Lincoln Planning Review, 11(1-2) (2021) 55-72

Managing biodiversity in the Waikato region, Aotearoa New Zealand

Katie NIMMO

Freshwater Projects Manager, Canterbury Regional Council, Christchurch, New Zealand

ABSTRACT

A case study approach using discourse analysis of key planning documents is used to describe and review mechanisms used in 2020 by the Waikato Regional Council to manage biodiversity in the Waikato region, Aotearoa New Zealand. It sets out two proposed national-level tools that will change how biodiversity is managed in Aotearoa New Zealand. The case study assesses Waikato Regional Council planning documents against the Aichi Global Biodiversity Convention Targets. It also identifies a number of important barriers to better management of biodiversity in the Waikato region and outlines how these barriers could be addressed. The research was undertaken in the first six months of 2020 and provides a snapshot of the state of play at that time before the Aotearoa New Zealand Biodiversity Strategy 2020 was finalised.

It was found that the Waikato Regional Council appears to be well positioned to meet the Aichi Biodiversity Convention Goals. However, realisation of the Aichi goals through on-the-ground implementation is likely to be compromised due to a lack of adequate funding for both planning and implementation at the district level. Transparent targets or measures of success also threaten to compromise good implementation. Options for addressing these barriers include an increase in funding for district-level planning and implementation, plus strengthening alignment of existing planning tools (such as the Waikato Regional Plan) and measures of success with the Draft National Policy Statement for Indigenous Biodiversity and the draft New Zealand Biodiversity Strategy.

Keywords: biodiversity planning, environmental policy, Convention on Biological Diversity.

1. INTRODUCTION

This is a case study of the mechanisms used by the Waikato Regional Council (WRC) in May/June 2020)[1] to achieve on-the-ground implementation of maintaining, protecting and enhancing indigenous biodiversity in Aotearoa New Zealand. The case study investigates the extent to which New Zealand meets the Aichi Biodiversity Goals at the level of a regional council; a statutory government agency responsible for managing natural resources in Aotearoa New Zealand. Key barriers that prevent the council from meeting the Aichi Biodiversity Goals are identified, and options for addressing those barriers are suggested, taking into account foreseeable national-level mechanisms including the then draft New Zealand Biodiversity Strategy (2019) and the Draft National Policy Statement for Indigenous Biodiversity (2019).

Corresponding author: Katie Nimmo katie.nimmonz@gmail.com

[1] *These policies and planning mechanisms may change as a consequence of implementing the Aotearoa New Zealand Biodiversity Strategy released in August 2020 and when the draft National Policy Statement for Indigenous Biodiversity is finalised and comes into effect.*

Hardwick (2016) defines a case study as "… the study of a single instance … in order to explore the context of that phenomenon." The WRC is the case study local government body explored here, but the objects of analysis in this case study include a range of WRC planning and policy documents. Qualitative content analysis is used to understand the intentions of the WRC to achieve on-the-ground implementation of maintaining, protecting and enhancing indigenous biodiversity (Luo, 2020). Relevant WRC staff were also emailed to obtain information not publicly discoverable, or to confirm the status of a particular planning tool if this was not clear from the council website or other documents.

2. BACKGROUND

The Convention on Biological Diversity (CBD) promotes the conservation and sustainable use of biological diversity on an international scale. Aotearoa New Zealand has been a signatory to the Convention since 1993 (CBD, 2020b). Biodiversity-related strategies and action plans in Aotearoa New Zealand are therefore required to be consistent with the CBD's Aichi Biodiversity Targets. These targets are expressed as a set of strategic goals for the period between 2011 to 2020 (see Table 1).

Strategic Goal A	Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.
Strategic Goal B	Reduce the direct pressures on biodiversity and promote sustainable use.
Strategic Goal C	To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.
Strategic Goal D	Enhance the benefits to all from biodiversity and ecosystem services.
Strategic Goal E	Enhance implementation through participatory planning, knowledge management and capacity building.

Table 1: Adapted from Aichi Biodiversity Targets, *by Convention on Biological Diversity, 2020a (https://www.cbd.int/sp/targets/)*

These targets were seen as stepping stones towards the 2050 Vision of "Living in harmony with nature" by the end of 2020 (CBD, 2020c) and a post-2020 Global Framework with new goals is currently being negotiated.

2.1 Current national settings for managing biodiversity in Aotearoa New Zealand

National mechanisms for the management of biodiversity by regional, unitary, and district councils in Aotearoa New Zealand include the Resource Management Act (1991), the Local Government Act (2002), and the Biosecurity Act (1993). The Resource Management Act (1991) directs the management of biodiversity, particularly on privately owned land. The Local Government Act (2002) sets processes that determine the amount of resources and funding a regional community allocates to the management of biodiversity. The Biosecurity Act (1993) requires councils to manage a class of biodiversity broadly categorised as pests and weeds, and this Act can influence how other classes of biodiversity (e.g. indigenous biodiversity) are managed. These three acts are described below in further detail.

2.2 The Resource Management Act 1991

The Resource Management Act (1991) (RMA) gives regional councils, unitary councils, and territorial authorities (district and city councils) responsibilities for maintaining biological diversity under sections 30 and 31 (see Table 2).

Statute	Regional council functions, powers	Territorial authority functions, powers and responsibilities
Resource Management Act 1991	Control use of land for the purpose of: maintaining and enhancing ecosystems in water bodies and coastal water (s30(c)(iiia)). Establish, implement and review objectives, policies and methods for maintaining indigenous biological diversity (s30(ga)).	Control of any actual or potential effects of the use, development, or protection of land, including for the purpose of maintaining indigenous biodiversity (s31).

Table 2: Primary functions and powers of local government that affect biodiversity. Adapted from Indigenous biodiversity and the RMA and Roles and Responsibilities*, by* Quality Planning, 2020a

Regional councils must provide for these matters through Regional Policy Statements (RPS) as per s59 of the Resource Management Act (1991). The overall purpose of an RPS is to achieve the purpose of the RMA by providing an overview of the resource management issues of the region, plus policies and methods to achieve integrated management of the natural and physical resources of the whole region. More specifically, an RPS must establish and implement objectives, policies, and methods for maintaining and enhancing indigenous biodiversity. Regional plans (developed by regional councils) and district plans (developed by territorial authorities such as district, unitary and city councils) must then give effect to, or implement that RPS (MfE 2020b).

2.3 Local Government Act 2002

Under the Local Government Act (2002) the purpose of local government is to "promote the social, economic, environmental and cultural wellbeing of communities" (2002, Section 10a). The Local Government Act (LGA) requires regional and territorial authorities to consult with their local communities and determine what public goods and services the community want provided to them (Quality Planning, 2012). Based on this consultation, councils develop and implement Long Term Plans that cover a period of ten years and describe the activities and community outcomes councils want to achieve. Overall funding for biodiversity initiatives is shaped through the Long Term Plan process and influenced by ratepayers via the submission process (Department of Internal Affairs, 2020).

2.4 Biosecurity Act (1993)

Regional councils are required by the Biosecurity Act (1993, Section 12B) to provide leadership in activities that prevent, reduce, or eliminate adverse effects from harmful organisms that are present in its region. Leadership activities include facilitating the development and alignment of regional pest management plans and regional pathway management plans in the region, plus facilitating communication and cooperation among those involved in pest management. District councils also have a responsibility to act as a management agency under the Biosecurity Act (1993, Section 14).

The Biosecurity Act is included in this analysis because biosecurity functions of councils influence the biodiversity planning, capability and initiatives in two ways. For example, the *Waikato Regional Policy Statement* (2016) requires the Regional Pest Management Strategy to have regard to indigenous biodiversity values, thereby safeguarding some ecosystems and habitats from being invaded by unwanted organisms (typically framed as pests and weeds). Secondly, different levels of funding are allocated to biosecurity and biodiversity separately through the *Waikato Regional Council Long Term Plan*.

2.5 Foreseeable national settings for managing biodiversity in Aotearoa New Zealand

At the time of conducting the research, the CBD website referred to a twenty-year-old biodiversity strategy, *The New Zealand Biodiversity Strategy: Our Chance to Turn the Tide* (2000), and a four-year-old *Biodiversity Action Plan* (2016) as New Zealand's current national-level guidance on managing biodiversity (CBD, 2020a). The Department of Conservation updated *Our Chance to Turn the Tide* with a new national-level biodiversity strategy launched in August 2020, *Te Mana o te Taiao- Aotearoa New Zealand Biodiversity Strategy 2020* and the CBD data has been updated accordingly but this is indicative of the potential for lack of alignment between national and international action. The Ministry for the Environment has published and received submissions on a *Draft National Policy Statement for Indigenous Biodiversity*, which has yet to be finalised. Once these national settings are confirmed, they will be key links to the CBD. The analysis for this case study was conducted against the then draft national strategy and draft national policy statement as those provided the context for the documents under study at the time. These two tools are explained in greater detail below.[2]

2.6 Draft National Biodiversity Strategy

The Department of Conservation of Aotearoa New Zealand led the development of a biodiversity strategy discussion document in 2019, which resulted in *Te Koiroa o te Koiora: Our shared vision for living with nature* (DOC, 2019). This document signals some fundamental changes to how biodiversity is managed in Aotearoa New Zealand. A core principle is that the protection and maintenance of indigenous species is privileged over non-indigenous species. The strategy proposes that future management of indigenous biodiversity must include strengthening the conservation and restoration of ecosystems and landscapes on private land, which brings this into the purview of regional and territorial councils. Immediate or short term directions in the draft strategy are outlined in Table 3.

Establish an interim governance structure to oversee the new biodiversity strategy's implementation planning and delivery	Immediate (Y1)
Deliver the National Policy Statement for Indigenous Biodiversity to regulate the way we manage biodiversity on land through council plans and resource consent decisions	Short term (Y1–2)
Review system responsibilities, governance, leadership and statutory roles and responsibilities to ensure that these are fit for purpose. Implement the recommendations of this review. At a national level this will include regular reporting, and independent audit of progress against the strategy, and independent advice on the key actions to be taken in development of the next round of action planning in 5 years' time	Short term (Y1–2)

Table 3: Short term directions proposed in the Draft Biodiversity Strategy. Adapted from Te Koiroa o te Koiora: Our Shared Vision for Living with Nature. A Discussion Document on Proposals for a Biodiversity Strategy for Aotearoa New Zealand, by the Department of Conservation.

A submission by the WRC to the proposed strategy made the following points:

- the WRC was largely supportive of the Draft National Biodiversity Strategy;

[2] *Despite the Aichi Biodiversity Targets also being updated or replaced in the post-2020 Convention on Biological Diversity Conferences of the Parties' negotiations there is no requirement in law for Aotearoa New Zealand to compulsorily adjust national-level tools to align with the updates.*

- a National Policy Statement for Indigenous Biodiversity is essential for implementing the strategy effectively;
- additional central government resourcing is required to give appropriate effect to the Biodiversity Strategy and the National Indigenous Biodiversity Strategy (WRC, 2019).

2.7 National Policy Statement for Indigenous Biodiversity

National Policy Statements (NPS) are instruments issued under section 52(2) of the RMA. An NPS prescribes objectives and policies for matters of national significance that are relevant to the RMA. An NPS includes direction for how local authorities are to give effect to that NPS (MfE, 2020c). A National Policy Statement for Indigenous Biodiversity (NPSIB) is currently under development by the Ministry for the Environment (MfE, 2019). It is a key tool that will support the implementation of the proposed Draft National Biodiversity Strategy. The final version of the NPSIB will have significant implications for how indigenous biodiversity is managed on all types of land tenure, including public, Māori, and private land.

The proposed NPSIB will require regional councils to prepare a Regional Biodiversity Strategy in collaboration with territorial councils, tangata whenua, communities, and other identified stakeholders. This in turn will be linked to the Draft New Zealand Biodiversity Strategy (MfE, 2019). Local authorities must then have regard to the relevant regional biodiversity strategy when developing restoration and enhancement objectives, policies, and methods for inclusion in RPSs and plans.

All councils will be required to identify areas with significant indigenous vegetation and habitats, Significant Natural Areas (SNAs), using criteria developed by ecologists. SNAs will be protected through regional and district plans and consent processes under the RMA (MfE, 2019). Indigenous biodiversity (on private land) that exists *outside* SNAs is also included, and councils will be required to determine where and when to manage adverse effects on these areas. The latter requirement will broaden the management of indigenous biodiversity beyond the constraints of SNAs, with the intention of enabling planners to take into consideration ecosystems and habitats at a larger spatial scale (MfE, 2019).

Consultation on the proposed NPSIB closed in March 2020, and a final version was planned to be gazetted approximately mid-2020, but this has yet to happen. Once gazetted, all local authorities will need to give effect to the proposed NPSIB by updating their planning documents in line with one of two possible implementation time frames:

1. Implementation as soon as reasonably practicable – SNAs identified and mapped in five years, scheduled and notified in plans in six years.
2. Progressive implementation programme – SNAs identified and mapped within seven years, scheduled and notified in plans in eight years (Ministry for the Environment [MfE], 2019).

A submission by the WRC to the proposed NPSIB is similar to that of the WRC submission to the Draft Biodiversity Strategy in that the council was largely supportive, noting that much of the Council's approach already set out in the WRC Regional Policy Statement aligns well with the draft NPSIB. However, WRC again argued that effective implementation of an NPSIB would require significantly more resources, and asked that central government contribute directly to the costs of implementing it (WRC, 2020e).

3. MAINTAINING, PROTECTING AND ENHANCING BIODIVERSITY IN THE WAIKATO REGION

In the Waikato a key mechanism for maintaining or enhancing indigenous biodiversity is the Waikato Regional Policy Statement (WRPS). This second generation WRPS became operative in the Waikato Region in May 2016 (WRC 2016). Chapter 11 sets out the planning framework for indigenous biodiversity through a hierarchy of objectives, policies, and methods that give effect to the RMA. The RPS provides for a mix of

regulatory (rules) and non-regulatory methods. The latter methods include information gathering, biodiversity inventory, threatened species information, district plan development, pest management, funding and assistance, and Local Indigenous Biodiversity Strategies (WRC 2016, Part B. 11-1 to 11-13).

3.1 Achieving action on the ground and Aichi Biodiversity Goals

One way to assess if WRC planning mechanisms meet Aotearoa New Zealand's obligations to the CBD is to identify and map which WRPS objectives, policies, and methods (at least notionally) give effect to each Aichi Biodiversity Goal. National-level legislation, policy statements, and policy directions are also included in this assessment, because they are relevant to Aichi Goals A and D, which require whole-of-society or national-level outcomes.

This mapping exercise is demonstrated in Table 4, and suggests that (on paper at least) each Aichi goal can be matched with at least one national-level mechanism, or a WRPS policy, objective and method. WRC could therefore be regarded as achieving Aichi Biodiversity Goals, and if considered as a proxy for management of indigenous biodiversity at a national level, Aotearoa New Zealand as a nation would also be achieving the Aichi goals.[3] However, a closer look at some key council documents suggests that, in practice, realisation of the Aichi targets in the Waikato region is likely to be compromised under the current planning and funding arrangements. This is explored in the following section.

4. BARRIERS TO BETTER ACHIEVING LOCAL IMPLEMENTATION OF NEW ZEALAND'S GLOBAL RESPONSIBILITIES.

The WRPS, supported by national-level legislation (both current and foreseeable), appears to position the WRC well to meet the CBD Aichi targets. However, a closer examination of council documents has identified four issues[4] which may act as barriers to achieving local implementation of New Zealand's global responsibilities for biodiversity. These include:

1. Funds allocated in the WRC Long Term Plan
2. Planning to link action on the ground
3. Alignment of the Waikato Regional Plan
4. Measures of success

This section explores these barriers in greater depth.

[3] *A key point of difference worth noting between the Aichi targets and the WRC RPS is that the Aichi Biodiversity Goals do not explicitly declare indigenous biodiversity as a priority, whereas the WRC RPS does (as does the draft National Policy Statement on Indigenous Biodiversity and the Draft Biodiversity Strategy). Conversely, the WRC RPS does not give effect to protecting, enhancing, or planning for non-indigenous biodiversity that may support or enhance indigenous biodiversity in general. An example might be non-native plants that provide an important food source for tui and bellbirds at certain times of the year (Banks Peninsula Conservation Trust, n.d.). Note that RPS makes provision in 11.1 and 11.2 etc. for areas of significant habitat of indigenous fauna, which could include non-indigenous vegetation.*

[4] *This is not intended to be a comprehensive review of barriers to protecting or enhancing biodiversity in the Waikato Region.*

Aichi Biodiversity Targets	National Legislation and Policy Directions	RPS Objectives[5] (WRC 2016)	RPS Chapter 11 Indigenous Biodiversity Policies (WRC 2016)	RPS Chapter 11 Indigenous Biodiversity Methods (WRC 2016)
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.[6]	RMA (1991) DRAFT Biodiversity Strategy (2019) DRAFT NPSIB (2019)			11.1.11 Local Indigenous Biodiversity Strategies
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use.	Biosecurity Act (1993) RMA (1991)	3.1 Integrated management 3.2 Resource use and development 3.12 Built environment		11.1.2 Adverse effects on indigenous biodiversity 11.1.9 Pest management 11.1.4 Recognition of activities having minor adverse effects on indigenous biodiversity 11.2.4 Identify threats to areas of significant indigenous biodiversity
Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.	RMA (1991) Draft Biodiversity Strategy (2019) Draft NPSIB (2019)	3.4 Health and wellbeing of the Waikato River 3.7 Coastal environment 3.19 Ecological integrity and indigenous biodiversity 3.16 Riparian areas and wetlands	Policy 11.1 Maintain or enhance indigenous biodiversity Policy 11.2 Protect significant indigenous vegetation and significant habitats of indigenous fauna Policy 11.4 Safeguard coastal/marine ecosystems	11A Criteria for determining significance of indigenous biodiversity 11.1.1 Maintain or enhance indigenous biodiversity 11.1.3 Avoidance, remediation, mitigation and offsetting (for indigenous biodiversity that is not significant) 11.2.1 Identify areas of significant indigenous vegetation and significant habitats of indigenous fauna 11.2.2. Protect areas of significant indigenous vegetation and significant habitats of indigenous fauna

[5] WRC RPS Objectives, policies and methods can be relevant to multiple Aichi Goals. In order to keep the above table simple, overlapping connections are not mapped.

[6] Aichi Objectives A and B are interpreted as requiring national-level legislation, policies, and strategies and methods as well as regional policies, objectives and methods.

Aichi Biodiversity Targets	National Legislation and Policy Directions	RPS Objectives[5] (WRC 2016)	RPS Chapter 11 Indigenous Biodiversity Policies (WRC 2016)	RPS Chapter 11 Indigenous Biodiversity Methods (WRC 2016)
Strategic Goal C continued			11A Criteria for determining significance of indigenous biodiversity	11.2.3. Assess significance 11.2.4 Identify threats to areas of significant indigenous biodiversity
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services.	Draft Biodiversity Strategy 2019: See footnote 6	3.8 Ecosystem services		11.1.10 Funding and assistance 11.3.2 Education and advocacy
Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building.[7]	Draft Biodiversity Strategy (2019) NPSIB (2019) LGA (2002)	3.1 Integrated management 3.9 Relationship of tangata whenua with the environment	Policy 11.3: Collaborative management (Chapter 11)	11.1.5 Information gathering 11.1.6 Biodiversity inventory 11.1.7 Threatened species information 11.1.8 Plan development: incentives, financial contributions, economic instruments 11.1.10 Funding and assistance 11.1.11 Local Indigenous Biodiversity Strategies 11.3.1 Working with tangata whenua 11.3.2 Education and advocacy 11B: Significant indigenous biodiversity roles and responsibilities

Table 4: National and regional mechanisms aligned with Aichi Biodiversity Goals

Adapted from: *The Waikato Regional Policy Statement: Te Tauākī Kaupapahere Te-Rohe O Waikato* by Waikato Regional Council, 2016

[7] *Ibid*

4.1 Funds allocated in the Waikato Regional Council Long Term Plan

A Waikato Regional Council Long Term Plan (WRC LTP) covers a period of ten years and describes the council's activities and community outcomes it wants to achieve. While a WRC LTP cannot override the functions of an RMA, it is required to reflect the priorities and interests of the communities in the region. The WRC LTP subsumes biodiversity initiatives and activities under "Integrated Catchment Management" (WRC 2018). Biodiversity activities encompass three main functions: empowering communities, advancing restoration, and promoting the benefits WRC activities bring to the region's biodiversity.

A simple analysis of levels of funding for biodiversity initiatives through the WRC LTP compared to other activity areas is revealing. Biodiversity initiatives are subsumed in the WRC LTP into an area of activity called "Integrated Catchment Management" (WRC 2016). This is a non-statutory initiative which resources and coordinates management operations. Tables 5 and 6 offer a comparison of levels of expenditure both within Integrated Catchment Management group activities, and across all council activities for 2020/2021.
Table 5 (and Appendix A) demonstrates that expenditure on biodiversity initiatives *within* the Integrated Catchment Management group is only 10%. At 50%, the lion's share of expenditure is spent on catchment management and planning, and biosecurity receives a third. In addition, there is a significant difference in investment between biodiversity and biosecurity.

Breakdown of Integrated Catchment Management Expenditure 2020/21	**$(000)**	**Percentage of expenditure on Integrated Catchment Management**
Catchment management and planning	15,815	50
Biosecurity	10,587	33
Biodiversity	3,011	10
Land management advisory services	2,091	7
Total	**31,504**	**100**

Table 5: Breakdown of Integrated Catchment Management Expenditure 2020/21. Adapted from: 2018-2028 Long Term Plan: Te Marahere Roa by *Waikato Regional Council, 2018*

Expenditure in WRC LTP Activity Areas 2020/21	**$(000)**	**Percentage of total expenditure**
Public transport	39,000	24
Science and strategy	32,592	20
Integrated Catchment Management	31,504	19
Flood protection and control works	24,866	15
Resource use	17,460	11
Community and services	14,795	9
Civil defence and emergency management	2,561	2
Regional hazards and emergency response	2,072	1
Total	**164,850**	**100**

Table 6 Expenditure in all WRC LTP Activity areas 2020/21. Adapted from: 2018-2028 Long Term Plan: Te Marahere Roa by *Waikato Regional Council, 2018*

If expenditure is compared across all council activities for the years 2020–2021, transport receives the highest level of funding overall at 24%, with the Integrated Catchment Management group of activities receiving about 19%. Investment into biodiversity-specific activities is therefore only 2% of the expenditure across all council activities (Table 6 and Appendix B). The need for ratepayers to travel around their region is clearly

prioritised over and above protecting ecosystems and non-human species in the Waikato Region. Allocation of funds constrains or enhances council activities (and outcomes) and the relatively small proportion of funds allocated to biodiversity activities by the WRC LTP is a significant constraint.

4.2 Planning to link action on the ground

The Waikato Region is split into nine spatial management areas called "zones" (Figure 1). These are based largely on water catchments, and each zone must develop a Zone Management Plan. The primary purpose of a Zone Management Plan is the implementation of *all river and catchment management activities* [emphasis added] in the Waikato region (WRC, 2020f).

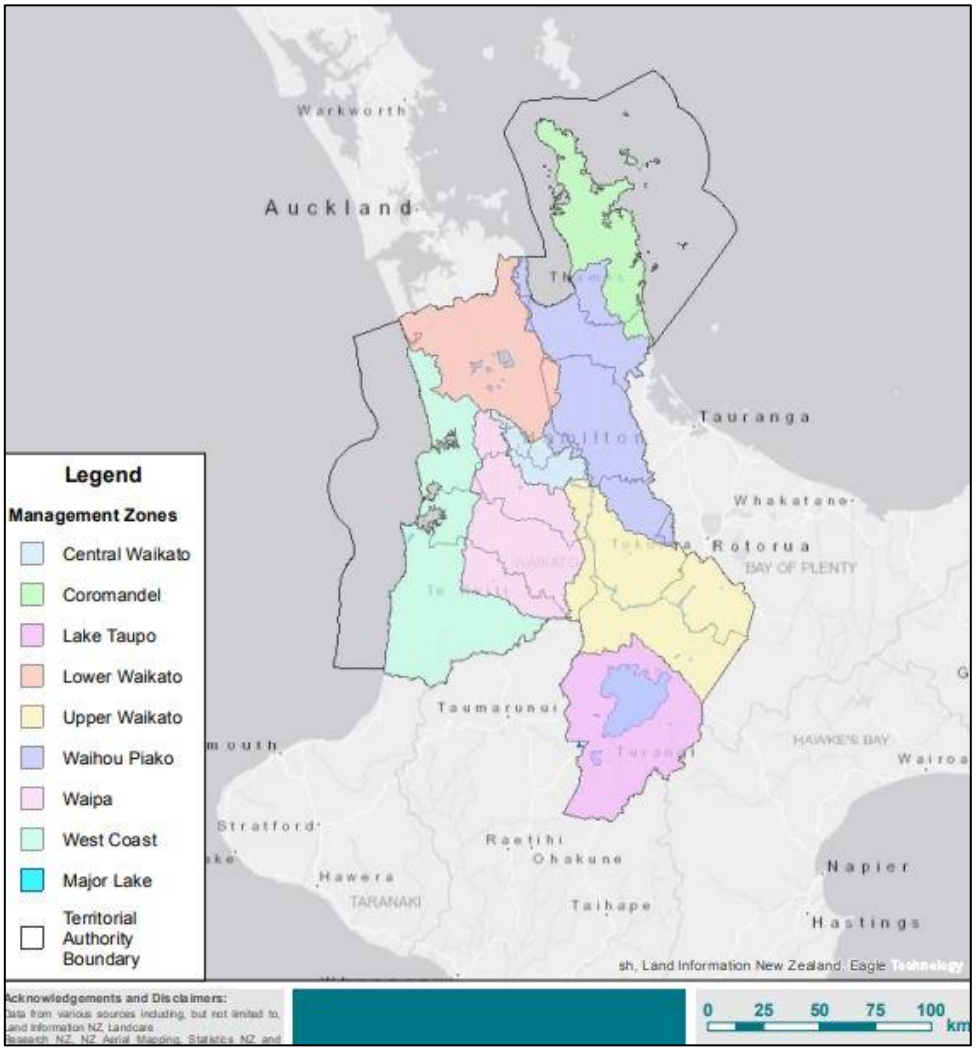

Figure 1. Waikato Regional Council Management Zones (Source: Waikato Regional Council (2020) Catchment Management Zones*)*

Zone Plans encompass a range of complex, competing activities, and it is hard to gauge the priority that different Zone Committees will give to a biodiversity plan among the other initiatives and outcomes they must deliver. There is potential for a Zone Committee to award the development and implementation of an indigenous biodiversity plan a similar priority to that which is commensurate with funding allocated in the Long Term Plan. In other words, flood management, drainage, and biosecurity is prioritised over an indigenous biodiversity plan.

Under the current WRC RPS, the responsibility for developing a Local Indigenous Biodiversity Strategy (LIBS) was intended to be handed over to the 11 district councils in the region (Method 11.1.11). Two LIBS were

piloted (Source to Sea and Hamilton Halo), and in the case of the Hamilton Halo LIBS, it became a policy directive which the Central Waikato Zone Plan had to take into account (see Figure 2). Planning for biodiversity at a local level therefore had a formal, recognised status in the Central Waikato Zone Plan.

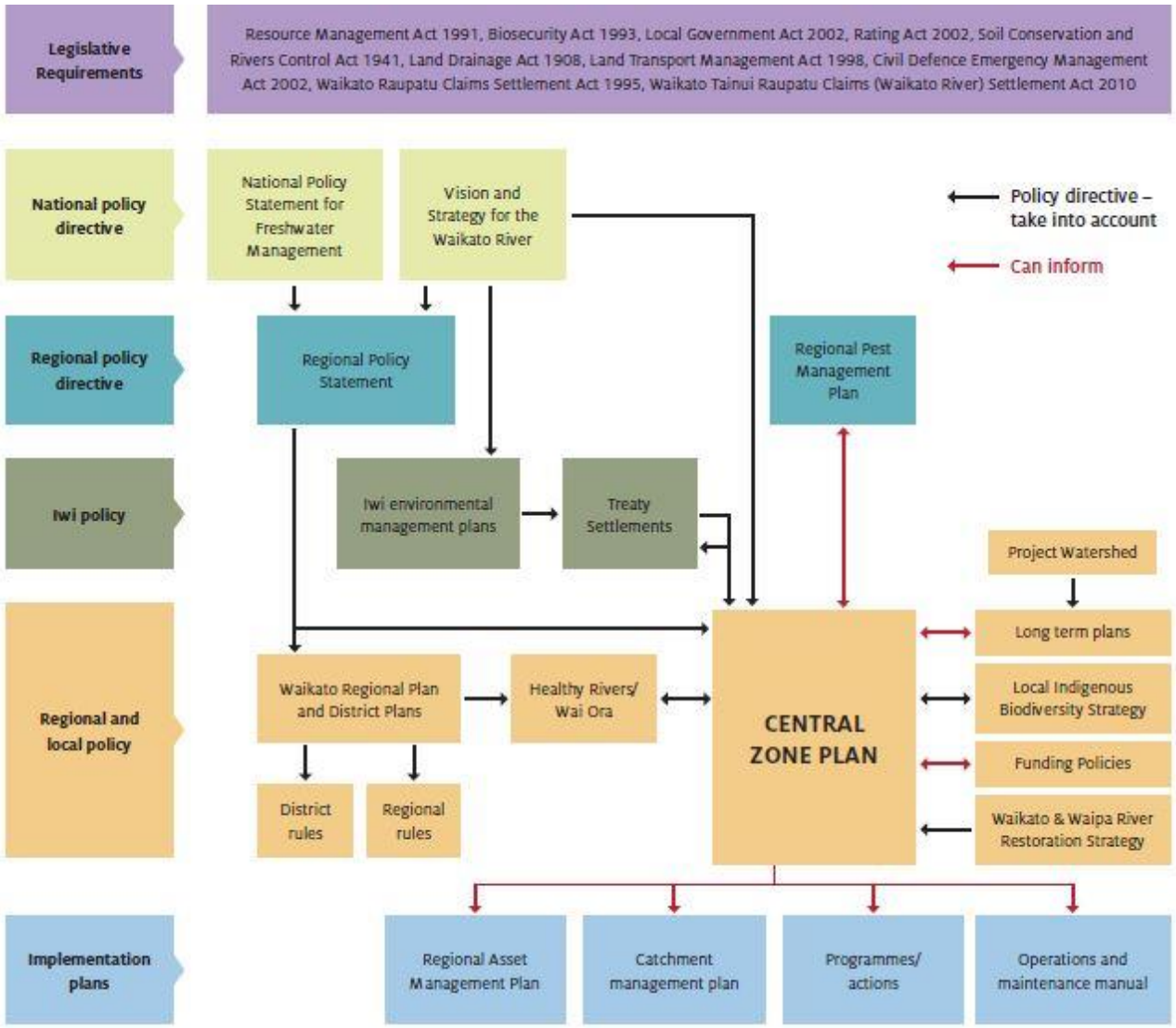

Figure 2: Summary of legislative and policy framework for the Central Waikato Zone Plan (Source: Waikato Regional Council (2017) Central Waikato Zone Plan: Te Mahere o Waikato Waengapū)

However, after conducting the LIBS pilots, it was found that WRC does not have the resources to undertake similar processes for other district councils. An evaluation of the environmental outcomes of the RMA by the Environmental Defence Society in 2016 found that constrained capacity related to lack of financial resources was a widespread problem among environmental management agencies (EDS, 2016), and this is yet another example of such a problem. The LIBS model as proposed through the WRC RPS appears to be stalled, and the pilots are instead informing a "collective impact approach process" at a regional scale (Personal Communication, Andrew Thomas, WRC Biodiversity Officer 4 June 2020).

A consequence of lack of resources to develop additional Local Indigenous Biodiversity Strategies (either by WRC or district councils) could mean that WRC Zone Committees make decisions or approve processes via Zone Plans that are not well aligned with the biodiversity issues at a district council or local, place-based ecosystem scale. Without district council–driven LIBS, the opportunity to raise awareness about biodiversity, build capability at a district level (both within councils and among place-based communities) and achieve

action on the ground is also compromised. It also brings into doubt the extent to which the WRPS is able to give effect to meaningful biodiversity outcomes.

4.3 Alignment of the Waikato Regional Plan

The purpose of a regional plan is to assist a regional council to carry out its functions to achieve the purpose of the Resource Management Act (1991 s63.1). Regional plans must give effect to and implement national and RPSs (Environment Guide, 2020b). The current Waikato Regional Plan that became operative in 2009 is not aligned with the 2016 RPS. The protection and enhancement of biodiversity is excluded in the 2009 Waikato Regional Plan, and the Regional Policy Statement on Indigenous Biodiversity appears to have been functioning as a proxy chapter of the Waikato Regional Plan instead, taking direction from the RMA as national-level direction.

4.4 Measures of success

Measures of success help to determine what progress is being made on a strategy, programme or a plan. Measures of success should also ensure agency accountability, particularly if the planned outcomes are not achieved (EDS, 2016).

The WRC LTP requires two on-the-ground indigenous-biodiversity *projects* to be completed each year as a performance measure (WRC, 2018). The scale or purpose of these "projects" is not clear, and the measure uses vague language that cannot easily be linked to the RPS. It is possible that two small protection or restoration "projects" per zone would satisfy this measure, but have no broader outcomes that are required by the RPSs, such as buffering or corridors (WRC, 2016).

Current public reporting on indigenous biodiversity by WRC is restricted to the following environmental indicators:

1. Extent of freshwater wetlands.
2. Coverage of indigenous vegetation.
3. Forest fragmentation.
4. Indigenous coverage of protected areas on land (WRC, 2020b).

The web pages (see WRC, 2020b) reporting the above data do not comment on any targets and the reader is left uninformed about the trends and their relationship to the progress or success of WRC RPS biodiversity policies, objectives, and methods.

Under the RPS, one of the tasks of an LIBS (11.1.11(b)) is to 'establish indigenous biodiversity targets to enable local authorities to prioritise resourcing, track progress and monitor effectiveness in achieving indigenous biodiversity objectives' (WRC, 2016). Measures of success on the protection and enhancement of biodiversity in the Waikato Region against the RPS therefore appear to be in stasis, with no systematic way to prioritise resourcing or determine progress in a transparent, meaningful way, particularly at a district level.

5. OPTIONS FOR BETTER ACHIEVING IMPLEMENTATION OF NEW ZEALAND'S GLOBAL RESPONSIBILITIES FOR BIODIVERSITY

Barriers to achieving on-the-ground implementation by regional and district councils include: inadequate funds allocated by the WRC Long Term Plan; poor links between Zone Plans and action on the ground; weak alignment of the Waikato Regional planning mechanisms; and inadequate measures of success. The following sections explore options for addressing these barriers.

5.1 Increased levels of funding for planning and action on the ground

The suspension of Local Indigenous Biodiversity Strategies as a tool to inform future Zone Plans and achieve action on the ground (assuming LIBS continue to be perceived as too expensive to develop) is problematic. Zone Plans are no longer informed at the "ground level", and the opportunity to raise awareness about biodiversity, build capability, and implement action on the ground at a district level is therefore compromised.

One option to address this is to argue that the development of a LIBS or a similar planning process and more biodiversity interventions in general is not "too expensive". Instead, a different way of viewing the problem is that at 2% of the total expenditure for biodiversity activities in the Long Term Plan (for the year 2020/21), biodiversity activities in general are grossly underfunded and deserve more support. Increases in funding and investment that are commensurate with the actual planning and project costs could bring local planning for biodiversity back into the Zone planning process, and boost implementation of on-the-ground activities.

Submissions by the WRC to both the Draft Biodiversity Strategy and the proposed NPSIB are emphatic on this point, arguing that additional central government funding is required to resource the implementation of both national mechanisms.

5.2 Alignment of Plans

The current Waikato Regional Plan, which became operative in 2009, is not aligned with the 2016 RPS. Consequently, the protection, maintenance and enhancement of indigenous biodiversity of any sort are not included in the 2009 Waikato Regional Plan. Regardless of this lack of alignment, those operating under and implementing the WRP still have to give effect to the WRPS, but having an out of date plan makes this more difficult and less apparent.

The Waikato Regional Plan is under review, combined with a review of the Waikato Regional Coastal Plan (2020). If the proposed NPSIB is gazetted, the next generation Waikato Regional Plan would have to give effect to its direction. This could be achieved by co-opting a range of existing policies, objectives, and methods that have been proven to be effective from the WRC RPS.

If the draft NPSIB is gazetted with minor changes only, WRC will also be required to develop a Regional Biodiversity Strategy. In the absence of LIBs, a Regional Biodiversity Strategy would provide better direction and set high level targets that measure the success of a broad range of initiatives (instead of ad hoc targets limited to the Long Term Plan or restricted to localised zone plans). This appears to have been anticipated by the council through the development of a "Regional Scale Collective Impact" programme. This programme is based on findings from the LIBS pilots and identifies the need for an "overarching framework and underlying support structure" to improve alignment across groups and initiatives within the region (WRC 2020c).

Based on current and foreseeable mandates and mechanisms, biodiversity planning through Zone Plans would be strengthened by direction from a national level (the New Zealand Biodiversity Strategy and the NPSIB), and a regional level (WRC Regional Biodiversity Strategy), and supported by an updated Waikato Regional Plan.[8] Improved levels of funding would strengthen planning and action at a local level by reinstating key processes identified as effective through the Hamilton Halo and Source to Sea pilot LIBS. Planning, management, and action to maintain and enhance indigenous biodiversity in the Waikato Region would therefore be informed by and held to account at all levels of governance.

[8] *It is assumed that no additional Local Indigenous Biodiversity Strategies will be developed due to lack of resources.*

5.3 Improved measures of success

Measures of success or targets for biodiversity planning in general and action on the ground across regional, zone, and district planning levels need to be better defined whereby measures or targets are benchmarked against the New Zealand Biodiversity Strategy, the NPSIB, and a Regional Biodiversity Strategy. In addition, while it is not the task of the WRC Long Term Plan to determine how biodiversity is managed in a region, high level measures could be drawn from a Regional Biodiversity Strategy to inform the LTP. A key advantage of aligning measures of success from a local to a national level is that they become more transparent and more readily compared against the Aichi Biodiversity Goals. This would enable a better assessment of New Zealand's level of achievement against its international commitments.

In summary, options for addressing barriers to achieve implementation on the ground for indigenous biodiversity in the Waikato region include an increase in funding for district-level planning and implementation, plus strengthened direction from a national level by aligning existing planning tools such as the Waikato Regional Plan with the proposed NPSIB and the New Zealand Biodiversity Strategy. Measures of success at district and regional levels should also be aligned with national-level direction to enable accountability at all levels, and a transparent means by which progress on maintaining and enhancing indigenous biodiversity in Aotearoa New Zealand can be tracked.

6. CONCLUSION

The purpose of this case study was to determine if New Zealand is able to meet the CBD Aichi current goals, using the WRC as an example. A combination of (current and foreseeable) national-level policy settings and a range of policies, objectives, and methods from Chapter 11 of the WRC RPS was mapped against the Aichi Biodiversity Goals. The mapping exercise found that the WRC appears to be well positioned to meet the Aichi Biodiversity Goals, because each Aichi goal can be matched with at least one national-level mechanism, or a WRC RPS policy, objective, and method.

However, a closer look at some key council documents suggests that, in practice, realisation of the Aichi targets in the Waikato region through on-the-ground implementation is likely to be compromised for a number of reasons. Examples highlighted include lack of clarity for biodiversity management through the Zone Planning process, resulting in inadequate funding for planning and funding at the district level. Secondly, the WRC Long Term Plan measure of success for Biodiversity is vague and unclear, and any existing biodiversity indicators are not tied to transparent targets or measures of success.

Options for addressing barriers to achieve implementation on the ground for indigenous biodiversity in the Waikato region include an increase in funding for district-level planning and implementation, and strengthened direction from a national level by aligning existing planning tools (such as the Waikato Regional Plan) and measures of success with the proposed NPSIB and the draft New Zealand Biodiversity Strategy.

If these significant barriers are addressed, the WRC appears to be well positioned to make good progress on maintaining, protecting, and enhancing indigenous biodiversity in its region. As a case study, the council's approach will also serve to place Aotearoa New Zealand in a positive light in an international setting. However, there are ten other regional and five unitary councils in Aotearoa New Zealand, all at different stages of developing their unique biodiversity planning and management tools. Therefore, this case study of a single council cannot be extrapolated to a national scale using an assumption that indigenous biodiversity is managed in the same way across the whole of Aotearoa New Zealand.

7. REFERENCES

Banks Peninsula Conservation Trust. (n.d). *Tui tucker: Attracting Tui to your garden.* http://www.bpct.org.nz/images/Resources/Tui-Tucker-brochure.pdf

Convention on Biological Diversity. (2020a). *Aichi Biodiversity Targets.* https://www.cbd.int/sp/targets/

Convention on Biological Diversity. (2020b). *Country Profiles: New Zealand.* https://www.cbd.int/countries/?country=nz.

Convention on Biological Diversity. (2020c). *Preparations for the Post-2020 Biodiversity Framework.* https://www.cbd.int/conferences/post2020

Department of Conservation. (2000). *The New Zealand Biodiversity Strategy: Our Chance to Turn the Tide*. https://www.doc.govt.nz/globalassets/documents/conservation/new-zealand-biodiversity-strategy-2000.pdf

Department of Conservation. (2016). *Biodiversity Action Plan*. https://www.doc.govt.nz/documents/conservation/new-zealand-biodiversity-action-plan-2016-2020.pdf

Department of Conservation. (2019). *Te Koiroa o te Koiora: Our Shared Vision for Living with Nature. A Discussion Document on Proposals for a Biodiversity Strategy for Aotearoa New Zealand*. https://www.doc.govt.nz/globalassets/documents/conservation/protecting-and-restoring/biodiversity-discussion-document.pdf

Department of Conservation. (2020a). *Proposal for New Zealand's next biodiversity strategy.* https://www.doc.govt.nz/get-involved/have-your-say/all-consultations/2019/proposal-for-new-zealands-next-biodiversity-strategy/

Department of Internal Affairs. (2020). *Council planning and consultation processes.* http://tiny.cc/x4ysqz

Environment Guide. (2020b). *Regional Plans.* http://www.environmentguide.org.nz/rma/planning-documents-and-processes/regional-plans/#:~:text=The%20purpose%20of%20a%20regional,688

Environmental Defence Society. (2016). Evaluating the environmental outcomes of the RMA. https://www.eds.org.nz/assets/Publications/Evaluating%20the%20Environmental%20Outcomes%20of%20the%20RMA%20Report%20Final.pdf

Hardwick, S.W. (2017). Case study approach. In D. Richardson, N. Castree, A. Koboyashi, W. Liu, R.A. Marston, K. Mei Po (Eds.), *The International Encyclopedia of Geography: People, the Earth, Environment and Technology*. https://onlinelibrary.wiley.com/doi/book/10.1002/9781118786352. John Wiley & Sons.

Luo, A. (2020). *What is content analysis and how can you use it in your research?* https://www.scribbr.com/methodology/content-analysis/

Ministry for the Environment. (2019). *Draft National Policy Statement for Indigenous Biodiversity*. https://www.MfE.govt.nz/sites/default/files/media/Biodiversity/draft-npsib.pdf.

Ministry for the Environment. (2020a). *National policy statements under the Resource Management Act 1991.* https://www.MfE.govt.nz/rma/rma-legislative-tools/national-policy-statements

Ministry for the Environment. (2020b). *Resource Management Act and Biodiversity.* https://www.MfE.govt.nz/more/biodiversity/overview-biodiversity/resource-management-act-and-biodiversity

Quality Planning. (2012). *Related Laws: Relationship between the Local Government Act 2002 and the Resource Management Act 1991.* https://www.qualityplanning.org.nz/sites/default/files/2018-11/Relationship%20between%20the%20Local%20Government%20Act%20and%20the%20Resource%20Management%20Act2.pdf.

Quality Planning. (2020a). *Indigenous biodiversity and the RMA and Roles and Responsibilities.* https://qualityplanning.org.nz/node/760

Quality Planning. (2020b). *Local Government Act 2002.* https://qualityplanning.org.nz/node/694

Waikato Regional Council (2007). Waikato Regional Plan. https://www.waikatoregion.govt.nz/council/policy-and-plans/rules-and-regulation/regional-plan/#e5867

Waikato Regional Council. (2016). *Waikato Regional Policy Statement: Te Tauākī Kaupapahere Te-Rohe O Waikato*. https://www.waikatoregion.govt.nz/council/policy-and-plans/regional-policy-statement/

Waikato Regional Council. (2017). *Central Waikato Zone Plan: Te Mahere o Waikato Waengapū..* https://www.waikatoregion.govt.nz/assets/WRC/Council/Policy-and-Plans/hazard-catchment-management/zone-management-plans/Central-Waikato-Zone-Plan.pdf

Waikato Regional Council. (2018). *2018-2028 Long Term Plan: Te Marahere Roa.* https://www.waikatoregion.govt.nz/council/policy-and-plans/long-term-council-community-plan-annual-plan-and-annual-report/long-term-plan-2018-2028/

Waikato Regional Council. (2019). *Waikato Regional Council Submission to the proposal for New Zealand's next biodiversity strategy*. https://www.waikatoregion.govt.nz/assets/WRC/WRC-2019/WRC-Submission-NZ-Biodiversity-Strategy-2019.docx.pdf

Waikato Regional Council. (2020a). *About Hamilton Halo.* https://www.waikatoregion.govt.nz/environment/natural-resources/biodiversity/hamilton-halo/about-hamilton-halo/

Waikato Regional Council. (2020b). *Biodiversity: Monitoring and reporting*. https://www.waikatoregion.govt.nz/environment/environmental-information/environmental-indicators/biodiversity/

Waikato Regional Council. (2020c). *Indigenous Biodiversity Programme: Restoring nature, connecting communities.* https://www.waikatoregion.govt.nz/environment/natural-resources/biodiversity/indigenous-biodiversity-programme/

Waikato Regional Council. (2020d). *Local Indigenous Biodiversity Strategies*. https://www.waikatoregion.govt.nz/Council/Policy-and-plans/Regional-Policy-Statement/RPS2016/Part-B/11/1/Implementation-methods/11/

Waikato Regional Council. (2020e). *Submission from Waikato Regional Council on the draft National Policy Statement on Indigenous Biodiversity*.

https://www.waikatoregion.govt.nz/assets/WRC/Community/whats-happening/policy-submissions/Proposed-NPS-Biological-Diversity.pdf

Waikato Regional Council. (2020f). Zone Management Plans. http://tiny.cc/1rzsqz

8. LIST OF LEGISLATION

Biodiversity Act 1993

Local Government Act 2002

Resource Management Act 1991

9. APPENDIX A: WRC Regional Council Long Term Plan: Expenditure on integrated catchment management activities

Cost of service statement

Integrated catchment management

	2017/18 Annual Plan ($000)	2018/19 LTP ($000)	2019/20 LTP ($000)	2020/21 LTP ($000)	2021/22 LTP ($000)	2022/23 LTP ($000)	2023/24 LTP ($000)	2024/25 LTP ($000)	2025/26 LTP ($000)	2026/27 LTP ($000)	2027/28 LTP ($000)
Catchment planning and management	11,563	14,526	14,743	15,815	16,302	16,531	16,633	16,713	17,041	17,414	17,834
Biosecurity	7,036	7,998	8,764	10,587	9,738	10,216	11,227	11,123	9,263	12,255	12,575
Biodiversity	2,559	2,770	2,854	3,011	2,831	2,876	2,920	2,965	3,015	3,066	3,120
Land management advisory services	1,853	2,022	2,014	2,091	2,165	2,203	2,018	2,050	2,087	2,125	2,164
TOTAL EXPENDITURE	23,011	27,316	28,375	31,504	31,036	31,826	32,798	32,851	31,406	34,860	35,693

Source: Waikato Regional Council, 2018, *2018-2028 Long Term Plan: Te Marahere Roa.* https://www.waikatoregion.govt.nz/council/policy-and-plans/long-term-council-community-plan-annual-plan-and-annual-report/long-term-plan-2018-2028/

10. APPENDIX B: WRC Regional Council Long Term Plan: Expenditure across all activity areas

Expenditure											
Community and services	9,938	10,512	14,404	14,795	12,429	13,048	12,936	12,793	13,551	13,587	13,426
Civil Defence and emergency management	2,192	2,464	2,515	2,561	2,611	2,657	2,648	2,703	2,747	2,791	2,834
Regional hazards and emergency response	1,602	1,937	1,983	2,072	2,034	2,093	2,190	2,245	2,298	2,355	2,404
Flood protection and control works	19,037	21,847	23,892	24,866	25,525	27,372	27,335	27,503	28,999	29,589	30,482
Integrated catchment management	23,011	27,316	28,375	31,504	31,036	31,826	32,798	32,851	31,406	34,860	35,693
Resource use	15,236	16,140	16,718	17,460	18,676	19,227	19,537	19,785	20,180	19,488	19,852
Science and strategy	27,759	24,593	27,387	32,592	28,493	27,760	33,182	27,069	27,572	35,410	28,761
Public Transport	23,786	26,773	35,414	39,000	40,547	41,568	41,919	42,670	43,693	44,705	45,745
Corporate and self funding	911	3,964	2,452	(769)	42	33	10	(25)	(59)	(65)	(80)

	2017/18 Annual Plan ($000)	2018/19 LTP ($000)	2019/20 LTP ($000)	2020/21 LTP ($000)	2021/22 LTP ($000)	2022/23 LTP ($000)	2023/24 LTP ($000)	2024/25 LTP ($000)	2025/26 LTP ($000)	2026/27 LTP ($000)	2027/28 LTP ($000)
Council controlled organisations	137	160	162	167	173	177	180	183	187	190	194
Total expenditure	**123,609**	**135,706**	**153,302**	**164,248**	**161,566**	**165,761**	**172,735**	**167,777**	**170,574**	**182,910**	**179,311**

Source: Waikato Regional Council, 2018, *2018-2028 Long Term Plan: Te Marahere Roa.* https://www.waikatoregion.govt.nz/council/policy-and-plans/long-term-council-community-plan-annual-plan-and-annual-report/long-term-plan-2018-2028/