and impede. Obstacles and setbacks make adjustments more stressful and challenging.

The Kubler-Ross Change model suggests the impact of feelings on change which the figure below shows<sup>29</sup>. Initially, there is denial, resentment and feelings of fear. Transition requires a

shift from the performance zone that has become familiar and comfortable. Change entails a degree of risk, discomfort, the unknown and chaos. At this point, the leader's role is to recognize and validate the team's feelings. Sensitivity and appreciation go far in creating a sense of unity for dealing with improvement.



<sup>29</sup> <https://www.linkedin.com/pulse/making-change-improvement-progress-robert-jerus-sphr>

When change begins, the leader's influence serves as the impetus for growth. Inspiration and influence convinces people that the gains far outweigh the risks. By recognizing and empathizing with feelings, the leader sets a path for success and creates a far easier transition. Awareness triggers higher levels of stress, anxiety and worry. Anger and frustration come into play as team members become uncomfortable with uncertainty. Heightened levels of risk bring their abilities into question and can shake confidence. During this time, the leader's role is to bring assurance and stability. Clear definition, a well-developed plan, necessary resources and the organization to achieve settles unrest.

The change leader nurtures motivation and drive. Support and inspiration allow for greater acceptance and effort. When the leader is confident, the team catches that emotion. Trust, likeability and powerful relationships transform suspicion and doubt into energy and development. Continuing supportive communication produces realistic positive expectations. The leader's inner qualities assure that the journey will generate targeted outcomes. Imagination and learning provide continuously improving tools to direct the effort. As stability begins to return, the team is more energized and engaged. Positive feelings have replaced confusion and doubt.

As the change cycle comes to a close, the culture and climate of the group provide safety and security. When change is viewed in a positive way, it is a path to development. Progress comes from abandoning the old, worn out ways and accepting the adventure of developing something new and special. Groups cultivate and nurture an emotional framework for development that supports positive feelings, encourages challenges, and assures that failure is not fatal.

This model applies to catchment groups. Its only when everyone moves through the grief cycle, are we all really going to notice the positive difference that both rural and urban citizens are making to water quality in New Zealand. Catchment groups are a great vehicle to help communities move through the grief cycle.

Learning and emotional intelligence provide motivation for positive feelings of growth. Creativity, curiosity and imagination ask about possibilities and potential. They like experimentation and exploration as long as risk is managed.

When dealing with change, leaders need to design and implement transition. Navigation can be difficult. The team needs to be assured that the rewards and results will compensate for the stress and pain of transition. Leaders succeed by communicating candidly and transparently. The relationship serves to enhance motivation and spirit. Communication inspires and generates reciprocal empathy. This supports feelings of teamwork and connection.

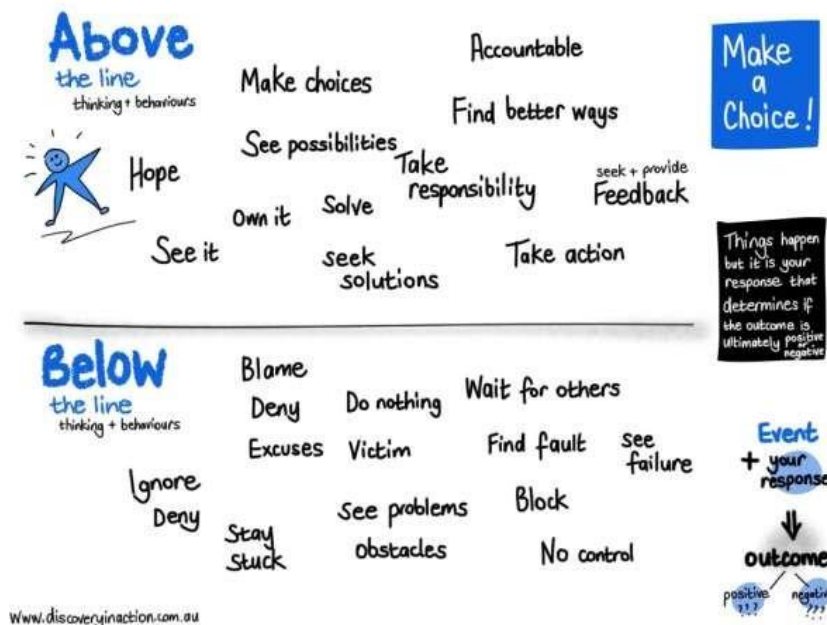
There must be a change in the people and the way they treat and respect the environment. If even in bringing about several changes in the systems and processes. If people persist in their old ways, then everything that has been invested will go to waste and water quality will never change. Therefore, it is important for both rural and urban communities to adapt and change accordingly. Only when everyone make changes can the environment move ahead in a positive direction and reap the benefits.

## **8.5 Above the Line Leadership**

A person or team is “above the line” if they are taking responsibility, being accountable, using positive language, supporting and encouraging each other and looking for solutions. A person or team is “below the line” if they are blaming others, using negative language including sarcasm, focusing on the problem and continuously knocking down others and their ideas, saying “that will never work”, “we’ve already tried that”. To be effective, leaders must have a solid understanding of how their emotions and actions affect the people around them. The better a leader relates to and works with others, the more successful he or she will be. Take the time to work on self-awareness, self-regulation, motivation, empathy, and social skills. From a leadership perspective, all leaders can drop below the line at some point. This is normal. But what matters is not whether a leader drops below the line, but how quickly they get back above it. Leadership is about taking responsibility, raising the bar and the standards of the team and quickly getting back above the line without having the whole group spiral down with you into negativity.

Management needs to be team-oriented, banding together for the greater good.

People within catchment groups need to have 'above the line' thinking. We must evolve our thinking and behaviours to a state of curiosity, learning, problem solving and action<sup>30</sup>



Leadership is more about *trust* you have earned than the authority you have been granted. You must earn the right for people to follow you. It is about equipping people with the tools necessary to get and stay above the line. It's about maximizing their talent and their lives. You are stretching people, helping them change and grow. You are taking people to places they never thought they would reach. You are helping them live better lives. Remember, you can't lead people to a place that you are not going to as well.

<sup>30</sup> <https://www.discoveryinaction.com.au/latest-news/above-or-below-the-line-where-are-you/>

## 9. Limitations

Like anything, there are always limitations. Catchment groups are no different.

### **Lack of regional council support for ICM**

Initiatives to date in New Zealand tend to be *ad hoc*, reliant on availability of funding and personal initiative. There is limited staff and other resources allocated to catchment initiatives by regional councils, even where the political support for catchment groups are getting strong. An emphasis is needed to fund good facilitators to steer the process.

### **Lack of support and capacity building by central government**

Even though central government has significantly devolved water resource management responsibilities to local government, it has provided limited policy guidance or direct support to build local capacity and political commitment. Catchment group and their projects often do not continue long enough or with sufficient funding to ensure that successes in areas are able to be built on and integrated, either horizontally (between catchments) or vertically (from the individual through to the national level). Central government support for local government is considered more critical than ever, as water resource issues outstrip planning and technical capabilities of regional councils. This lack of sustained resourcing is a critical constraint on effective community engagement and stakeholder participation as a continuous process.

### **Participation**

Inclusive community participation is important for reasons of democratic authenticity and practical considerations related to problem solving and decision implementation. We could be working a back-to-front way with the community, in that the initiative was identified first, and the participation sought second. If the councils were first able to establish a collaborative relationship with the community, then as issues arose the resolution process could be less controversial. The presence of some sort of 'crisis', either real or perceived, is the most likely reason for a catchment group process to be publicly supported.

## **Leadership**

Leadership is required from all participants in a catchment group. While leadership by senior regional council officials is considered highly significant to enable and support a culture conducive to catchment groups, long term catchment group success is principally relying on community leadership.

Facilitation requires a person or persons with sufficient trust and respect from participants to keep the process moving forward. The lack of trained and resourced facilitators is a significant barrier to effective stakeholder participation. The role of the facilitator is imperative to build a reputable profile, establish trust, organise events and access and share information.

## 10. Conclusions

Catchment groups are not necessarily the silver bullet in improving water quality.

Catchment groups won't change the world or its water quality issues. We need to be realistic. Catchment groups can't be everything for everyone. The launch plan looks solid and the plan looks good in theory.

But they are a step in the right direction. They are an agent for thought change. Where the rubber meets the road where the point at which the theory or idea is put to the practical test is when we will really see what catchment groups are capable of and we will be able to really measure their worth.

Cultural, economic and social values need to remain at the forefront of catchment groups. Catchment groups need participation. From everyone, both rural and urban. Everyone has their part to play. Together we can all begin to have positive conversations that centre around the wanted improvement in water quality in New Zealand. By keeping our values at the forefront, we will be able to protect the health of the water, the health of the environment and the health of the people who come in contact with the water. This will mean our values are meeting the continuous needs of New Zealand and its people.

Collaboration contributes towards creating and developing processes. It promotes different capabilities and knowledge coming together, and in the process enhancing their competitiveness and accelerating their innovation process.

Leadership and governance means that catchment groups will be aware of their vision and values, which in turn will underpin the success of each individual group. Leaders will have above the line thinking, taking each group member on the water quality journey with them.

We need to create a culture that is bound by a metaphorical rope. You are unable to mitigate fear and greed so leverage off the good quality substance. Knowledge reduces fear.

And knowledge is power. Resilient communities can solve problems together.

Empowered communities will take ownership together.



## 11. Recommendations

1. Good management practice evolves through time and results in continuous improvement we need to be able to prove to our consumers that our products are being produced with minimal environmental harm in a responsible. Our Good Management Practices will assist us in doing this. We need to work together to move forward.
2. Due to ongoing economic growth, it is inevitable that there will be ongoing decline. Catchment groups are a great vehicle to help that decline at least slow down, if not reverse. Educated communities will be able to decide their own sustainable futures, and together with councils and national policies, can implement stronger regulations.
3. Instead of focusing on the bottom 5% of farmers, let's look at the top 10%. What are they doing? How can we mirror that in other regions and individual farms?
4. For catchment groups to be successful there are things that they need to do.
  - Catchment groups need strong leadership. Catchment groups need buy in to make a difference.
  - They need targeted planning and communication. We must have multi-layer conversations. Jumping to the end result is only going to complicate things. We should do the pre-work. The results will fall out the bottom by default.
  - Catchment groups need a willingness to identify and engage existing community organisations.
  - They also need adequate resourcing, knowledge and skills. Catchment groups with flexibility and creativity to engage the community's different motivations for participation will see success.
  - Local projects that give regular opportunities for people to connect with and become involved with caring for their local area are needed. You're better off

being involved than not. There are lots of little things the rural and urban community can do, and these will be different for each district and region. There is no one solution around water quality.

5. Catchment groups are helping with the challenge of improving water quality by providing clear communication, supporting good management practices, and encouraging other farmers to get involved. Getting involved is the first step for farmers, followed by making small changes on-farm. Start small, get help and advice from other groups, seek assistance from regional council, and look to the best farmers in the community for good-practice methods.
6. Integrated management of natural and physical resources requires consideration of the complex relationships between natural and physical resources and social, cultural, economic and political matters.
7. Ask the right questions to ensure you are getting the right answers. If catchment groups look after themselves then each region will benefit and grow in terms of water quality. And when regions are benefiting, the entire nations water quality is at an advantage.
8. Knowledge is power. Learn off each other. Look at what the best farmers in the district are doing. Can any of their management be mirrored on your side of the fence? Farmers are getting better at asking for help. Catchment groups that seek assistance, ask for advice from other successful groups and ask for advice from regional council are going to skyrocket themselves towards catchment management success.

**“There are a number of ways to save water.  
They all begin with you” - Unknown**

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