

Biodiversity Implementation Plan 2008 -12

Biodiversity Co-ordinating Group
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1. Purpose

The purpose of this Biodiversity Implementation Plan is to describe how Greater Wellington responds to the biodiversity challenges facing the Wellington region and will implement the biodiversity aspects of the Regional Policy Statement for the Wellington region.

The plan:

- Examines the region's biodiversity challenges;
- Describes the context for our work, provided by the relevant national and regional biodiversity goals and objectives (New Zealand Biodiversity Strategy, the current Long Term Council Community Plan and the (draft) Regional Policy Statement for the Wellington region);
- Describes the importance of indigenous biodiversity to the tangata whenua of the region;
- Describes the principles that guide Greater Wellington's biodiversity programmes;
- Describes Greater Wellington's current programmes;
- Identifies possible enhancements to Greater Wellington's biodiversity programmes for consideration through the Long Term Council Community Plan (LTCCP) process.

The Biodiversity Implementation Plan will be reviewed every three years to mirror the cycle of the LTCCP. It will be the primary vehicle for providing biodiversity input into the LTCCP process. However, to bring this plan into line with the council's LTCCP cycle, it will cover the period 1 July 2008 to 30 June 2012.

What is biodiversity?

Biodiversity is short for biological diversity. It describes the variety of all biological life – the different species, from micro-organisms to trees, animals and fungi: the genes they comprise; and the ecosystems they collectively form. This includes diversity within species, between species and of ecosystems. It forms a fundamental part of the natural heritage and unique character of our region.

2. The Biodiversity Challenge

2.1 A nation-wide history of biodiversity loss

New Zealand's varied landscapes and unique native plants and animals have been a strong influence on our national character and cultural identity. Internationally, New Zealand is regarded as a significant contributor to global biodiversity with over 80,000 native animals, plants and fungi. A comparatively large proportion of these do not live anywhere else on earth.

Since human settlement, New Zealand has experienced one of the highest extinction rates in the world due to habitat loss and introduced pest plants and animals. Today almost 2,500 native land-based and freshwater species are threatened. The impact of introduced animal and plant pest species on our biodiversity is significant. More than 25,000 plant species, 54 mammals and about 2000 invertebrate species have been introduced to New Zealand, many of which threaten our native plants and animals. Protection from predation and competition by introduced animals and plants is essential to avoid further biodiversity loss.

Although by international standards New Zealand has a high proportion of total land area legally protected for conservation purposes (31 per cent), most of this land is mountainous and is not representative of the full range of ecosystems. For example, lowland ecosystems are poorly protected.

2.2 The regional picture

The Wellington region reflects the national picture described above: we have an environment with severely depleted biodiversity. Before human arrival around 98 per cent of our region was cloaked in forest. Today, just 28 per cent survives – mostly in the hills. (See Figures 1 and 2) In addition to the loss of habitats, the condition (or quality) of many of our remaining ecosystems types is poor. The introduction of pest plants, such as old man's beard, and animals such as possums, goats, rats, cats and stoats has put further stress on our ecosystems, and now it is accepted that our ecosystems cannot survive without intervention.

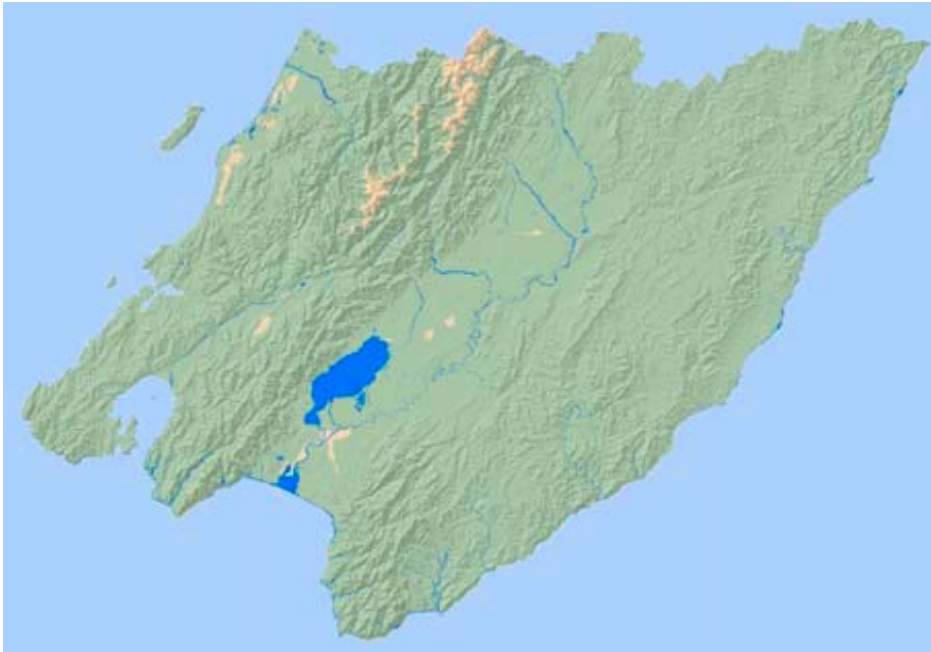


Figure 1: Extent of indigenous forest prior to the arrival of humans

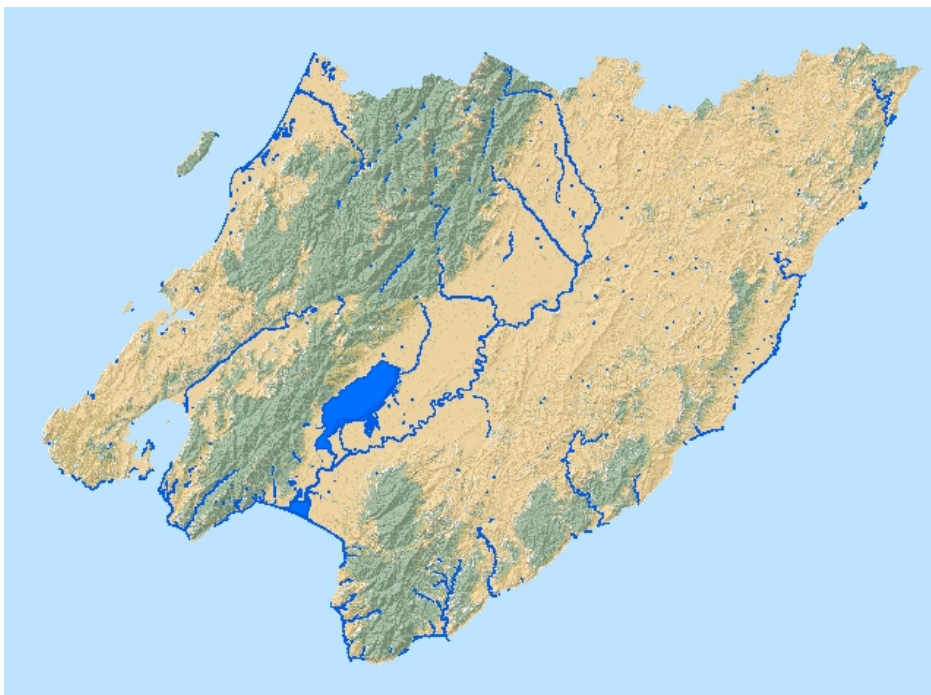


Figure 2: Extent of indigenous forest today.

Biodiversity loss has reached a critical threshold in most of our lowland areas. This means that further extinction of species can be expected even if there was no further loss of ecosystems and habitats. This can be explained by using one of the most fundamental relationships in ecology, the species-area relationship (or “slippery slope graph”) as shown in Figure 3. As a general rule, the relationship between the number of species contained in an area and the size of that is not linear, but a curve. If this rule is applied to an environment, ecosystem or habitat type, then as habitat loss advances, each additional increment of habitat

loss will remove a larger proportion of the original species that it once contained. We know that approximately 30,000 hectares of unprotected native vegetation is in land environments reduced to less than 20 percent of their original extent in the Wellington region. This is a concern, because research has shown that the rate of biodiversity loss increases dramatically when native vegetation cover drops below 20 percent of what it was before humans arrived.

Habitat loss – Species-area relationship

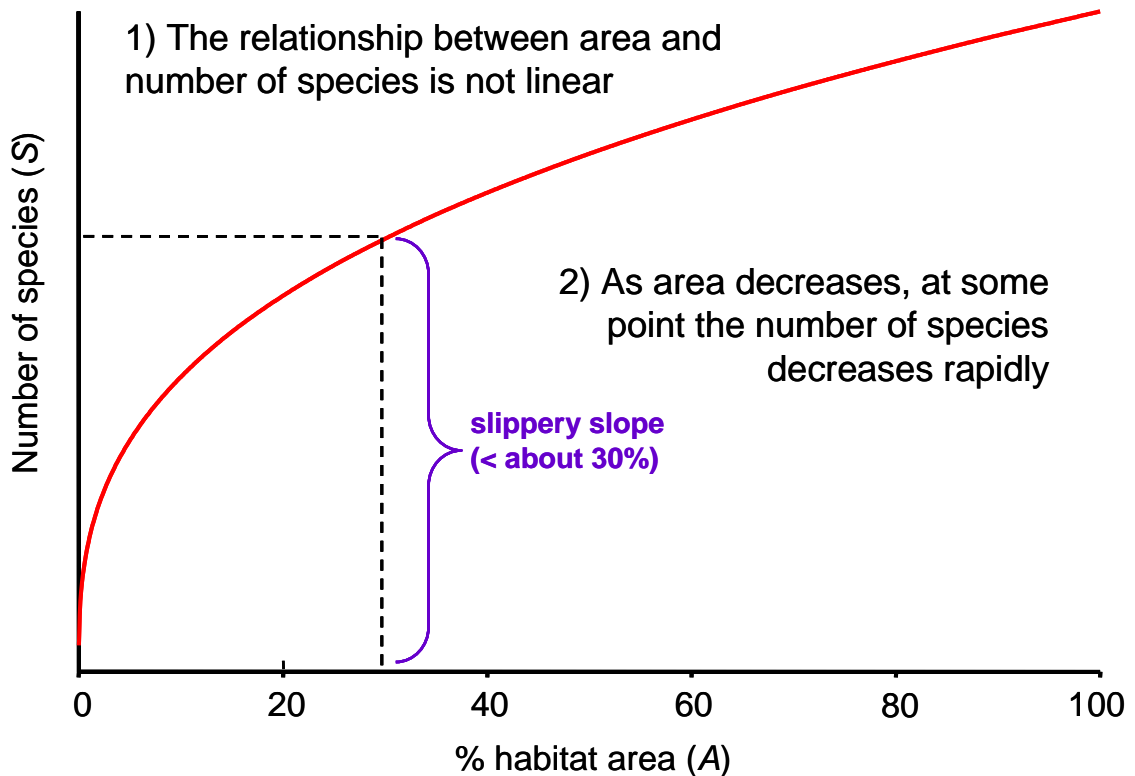


Figure 3 The “slippery slope” graph

This relationship has led New Zealand ecologists to develop the “Threatened Environment Classification” (TEC). The classification uses Land Environments of New Zealand (LENZ), a national classification system that maps areas that are similar to each other, regardless of where they occur. LENZ uses 15 climate, landform and soil variables that can influence the distribution of species to identify areas with similar environment or ecosystem character. These are known as “land environments”. By combining LENZ maps with satellite images from the Land Cover Database, as well as showing legal protection status, we can identify changes in vegetation cover time and see what vegetation is legally protected.

The Threatened Environment Classification is based on the following categories:

Category	Criteria
Acutely threatened	Less than 10% indigenous cover remaining
Chronically threatened	Less than 20% indigenous cover remaining
At risk	Less than 30% indigenous cover remaining
Critically unprotected	Greater than 30% indigenous cover remaining but Less than 10% legally protected
Underprotected	Greater than 30% indigenous cover remaining but 10 – 20% legally protected

Table 1: The Threatened Environments Classification

The Threatened Environments Classification is useful as it identifies the places likely to contain the most threatened ecosystems and, therefore the priorities for protection.

Using LENZ and the Threatened Environments Classification an examination of the Wellington region shows what and where the most vulnerable places are.

LENZ Level 3 classes, percentage of area in natural cover

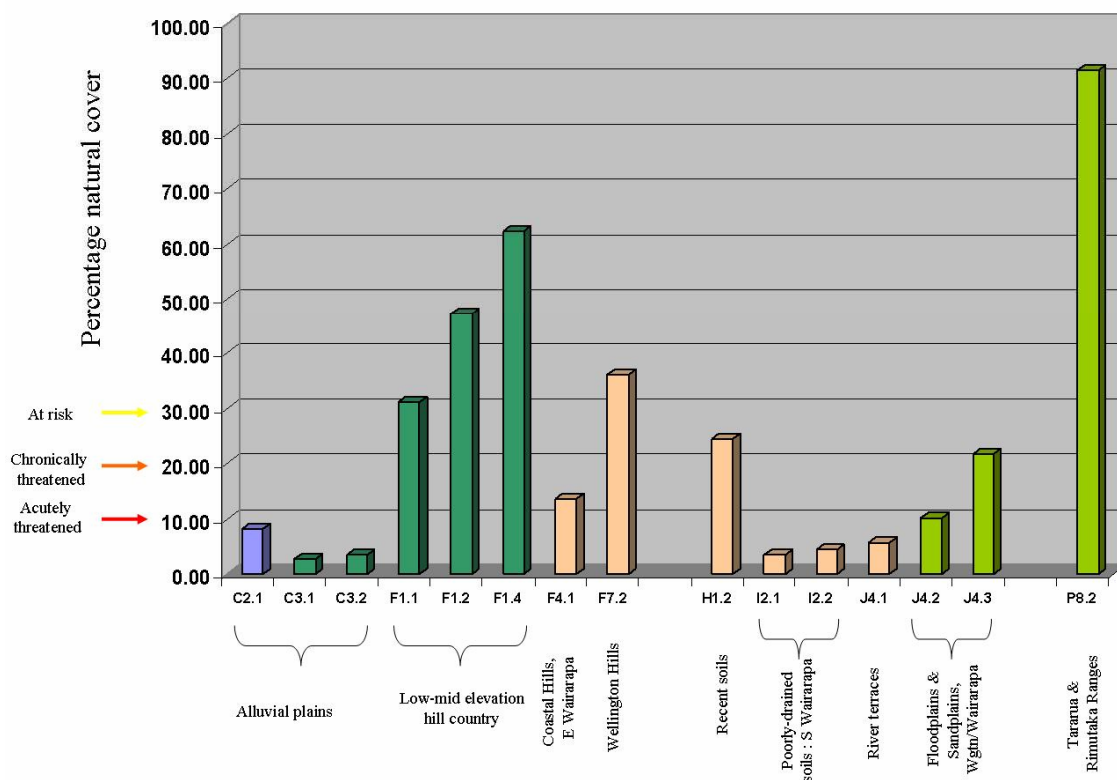


Figure 4: The Wellington region by Level 3 LENZ classes

This graph confirms what we already know. The region has extensive vegetation cover (90%) on its mountain ranges, mainly contained within the Tararua, Rimutaka and Aorangi Forest Parks. In contrast, the alluvial plains of the Wairarapa, Hutt and Kapiti areas all have less than 10% of their original vegetation cover left, putting them in the “acutely threatened” category. Other ecosystem types are also vulnerable: many freshwater ecosystems have been ecologically degraded by pests, reduced water quality, and sedimentation; and marine ecosystems and biodiversity are affected by the degradation of freshwater, direct discharges and fishing techniques.

2.3 What are the priorities for action?

Given that we have lost so much of the biodiversity from our region, particularly in the lowlands, should the focus be on protecting what remains or trying to restore indigenous habitat in the parts of the region with less than 20% of indigenous habitat remaining?

The first priority, if the decline in indigenous biodiversity in the Wellington region is to be halted, must be the protection and maintenance of remaining significant habitats and ecosystems and the linkages between them. Not only will this prevent further loss, it is the most efficient use of the limited resources available.

The costs of restoring or recreating habitats or ecosystems once degraded or lost are considerable and the task, at times, impossible.

Given the degree of loss and modification that has occurred, restoration of representative habitats and ecosystems is a second priority for the region. Without restoration, indigenous habitat in many parts of the region would remain well below the critical 20% threshold and indigenous biodiversity would be vulnerable to further decline. Restoration is expensive and time-consuming so it is important that effort is directed to those areas where the greatest benefits will be achieved.

In the Wellington region the most ecologically vulnerable places that need protection and restoration efforts focused on them to prevent further decline are:

- Lowland forest, including eastern Wairarapa “dry land” forests
- Rivers and lakes and their margins
- Wetlands, including estuaries
- Dunes, coastal escarpments and gravel beaches

2.4 Biodiversity and climate change

In New Zealand, it is predicted that climate change will result in an increase in average temperatures, fewer extreme cold temperatures, more high temperature episodes, changes to average rainfall patterns, reduced areas with snow cover, heavier and/or more frequent extreme rainfall, and a rise in sea level. Should these changes occur, they may give rise to a range of potential effects on ecosystems and biodiversity. The main effects on biodiversity will be a gradual change in habitat, changes in species’ distribution, and increased threats from pests and disease due to changes in their distribution. It will be crucial that indigenous species are able to relocate or move into more suitable areas, which can only happen if there

are corridors along which species can move. Maintaining these ecological corridors is part of what is referred to as maintaining “ecological resilience”.

Section 2 summary

- Since the arrival of humans to the Wellington region, there has been a decline in the area of indigenous ecosystems and of their quality.
- The impact on our indigenous biodiversity is considerable and continuing.
- The “Threatened Environments Classification” indicates that lowland forests, the margins of our lakes and rivers , wetlands and coastal dunes and beach ecosystems are “threatened” and vulnerable to further loss.
- To prevent further losses, the protection and maintenance of remaining significant indigenous habitats and ecosystems is the highest priority.

3. Relevant legislation and strategies for biodiversity

Greater Wellington's biodiversity programmes occur within a framework of legislation, national strategies and guidelines, and regional policies. In addition, the community expresses its aspirations for biodiversity through "community outcomes" in the council's Long Term Council Community Plan.

National legislation and policy that relates to the management of native terrestrial and freshwater biodiversity has been developed and enacted over many years. The legislation includes the Biosecurity Act 1993, Forests Amendment Act 1993, Wildlife Act 1953, Reserves Act 1977, Conservation Act 1987 and the Queen Elizabeth II National Trust Act 1977.

The most relevant to Greater Wellington's activities is the Resource Management Act 1991 (RMA).

3.1 Resource Management Act 1991 (RMA)

The RMA is the principal legislation governing the use, development and protection of New Zealand's land, air, water, ecosystems and built environment. The RMA has a key role in managing New Zealand's terrestrial and freshwater biodiversity. Almost all forms of resource use affect indigenous biodiversity and biodiversity is recognised in the Act in many ways:

- Section 5 (Purpose) describes the Act's purpose as promoting the sustainable management of natural and physical resources including safeguarding the life-supporting capacity of air, water, soil and ecosystems.
- Section 6 (c) (Matters of national importance) requires all persons exercising functions, powers and duties under the Act to recognise and provide for the protection of areas of significant native vegetation and significant habitats of native fauna.
- Section 7 (d) (Other matters) requires that particular regard be given to the intrinsic values of ecosystems.
- Section 12 (1) (e) (Restrictions on the use of the coastal marine area) controls the destruction, damaging or disturbance of the foreshore and seabed to prevent adverse effects on plants, animals or their habitat.
- Section 30 (1) (c) (iiiia) (Functions of regional councils) provides that it is a function of regional councils to control the use of land for the purpose of maintaining and enhancing ecosystems in water bodies and coastal waters.
- Section 30 (1) (ga) (Functions of regional councils) provides that it is a function of regional councils to establish, implement and review objectives, policies and methods for maintaining indigenous biological diversity.

- Section 31 (b) (iii) (Functions of territorial authorities) provides that it is a function of territorial councils to control the effects of the use of land on the maintenance of indigenous biological diversity.

Amendments to the Act in 2003 clarified that regional councils and territorial authorities both have responsibilities for managing indigenous biodiversity and that local authorities must consider the consequences of all effects on indigenous biodiversity, not simply the significance of a species or habitat.

3.2 Central Government Policy Direction

3.2.1 New Zealand Biodiversity Strategy (NZBS)

The NZBS reflects New Zealand's commitment to the United Nations Convention on Biological Diversity 1993. It sets out national goals and principles for managing New Zealand's biodiversity.

Goal Three is the most relevant to the work of Greater Wellington and states:

Halt the decline in New Zealand's indigenous biodiversity

Maintain and restore a full range of remaining natural habitats and ecosystems to a healthy functioning state, enhance critically scarce habitats, and sustain the more modified ecosystems in production and urban environments; and do what else is necessary to

Maintain and restore viable populations of all indigenous species and subspecies across their natural range and maintain their genetic diversity.

This goal was strongly endorsed by Greater Wellington.

3.2.2 National Priorities for Protecting Rare and Threatened Native Biodiversity on Private Land

In April 2007, the Government issued a set of national priorities for native biodiversity as part of implementing the New Zealand Biodiversity Strategy. The introduction notes that "the statement is intended to be particular use to local government, which has the primary responsibility for protecting native biodiversity on private land – a role assigned to it by the Resource Management Act 1991".

The four priorities are:

National Priority 1:

To protect indigenous vegetation associated with land environments, (defined by Land Environments of New Zealand at Level IV), that have 20 percent or less remaining in indigenous cover.

National Priority 2:

To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity.

National Priority 3:

To protect indigenous vegetation associated with “originally rare” ecosystem types not already covered by priorities 1 and 2.

National Priority 4:

To protect habitats of acutely and chronically threatened indigenous species.

The national priorities closely reflect the priorities Greater Wellington has identified for the region (See 2.2)

3.3 The Regional Policy Statement for the Wellington region

The Regional Policy Statement is a statutory policy document that sets the policy framework for promoting the sustainable management of natural and physical resources, including biodiversity.

The Regional Policy Statement for the Wellington region is currently under review. The draft section relating to indigenous ecosystems contains the following objective for the region:

The remaining significant indigenous ecosystems and habitats in the Wellington region are maintained and restored to a healthy functioning state.

The three relevant policies are designed to:

1. Require district and regional plans to identify indigenous ecosystems with significant biodiversity values.
2. Require district and regional plans to protect indigenous ecosystems with significant biodiversity values.
3. Require local authorities to have particular regard to maintaining biodiversity values when considering resource consents and other decisions.

Provisions from the draft Regional Policy Statement Indigenous Ecosystems section are reproduced in full at *Appendix 1*.

3.4 The community’s vision for biodiversity

As part of Greater Wellington’s current Long Term Council Community Plan (LTCCP) 2006-2016, Greater Wellington put forward a number of outcomes for testing with the community. One of these was entitled “Healthy Environment” and stated:

We have clean water, fresh air and healthy soils. Well-functioning and diverse ecosystems make up an environment that can support our needs. Resources are used efficiently. There is minimal waste and pollution.

This outcome was endorsed by the community and is, in effect, an overall community “vision” for the region.

Section 3 summary

- Clear direction is provided by both the New Zealand Biodiversity Strategy and the Statement of National Priorities as to what should be the focus for biodiversity protection.
- The objective for the Wellington region from the Regional Policy Statement reflects this direction:

The remaining significant indigenous ecosystems and habitats in the Wellington region are maintained and restored to a healthy functioning state.

- The community, through the LTCCP process, have expressed their wish for good management of the region’s ecosystems.

4. Biodiversity and the tangata whenua of the Wellington region

The tangata whenua of the Wellington region have a significant interest in the protection, management and restoration of indigenous ecosystems and biodiversity. This interest stems from the relationship Maori have with the biodiversity of the Wellington region developed over centuries of occupation.

The Wellington region (known as Te Upoko o te Ika a Maui the head of the fish of Maui) is home to following tangata whenua:

- Ngati Raukawa ki te Tonga
- Te Atiawa ki Whakarongotai
- Ngati Toa Rangatira
- Te Atiawa, Ngati Ruanui, Ngati Tama and Taranaki
- Ngati Kahungunu
- Rangitaane

Tangata whenua have a special relationship with the land, air, water and natural resources.

The Treaty of Waitangi guarantees rangatiratanga, the right of tangata whenua to manage their lands and natural resources in accordance with customary traditions. Tangata whenua today practise the environmental guardianship system, or kaitiakitanga, used by their ancestors. Kaitiakitanga is based on Maori views of the world and its origins, and the principle that everything is interrelated and interconnected.

Tangata whenua consider that the region's indigenous ecosystems and biodiversity need to be managed in an integrated and holistic way in order to achieve a sustainable future. They have identified two significant concerns in relation to the biodiversity of the Wellington region: the loss of mauri ("life force") and the degradation of mahinga kai (customary food gathering areas) and natural resources used for cultural purposes.

4.1 Loss of mauri

Mauri, the life force that exists in all things in the natural world, can be harmed by insensitive resource use. For example, the health and vitality of the sea, streams and rivers and the plants and animals they support can be threatened by activities such as: discharges of pollutants, stormwater, sewage and runoff of contaminants from land; excessive water use; and changing the course of water bodies or diverting water between catchments or rivers. Maori consider that rivers are the life blood of the land and that the well-being of a river is reflected in the well-being of people. Similarly, the mauri of the land and air and the plants and animals they support can be harmed by practices such as clearance of vegetation, soil disturbance and disposal of wastes.

4.2 Mahinga kai

The Wellington region has traditionally had abundant food and natural resources in its seas, foreshore, harbour, rivers, streams, riparian lands, bush and wetlands. The loss of those valued resources, including mahinga kai and other natural resources used for cultural purposes, is identified as a significant resource management issue for the region.

Any degradation or loss of nga kai (traditional foods), maataitai (seafood) and flora and fauna also compromises the mana of tangata whenua by impairing their ability to fulfil their role and responsibilities in relation to kaitiakitanga and their responsibilities of care for guests (manaakitanga). Foods of traditional cultural importance include, but are not limited to seafood, freshwater fish and particular forest plants.

Major threats to mahinga kai include: the development of residential, commercial, industrial, horticultural and agricultural uses on and around significant sites; degradation of water quality in freshwater and marine environments through poor stormwater, sewage and runoff management; loss of water resources and associated ecosystems through water abstraction, drainage and flood management works; and exclusion from access to mahinga kai through the construction of physical barriers such as roads or through changes in ownership, management and control.

Natural resources are not only used for food, but are also used in Maori cultural practices and activities such as making medicine, weaving, carving, other arts and the construction of wharehau (meeting houses) and waka (canoes). Resources used for cultural purposes include, but are not limited to: flora and fauna for rongoa Maori (medicine), flora and fauna for weaving (e.g. pingao, kiekie, bird feathers), wood such as totara for carving purposes.

Major threats to natural resources used for cultural purposes are similar to the threats to mahinga kai, including development, changing land use, loss of ecosystems, poor management and disposal of wastes, unsustainable resource use and exclusion from access to sites where valued cultural resources are found.

4.3 Relationship between biodiversity and Maori heritage values

Many of the areas with high biodiversity value in the Wellington region frequently contain heritage values of significance to tangata whenua. For instance, māori frequently settled in or adjacent to wetland and coastal areas because of the access to mahinga kai. Wahi tapu and other sites of significance are often present in association with high value indigenous ecosystem areas. As a result the protection and management of areas for biodiversity values can have benefits for conserving heritage sites.

Section 4 summary

- Tangata whenua of the region consider that the region's indigenous ecosystems and biodiversity need to be managed in an integrated and holistic way.
- Two matters are of particular concern to tangata whenua – the loss of mauri and the degradation of mahinga kai and natural resources used for cultural purposes.

5. Principles that guide Greater Wellington's biodiversity programmes

Greater Wellington recognises that it is well placed to provide leadership for indigenous biodiversity management given the nature of its functions and its regional focus. Greater Wellington also recognises that organisations such as city and district councils, private landowners and individuals have key roles in achieving biodiversity gains. The majority of our vulnerable lowland ecosystems are in private ownership and their future is dependant on continued sensitive stewardship of these resources.

Greater Wellington's biodiversity programmes are built around the following principles:

5.1 Focusing on the highest priority areas

Since 2000, Greater Wellington's biodiversity focus has been on those areas widely acknowledged to be the most ecologically vulnerable in our region. As stated earlier, these include:

- Lowland forest, including eastern Wairarapa "dry land" forests
- Rivers and lakes and their margins
- Wetlands, including estuaries
- Dunes, coastal escarpments and gravel beaches

Central government has recently reinforced the need to make progress towards protecting and managing these areas with the release of its "National Priorities for Protecting Rare and Threatened Native Biodiversity on Private Land" (see 3.2.2).

However, it is not Greater Wellington's intention to ensure that only the best examples of each ecosystem type are protected. As Walker (2007) notes:

...theoretical and empirical ecology tells us that protection of representative, high quality examples/samples of ecosystems alone will not achieve the persistence or maintenance of what now remains, especially if the corollary is that "the rest" is cleared, either rapidly or eventually".

The Threatened Environments Classification (see 2.2) informs us that in many parts of the Wellington region, all remaining indigenous ecosystems and habitats are of high priority because of their scarcity.

5.2 Leading by example: managing our own lands well

Greater Wellington is a significant landowner in the region. It manages over 40,000 hectares of indigenous biodiversity in the Wellington region within its regional parks, regional forests and water collection areas. Some of these areas are the highest priority areas in terms of ecological values in the region. Greater Wellington also owns and manages an area of 3,806 hectares for soil conservation purposes (of which about 1,575

hectares is in indigenous forest and scrub) and manages large tracts of land in river corridors as part of its flood protection responsibilities. In the last five years additional resources have been allocated to ensure that these areas, particularly regional parks and forests, are managed to improve the quality of ecosystems they contain. Not only does this produce biodiversity gains but supports the Council's role as an advocate of biodiversity protection and management.

Threats to the ecosystems on Council land come from pest plants and animals and human use. In the case of regional parks and forests, the threats from pests have been acknowledged and addressed through an Environmental Asset Management Plan and additional resources. The plan seeks to care for the ecological values of the land by setting out a programme of pest control and forest health monitoring. An integrated approach to pest management is taken and possums, goats and pest plants are all controlled on Council land. In some high value ecological areas pest control is undertaken at a more intense level.

The challenge is to ensure that appropriate biodiversity goals are incorporated into the management objectives of all land over which the Council has control.

5.3 Working with private landowners

In common with many regions in New Zealand, the Wellington region contains a considerable area of Crown-owned upland native forests. These are managed by the Department of Conservation and largely form the Tararua, Rimutaka and Aorangi forest parks. In contrast, the majority of our lowland ecosystems, including lowland forests and wetlands are in private ownership and are scattered throughout our working landscapes.

Nationally, it is widely recognised that increasing the area of privately owned indigenous ecosystems and habitats subject to legal protection and pest control will result in a slow down, and perhaps reversal, in the decline in indigenous biodiversity. The ability of regional and territorial authorities to encourage and facilitate such actions is also well recognised.

Greater Wellington recognises that assisting private landowners to protect and manage biodiversity resources on their land is the key to achieving the Council's goals. This is achieved by providing information and financial assistance to landowners.

Specifically, the Council recognises that:

- (a) Landowners are more likely to protect and manage biodiversity on their land when they have an understanding of its value and are made aware of the protection and management options available to them. It is also important that the Council recognises the landowner's property rights.
- (b) The costs of protecting and managing high value areas of biodiversity may be beyond the financial capabilities of a landowner. Greater Wellington recognises that biodiversity management on private land can bring regional benefits and that sharing the costs of legal protection and the control of pest plants and animals is fair.

5.4 Working with other agencies

Greater Wellington cannot achieve its objectives for biodiversity in the region on its own. There is a wealth of experience and expertise contained within other agencies and the community.

City and district councils have a particularly significant role in protecting and enhancing biodiversity in the region. The indigenous ecosystem policies in the draft Regional Policy Statement reflect this (see 3.3) and Greater Wellington will continue to work closely with them.

The Council is also committed to working with other agencies such as:

- Department of Conservation
- QEII National Trust
- Wellington Fish and Game Council
- Federated Farmers of New Zealand Inc
- Royal Forest and Bird Protection Society

One of the ways Greater Wellington does this is by facilitating the Wellington and Wairarapa Land Protection Forums. These are regular meetings of representatives of the above agencies, and some territorial authorities, to discuss matters of mutual interest, particularly relating to biodiversity on private land.

5.5 Working with the community

The community has expressed a strong desire to “roll up their sleeves” and help with the ecological restoration of places around the region. Greater Wellington has responded by providing funding and expert advice through its *Take Care* community group programme.

The *Take Care* programme provides funding, staff support and specialist advice to community groups who volunteer their time to restore the health of the region’s most at risk ecosystem types. These include rivers, streams, wetlands, estuaries, coastal dunes and escarpments. The programme balances the joint objectives of restoring ecological sites with the delivery of environmental education, and gives the Council more opportunities to connect with the community.

5.6 Protection is not enough: the biosecurity challenge

Many of the region’s ecosystems have undergone considerable modification and, as a result, have lost much of their ecological resilience. For this reason, while legal protection is important, it is often not enough to ensure that indigenous ecosystems and habitats are capable of surviving into the future. Management interventions such as plant and animal pest control and restoration planting are often required. Greater Wellington recognises this and has responded by providing additional resources for the management of its own land and has introduced programmes for city and district council and private land through its Key Native Ecosystem programme as part of its Regional Pest Management Strategy.

The role of the bovine Tb vector control programme in providing biodiversity benefits should not be overlooked. A study undertaken as part of the review of the Regional Policy Statement for the Wellington region concluded that the Bovine Tb vector control programme had reduced possum numbers considerably on private land, bringing tangible biodiversity benefits such as increased native bird populations. The bovine Tb programme is funded by central government through the Animal Health Board (50%), industry (40%) and Greater Wellington (10%).

One of the more significant biodiversity challenges facing Greater Wellington is the progressive withdrawal of Animal Health Board funding as the incidence of bovine Tb declines. A reduction in the total funding available is already reducing the frequency of re-treatment of areas. From 2009 there will be a progressive reduction in the vector control programme commencing in the northern parts of the region as areas are declared Tb free. Without this control programme possum populations (and those of other pest animal species) are likely to increase significantly.

In order to prevent a loss of the gains made in controlling Bovine Tb and for biodiversity will be lost. A policy response to this issue will need to be developed by the Council

Section 5 summary

- Greater Wellington's biodiversity programmes focus on the most ecologically vulnerable ecosystems in the region
- Greater Wellington is committed to leading by example on its own lands.
- Greater Wellington recognises that working with private landowners is the key to making significant gains in the protection and management of indigenous biodiversity in the region.
- City and district councils have significant roles in managing biodiversity in the region.
- The wind-down of the Bovine Tb vector control programme will require the Council to decide what sort of programme replaces it and what the role of Greater Wellington will be.

6. How Greater Wellington delivers biodiversity

Greater Wellington has demonstrated that it is well placed to deliver biodiversity outcomes on its own land and to assist territorial authorities and private landowners wishing to protect and better manage biodiversity on their land. It is also successful in encouraging and assisting the community in a range of ecological restoration projects.

6.1 Managing biodiversity within Greater Wellington

Biodiversity outcomes within Greater Wellington are not delivered through a single department but rather by a number of departments across the council. For instance, the Wetlands Incentive programme is led by the Environmental Policy department while the Key Native Ecosystem programme is delivered by the Biosecurity department. Staff from a number of departments may contribute to the delivery of any one programme.

To provide council-wide co-ordination of all biodiversity programmes a Biodiversity Co-ordinating Group has been established. Its membership comprises those with line management responsibilities for the various programmes. The role of this group is to:

1. Facilitate a whole-of-council approach to managing biodiversity in the region;
2. Oversee the development, implementation and review of the Biodiversity Implementation Plan;
3. Oversee the development, implementation and review of biodiversity action plans for the following ecosystem types:
 - Riparian margins
 - Wetlands
 - Streams
 - Indigenous forest
 - Coastal and marine
4. Oversee the implementation of the:
 - Wainuiomata Mainland Island strategic plan
 - Pauatahanui Inlet Action Plan
 - Waiwhetu Stream Action Plan
5. Identify and promote new opportunities for greater Wellington's involvement in protecting and managing regional biodiversity and advise the Council accordingly;
6. Report on the above to the Executive Management Team and the Regional Sustainability Committee

6.2 Greater Wellington's current core biodiversity programmes

A brief description of Greater Wellington's core biodiversity programmes is given in the table below.

Programme	Broad objective(s)	Departments involved	Applies to: GW, TA & Private land
Wetlands	<p>To halt the decline in the number and condition of the region's wetlands.</p> <p>This is achieved by:</p> <ul style="list-style-type: none"> • improving the management of wetlands on Council land • offering advice and financial support to private landowners wishing to protect and manage their wetlands 	<p>Environmental Policy</p> <p>Parks</p> <p>Biosecurity</p>	TA, private
Riparian: "Streams Alive"	<p>To improve management of the region's riparian areas to enhance water quality and biodiversity.</p> <p>This achieved by:</p> <ul style="list-style-type: none"> • Providing advice to private landowners wishing to enhance their streamsides • Providing advice and financial assistance to landowners in 12 selected catchments to improve streamsides. 	Land Management	Private
Key Native Ecosystem (KNE)	<p>To protect and enhance native flora and fauna in selected sites throughout the region.</p> <p>This achieved by:</p> <ul style="list-style-type: none"> • Delivering intensive and integrated pest control on TA reserve land or private land of high biodiversity value 	Biosecurity	GW,TA, private
QEII National Trust covenant assistance	<p>To assist private landowners to legally protect areas of high ecological value on their land.</p> <p>This is achieved by:</p>	<p>Environmental Policy</p> <p>Biosecurity</p> <p>Land</p>	Private

Programme	Broad objective(s)	Departments involved	Applies to: GW, TA & Private land
	<ul style="list-style-type: none"> providing financial assistance for fencing and an initial knock-down of pest plants and animals 	Management	
Freshwater ecosystems	In development	Environmental Policy	GW, TA, private
Coastal and Marine ecosystems programme	<p>To protect and rehabilitate high quality coastal biodiversity that is degraded.</p> <p>This is achieved by:</p> <ul style="list-style-type: none"> Identifying areas of high biodiversity value on the coast Providing financial assistance to landowners wishing to protect of manage areas of high biodiversity such as dune systems. 	Environmental Policy	GW, TA, private
Implementation of Parks and Forests Environmental Asset Management Plan	<p>To protect and enhance indigenous ecosystems on council-owned land.</p> <p>This is achieved by:</p> <ul style="list-style-type: none"> Undertaking integrated pest plant and animal control to specified service levels Monitoring to confirm that control operations are having the desired beneficial ecological effects 	Parks	GW
Wainuiomata Mainland Island project	<p>To maintain and restore the Wainuiomata Mainland Island ecosystems to a healthy functioning state.</p> <p>This is achieved by:</p>	Biosecurity Parks	GW

Programme	Broad objective(s)	Departments involved	Applies to: GW, TA & Private land
	<ul style="list-style-type: none"> • Controlling pest animals to very low levels • Monitoring and reporting on the resulting beneficial ecological effects • Considering the re-introduction of some once common animal species. 		
Wainuiomata/Orongorongo catchments environmental management	<p>To maintain the ecological integrity of the water collection areas for water supply purposes</p> <p>This is achieved by:</p> <ul style="list-style-type: none"> • Undertaking plant and animal pest control to ensure maintenance and enhancement of forest health 	Water Group Parks	GW
Pauatahanui Inlet Catchment Management programme	<p>To identify what the council can do to improve freshwater ecosystems and to enhance them through restoration and increased public awareness</p> <p>This is achieved by:</p> <ul style="list-style-type: none"> • Working in partnership with Porirua City Council and with private landowners to improve catchment management practices • Working with other agencies to mitigate the impacts of their activities on the catchment. 	Environmental Policy	TA, private
<i>Take Care</i> care group programme	<p>To provide funding, staff support and specialist advice to community groups who volunteer their time to restore the health of the region's most at risk ecosystem types.</p>	Environmental Education Environmental	GW, TA, private

Table 2: Greater Wellington's core biodiversity programmes in summary

7. Priority Actions: 2008-12

This section identifies the significant actions that will need to be undertaken over the life of this plan in order to achieve the Council's biodiversity objectives. Any additional resources required to undertake these actions will be sought through the Council's Long Term Council Community Plan process.

7.1 High priority actions

7.1.1 Investigate biodiversity enhancement options in anticipation of the withdrawal of the Bovine Tb Vector Control Programme

The Bovine Tb vector control programme currently covers over 600,000 ha of the region. Pest control undertaken as part of this programme includes possum and ferret control. However, a number of other pests (e.g. rodents) are also controlled at sites where intensive pest control is undertaken such as Key Native Ecosystems. The benefits for biodiversity enhancement have been significant under this programme.

Parts of the northern Wairarapa will be withdrawn from the programme from 2009. This withdrawal will gradually continue over time as areas are deemed to be officially free of Bovine Tb.

Greater Wellington will need to carefully consider its role in protecting the biodiversity gains that have ensued from the Bovine Tb control programme. Doing nothing will result in a steady increase in possums, mustelids and rodents, eroding the gains made over the past 20 years. However, the Council's role will largely be influenced by community desires and willingness to pay. Options include –

- Undertaking widespread pest control when pre-determined density triggers are surpassed;
- Identify the high value ecosystems and implement more intensive pest control in these areas only;
- A combination of both of the above options.

Timing: Greater Wellington will undertake a consultation programme with affected landowners to determine community objectives and support for a new control programme. The consultation programme will commence in the second quarter of 2008. Survey outcomes will be considered in the next LTCCP.

7.1.2 Ensure biodiversity values are incorporated into farm planning mechanisms.

Greater Wellington currently provides advice and assistance to landowners to control soil erosion through regional farm planning programmes. The protection and enhancement of areas with high biodiversity values has been a by-product of the farm plan approach. Where appropriate, staff have advocated for the protection of biodiversity within a framework of sustainable land management. This is a role that could be strengthened to great effect given the positive relationship between landowners and Land Management officers.

Recent developments such as central government taking an interest in the issues of hill country erosion, afforestation and climate change and the Council's signalled move towards taking a total catchment management approach to natural resource management is likely to result in changes to Council's farm planning approach. As these developments evolve it will be important to ensure that opportunities to protect and enhance biodiversity are "built in" to any new or modified farm plan programmes.

Timing: Reviews of the Wind Erosion Control Scheme and the "Streams Alive" riparian programmes are underway. Implementation of a total catchment management approach is pending.

7.2 Priority actions

7.2.1 Implement biodiversity action plans

Action plans or strategies have been developed for the following ecosystem types or specific areas:

- Indigenous forests
- Wetlands
- Coastal and marine
- Riparian

Action plans or strategies have also been developed for the following specific areas:

- Pauatahanui Inlet
- Wainuiomata Mainland Island
- Waiwhetu Stream

These plans contain objectives, goals, actions and milestones against which progress can be measured. Budgets currently exist to support the implementation of these plans. The adequacy of existing budgets will be assessed as the plans are reviewed (normally every 5 years).

Biodiversity programmes are also guided by the Regional Pest Management Strategy (specifically the Key Native Ecosystem programme), the Parks and Forests Environmental Asset Management Plan and the Greater Wellington Water Asset management plan.

Timing: Implementation of these plans is ongoing by a range of departments across council as listed in Table 2. Progress towards implementation is reported to the Executive Management Team and Council via the biodiversity six monthly reviews.

7.2.2 Develop a Freshwater Ecosystems action plan

The need for an action plan for this important ecosystem type has been identified. The council does have a riparian strategy, from which the “Streams Alive” streamside planting assistance programme was developed. However a more comprehensive set of actions needs to be developed to address freshwater ecological issues.

Timing: The plan will be developed to a draft stage by 31 December 2008

7.2.3 Implement the Regional Policy Statement for the Wellington region

Although it is still to go through the statutory processes, the revised draft Regional Policy Statement is likely to come into effect within the life of this plan.

The policies relating to biodiversity in the draft Regional Policy Statement do not call for any significant variation to the approach Greater Wellington has taken to date. In essence, the Regional Policy Statement either requires or encourages Greater Wellington, the region’s city and district councils, other organisations and individuals to carry out a range of actions.

Policies that directly or indirectly impact on Greater Wellington include:

- the need to identify significant biodiversity resources
- the requirement to include objectives, policies and methods in regional and district plans to protect and maintain biodiversity and indigenous ecosystems
- the requirement to ensure when resource consents are considered that the effects on biodiversity are adequately considered
- encouraging the community, by various means such as the provision of advice, information and financial incentives, to maintain and enhance the region’s biodiversity.

Timing: The provisions of the current Regional Policy Statement (1995) will continue to guide the council’s work. The timing of the adoption of the draft Regional Policy Statement is unknown but is likely to be within the life of the Biodiversity Implementation Plan.

7.2.4 Identify suitable outcome monitoring for biodiversity

Monitoring is a necessary activity to satisfy two needs. Firstly, to provide information for the six yearly state of the environment report for the region, which assesses the effectiveness of the Regional Policy Statement. Secondly, it is important to determine the effectiveness of our specific biodiversity programmes.

The Council and other organisations already undertake biodiversity monitoring but there are some gaps in our knowledge. There is a need to identify where the gaps are and identify suitable cost-effective tools to overcome this. In the case of state of the environment monitoring, these are likely to be “high level” and used by other regional or national organisations. The use of the Threatened Environments Classification may be an example.

For our specific programmes, monitoring is likely to be a site specific level to provide an indication of the outcome of the specific biodiversity programme.

Timing: The selection of a set of suitable monitoring tools, including the identification of any information gaps will be completed by 31 December 2008.

Appendix 1: Draft Regional Policy Statement: Indigenous Ecosystems Policies and Methods

1. Policies

Policy 22: Identification of indigenous ecosystems, habitats and areas with significant indigenous biodiversity values

District and regional plans shall identify indigenous ecosystems, habitats and areas with significant indigenous biodiversity values using the following criteria:

- (a) Representativeness: high representativeness values are given to particular ecosystems or areas that were once typical and commonplace in a district or in the region, and:
 - (i) have been reduced from their former extent; and/or
 - (ii) are poorly represented in existing protected areas.
- (b) Rarity/special features: the ecosystem or area has biological or physical features that are scarce in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.
- (c) Ecological context of an area: the ecosystem or area:
 - (i) enhances connectivity between fragmented indigenous habitats;
 - (ii) buffers or similarly enhances the ecological values of a specific site of value; or
 - (iii) provides seasonal or core habitat for specific indigenous species.
- (d) Diversity: the ecosystem or areas has a natural diversity of ecological units, ecosystems and physical features within a natural area. Species richness is also taken into account.
- (e) Cultural significance: the ecosystem or area contains indigenous ecosystem characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Maori.

Explanation

Policy 22 sets out criteria as guidance that can be considered in determining and identifying ecosystems, habitats and areas with significant indigenous biodiversity values. These are widely accepted ecological criteria. These criteria need to be considered in all assessments but each will have lesser or greater relevance in individual cases. Conversely, there may be

cases where additional criteria to those listed may be justified in order to effectively assess ecological values.

Significance is to be determined with reference to the overall objective of retaining and restoring a full range of remaining indigenous ecosystems and habitats, and not limiting the assessment to retaining only 'high value' areas.

Policy 23: Protection of indigenous ecosystems, habitats and areas with significant indigenous biodiversity values

District and regional plans shall include policies, rules and methods to protect indigenous ecosystems, habitats and areas with significant indigenous biodiversity values, from inappropriate subdivision, use and development.

Explanation

Policy 23 applies to provisions in district plans that control the subdivision, use and development of land. For regional plans it applies to the control activities that destroy, damage or disturb any foreshore and seabed, or the beds of any river or lake, and control the use of land to maintain and enhance ecosystems in water bodies (including wetlands) and coastal water.

Tables 16 and 18 in Appendices 1 and 2 identify ecosystems, habitats and areas with significant indigenous biodiversity values in the coastal environment and in river and lake environments.

Policy 44: Managing effects on indigenous ecosystems, habitats and areas with significant indigenous biodiversity values

When considering an application for a resource consent, notice of requirement, or a change or variation to a district or regional plan, local authorities shall use the criteria in policy 22, to determine whether an activity may affect indigenous ecosystems, habitats and areas with significant indigenous biodiversity values, and in determining whether an activity is inappropriate have particular regard to:

- (a) maintaining connections within, or corridors between, habitats of indigenous flora and fauna
- (b) providing adequate buffering around areas of significant indigenous ecosystems and habitats from other land uses
- (c) maintaining water bodies in their natural state
- (d) avoiding the incremental loss of indigenous ecosystems and habitats; and
- (e) protecting indigenous biodiversity where avoiding adverse effects is not practicably achievable.

Explanation

Policy 44 provides an interim assessment framework for councils, resource consent applicants and other interested parties, prior to the identification of ecosystems, habitats and areas with significant indigenous biodiversity values in accordance with policy 22, and the adoption of plan provisions for protection in accordance with policy 23. This policy shall cease to have effect once policies 22 and 23 are in place in an operative district or regional plan.

Policy 66: Restoration and enhancement of indigenous ecosystems and habitats

To restore and enhance indigenous ecosystems and habitats through the provision of information, through support for environmental enhancement initiatives and by taking a whole of catchment approach that recognises the values of indigenous ecosystems and habitats.

Explanation

Restoration and enhancement of damaged indigenous ecosystems and habitats cannot be achieved through regulatory approaches. Setting right the effects of historical activities that have reduced the extent and quality of indigenous ecosystems and habitats in the region can be facilitated by providing information about the importance of indigenous ecosystems and habitats, and by providing financial incentives to promote their maintenance, enhancement and restoration.

2. Methods

Method 1: District plan implementation

The process to amend district plans to implement policies 1, 3, 4, 5, 7, 8, 9, 11, 12, 14, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 32 will commence on, or before, the date on which the relevant council commences the review of its district plan pursuant to section 79 of the Resource Management Act 1991.

City and district councils may implement these policies earlier by plan change, and in the case of a 'rolling review' the policies must be implemented at the time of commencing the review of the relevant part(s) of the plan.

City and district councils referred to in method 1 are:

- *Wellington City Council*
- *Porirua City Council*
- *Kapiti Coast District Council*
- *Hutt City Council*
- *Upper Hutt City Council*
- *South Wairarapa District Council*
- *Carterton District Council*

- *Masterton District Council.*

Policies 3, 4, 5, 6 and 7 with respect to the coastal environment do not apply to Upper Hutt City Council.

Method 2: Regional plan implementation

The process to amend regional plans to implement policies 2, 3, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25 will commence on, or before, the date on which Wellington Regional Council commences the review of its regional plans pursuant to section 79 of the Resource Management Act 1991.

Method 4: Consideration – resource consents, notices of requirement and when changing, varying or reviewing plans

- (a) City and district councils will implement policies 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56 and 57 when assessing resource consents, notices of requirement, and when changing, varying or reviewing district plans.

City and district councils referred to in method 4 are:

- *Wellington City Council*
- *Porirua City Council*
- *Kapiti Coast District Council*
- *Hutt City Council*
- *Upper Hutt City Council*
- *South Wairarapa District Council*
- *Carterton District Council*
- *Masterton District Council*
- *Tararua District Council where a proposal relates to land within the Wellington region.*

Policy 56 only applies to Kapiti Coast District Council, Carterton District Council and Masterton District Council

- (b) (b) The Wellington Regional Council will implement policies 33, 35, 36, 37, 40, 41, 43, 44, 45, 46, 47, 48, 49, 51 and 57 when assessing resource consents, notices of requirement, and when changing, varying or reviewing regional plans.

Method 14: Information and guidance on techniques to maintain and enhance indigenous ecosystems

Prepare and disseminate information and guidance on the importance of indigenous ecosystems, habitats, areas with significant biodiversity values, and the range of techniques to maintain and enhance indigenous ecosystems such as pest control, restoration approaches, revegetation and legal protection.

Implementation: Wellington Regional Council and city and district councils

Method 23: User guide for identifying and assessing effects on indigenous ecosystems, habitats, and areas with significant biodiversity values

Prepare a user guide to illustrate and interpret the criteria set out in policies 22 and 44 which require the identification and assessment of effects on indigenous ecosystems, habitats, and areas with significant indigenous biodiversity values.

Implementation: Wellington Regional Council and city and district councils*

Method 28: Whole of catchment approach to works, operations and services

Take a whole of catchment approach that recognises the values of natural resources when undertaking and planning works, operations and services.

Implementation: Wellington Regional Council and city and district councils*

Method 30: Involvement of tangata whenua and community in the identification, protection or management of natural and physical resources

Involve iwi, hapu, marae and whanau, and community, in the identification, protection or management of:

- (a) historic heritage
- (b) outstanding natural features and landscape, and notable landscapes
- (c) indigenous ecosystems, habitats, and areas with significant indigenous biodiversity values
- (d) the coastal environment
- (e) fresh water.

Implementation: Wellington Regional Council and city and district councils

Method 55: Incentives to promote maintenance, enhancement and restoration of indigenous ecosystems

Provide incentives such as grants, subsidies and rate relief to promote the maintenance, enhancement and restoration of indigenous ecosystems including:

- (a) assisting with the costs of legally protecting indigenous ecosystems by way of open space covenants with Queen Elizabeth the Second National Trust (QEII)

- (b) assisting with the costs of controlling pest plants and animals
- (c) supporting landowners to restore significant indigenous ecosystems by fencing and planting.

Implementation: Wellington Regional Council and city and district councils

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