
Part II

Issue Resolution

Introduction

(a) Cross-referencing

Within each chapter cross-references to other relevant objectives and policies are listed in the left hand margin. Cross referencing between issues is shown under the relevant issue.

While all policies in the Regional Policy Statement should be considered collectively, there are instances where to help achieve integrated management, objectives and policies in one section can influence the resolution of an issue in another section. These are cross referenced. Where an objective or policy is cross referenced, that italicised objective or policy is to be taken into consideration and given the same weight as if it were written in full form at the place where it is mentioned in italics.

(b) Summary Pages

The summary page at the start of each chapter is provided to give an easy appreciation in summary form of the issues, objectives, policies, methods, environmental results and monitoring provisions.

Within a chapter, however, each individual issue is linked directly to the specific objectives, policies and methods needed to resolve that issue. The summary page must be regarded as background material only. Actual policy is contained within the body of each chapter.

(c) Methods

For Chapters 6 - 18 the methods to implement a policy are listed in summary form under each policy. The detailed explanation of each method is provided in the Methods section of each chapter. Methods have been separated under each policy into two groups: those used or to be used by the Regional Council, and those which District/city councils should consider in the preparation of their district plans. No hierarchy or priority is intended by the order of methods in any chapter.

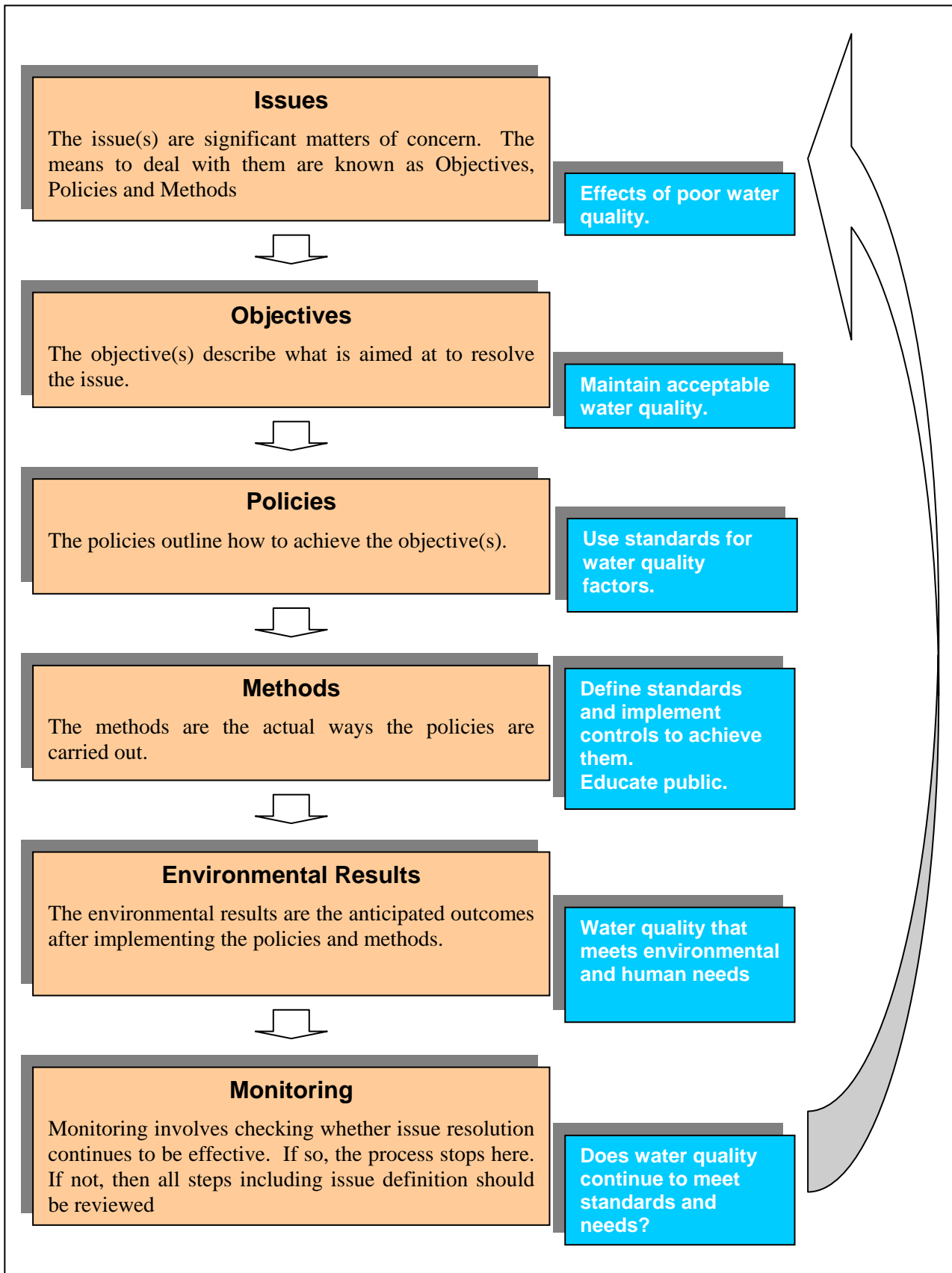


Figure 5: Procedure for Resolving Resource Management Issues

4. Summary of Significant Resource Management Issues of the Region

Introduction

The following is an aggregation of all the issue statements contained in Chapters 6 to 18. Its function is to provide an overview of the resource management issues of the region.

Chapter 6 Provision for the Relationship of Tangata Whenua with Resources

Issue 1

Tangata Whenua need to exercise their cultural and traditional relationship, which includes kaitiakitanga and rangatiratanga, with their ancestral lands, water, sites, wahi tapu and other taonga in order to achieve environmental results that will meet the concerns that they have identified through the Regional Policy Statement consultation process.

Chapter 7 Soils and Land Use

Issue 1

Existing and potential land degradation, particularly degradation in the quality and life-supporting capacity of soils which arise from land use practices, or activities that reduce their: versatility for a wide range of primary productive uses; productivity; and ability to support a robust or regenerating vegetation cover. Examples of practices include:

- (i) burning and over-grazing in parts of the high country causing land degradation including reduced plant stature and biomass, loss of nutrients and soil organic matter, increased introduced plant and animal pests, increased bare ground and induced erosion;

- (ii) cultivation of soil to a fine tilth, particularly the free draining light to medium soils of the Canterbury Plains, which predisposes them to wind erosion.

Issue 2

Land use activities which reduce the availability of land which can be identified as comprising versatile soils, thereby foreclosing future land use options that benefit from being located on such soils.

Issue 3

Land use activities which result in soil contamination and consequent adverse environmental effects.

Issue 4

Land use effects on water quantity and quality in catchments.

Chapter 8 Landscape, Ecology and Heritage

Issue 1

Adverse effects of the use, development, and protection of natural and physical resources on the integrity, distinctive characteristics, and contribution to a regional sense of identity of:

- (a) wetlands, including their overall area and functioning.
- (b) the natural character of the coastal environment, wetlands, lakes, rivers, and their margins.
- (c) natural features and landscapes including their cultural, amenity and recreational values.
- (d) indigenous vegetation, habitats of indigenous fauna and ecosystems.
- (e) the historical and cultural heritage of Canterbury including its amenity and recreational values.
- (f) the relationship of Tangata Whenua and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga.

Chapter 9 Water

Issue 1

There are competing demands for the quantity of water in water bodies from: abstractors; those who discharge into water either directly or indirectly through activities on land; instream users including those who store water and generate electricity; those who drain or divert water; fishers and other recreational users; those who value the water for its natural character and its ecological life-supporting capacity; and Tangata Whenua who value the water for its wahi tapu, wahi taonga and mahinga kai.

Issue 2

Land uses can affect water flows and levels in water bodies and consequently have adverse or beneficial effects on the values held for those water bodies, for example, by preventing runoff or intercepting rainfall.

Issue 3

Land uses, and discharges of contaminants into water or onto or into land, can adversely affect water bodies and coastal waters including: their ecological value; their use by present and future generations; and their recreational, cultural, social, economic, health and other values to the Canterbury community. Point source discharges can also compromise the cultural relationship of Tangata Whenua who value water for its wahi tapu, wahi taonga and mahinga kai.

Chapter 10 Beds of Rivers and Lakes and their Margins

Issue 1

With respect to land use activities within water bodies, their beds and margins:

- (a) Damage to the natural character of lakes and rivers, habitats of indigenous flora and fauna and trout and salmon, the health of aquatic ecosystems, the quality or extent of and access to mahinga kai, wahi tapu and wahi taonga, or heritage sites due to:
 - (i) the effects of drainage works on wetland margins;
 - (ii) land uses which modify riparian vegetation;
 - (iii) degraded water quality from contaminant discharges;
 - (iv) damming or diversion of flows, and direct destruction by construction or mining machinery;
 - (v) the effects of management of the levels of lakes and coastal lagoons;
 - (vi) siltation of the beds of water bodies through human induced erosion;
 - (vii) disturbance of wildlife and destruction of habitats by vehicles, watercraft, people and domestic animals, particularly grazing stock;
 - (viii) the replacement of diverse ecosystems with a narrow range of plant species in riparian plantings;
 - (ix) effects of the spread and control of undesirable plants in water bodies, their beds and margins;
 - (x) effects of the dumping of rubbish.
- (b) Reduction of significant amenity values, cultural and recreation values, or natural features and landscapes including:
 - (i) the effects of dust storms associated with low lake levels (e.g. Lake Tekapo);
 - (ii) the effects of the extraction of rock, gravel, sand or other bed material, and river works activity;
 - (iii) the presence of structures, buildings, and other land uses in disharmony with the landscape;
 - (iv) effects of the dumping of rubbish;
 - (v) the spread of undesirable plants.

Issue 2

Reduced flood-carrying capacity of rivers due to:

- (a) the effects of land use on any riparian vegetation which contributes positively to flood-carrying capacity;
- (b) the accumulation of aquatic and terrestrial plants, and bed material within the beds of rivers which may obstruct water flows;
- (c) the effects of tree planting, the deposition of materials, gravel and sand excavation, earthworks, and erection of buildings and structures within the beds and margins of rivers on flood flows; and
- (d) the effects of land use activities on the stability or performance of flood mitigation works.

Issue 3

Land use activities causing adverse effects on the stability or performance of essential structures within river beds and their margins.

Adverse effects include:

- (a) undermining or scouring of banks or structures;
- (b) diversion of water flows;
- (c) impeding the flow regime of a river;
- (d) uncovering or damaging a buried structure; and
- (e) deposition or excavation of bed material.

Essential structures include bridges, fords, pylons, pipeline crossings, structures for the diversion and conveyance and discharge of water, and dams.

Issue 4

Public access needs and conflicts arising from:

- (a) restrictions on public access to and along rivers and lakes including:
 - (i) inadequate provision for access;
 - (ii) denial of access along legal roads and public rights of way by land owners or occupiers;
- (b) infringement of private property rights by people seeking access;
- (c) lack of opportunity for Tangata Whenua to exercise kaitiakitanga.

Chapter 11 The Coastal Environment

Issue 1

Within the coastal environment, adverse effects on:

- (a) the life-supporting capacity of coastal ecosystems including areas of significant indigenous vegetation and significant habitats of indigenous flora (e.g. marine mammals, coastal lagoon ecosystems, mahinga kai areas);
- (b) outstanding landscapes and natural features (e.g. Kaikoura scenic corridor, Banks Peninsula, Kaitorete Spit);

- (c) natural character;
- (d) amenity values, including recreational attributes;
- (e) areas of special cultural significance¹ to Tangata Whenua, for example, wahi tapu, urupa, tauranga waka and mahinga kai;
- (f) heritage values

From human activity or actions within or inland of it, including:

- (i) rivers discharging contaminants into the Coastal Marine Area;
- (ii) damming or gravel extraction causing changes in the nature or quantity of sediment transported to the coast by rivers, for example, Waitaki River;
- (iii) point source and non point source run-off directly into the coastal marine area, for example, bays of Banks Peninsula;
- (iv) harbour dredging and spoil dumping;
- (v) reclamations;
- (vi) port operations (Timaru, Lyttelton, Akaroa, Kaikoura);
- (vii) mining of beach deposits (including sand and shells);
- (viii) structures (e.g. jetties); and
- (ix) agricultural run-off into coastal waterways and water bodies.

Issue 2

Public access needs to and along the coastal marine area and conflicts arising from:

- (a) Restrictions on public access to the coastal environment including:
 - (i) inadequate provision for access;
 - (ii) denial of access along legal roads and public rights of way resulting in conflict with landholders; and
 - (iii) lack of opportunity for Tangata Whenua to exercise kaitiakitanga.
- (b) infringement of private property rights by people seeking access
- (c) the adverse effects caused by public access to the coastal environment on:
 - (i) ecological values, for example, bird nesting;
 - (ii) sites of cultural significance to Tangata Whenua;
 - (iii) sand dune stability;
 - (iv) amenity values;
 - (v) other recreationalists; and

¹ “Special cultural significance” has been defined as areas for which Maori have claimed or recognised a special relationship throughout the generations - High Court judgement, in Royal Forest and Bird Protection Society versus Habgood (1987) 12 NZTPA 76.

(vi) natural character.

(d) Lack of appropriate levels of servicing (for example, toilets, car parking)

Issue 3

The adverse effects of noise, speed of watercraft or vehicles, and conflicts between recreational activities on people's health, safety, amenity and other values in the coastal environment.

Issue 4

Discharges, both point and non-point source, and both landward of the coastal marine area or within it, which adversely affect the life-supporting capacity of marine ecosystems, amenity, recreational and cultural values.

Issue 5

Natural occurrences, such as coastal erosion, and salt water inundation, have the potential to interact with assets (including human lives) placed within their reach. Such occurrences, are more frequent or more severe at certain places along the coast. Climate change may also cause a rise in sea level. Structures, or their protective barriers can often have an adverse effect on coastal processes, which may include worsening the incidence of natural hazard or natural occurrences elsewhere, for example, by trapping sediment moving along the coast, the port at Timaru has increased coastal erosion at Washdyke.

Chapter 12 Settlement and the Built Environment

Issue 1

Adverse effects of urban development, physical expansion of settlements and the use and provision of network utilities on the environment.

Issue 2

Loss of rural character of land on the outskirts of Christchurch.

Issue 3

Land uses or land use patterns which constrain future populations and communities in urban areas and settlements from meeting their needs.

Chapter 13 Air

Issue 1

Existing and potential health and nuisance effects of low ambient air quality in the urban and settled areas of Canterbury, particularly in Christchurch and Timaru.

Issue 2

Nuisance and health effects and adverse effects on natural and physical resources and social and cultural values from localised discharges of contaminants into air including:

- (a) smoke from domestic fires and emissions from motor vehicles.
- (b) smoke and gases from industrial processes, for example, from chemical manufacturing plants, spray painting and waste incineration.

- (c) odours generated, for example, from composting, fish processing factories, piggeries, oxidation ponds, land effluent disposal, fertiliser and freezing works.
- (d) chemical spray drift.
- (e) dust, for example, from land where vegetation has been removed, quarries, gravel roads, cultivation, and from stockpiles of materials such as coal.
- (f) smoke generated in both urban and rural areas by burning of vegetation and waste.

Issue 3

- (a) The potential for climate change from greenhouse gas emissions including: emissions from burning of carbon-based fuels, methane and other emissions from landfills, motor vehicle emissions, and pastoral and dairy farming.
- (b) Stratospheric ozone layer depletion from the release of CFCs and other ozone depleting substances.

Chapter 14 Energy

Issue 1

The region's dependence on non-sustainable energy sources, and fossil fuels in particular, to meet present and future needs. These energy sources include those that are non-sustainable because of the adverse global and regional environmental effects that result from their production and use.

Issue 2

The adverse global and regional environmental effects which result from the production and use of energy. The adverse effects include:

- (a) air pollution
- (b) loss of land
- (c) effects on ancestral lands, sites and other taonga of value to Tangata Whenua
- (d) loss of recreational values
- (e) landscape effects
- (f) human health effects
- (g) effects on natural and physical resources

Chapter 15 Transport

Issue 1

The use, development or protection of land and associated natural and physical resources can cause adverse effects on the ability of the transport infrastructure to efficiently and effectively meet present and future regional, interregional and national transport needs.

For example:

- (1) resource development resulting in transport demands which exceed the capacity of existing infrastructures or are incompatible with present uses, for example, forestry.

- (2) land use which impedes the development of transport infrastructure, for example, by foreclosing opportunities for the future expansion of airports or sea ports or impeding the upgrading of the road network.
- (3) aquatic development near airports which may compromise operational safety, for example, due to the risk of bird strike.
- (4) retail developments on arterial routes which impair their efficiency and safety by creating traffic conflicts.
- (5) buildings or trees on the flight paths at airports.
- (6) developments which impede access to seaports for larger vehicles.

Issue 2

Adverse effects on the environment are caused by the provision of transport infrastructure and the use of transport. These effects include:

- (1) air pollution.
- (2) noise and vibration
- (3) contaminated run-off from roads discharging into water or onto or into land.
- (4) loss of public amenity including effects on visual amenity, natural character and areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- (5) effects on ancestral lands, sites and other taonga of value to Tangata Whenua.
- (6) spread of noxious weeds from road verges.
- (7) loss of land to roads and to the parking of vehicles.
- (8) effects on sites, buildings, places or areas of heritage value.

Chapter 16 Natural Hazards

Issue 1

The actual or potential costs of natural hazards to communities.

Issue 2

The impact of natural hazard protection measures on the environment, especially on habitat and amenity values, heritage places, mahinga kai, and other taonga.

Chapter 17 Hazardous Substances

Issue 1

Adverse effects on the environment may arise from the storage, use, disposal, or transportation of hazardous substances including:

- (a) contamination of air, water and soil
- (b) effects on ancestral lands, sites and other taonga of value to Tangata Whenua
- (c) effects on ecosystems

- (d) human health effects

These adverse effects may arise because:

- (a) precautionary measures taken when hazardous substances are stored, used or disposed of are inadequate.
- (b) spills or leaks can occur when hazardous substances are transported, loaded or unloaded; or
- (c) activities using hazardous substances as an integral part of their process, for example, agricultural spraying, may make discharges into the environment which have unintended adverse effects.

Chapter 18 Solid and Hazardous Waste Management

Issue 1

Adverse effects on the environment, including soil, air, and water pollution and effects on human health, and on ancestral lands, sites and other taonga of value to Tangata Whenua, may rise from past, present and future waste management practices and problems. These practices and problems include:

- (a) an uncoordinated approach by waste management agencies.
- (b) old waste disposal and storage sites which continue to release contaminants.
- (c) a shortage of suitable new waste disposal sites and limitations on existing sites, and a lack of facilities to handle hazardous wastes in particular.
- (d) Production of increasing amounts of solid and hazardous wastes requiring disposal.

5. Matters of Resource Management Significance to Tangata Whenua

5.1 Introduction

This chapter, prepared by Tangata Whenua, and developed in accordance with section 62(1)(b) of the RM Act, presents matters of resource management significance to Tangata Whenua as identified through consultation with runanga. The list of matters is not finite and further consultation with Nga Upoko and Nga Runanga of the region will expand the parameters of significant matters.

The following will serve as a starting point only.

5.2 Matters of Historical, Cultural and Traditional Significance

The relationship of Tangata Whenua with the resources of Canterbury begins in the ancient times of Aoraki and the Creation of Te Waipounamu (South Island).

Because of aroha, the beings who became the gods of Waitaha and Ngati Mamoe reconvened and transformed the landscape so that the sacred relatives of the original crew would no longer be barren.

Aoraki plays a key role in the mainstream of a unique identity as he represents the beginning of human presence in Te Waipounamu. Aoraki is also the last place referred to by Ngai Tahu families in tangihanga (funeral services) as the spirits of the dead are lead away on their last journey to their rivers and mountains. Thus, they establish their bearing, look back, acknowledge those who grieve for them and then continue the journey back to Hawaiki, the homeland of all Maori.

In the mainstream western mindset, human activity and thought is often at variance with nature and the natural world. Tangata Whenua do not see their existence to be separate from Te Ao Turoa (the natural world), but an integral part of it.

All forms of life are related by Whakapapa (genealogy) and descend from a common source. This provides an underlying bond and harmony through kotahitanga and whanaungatanga (indissoluble ties of kinship).

However there will inevitably be conflict. Pakiwaitara (legends) explain the reasons for this. For example, the wind and the rain batter the earth because Tawhirimatea (wind deity) was angry with his brothers for having agreed to the separation of Ranginui (Sky Father) and Papatuanuku (Earth Mother).

When human beings kill fish or birds, dig up plants or cut down trees they are enacting a role of another legendary brother Tumatauenga (deity of war) who represents the warrior. Tumatauenga finds justification for his slaughter of his natural brothers because they failed to help him with Tawhirimatea to keep Ranginui and Papatuanuku together.

Deities possess a dual aspect in that on one hand they are a part of nature and on the other provide patterns of behaviour to be followed by their human descendants.

This closeness to nature, the immediacy and dependence upon it led to a holistic view that recognises the sacredness of other life forms and of the landscape itself, and melds together science and religion in a rich store of shared imagery that is ingenious and subtle.

The traditional rights to and attitudes towards land, water and natural resources evolved over time, thereby, creating a system incorporating a unique blend of religious beliefs and a social structure that balanced with the environment.

While retaining traditional values, this framework also absorbed the changes in social organisation which emerged through adaption to the new environment and the development of a new economy.

These changes required the adoption of new skills, technology and methods of resource control and labour utilisation.

The land, water and resources in a particular area are representative of the people that reside there. These natural resources also determine the welfare and wealth of the tribal group which owns or controls them.

Control of the rahui or tapu regulated the acquisition and maintenance of resource rights and preserved those rights for those who remained within the group.

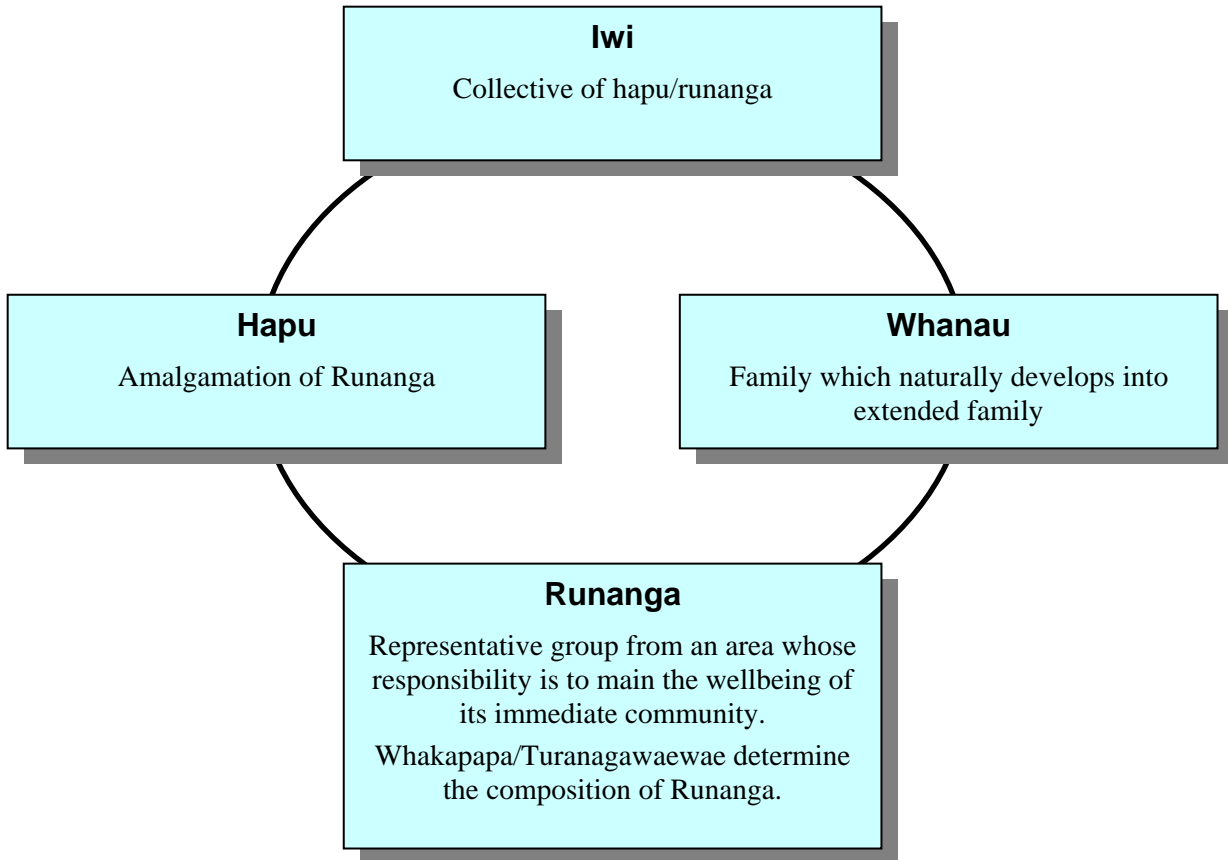
The important challenge in the modern context is the wise use of our natural resources in a way which is consistent with those values passed on to us by our tupuna (ancestors). A combination of balanced realism and acceptance of Tangata Whenua values is needed.

The long term welfare of the environment and the long term welfare of the people within that environment is central to maintaining the sustainable balance between conservation and development.

The need to realise the interconnectedness and sacredness of living things is more important for our survival than it has ever been. While we cannot go back we can learn from those who were here before us.

5.3 Tribal Organisation

The tribal organisation consists of four groups of people.



The nine Papatipu Marae currently established in the Canterbury region are:

<i>Hapu</i>	<i>Marae</i>	<i>Runanga</i>
Ngati Kuri	Takahanga	Kaikoura
Ngai Tuahuriri	Tuahiwi	Tuahuriri
Ngati Wheke	Wheke	Rapaki
Ngati Tutehuarewa	Tutehuarewa	Koukourarata
Ngati Irakehu	Onuku	Akaroa
Ngati Irakehu	Mako	Wairewa
Ngai Te Ruahikihiki	Ngati Moki	Taumutu
Kati Huirapa	Te Hapa O Niu Tireni	Arowhenua
Kati Huirapa	Waihao	Waihao

Otautahi runanga is based in Christchurch to meet the needs of Ngai Tahu people in the main urban area. The Runanga is responsible for the social, economic and cultural needs, under Article III of the Treaty of Waitangi, for Tangata Whenua in Christchurch and is involved in resource management issues in conjunction with Tuahiwi runanga.

5.4 Role of Tangata Whenua

The traditional Ngai Tahu system of resource allocation and control contained and reflected all of those beliefs and practices which were important to the society's welfare and identity. In this way, the physical environment and Ngai Tahu interaction with it was an unbroken combination of the past, the present and the unfolding future.

An integral element of the concepts of kaitiakitanga/rangatiratanga is the recognition that Tangata Whenua have their own traditional means of managing and maintaining resources and the environment.

The system of traditional rights to and attitudes towards resources have evolved over time. The resources in any given area, are representative of the people who reside there and are a statement of identity.

Tangata Whenua regard the environment from a holistic approach from the mountains to the sea and do not look in isolation at environmental issues.

Each runanga has its own area, carefully determined by natural boundaries such as mountain ranges and rivers.

This political and occupational authority over an area is **manawhenua** and encompasses **kaitiakitanga** and **rangatiratanga**.

(a) **Tikanga:** Practices, or tikanga, were developed to maintain the mauri of the domains of duties of Ranginui and Papatuanuku. They are based on the general understanding that people belong to the land and have a responsibility of kaitiaki to that land. Tikanga incorporated concepts such as tapu (sacredness) and rahui (temporary restriction). These are forms of social control which manage the interrelationship of people and the environment.

Tikanga were developed in recognition of the three planes of reality:

- te taha tinana (the physical plane)
- te taha hinengaroa (the intellectual plane)
- te taha wairua (the spiritual plane)

Tikanga seeks to unify these three planes in an holistic way. Observing tikanga is part of the ethic and exercise of kaitiakitanga.

(b) **Kaitiakitanga** is the expression of Maori authority, mana, ethics and guardianship. Tangata Whenua are the keepers and caretakers of knowledge relating to natural resources and the protectors of those resources.

Kaitiakitanga is fundamental to the relationship of Tangata Whenua and the environment.

All persons exercising powers and functions under the RM Act, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to Kaitiakitanga (section 7(a)). While the RM Act defines Kaitiakitanga, and in law that is the

definition the Regional Council must use, Kaitiakitanga is not adequately explained by that definition (see Appendix 1).

Kaitiakitanga is an environmental decision making system which has been developed by Tangata Whenua to fulfil their responsibility towards the environment. The responsibility of Kaitiaki is twofold: first, there is the ultimate aim of protecting mauri and, secondly, there is the duty to pass the environment to future generations in a state which is as good as, or better than, the current state.

Kaitiakitanga is a broad notion which includes the following ideas:

- Guardianship
- Care
- Wise management
- Resource indicators, where resources themselves indicate the state of their own mauri.

A Kaitiaki is a person and/or agent who performs the tasks of guardianship. Kaitiakitanga may be practised through:

- The maintenance of wahi tapu, wahi tipuna and other sites of importance.
- The management of fishing grounds (mahinga mataitai).
- Protesting about environmental degradation (e.g. Sticking Point submissions).
- Observing the maramatanga (lunar calendar).
- Observing the tikanga of sowing and harvesting.
- Designing settlements in keeping with the environment.

Kaitiakitanga is linked inextricably to Tino Rangatiratanga as it may only be practised by those Iwi, Hapu, Runanga or Whanau who possess Tino Rangatiratanga in their tribal area.

Families and subtribes, and sometimes individuals, are charged with the tasks of Kaitiakitanga. Kaitiaki often receive their mana or authority with respect to a particular locality, place or resource. For example, a family or individual might be the Kaitiaki for a pa or for a fishing ground because they possess an intricate knowledge of the local environment and Whakapapa.

Kaitiakitanga is a proactive and preventative approach to environmental management. However, this traditional management system has rarely had the opportunity to address large scale environmental degradation. For example, the mauri of places like Sticking Point and the mouth of the Estuary, through long-term abuse, have been adversely affected. Tangata Whenua feel that if Kaitiakitanga had been recognised, such degradation would not have occurred.

(c) Rangatiratanga is the full chieftainship and authority including the right to permit or deny others. It is an inherent sovereignty and is exercised by Tangata Whenua as kaitiaki of the resources and environment within their rohe.

Rangatiratanga and Kaitiakitanga are the practical expression of the cultural and traditional relationship of Tangata Whenua with their ancestral lands, water sites, wahi tapu and other taonga (see section 6 (e) of the RM Act).

In recognising and providing for Rangatiratanga and Kaitiakitanga, it is necessary for the Regional Council and other RM Act players to consult with Tangata Whenua. The Parliamentary Commissioner¹ has said:

“It also means that care needs to be taken...to ensure that activities which are contrary to the spirit of sections 6(e), 7(a) and 8 are not allowed unless Tangata Whenua have been consulted.”

Accordingly, the Regional Council has developed a consultative relationship with Tangata Whenua. The outcome of consultation is to ensure that resource management issues of concern to Ngai Tahu and the processes Tangata Whenua see as necessary for integrated management of natural and physical resources are incorporated into the Regional Policy Statement.

5.5 Why These Issues Are Important To Tangata Whenua

The enclosed issues are central to Tangata Whenua because they represent the diminishment of a tribe’s physical, intellectual and spiritual estate (e.g. taonga).

These issues are central to section 62 of the RM Act as each issue represents a significant matter of resource concern.

The term taonga can refer to anything that contributes to the maintenance of a tribe’s intellectual, physical and spiritual estate and, as such, is fundamental to Maori environmental management. It is also referred to in section 6(e) of the RM Act and Article 2 of the Treaty of Waitangi.

Although some taonga, such as land and water in any form (including rivers, lakes, groundwater, pools, waterfalls and springs), relate directly to domains, other taonga are more diverse. They include sites and resources such as wahi tapu, tauranga waka and mahinga mataitai (each is referred to in the RM Act), other sites for gathering food and other cultural resources, hills, mountains and caves.

Taonga can refer to intangible, as well as tangible entities. Institutions that give expression to the Tino Rangatiratanga and Mana Whenua of the iwi are also regarded as taonga. All taonga are part of the cultural and tribal identity of iwi.

Examples of taonga are:

- **Nga Awa (water)**

Water is an essential element of life. Consequently, it is a very significant taonga to Maori and plays a central role in both the spiritual and secular worlds. Water represents the life blood of Papatuanuku, the tears of Rangi, and is the domain of Tangaroa. The condition of water is a reflection of the state of the land, and this in turn is a reflection of the health of Tangata Whenua.

- **Te Moana (sea)**

The domain of Tangaroa has great spiritual significance vested in Mana Atua. It also has a practical value. The sea is a food basket of the iwi. As such, practices and elements that defile the mauri and the mana of the sea are seen as abhorrent. The discharge of pollutants into the sea is an obvious example.

¹ “Proposed Guidelines for Local Authority consultation with Tangata Whenua”. Office of the Parliamentary Commissioner for the Environment, 1992.

Te Moana includes the shoreline, foreshore, estuaries, river mouths and so forth. Lakes, such as Lake Wairewa, are often referred to as moana.

- **Nga Maunga (mountains)**

Maunga are a source of, and enhance, the mana of an iwi and hapu. The relationship of an iwi with its maunga can be affirmed and strengthened in a number of ways. Often a maunga is named directly after a tribal tipuna (ancestor), thereby establishing a clear genealogical relationship or commemorating a significant event. Often such maunga are classified as tapu to an iwi or hapu.

- **Nga Awa (rivers)**

Awa have a mauri, mana and tapu of their own. They are entities, like maunga, with which iwi groups identify. Tangata Whenua often refer to the river as a taonga and in doing so denote their relationship to the entire river system, not to any one part. Rivers carry the life blood of the land; the well-being of a river is reflected in the well-being of the local people.

- **Mahinga Kai (traditional food)**

Various traditional foods are of value to iwi. Some, like mataitai (see below) are identified as such in both the RM Act and in the National Coastal Policy Statement. However, there are other valued sources of kai, for example, eels and watercress. All fauna and flora are the offspring of various deities; for example, all sea life is of Tangaroa, forests and animals are of Tane Mahuta and uncultivated foods are of Haumietikitiki. For this reason they have Mana Atua and are considered tapu.

Food also has a strong social and cultural meaning. Manaaki tangata is the custom of being aware of and caring for the needs of your guests. Food is a fundamental way of expressing this ethos. In turn, the mana of the Tangata Whenua is both upheld and enhanced. The loss of the ability of Tangata Whenua to provide for guests in this way can also be seen as a loss of mana.

- **Mataitai (seafood)**

Mataitai is food provided by the sea, for example, shellfish, fish, crayfish. Apart from being a major source of mana, the state of mataitai is a reflection of an iwi, hapu, Runanga or Whanau duty of kaitiakitanga. Where they are no longer able to protect these resources, Tangata Whenua may suffer a loss of mana in being unable to fulfil their role as kaitiaki.

- **Wahi Tapu**

Wahi tapu, which is specifically referred to in the RM Act, covers a broad range of places. It is a status which recognises the tapu of the area. The area may be associated with creation stories of Tangata Whenua, a particular event (such as a battle or ceremony); it may be where the whenua (placenta) was returned to the earth, or where a certain type of valued resource is found.

- **Tauranga Waka**

Tauranga waka are landing sites for canoes. Sites used for landing and berthing of waka taua (war canoes) may, because of the association with life and death, be considered wahi tapu. Similarly, where a waka is of significance to the mana of Tangata Whenua, its resting place may be categorised as a tauranga waka.

- **Cultural Resources**

Cultural resources comprise a broad category of resources used in cultural practices and activities of Maori. Such resources include flora and fauna for rongoa Maori (medicine), prized flora and fauna for weaving (e.g. pingao, harakeke, kiekie, pigeon feathers), and wood (e.g. totara) for carving purposes.

Cultural activities are the essential working elements of the tribal culture. They give rise to, and reaffirm, the relationship of Tangata Whenua with the land. The guaranteed availability of these resources has implications that extend beyond the use of a material for any one cultural activity. It extends to preserving tikanga (customary practices) associated with their use.

• **Cultural Institutions**

Cultural institutions are matters of significance to iwi because of their relationship to tribal identity and tribal development. They comprise the essential institutional elements that denote mana whenua, the customary right of power relating to tribal rohe (boundaries). Turangawaewae (a place to stand, foothold), papakainga (whanau housing), and mahinga mataitai are some of these institutions.

5.6 Matters of Resource Management Significance to all Runanga(a) Water quality

- Amenity value; the ability to swim in water.
- No discharge of human excrement into water bodies. Discharge should be stopped and alternative processes should be monitored.
- Dairy shed and other agricultural/industrial run-off.
- Riparian land use that has downstream effects.
- Facilities such as sewage outlets should not be constructed without consultation with and approval of the runanga. Risk to kaimoana from discharges into water.
- Discharge of chemicals and other potentially hazardous waste.
- Dumping of waste into the sea.

(b) Water quantity

- Is groundwater being managed sustainably?
- What are the cumulative effects of its use?
- What are the cumulative effects of taking water from a catchment?
- Need to know the quantity of water take and its implications for the resource overall.

(c) Harvesting of Mahinga Kai

- Effects on the habitat of traditional fish species. Protection of spawning sites.
- Access to rivers and beaches where mahinga kai is gathered. Access to areas such as wahi tapu and mahinga kai needs to be guaranteed. General access to cultural sites should be in consultation with Tangata Whenua.
- Marine reserves lock up mahinga kai. Alternative measures should be looked at.
- Decline of raupo growth; wetlands that act as buffer zones and protect mahinga kai.
- Spraying of water cress in streams.

(d) Consultation

- Water based sites of cultural significance, wahi tapu, mahinga kai need to be protected.
- Resource consents and monitoring for Tangata Whenua concerns. Provision should be made.
- Protection of wahi tapu sites and urupa. Need for a process to ensure runanga are consulted if wahi tapu present on a site. Tikanga Maori should be observed.

(e) Ownership

- Tangata Whenua must have ownership of cultural history/knowledge in relation to activities within their rohe.

(f) Papakainga

- Policies should enable Tangata Whenua to provide for papakainga housing so they can provide for their culture and well being through living in a culturally based way.

(g) Sites for tips; landfills

- Should be chosen in a culturally aware way.

(h) Process

- Need for co-ordination between resource management agencies, particularly regional and district councils.
- Issues should be integrated into the Regional Policy Statement/Regional Coastal Plan policy documents, and not included in a separate section.
- Section explaining the relationship of Te Tiriti and the RM Act and the status of Tangata Whenua.
- Regional Policy Statement/Regional Coastal Plan planning process needs to recognise iwi and runanga planning and integrate with this.
- Need for adequate resourcing to enable Tangata Whenua to participate - to recognise that Regional Councils have large resources and Tangata Whenua are limited.
- Consultation processes need to reflect the Court of Appeal decision on the Wellington International Airport case (see Chapter 2.2(c)).
- Tangata Whenua information needs to retain its integrity and not be changed.
- Resource management process should provide for the input of Tangata Whenua and include local knowledge.
- How will Tangata Whenua concerns be provided for in the next ten years?
- How will the Regional Council ensure that Tangata Whenua concerns are acted on and do not get forgotten? There is a need to develop a process based on section 6(e), 7(a) and 8 of the RM Act.
- What is the status of Tangata Whenua information given through the consultation process? Will all issues be faithfully included?

(i) Consents

- The Unit needs to sort the consents process out - 10 days for runanga to respond is too onerous.
- There is a concern that consents are being granted before runanga are consulted. Are there checks to ensure that the activity implemented is that approved? (Monitoring)
- Consultation over resource consents and monitoring for Tangata Whenua concerns.

5.7 Matters of Resource Management Significance to Runanga within their Individual Rohe

(a) Tuahiwi

- Discharge of sewage into the Cam is a concern.
- Rakahuri (Ashley) river - there needs to be protection of important spawning/breeding grounds (e.g. whitebait, cockles etc.).

(b) Koukourarata

- The Regional Council should direct applicants to consult with Koukourarata runanga before their application is accepted.
- Discharges from the paua farm need to be monitored.
- Lyttelton and Akaroa harbours are both a concern re water quality - it needs to be improved to a drinkable state.
- Maintenance of the wharf at Port Levy. Monitoring of marinas and moorings of Port Levy for sewage discharges.
- The effect of dredging (Lyttelton Harbour) on Port Levy Bay should be studied, ascertained and monitored.
- A lack of public toilets around Banks Peninsula.
- Mahinga mataitai designations² possibly at Koukourarata (Port Levy) and Okains Bay.

(c) Onuku

- Lyttelton and Akaroa harbours are both a concern re water quality - it needs to be improved to a drinkable state.
- Sewage outlets, such as the one at Tikao Bay should be located away from shellfish beds.
- The harbour at Robinsons Bay (Akaroa) is black and smells at low tide? What causes this and what are the options for preventing it?
- There is concern at discharges from boats moored in the harbour - what are the effects on kaimoana? Concerns are for the whole community - the runanga can no longer take kaimoana freely or swim freely any more.

² Note that Mataitai Reserves can only be established under the Fisheries Act 1996, not the RM Act.

(d) Wairewa

- The use of Wairewa (Lake Forsyth) for entertainment/recreation such as powerboats and jetskis affects values such as fishing. No landfills because of the threat of seepage of leachate into Wairewa and potential seepage into groundwater.
- A landfill at Kaitorete Spit would be sacrilege.
- Wairewa is:
 - a taonga of significance;
 - a mahinga kai of major significance;
 - an integral part of the way of life of the people.
- There needs to be consultation over the opening of the lake because of the eels.
- When the lake backs up there can be problems with eel drains.

(e) Taumutu

- Water quality for Te Waihora (Lake Ellesmere) and its tributaries. (Te Taumutu runanga)
- The cumulative effect of surface and groundwater abstraction in the Te Waihora catchment.
- The Regional Council cuts weed in the tributaries of Te Waihora and lets it drift into the lake resulting in reduced oxygen levels.
- The Regional Council needs to close the information gap on Te Waihora.
- Te Waihora should be managed for its fisheries.
- Kaitorete Spit - protection of the pingao here is a concern:
 - mining;
 - landfill proposals etc.;
 - dune buggies.
- Replanting of pingao is needed because of beach erosion and marram grass encroachment.
- Opening of the lake for drainage purposes.

(f) Rapaki

- Protection of wahi tapu sites and urupa and that consideration be given to Tangata Whenua cultural values, with regard to the commercial development of Banks Peninsula.
- Appropriate resourcing of runanga for consultation and resource consents administration. We consider 5% of the application fee for consents administration to be appropriate for runanga processing consents.
- Runanga must be given clarification of the process as to what constitutes a notifiable or non-notifiable path for consent applications.
- Status of information given by Tangata Whenua is to be upheld by the body reproducing the information.

- The problem of erosion across the Port Hills is a major concern and should be investigated and a report produced. (ie. protection of landscape).
- Provision should be made for the planting of native plants on Banks Peninsula.
- We are concerned with the water quality of Lyttelton harbour. Testing of water in regard to the appropriate safe water standards, should be carried out at specifically notified times.
- Consideration should be given by Regional Council and any other authorities, when spraying noxious weeds etc, as to the runoff of chemicals/contaminants into any waterways. Our concerns are based on practices such as spraying of road side beside open waterways, gutter and stormwater runoff in Lyttelton township which may contain heavy metals etc.
- There is a lack of public facilities at Rapaki.
- We are concerned by the discharge of raw sewage into the harbour.
- We are concerned at the discharges from boats moored in the harbour - what are the effects on kaimoana? Our concerns are for the whole community - the runanga can no longer take kaimoana or swim freely in the harbour.
- Tradable water rights - the right for some to sell excess water rights to others.
- Concerned that environment stays nuclear free.

(g) Kaikoura

- Most issues that concern the runanga are coastal.
- Dumping of waste into the sea (e.g. rock onto young paua beds).
- Agencies need to be more creative with the disposal of rock and silt.
- Kaikoura is traditionally a very heavily populated area. There can be difficulty recognising places of settlement - what is wahi tapu etc.? How to recognise Ngai Tahu sites, but there is a very little history on previous occupations. It is hard to identify the sites. When roadworks turn up bodies/bones need to notify runanga.
- Earlier settlements are represented by Ngai Tahu through whakapapa but no previous history of settlement. Whakapapa runs in people here - Mamoe, Waitaha etc. are no longer separate groups.
- History of intense settlement because of food resources probably.
- What is the best means of providing for taiapure?
- What can be done to make the water cleaner?
- Who monitors outputs ? Does Council have people monitoring conditions?
- 100% clean water is what is wanted re discharge of waste.
- Suppose treated effluent could be okay if treated to a suitable level.
- Liaison improvements - a newsletter could be useful.
- Tangata Whenua need to identify the things they value and the things they want to achieve.

(h) Arowhenua-Waihao

The following represents the matters of resource management significance to Arowhenua and Waihao runaka (Kati Huirapa hapu) which they have chosen to express to the Regional Council in the form of policies from the Kati Huirapa Management Plan. These do not represent the policy of the Regional Council. The policies of the Regional Council are set out in Chapters 6 to 18 and endeavour to address and reconcile all the matters raised in Chapters 4 and 5.

Resource Management Concerns of Kati³ Huirapa for the Area Rakaia to Waitaki

The Takata Whenua (people of the land) are Kai Tahu, Kati Mamoe, Rapuwai, Hawea Waitaha (iwi). The hapu (sub tribe) is Kati Huirapa. The Tipuna Marae (ancestral marae) is located at Arowhenua. The district (rohe) of Kati Huirapa extends over the area from the Rakaia River to the Waitaki River.

The history of the land goes back to about 850 AD when, according to tradition, Rakaihautu came to Te Waipounamu (South Island) from Hawaiki in the canoe “Uruao”. The canoe landed at the boulder bank Nelson. While his son Te Rakihouia took some of the party down the east coast, Rakaihautu led the remainder through the interior to Foveaux Strait. With his magic ko (digging stick) Rakaihautu dug the southern lakes (Te Kari Kari O Rakaihautu).

Te Rakihouia proceeded south in “Uruao” down the Canterbury coast where he placed eel weirs at the mouths of the rivers. (The posts he left behind became known as Nga Pou Pou O Rakihouia.) The two parties met up at Waihao, then proceeded up the coast, making their headquarters at Akaroa.

Rakaihautu was buried at Wai Kakahi (near Lake Forsyth). Te Uruao lies as part of the Waitaki River bed near Wai Kakahi (near Glenavy).

Sovereignty

- *Our sovereignty extends over all things Maori, ratou taonga katoa.*

Treaty of Waitangi

- *The Mahika Kai is ours. We are the Takata Whenua.*
- *Governance of this land (Article One) by the Crown and other agents with authority delegated by the Crown and other agents with authority delegated by the Crown is dependent on recognition and protection of Treaty rights (Article Two).*

United Nations Declaration of Principles by Indigenous People

- *It is the responsibility of the Crown and other agents with authority delegated by the Crown, to actively protect Treaty rights.*
- *The Takata Whenua hereby called upon the government to observe, as a member of the United Nations, the principles adopted by United Nations Indigenous Peoples.*

Consultation

- *The Crown and other agents with authority delegated by the Crown, consult with the Takata Whenua on all matters Maori as set out in the RM Act.*

³ Language: The preference of Kati Huirapa” is to denote the “k” in place of “ng” and has been included in this section of the RPS.

Implementation

- *The Crown and other agents with authority delegated by the Crown, put into effect the provisions of the RM Act which actively protect all things Maori, Ratou Taonga Katoa.*

Accountability

- *The Crown and other agents with authority delegated by the Crown, are called upon to consider and put into effect that which has been set out by the Environment Court, the Law Courts, to actively protect all things Maori, Ratou Taonga Katoa.*

Resources and Equity

- *The Crown and other agents with authority delegated by the Crown are called upon to consider and put into effect that which ensures a fair and equitable partnership.*

Kaitiakitanga

- *The Takata Whenua call on all people, residents, visitors, to respect all living things in this land and act as guardians to ensure that future generations can also enjoy them.*

Mahika Kai

- *All land, forests, inland waters, coastal waters are Mahika Kai, places where the Takata Whenua sought food, natural resources, Nga Hua o Te Whenua.*

Nga Uri o Takaroa (The children of Takaroa)

Nga Uri o Tane (The children of Tane)

Who will speak out for our children, grandchildren, those yet to be born?

Who are the guardians of their inheritance?

Takata Whenua

The Takata Whenua say clean up all rivers, lakes, all waterways, all coastal waters

Discharge of contaminants

- *All sewage, all waste discharges out of the rivers, lakes, sea, all natural waters.*
- *All waters be the highest classified standard of water quality, with no waste discharges.*

Hazardous and toxic substances

- *No spraying of pesticides, any toxic chemicals in or near rivers, lakes, sea, all natural waters.*

Solid wastes

- *No dumping of rubbish in or near rivers, lakes, sea, all natural waterways.*
- *All rubbish, solid waste be removed from rivers, coastline, wetlands, all natural waterways.*
- *All local authority waste disposal areas in wetlands, riverbeds and adjacent to rivers, lakes, coast, all natural waters, be phased out and relocated away from waterways, wetlands and coastal areas.*

Grazing animals in and adjacent to natural waters

- *No grazing animals in riverbeds, wetlands, or in the margins of coastal waters, creeks, streams, rivers, lakes, any natural waters.*

Discharges from ships in coastal waters

- *No dumping wastes, dredgings, any contaminants, in coastal waters.*

Contamination of food

- *All food taken from natural waters be fit for human consumption.*

The Takata Whenua say restore the life supporting capacity of all natural waters and waterways

Abstractions, dams and diversion of water

- *All water be returned to the rivers.*

Water levels

- *Water level of lakes, lagoons, wetlands, all natural waters be maintained at levels sufficiently high to sustain the life of these waters.*

Wetlands

- *No more drainage of wetlands.*

Fish passage

- *Passage for migrating fish be maintained in all rivers, coastal lagoons, all natural waterways.*
- *All river backwaters and outlets to drains, streams and springs be reinstated and maintained to ensure passage of fish.*
- *No drains in Mahika Kai areas be cleaned without consulting the Takata Whenua first.*
- *No outlets to rivers, lakes, streams, springs, lagoons, wetlands, any natural water be blocked or destroyed.*

Storing and releasing water from dams

- *The natural rises and falls of flows in rivers be maintained.*

Breeding area

- *Breeding areas for fish, birds, all species in waterways remain undisturbed.*

Wildlife corridors

- *Corridors of undisturbed vegetation be maintained along all rivers, and between rivers and forests, any areas of indigenous flora and habitats of indigenous flora and habitats of indigenous fauna to maintain the seasonal migration and movement of birds, all creatures.*

Increasing area of wetlands

- *The restoration of existing wetlands and the construction of new wetlands be encouraged.*

Natural habitats

- *The protection and restoration of natural habitats be encouraged.*

Planting native species

- *Where plantings are required to protect the margins for farmland adjacent to rivers, local native species should be used to restore habitats and depleted natural areas.*
- *The planting of flax and other native species which are a source of traditional materials be encouraged.*
- *People be encouraged to build and manage wetlands to treat wastes for irrigating land, providing the natural water quality in the ground and in springs and rivers downstream is not lowered.*

The Takata Whenua say that the hills and mountains, the sources of our life giving waters, remain protected by the natural native vegetation

Burning

- *No burning of native vegetation.*

Clearance of native vegetation

- *No logging or clearance of native vegetation.*

Grazing high altitude area

- *The higher slopes and peaks covered by snow in winter, be free of grazing animals.*

Tracking

- *No scarring of the mountains with tracks and roads.*

Legal protection of heritage area

- *People be encouraged to enter into heritage covenants with suitable incentives and compensation where appropriate.*

The Takata Whenua say that all things which affect Maori land will be dealt with by Maori first and foremost

Rating Maori land

- *The issue of rating ancestral lands for any reasons be resolved on the Marae.*

Fishing easements

- *Access to Mahika Kai adjacent to Maori reserves be maintained by the Crown, District Councils and the Regional Council, recognising the purpose of these reserves when land was taken by the Crown for European settlement.*
- *Access to Mahika Kai means access to water of sufficient quantity and quality to exercise traditional rights and customary uses.*

The Takata Whenua say that all discharges of harmful contaminants into air which threaten the life support capacity of air, land and water should cease

- *All harmful contaminants removed from air discharges.*

The Takata Whenua say that the use, storage or transport of hazardous substances be controlled to ensure that they do not cause any damage to the natural environment or place the environment or people at risk from contamination

The Takata Whenua say that the use of any Maori place name in the local area be referred to the Takata Whenua first

The Takata Whenua say that any proposal to disturb ground where there was or is traditional and customary use of ancestral lands, be referred to the Takata Whenua first

Tikanga Maori

- *If any bones or artefacts are disturbed, the runanga be contacted and Tikanga Maori observed.*

The Takata Whenua say that the management of Mahika Kai recognises and accounts for the traditional values and uses of resources by the Takata Whenua

- *Issues of use, control and ownership of Mahika Kai resources are resolved on the marae.*
- *Any management plans proposed be drafted in consultation with the Takata Whenua.*
- *The taking of Mahika Kai ceases until it is proven that the quantity, type and size of resources taken is sustainable and does not prevent the exercise of traditional uses by the Takata Whenua.*
- *Traditional values include the recognition of rahui.*
- *Traditional uses include the erection and use of eel weirs and other traditional means of taking Mahika Kai and the opening of river mouths.*
- *Seeding of shellfish (including freshwater shellfish), the protection of habitat and breeding areas.*
- *Restocking of coastal (kai moana) areas and the protection of habitat and breeding areas.*
- *Restocking of rivers, lakes, wetlands with indigenous fish and protection of habitat and breeding areas.*

Record of Sites

- *Record of sites for the protection and/or restoration of Mahika Kai in riverbeds, coastal areas, the margins of waterways, natural water, which is subject to Canterbury Regional Council Rules.*

5.8 Outcomes Sought by Tangata Whenua

Tangata Whenua identified the following outcomes that they sought to see reflected in regional policy.

- (1) Priority should be all water catchments, for example, Wairewa and tributaries.
- (2) That the mixing and diverting of waters be prohibited unless by consent of Tangata Whenua.
- (3) That Tangata Whenua be recognised as kaitiaki of all water bodies.

That local runanga be consulted regarding implementation of the policy.

In respect of Tangata Whenua, water values will not be compromised in any form and shall be established through consultation with Tangata Whenua.

In recognition of their role as kaitiaki, resource management responsibilities be returned, in consultation, to runanga.

- (4) Establish and improve water flow and/or water level regimes for Canterbury water bodies which are subject to competing demands for their use.
- (5) That the establishment of water flow and water level regimes for Canterbury water bodies which are subject to competing demands for their use.
- (6) Water abstraction permits shall be reviewed if Tangata Whenua values are compromised. (We are the other partner therefore we own half the water in conjunction with the Crown).
- (7) Protecting a habitat for mahinga kai purposes and arresting soil erosion.
- (8) Subdivision of rural land in general title will be promoted to enable Tangata Whenua to live on ancestral land.

Where subdivision occurs to enable Tangata Whenua to live on ancestral land, reserve contributions be waived.

Creation of a Maori Reserve in lieu of a reserve contribution.

- (9) To protect and enhance access to wahi tapu and wahi taonga for Tangata Whenua.

Each runanga to be deemed to be Heritage Protection Authorities for the purposes of managing and protecting wahi tapu and wahi taonga sites within their rohe.

To obtain the concurrence of Tangata Whenua in use or access to appropriate information regarding wahi tapu and wahi taonga sites.

- (10) To protect and enhance access to wahi tapu, wahi taonga and mahinga kai for Tangata Whenua.
- (11) To seek to eradicate introduced animal species that impact adversely upon indigenous and native flora, fauna and mahinga kai, in consultation with Tangata Whenua.
- (12) To protect, enhance and re-establish indigenous flora and fauna.

Two matters of resource management significance to Tangata Whenua have not been reflected in policies in the Regional Policy Statement and this is a matter of concern to them. These matters are:-

- (1) **No discharge of contaminants to water bodies.**
- (2) **That tradeable water rights over water be held in abeyance until ownership of water, under the Treaty, is resolved.**

5.9 Measures Sought by Tangata Whenua to Achieve Outcomes

(1) Transfer of Powers (section 33, RM Act)

- Transfer of functions or duties, powers or responsibilities to Tangata Whenua. Process:
 - (a) special consultative procedure specified in section 716A of the Local Government Act 1974.
 - (b) serve notice on Minister of its proposal.

- (c) both authorities agree transfer is desirable because:
 - (i) authority to which transfer is made represents the appropriate community of interest relating to the exercise or performance of the function, power or duty.
 - (ii) efficiency.
 - (iii) technical, special capability or expertise.
- (d) agreement between authorities concerned and on such terms and conditions as are agreed.
- (e) transfer may be changed or revoked at any time by notice from transferor to transferee.
- (f) transferee may relinquish transfer in accordance with agreement.
- Option

(2) Inclusion of Tangata Whenua in resource decision making, for example, Hearings Commissioners (section 34, RM Act)

- Equal representation/partnership

(3) Heritage Protection Authority (sections 187-198, RM Act)

- Equal representation/notification to Regional Council of legal right.
- Closest body to Tangata Whenua who can be a Heritage Protection Authority is Minister of Maori Affairs acting on the recommendation of a runanga (section 188 of the RM Act).

(4) Water Conservation Orders (sections 199-217, RM Act)

- Joint agreement in process, for example, setting standards.
- Attempts to preserve the quality of a freshwater body.
- Significance wider than just local interest.
- To provide for the protection of characteristics which any water body has or contributes to, and which are considered to be of outstanding significance in accordance with tikanga Maori (section 199 (2)(c) of the RM Act).

(5) iwi management plans

- Identify
 - (a) Procedure, if conflict i.e. linkage between iwi policy/regional policy and process to resolve this.
 - (b) Integration of agreed policies.
- Informs councils what the expectations of iwi are.
- Procedures

- Negotiated and conducted in a manner appropriate for two equal partners.
- Forums - both marae and council bases.
- Although the RM Act does not regard advice by iwi as binding, the statutory requirements under section 6, 7 and 8 should give weight and prominence to interests of Maori.

(6) All policies to be compatible with Tangata Whenua beliefs

- Section 6(e) of the RM Act requires that all persons exercising functions and powers under it in relation to managing the use, development and protection of natural and physical resources shall recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.
- Section 7(a) of the RM Act requires councils to have particular regard to kaitiakitanga.
- Tangata Whenua beliefs take a long term approach to survival of both people and the natural world.

(7) Access: inclusion in each chapter

- Access to wahi tapu, and areas of mahinga kai by Tangata Whenua initially is essential for the sustaining, or looking after of the resources affected by the RM Act. This means there is a need for careful and sensitive planning for people and by the people of the region.
- Reduced access to areas may also be applicable if the area is under threat of destruction.

(8) Economic and cultural relationship

- It is impossible to take sections of a peoples life and highlight those aspects out of context from the culture of which it was a part.
- It is for this reason that the cultural relationship of Tangata Whenua as provided for in the RM Act impacts on other aspects of the culture also, and these implications needed to be considered by planners.

(9) Explicit recognition and provision shall be made for Tangata Whenua input into the decision making process.

- Given the principles of Kaitiakitanga under section 7(a) of the RM Act, the tenets of rangatiratanga and kawanatanga within the Treaty of Waitangi, Tangata Whenua are key players in the resource management field.
- Explicit recognition and provision of Tangata Whenua input into the decision making process is essential for both Runanga and the Crown to honour their obligation to the natural environment for which these bodies are guardians. Consultation is key to the implementation of a joint decision making process.
- Sections 33 and 34 of the RM Act refer to the functions and delegations of local authorities as mechanisms to fulfil the principles of rangatiratanga and kawanatanga.

(10) The obligation of Regional Council to recognise and provide for the Treaty right of Tangata Whenua to exercise their economic and cultural relationship with taonga.

- This is implicit within sections 6(e), 7(a) and 8 of the RM Act and is also linked with measure (8) above.

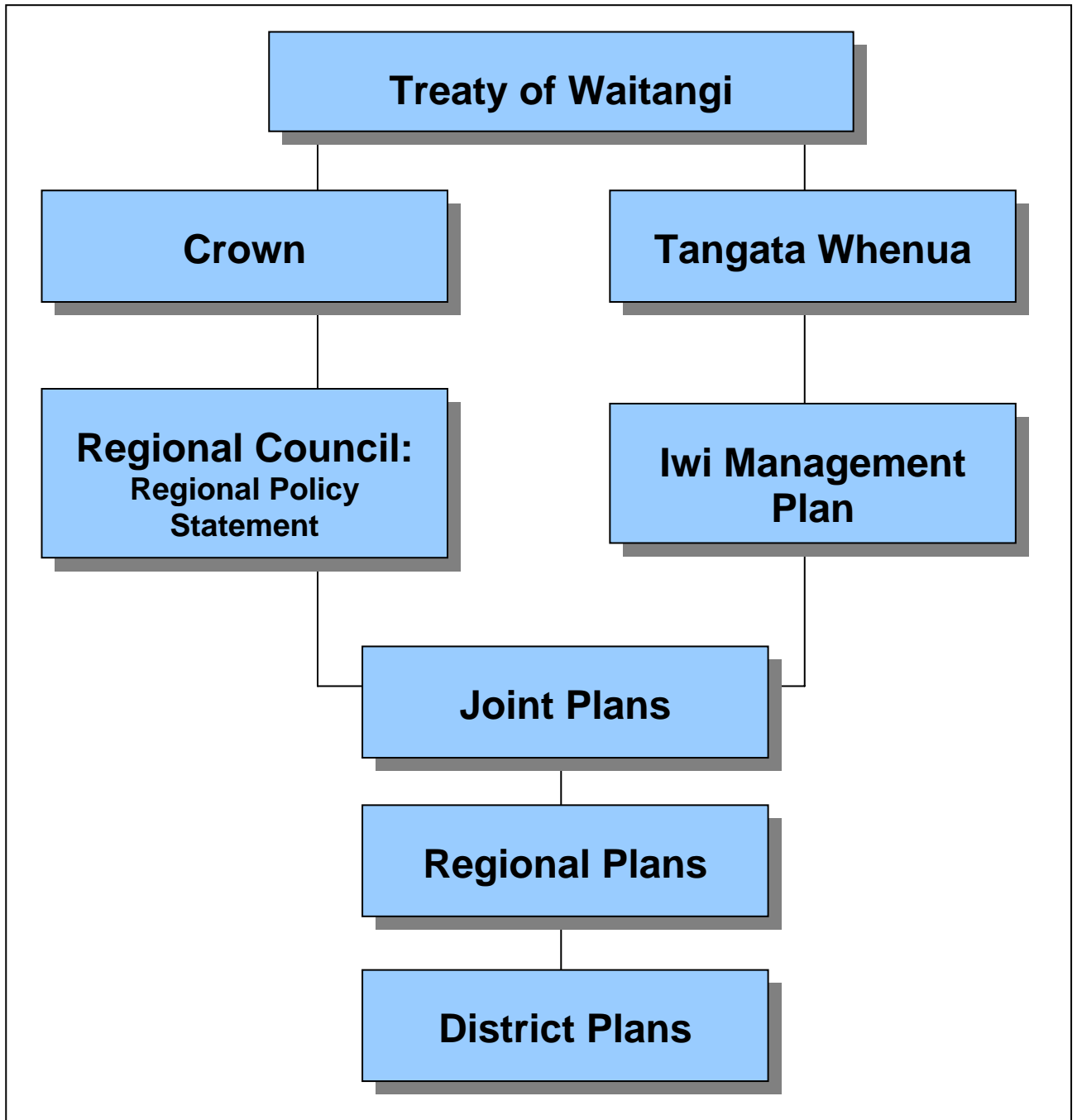


Figure 6: Resource Management Planning Framework Desired by Tangata Whenua

Table 2: Reference Guide to Matters of Resource Management Significance to Tangata Whenua

This table shows objectives, policies and other methods from Chapters 6 to 18 which relate to the outcomes and measures sought by Tangata Whenua in Chapter 5.

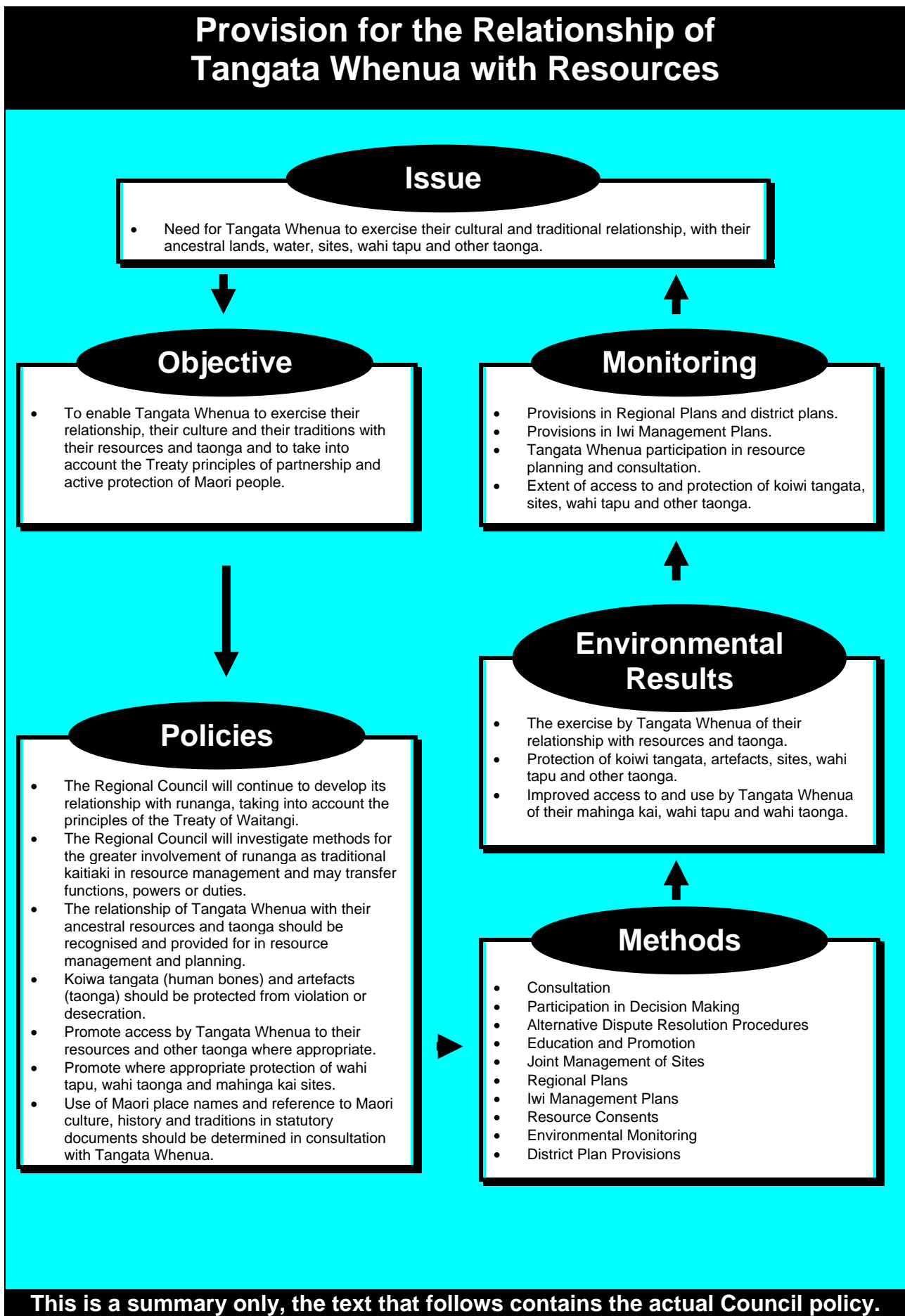
Outcomes sought by Tangata Whenua	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14	Ch 15	Ch 16	Ch 17	Ch 18
1. No mixing or diverting of waters	Obj 1			Pol 14	Pol 1								
2. No discharge of contaminants to water	Obj 1		Pol 1	Pol 12, 13		Issue 4		Pol 4				Pol 1(c), 2 (3)	
3. All water catchments a priority	Obj 1			Pol 4, 10									
4. Recognise Tangata Whenua as Kaitiaki of water	Obj 1 Pol 3				Obj 4 Pol 7	Pol 3(b)							
5. Hold tradeable water rights until Treaty claim settled				Pol 3 Meth 1(a)									
6. Consultation	Pol 1 Meth 1(a)	All other section per cross reference to Chapter 6.											
7. Transfer powers to Tangata Whenua	Pol 2 Meth 1(a), (e), (h), (i)			Meth 1(a)	Meth 1(a)	Meth 1(c)	Meth 1(f)	Meth 1(f)					
		All other section per cross reference to Chapter 6.											
8. (i) Establish water flow regimes (ii) Improve water standards	Obj 1			Pol 1, 2, 4					Pol 3				
9. Protect mahinga kai.	Obj 1 Pol 5(a), (b)	Pol 2, 4, 7, 8		Pol 1, 8, 13	Pol 1	Pol 1, 2(b), 3(b)	Obj 1(f) Pol 2(c), (d), 5				Pol 7	Pol 2, 3	

Table 2 cont'd

Outcomes sought by Tangata Whenua	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14	Ch 15	Ch 16	Ch17	Ch 18
10.(i) Establish water quality standards (ii) Enhance water quality	Obj 1	Pol 4		Pol 9, 10	Pol 3				Pol 3				
11.Arrest soil erosion	Obj 1	Pol 2, 3, 4, 5			Pol 3								
12.Promote papakainga settlement	Obj 1						Obj 6 Pol 8						
13.Recognise runanga as Heritage Protection Authorities for wahi tapu/wahi taonga	Obj 1 Pol 4, 5(b)		Pol 5(c)										
14.Obtain the concurrence of Tangata Whenua for use/access/ information re: wahi tapu/wahi taonga	Obj 1 Pol 4, 5(a) (b), 6		Pol 5(b), (c)		Pol 1	Obj 1(c)							
15.Eradicate introduced species adversely affecting indigenous flora/fauna/ mahinga kai.	Obj 1	Pol 5	Pol 4		Pol 2								
16.Protect/enhance/ re-establish indigenous flora and fauna.	Obj 1	Pol 4	Pol 4	Pol 1	Pol 1, 2, 3	Pol 1(e), 2(a) (b)	Pol 5			Pol 4	Pol 7	Pol 2, 3	

Table 2 cont'd

Measures sought by Tangata Whenua	Ch 6	Ch 7	Ch 8	Ch 9	Ch 10	Ch 11	Ch 12	Ch 13	Ch 14	Ch 15	Ch 16	Ch17	Ch 18
(i) Transfer of Powers	Obj 1 Pol 2 Meth 1(b), (e), (h), (i)			Meth 1(a)	Meth 1(a)							Meth 1(a)	
	All other sections per cross reference to Chapter 6.												
(ii) Inclusion in Decision Making	Obj 1 Pol 2 Meth 1(a), (b), (c), (e), (h), (i)	Meth 1(b)	Meth 1(c)	Meth 1(c)	Meth 1(c)	Meth 1(c)	Meth 1(f)	Meth 1(f)	Meth 1(d)	Meth 1(c)	Meth 1(c)	Meth 1(c)	Meth 1(c)
(iii) Heritage Protection Authorities.	Obj 1		Pol 5(c)										
	All other sections per cross reference to Chapter 6.												
(iv) Iwi Management Plans	Obj 1 Pol 2 - 6 Meth 1(g)	Method 1(b)	Meth 1(c)	Meth 1(c)	Meth 1(c)	Meth 1(c)	Meth 1(f)	Meth 1(f)	Meth 1(d)	Meth 1(c)		Meth 1(c)	Meth 1(c)
(v) Water Conservation Orders	Not something the Regional Council can provide for												
(vi) Access	Obj 1 Pol 5(a) (b)		Pol 5(b)		Pol 7 Meth 1(d), (f), 2	Pol 3(b)							
	All other sections per cross reference to Chapter 6.												
(vii) Provide for Tangata Whenua Values	Obj 1 Pol 1 - 6 Meth 1(a) - (i)		Obj 2 Pol 1, 3 - 5	Ob 1, 2 Pol 1, 14	Pol 1	Obj 1(c) 2 Pol 1(e), 3(b)	Pol 2(c), (d), 8	Obj 2, Pol 2, 4		Pol 4			Pol 3
(viii) Economic/Cultural Relationship	Obj 1												
(ix) Provide for Explicit Recognition in Decision Making	Obj 1 Pol 1, 2 Meth 1(a)-(c), (e), (h), (i)	All other sections per cross reference to Chapter 6											





6. Provision for the Relationship of Tangata Whenua with Resources

6.1 Introduction

Many of the matters raised as concerns by Tangata Whenua in Chapter 5 relate to their involvement in resource management that needs to be recognised and provided for in the Regional Policy Statement. Although the Regional Council has incorporated many of the concerns of Tangata Whenua into the objectives, policies and methods of the issue resolution chapters (7 to 18), it is important that it sets out processes to provide for the exercise of rangatiratanga and kaitiakitanga in the management of natural and physical resources. The Regional Policy Statement should also identify how the Regional Council will take into account the Treaty principles of partnership and active protection of Maori people in the use of their lands and waters to the fullest extent practicable.

6.2 Issue Resolution

Issue 1

Tangata Whenua need to exercise their cultural and traditional relationship, which includes kaitiakitanga and rangatiratanga, with their ancestral lands, water, sites, wahi tapu and other taonga in order to achieve environmental results that will meet the concerns that they have identified through the Regional Policy Statement consultation process.

Objective 1

To enable Tangata Whenua to exercise their relationship, their culture and their traditions with their ancestral lands, water, sites, wahi tapu, and other taonga and to take into account the Treaty principles of partnership and active protection of Tangata Whenua in the use of their lands and waters to the fullest extent practicable.

Principal Reasons

To meet the matters of resource management significance to runanga that have been identified through consultation, and to give effect to Part II of the RM Act.

Policy 1

The Regional Council, in recognition of the role of Tangata Whenua in resource management, will continue to develop its relationship with runanga for the management of natural and physical resources and to resolve conflict that may arise over resource management issues. In fostering this relationship the Regional Council will take into account the principles of the Treaty of Waitangi as expressed in case law, and as appropriate to the circumstances, those principles expressed by the Waitangi Tribunal. It will seek to give effect to these principles with the utmost good faith.

Explanation

A consultative relationship has been developed between the Regional Council and Tangata Whenua and is important in providing for the relationship of Tangata Whenua with resources. Taking into account the principle of partnership means that the Regional Council should endeavour to resolve differences to the satisfaction of all parties.

Principal Reasons

To give effect to sections 6(e), 7(a) and 8 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Consultation
 - (b) Participation in decision making
 - (c) Alternative conflict resolution procedures
 - (d) Education and promotion

Policy 2

The Regional Council recognises that individual runanga are traditional kaitiaki within the rohe of their runanga and will investigate methods to provide for the greater involvement of individual runanga in the management of natural and physical resources. The Regional Council may transfer any one or more of its functions, powers or duties to runanga.

Explanation

It is a requirement of the RM Act that the relationship of Maori, their culture and traditions with their ancestral lands, water, sites, wahi tapu and

other taonga be recognised and provided for. The transfer of powers to Tangata Whenua is provided for under section 33 of the RM Act and opportunities to do this should be identified through regional plans and other resource management processes. Any such transfers, however, will be discussed and mutually agreed between the parties, prior to such transfer occurring.

Principal Reasons

To give effect to Sections 6(e), 7(a), 8 and 33 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Consultation
 - (b) Participation in decision making
 - (e) Joint management of sites
 - (f) Regional plans
 - (g) Encourage the preparation of iwi management plans
 - (i) Environmental monitoring

Policy 3

Specific aspects of the relationship of Tangata Whenua, their culture and their traditions with their ancestral lands, water, sites, wahi tapu and other taonga should be recognised and provided for through resource management and planning including provisions in plans, decisions on resource consents and monitoring the state of the environment.

Explanation

The Regional Council has endeavoured to provide for the resource management matters of significance to runanga through the process and issues chapters of the Regional Policy Statement. Other matters of concern, reflecting the relationship of Tangata Whenua with their resources and taonga, may arise however in relation to specific proposals, areas and resources. Policy 3 gives direction that these will be provided for through resource planning.

Principal Reasons

To give effect to sections 6(e), 7(a), and 8 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Consultation

- (b) Participation in decision making
 - (e) Joint management of sites
 - (f) Regional plans
 - (g) Encourage the preparation of iwi management plans
 - (h) Resource consents
 - (i) Environmental monitoring
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider making provision for:
- (a) the management of koiwi tangata and artefacts;
 - (b) access to and protection of sites of significance to Tangata Whenua.

Policy 4

To promote the protection of any site or activity that yields evidence of koiwi tangata (human bones) or artefacts (taonga) from violation or desecration.

*Ch 8 Landscape, Pol. 5
Ch 10 Beds of Rivers, Pol. 1
Ch 11 Coastal Env. Pol. 1
Ch 12 Settlement, Pol. 2.*

Explanation

The remains of tipuna (ancestors) and artefacts are of significance to Tangata Whenua, because they are the physical manifestation of their whakapapa and form part of their cultural inheritance¹.

Principal Reasons

To give effect to sections 6(e), 7(a) and 8 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
- (a) Consultation
 - (d) Education and promotion
 - (e) Joint management of sites
 - (f) Regional plans
 - (g) Encourage the preparation of iwi management plans
 - (h) Resource consents
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider making provision for:

¹ Nga Tahu Policy - Koiwi Tangata, June 1993, page 3

- (a) the management of koiwi tangata and artefacts.

Policy 5

Ch 8 Landscape, Pol. 4, 5
Ch 10 Beds of Rivers, Pol. 7
Ch 11 Coastal Env. Pol. 3
Ch 12 Settlement, Pol. 2

- (a) Promote the provision of access for Tangata Whenua to their ancestral lands, water, sites, wahi tapu, and other taonga where appropriate.**
- (b) Promote where appropriate the protection of wahi tapu, wahi taonga and mahinga kai sites of Tangata Whenua from general access where this is required by Tikanga Maori.**

Explanation

Access to sites such as wahi tapu, wahi taonga and mahinga kai is of cultural significance to Tangata Whenua and should be provided for wherever possible in order to meet the provisions of sections 6(e), 7(a) and 8 of the RM Act. It may not always be possible for the Regional Council to enable access. Where sites are of special significance however, Tangata Whenua may wish to protect them by restricting access and information about their location, and ensuring their management in accordance with Tikanga Maori. Appropriateness should be determined through reference to: available legal powers; the needs of Tikanga Maori as advised by Tangata Whenua; the extent of the site; any need for maintaining public access; and the impact that protection would have on public access and other values such as amenity.

Principal Reasons

To give effect to sections 6(e), 7(a), 8 and 42 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Consultation
 - (b) Participation in decision making
 - (c) Education and promotion
 - (d) Joint management of sites
 - (e) Regional plans
 - (f) Encourage the preparation of iwi management plans
 - (g) Resource consents
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider making provision for:
 - (a) access to and protection of sites of significance to Tangata Whenua.

Policy 6

Statutory documents should only use Maori placenames and refer to Maori culture, history and traditions where correct usage has been determined in consultation with Tangata Whenua.

Explanation

Maori placenames and their meaning, and Maori culture, histories and traditions are taonga and represent significant aspects of the relationship of Tangata Whenua with resources. It is important that the relationship of Tangata Whenua with their taonga is respected by ensuring that usage in local authority public documents is correct.

Principal Reasons

To give effect to sections 6(e), 7(a) and 8 of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Consultation
 - (b) Participation in decision making
 - (d) Education and promotion
 - (f) Regional plans
 - (g) Encourage the preparation of iwi management plans
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider making provision for:
 - (c) only using Maori place names which have been determined in consultation with Tangata Whenua.

6.3 Methods

1. Regional Council

The methods used or to be used by the Regional Council are:

(a) Consultation

The Regional Council will continue to consult with Tangata Whenua, so as to:

- (i) Recognise and provide for direct communication in order to better work together, and to identify points of common interest and resolve differences where conflict has arisen.
- (ii) Clearly identify the outcomes it believes can be expected from consultation.

- (iii) Clearly identify consultative constraints, including resources and time.
- (iv) Provide sufficient information to Tangata Whenua, so that they can make informed decisions.
- (v) Provide sufficient time for both the participation of Tangata Whenua and the consideration of the advice given.
- (vi) Allow genuine consideration of that advice, including a willingness to change.

Consultation assists identification of appropriate opportunities for participation in decision making, transfer of powers, or the joint management of sites and resources. It is necessary in the preparation of Regional Plans, the processing of resource consents, in undertaking environmental monitoring, and establishing processes for conflict resolution. It is essential to ensure appropriate management of koiwi tangata and other taonga, including the use and interpretation of Maori placenames and reference to their culture, history and traditions, and the protection and provision of access to significant sites.

Principal Reasons

Consultation helps give effect to Part II of the RM Act. Consultation between parties can result in more informed decision making and better environmental outcomes.

(b) Participation in decision making

Opportunities for participation in decision making should be explored, subject to natural justice being met.

Principal Reasons

Participation in decision making gives effect to Part II of the RM Act. Subject to natural justice not being breached it can provide for better environmental outcomes by bringing together the resource management traditions of two cultures.

(c) Alternative dispute resolution procedures

Disagreement and even conflict over resource management matters may arise from time to time. Dispute resolution procedures offer an alternative to litigation and the adversarial process. Such procedures include direct communication to identify common interests and resolve differences; facilitation; assisted negotiation; mediation and arbitration. Procedures should be selected for use according to the requirements of the circumstances.

Seeking to resolve disagreement in a non adversarial way takes into account the Treaty principles of partnership and utmost good faith in dealings between partners.

Principal Reasons

To give effect to Part II of the RM Act.

(d) Education and promotion

This can be an outcome of plans or take place independently. Education about the cultural and traditional relationship of Tangata Whenua with resources should provide better understanding of the RM Act's provisions. The Regional Council will also encourage runanga to establish

communication channels with landowners and occupiers so that through better understanding, landowners and occupiers will be able to avoid adversely affecting sites of value to runanga. It is particularly important to achieve appropriate outcomes in the protection of human remains and significant sites, and correct reference to Maori placenames, culture, history and traditions.

Principal Reasons

Education and promotion will develop better understanding of the provisions of the RM Act relating to partnership with Tangata Whenua and providing for the transfer of powers. It can assist agencies and individuals to explore positive models of partnership, particularly in relation to matters such as koiwi tangata, access and protection of taonga.

(e) Joint management of sites

Joint management of sites and treasured resources, such as Te Waihora (Lake Ellesmere), provides opportunity for local authorities and Tangata Whenua to work together to promote sustainable management. Joint management could include working together to give effect to functions under the RM Act; for example, working jointly with the Regional Council to establish, implement and review objectives, policies, and methods to achieve integrated management of a particular resource (see section 30(1)(a) of the RM Act). It could also include non statutory management plans, joint working parties and other mechanisms as appropriate.

Joint management of sites provides an alternative to transfer of powers that provides for the rangatiratanga and kaitiakitanga of Tangata Whenua and takes into account the principle of partnership.

Principal Reasons

To give effect to sections 6(e) and 8 of the RM Act.

(f) Regional plans

Regional Plans should provide for the relationship, culture and traditions of Tangata Whenua with resources; take into account the principles of the Treaty of Waitangi; identify opportunities for participation in decision making, transfer of powers, and processes for managing the discovery of koiwi tangata and artefacts, access to and protection of significant sites.

Principal Reasons

Regional Plans give effect to regional resource management policy in relation to more specific areas and resources.

(g) Encourage the preparation of iwi management plans

Iwi management plans are non-statutory documents that have been prepared by Tangata Whenua. The Regional Council, in preparing regional plans, must have regard to iwi management plans. By agreement with the Regional Council all or part of an iwi management plan, for example, dealing with wahi tapu or wahi taonga, may be incorporated into a regional plan. The development of the regional plan would be subject to the public consultation processes set out in the RM Act. The Regional Council, by agreement with Tangata Whenua, recognises that there is opportunity for this to occur.

Iwi management plans can provide mechanisms for implementing aspects of policy. For example, the process for managing the discovery of koiwi tangata; how any powers transferred will be discharged; and the joint management of sites and/or resources. They can also be a source of information that aids, but does not replace, consultation with Tangata Whenua during regional plan preparation or consideration of consents.

The Regional Council will encourage runanga to prepare iwi management plans and if requested, will provide advice to aid their formulation.

Principal Reasons

Reference to iwi management plans assists in the understanding of Tangata Whenua perspectives, and can provide an appropriate method to achieve certain environmental policies.

(h) Resource consents

Resource consents are required for a range of activities and provide a mechanism to actively protect the relationship of Tangata Whenua with their ancestral resources. For example, conditions on consents can provide for the appropriate treatment of koiwi tangata and the protection of wahi tapu and wahi taonga.

Principal Reasons

Resource consents address specific resources, sites and activities and are an effective mechanism for giving effect to Part II of the RM Act.

(i) Environmental monitoring

Joint management and transfer of powers, functions and duties could provide opportunity for Tangata Whenua involvement in monitoring, for example, monitoring the continued wellbeing of sites, mahinga kai, wahi tapu and wahi taonga.

Principal Reasons

Environmental monitoring will assist both the Regional Council and Tangata Whenua to assess whether resource objectives are being met and is a practical way for Tangata Whenua to exercise kaitiakitanga.

2. District plan provisions

District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider making provision for:

- (a) the management of koiwi tangata and artefacts;
- (b) access to and protection of sites of significance to Tangata Whenua;
- (c) only using Maori place names which have been determined in consultation with Tangata Whenua.

Principal Reasons

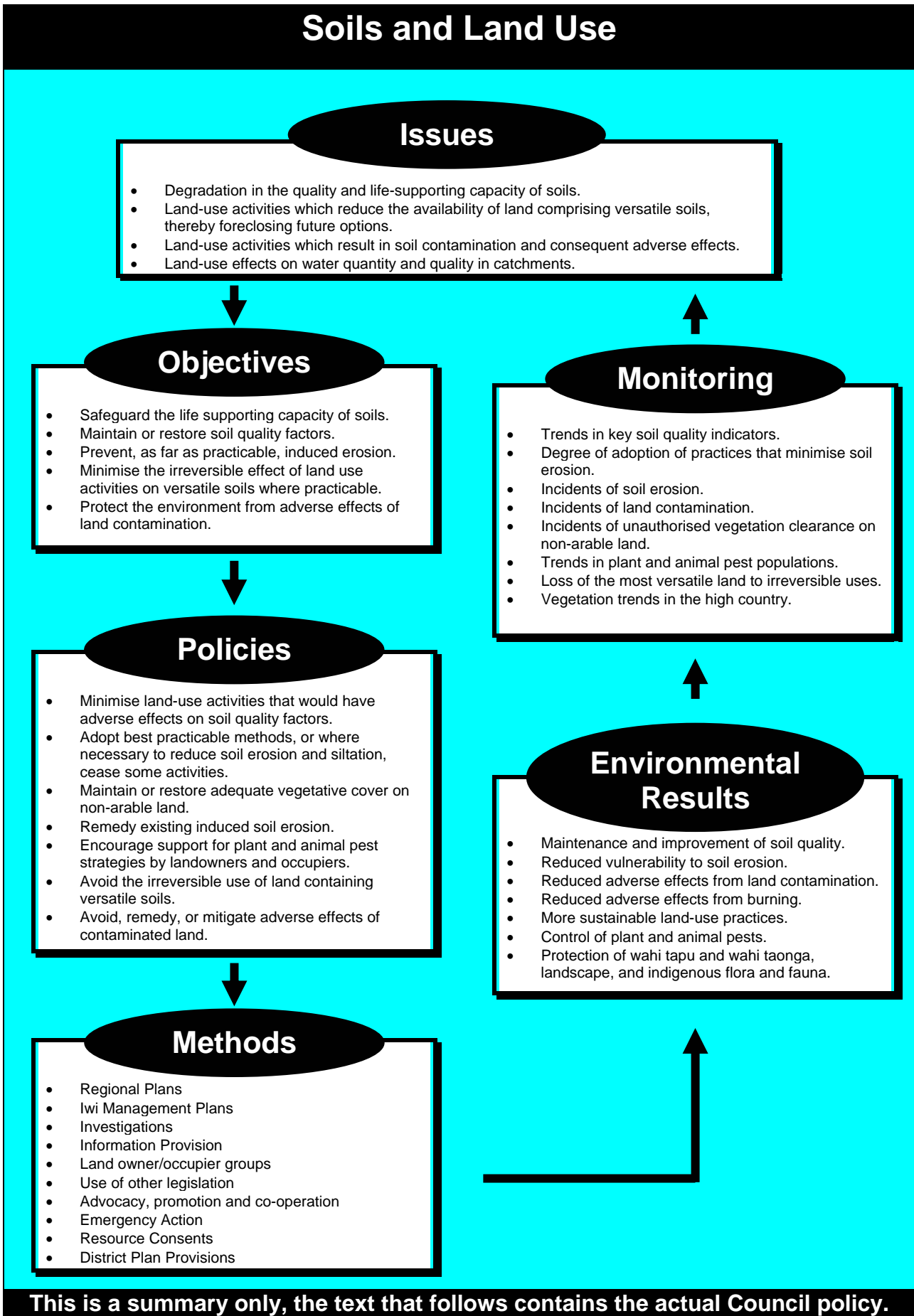
Some policies will be implemented more effectively through district plans.

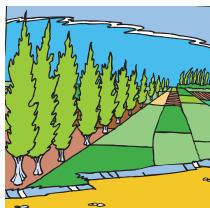
6.4 Environmental Results Anticipated

- (1) The exercise by Tangata Whenua of their relationship with resources and taonga in the management of natural and physical resources.
- (2) Protection of koiwi tangata, artefacts, sites, wahi tapu and other taonga of significance to Tangata Whenua.
- (3) Improved access to and use by Tangata Whenua of their mahinga kai, wahi tapu and wahi taonga.

6.5 Monitoring Effectiveness

- (1) Provisions in Regional Plans and district plans.
- (2) Provisions reflecting regional policy in iwi management plans.
- (3) Extent of Tangata Whenua participation in resource planning and consultative processes.
- (4) Extent of concern on access to and protection of koiwi tangata, sites, wahi tapu and other taonga.





7. Soils and Land Use

7.1 Introduction

(a) Life-supporting capacity

Land and its covering soils are a fundamental resource having the same importance to the region's life as air and water. The life-supporting capacity of soil includes its productive value in terms of its ability to support a healthy complex of indigenous or introduced plants and animals above and within the soil. Reduction of the life-supporting capacity of soils, whether through depletion of quality or availability deprives present and future generations of a potential resource. The inter-generational dimension is important because in human terms soil is effectively a non-renewable resource - the time needed for the inorganic fraction¹ of soils to develop is measured in thousands of years. Therefore, the generations of today must ensure they hand on the region's soil resource in a condition at least as good as it is now. To do this and still retain the soil's natural ecosystem values or use soils to generate a substantial part of the region's economic wealth means managing them in a sustainable manner, protecting them or compensating them for any stress arising from their use. It is life-supporting capacity for which soils are, and will continue to be, a valued resource. Soil conservation, the protection of that capacity, is where management issues arise from.

(b) Degradation of soil quality

Soil quality is the term used here to refer collectively to soil attributes necessary for soil to be life-supporting. These include soil nutrient levels, nutrient cycling ability, organic matter, soil structure, depth, and water holding capacity. Inappropriate land management, past and present, can adversely affect soil quality attributes through, among other things, loss of vegetative cover (whether by overgrazing, burning, or vegetation clearance) exposing soil or reducing slope stability and inducing erosion.

The degradation of soil quality is a serious adverse effect on a basic resource. Because of the relationship between soils and the life that depends on them, a reduction in soil quality can lead to less diverse and less vigorous vegetation. Loss of soil quality means that to sustain a given level of production, more inputs are needed (such as energy, fertilisers, or irrigation).

¹ Soil is a mix of organic matter such as rotting vegetation, and inorganic matter such as sand, silt, or clay. In some areas, particularly where pasture is irrigated, the organic content of soils can be increased relatively quickly. However, that is only one component of soil quality, and it can be just as readily lost.

(c) Land degradation

This is a widely used but poorly defined term. It has a wider interpretation than degradation of soil quality although that is included within the concept. In Canterbury land degradation is usually linked to the undeveloped high country, arises as a consequence of introduced pests and pastoral land use over the past 150 years, and generally includes reduced plant stature and biomass, and negative changes in soil quality such as reduced soil organic matter, nutrient levels, soil depth and soil microfauna.

It is acknowledged that land development (e.g. replacement of matagouri or short tussock with pasture grasses) can result in a reduction in plant stature and sometimes biomass. However, with the ongoing addition of nutrients and pasture grasses to maintain or increase productivity, land degradation does not result.

The most visible area of land degradation in Canterbury is the Mackenzie Basin where parts are severely degraded although there are similar examples elsewhere. Extensive areas have little tussock left, hieracium comprises a significant part of the ground cover, and a significant percentage of the ground surface is bare, predisposing it to erosion by wind and water. There is concern that all of the undeveloped tussock grasslands used for pastoral farming are at some degree of risk unless managed correctly.

Ongoing pastoral farming in the undeveloped tussock grasslands of Canterbury's high country is dependent on the maintenance of tussock ecosystems. In parts of the high country centuries of periodic burning and 150 years of grazing by rabbits and stock, coupled with nil or insufficient inputs of fertiliser, have resulted in a major decline in the health and extent of the tussock ecosystems. The depletion of the vegetative cover has increased the risk of induced erosion by leaving the soil vulnerable to frost heave and erosion by wind and water. Recovery from such degradation will be very slow in the harsh climate of the high country.

Hieracium species, particularly *H. pilosella* or mouse eared hawkweed, are introduced plants now widely found throughout the high country and in the most degraded areas can be the dominant vegetation cover. The two factors most frequently cited as causing this are the invasive capabilities of hieracium and the effects of burning and overgrazing causing land degradation. Yet hieracium is also found in undisturbed and relatively undisturbed areas. As a consequence there is no universal consensus amongst researchers and stakeholders that either factor adequately explains the success of hieracium. There is widespread acceptance that maintaining vegetation cover and shading is a key factor in limiting the occurrence of *H. pilosella*. One thing that is agreed, is that interactions within the tussock grassland ecosystem are complex.

Finding successful long-term solutions to land degradation will require that the social and economic factors which affect the way land is managed now and in the future, are addressed along with the natural resource problems. Such factors include the short-term and long-term economic viability of properties, institutional arrangements, the mix of land types within properties, and alternative sustainable land uses. While an integrated approach to solving land degradation is required, it is beyond the scope of the Regional Policy Statement and the functions of the Regional Council to address the social and economic dimensions. The Regional Policy Statement focusses on addressing the natural resource issues but acknowledges the need to work with other organisations to address the wider problems.

Chapter 7 deals with the soil conservation aspects of land degradation, in particular degradation of soil quality and induced erosion. Protection of areas of significant vegetation and significant habitats are addressed in Chapter 8 Landscape, Ecology and Heritage.

(d) Induced soil erosion

Soil erosion, the loss of soil from a site, can be classified into natural erosion and induced erosion. Natural soil erosion is a fundamental part of the geological processes which shape the land and is occurring even in areas undisturbed by the activities or actions of people. Some indigenous ecosystems need ongoing natural erosion to maintain them. Generally the costs of intervening on a broad scale to stop natural erosion where that is possible, would be very high and probably could not be justified.

Induced erosion is erosion in excess of natural rates and that can be attributed to the actions or activities of people.

Induced soil erosion lowers the life-supporting capacity of the soil resource thereby reducing the ability of future generations to meet their needs. Even the poorest soil has some life-supporting capacity as long as it remains firmly in one place, but even the best soil loses some of its life-supporting capacity if it becomes eroded. Induced soil erosion can develop slowly over time, as a result of land degradation, plant vigour falls, and the soil becomes exposed to the elements, or it may come abruptly with vegetation clearance or mechanical disturbance. Factors contributing to induced soil erosion include:

- (i) Loss of vegetative cover in hill and high country areas by deliberate clearance of vegetation, such as by burning, cultivation, or felling of bush and trees.
- (ii) Loss of vegetative cover particularly in hill and high country areas by over-grazing, whether by domestic animals, and/or animal pests, especially where drought limits available grazing.
- (iii) Cultivation, especially where a fine tilth is developed and/or sloping land is tilled. Creation of a fine tilth increases the risk of wind erosion. This is of particular concern on the plains and downs, and especially in cropping areas where a high proportion of the land is cultivated each year.
- (iv) Earthworks which may reduce slope stability, for example, the cutting of tracks on hill country.

Depth is the most difficult soil quality to regain. It is in the upper horizons that most of the nutrient cycling (decay of organic matter, nitrogen, phosphorus) occurs. These horizons are also the main contributor of moisture-holding capacity. Their removal by induced erosion is seen as the major threat to the life-supporting capacity of soil.

At a number of places in Canterbury, actions have already taken place that increase vulnerability to erosion, for example, the erosion-prone hill-slopes in parts of North Canterbury and Banks Peninsula that have been cleared of deep-rooted vegetation.

As a result of induced erosion, flood flows, aquatic ecology, and water quality may be adversely affected by sedimentation of rivers and lakes. Build-up of the sea floor and degradation of marine ecosystems has occurred in the bays and harbours of Banks Peninsula.

(e) Land management burning

In the Canterbury hill and high country, where land management burning is used to remove or suppress unwanted vegetation, there can be adverse effects on biodiversity, and on soil quality through a loss of soil nutrients, exposure of soil to the weather, and the consequent possibility of soil erosion. In addition, water quality, air quality, high country riparian and wetland areas,

mahinga kai, landscape and significant indigenous vegetation or habitats of indigenous fauna may be affected.

(f) Soil contamination

In Canterbury, low concentrations of contaminants are dispersed over extensive areas, and often more problematically, there are high concentrations over small areas. Discharges, accidental or otherwise, of substances that contaminate land are actually or potentially harmful to the environment. Land affected in this way may require expensive and difficult remediation of adverse effects on water and air quality and/or people's health and welfare. For example, in parts of Canterbury past applications of DDT still limit the use of some land, and dangerous residues remain from waste disposal sites and the use of timber treatment chemicals. Where they occur, these effects limit the availability of land.

(g) Loss of soil availability

Because of the basic requirements of communities for land on which to build and extend the infrastructure that supplies shelter and conveniently facilitates the supply of most social needs, the reduced availability of the benefits of the soil resource is easily overlooked. Urban development has removed the potential for primary productive use of some of the region's most versatile land. This applies to many Canterbury towns, and particularly on the periphery of Christchurch.

Intensified residential development on rural land can have adverse effects that tend to increase incrementally. They can include loss of the availability of land for primary production (both directly, and due to higher land values), harm to groundwater quality, increased demand for potable water, exposure to natural hazards, limitation of adjacent land uses, impact on landscape or heritage values, and additional demand for services, transport or energy.

(h) Water yield

Changes in land use, and particularly those involving vegetation change, such as trees to grass or vice versa, or vegetation to impermeable surfaces (roads, car parks, house roofs), are recognised as being a critical factor in water yields. Such changes in land use have occurred extensively in the past and continue to occur. These changes, especially in small catchments, affect water yield, including the magnitude and timing of flood flows, and can affect water quality.

7.2 Issue Resolution

Issue 1

Existing and potential land degradation, particularly degradation in the quality and life-supporting capacity of soils which arise from land use practices, or activities that reduce their: versatility for a wide range of primary productive uses; productivity; and ability to support a robust or regenerating vegetation cover. Examples of practices include:

- (i) burning and over-grazing in parts of the high country causing land degradation including reduced plant stature and biomass, loss of nutrients**

and soil organic matter, increased introduced plant and animal pests, increased bare ground and induced erosion

- (ii) cultivation of soil to a fine tilth, particularly the free draining light to medium soils of the Canterbury Plains, which predisposes them to wind erosion.

Objective 1

Ch 8 Landscape, Obj.2
Ch 6 Tangata Whenua, Obj 1

- (a) **Safeguard the life-supporting capacity of soil by maintaining or restoring where appropriate, soil quality factors including: soil depth, soil structure, water holding capacity, organic matter, soil fertility and soil fauna.**
- (b) **Prevent, as far as practicable, induced soil erosion in Canterbury.**

Principal Reasons

Objectives 1 (a) and (b) are intended to protect the life-supporting capacity of soils. In doing this, and particularly by reducing induced soil erosion, they also reduce siltation in water bodies. This benefits the life-supporting capacity of aquatic ecosystems, including mahinga kai areas.

To ensure retention and improvement of the life-supporting capacity of soils, and thereby safeguard their ecological functioning and potential to meet the reasonably foreseeable needs of future generations. Reduction of soil quality is a major factor contributing to land degradation.

To safeguard overall soil productivity (life supporting capacity) to meet the reasonably foreseeable needs of future generations, protect terrestrial and aquatic habitats, water quality, and other values of water bodies. The loss of soil through induced erosion reduces the life-supporting quality of soils. Loss of the mineral component of soil is effectively irreversible given its very slow rate of formation (generally several thousand years for Canterbury).

Policy 1

Land use activities that actually or potentially have significant adverse effects on the following soil quality factors: soil structure, organic content, soil fauna, water holding capacity, and soil fertility, should be avoided, or those effects remedied or mitigated.

Significant adverse effects on any of these factors include:

- (a) **any deleterious change in a soil quality factor which would persist for 25 years or more, or would be impracticable to remedy;**
- (b) **a change in a soil quality factor that increases the rate of runoff and/or nutrient contribution to waterbodies.**

Explanation

The use of land should not be allowed to irreversibly reduce soil quality factors because it is the combined operation of these factors that determines the productive capacity of soil. Significant adverse effects can also occur where long term but not necessarily irreversible changes take place. For the purposes of this policy, 25 years, the approximate length of one human generation, is considered to be an appropriate measure of 'long term'.

Soil compaction at deeper levels, such as that associated with repeated passage of heavy machinery over moist soils, is an example of an adverse effect on the soil structure factors. Harvesting from the land, whether of crops directly, or through pastoral animals, depletes the soil of nutrients. Nutrient depletion occurs when the rate of nutrient removal is faster than the rate at which available nutrients are replenished naturally, or from the addition of fertiliser. The tolerance of soils to this depletion varies widely, but all need nutrient inputs. It is intended to implement this policy by monitoring indicators on a representative range of sites. Any adverse trends would signal a need to provide feedback to land users in the affected areas along with information on corrective options.

Principal Reasons

The loss of key soil quality factors can be difficult to rectify, and if not corrected that degradation may continue to worsen, often resulting in exposure to soil erosion.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (g) Advocacy, promotion and co-operation
 - (h) Emergency action
 - (i) Resource consents

Policy 2

*Ch 10. Beds of Rivers, Pol. 3, 4,
5
Ch.9 Water, Pol. 12
Ch. 11 Coastal Env. Pol.1*

- (a) **Wherever any action or activity is carried out that increases the likelihood of soil depth being lost, the best practicable² method for reducing the amount of erosion likely to occur as a result of that action or activity should**

² For the purposes of this policy, “practicable” means what is possible in practice. Put in other words, adopting the “best practicable method” means using a method that minimises the likelihood of soil erosion occurring or being made worse, while still enabling the task to continue.

be adopted.

- (b) Activities that have the potential, regardless of the method adopted, to result in significant soil erosion, or to lead to significant off-site effects, including sedimentation of water bodies or the coastal environment, should be avoided unless these adverse effects can be offset by mitigation measures undertaken elsewhere.**

Explanation

There is little quantitative information on the increase in erosion induced by various land uses and practices, relative to natural rates of erosion. This data is essential if the region is to achieve sustainable use of land. However, even in its absence there is sufficient history of land use and erosion problems on most types of country to know:

- (a) Which practices need to be avoided or very carefully managed.
- (b) Which practices assist in minimising erosion.

In the absence of reliable information on what constitutes sustainable land use, the conservative strategy being pursued with Policies 2 (a) and (b) is:

- (a) to allow land uses and activities to proceed through the use of methods having the lowest potential to cause soil erosion, except where
- (b) past evidence indicates there is potential for significant soil erosion or off-site effects from soil erosion, in which case the land use or activity should not proceed unless offsite mitigation is sufficient to offset the adverse effects created.

So as to minimise the risk to future generations from loss of life-supporting capacity of soils, it is essential that investigations be undertaken to identify land uses and practices that are sustainable in terms of soil loss, and other soil quality factors.

Examples of steps that could be taken to comply with Policy 2 (a) include, but are not limited to:

- (a) Use of lower erosion risk cultivation methods and timing, for example, direct drilling, not cultivating to a fine tilth.
- (b) Action to maintain or improve soil properties, for example, level of organic matter.
- (c) Planting of shelter belts to reduce wind erosion.
- (d) Use of irrigation which helps establish groundcover after cultivation, or maintain it in drought.
- (e) Managing stocking rates (taking into account background climatic and other factors, such as animal and plant pest intensity) to maintain adequate protective ground cover.

- (f) Precautions to minimise the environmental effects of burning, for example, oversowing, topdressing, or not burning too frequently.
- (g) Preparations before undertaking earthworks to minimise the risk of short or long-term soil erosion, for example, minimising area of exposed ground during and after earthworks, provision of traps and other sediment retention techniques.
- (h) Planning for forestry to minimise soil erosion, for example, track design and location, harvest management plan.
- (i) Planting of suitable vegetation on erosion-prone hill slopes where this would help stabilise the soil.
- (j) Strategies that combine relevant elements of the above actions together to avoid or correct land degradation.

Principal Reasons

To allow most of the normal uses of land while minimising the risk to the life-supporting capacity of soils, and protecting lakes, rivers, the coast, and life within them from harm caused by sediment from soil erosion.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Encourage the preparation of iwi management plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (f) Use of other legislation
 - (g) Advocacy, promotion and co-operation
 - (h) Emergency action
 - (i) Resource consents
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions, should consider including provisions:
 - (a) requiring earthworks for all new subdivisions, building sites, roads or other infrastructure to have effective traps or other sediment retention measures where there is potential for sediment to enter water via stormwater runoff, and that earthworks be designed and programmed so as to minimise the extent of bare ground at any time;

except where provided for in any regional plan.

Policy 3

Ch. 8 Landscape, Pol. 4
Ch. 10 Beds of Rivers, Pol 1, 3

- (a) Maintain or restore vegetative cover on non-arable land so that it is sufficient to prevent land degradation as indicated by:**
- (i) a combination of all the following: a long-term reduction in plant stature, vigour and biomass; increased bare ground; and the presence of early successional plant communities; or**
 - (ii) a long-term decline in soil quality factors as set out in Policy 1; or**
 - (iii) induced soil erosion.**
- (b) Vegetation clearance on non-arable land, whether by burning, or other means, should as soon as practicable be followed by post-clearance treatment to restore or establish a vegetative cover or other surface that is sufficient to prevent induced soil erosion.**
- (c) Where burning is used to manage vegetation on non-arable land, pre-burn soil quality factors should be protected or restored by appropriate post-burn management.**

Explanation

The single most important factor in preventing land degradation and induced soil erosion is a healthy indigenous or introduced vegetative cover with a low percentage of bare ground. Vegetation clearance by depleting or removing the vegetative cover exposes the soil and increases the risk of erosion in the period following clearance. Vegetation clearance is a major factor contributing to increased risk of induced erosion within non-arable areas (hill and high country predominantly). This is particularly so for dry areas, areas with erodible soils, for example, loessal areas and for hill and high country (particularly sub-alpine and alpine vegetation areas) and on Class VIIe and VIII land, where the harsh nature of the climate means that recovery after burning is very slow and the risk of induced erosion occurring is greatly increased. In harsh environments, the retention of indigenous plant communities is a practical means of avoiding induced erosion because these communities have evolved in these environments and are adapted to the conditions. Introduced species are often unable to successfully replace them as a means of preventing induced soil erosion.

Vegetation clearance can lead to surface erosion, or to mass movement, for example, by slipping or slumping where a greater depth of soil loss is involved. Burning can result in: excessive damage to vegetation (such as killing the crowns of tussocks); loss of soil organic matter and nutrients; creation of more attractive rabbit habitat; and exposure of large areas of soil to surface erosion.

Post-burn management is always important, but will vary from site to site. It can include spelling before grazing occurs, oversowing, and/or fertiliser

application. By implementing appropriate post-burn treatment the likelihood of significant erosion occurring can be greatly reduced. Post-burn treatment should commence as soon as practicable, ideally within six months of burning occurring so that by the end of the growing season following the burn there is sufficient vegetative cover to prevent induced erosion.

Burning, particularly of tussocks, should not be so frequent as to cause a progressive decline in plant vigour with each burn.

Sometimes vegetation clearance is associated with development, for example, roads and skifields. Establishing a protective surface with appropriate drainage is also important in these situations.

Principal Reasons

To help safeguard the life-supporting capacity of soils and to help prevent induced soil erosion.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (g) Advocacy, promotion and co-operation
 - (h) Emergency action
 - (i) Resource consents

Policy 4

- (a) **Where past or present land use is resulting in induced erosion, or has increased vulnerability to induced erosion, the landowner or occupier should implement remedial measures to return the rate of erosion, or erosion vulnerability to its natural level.**
- (b) **Priority for treatment should be where there is a significant actual or potential adverse effect on significant habitats of indigenous flora and fauna, water bodies or their beds (including wetlands), or the coastal environment.**

Explanation

This policy is expressly concerned with land that is already at risk of, or actually experiencing, induced soil erosion. It encourages steps to be taken to reduce erosion proneness. Ways of doing this include, but are not limited to, re-establishment of protective vegetation, temporary or

permanent destocking, action to maintain or improve soil properties, planting shelter, the use of structural methods such as retaining walls, and cutoff drains. Where planting of vegetation is a suitable erosion control technique, the use or incorporation of indigenous species should be encouraged but not at the expense of the effectiveness of erosion control.

With respect to Policy 4(b), the Regional Council will assign priority for remedial treatment where induced soil erosion has significant adverse effects on resources of value to the wider community, as compared to effects that are of primary concern to the landowner or occupier. The aim of Policy 4(b) is to provide a focus for allocating financial resources and effort and it is not intended to imply that other adverse effects are not of concern and should not receive remedial treatment.

Principal Reasons

Effective implementation of these policies will result in conservation of soils, and/or reduced adverse effects on aquatic life, water quality, and the beds of rivers, lakes, or the sea from sedimentation due to induced soil erosion.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Encourage the preparation of iwi management plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (f) Use of other legislation
 - (g) Advocacy, promotion and co-operation
 - (h) Emergency action
 - (i) Resource consents
2. District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions should consider including provisions:
 - (b) requiring remedial measures to be implemented to stop, as far as practicable, induced soil erosion where it is already occurring as a consequence of the development of subdivisions, building sites, roads, or other infrastructure;

except where provided for in any regional plan.

Policy 5

In respect of land harbouring pests, being plants, animals or

other organisms subject to a pest management strategy, encourage landowners and occupiers to ensure that their use of land complements that strategy so that these pests do not:

- (a) Spread to adversely affect neighbouring properties, for example, by contributing to induced soil erosion through the depletion of vegetative cover; or**
- (b) Contribute to induced soil erosion through depletion of vegetative cover on their properties.**

Explanation

Introduced animal pests, such as rabbits and wallabies, can contribute directly to land degradation by depleting the vegetative cover, and exposing soil to erosion. Introduced plant pests do not necessarily degrade soil quality, but they do reduce productive land use options available to landowners and occupiers. The Regional Council recognises that in certain circumstances some plant pests such as gorse and broom can aid soil conservation and the transition to more sustainable classes of vegetation cover. The Biosecurity Act 1993 is aimed at eradication or control of unwanted plant and animal pests, and has powers that are complementary to those under the RM Act. Pest management strategies are prepared in accordance with the Biosecurity Act 1993 and come into effect after 30 June 1996.

Principal Reasons

Some pests if not controlled can contribute to land degradation which would be contrary to the purpose of the RM Act.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (f) Use of other legislation
 - (g) Advocacy, promotion and co-operation
 - (h) Emergency action
 - (i) Resource consents

Issue 2

Land use activities which reduce the availability of land which can be identified as comprising versatile soils, thereby foreclosing future land use options that benefit from being located on such soils.

Objective 2

*Ch. 12 Settlement, Issue 1
Ch 6 Tangata Whenua, Obj. 1*

Minimise the irreversible effect of land use activities on land comprising versatile soils where such use would foreclose future land use options that benefit from being located on those soils, where it is practicable to so.

Principal Reasons

The rationale for the Regional Council exercising its soil conservation function with respect to land comprising versatile soils is to safeguard its life-supporting capacity and sustain the potential of that land to help meet the reasonably foreseeable needs of future generations.

Policy 6

Ch.12 Settlement. Pol 2

- (a) **Where consideration is being given to the use, development or protection of land comprising versatile soils, in circumstances where such use development or protection is necessary to achieve the purpose of the RM Act, particular regard shall be had, in the circumstances of the case, to any need to protect such land from irreversible effects that may foreclose some future land use options that benefit from being located on such land.**
- (b) **Provided that where a proposed activity will irreversibly affect land comprising versatile soils and there is a choice in the locality between such activity occurring on that land or on less versatile land, the preference shall be to protect versatile land from such activity, unless the proposed activity would better achieve the purpose of the RM Act.**

Explanation

While the policies in the chapter focus on promoting sustainable management of all land, this policy addresses land comprising versatile soils classified as Class I and Class II. Class I and Class II soils under the Land Use Capability Classification System are defined as land comprising the most versatile soils and covering approximately 294,000 hectares of the region. Such versatile land has particular attributes which make it desirable to protect it from irreversible effects and irreversible uses as far as is practicable. This is land already extensively used for primary production apart from land taken up for urban, commercial and industrial development and for the potential for such development. There are few existing indigenous ecosystem values and its most likely future use is for primary production. It is land which has superior potential for production whether that be agriculture, forestry or for some other form of production.

This is because of its inherent soil qualities which allow it to sustain a given level of outputs with less inputs than would be required for less versatile soil. Such versatile land is a valued resource and further irreversible uses of it should be avoided so far as is practicable to avoid foreclosing options for productive use.

However, the policy recognises that there will be some situations where irreversible development will occur to enable the needs of other users or potential users of the land resource to be met in accordance with the purpose of the RM Act. This policy requires that, where consideration is being given to the use, development or protection of land comprising versatile soils, in circumstances where such use, development or protection is necessary to achieve the purpose of the RM Act, particular regard shall be had in the circumstances of the case to any need to protect such land from irreversible effects that may foreclose some future land use options. The policy also provides that where a proposed activity will irreversibly affect land comprising versatile soils and there is a choice in the locality between such activity occurring on such land and on land having less versatile soils, preference should be to protect versatile soils from such activity unless the proposed activity would better achieve the purpose of the RM Act. Accordingly the policy recognises that land comprising versatile soils is important. There can be circumstances where the use of such soils to provide for urban commercial and industrial activities and expansion of the city would enable people and communities to provide for their economic social and cultural well-being and their health and safety where such provision is in accordance with the purpose of the RM Act. The policy intends that “locality” is a concept which will have a different meaning in different circumstances and relative to activities being considered. It is a matter of fact and degree in each case and could range from consideration of the area of the whole district at a district plan review to the immediate locality in the case of small scale proposals.

While the policy places a weight consistent with the duty to have particular regard to the protection of land comprising versatile soils, this policy is not intended to be absolute or inflexible and is intended to recognise exceptions where the use of land comprising versatile soils for uses other than production is found to be necessary to achieve the purpose of the RM Act as set out in the policy. Thus there can be counterbalancing considerations of sustainable management which outweigh any inflexible application of the policy, as is set out in the policy itself.

Principal Reasons

To provide a framework for assessing whether, to give effect to the purpose of the RM Act for the enablement of people and communities in terms of section 5, it is appropriate to allow land use activities that permit the irreversible loss of land comprising versatile soils and to provide a framework for assessing the extent to which such activity should not be allowed so that the stock of versatile land in the Canterbury region will be sustainably managed so as to meet the needs of present and future generations.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (c) Investigations
 - (d) Information provision
 - (g) Advocacy, promotion and co-operation
 - (i) Resource consents
2. District plan provisions

Issue 3

Land use activities which result in soil contamination and consequent adverse environmental effects.

Objective 3

*Ch.17 Hazardous Substances,
Issue 1
Ch 6 Tangata Whenua, Obj. 1*

Protection of the environment from on-site and off-site adverse effects:

- (a) resulting from land that has become contaminated;
- (b) by prevention of land contamination.

Principal Reasons

Both to minimise directly connected adverse environmental effects, and to avoid follow-on effects such as farm produce that cannot meet health standards. To avoid creating future pollution problems.

Policy 7

Ch 17 Haz. Substances, Pol. 3

Any use or activity that has the potential to result in contamination of land should not be established or continued unless effective precautions have been taken to avoid significant adverse effects on the environment.

Explanation

The contamination of land can be an adverse effect in its own right through limiting its further use. It also poses a risk to various forms of life. Its effects may reflect in lost access to produce markets. There is often a risk of surface and ground water or air being contaminated. This policy is intended to make it clear that adverse effects of the contamination of land should be avoided, and that practices that have the potential to lead to such effects should not continue unless reliable preventive measures have been taken to ensure that the effects are not likely to occur.

Principal Reasons

To avoid the adverse effects of land becoming contaminated.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (b) Encourage the preparation of iwi management plans
 - (c) Investigations
 - (d) Information provision
 - (e) Landowner and occupier groups
 - (h) Emergency action
 - (i) Resource consents

Policy 8

Land that the Regional Council suspects of being contaminated will be investigated to assess the level of environmental risk. The investigation will determine how land that is contaminated should be managed to avoid, remedy, or mitigate the adverse effects.

Explanation

Land contamination needs to be assessed on a site specific basis. Any decision as to whether to attempt decontamination of the site, or to contain any problems in some way should be decided on that basis. Significant actual or potential adverse effects off-site, such as on the quality of adjacent water would be a compelling reason for urgent remedial action. While the Regional Council will ensure that contaminated sites are investigated it will not necessarily undertake the investigations. At sites where a discharge is occurring or where there are identifiable adverse environmental effects, the Regional Council will use its enforcement powers to require investigations and, where necessary, remediation of the problem, and will also assess the adequacy of any action taken.

Principal Reasons

Protection of the environment from adverse effects while recognising the need for management solutions to reflect parity between benefits and costs.

Methods

1. The methods used or to be used by the Regional Council are:
 - (a) Regional plans
 - (c) Investigations
 - (h) Emergency action
 - (i) Resource consents

Issue 4

Land use effects on water quantity and quality in catchments.

The above issue has been dealt with in Chapter 9 by Policies 8 and 12.

7.3 Methods

1. Regional Council

The methods used or to be used by the Regional Council are:

(a) Regional plans

The Regional Council will prepare a Natural Resources Regional Plan (NRRP) dealing with issues relating to land, air, water and natural hazards. The NRRP will contain specific policies to promote the sustainable management of natural and physical resources and, where appropriate, include rules. In preparing the land chapter of the NRRP dealing with soil conservation, the Regional Council will consider:

- (1) the need for rules in relation to managing induced soil erosion; the protection of versatile land; and soil contamination;
- (2) among other non-regulatory methods for managing soil quality/quantity problems:
 - (a) economic instruments, including financial incentives;
 - (b) service provision by the Regional Council where it is efficient and cost-effective to do so; and
 - (c) the need to initiate further investigations.

At the time the land chapter of the NRRP becomes operative, the Regional Council will consider whether any transfers of powers pursuant to section 33 of the RM Act should occur for reasons of administrative efficiency and effectiveness.

Principal Reasons

Regional plans offer a comprehensive and integrated approach to implementing relevant policies. Where regional rules are required there is no other option.

(b) Encourage the preparation of iwi management plans

Iwi management plans are non-statutory documents that have been prepared by Tangata Whenua. The Regional Council, in preparing regional plans, must have regard to iwi management plans. By agreement with the Regional Council all or part of an iwi management plan, for example, dealing with wahi tapu or wahi taonga, may be incorporated into a regional plan. The development of the regional plan would be subject to the public consultation processes set out in the RM Act. The Regional Council, by agreement with Tangata Whenua, recognises that there is an opportunity for this to occur.

Iwi management plans can provide mechanisms for implementing aspects of policy, for example: the process for managing the discovery of koiwi tangata; how any powers transferred will be discharged; and the joint management of sites and/or resources.

They can also be a source of information which aids, but does not replace, consultation with Tangata Whenua during regional plan preparation, or in consideration of consents.

The Regional Council will encourage runanga to prepare iwi management plans and, if requested, will provide advice to aid their formulation.

Principal Reasons

Reference to iwi management plans assists the understanding of Tangata Whenua perspectives, and can provide an appropriate method to achieve certain environmental policies.

(c) Investigations

Management of the region's land resource needs to be based on sound information about trends in its state at any given time, and of mechanisms operating within it. It will be necessary to:

- (i) (a) identify rates of induced erosion under different land uses and areas most vulnerable to induced erosion;
- (b) identify indicators of soil quality;
- (c) establish standards for soil quality;
- (d) investigate sustainable land use options for the undeveloped tussock grassland;
- (e) evaluate the effectiveness of existing erosion control measures, for example, windbreaks;
- (f) identify best practicable methods for minimising soil erosion;
- (g) investigate mechanisms for influencing the adoption of best practicable methods;
- (h) investigate the effects of land use on surface water quality and quantity;
- (i) identify areas of significant indigenous vegetation and significant habitats of indigenous fauna through the use of assessment criteria. These habitats will be identified on maps. As far as possible, this study should be undertaken in conjunction with the Method "Investigations" in Chapter 8;
- (j) identify land use practices which minimise the adverse effects of land use on water quality and quantity;
- (k) (i) identify and map, in consultation with district/city councils and other parties, areas of Class I and II land which need protecting to give effect to Policy 6; and
(ii) identify patches of Class I and II land where protection is not justified.
- (ii) For contaminated site investigations the Regional Council will either undertake the investigation itself or require those responsible for the site to undertake investigations to meet the Regional Council's requirements. Where the Regional Council undertakes the investigation it may seek to recover costs.

Principal Reasons

To provide information on which to base effective resource management measures to maintain soil quality in Canterbury. Investigations must be undertaken to determine what the significance of any adverse effects may be, and to identify options for remedial action.

(d) Information provision

A programme to pass on credible information about sustainable land management to land users and others should be established, adding to work already being done by the Canterbury Regional Council. The aim of this programme would be to bring land use practices, and the underlying attitudes of members of the public and individual land users more into line with the principles of sustainable management. The programme should continue for the duration of this Regional Policy Statement. Every effort should be made to enlist support and participation in this programme by territorial authorities in the Canterbury Region, Tangata Whenua, and other agencies.

As investigations in Method (c) are completed and as new findings come to hand from research organisations, relevant information will be disseminated to landowners, occupiers and other stakeholders. Appropriate mechanisms are likely to include the publication of reports, discussions with landowner and occupier groups, field days, demonstration sites, preparation of pamphlets, newspaper articles and videos.

Specific areas of information provision via pamphlets, video or other media include:

- (i) identifying techniques which landowners and occupiers can use for monitoring soil quality, for example soil structure, identifying soil quality problems, and how such problems can be remedied;
- (ii) identifying simple and effective techniques for monitoring land condition, particularly in the hill and high country areas; and
- (iii) identifying practical measures to help prevent induced soil erosion, for example: preparation of guides to planting wind erosion shelter, conservation tillage techniques and pre- and post-burn management in the high country.

The Natural Resources Regional Plan will identify further specific information provision activities needed to implement that plan's policies for achieving sustainable land management.

Principal Reasons

Providing quality information will influence attitudes, and provide choices for the sustainable management of land.

(e) Landowner and occupier groups

Local landowner and occupier co-operative approaches to achieving sustainable management of land, such as landcare groups, should be recognised by the Regional Council for their potential to have a major role in developing solutions to problems at the “grass roots” level. While wishing to avoid intrusion into such groups, the Regional Council intends to co-operate and facilitate wherever possible, by the provision of information, and assisting with monitoring and result analysis. This method is expected to have strong links with Method (d).

Principal Reasons

Promotes direct solution-finding by landowners and occupiers, ensuring a high level of compliance and commitment to making them work.

(f) Use of other legislation

As necessary the Regional Council will make use of its powers under the Biosecurity Act 1993 to help ensure that pests do not compromise the requirements of policies in this chapter.

Principal Reasons

Powers available to the Regional Council under the Biosecurity Act 1993 will be necessary to complement those in the RM Act to help achieve sustainable management of land.

(g) Advocacy, promotion and co-operation

- (i) Where the Regional Council considers there would be benefits from the development of a code of practice for a particular industry activity (e.g. farming, forestry, NZ Defence Force), it will liaise with industry representatives and advocate to them the preparation of a code. The Regional Council will assist with technical advice as appropriate.
- (ii) The Regional Council, as appropriate, will seek the co-operation of, or co-operate with, other local authorities or organisations in the promotion of land management practices which will contribute to the sustainable management of natural and physical resources. This could include participation in joint investigations, development of demonstration sites, field days and publication of educational material.
- (iii) The Regional Council will liaise with other local authorities and organisations to improve co-ordination of activities and avoid duplication of effort in relation to the promotion of land management practices which contribute to the sustainable management of natural and physical resources.
- (iv) The Regional Council will advocate the preparation by landowners and occupiers of property plans dealing with their whole property in an integrated way so as to help promote sustainable management of natural resources.
- (v) The Regional Council will consult widely in the identification of:
 - areas subject to induced erosion or areas where vulnerability to induced soil erosion has increased due to the actions of people;
 - priorities for remedial treatment; and
 - best practicable methods for reducing induced soil erosion or increased vulnerability to induced soil erosion.
- (vi) The Regional Council will encourage and co-operate with other organisations and central government agencies which are addressing social and economic factors contributing to present or potential land degradation problems.

Principal Reasons

To improve the level of integrated management of natural and physical resources in Canterbury, and achieve outcomes beyond the direct powers of the Regional Council.

(h) Emergency action

To help achieve its land management policies, the Regional Council, may issue abatement notices, or apply for enforcement orders.

This method will be used by the Regional Council whenever it considers urgency is needed to limit environmental damage.

Principal Reasons

To enable emergencies to be dealt with.

(i) Resource consents

The Regional Council is a consent authority for land use consents in relation to soil conservation and for the discharge of contaminants onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water.

In considering consents for burning of vegetation in the hill and high country regard shall be had to: the history of burning for any area proposed to be burnt; the appropriate interval between burns to prevent progressive loss of plant vigour; the likelihood of a vegetative cover sufficient to prevent induced erosion being re-established within one growing season; the risk of induced erosion occurring as a direct consequence of the proposed burn; and the risk of induced erosion occurring in the future due to the cumulative effect of past burns and the burn proposed.

Consents may also be required for other land use activities, for example earthworks.

Principal Reasons

Resource consents, when required through a rule in a regional plan, are an important method for controlling land use activities that are likely to result in soil erosion or contamination of water.

2. District plan provisions

District/city councils in the preparation, variation, change or review of their district plans, through the exercise of their functions should, consider including provisions:

- (a) requiring earthworks for all new subdivisions, building sites, roads or other infrastructure to have effective traps or other sediment retention measures where there is potential for sediment to enter water via stormwater runoff, and that earthworks be designed and programmed so as to minimise the extent of bare ground at any time;
- (b) requiring remedial measures to be implemented to stop, as far as practicable, induced soil erosion where it is already occurring as a consequence of the development of subdivisions, building sites, roads, or other infrastructure;

except where provided for in any regional plan.

Principal Reasons

It is more efficient for District/city councils to integrate controls over induced erosion with their RM Act and Building Act 1991 responsibilities in relation to subdivisions, buildings/building sites, roading and infrastructure.

7.4 Environmental Results Anticipated

Implementation of the above policies and methods is expected to have the following environmental results:

- (1) Maintenance and improvement of soil quality.
- (2) A reduction in the vulnerability of soils to induced erosion.
- (3) Reduced adverse effects from land contamination.
- (4) Reduction in adverse effects from land management burning.
- (5) More sustainable land uses and practices.
- (6) Control of plant and animal pests.
- (7) Protection of significant wahi tapu and wahi taonga, landscapes and indigenous flora and fauna.

7.5 Monitoring Effectiveness

For soils and land use the following indicators should be monitored to assess the suitability and effectiveness of this part of the Regional Policy Statement, and any need for it to be reviewed:

- (1) Trends in key soil quality indicators at sample sites.
- (2) The degree of adoption of land management practices that minimise soil erosion.
- (3) Incidents of soil erosion.
- (4) Incidents of land contamination.
- (5) Incidents of unauthorised vegetation clearance on non-arable land.
- (6) Trends in plant and animal pest populations, and their effects on the land resource.
- (7) The extent of conversion of Classes I and II land to irreversible uses.
- (8) Trends in vegetation cover and composition in hill and high country areas.

