



Ministry for the
Environment
Manatū Mō Te Taiao

Annual Report *Pūrongo ā-Tau*

2018/19



Presented to the House of Representatives pursuant
to section 44 of the Public Finance Act 1989

Published in October 2019 by the
Ministry for the Environment
Manatū Mō Te Taiao
23 Kate Sheppard Place, Thorndon
PO Box 10362, Wellington 6143, New Zealand

Publication number: ME 1436

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Ministry for the
Environment
Manatū Mō Te Taiao



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Welcome

This report shows how we've performed in the year to 30 June 2019.

Part 1: About us ***Kōrero mō mātou***

An overview of our organisation – our purpose, people, way of working and funding.

Part 2: Our performance ***Ngā mahi kua mahia***

How we performed in the year, showing achievements against our long-term and annual performance measures.

Part 3: Our finances ***Kōrero pūtea***

The financial resources we used to deliver our services, including an independent audit report of our annual report.

Tell us what you think

We welcome your feedback.
Get in touch by:

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Phone: +64 4 439 7400
Email: info@mfe.govt.nz

Change in a connected world



*Kei te tangi a Ranginui
Kei te tangi a Papatūānuku
Kei te rere ngā roimata
Rere ki uta. Rere ki tai.*

Kei hea ngā kaitiaki mō

*Te mana o te Wai
Te Mauri o te Wai?*

*Whakarongo mai!
Whakaoratia!*

*Hei oranga wairua!
Hei oranga tangata!
Hei oranga mō Aotearoa
katoa*

Tēnā koutou

Everyone's talking about the environment. There's a growing appreciation that the health of our environment has implications for jobs, incomes, human health and safety, cultural identity, and social wellbeing. Helping our environment thrive is helping people thrive.

This makes the work of the Ministry for the Environment important for every New Zealander. It also means we can't ignore any part of the world around us as we look for solutions to environmental issues – because everything is connected.

So alongside our natural environment, at the Ministry we think about the built environment – our towns and cities. We think about the way we live and make a living – the relationship between people and nature, and the aspirations New Zealanders have for their country and their whānau. We want our land and water to be healthy. We want our natural resources to be productive and well managed. We want to enjoy this place. Everything has to work together.

And together, with all New Zealanders, we've got work to do.

During the year we released *Environment Aotearoa 2019*, a report compiled in collaboration with Stats NZ. It provides scientific evidence that we are operating at our limits and need to make changes.

“Environment Aotearoa 2019, a report compiled in collaboration with Stats NZ, provides scientific evidence that we are operating at our limits and need to make changes.”

A lot of good things are being done to turn things around, and I'm proud of the way the Ministry has connected with others to make a difference this year.

It started with a bang. Sixty of New Zealand's leading businesses formed the Climate Leaders' Coalition, which aims to reduce greenhouse gas emissions. The Government announced the phasing out of single-use plastic bags, along with a programme of work to tackle New Zealand's waste problems.

One thing we did early on was help to form the Aotearoa Circle. It's a group of senior leaders from across the public and private sectors that aims to halt and reverse the decline of New Zealand's natural assets. The Circle has kicked into gear, focusing on sustainable finance. We also supported the development of 9 Wire, an initiative led by the WWF NZ to fund and support environmental innovation.

Throughout the year, a major focus has been the work we have done to support the Government's Essential Freshwater work programme. The Kāhui Wai Māori (who have provided the proverb on the previous page) and other groups contributed diverse, important perspectives to the work programme announced recently by

the Minister for the Environment. I think the way we have worked with these groups provides a model for future policy development, by bringing different views into policy development earlier and more deeply. This includes how we consider Te Ao Māori, which in our freshwater work is reflected in Te Mana O Te Wai – a concept which brings the health and wellbeing of water itself into the heart of policy proposals.

Other milestones during the year included the Zero Carbon Bill being introduced to Parliament, and improvements to the planning system. They're changes that will support better strategic planning, and New Zealand's transition to a sustainable, low-emissions economy.

I'm also proud of the things we've done inside the Ministry to improve our performance. If we're asking people to make more sustainable choices, we have to walk the talk. Sustainability means operating within a baseline, minimising our environmental footprint, and providing people with what they need to thrive.

We recently launched our internal sustainability strategy. It aims to improve our sustainable business performance with both long- and short-term goals, and demonstrate

how government can take the lead on sustainable business practices. We have already made progress by achieving CEMARS (Certified Emissions Measurement and Reduction Scheme) certification.

In all of this, we are charting a course to a liveable future. We're asking how we can live in a way that ensures future generations enjoy the same, or better opportunities. We're asking how we can better recognise te ao Māori in our thinking and decision-making. And we're focusing on how we can find a way through tough questions with others, by engaging with respect and finding common ground.

There's plenty of mahi ahead of us, but the steps we've taken this year matter, and will make a difference.

Nāku noa, nā



Vicky Robertson

Chief Executive and Secretary
for the Environment

Shifting the trajectory

These statistics are from Environment Aotearoa 2019, a report produced by the Ministry for the Environment and Stats NZ presenting the most important issues that affect the health of our environment today.



Over 70,000 hectares of native vegetation lost through conversion to pasture, plantation forestry, and urban areas (between 1996 and 2012).

Our per-person rate of greenhouse gas emissions is the 6th highest

for an industrialised country (2015).

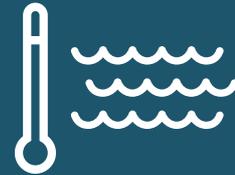


Over 1000 hectares of wetland areas lost between 2001 and 2016.

Our volume of freshwater take per person is the second highest of OECD countries (2014).

14–22cm of sea-level rise and 0.7°C warming of seas in the last century.

7% increase in ocean acidity in the past 18 years.



20% increase in our gross greenhouse gas emissions (since 1990).

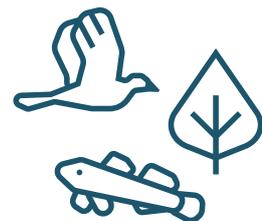
Our emissions per unit of gross domestic product are the 4th highest in the OECD (2016). Global temperatures have already increased by about 1°C above pre-industrial levels.



Almost 25% loss of ice from our glaciers in the past 40 years.

16% of routinely assessed fish stocks were overfished

and 10 stocks are considered collapsed (2017).



Nearly 4000 of our native species are at risk or threatened with extinction.

90% of seabirds, 76% of freshwater fish, 84% of reptiles, and 46% of vascular plants are currently threatened with or at risk of extinction. The extinction risk has worsened for 86 species in the past 15 years. At least 75 animal and plant species have become extinct since humans arrived in New Zealand.

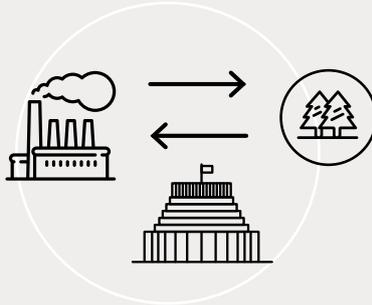
What the Ministry has been doing to help

Highlights from 2018/19



July 2018

- Coastal hazards and climate change guidance technical workshops start around the country.



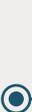
September 2018

- New Zealand Productivity Commission releases final report on opportunities and challenges for New Zealand's progress to a low-emissions economy.
- The Ministry attains Certified Emissions Measurement and Reduction Scheme (CEMARS) certificate through Enviro-Mark Solutions' accreditation scheme.



November 2018

- Urban Water Working Group releases report outlining 10 urban water principles and a vision for reducing the negative effect our cities have on water ecosystems.
- Environment Minister David Parker announces two-stage process to improve the resource management system.



August 2018

- Government announces phasing out of single-use plastic bags.
- Consultation begins on improving the New Zealand Emissions Trading Scheme.
- Associate Minister for the Environment Eugenie Sage announces a programme of work to tackle New Zealand's waste problems.
- Associate Minister for the Environment Eugenie Sage announces solutions to Auckland's commercial and industrial waste.



October 2018

- Government releases blueprint for improving freshwater quality.
- We begin measuring and monitoring our carbon emissions.
- *Our Air 2018* report released.
- The *Report of the Biodiversity Collaborative Group* is released outlining a draft National Policy Statement for Indigenous Biodiversity.
- New Zealand signs an international declaration to cut plastic waste from its economy and environment – the *New Plastics Economy Global Commitment*.

November 2018 (continued)

- Our guidance for local government on coastal hazards and climate change wins the annual Terry Healy Memorial Award.
- Associate Minister for the Environment Eugenie Sage confirms phase out of single-use plastic shopping bags.
- Minister for Housing and Urban Development Phil Twyford announces that the Housing and Urban Development Authority will have cut-through powers to build quality state and affordable homes and create thriving communities with less impact on the environment.



December 2018

- The Government announces improvements to the New Zealand Emissions Trading Scheme to help New Zealand meet its goals of reducing greenhouse gas emissions and planting 1 billion trees.



April 2019

- New Zealand's first circular economy summit held – Ōhanga āmiomio.
- Release of new National Planning Standards to make resource management plans easier to prepare, use and understand.



May 2019

- New National Planning Standards come into force to improve the consistency of council plans and policy standards.
- Climate Change Response (Zero Carbon) Amendment Bill (Zero Carbon Bill) goes to Parliament.



December 2018 (continued)

- We launch the Waste-free Summer campaign with tips on preventing waste, reusing and recycling.



April 2019 (continued)

- Panel established to create the framework for New Zealand's first national climate change risk assessment.
- Release of *Environment Aotearoa 2019* – an overview of the state of New Zealand's environment under five broad themes, presenting nine priority environmental issues.

May 2019 (continued)

- Guidance for businesses and organisations wanting to track their emissions released.
- New Zealand and around 180 other countries agree to better regulate global trade in plastic waste (the Basel Convention Ban Amendment).





01

About us *Kōrero mō mātou*

*An overview of the
Ministry for the Environment,
Manatū Mō Te Taiao*

Key topics

10 *Te Pūrengi – our leadership team*

12 *Our strategic direction*

14 *Our people*

18 *Our funding*

20 *Getting fit for the future*

Te Pūrengi

Our leadership team



Vicky Robertson
Secretary for the Environment
and Chief Executive

Meet our leadership team

Last year Natasha Lewis, Anne Haira, Sam Buckle, and Melanie Mark-Shadbolt joined our team. It's great to have the benefit of their expertise, gained from working in the public and the private sector, and their strengths in building relationships with different groups.

You can find out more about our leadership team and the teams they lead on our website:

www.mfe.govt.nz/about-us/leadership-team



Natasha Lewis
Deputy Secretary,
Strategy and Stewardship



Anne Haira
Deputy Secretary,
Partnerships and Customers



Claire Richardson
Chief Operating Officer
and Deputy Secretary,
Organisational Performance



Dr Alison Collins
Kaitohutohu Mātanga
Pūtaiao Matua,
Chief Science Advisor



Amanda Moran
Deputy Secretary,
Natural and Built System



Cheryl Barnes
Deputy Secretary,
Water and Climate Change



Sam Buckle
Deputy Secretary,
Resource Efficiency



Melanie Mark-Shadbolt
Kaihautū,
Chief Māori Advisor

Pulling together

Te Pūrengi is our Ministry leadership team, keeping us connected to our purpose and vision, and accountable for our performance.

Te Pūrengi delegates some advisory, oversight, and decision-making roles to two groups: Te Aukaha and Te Mīmiro.

In the metaphor of Manatū Mō Te Taiao as an ocean-going waka, Te Pūrengi is a stay, or rope, connecting the mast and sails – its role is to ensure the canoe does not break or separate. The emphasis is on connecting and integrating.

Te Pūrengi connects our waka by holding us to a unifying purpose: Aotearoa New Zealand is the most liveable place in the world. It provides a vision for the future and a strategy to take us there. It stretches our sight to the horizon.

The Te Aukaha sub-group plays a valuable role in binding together work across the Ministry. It focuses on overall impact, policy strategy, and opportunities to connect different work areas to get better results. In the waka metaphor, aukaha are the lashings of the waka.

The Te Mīmiro sub-group focuses on how Manatū Mō Te Taiao functions and performs as a whole, enabling and connecting and building capability. The word mīmiro refers to waka-making implements used to tighten lashings, ensuring strength and momentum.

The two sub-groups are interdependent. Mīmiro serve no purpose without aukaha. Aukaha are no use at all if not securely fastened.

Together we are Te Whakahiato – those who are bound together.

Our ministers

We work with ministers across two portfolios which are Environment and Climate Change.



Minister for the Environment
Hon David Parker



Minister for Climate Change
Hon James Shaw



Associate Minister for the Environment
Hon Eugenie Sage



Associate Minister for the Environment
Hon Nanaia Mahuta

Our strategic direction

Our purpose

People value the environment for many different reasons, and our purpose acknowledges this: Aotearoa – he whenua mana kura mō te tangata. We want Aotearoa New Zealand to be the most liveable place in the world.

Our work

The choices we make can take a long time, sometimes decades or more, to filter through to the natural environment. For this reason, the goals we focus on as a Ministry are long term. The goals, and what we have done to achieve them in the last year, are outlined in the next section of this report.

On a day-to-day basis, we pursue our purpose by:

- providing evidence-based advice, with a clear point of view, to help governments make policy decisions
- acting as a steward for the environment – considering how the decisions we make today will influence the environment and New Zealanders' quality of life generations from now
- connecting with New Zealanders to make sure our perspective is grounded and relevant
- working with people who give effect to policy decisions to help make sure the underlying intent turns into meaningful action and better results
- partnering with others to tap into momentum for change and supporting the initiative they want to take
- providing data and evidence to help individual New Zealanders make informed decisions, so our environment, economy and people thrive
- providing funding and advice for community projects to improve water quality, reduce waste, and other environmental outcomes
- coordinating responses to environmental emergencies.

Guiding principles

Two key principles underpin everything we do: Policy Plus and Partnering with Purpose.

Policy Plus

We are committed to exploring new methods of analysis and achieving our objectives outside traditional regulatory tools. We call this Policy Plus. It includes:

- actively shaping the agenda – providing information and advice with a strong, clear point of view
- advising with impact – using storytelling, insights from data, real life examples, and the views of end users, including everyday New Zealanders
- focusing on supporting the decisions Ministers need to make – understanding their objectives and what they need to achieve them
- problem solving in many ways: non-regulatory interventions, visual tools and more
- harnessing our diverse perspectives and the skills of our workforce – not boxing ourselves into a fixed way of looking at the world or a limited set of solutions
- seeing the whole system and playing a brokering role – connecting people who are motivated and have complementary goals and skills.

Partnering with purpose

Partnerships are an essential part of our work. The Treaty of Waitangi is the founding document of our country, promising partnership between Māori and the Crown.

We work alongside other agencies, including Te Arawhiti, the new Crown agency dedicated to the Government-Māori relationship, to ensure we are delivering on our Treaty obligations and supporting natural resource redress. These arrangements not only ensure we uphold the promises of the Crown but that we create partnerships that will yield more fruitful opportunities and longer-lasting outcomes for Māori, the Crown, and te taiao (the environment).

In a broader sense, we partner with a range of people and organisations to:

- improve freshwater quality, soil and ecosystems
- move to a resilient and low-emissions economy
- have healthy air and sustainable, liveable cities
- be world leading in our ocean management.

We recognise good partnerships are built on:

- clear objectives that line up with the underlying values and long-term goals of everyone involved
- involving others in our thinking early on, and asking others to bring us into theirs, before ideas and solutions become set
- recognising and respecting the constraints or limits people bring to a partnership – what they can and can't do
- recognition, respect and constructive challenge.

We are continuing to work on our ability to do this well and make it a core part of the way we pursue environmental outcomes.

Our priorities

Different parts of the environment are connected. In the same way, we need to connect workstreams around a range of environmental challenges. To help with this, we base our work around five key priorities we call strategic themes. These big ideas knit together work carried out in different parts of the Ministry. They help us build a coherent 'One Ministry for the Environment' work programme focused on results.

1. **Transition** (new) – leading Aotearoa's transition to a sustainable, low-emissions, circular economy. This theme joins up our work in science and environmental reporting, and work with a cross-cutting or long-term focus, to provide strong strategic direction.
2. **Environmental management system** – bringing a holistic approach to government policies and regulatory frameworks covering where and how we live.
3. **Sustainable land use** – particularly how land use can affect climate and water outcomes.
4. **Partnering and mobilising action** – motivating and inspiring action to positively influence New Zealanders' attitudes and behaviour towards the environment.
5. **A stronger, more integrated ministry** – investing in our people and systems to support future delivery.

Our people

Averages



Age

2018/19

39 years

2017/18

40 years



Length of service

3.5 years

3.7 years

Position numbers



Full-time staff as at 30 June

2018/19

371.6

2017/18

359.7



Unplanned turnover

24.8%

24.3%



Part-time staff

12%

11%

Gender



All staff

2018/19

64.5%*

35.2%*

2017/18

65.1%

34.9%



Management

59.2%

40.8%

60.8%

39.2%

*0.26 per cent of staff identify as 'other'.

In 2018/19, we introduced a transformational way of working we call People to Projects, where people are given the opportunity to express interest in projects happening across the organisation once the business plan is finalised. People to Projects makes better use of our talents, helps people to develop greater depth and breadth in their abilities, and supports retention by giving people additional ‘careers’ at the Ministry.

“For me, People to Projects was a chance to think about what I really want to be doing at work, and what I can be involved with that will serve my future career in the skills and experience I gain.”

Diversity and inclusion

Our new diversity and inclusion strategy was launched in April 2019. It sets out clear goals and timeframes and was developed to ensure our culture is diverse and inclusive. We know that to achieve our goals our workforce needs to reflect, and better connect with, a wide range of New Zealanders.

The strategy's main priorities and actions are:

- maintaining a balanced workforce gender profile and continuing work on closing our gender pay gap by 2022
- increasing our workforce's ethnic diversity, and reviewing and improving recruitment practices to better support this
- increasing the diversity of skills, perspectives and experiences to improve the quality of our advice
- running an initial survey to understand our people's current experiences and perceptions of our diversity and inclusion, to inform future goals and initiatives.

Our four focus areas and key successes are:

Demonstrate inclusive leadership	<ul style="list-style-type: none">• putting diversity and inclusion at the heart of our organisational and workforce strategies• continuing to embed diversity and inclusion at all levels of leadership
Harness diverse thinking	<ul style="list-style-type: none">• developing our Te Ao Māori Strategy to increase capability in mātauranga• increasing the diversity of skills, perspectives and experiences to improve the quality of our advice• developing a youth strategy and focus in 2019• establishing a Māori secretariat
Create an inclusive culture	<ul style="list-style-type: none">• surveying our people to understand their experiences and perceptions of Ministry diversity and inclusion and inform future goals and initiatives• maintaining a balanced workforce gender profile and continuing work to close our gender pay gap by 2022• supporting and empowering our diversity networks (women’s network, rainbow group, faith group, Ngā Manu Taiao waiata group)• increasing the diversity of skills, perspectives and experiences to improve the quality of our advice
Embed organisational practices that make the most of our diverse talents	<ul style="list-style-type: none">• signing the whole-of-government Accessibility Charter• introducing flexible working practices and employment models• introducing talent mapping and a more agile way of working (people-to-projects) so we can better match our people and their skills and capabilities to our work

Focusing on health, safety and wellbeing

Our efforts in health, safety and wellbeing start at the top, and Te Pūrengi (our Executive Leadership Team) maintains close oversight of our health and safety work programme.

We're building a stronger culture where everyone's involved in wellbeing, safety and security, and people understand what's expected of them. The focus is how we keep ourselves and others safe. As a Ministry, we're committed to ensuring our workplaces are safe, secure and fit for purpose, and we have the right processes and systems to operate in a more agile environment.

Better reporting on health and safety, and wellbeing

Staff have always recorded hazards, near misses, incidents and sick leave, but this has been difficult to collate meaningfully. Our new dashboard system more effectively pulls together this information each month, to tell the story about our workforce's health and wellbeing.

Government Health and Safety Lead programme

The Ministry is a member of the Government Health and Safety Lead programme, which has fostered cross-agency connections to develop best practice in health, safety and wellbeing.

Over the summer, we employed a member of this programme to help review our health and safety systems and processes. This initiated an updated work programme focused on employee participation and mental health and wellbeing.

Health and safety representatives

During the past year, we established a group of elected and trained health and safety representatives. These enthusiastic staff members are active in every division as a voice for our people, and are already helping identify areas where we could improve our practices. Our reps also support the existing Health and Safety Committee.

Equal employment opportunities

We provide equal employment opportunities in our procedures for recruitment and selection, career development and progression, training and employment conditions.

Our flexible working policy allows people to balance their commitments inside and outside of work.

Our funding

Vote Environment

The following figure shows 2018/19 expenditure in Vote Environment divided into:

- departmental funding, used for our work programme
- non-departmental funding, administered on behalf of ministers and distributed externally, for instance, for clean-up projects. Non-departmental funding also includes:
 - Environmental Protection Authority funding
 - New Zealand Emissions Trading Scheme funding (covering allocation of emission units to industry to mitigate the scheme's effects on international competitiveness, and to owners of post-1989 forests who choose to enter the scheme to earn units as their forests grow and sequester carbon).

We show these two types of non-departmental funding separately because of their size and significance.

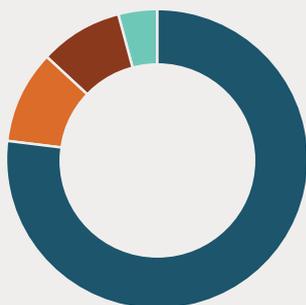
Departmental funding

Our departmental funding was spent during 2018/19.

Other non-departmental funding

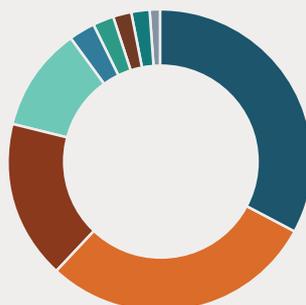
In 2018/19, we administered non-departmental funding in the following categories. This excludes the Environmental Protection Authority and funding for the allocation of units (within the New Zealand Emissions Trading Scheme).

VOTE ENVIRONMENT



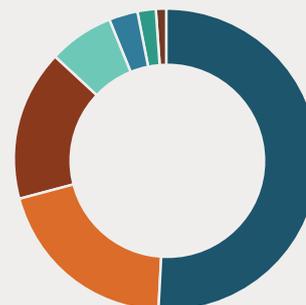
- 77%** Emissions Trading Scheme, \$543,251
- 10%** Departmental, \$72,075
- 9%** Non-departmental, \$66,382
- 4%** Environmental Protection Authority, \$25,517

DEPARTMENTAL FUNDING



- 33%** Climate change policy advice, \$23,878
- 29%** Resource management advice, \$20,737
- 17%** Water policy advice, \$12,080
- 11%** Waste minimisation and environmental hazards advice, \$7,677
- 3%** Treaty policy advice, \$2,127
- 2%** Ministerial servicing, \$1,650
- 2%** Marine policy advice, \$1,425
- 2%** Administering grants, \$1,375
- 1%** International advice, \$878
- 0%** Independent Climate Change Commission set up, \$248

OTHER NON-DEPARTMENTAL FUNDING



- 51%** Waste minimisation, \$34,012
- 20%** Water initiatives, \$13,425
- 16%** Treaty obligations, \$10,336
- 7%** Community funding, \$4,633
- 3%** Contaminated sites, \$1,975
- 2%** Climate change, \$1,362
- 1%** International obligations, \$639

All figures \$000.

Getting fit for the future

In 2016/17, the Ministry went through its regular Performance Improvement Framework (PIF) review. The review endorsed our strategic approach and laid down a challenge. It acknowledged we “can no longer afford to ‘run the same race faster’ (improvement), but need to ‘run a new race’ (transformation)”.

The PIF said we need to go further, faster, to make our strategy a lived reality. In particular, it recommended we shift up a gear in collaborating with others in the natural resources system and with New Zealanders to achieve better environmental, social and economic outcomes.

As well as working more closely with others right now, we are investing in new capabilities and taking further action on diversity and inclusion so we can be the kind of Ministry New Zealand needs us to be in the future. Highlights of 2018/19 include:

- lifting the capability around te ao Māori by establishing a new Chief Māori Advisor position and a Māori Secretariat to support and advise various policy workstreams
- implementing our workforce strategy, the 2018/19 focus being flexible working, better alignment of pay and performance, closing remuneration gaps, and ensuring our remuneration is competitive with comparable organisations
- reviewing our communications and stakeholder engagement function, and developing a new team to

strengthen our relationships and interaction with stakeholders and the public

- reviewing our Organisational Performance division, ensuring corporate services are better integrated and support our new operating model (flexible teams built around time-bound projects and results)
- further embedding our new business-planning process so we can better scope work across the organisation to help us decide where to invest for greatest impact and to identify cost savings.

For 2019/20, we have prioritised three areas we want everyone to focus on, whatever they are working on at the Ministry. The focus areas will amplify the effect of everything we do.

1. **System leadership** is about leading across boundaries – divisional, governmental and people – even when we’re not in charge. It’s how we’ll need to work when addressing complex, challenging problems. It means starting new conversations and putting forward new ideas to influence change.
2. **Te ao Māori** means we work with our Treaty partner to advance Māori priorities for the environment and for environmental success. We will be confident and coordinated in our ongoing engagement with Māori and lead the natural resources system in engaging for success with tangata whenua. We will grow our capability and capacity to accurately reflect Māori views in our work.
3. **Workforce strategy** ensures our people are stronger together because they are better integrated. We care about the workforce that

stays with us. We strive to have the right people with the right capabilities and interests in the right roles. We want our people and their talents to be well aligned with our work programme.

Te Ao Māori Strategy

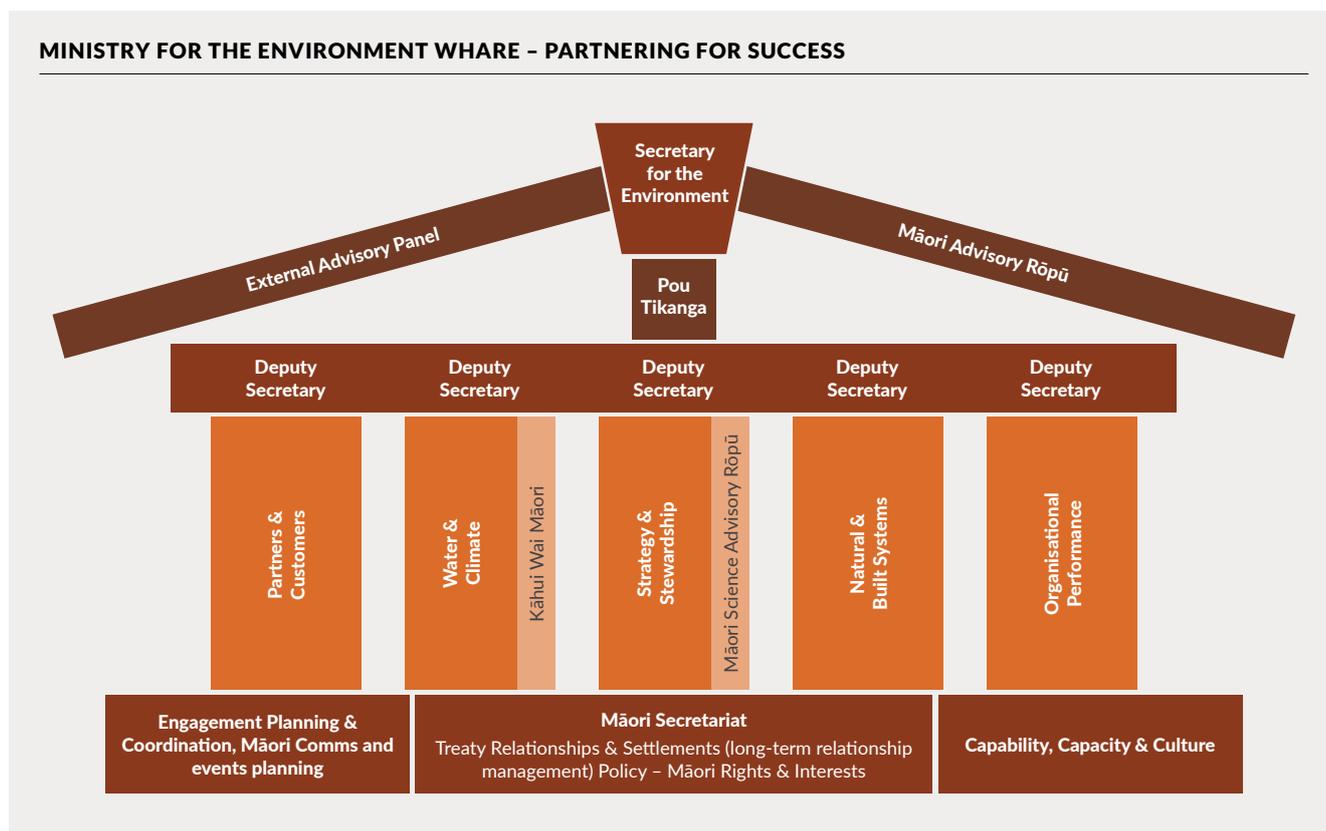
Our Te Ao Māori Strategy is an example of how we’re investing in our ability to put our Policy Plus and Partnering with Purpose principles into action.

Te ao Māori is the ‘Māori world’, and our strategy is that we will partner with Māori for success. We will be confident in our coordinated, long-term engagement with Māori and will incorporate Māori views into our work. We will lead the system in engaging for success with tangata whenua.

Māori have an important role in addressing our many urgent environmental issues not only because they are our Treaty partners but because their very existence as tangata whenua (people of the land) depends upon the protection of the environment.

In recognition of this interdependency between tangata whenua and te taiao (the environment), mātauranga Māori (Māori knowledge) has and is created to ensure people live in harmony with nature.

Our modern way of living and its unsustainable use of nature has upset this balance. We acknowledge the learnings held within mātauranga Māori can help us find the right solutions for Aotearoa New Zealand, and we are committed to ensuring mātauranga Māori informs and guides our work.



Alongside this, we have committed to being a better Treaty partner by ensuring we partner with Māori for environmental success.

Our newly developed Te Ao Māori Strategy will ensure we engage with iwi, hapū and whānau in a way that delivers equity and better outcomes for te taiao.

Important components for successfully delivering this strategy are:

- ensuring we meet our Treaty obligations
- developing enduring, trust-based relationships
- incorporating te ao Māori views into our work
- ensuring our staff understand te ao Māori and how to work with Māori communities.

These components align with Te Arawhiti (the Office for Māori-Crown Relations) guidelines to engage early, be inclusive, and think broadly.

This is Policy Plus in action. Recognising that regulation is not the only way to achieve change, we can inform, learn together, consult, partner and empower, or do something quite different to solve a problem. We need to be open minded, innovative and curious in our approach to problem solving.

In 2018/19 we progressed this by appointing a:

- kaihautū Chief Māori Advisor
- principal analyst in Māori rights and interests
- specialist Māori engagement lead.

These new positions have been created to ensure the Ministry has the internal capability to deliver on the aspirations articulated in the Te Ao Māori Strategy.

Last year was about planning and getting processes in place; the next is about implementation. Over the next 12 months, our newly created kāhui Māori will develop a work programme that ensures we can include the Māori worldview in our work. Our Māori Pūtaiao Rōpū will also ensure this.

We will create further Māori-specific roles, including one dedicated to building the internal capability and capacity of our staff to work with Māori, and another committed to ensuring mātauranga Māori is included in our work programmes.



Chaperones help create a fun environment in which BLAKE Inspire delegates can thrive.

Partnering with purpose – BLAKE Inspire

We partnered with BLAKE (formerly Sir Peter Blake Trust) to deliver this annual programme (formerly called the Youth EnviroLeaders' Forum). It's a week-long adventure for 15–18 year olds passionate about the environment. It gives 56 students an opportunity to better understand environmental matters facing New Zealand, and develop leadership skills for addressing these issues in their schools and communities. It helps grow our next generation of environmental leaders and increases youth awareness and action.

The 2019 event was held in Waikato in the April school holidays. It covered topics including freshwater, agriculture, Māori rights and interests, biodiversity, climate change, and energy.

It received more than 500 applications, with 56 chosen to attend. Afterwards, 94 per cent of delegates strongly agreed the event was a good way to learn about environmental issues. More than 80 per cent said they felt very confident about taking on new environmental initiatives in their school or community. Delegates' knowledge of Ministry roles and responsibilities increased from 16 per cent to 81 per cent.

Attending events like this is also a launching pad for other opportunities. Some delegates were able to talk about climate change with UN Secretary General António Guterres during his visit to New Zealand in May. Occasions like this will empower our rangatahi to take action on contemporary environmental issues.

Sustainability at the Ministry for the Environment

We launched our internal sustainability strategy in 2018, aiming to improve our sustainable business performance. It includes targets to achieve by July 2020.

Sustainability for us as an organisation means operating within our baseline, minimising our environmental footprint, and giving our people what they need to thrive.



UN Secretary General António Guterres, Minister Shaw, Vicky Robertson, BLAKE and Te Ara Whatu delegates meeting in May 2019 to discuss climate change.

Certified Emissions Measurement and Reduction Scheme certification

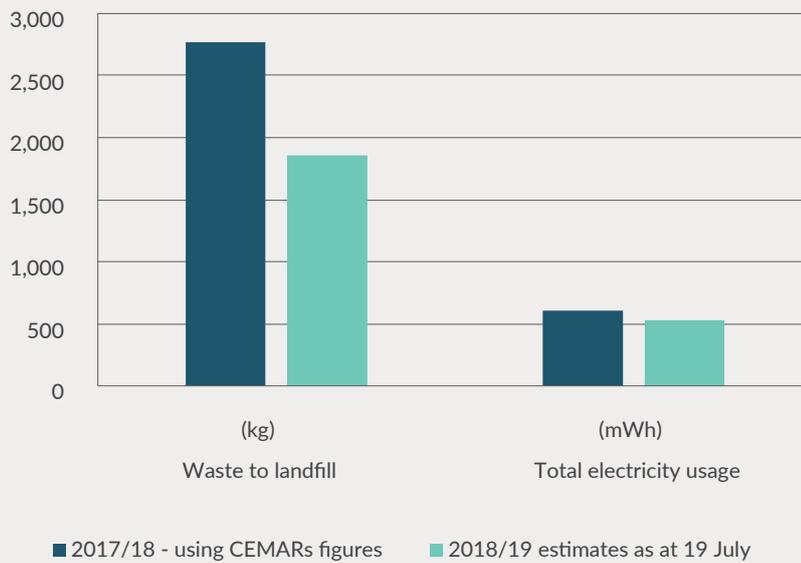
Our sustainability strategy commits us to measuring, reducing and reporting on our emissions profile and having it externally verified. We are also committed to emissions-reduction goals on our travel (20 per cent), head office energy use (10 per cent), and waste to landfill (50 per cent).

In late 2018, we obtained our Certified Emissions Measurement and Reduction Scheme (CEMARS) certificate through Enviro-Mark Solutions' accreditation scheme.



The delegates doing their bit with a food rescue, helping reduce what ends up in landfill.

FIGURE 1: COMPARISON OF MINISTRY FOR THE ENVIRONMENT TOTAL ELECTRICITY AND WASTE CONSUMPTION, 2017/18-2018/19



Note: CEMARs = Certified Emissions Measurement and Reduction Scheme.

Figure 1 shows progress towards our emissions reduction goals.

Our travel

Travel is the largest component of our emissions profile, so we focused on it in the past year. We are committed to reducing the amount we travel and improving how we travel, to reduce our carbon footprint and our costs.

Various initiatives ensure we're reducing our travel and using sustainable options, including:

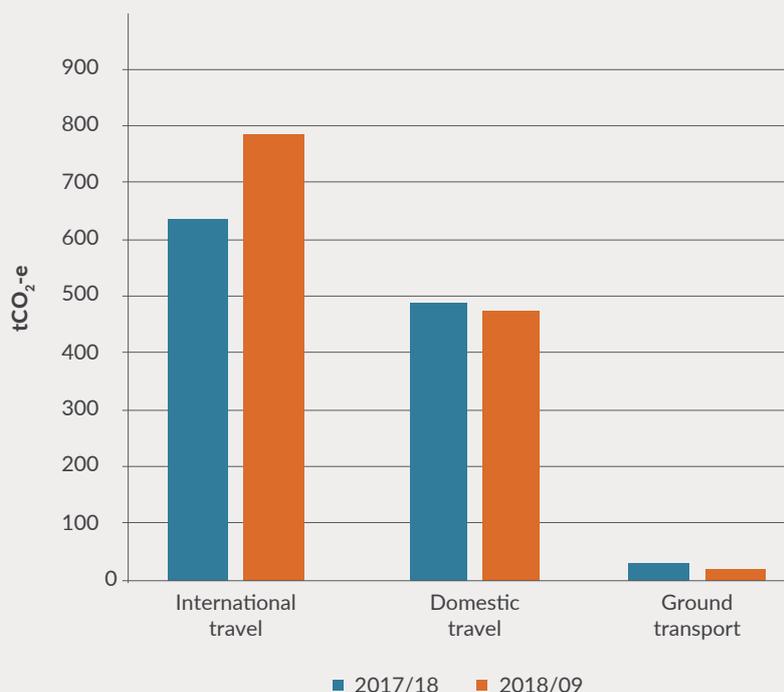
- giving comprehensive guidance on sustainable travel options and behaviours
- providing enough video conferencing and teleconferencing technology to let us attend external meetings remotely
- providing Snapper bus cards and SkyBus tickets for Auckland, and bus timetables.
- providing a small number of staff bikes and scooters for attending local meetings
- launching a staff travel plan to ensure staff make sustainable travel choices to and from our offices.

Improvement initiatives we're pursuing in 2019/20 are:

- reducing our international travel – our greatest source of emissions

For the 2018/19 financial year, our gross emissions were 1330 tonnes of carbon dioxide equivalent (tCO₂-e) – an increase of 6 tonnes on last year (see figure 2). Our staff numbers increased in 2018/19, but tCO₂-e per full-time equivalent (FTE) has decreased from 3.67 to 3.21.

FIGURE 2: TRANSPORT EMISSIONS, TONNES CARBON DIOXIDE EQUIVALENT, 2017/18–2018/19



Note: some emissions factors changed after the 2018/19 reporting period. From 1 Jan 2019, the difference would mean 42.93tCO₂e or 3.23% decrease in the total footprint depicted here. See <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/corrections-to-2019-measuring-emissions-guide-for-organisations.pdf>

Strategies to reduce ground transport usage mean we’ve seen a drop of 40 per cent on last year, with a minor decrease in domestic flights of 2.5 per cent. Our international travel is by far our biggest challenge and has increased by 24 per cent. This represented staff attendance at the United Nations Framework Convention on Climate Change (UNFCCC) and Intergovernmental Panel on Climate Change meetings, and other environmental negotiations and conferences. We’ll look for ways to reverse this trend and continue to drive essential reductions across the rest of the business. We will need to decouple growth in FTEs and work programmes from our emissions, so we are reducing emissions regardless of the size of the organisation or the scale of our work.

Our waste

Reducing our waste to landfill by 50 per cent by July 2020 is a major focus for the Ministry. Three separate waste audits have tracked how our waste reduction and contamination levels (things in the wrong bin) are progressing towards this goal. We conducted these according to best-practice guidelines, and the audits give us better insight into common mistakes.

We’ve run a staff education and behaviour change programme. In parallel, we have introduced reusable items in staff kitchens in an effort to reduce our waste, particularly of single-use items. Staff can take our mugs offsite to cafes to avoid single-use coffee cups.

We have seen significant change in staff understanding of and behaviour related to composting. Our dedicated group of sustainability champions have played an important role in improving action. Many reductions in waste to landfill over the last year have been due to redirecting food waste into compost bins.





02

Our performance

*Ngā mahi
kua mahia*

*How we performed in 2018/19.
The first section shows the
longer-term results we want for
New Zealand. The second section
describes our day-to-day work
programme performance.*

Key topics

28 Our liveability targets

57 Measuring our operating performance

Our liveability targets

To track progress in making New Zealand the most liveable place in the world, we have developed a set of 'headlight' performance measures. These measures are included in our Statement of Intent 2017–2021 and determine where we want to get to by 2030.

The measures are not designed to capture everything we do, but, combined, they allow us to communicate the impact of our work in a tangible and meaningful way. Taken collectively, they are our 'liveability targets'. We report on them here for the second time.

We cannot, in some cases, provide updated data for our measures in this section, so we explain why, and note when and where updated data will be available in the future.

Our liveability targets – progress at a glance

DOMAIN	LONG-TERM GOALS	TARGETS	2018/19 INFORMATION
 <p>Air – Āngi</p>	New Zealand is a world leader in managing risks to human health and the environment resulting from poor air quality.	By 2030: health impacts from human-made sources of air pollution are reduced 35% from 2012 levels.	According to data modelled in 2018, 27 premature adult deaths per 100,000 New Zealanders resulted in the year to 30 June 2016 from exposure to human-made particulate matter PM ₁₀ – 8% fewer than in the year to 30 June 2006.
 <p>Atmosphere and climate – Kōhauhau me āhua o ngā rangi</p>	New Zealand has an innovative and productive economy, with fewer greenhouse gas emissions, and is resilient to the physical and economic impacts of climate change and adverse climatic events.	By 2030: New Zealand's greenhouse gas emissions intensity (per unit of gross domestic product) is half what it was in 1990.	2017 emissions intensity was 43% lower than the 1990 level.
 <p>Urban – Tāone</p>	New Zealand is a leader of environmentally-sustainable cities, leveraging the benefits that cities offer while reducing the costs and impacts they impose.	By 2047: housing supply in all high-growth urban areas keeps pace with demand. Auckland issues at least 400,000 building consents for new dwellings (around 13,500 per year).	In the 12 months to 30 June 2019, Auckland issued consents for 14,032 new dwellings.
 <p>Freshwater – Wai</p>	New Zealand increases the value from, and improves the quality of, our freshwater.	By 2021: no native freshwater fish ¹ decline from 'not threatened' to 'at risk', or from 'at risk' to 'threatened' from the 2013 assessment. By 2030: 80% of our rivers and lakes are swimmable; by 2040: 90% of rivers and lakes are swimmable.	The native freshwater fish target is updated every three years – the next update will be as part of the <i>Freshwater Aotearoa 2020</i> report. We do not have updated results for this target which looks at swimmability in lakes and rivers across the country. We have information on monitored river swimming sites that shows a 10-year progress trend (see the freshwater narrative for more information).
 <p>Land – Whenua</p>	New Zealand improves the quality of our soils and terrestrial ecosystems and increases value from our land-based resources.	By 2030: estimated annual erosion from managed grassland is reduced by 50% (42 million tonnes per year) from the 2012 baseline of 84 million tonnes per year.	Total estimated soil erosion from managed grassland across New Zealand at 2012 was 84 million tonnes per year. The 2019 update of the land cover database will allow updating of this erosion measure.
 <p>Marine – Wai tai</p>	New Zealand is a world leader in the sustainable management of marine ecosystems that support its marine life, society and the economy.	By 2030: the resilience of marine ecosystems is improved because a representative 10% of ecosystems in each biogeographic region of New Zealand's territorial sea are marine protected areas.	No change because policy reform is under consideration by the Government and no new marine protected areas have been established.

1 Fish includes taxonomically indeterminate and determinate taxa.



Air – Āngi

Domain goals: *New Zealand is a world leader in managing risks to human health and the environment resulting from poor air quality.*

TARGET	2017/18 RESULT	2018/19 RESULT
By 2030: health impacts from human-made sources of air pollution are reduced by 35% on 2012 levels.	No modelling in this year because of preparations for <i>Our Air 2018</i> .	<i>Our Air 2018</i> was published on 18 October 2018. According to data modelled in 2018, the year to 30 June 2016 saw 27 premature adult deaths per 100,000 New Zealanders from exposure to PM ₁₀ in New Zealand ² – 8% lower than the year to 30 June 2006.

Looking after our air is crucial to New Zealanders’ wellbeing. The quality of our air results from our cumulative decisions as individuals, neighbourhoods, towns and cities. Much of the pollution we’re exposed to in New Zealand comes out of our chimneys and the exhaust pipes of our vehicles, so our choices are important to the health of those around us. This is especially true for those most at risk from air pollution, such as the very young, the elderly and those with pre-existing diseases, such as asthma.

Our Air 2018, published in October 2018, shows that many New Zealanders are already making decisions that have a positive impact on the quality of the air we breathe, including:

- using high-efficiency heating options, such as heat pumps, pellet burners or wood burners designed to have low emissions
- storing wood under cover and burning only seasoned, dry wood,

using efficient burning techniques recommended for their burners

- **not burning treated timber** and, therefore, avoiding release of toxic substances, such as arsenic
- **avoiding outdoor burning** of rubbish and plant matter and instead using appropriate recycling or rubbish disposal facilities, and composting and mulching where possible
- **reducing transport emissions** by cycling, walking, using public transport or using vehicles with low or no emissions.

for all New Zealanders. From 2016/17 and continuing through 2018/19, we reviewed the standards to ensure they are still fit for purpose.

Associate Minister for the Environment Hon Nanaia Mahuta launched the review on 18 October 2018. It aims to take into account the latest scientific findings on the health impacts of air quality, including exposure to PM_{2.5}³, and to adopt a more integrated approach to managing home-heating emissions nationally and regionally.

Healthy Homes Standards for rental properties

We worked closely with the Housing Policy Branch of the Ministry of Housing and Urban Development (formerly part of the Ministry of Business, Innovation and Employment) to develop standards for rental housing stock under the Healthy Homes Guarantee Act 2017.

Our achievements in air

Reviewing the National Environmental Standards for Air Quality

These regulations, which came into effect in 2004 under the Resource Management Act 1991, set a guaranteed level of health protection

2 Health and Air Pollution in New Zealand (HAPINZ) Exposure Model (Kuschel et al, 2012); Emission Impossible Ltd.

3 PM_{2.5} are particles with a diameter of 2.5 micrometres or less. PM_{2.5} is a component of PM₁₀.

TABLE 1: MODELLED HEALTH EFFECTS FROM EXPOSURE TO HUMAN-GENERATED PM₁₀, 2006 AND 2016

HEALTH EFFECT		NUMBER OF CASES PER 100,000 PEOPLE ⁴	
		2006	2016
Premature mortality (adults aged 30-plus)		29	27
Hospital admissions	Cardiac hospital admissions	6	5
	Respiratory hospital admissions	9	9
	Total hospital admissions	15	14
Restricted activity days		36,300	31,800

Data source: HAPINZ Exposure Model (Kuschel et al, 2012), Emission Impossible Ltd

The Residential Tenancies (Healthy Homes Standards) Regulations 2019 were finalised on 13 May 2019. They will supplement the clean air provisions of the national standards, ensuring rental properties are warm, dry and more energy efficient.

We provide policy oversight on the direction and systems for environmental management. Our responsibilities include:

- the National Environmental Standards for Air Quality under the Resource Management Act, which set minimum requirements for councils to manage air pollution
- the Environmental Reporting Act 2015, which requires regular reports on New Zealand's environment, including the air domain. The Government Statistician and the Secretary for the Environment are jointly responsible for producing and publishing environmental reports independently of the government of the day

- helping councils understand their responsibilities in meeting the national standards.

Air-quality reporting

We worked with Stats NZ to prepare and publish *Our Air 2018*, released on 18 October 2018. It shows the current state of air quality, trends over time, and associated pressures and impacts. It is helping us understand nationwide air quality issues – current and emerging – and informing policy development.

The modelled data in *Our Air 2018* estimates the number of premature adult deaths per 100,000 people from exposure to PM₁₀ (fine, airborne particulate matter) in New Zealand in 2016 was 8 per cent lower than in 2006.

Also, the number of days per 100,000 people when New Zealanders were unable to go about their regular daily activities was 12 per cent lower in 2016. However, these relative improvements seem largely due to

more people living in areas with lower PM₁₀, such as Auckland, rather than a reduction in PM₁₀⁵.

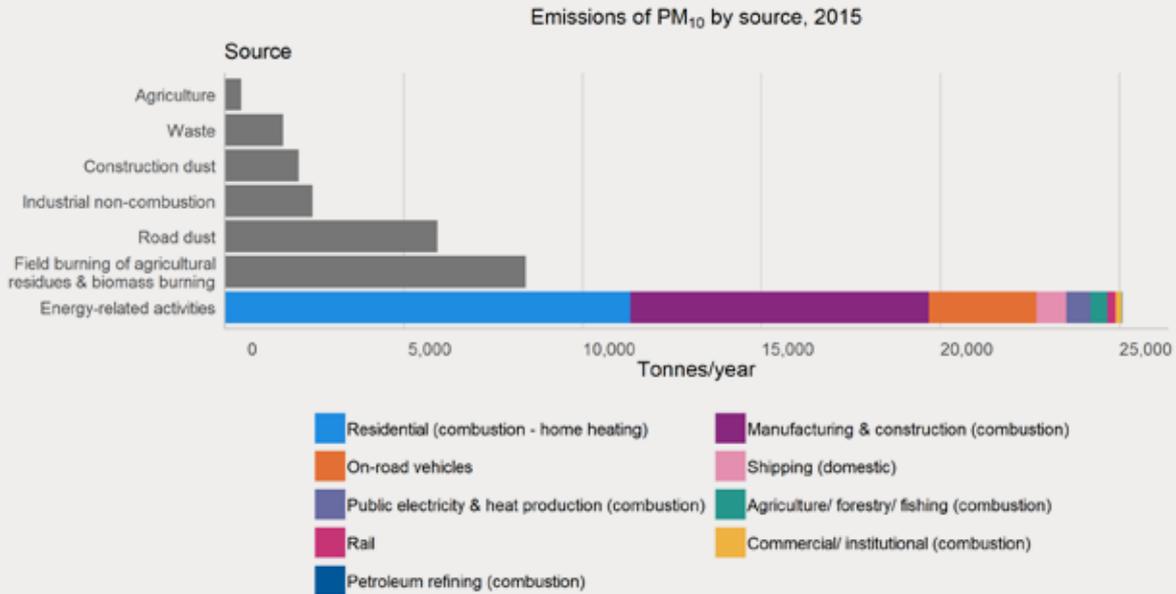
Overall the quality of our air is generally good and has improved overall since the National Environmental Standards for Air Quality were introduced in 2004. However, air pollution remains a problem in parts of the country, especially during winter when wood burners are used for home heating (figure 3). Many councils have made significant improvements to air quality in their regions, under the existing national standards, and we continue to work with councils to build on this progress.

We are also developing proposals to change air quality standards. These changes will take into account recent important scientific findings on the health impacts of fine, airborne particulate matter and better target controllable sources of air pollution.

4 Number of cases per 100,000 people for premature adult mortality and hospital admissions are rounded to the nearest whole number and restricted activity days to the nearest one hundred.

5 Health and Air Pollution in New Zealand (HAPINZ) Exposure Model (Kuschel et al, 2012); Emission Impossible Ltd.

FIGURE 3: SOURCES OF PM₁₀ IN NEW ZEALAND, 2015



Data source: Emissions Impossible

Note: Sources with emissions below 1% are excluded. Home heating emissions are assumed to be the same as the 2013 national emissions inventory.
 PM₁₀ – particulate matter 10 micrometres or less in diameter.

Regional councils and unitary authorities

We help councils understand their responsibilities in meeting the national standards. Councils monitor and manage air quality within their regions as follows:

- regional councils have developed plans for managing activities that discharge contaminants into the air
- territorial authorities observe and enforce the national standards by ensuring urban wood burners comply with design standards.

Other government agencies

Other central government agencies manage various sources of air pollutants in New Zealand.

- The Ministry of Transport is responsible for the government policy on managing air pollution from transport, which includes the Land Transport Rule: Vehicle Exhaust Emissions 2007). The New Zealand Transport Agency implements these policies, plans the state highway system, and undertakes land transport planning.
- The Ministry of Business, Innovation and Employment administers the Building Act 2004 and the Engine Fuel Specifications Regulations 2011 (Fuel Standards).
 - Fuel Standards control the level of contaminants released through combustion by controlling the amount of contaminants found in various types of fuel.
- The Ministry of Housing and Urban Development administers the Healthy Homes Guarantee Act 2017, which aims to make rental homes warmer and drier. It enables the Government to make healthy-homes standards that landlords must comply with, including standards for heating, insulation, ventilation, moisture ingress, draught stopping and drainage.
 - The Building Act works to improve the energy efficiency of dwellings, such as minimum requirements for insulation, which reduces how much heating is needed in the home.



Atmosphere and climate – Kōhauhau me āhua o ngā rangi

Domain goals: New Zealand has an innovative and productive economy, with fewer greenhouse gas emissions, and is resilient to the physical and economic impacts of climate change and adverse climatic events.

TARGET	2017/18 RESULT	2018/19 RESULT ⁶
By 2030: New Zealand's greenhouse gas emissions intensity (per unit of gross domestic product (GDP)) is half what it was in 1990.	Emissions intensity per unit of GDP has decreased 41% since 1990.	New Zealand's 2017 emissions intensity was 43% below 1990 levels.

Climate change is one of the biggest environmental challenges of our time. New Zealand's climate has already warmed by about 1 degree Celsius, and we are seeing changes to our agriculture, native ecosystems, infrastructure and biodiversity. Unmitigated climate change has the potential to cause massive environmental, economic and social impacts. The Government continues

to build policies across all sectors to reduce emissions and enable us to adapt to these inevitable impacts.

Our changing climate will affect our economy, environment and way of life. We are uncertain of the pace and scale of future change, but we do know we must plan for a different climate. New Zealand needs resilient systems that can deal with the scale and pace of change.

Long-term, effective and stable policy solutions supported by society and iwi/hapū are essential for moving to a resilient, low-emissions economy. This year, Cabinet agreed on a framework for the whole of government, and this will drive our climate change policy towards low emissions and climate resilience. To enact it, we need climate change to be seen not only as an environmental issue but as a broader societal one in which

Emissions reductions targets

The Atmosphere and climate section of this report talks about various emissions reductions targets.

2020: In 2013, the Government announced an unconditional target of 5 per cent below 1990 greenhouse gas emissions levels by 2020. This remains our current target because it covers 2013 to 2020.

2030: New Zealand's target under the Paris Agreement is to reduce greenhouse gas emissions by 30 per cent below 2005 levels by 2030. This is equivalent to about 11 per cent below 1990 levels.

The Zero Carbon Bill introduces a proposed target of 10 per cent below 2017 levels for methane from agriculture and waste (biogenic methane).

2050: The current 2050 target is reduction of greenhouse gas emissions to 50 per cent below 1990 levels, as notified in the *New Zealand Gazette* in March 2011.

In May 2019, the Government proposed two new 2050 targets: a net-zero target for all gases other than biogenic methane and a 24–47 per cent reduction on 2017 levels for biogenic methane.

For more information see:

www.mfe.govt.nz/climate-change/what-government-doing/new-zealands-emissions-reduction-targets/about-our-emissions#2020.

⁶ Emissions intensity is now calculated by taking gross greenhouse gas emissions in year i and dividing by GDP in year i+1. This is to reflect the fact that GDP in year i is measured from April 1 of year i-1 to March 31 of year i, while the Greenhouse Gas Inventory reports emissions by calendar year. Therefore, in the updated calculations (emissions_i/GDP_{i+1}), there is a 9 month overlap, whereas there was only a 3 month overlap using the method from previous annual reports (emissions_i/GDP_i). The effect of this change in method is to increase the result by 2 per cent since the previous annual report, which reported 41 per cent. (Note that there is also about a 16 month lag between emissions and time of inventory publication.)

New Zealand's economic and socio-cultural foundations are reshaped for the future.

Our role

Climate change is a global issue. International commitments made by New Zealand flow through to policy responses and action at home. The Ministry is the lead agency on domestic climate change policy, working closely with other government agencies and key stakeholders, such as local government, to ensure our approach is well-coordinated and effective.

We will need to meet our international target through a combination of domestic emissions reductions, removal of carbon dioxide by forests, and purchasing international emissions reductions with high environmental integrity. There are three main parts to the policy response to reduce emissions:

1. **Durable institutional arrangements** to set a long-term direction and keep us on track towards targets, including support for innovation and investment
2. **Effective emissions pricing**
3. **Policies and regulations** to support emissions reductions in specific sectors, and ensure the transition is just and inclusive.

Meeting our targets requires innovation, particularly to reduce the big proportion of biogenic methane emissions. The urban challenge is also significant. The ability of towns and cities to grow and adapt to a lower-emissions economy will be critical to New Zealand's overall performance in meeting its targets.

We are working to ensure the low-emissions transition pathway is integrated into the Government's

overarching economic strategy. An effective response to climate change must be consistent with other strategic work programmes, such as industry policy, science and innovation. Overall, this work aims to support a more productive, sustainable and inclusive economy.

Our impact measure – the gross emissions intensity of our economy per unit of gross domestic product (GDP) – captures progress on work to decouple emissions from economic growth. We want New Zealand's economy to produce fewer emissions for each unit of GDP produced. Our 2030 goal is for emissions intensity to be half what it was in 1990.

In 2017, the economy's emissions intensity was 43 per cent below that of 1990. But, although this is an improvement, gross emissions have increased by nearly a quarter since 1990, a trend we need to reverse to meet our commitments under the Paris Agreement.

New Zealand's gross emissions have been stable for more than 10 years and GDP has continued to grow (see figure 4). But we want gross emissions to decrease and our economy to keep growing – in other words, emissions to further decouple from economic growth.

Our climate achievements

Climate Change Response (Zero Carbon) Amendment Bill

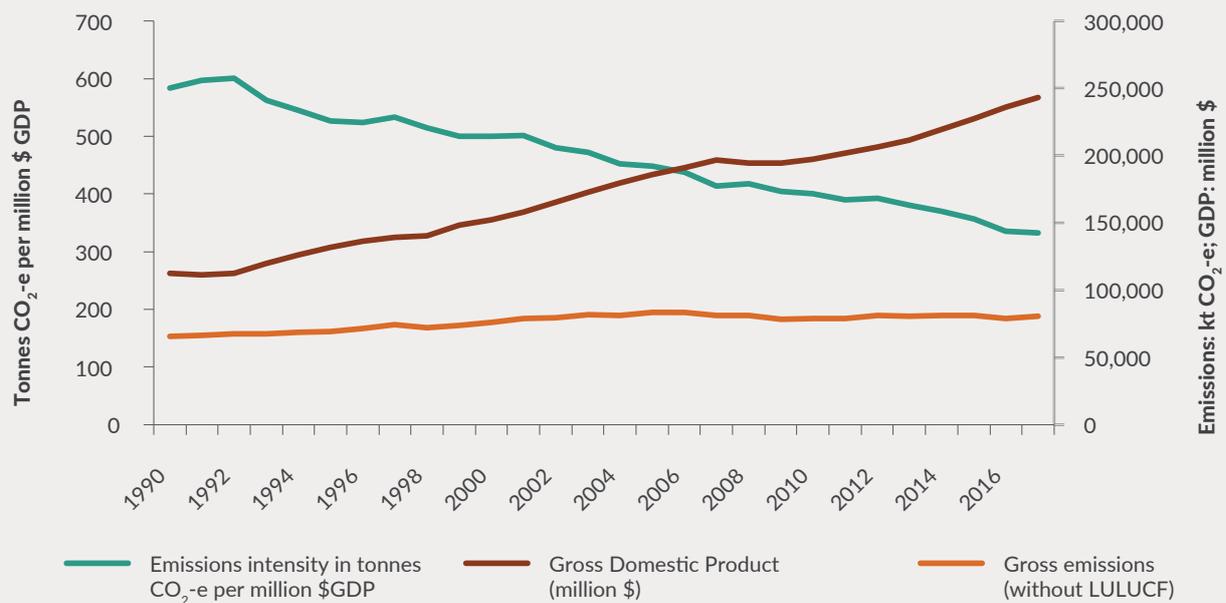
The Bill was introduced to Parliament in May. It establishes a framework for moving to a low-emissions and climate-resilient future, through four main functions:

1. establishing an independent Climate Change Commission to give the Government expert advice and monitor progress towards its mitigation and adaptation goals
2. setting a legislative emissions-reduction target, requiring:
 - net emissions of all greenhouse gases, except biogenic methane, to reach zero by 2050
 - gross emissions of biogenic methane to reduce to 10 per cent below 2017 levels by 2030
 - gross emissions of biogenic methane to at least 24–47 per cent below 2017 levels by 2050
3. setting up a system of emissions budgets that step progressively towards the 2050 target and that are supported by policies and strategies to achieve it
4. establishing a range of adaptation measures, including regular national climate change risk assessments and national adaptation plans.

The Bill reflects New Zealand's international obligation to tackle climate change, and the country's commitment to upholding its Paris Agreement commitments. Work on policies and programmes to drive real emissions reductions and increase our ability to adapt to climate change is ongoing.

Building the evidence base for a new 2050 target

In preparing the Zero Carbon Bill, we developed a robust scientific and economic evidence base to ensure targets are consistent with New Zealand's international climate change obligations. The evidence base draws together work from several important areas, as outlined below.

FIGURE 4: GROSS DOMESTIC PRODUCT, GROSS EMISSIONS AND EMISSIONS INTENSITY SINCE 1990

Note: CO₂ = carbon dioxide; GDP = gross domestic product; kt = kilotonnes; LULUCF = land use, land-use change and forestry.

- Accurate and transparent greenhouse gas emissions reporting** is a cornerstone of the Ministry's contribution. Publishing *New Zealand's Greenhouse Gas Inventory* in April, and the in-country review of the *Third Biennial Report* and *Seventh National Communication*, fulfils our reporting and transparency obligations under the United Nations Framework Convention on Climate Change. Accurate, economy-wide emissions reporting also ensures we have robust baselines that can be used to set targets. This work includes ongoing updates to our land use and forestry systems, ensuring changes in greenhouse gas emissions in these sectors are accurately accounted for.
- Continuing to build the science capability** of the Climate team will ensure the most up-to-date international research informs our long-term emissions-reduction targets. This is particularly important in light of New Zealand's unique emissions profile.
- Economic modelling** will ensure long-term targets are conducive to a just transition for all New Zealanders and inform policy pathways for achieving our climate goals. A report, jointly commissioned by the Ministry and the Productivity Commission, was compiled by a group of organisations comprising Concept Consulting Group, Motu Economic and Public Policy Research, and Vivid Economics. They were tasked with analysing a range of sector- and technology-specific transition pathways, and to model how economic activity and greenhouse gas emissions might change in an uncertain future. We also commissioned research from the New Zealand Institute of Economic Research into the economy-wide impacts of meeting various 2050 targets.

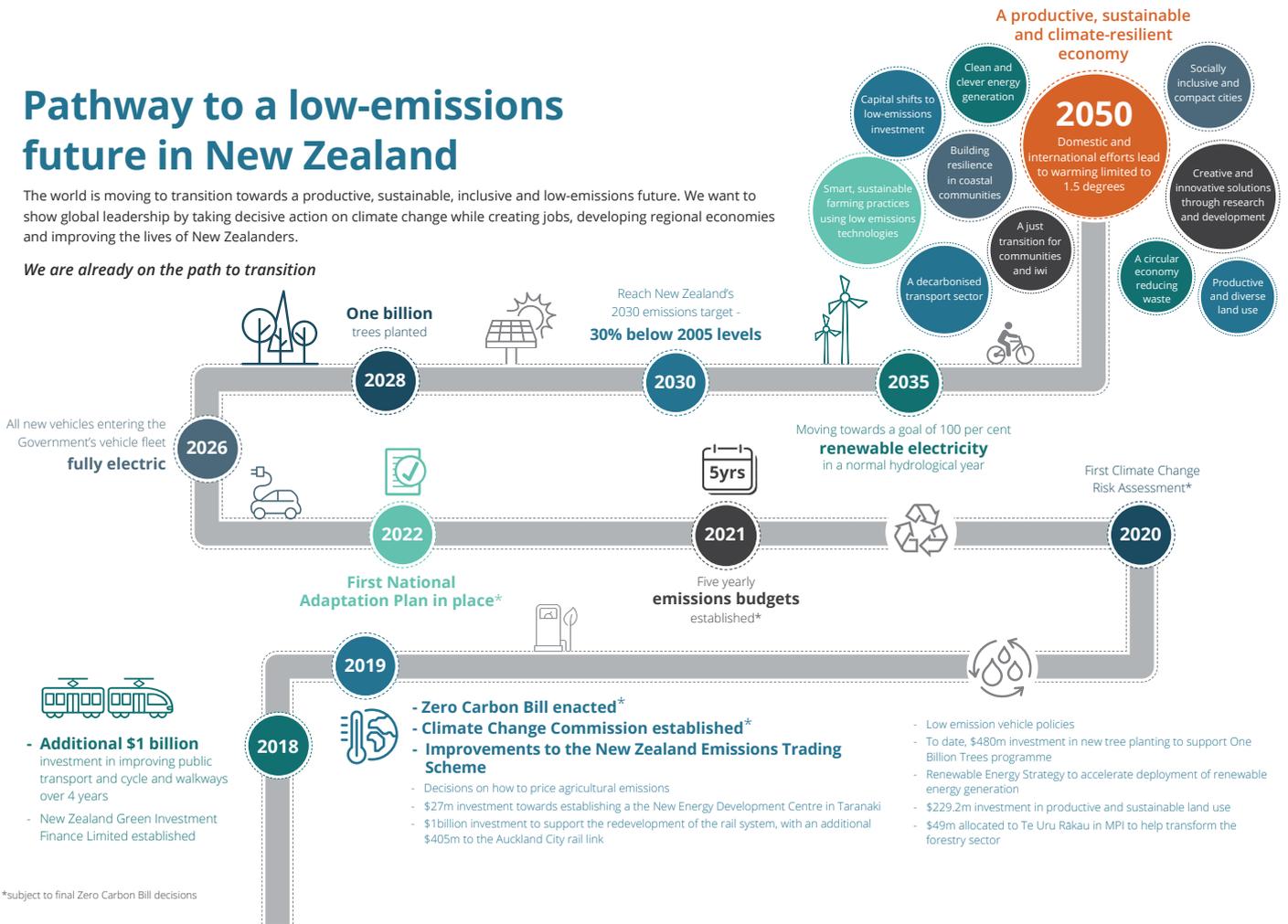
Establishing an independent Climate Change Commission

The Climate Change Commission will be established when the Zero Carbon Bill is enacted and operational soon after. Its first task in 2021 will be recommending emissions budgets and beginning its monitoring and reporting functions.

Pathway to a low-emissions future in New Zealand

The world is moving to transition towards a productive, sustainable, inclusive and low-emissions future. We want to show global leadership by taking decisive action on climate change while creating jobs, developing regional economies and improving the lives of New Zealanders.

We are already on the path to transition



*subject to final Zero Carbon Bill decisions

The Interim Climate Change Committee delivered reports on agriculture in the New Zealand Emissions Trading Scheme and how to transition to 100 per cent renewable electricity, but it has had its role extended to work on pathways for the Bill's targets. This work will be handed over to the Commission so it can draw up the first emissions budgets.

Work is under way pre-enactment of the Zero Carbon Bill to select the Commission candidates.

Managing the transition

The Ministry provides the strategic overview for government plans to manage the transition. We continue to build an evidence base and develop and coordinate advice on policy options to drive the transition to a low-emissions economy. A major part of the work programme this year was coordinating and driving the Government's response to the Productivity Commission's *Low Emissions Economy* report.

Empowering New Zealanders to play a part in the transition

Publishing the *Measuring Emissions Guide* in May 2019 was a milestone, giving individuals and businesses the information they need to accurately measure their greenhouse gas emissions. We also updated our website and used social media to further inform members of the public on the science of climate change and how they can play their part in reducing emissions.

Putting an effective price on emissions

Cabinet has approved amendments to the Climate Change Response Act 2002 that will improve the New Zealand Emissions Trading Scheme. The improved scheme will set an overall limit ('cap') on the emissions it covers, allowing New Zealand to meet its emissions reduction targets. Public feedback from consultation with businesses, individuals and Māori leaders in August and September 2018 informed these decisions.

Work is now under way to give effect to the improvements the Government has decided to make to the scheme, including developing an auctioning function to sell units. We are preparing for public consultation in late 2019. The consultation will cover topics fundamental to the mechanics of the scheme, including setting the overall 'cap' and the levels of price controls. It will also cover operational detail on auctioning.

Adapting to climate change

A panel of risk assessment experts has delivered a draft framework for the first National Climate Change Risk Assessment. The assessment will provide a national overview of climate change hazards and threats that will affect New Zealand. We'll be working with local government, iwi and the private sector to deliver this framework in the 2019/20 financial year.

The assessment will inform a national adaptation plan. Central and local government have agreed to work together to prepare New Zealand to adapt to the impacts of climate change. We are currently scoping a joint central and local government community-resilience work programme.

We also ran a successful roadshow to support councils to use the updated *Coastal hazards and climate change guidance for local government*. Our guidance won the annual Terry Healy Award at the New Zealand Coastal Society Conference.

Agriculture and climate change

This year we led work with the Ministry for Primary Industries to respond to the Interim Climate Change Committee's report on addressing agricultural emissions. This work is well advanced, and we are expecting it to deliver significant policy outcomes that will ensure New Zealand's agriculture sector remains productive and profitable throughout the transition.

Completion and publication of the Biological Emissions Reference Group's work on agricultural emissions in late 2018 was a significant achievement. The group drew together industry and government to develop evidence to inform Zero Carbon Bill targets and the Interim Climate Change Committee's analysis, and to give the agriculture sector the knowledge to manage the transition.

Supporting the international process

We contributed to finalising the Paris Agreement Rulebook, which culminated in decisions taken at the 2018 United Nations Climate Change Conference in Katowice, Poland in December 2018.

The parties to the Paris Agreement succeeded in agreeing transparency (reporting and review) guidelines that for the most part have common provisions for all parties.

Reporting under the Paris Agreement will begin in 2024 for all parties. New Zealand's objective of having a robust enough transparency system that does not place undue burdens on parties or the secretariat has been achieved.

The Ministry has a particular interest in these issues as we are responsible for New Zealand's international climate change reporting. The transparency framework enables parties to the Paris Agreement to hold each other to account for the commitments made in their nationally determined contributions, which sit outside of the formal Agreement.

Building environmental integrity in international carbon markets

We participated in the United Nations Framework Convention on Climate Change negotiations and continue to contribute to ensure international carbon markets that develop under the Paris Agreement are transparent, rules based, and have environmental integrity.

We are engaged in international initiatives to advance the development of markets with environmental integrity, for example:

- delivering standards and guidelines for environmental integrity under the New Zealand-led Ministerial Declaration on Carbon Markets
- working with others to build the architecture of sound regional and global carbon markets through the Asia Pacific Carbon Markets Roundtable.

We have also been exploring high integrity supply options for New Zealand to use if it chooses to supplement domestic actions with international reductions in the future.



Urban – Tāone

Domain goals: New Zealand is a leader of environmentally-sustainable cities, leveraging the benefits cities offer while reducing the costs and impacts they impose.

TARGETS	2017/18 RESULTS	2018/19 RESULTS
<p>By 2047: housing supply in all high-growth urban areas keeps pace with demand.</p> <p>Auckland issues building consents for at least 400,000 new dwellings (approximately 13,500 per year).</p>	<p>Auckland issued 12,369 consents for new dwellings in the year to 30 June 2018.</p>	<p>Auckland issued 14,032 consents for new dwellings in the year to 30 June 2019.</p>

Most New Zealanders live in urban areas, so the success of our cities greatly affects New Zealand’s overall economic, social, cultural and environmental performance. Well-functioning cities benefit New Zealanders by maximising opportunities for social and economic interactions, supporting a more diverse and productive economy, and contributing to wellbeing and higher living standards for all.

Our cities are facing significant challenges, including rising land prices, declining housing affordability, increasing homelessness, traffic congestion, lack of transport choice, flattening productivity, and the need to respond to natural hazards and climate change. We must address these challenges to secure long-term urban liveability, resilience and sustainability. Fortunately, the changing nature of our cities affords us many opportunities to improve the quality of our built and natural environment. By recognising and leveraging these opportunities, and working with stakeholders, we can improve how our cities perform.

Our cities need to give people housing choices and let them live affordably. Cities need to be designed so people can move easily between where they live, work and play, and support social, economic, cultural and environmental wellbeing. To achieve this, our urban markets need to perform better by changing how they respond to growth. We need to ensure cities make room for growth, that growth pays for itself, and that transport investment drives more efficient and liveable urban forms.

Improving the liveability, performance and productivity of cities and towns will help ensure New Zealand has a resilient society and economy, capable of responding to changing social and economic conditions, and to the physical and economic impacts of climate change and adverse climatic events.

Our role

We provide policy oversight of urban planning and environmental management, using a system-wide perspective that aims to create sustainable, liveable cities. This includes changing to system-level settings to improve housing and urban development outcomes. Our role includes:

- jointly leading, along with the Ministry of Housing and Urban Development, the Urban Growth Agenda, to improve housing affordability and develop high-quality, thriving and resilient communities
- looking – as one aspect of the agenda – at how planning rules, methods and practices enable or restrict quality intensification, and developing a framework for spatial planning that will increase development opportunities and support quality built environments
- developing the new National Policy Statement on Urban Development (NPS-UD) and continuing to

support councils to implement the National Policy Statement on Urban Development Capacity

- contributing to the development of Kāinga Ora – Homes and Communities monitoring, evaluating and reporting on planning outcomes in national urban areas
- supporting local authorities to achieve better urban planning outcomes and providing guidance to, and working with, stakeholders to build capability and facilitate knowledge sharing to achieve national direction
- working with other agencies in the Auckland Policy Office to support achievement of government objectives in our biggest city
- releasing the first set of National Planning Standards on 5 April 2019 to get more consistency in plan- and policy-statement structure, format and content so they are easier to prepare, understand, compare and comply with.

The urban domain takes a systems approach to issues and opportunities, but the outcomes in other domains also apply to urban areas. Urban residents should be able to enjoy clean waterways and a protected marine environment, breathe fresh air, and contribute to climate change goals. Various interventions across these domains also contribute to liveable, sustainable cities.

Our urban achievements

Supporting councils to plan for growth

National Policy Statement on Urban Development

We are working with the Ministry of Housing and Urban Development to develop a National Policy Statement on Urban Development (NPS-UD) that will replace and build on the National Policy Statement on Urban Development Capacity. It will give clear direction and guidance on enabling urban growth. It will also deliver a quality urban environment now and in the future. It will encourage responsive planning that enables flexible growth and delivers quality urban environments, while continuing to ensure cities provide enough development capacity. Public consultation on the NPS-UD is due to occur in August and September 2019.

National Policy Statement on Urban Development Capacity

This important tool, which came into force in 2016, ensures housing supply keeps pace with demand. It requires councils to ensure the market can provide enough housing and business space. In 2019/18, together with the Ministry of Housing and Urban Development, we focused on supporting medium-growth councils to complete and evaluate their first housing and business development capacity assessments. We have also been helping high-growth councils prepare development strategies, and we expect all these to be completed in 2019.

The development strategies are the next milestones in implementing the national policy statement, which will be incorporated into and replaced by the NPS-UD once gazetted.

Using our planning expertise to establish Kāinga Ora – Homes and Communities

We have supported the Ministry of Housing and Urban Development in developing legislation to establish Kāinga Ora – Homes and Communities. It will have enabling development powers to deliver nationally or locally significant urban development projects that provide quality housing and infrastructure. This will contribute to both our key targets: ensuring housing supply keeps pace with demand, and delivering liveable urban environments.

The Ministry has jointly led all resource management and planning aspects of the Bill, as well as any other interactions with the Resource Management Act. A Bill to establish Kāinga Ora was introduced on 29 May 2019 and is expected to pass in October 2019. A second Bill, setting out the process through which Kāinga Ora will deliver development projects, will be introduced in the coming months.

Changing system settings to improve housing affordability and support communities

With other government agencies (including the Ministry of Housing and Urban Development, the Department of Internal Affairs, The Treasury and the Ministry of Transport), we have progressed the Urban Growth Agenda, which focuses on the underlying urban development system to enable delivery of housing and urban development projects. Five interconnected workstreams are under way to achieve the Agenda, as part of an ambitious, integrated, cross-government approach to tackling the housing crisis.

The programme will deliver on the main targets for ensuring housing supply keeps pace with demand, and delivering liveable urban cities. We co-lead the Agenda’s urban-planning pillar with the Ministry of Housing and Urban Development, and also the Agenda’s legislative reform (long-term) pillar. Decisions will be staged throughout 2019, with housing and urban development ministers signalling the following priorities:

- removing constraints on intensification and improving urban planning to yield housing variety and choice
- developing integrated spatial plans by building stronger partnerships with local government
- exploring use of new tools and mechanisms for infrastructure funding and financing.

Supporting Auckland’s development

We continued throughout the year to advise on the *Auckland Unitary Plan* progress, contribute to developing the housing and urban growth joint programme between the Government and Auckland Council, and provide input into Auckland planning issues as they arose.

National Planning Standards

Plans will be easier to prepare, use and understand under the Resource Management Act with the National Planning Standards released by the Minister for the Environment on

5 April 2019. The 17 standards address the structure, form, definitions and electronic accessibility of Local Government Act 2002 plans and policy statements. Standards and supporting material can be found alongside guidance material on our website at www.mfe.govt.nz/national-planning-standards/first-set.

The planning standards have been introduced because plans and policy statements prepared under the Resource Management Act have been inconsistent with each other, slow and costly to prepare and compare, and hard to understand and comply with. This is because councils have tended to develop them independently of each other and any standard structure and format.

The purpose of the new standards is to improve consistency in plan and policy statement structure, format and content. The standards are intended to let councils focus time and resources on content that matters to their communities rather than on what has no substantive outcomes on the ground (such as plan format).

The standards do not determine local policy matters or the substantive content of plans, which remain the responsibility of councils and communities. They standardise the basic elements of plans, such as the names of many chapters, where they sit within the document, and how provisions are numbered.

The standards will address some of the undue complexity of Local Government Act plans. They will also help move planning documents to electronic interactive plans to make them more user-friendly for the public and resource management practitioners.



Environment Minister Hon David Parker presenting the new National Planning Standards in April.

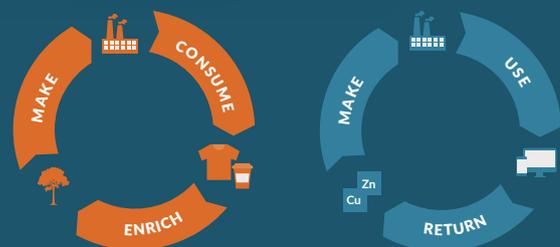
Linear economy



Technical & biological materials mixed up

Energy from finite sources

Circular economy



Biological materials

Technical materials

Energy from renewable sources

Timeframes for implementing the national standards vary for councils, planning documents and standards. Currently, we are focusing on giving one-on-one support to councils drafting plans and undertaking full reviews right now. We have also been visiting councils (and some universities) around the country to give presentations about the standards and answer questions on implementing them.

Transition to a resource-efficient circular economy

The long-term goal of our resource efficiency and circular economy transition programme is to move Aotearoa New Zealand to a low-emissions, circular economy. It involves moving away from the current 'take, make and dispose' economy to one in which natural and human-made materials are reused and recycled indefinitely. This approach benefits the environment by reducing waste and pollution, and the economy by more efficient use of valuable and finite resources.

The need for a circular economy was brought home in 2018/19 by international pressure on the resource-recovery sector. China's ban on imports of many types of waste caused a major global disruption to the market for recyclables and was followed by other countries strengthening their own regulations on importing waste. In June 2019, parties to the Basel Convention agreed to regulate trans-boundary movements of problematic plastic waste. As a result, the Ministry has tightened its focus on resource-efficiency policy, while continuing to administer the Waste Minimisation Fund that supports community-based initiatives.

Progress on selected 2018/19 projects follows.

Circular economy opportunities report for Aotearoa New Zealand – A sectoral and regional analysis

This report was commissioned in late May 2019 and follows similar analyses in Europe and Asia. It will examine current barriers to, impacts on and opportunities for moving to a circular economy. Its findings will inform potential next steps towards a circular economy roadmap, including identifying the main sectors for development and future investment.

Investment strategy

In 2018, we started work on the circular economy transition. We introduced investment signals for the May round of the Waste Minimisation Fund, including:

- moving towards a circular economy in New Zealand
- encouraging product stewardship
- building a more resilient resource-recovery sector
- developing a sustainable plastics lifestyle.

We will work with partners to develop a comprehensive, whole-of-government and industry-backed, long-term investment strategy and circular economy roadmap to minimise waste and increase resource recovery. This may also inform an updated approach to the existing New Zealand Waste Strategy.

We will invest additional levy funds in projects and initiatives to build onshore resource-recovery infrastructure. This will increase economic activity and regional job creation, along with viable alternatives for businesses and households to divert waste and reduce the impact of the increased levy.

Ōhanga Āmiomio: Ellen MacArthur Foundation Pacific Summit, April 2019

The Ministry co-hosted the first circular economy Pacific summit as part of developing a circular economy roadmap. Held at Te Puia, in Rotorua, it attracted more than 200 participants, including a range of private sector, Māori and Pacific businesses, non-governmental organisations, and government stakeholders. The summit was supported by the Nature Conservancy alongside key contributors, including Te Arawa iwi and Rotorua Lakes Council.

Summit themes were mātauranga, materials and manifestos, with a focus on ocean plastics and their effects in the Pacific. The essence of the circular economy discussions was understanding the interconnectedness of everything from the perspective of Māori and Pasifika peoples and that of the wider Pacific region, and building cycles of continual regeneration.

National resource-recovery project

The National Resource Recovery Taskforce was established after the enforcement of China's National Sword policy (February 2018). We commissioned two reports – a situational analysis and a response options report – both of which are available on our website. The options report helped define the path forward and, on 10 June 2019, the Associate Minister for the Environment Hon Eugenie Sage announced the Government's initial plan to recharge recycling.

The initial 3-year plan includes:

- a resource-recovery sector infrastructure and gap analysis
- a review of domestic kerbside and commercial collections to identify opportunities for improvements and standardisation of services
- feasibility studies for onshore plastics and fibre (paper and cardboard) processing
- examining product stewardship and other regulatory options for single-use packaging
- running a national education campaign to reduce contamination
- developing model contracts for the sector
- developing a sustainable procurement plan.

Implementation will continue to involve taskforce stakeholders, and the next meetings will be held in the first quarter of 2019/20.

Reducing plastic waste

We have an ongoing focus on minimising harm from plastic waste because it is so widespread and durable. Regulations under the Waste Minimisation Act 2008 prohibiting single-use plastic shopping bags were drawn up in December 2018 and came into effect on 1 July 2019. To help the public and retailers to adapt, we accompanied the ban with a public social media campaign and implementation guidance for businesses.

In 2018, Aotearoa New Zealand signed up to the Ellen MacArthur Foundation and the United Nations Environment Programme's New Plastics Economy Global Commitment. Future work will be with stakeholders to identify actions needed to achieve this commitment. Other projects, including the national resource-recovery project, will also address it.

Expanding the waste disposal levy

A higher waste disposal levy with wider scope will provide a stronger incentive to minimise waste and encourage resource recovery as an alternative to landfill. It will also help fund waste minimisation measures in line with our investment strategy. It may be possible to invest additional levy funds in projects and initiatives to build onshore resource-recovery infrastructure.

Throughout 2018/19, we carried out work to inform government policy in this area. This included working with a stakeholder reference group on technical landfill classifications – to help define and understand the various waste types and disposal facilities in Aotearoa New Zealand – and initiating a cost-benefit analysis to understand the economic impacts of options for applying differentially rated levies to landfills.

The next step is public consultation on proposals to expand the levy and improve our waste data. This is expected later in 2019.

Regulated product stewardship schemes

In 2018/19, we began looking into options for regulated product stewardship schemes. Product stewardship is an option under the Waste Minimisation Act for managing classes of products whose disposal can cause environmental harm. Schemes can shift the costs of minimising harm away from the wider community and environment to product designers, producers and users. Regulated schemes are common overseas, but so far product stewardship has been voluntary in New Zealand.

The first formal step toward regulating product stewardship schemes is a ministerial declaration of the Waste Minimisation Act's priority products. We expect public consultation on these schemes in 2019.

Compliance, monitoring and enforcement

The Compliance, Monitoring and Enforcement team is responsible for a compliance-assurance programme that monitors disposal facilities, territorial authorities, and the levy collector, to ensure they are fulfilling their obligations under the Waste Management Act and associated regulations. This includes:

- collecting the waste disposal levy from disposal facility operators
- distributing levy money to territorial authorities for waste minimisation initiatives

- monitoring whether territorial authorities are spending levy money to promote and achieve waste minimisation in accordance with their waste management and minimisation plans
- monitoring whether territorial authorities have adopted or reviewed their plans.

Future unit activities may include a quality assurance programme for a compliance, monitoring and enforcement framework for the Waste Management Act, consistent with the Ministry's compliance strategy. This would promote a transition to a 'system steward' role where we are outcome-focused and partner with frontline agencies to achieve shared objectives.

Waste Minimisation Fund

Since its 2010 initiation, the fund has held annual contestable funding rounds in May every year. Its purpose is funding projects that promote or achieve waste minimisation. The waste disposal levy funds the costs of these projects.

A circular economy-focused round was held in May 2018. Associate Minister for the Environment Eugenie Sage later approved 49 projects for funding, totalling \$16.3 million. This was the most projects initiated from a single funding round since the fund was established in 2010, and most of these projects have now begun.



Freshwater – Wai

Domain goals: New Zealand improves the value from, and quality of, our freshwater.

TARGETS	2016/17 BASELINES	2017/18 RESULTS	2018/19 RESULTS
<p>By 2030: 80% of our rivers and lakes⁷ are swimmable⁸.</p> <p>By 2040: 90% of rivers and lakes are swimmable.</p>	<p>71% of New Zealand's lakes and rivers are currently swimmable.</p>	<p>We expect to see improvements over the 2016/17 baseline but, with councils yet to report their final targets, it is too early to say what the improvement will be.</p>	<p>We do not have updated results for this target that looks at swimmability of lakes and rivers across the country. We have information on monitored river swimming sites, which shows a 10-year progress trend (see below for more information).</p>
<p>By 2021: No native freshwater fish decline from 'not threatened' to 'at risk', or from 'at risk' to 'threatened' from the 2013 assessment.</p>	<p>In 2014, 57 native fish species were assessed. 21 species were 'threatened' and 19 were 'at risk'.</p>	<p>In 2017, 57 native fish species were assessed. 22 species were 'threatened' and 17 were 'at risk'.</p>	<p>We do not have updated results for this target, which is updated every three years. We will be reporting on this as part of the <i>Our freshwater 2020</i> report.</p>

Freshwater is a precious resource of great significance for New Zealand:

- access to safe drinking water is a basic need
- our lakes and rivers are favourite recreational places
- the life-supporting capacity of water is critical to the habitat of indigenous freshwater species
- water underpins our agricultural and electricity sectors and is crucial for tourism.

Freshwater is a Māori taonga. Iwi and hapū have strong connections with local lakes and rivers, reflected in their whakapapa and history, and the Treaty of Waitangi recognises this relationship. Healthy freshwater provides mahinga kai (customary food and resource gathering).

The way we live and make a living is seriously affecting our environment, including our precious water resources, as highlighted in the recent report *Environment Aotearoa 2019*.

The report identifies nine priority issues – those that matter most to the current state of the environment. Four identify the following pressure we're putting on rivers, lakes, wetlands, estuaries and groundwater:

- changes to land vegetation are degrading soil and water
- waterways in farming areas are polluted
- urban environments are polluted
- taking water changes flows, which affects freshwater ecosystems.

7 These targets are included in the National Policy Statement for Freshwater Management. They apply to large rivers and lakes that are of sufficient size/depth to be feasible for recreation. This is defined as: rivers that are fourth order or above using the methods outlined in the River Environment Classification system, National Institute of Water and Atmospheric Research, Version 1; and lakes with a perimeter of 1.5 kilometres or more.

8 'Swimmable' means you can be confident when visiting lakes and rivers that you can swim (ie, putting your head under water) with a low chance of getting sick. In lakes and rivers the predicted average infection risk from *E. coli* is 3 per cent or less. For at least half the time, the estimated risk is <1 in 1000 (0.1 per cent risk). In lakes and lake fed rivers, there is a 'moderate' risk of health effects from exposure to cyanobacteria.

The health of our waterways is one of New Zealanders' major concerns. More than 80 per cent of us want action to improve water quality. But we are optimistic for the future, with 75 per cent agreeing that, together, New Zealanders can make a difference to water quality.⁹

Our role

We and the Ministry for Primary Industries are responsible for developing and overseeing the freshwater management system.

The focus of 2018/19 work has been the Essential Freshwater work programme that will set New Zealanders on the path to turning around water quality trends, and long-term improvements in freshwater health.

We expect the freshwater framework to include these major elements:

- setting freshwater objectives and limits catchment by catchment and integrated catchment-management plans, with regional councils continuing to implement national policy statements and national environmental standards
- ensuring good practice is applied everywhere – farms, forests, urban development and discharges (point sources of pollutants), and water infrastructure
- driving more fundamental change where ongoing good practice won't be enough
- better targeting government support to help landowners and others change
- investing in developing and disseminating solutions

- continuously improving the accuracy of discharge monitoring, modelling and measurement
- supporting effective implementation, including working with councils, landowners and Māori.

We also have programmes that fund communities to clean up our waterways.

Our achievements in freshwater

Essential Freshwater work programme

During 2018/19, the Ministry's freshwater work focused on the Essential Freshwater programme as part of a dedicated cross-government taskforce. The taskforce is led by the Ministry for the Environment and Ministry for Primary Industries, with members from other government agencies and local government.

The programme has three main objectives.

1. Stopping further degradation and loss – acting now to stop the state of our freshwater resources, waterways and ecosystems deteriorating by preventing further degradation and loss, and making immediate improvements in water quality within 5 years.
2. Reversing past damage – promoting restoration to bring our freshwater resources, waterways and ecosystems to a healthy state within a generation, including applying the new National Policy Statement for Freshwater Management and other legal instruments.

3. Addressing water allocation issues – working for efficient, fair allocation of freshwater and nutrient discharges, accounting for all interests, including Māori and existing and potential new users.

We have a package of policies to stop further degradation and reverse damage. We developed these policies with partners and stakeholders and consulted on them in the first quarter of 2019/20. The Government will take final decisions on the package in early 2020, following consideration of consultation feedback. Important aspects of the package consulted on are:

- setting policy direction – taking a holistic view of managing land and water resources by clarifying and strengthening regulatory requirements for Te Mana o Te Wai as the overarching framework for managing freshwater, and enabling regional councils to move faster to get regional freshwater plans in place through proposed changes to the Resource Management Act
- raising the bar on ecosystem health – tightening the focus on maintaining or improving all aspects of ecosystem health in urban and rural areas, with proposed new bottom lines for key attributes, and stopping further loss of wetlands and streams
- supporting delivery of safe drinking water – requiring regional councils and territorial authorities to control activities that can affect the safety of drinking water sources (working with the Department of Internal Affairs)

⁹ Colmar Brunton research for the Ministry for the Environment, May 2018.

- improving ecosystem health by better managing stormwater and wastewater – proposing new minimum standards for wastewater discharges and overflows, and requiring wastewater and stormwater operators to improve practices and follow good risk management (working with the Department of Internal Affairs)
- improving ecosystem health by setting standards for some farm practices – restricting intensification of land use through interim measures, and requiring farmers and growers to improve practices and meet new standards for high-risk activities
- driving better farming practices through planning – encouraging use of freshwater modules with minimum requirements in farm plans
- supporting continuous improvement – investing in information, tools and advice to support communities in restoring waterways and improving practices.

We expect public consultation on these issues in the first quarter of 2019/20.

Working with Māori and stakeholders

The Ministry worked extensively with four advisory groups to develop the Essential Freshwater package.

- **Te Kāhui Wai Māori** provides the insight, skills and perspectives of Māori experts with experience and leadership in the primary sector and agribusiness, freshwater science and mātauranga Māori, local government, resource management law and policy, and whānau, hapū and iwi advocacy. It helped the

Taskforce understand the principles and obligations inherent in Te Mana o Te Wai, and shift the focus to structural and system reform to effect it.

- **The Freshwater Leaders Group** provides expertise and input from leaders across the primary sector and agribusiness, environmental non-governmental organisations and the community. It has been a sounding board for the Essential Freshwater proposals and has challenged analysis.
- **The Science and Technical Advisory Group** provides expertise on the technical and scientific basis of proposals, including advice on options to improve water quality, achieve healthy rivers, lakes and aquifers, and protect wetlands and estuaries.
- **The Regional Sector Water Subgroup** presents the views and experiences of regional councils, which are required to manage freshwater on behalf of their communities, and to consider environmental, social, cultural and economic wellbeing. The group provided insight from their substantial experience with the challenges and opportunities of implementing regional plans, the current National Policy Statement for Freshwater Management, and various Treaty settlement arrangements to do with freshwater management.

Addressing water allocation issues

The Taskforce is continuing to work on water allocation issues, with the 2018/19 focus on allocating allowances for discharging nitrogen.

Māori rights and interests

At the heart of freshwater matters is the provision for and resolution of Māori rights, interests and obligations. The Government will continue to work with Māori to address these, and develop and implement changes to the freshwater system.

Swimmability

It is not practical to measure the thousands of kilometres of rivers and lakes in New Zealand, so to supplement monitoring information we rely on computer models to inform us of the proportion of rivers and lakes that are swimmable.

In 2017, a baseline figure of 71 per cent was estimated from computer models based on all the data available at individual sites. Data for individual sites varies, but overall the time period covered ranged from 1975 to 2013.

As with all modelling, the estimates are uncertain. They do a good job of estimating swimmability, but there is a degree of error associated with modelling natural systems.

At this stage, not enough time has elapsed from the original modelling for new modelling to show a meaningful change. When more time has passed, an update of the modelling will be more reliable. An update could be performed after 10 years (2027), which is three years before the 2030 target.

In the meantime, we can look at the data for monitored swimming sites to inform how we are tracking towards targets (see figures 5 and 6).

FIGURE 5: E. COLI RIVER CONCENTRATION LEVELS, 2008-17

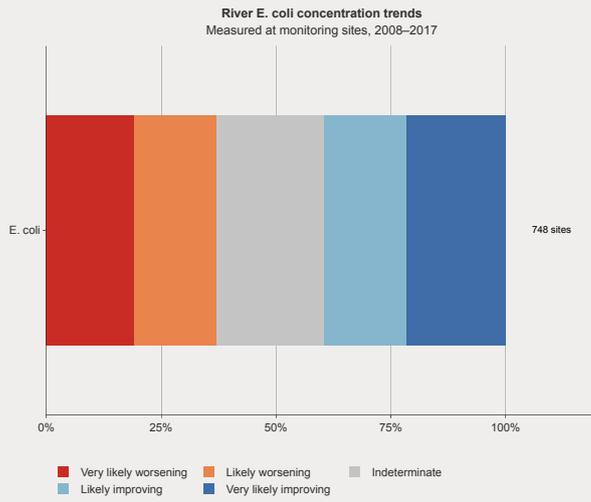
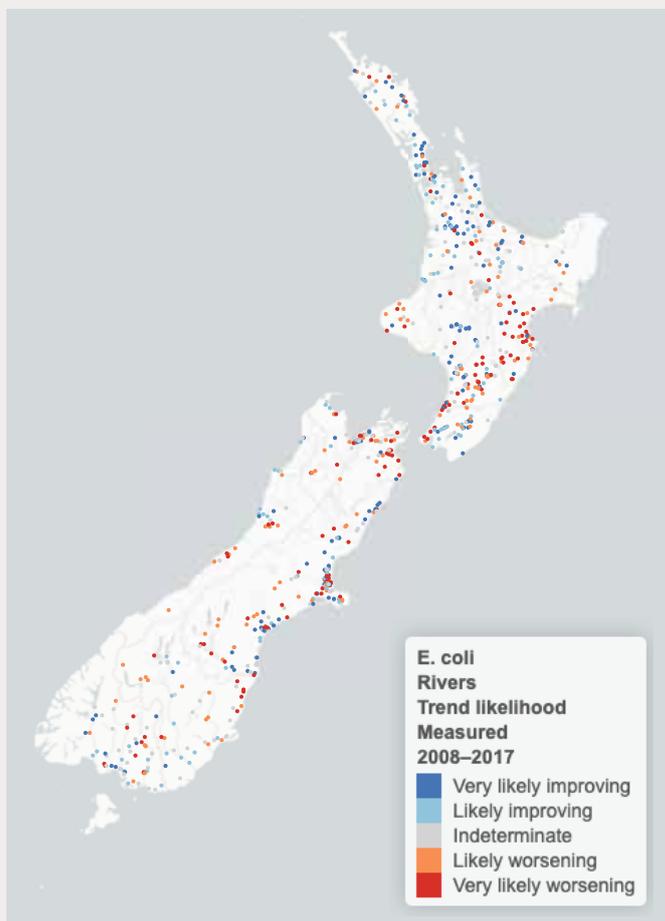


FIGURE 6: MEASURED TRENDS FOR E. COLI IN RIVERS, 2008-17



The contribution that each region will make towards the national target has been publicly notified by each region as of March 2019. These targets are not currently set at a level that would achieve the national swimmability target. For this reason, more stringent human health for recreation bottom lines are being proposed by the Ministry in the 2019 Action for healthy waterways proposal.

The freshwater domain target on swimmability is a long-term measure. Figures 5 and 6 show the 10-year trend for *E. coli* concentration levels for monitored river sites (*E. coli* = faecal indicator bacteria) as an indicator of progress on swimmability.¹⁰

At the monitoring site level, there is some statistical uncertainty associated with each of the estimates. On any one day a site could be in a higher or lower category for swimming.

There are also other factors which can affect how suitable a waterway is for swimming, including flow, access, heavy rain events, and other weather conditions.

For these reasons, always check regional council websites and the Land, Air, Water Aotearoa website for the latest conditions and warnings at popular swimming spots before you swim.

Policy work to improve swimmability levels

During 2018/19, the Ministry worked with experts and stakeholders to develop policy options for the Government that would improve the ecosystems and quality of New Zealand's freshwater. This included the water quality in rivers

and lakes for swimming. These proposals are included in the Essential Freshwater package that was consulted on in the first quarter of 2019/20.

One proposed policy is to add a new requirement in the National Policy Statement for Freshwater Management for regional councils to put measures in place so water quality at bathing sites is swimmable during the bathing season. Councils would be required to put action plans in place to reduce *E. coli* levels at those places, so the water quality is at least better than the current A grade in the national policy statement (the swimmable rivers and lakes targets require water quality to be in the A, B or C grade). Action plans may, for example, target the runoff of animal dung at critical source areas on stock farms and/or require upgrades to wastewater treatment plants and reductions in sewage overflows to streams during rainfall events.

Another proposed policy in the Essential Freshwater package is to make a new regulation to require stock to be excluded from rivers and lakes – targeting stock at high densities. Both policies should lead to improved levels of swimmability by 2030.

We have also invested in community funds to improve the swimmability of New Zealand rivers. The Freshwater Improvement Fund provided funding to three projects in the Selwyn River and Wharekopae River catchments to improve swimmability (see case study on the following page).

Additionally, in 2017, we commissioned the Institute of Environmental Science and Research to review the science needed for a new quantitative microbial risk assessment. This is to establish which pathogenic microbes are likely to be present in New Zealand freshwater and the risk of people getting sick when exposed to the water. We are currently evaluating how the new survey can be implemented over the coming fiscal year.

Freshwater clean-up funds

The Ministry invests millions of dollars in improving freshwater quality and management through several funds and projects. Those we are responsible for are the:

- Community Environment Fund, empowering New Zealanders to make a positive difference to the environment
- Freshwater Improvement Fund, committing \$100 million over 10 years to improving the management of New Zealand's lakes, rivers, streams, groundwater and wetlands
- Te Mana o Te Wai Fund, for projects supporting or enabling iwi/hapū to improve the quality of freshwater bodies, including lakes, rivers, streams, estuaries and lagoons
- Rotorua Te Arawa Lakes Programme, which is improving the water quality of the Rotorua Lakes
- Lake Taupō Protection Project, which focuses on reducing nitrogen to improve the lake's water quality.

10 River water quality: *E. coli*. No date. Retrieved from https://statisticsnz.shinyapps.io/river_water_quality_ecoli (6 September 2019).

CASE STUDY



Rere rockslide

Wharekopae River Restoration Project – *Ngā whakapai i te wai o Wharekopae*

The Wharekopae River is the most significant freshwater recreational and tourism resource in the Gisborne district. The iconic Rere Rockslide, Rere Falls and Champagne Pools swimming sites are located on the river.

In 2017, Gisborne District Council's 'Wharekopae River Restoration' project was granted funding of \$847,450 towards total project costs of \$1,717,450 through the Freshwater Improvement Fund. This five-year project aims to improve water quality in the 30 kilometre length of the river so it consistently meets the swimming-related objectives and targets of the Gisborne Regional Freshwater Plan, and the river supports a diverse and healthy abundance of aquatic life.

The Wharekopae River flows through steep, hill country farmland behind Poverty Bay and is affected by high *E. coli* levels, which is an indicator

of microbial pathogens that may be present in the water. Latest data when the project started saw *E. coli* levels well below bottom lines (E Band) indicating poor water quality under the National Objectives Framework.

The project includes engagement with the local community and supporting farmers with land adjacent to the river (and its tributaries) with farm environment planning and funding support to implement interventions targeted towards reducing *E. coli*. These interventions typically include some combination of fencing to exclude stock, installing systems for water reticulation, riparian plantings and culverting stock crossings. It is hoped these interventions will, over time, result in *E. coli* levels in the Wharekopae River meeting limits set by the Council's freshwater plan during the recreational bathing season.

The project has been running for around 14 months so is still at a relatively early stage. To date, eight farmers have been awarded 11 grants by the Council to implement on-farm interventions to improve water quality based on their farm environment plans (FEPs). Six new FEPs (towards a target of 14) have been completed since the project started and a further three FEPs are in progress.

The project includes monitoring of water quality by the Council. Given the relatively short timeframe since the start of the project, we would not yet expect a significant change in water quality to be seen, and it is more likely this will become apparent beyond the five-year life of the project.



Land – Whenua

Domain goals: New Zealand improves the quality of our soils and terrestrial ecosystems, and increases the value from our land-based resources.

TARGET	2017/18 RESULT	2018/19 RESULT
By 2030: estimated annual erosion from managed grassland is reduced by 50% (42 million tonnes per year), from the 2012 baseline of 84 million tonnes per year.	Work is under way to commission development of an update to the Land Cover data set, which will allow this erosion measure to be renewed.	The Ministry, in partnership with the Department of Conservation and Ministry for Primary Industries, has commissioned an update of the Land Cover Database version 5. It is expected to be finalised by the end of 2019. This data set will facilitate future assessments of erosion reduction stemming from changes to land cover since the previous version was released.

The report *Our Land 2018* highlighted significant gaps in data coverage, consistency and scale that preclude a complete picture of the state of, pressures on, and impacts from land and how it is used. One of the gaps was a lack of an update to our national land-cover mapping (the Land Cover Database). This 2012 data set underpins calculation of estimated annual erosion for this measure. The 2019 database update and other ongoing research will allow the update of this erosion measure.

Whenua, the land, sustains every aspect of our lives. Decisions affecting land also affect water, oceans, air and atmosphere, and the life they support. This puts land at the centre of most of New Zealand’s environmental conversations.

Humans have always used land for survival: for food, water, raw materials, dwellings and shelter. And even in the digital era, land-based production remains the foundation of our economic activity.

Land is also a connection to place and history – a space to play and learn, define culture, express spirituality, and anchor memory and identity.

Protecting and preserving our tūrangawaewae (place to stand) is one of society’s most complex and important challenges. Our land is where most of our environmental issues converge and it underpins the natural resources we rely on.

- The health and quality of our freshwater and coastal marine environment are driven by land use, through the impact of sediment and accumulation of contaminants and nutrients in waterbodies.

- New Zealand’s unique biodiversity relies on the land. We have lost many indigenous environments and what’s left doesn’t represent original ecosystems. Many indigenous plants and animals are at risk of extinction, and, for a large proportion, this risk is increasing.
- Choices about how we use land, such as for forestry and pastoral agriculture, affect how we mitigate and adapt to climate change.
- The future capability of our land is affected by current and legacy contamination.

New Zealand is heavily dependent on natural resources for economic prosperity and wellbeing. Land is a significant component of New Zealand’s natural capital-asset base. To ensure ongoing prosperity, we need to manage resource use carefully, while maintaining and enhancing the resilience of our land-based ecosystems.

Our land is a legacy from our ancestors and ours to pass on to descendants, so what we do with it matters. Investments and decisions we make today will influence our children's future. Soil takes millennia to be replaced once lost through erosion; land contamination may persist decades after the original event; and, competition for land in fast-growing urban areas is putting pressure on other resources such as freshwater and soil. A long-term and intergenerational approach to use and manage our land resource is vital.

Our role

Most aspects of the Ministry's work in this area relates to soil, how we use land, and what results from that use. Our work on achieving urban, water and marine outcomes all benefits or relates in some way to land. The New Zealand Emissions Trading Scheme puts a price on greenhouse gas emissions and incentivises businesses to reduce emissions and plant forests to absorb carbon dioxide. This is likely to have benefits for land too, such as reducing the risk of erosion.

The Ministry is responsible for several statutes governing our land. These are supported by statutory instruments (regulations, national policy statements, and national environmental standards), non-statutory guidance, funding mechanisms, research programmes, collaborative bodies, and other initiatives. Our responsibilities for managing land are broad, including many aspects of resource management, hazardous substances and waste.

- The **Resource Management Act 1991** is New Zealand's primary environmental management legislation, managing competing demands for land and other natural resources.

- The **Hazardous Substances and New Organisms Act 1996** is a framework for managing risks to the New Zealand environment posed by use of hazardous substances and introduction of new organisms. The Act and its regulations form a rigorous regime, controlling hazardous substances to prevent harm to people and the environment.
- The **Waste Minimisation Act 2008** is designed to decrease waste disposal, protecting the environment from harm and encouraging waste minimisation. Taking a circular economy approach results in environmental, social, economic and cultural benefits.
- The **National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health** is a Resource Management Act regulation implemented by councils. It ensures contaminated soil is identified and assessed before land is developed. If necessary, the land is remediated or contaminants are contained to make it safe for human use.
- The **Contaminated Sites Remediation Fund** has mechanisms for helping regional councils address priority regional contaminated sites.

The Ministry is also funding and supporting research that will help us assess how New Zealand is doing in relation to the erosion indicator we have set as a 'headlight' target, and other land issues. This includes work to understand how current land use and potential land-use changes affect other aspects of the environment.

Unitary, regional and territorial councils play a major role in managing soil and land use by way of regional and district plans under the Act, as well as by non-regulatory measures (such as farmer training and rates rebates for good practice). We set the framework for councils' land management through the Resource Management Act and its national direction, and target support to councils on land issues. We also work with industry and environmental non-governmental organisations to build robust policy and support them in implementing our policy.

Other government agencies also have a role in land.

- The Ministry for Primary Industries' work programmes intersect with land outcomes, including maximising export opportunities from land-based activities, improving primary industry practice, and protecting New Zealand from biological risk. We often partner with this ministry to deliver on both agencies' outcomes.
- The Department of Conservation administers public conservation land, which covers approximately 30 per cent of New Zealand. The Department is the lead agency for the Conservation Act 1987 and the Conservation General Policy, and its biodiversity work extends onto private land. The Minister for Conservation is also responsible for the New Zealand Coastal Policy Statement, which can drive improved land-use practices to manage effects on the coast.

Our land achievements

During the year, the Ministry worked on improving land outcomes in many different ways. The Government's proposed climate and freshwater policies are particularly relevant. If implemented, these would significantly affect market, regulatory and local government planning settings that influence land use and management. In addition to work which directly addresses our erosion target, we worked on land issues including biodiversity, contaminated sites and substance management, and soil policies.

1. Funding and facilitating direct action

Freshwater Improvement Fund

This fund is the Ministry's main vehicle for land action to improve freshwater outcomes.¹¹ It provides \$100 million over 10 years to support initiatives that improve freshwater management within quality and quantity limits, all of which focus on streambank erosion. Funded projects include components that reduce erosion or delivery of sediment to waterways including:

- fencing waterways from farm animals
- planting along streams
- developing wetlands
- retiring marginal land adjacent to waterways.

It is, for example, a co-funder of the Auckland Council-led Hōteio River project that aims to reduce sediment delivery to the Hōteio River and Kaipara Harbour.¹²

Improving the framework for contaminated land

Work on improving the framework for contaminated land focuses on improving guidance on contaminated land management, and implementing the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health. This includes addressing emerging soil contaminants, such as per- and poly-fluoroalkyl-substances. The work also includes developing guidance for hazardous activities and industry.

Per- and poly-fluoroalkyl-substances (PFAS) programme

We lead this all-of-government programme, which runs across several of our work areas. A primary objective is coordinating action from many stakeholders – national and international government agencies, local government, industry, and affected communities – to promote confidence and a nationally-consistent management approach.

Initial investigations stemmed from the historic use of firefighting foams on New Zealand Defence Force sites. During 2018/19, the communities directly affected in Ohakea and Woodbourne, along with small parts of Auckland, were the focus. But this is not the only use of these substances, so other industries and sites will be identified and, where necessary, investigated.

These are new contaminants with unique properties, and their interaction with humans and the environment is only partially understood.

The programme is adopting a precautionary approach, consistent with other governments around the world to ensure the wellbeing of communities is put first.

Contaminated Sites Remediation Fund

The Contaminated Sites Remediation Fund provides \$2.63 million a year for regional councils and unitary authorities to remediate sites that are a risk to human health and the environment.

Funding was pulled forward to fund priority sites in 2017/18, reducing the funding available in the 2018/19 and 2019/20 financial years.

Funding helps regional councils fulfil their obligations under the Resource Management Act. It is used for site investigation, remedial planning, and remediation of eligible sites. The fund allocated \$2.38 million to two new and three existing projects in 2018/19.

For the 2019/20 financial year \$2.11 million is available and one application was received for the first round of the 2019/20 financial year.

2. Structuring markets

Cabinet has approved amendments to the Climate Change Response Act 2002 that will improve the New Zealand Emissions Trading Scheme, as noted in the Atmosphere and Climate section of this report. This would mean more grasslands tree planting and – either by changing land use or changing land management practices within the existing use – less erosion.

11 About the Freshwater Improvement Fund. Retrieved from www.mfe.govt.nz/more/funding/freshwater-improvement-fund/about-freshwater-improvement-fund (6 September 2019).

12 Auckland Council. 2017. *Shot in the arm for Hōteio River project*. Retrieved from <https://ourauckland.aucklandcouncil.govt.nz/articles/news/2017/08/hoteio-river-grant/> (6 September 2019).

3. Direct regulation

Freshwater regulation

The Essential Freshwater work programme proposes direct regulation to halt waterway degradation by reducing erosion risk.¹³ The Ministry consulted on these proposals in the first quarter of 2019/20.

Forestry regulation

The National Environmental Standard for Plantation Forestry is a 'live' regulation currently being implemented by councils across New Zealand. It was published on 3 August 2017 and came into force on 1 May 2018. Ministry officials, along with the Department of Conservation, are working with Te Uru Rākau (Forestry New Zealand) on a year-one review to consider issues arising in the first year of implementation.¹⁴

A stakeholder working group of councils, foresters, non-governmental environmental organisations, the Ministry, the Department of Conservation, and Te Uru Rākau officials has been re-established for this review. Officials expect to brief ministers in late 2019 on changes to improve the workability of this regulation.

We are not yet asking for public submissions on the year-one review. But if substantive changes are proposed, the Government would need to consult. More comprehensive reviews will take place at three and five years from gazettal.

Outdoor tyre-storage regulation

The proposed National Environmental Standard for the Outdoor Storage of Tyres aims to protect land, water, the environment and human health from the adverse effects of this activity. Progress was delayed while we undertook further post-consultation research and analysis. We will continue working on the proposed standard, along with council waste management experts, to ensure it is fit for purpose. We expect the standard to be completed in early 2020.

4. Setting resource management policy implemented by local government

Freshwater policy

As noted in previous sections, the overarching objectives of this policy programme are halting water quality degradation, noticeably improving water quality in five years, and reforming the resource management system to provide for better long-term outcomes. Proposals include components that, if implemented, would increase councils' freshwater planning focus on erosion management.

Climate policy

The proposed Zero Carbon Bill's range of adaptation measures includes regular national climate change risk assessments and national adaptation plans to guide future land management frameworks.

Biodiversity policy

Through a stakeholder-led collaboration, we have developed a draft National Policy Statement for Indigenous Biodiversity and recommendations for complementary measures on managing terrestrial biodiversity on public and private lands. This was released in October 2018, and since then government officials have been engaging with iwi and councils, and preparing a redrafted policy statement for public consultation in October to December 2019.

The policy aims to protect and restore habitat for native plants and animals. It will be the framework for strengthening indigenous biodiversity management under the Resource Management Act, particularly on private land where many threatened species, habitats and ecosystems are located.

Healthy ecosystems have many benefits for wildlife and people, including air and water purification, reduced risk of erosion, improved soil health, carbon storage from trees, and flood and drought prevention from wetlands.

13 Ministry for the Environment and Ministry for Primary Industries. 2018. *Essential Freshwater: Healthy Water, Fairly Allocated*. Wellington: Ministry for the Environment and Ministry for Primary Industries. Retrieved from www.mfe.govt.nz/sites/default/files/media/Fresh%20water/essential-freshwater.pdf (6 September 2019).

14 Ministry for Primary Industries. *Terms of Reference for Year One Review of NES-PF*. Retrieved from <https://www.mpi.govt.nz/dmsdocument/32878-terms-of-reference-for-year-one-review-of-nes-pf> (6 September 2019).

5. Influencing other ministries' programmes

Hill Country Erosion Fund

Government significantly increased the value of this fund, which the Ministry for Primary Industries administers. In the 2018 funding round, \$36 million was allocated from 2019 to 2023 for developing and implementing erosion and sediment control plans, primarily for hill country pastoral farms.¹⁵ Several South Island councils made their first application to the fund as they reintroduce soil conservation programmes.

One Billion Trees Programme

As of 1 July 2019, this programme has spent around \$25 million initiating partnerships and funded activities to increase tree planting in erosion-prone areas. This has also included developing the nursery, commercial and implementation sectors that will underpin long-term achievement of the programme's objectives.¹⁶

6. Producing material to inform action

Land Cover Database

The Ministry, in partnership with the Department of Conservation and Ministry for Primary Industries, has contracted an update of the Land Cover Database, which is a core input for natural-resource modelling programmes, including those related to erosion.

Impact testing proposed freshwater policies

The Ministry contracted research to assess the potential impacts of freshwater policies. One component included evaluating erosion reduction available through various mitigation pathways. The research will be published when completed.

Ministry of Business, Innovation and Employment-funded research

In past years, the Ministry supported bids from three major research programmes that will deliver critical information on erosion in New Zealand:

- Maanaki Whenua – Landcare Research's Smarter Targeting of Erosion Control programme¹⁷
- Our Land and Water Sources and Flows programme¹⁸
- the National Institute of Water and Atmospheric Research-funded Managing Mud programme.¹⁹

These programmes are yielding information that will help central and local government, as well as industry and resource users, understand local level erosion processes in a catchment context and implement targeted and effective erosion mitigations.

15 Ministry for Primary Industries. No date. *Hill Country Erosion Fund*. Retrieved from www.mpi.govt.nz/funding-and-programmes/environment-and-natural-resources/hill-country-erosion-programme/ (6 September 2019).

16 Te Uru Rākau (Forestry New Zealand). 2019. *One Billion Trees Programme*. Retrieved from www.mpi.govt.nz/funding-and-programmes/forestry/planting-one-billion-trees/ (6 September 2019).

17 Maanaki Whenua – Landcare Research. No date. *Erosion and sediment 101: 101st LINK Seminar*. Palmerston North: Maanaki Whenua – Landcare Research. Retrieved from www.landcareresearch.co.nz/___data/assets/pdf_file/0016/184021/Erosion-and-Sediment-101-plus-some.pdf (6 September 2019).

18 National Science Challenges. No date. *Sources and Flows: Managing contaminant pathways and attenuation to create headroom for productive land use*. Retrieved from <https://ourlandandwater.nz/future-landscapes/sources-and-flows/> (6 September 2019).

19 National Institute of Water and Atmospheric Research. 2018. *Reducing sedimentation*. Retrieved from www.niwa.co.nz/news/reducing-sedimentation (6 September 2019).



Marine – Wai tai

Domain goals: New Zealand is a world leader in the sustainable management of marine ecosystems that support New Zealand’s marine life, society and the economy.

TARGET	2016/17 BASELINE	2017/18 AND 2018/19 RESULT
By 2030: the resilience of marine ecosystems improves because a representative 10% of ecosystems in each biogeographic region of New Zealand’s territorial sea are marine protected areas.	Proportions range from 0% in the Three Kings, Chatham and Snares Islands to 99% in the Subantarctic Islands and 100% in the Kermadec Islands, averaging 12% of New Zealand’s total territorial sea, as at December 2016.	No change because policy reform is under consideration by the Government and no new marine protected areas have been established.

Our marine environment is home to a richly unique array of animals, plants and habitats. Scientists estimate that as much as 80 per cent of our indigenous biodiversity may be in the sea. More than 15,000 species have been identified in our waters, and our isolation means many of these species are found nowhere else in the world.

The ocean also supports our economy, and most of us live near the coast and use the ocean for recreation. Given our reliance on the ocean, we need to ensure we have a system that supports its ongoing health and productivity.

Human activities put increasing pressure on our marine environment. Global greenhouse gas emissions are causing ocean acidification and warming; many of our native marine birds and mammals are threatened or at risk of extinction; and our coastal areas are degraded by the constant pressure of introduced species, seabed trawling and dredging. Land-based activities and practices are loading sediment, nutrients, contaminants and waste into our waters.

Supporting and building the resilience of our habitats and species will ensure they are able to withstand these pressures.

Our role

Effective area-based protection through marine protected areas helps maintain coastal and marine ecosystem health and productivity, while safeguarding social and economic development. Protected areas work most effectively when forming a representative and adaptable network.

Networks can improve marine ecosystem resilience by:

- stemming the loss of marine resources
- recovering marine life and entire ecosystems
- magnifying benefits of individual sites
- protecting large-scale processes
- slowing the loss of endangered marine species
- restoring depleted fisheries.

But the resilience of ecosystems also depends on a broader approach to best practice science and management. Marine protected areas are more effective when integrated into the marine management regime or supported by other protection. Extending beyond the artificial boundaries of such areas are the effects of land use, including the discharge of pollutants and plastics to coasts, and anthropogenic-driven ocean acidification and warming. This makes the Ministry’s work in a range of other areas relevant to the marine environment.

How we measure our progress against our target

In 2011, the Convention on Biological Diversity set global targets, commonly known as the Aichi Biodiversity Targets, which New Zealand supports. Target 11 encourages states to conserve “10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services ... through effectively and equitably managed, ecologically representative and

well-connected systems of protected areas and other effective area-based conservation measures...”.

To aid reporting against New Zealand's target, the Department of Conservation is working with the Ministry for Primary Industries and us to establish a process for assessing our protected areas against International Union for Conservation of Nature guidelines for best practice.

Our achievements in marine

Since October 2017, the Department of Conservation and Ministry for Primary Industries have led the development and provision of policy advice for marine protected areas. We continue to collaborate both in preparing policy advice and participating in the Science Advisory Group through the Marine Hub (policy development and advice group).

Agencies have identified several marine priority initiatives that are high-impact, cross-cutting workstreams to progress between now and 2021. Examples include marine protected areas reform, fisheries reform, Sea Change, a proposed National Environmental Standard for Marine Aquaculture, our marine domain report, and Marine Futures. The aim is, by late 2020, to make good progress towards reforming marine environment management and building more resilient ecosystems and fisheries. Longer-term initiatives will strengthen the foundations of our marine statutory regime. Specific regional initiatives will, in the short term, address calls for stronger marine protection in priority areas.

Other achievements in marine include:

- Marine Futures will help coordinate the marine cross-agency programme, working towards long-term shared objectives for improving marine management. It will work towards ecosystems-based management and future marine reform.
- International best practice regulatory approaches will be implemented for activities in the Exclusive Economic Zone. These will protect the marine environment by developing regulations for decommissioning offshore oil and gas installations.
- Comprehensive reform of the Resource Management Act will affect the coastal marine area by improving planning quality. It will allow coherence of national direction and quality decision-making. Issues relating to the coastal marine environment to be considered separately include open-ocean aquaculture and developing a charging regime for marine farmers and other occupiers of the coastal marine area. This work will run in parallel, with officials reporting back to ministers (environment, fisheries, conservation) by late 2019. Broader issues relating to overlapping marine legislative frameworks are better addressed by a later review of the marine system.
- The Government joined the International Alliance to Combat Ocean Acidification, alongside 23 other government agencies and 38 science, industry and non-governmental organisations, including Fiji, Secretariat of the Pacific Regional Environment

Programme, the University of Otago and New Zealand Ocean Acidification Community. A government science and industry working group is developing a New Zealand ocean acidification action plan.

- The National Environmental Standard for Marine Aquaculture is being developed under the Resource Management Act and intends to create a more consistent and efficient regional planning framework for managing existing marine aquaculture activities. It would ensure best practice environmental assessments for determining consent applications for marine farm replacements, implement on-farm biosecurity management for all farms, and support sustainable aquaculture within environmental limits. The Minister for the Environment is responsible for making national environmental standards, and the Minister of Fisheries is the lead minister on aquaculture policy. Cabinet has now approved the final policy for development of the standard. The intention is that Cabinet considers whether to make the standard in early 2020.

Future targets

We are exploring how we might report on other marine aspects. Our report on the marine environment, released in 2016, reveals many gaps in our knowledge, and we are working to prioritise and fill these before our next marine report in October 2019.

Measuring our operating performance

In this section we report financial and non-financial performance against our appropriations.

Ministerial servicing

This appropriation is intended to achieve the provision of support to ministers, especially in relation to their accountability to Parliament and the public.

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	2,150	2,150	1,650	1,701	2,150
Departmental	1	20	1	1	20
Other	1	13	-	-	13
Total revenue	2,152	2,183	1,651	1,702	2,183
Total expenses	2,202	2,183	1,651	1,650	2,183
Net surplus (deficit)	(50)	-	-	52	-

At Main Estimates, the 2018/19 budget for this output class was \$2.183 million. During the year, the appropriation decreased by \$532,000 to \$1.651 million due to:

- a reprioritisation of \$500,000 to the Carbon Monitoring Programme to continue the work programme
- a \$32,000 reduction in third-party revenue.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Quality of advice			
Percentage of all regulatory impact statements that partially or fully meet quality assurance criteria	100% (with 59% of regulatory impact statements fully meeting quality assurance criteria)	At least 90% (with 70% fully meeting criteria)	100% (with 73% of regulatory impact statements fully meeting quality assurance criteria). There were no regulatory impact statements that did not meet criteria
The satisfaction of the Minister for the Environment and the Minister for Climate Change with the advice service as per the common satisfaction survey ²⁰	81% Includes results from three ministers	At least 80%	75% Includes results from two ministers
The total cost per hour of producing outputs	\$219.78	\$200	\$219.84
Ministerial services			
Percentage of Ministerial Official Information Act requests submitted within the timeframes agreed with the Minister's office	86%	95%	89%
Percentage of responses to departmental Official Information Act requests sent within statutory deadlines	91%	95%	95%

²⁰ Note that the performance measure was set before two associate ministers were appointed. Their results have also been included.

Explanation

Ministerial services

The number of written parliamentary questions and ministerial correspondence that we handled tripled in 2017/18 and continued to increase in 2018/19. We continue to refine and improve processes and best practice, as well as running staff Official Information Act (OIA) training and producing updated OIA guidance. Despite continuously increasing OIA numbers, timeliness continues to improve towards the Ministry target of 95 per cent (and goal of 100 per cent timeliness).

Regulatory impact statements

In 2018/19, 22 regulatory impact statements (RISs) we developed were subject to quality assessment. Of these, seven were assessed by our internal assessment panel and 15 by The Treasury. Six RISs partially met rather than fully met the criteria, due to either limited consultation or it being considered that the RIS did not fully identify the impacts or potential costs of the outlined options.

Quality of advice results

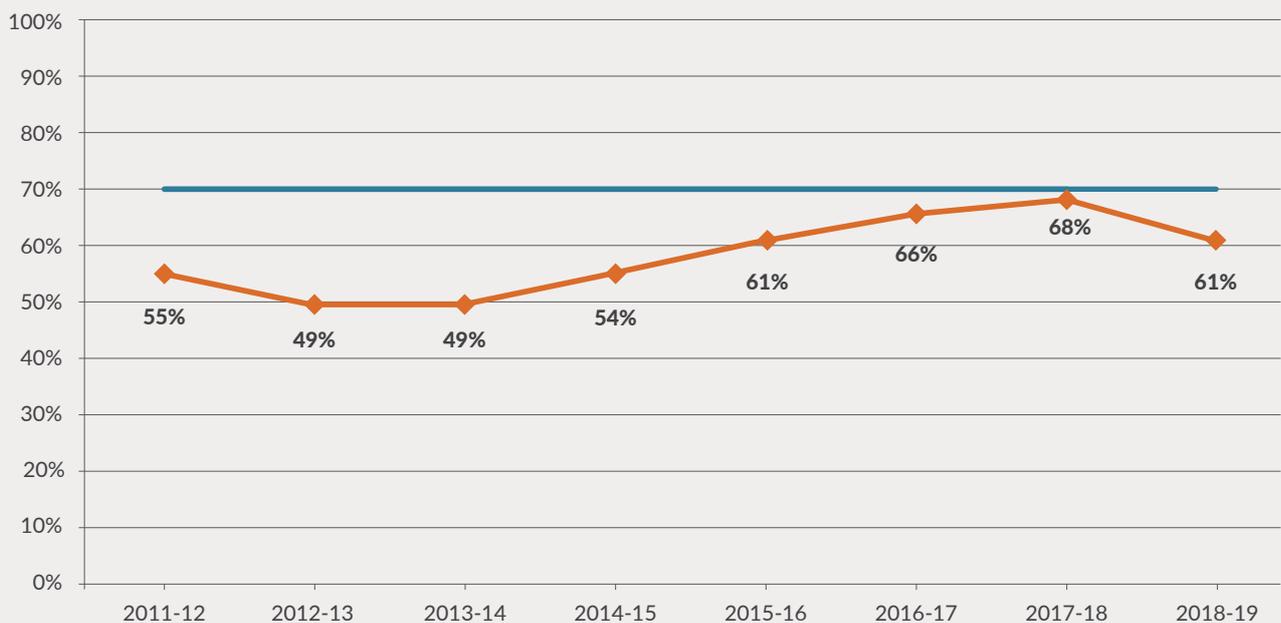
Since 2015/16, we have reported performance against our quality of advice standard by multi-category appropriation. Results can be found underneath each of these appropriations.

The Ministry has sustained its improvement over recent years against an ambitious target by using updated tools and providing support at crucial stages of commissioning and peer review, as well as through processes that combine advice for authors with development for people providing the support.

Figure 7 shows our quality of advice results since 2011/12, including those not covered by multi-category appropriations.

FIGURE 7: MINISTRY FOR THE ENVIRONMENT'S PERFORMANCE AGAINST QUALITY OF ADVICE STANDARD

(The target is that 70% of briefing notes and Cabinet papers score 7 or better: from 70 to 100 papers are assessed each year, 15-20% of the total)



Climate Change Multi-Category Appropriation

This appropriation is intended to achieve quality policy advice to ministers on domestic and international climate change issues.

Departmental Output Expense: Domestic Climate Change Programme Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	8,563	10,891	16,250	16,161	13,445
Departmental	275	42	240	298	42
Other	72	25	82	58	25
Total revenue	8,910	10,958	16,572	16,517	13,512
Total expenses	7,848	10,958	16,572	14,639	13,512
Net surplus (deficit)	1,062	-	-	1,878	-

At Main Estimates, the 2018/19 budget for this output class was \$10.958 million. During the year, the output class increased by \$5.614 million to \$16.572 million.

This increase was due to:

- new funding of \$1.391 million for the National Climate Change Risk Assessment
- new funding of \$927,000 for the Interim Climate Change Committee to receive the full level of funding agreed by Cabinet
- a fiscally neutral transfer of \$2.95 million from other departmental output expense appropriations to progress work programmes related to climate change
- an expense transfer of \$91,000 from 2017/18 to continue work in relation to the Interim Climate Change Committee
- an increase of \$255,000 related to third-party revenue.

Total actual expenditure for 2018/19 was \$1.933 million less than budget, due to delays in the work programmes for developing the National Climate Change Risk Assessment and the Interim Climate Change Committee. An in-principle expense transfer from 2018/19 to 2019/20 of up to \$1.950 million has been approved for this delayed work.

Departmental Output Expense: International Climate Change Programme Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	4,065	3,892	5,242	4,902	3,892
Departmental	183	37	71	198	37
Other	66	24	30	24	24
Total revenue	4,314	3,953	5,343	5,124	3,953
Total expenses	4,784	3,953	5,343	5,080	3,953
Net surplus (deficit)	(470)	-	-	44	-

At Main Estimates, the 2018/19 budget for this output class was \$3.953 million. During the year, the output class increased by \$1.39 million to \$5.343 million.

This increase was due to:

- a fiscally neutral transfer of \$1.35 million from other departmental output expense appropriations to progress work to represent New Zealand in various climate change meetings
- an increase of \$40,000 related to revenue from third parties.

Departmental Output Expense: Synthetic Greenhouse Gas Levy

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	49	49	49	45	49
Departmental	-	-	-	-	-
Other	-	-	-	-	-
Total revenue	49	49	49	45	49
Total expenses	45	49	49	45	49
Net surplus (deficit)	4	-	-	-	-

Departmental Output Expense: Carbon Monitoring Programme

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	3,499	2,167	3,992	4,150	2,167
Departmental	15	13	1	4	13
Other	17	7	7	5	7
Total revenue	3,531	2,187	4,000	4,159	2,187
Total expenses	3,777	2,187	4,000	4,114	2,187
Net surplus (deficit)	(246)	-	-	45	-

At Main Estimates, the 2018/19 budget for this output class was \$2.187 million. During the year, the output class increased by \$1.813 million to \$4 million.

This increase was due to a fiscally neutral transfer of \$1.825 million from other departmental output expense appropriations to progress various work programmes related to the LUCAS mapping programme and geospatial system upgrade.

This increase was partially offset by a decrease of \$12,000 related to third-party revenue.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Technical quality of advice papers assessed by a survey with a methodical robustness of 100%	83%	70%	60%

Carbon Monitoring Programme

This category is intended to achieve compliance with reporting requirements under the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

The land use and land-use change and forestry and the Kyoto Protocol portions of the National Inventory Report are completed to quality specifications and submitted on time	Achieved	Achieved	Achieved The land use and land-use change and forestry and the Kyoto Protocol sections were published within the National Inventory Report on 10 April 2019
The Land Use Carbon Analysis System publishes its 2016 Land Use Map	New measure	30 June 2019	Achieved The 2016 Land Use Map was published on 10 April 2019
Web services of national satellite imagery data sets and land use mapping published by the Ministry for the Environment are maintained during business hours and shared with the Ministry for Primary Industries	New measure	Achieved	Achieved

Domestic Climate Change Programme Policy Advice

This category is intended to achieve quality policy advice on domestic climate change issues.

Introduce Zero Carbon Bill into Parliament, establishing an Independent Climate Change Commission and new 2050 emissions reduction targets	New measure	31 December 2018	Achieved
Transition Hub delivers complex modelling of the impact of a new 2050 target to support the Zero Carbon Bill's introduction	New measure	31 October 2018	Achieved

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Transition Hub delivers evidence (including economic modelling on abatement costs) and advice on policy options to drive economic transformation, across sectors, to a low-emissions economy and acts as an innovation hub engaging in partnership projects supporting business transition	New measure	30 June 2019	Achieved

International Climate Change Programme Policy Advice

This category is intended to achieve developing effective quality policy advice on international climate change.

Percentage of New Zealand's international greenhouse gas reporting that meets agreed deadlines and is accepted by international institutions as meeting United Nations Framework Convention on Climate Change and the Kyoto Protocol reporting requirements	100% (Compliance assessed against reporting deadlines. Reports are reviewed by internationally qualified experts who assess the reports against internationally agreed guidelines. Feedback is provided with areas for improvement. Each year, we work on improving reporting, based on the latest feedback received). ²¹	100%	100%
The outcome of international negotiations for New Zealand's priority areas is consistent with the negotiating mandate as agreed by Cabinet	Achieved	Achieved	Achieved

Synthetic Greenhouse Gas Levy

This category is intended to achieve the efficient administration of the Synthetic Greenhouse Gas Levy Collection System.

Administer the funding for the ongoing costs of collecting the Synthetic Greenhouse Gas Levy by the New Zealand Transport Agency and New Zealand Customs Service in accordance with respective memoranda of understanding	Achieved	Achieved	Achieved
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21 This year's inventory submission will be reviewed in October 2019.

Independent Climate Change Commission Set-up Costs

This appropriation is limited to the set-up costs for an independent Climate Change Commission.

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown		-	516	516	-
Departmental		-	-	-	-
Other		-	-	-	-
Total revenue		-	516	516	-
Total expenses		-	516	248	-
Net surplus (deficit)		-	-	268	-

This is a newly established appropriation for 2018/19 for the set-up costs for an independent Climate Change Commission.

Actual expenditure for 2018/19 was \$268,000 less than budgeted, due to delays in the legislative and recruitment programmes to establish the Commission. An in-principle expense transfer from 2018/19 to 2019/20 of up to \$350,000 has been approved to reflect these delays.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Engage an establishment team to begin setting up an independent Climate Change Commission	New measure	30 June 2019	Achieved

Improving Environmental Management Multi-Category Appropriation

This appropriation is intended to achieve quality advice, with a focus on improving environmental management frameworks.

Departmental Output Expense: Developing and Implementing Treaty Settlements and Environmental Accords Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	3,084	1,874	2,149	2,149	1,874
Departmental	150	17	6	13	17
Other	20	9	5	5	9
Total revenue	3,254	1,900	2,160	2,167	1,900
Total expenses	2,778	1,900	2,160	2,127	1,900
Net surplus (deficit)	476	-	-	40	-

At Main Estimates, the 2018/19 budget for this output class was \$1.9 million. During the year, the output class increased by \$260,000 to \$2.16 million.

The increase was due to a fiscally neutral transfer of \$275,000 from other departmental output expenses for progressing policy work to negotiate and implement Treaty of Waitangi settlements.

This increase was partially offset by a decrease of \$15,000 related to third-party revenue.

Departmental Output Expense: Marine Environment Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	3,241	3,891	1,291	1,426	3,891
Departmental	46	18	39	28	18
Other	32	10	9	6	10
Total revenue	3,319	3,919	1,339	1,460	3,919
Total expenses	3,030	3,919	1,339	1,425	3,919
Net surplus (deficit)	289	-	-	35	-

At Main Estimates, the 2018/19 budget for this output class was \$3.919 million. There was a decrease of \$2.58 million to \$1.339 million during the year.

The decrease was due to a fiscally neutral transfer of \$2.6 million to other departmental output expenses to support the implementation of the National Policy Statement on Urban Development Capacity.

This decrease is partially offset by an increase of \$20,000 relating to third-party revenue.

Departmental Output Expense: Resource Management Implementation

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	14,158	12,427	13,227	12,927	13,131
Departmental	151	85	165	75	85
Other	149	44	69	131	44
Total revenue	14,458	12,556	13,461	13,133	13,260
Total expenses	14,436	12,556	13,461	13,054	13,260
Net surplus (deficit)	22	-	-	79	-

At Main Estimates, the 2018/19 budget for this output class was \$12.556 million. There was an increase of \$905,000 to \$13.461 million during the year.

The increase was due to:

- a fiscally neutral transfer of \$600,000 from other departmental output expenses to support the implementation of the National Policy Statement on Urban Development Capacity
- an expense transfer of \$500,000 from 2017/18 for progress work on resource management and water management reforms
- an increase of \$105,000 relating to third-party revenue.

This was partially offset by a transfer of \$300,000 to the Environmental Protection Authority's monitoring and enforcement functions, for Resource Management Act enforcement unit oversight activity.

Departmental Output Expense: Resource Management Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	6,192	6,542	7,542	7,699	11,522
Departmental	49	80	13	115	80
Other	68	44	92	97	44
Total revenue	6,309	6,666	7,647	7,911	11,646
Total expenses	6,626	6,666	7,647	7,683	11,646
Net surplus (deficit)	(317)	-	-	228	-

At Main Estimates, the 2018/19 budget for this output class was \$6.666 million. There was an increase of \$981,000 to \$7.647 million during the year.

The increase was due to a fiscally neutral transfer of \$1 million from other departmental output expenses to support the National Policy Statement on Urban Development. This increase was partially offset by a decrease of \$19,000 related to third-party revenue.

An in-principle expense transfer of up to \$175,000 from 2018/19 to 2019/20 has been approved, to support the comprehensive review of the Resource Management Act.

Departmental Output Expense: Water Management Implementation

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	2,075	2,225	2,075	2,075	5,757
Departmental	68	55	27	20	55
Other	14	25	12	9	25
Total revenue	2,157	2,305	2,114	2,104	5,837
Total expenses	2,078	2,305	2,114	2,026	5,837
Net surplus (deficit)	79	-	-	78	-

At Main Estimates, the 2018/19 budget for this output class was \$2.305 million. During the year, the output class decreased by \$191,000 to \$2.114 million.

The decrease was due to a fiscally neutral transfer of \$150,000 to other departmental output expenses to support implementing Treaty of Waitangi settlements.

This was partially offset by an increase of \$41,000 related to third-party revenue.

Departmental Output Expense: Water Management Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	12,959	12,998	10,258	10,258	15,277
Departmental	274	75	121	92	75
Other	75	135	32	22	135
Total revenue	13,308	13,208	10,411	10,372	15,487
Total expenses	12,040	13,208	10,411	10,054	15,487
Net surplus (deficit)	1,268	-	-	318	-

At Main Estimates, the 2018/19 budget for this output class was \$13.208 million. During the year, this output class decreased by \$2.797 million to \$10.411. This decrease was due to:

- a fiscally neutral transfer of \$4.25 million to other departmental output expenses mainly for climate change related work programmes
- a decrease of \$57,000 relating to third-party revenue.

This was partially offset by:

- new funding of \$890,000 for a new approach to the Crown-Māori relationship for freshwater
- an expense transfer of \$620,000 from 2017/18 to progress work on water management reforms.

Actual expenditure for 2018/19 was \$357,000 less than budgeted, due to delays in some work programmes within this output class. In-principle expense transfers of up to \$550,000 from 2018/19 to 2019/20 have been approved for continuation of work by:

- special tribunals to consider water conservation orders for the Ngaruroro and Clive rivers and Te Waikoropupu Springs and associated waterways
- Kahui Wai Māori – the Māori Freshwater Forum.

Non-Departmental Output Expense: Water Science and Economics

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Expenses					
Water science and economics	3,411	1,500	2,401	2,129	2,150

At Main Estimates, the 2018/19 budget for this output class was \$1.5 million. During the year, this output class increased by \$901,000 to \$2.401 million.

The increase was due to an expense transfer of \$1.551 million from 2017/18 to meet the funding needs of projects related to water science and economics.

This was offset by an expense transfer of \$650,000 to 2019/20 to complete programmes of work.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2017/18 TARGET	2018/19 PERFORMANCE
Technical quality of advice papers (assessed by a survey with a methodical robustness of 100%)	69%	70%	58%

Developing and Implementing Treaty Settlements and Environmental Accords Policy Advice

This category is intended to achieve quality policy advice to ministers in relation to negotiating and implementing Treaty settlements and environmental accords.

Number of negotiations supported	20	15	13
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Marine Environment Policy Advice

This category is intended to achieve quality advice to ministers on New Zealand's marine environment.

Review Exclusive Economic Zone regulations	Achieved Rocket regulations came into force on 5 April 2018	By 30 June 2019	Policy proposals for decommissioning regulations awaits Cabinet approval See Note 1
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Resource Management Implementation

This category is intended to achieve support for improvements to the resource management framework, as well as environmental reporting.

Percentage of local authorities that submit information for the National Monitoring System to support publicly available monitoring and evaluation across the environmental management system	100% All local authorities have returned their data	100%	100% All local authorities provided data for 2017/18 (reporting occurs in the following financial year). The 2018/19 data is due on 31 August 2019
Gazettal of National Planning Standards	New measure	18 April 2019	Achieved The first set of National Planning Standards were gazetted on 5 April 2019. Some guidance material was also released at this time

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2017/18 TARGET	2018/19 PERFORMANCE
Provide support to local authorities to prepare their future development strategies under the National Policy Statement on Urban Development Capacity (NPS-UDC), and evaluate these strategies	New measure	30 June 2019	Achieved The Ministry (with the Ministry of Housing and Urban Development) has provided targeted support to local authorities as they work towards developing their future development strategies under the NPS-UDC. One local authority (Auckland Council) has delivered a completed future development strategy that has been evaluated
Number of pieces of guidance to support effective implementation of National Direction	14 pieces of guidance (plus 21 subject-specific chapters published separately)	6	8 A guide to communicating and managing uncertainty when implementing the National Policy Statement for Freshwater Management (December 2018) National Environmental Standards for Telecommunications Facilities – Users' Guide (August 2018) 6 National Planning Standards guides
Percentage of stakeholder survey respondents who consider reports published under the Environmental Reporting Act 2015 'useful' or 'very useful' to their work	New measure	90%	Achieved (Of the stakeholders who responded to the survey and had heard of the report, 100% said it was useful or very useful)

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2017/18 TARGET	2018/19 PERFORMANCE
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Resource Management Policy Advice

This category is intended to achieve the provision of policy advice to ministers in relation to improving the resource management framework.

Minimum six weeks public consultation for all national direction workstreams	New measure	100%	No public consultation on national direction workstreams was undertaken in 2018/19
Provide advice and recommendations on final National Planning Standards to support gazettal	New measure	31 March 2019	Achieved Recommendations on submissions reports, a section 32AA report and the proposed standards were supplied to the Minister in February 2019

Water Management Implementation

This category is intended to achieve effective support for improvements to the freshwater management framework.

Councils consult with regional communities to set swimming targets	New measure	31 December 2018	By 30 June 2019, all but one council has set swimming targets
Councils previously identified as having made insufficient progress have revised implementation plans	New measure	30 June 2019	Achieved The Ministry has obtained and reviewed revised council implementation plans for all councils including those previously identified as having made insufficient progress. We are developing a revised programme to help councils implement the Essential Freshwater reforms

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2017/18 TARGET	2018/19 PERFORMANCE
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Water Management Policy Advice

This category is intended to achieve effective policy advice on freshwater management.

Advice on improving water quality has been delivered, and options have been developed and progressed where possible	New measure	30 June 2019	Achieved The Water Taskforce has delivered the Essential Freshwater package of policy advice on options for improving water quality. We are currently awaiting ministerial decisions on how to progress these options. This is an ongoing area of work for the Ministry
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Non-Departmental Output Expenses

Water Science and Economics

This category is intended to build science and economics knowledge and capability through the development of the science which underpins the attributes for the National Objectives Framework, and the understanding of the economic impacts associated with setting limits for these attributes.

Percentage of Water Science and Economics projects that achieved stated objectives (see Note 2)	New measure	80%	100% All contracts have been completed and achieved stated objectives
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Note 1: Due to Ministry-wide prioritisation of work, no review of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 or regulations under the Act has been completed this year. This measure has been amended in the 2019/20 Estimates.

Other work has been undertaken in the marine area. National direction under the Resource Management Act 1991 for marine aquaculture (National Environmental Standard for Marine Aquaculture) has been agreed by Cabinet committee and is awaiting Cabinet approval. Policy proposals for decommissioning regulations for offshore oil and gas installations have been through cross-party consultation and await approval by Cabinet committee and Cabinet. The next step will be Parliamentary Counsel Office drafting. Ongoing support will be given to interagency priority project work programme, including marine protected area reform and Sea Change – Hauraki Gulf Marine Spatial Planning.

Note 2: Including water science and economics projects associated with the management of Te Mana o Te Wai; human health for recreation; the proposed swimming targets; ecosystem health (including macroinvertebrates); toxic algae in rivers (drivers and toxicity); sediment; estuaries (state and values); freshwater flows; and groundwater.

Mitigating Environmental Hazards and Waste Multi-Category Appropriation

This appropriation is intended to achieve quality advice on managing chemical and biological hazards, and waste.

Departmental Output Expense: Environmental Hazards and Waste Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	1,548	2,365	2,215	2,215	3,265
Departmental	15	20	4	5	20
Other	13	11	9	7	11
Total revenue	1,576	2,396	2,228	2,227	3,296
Total expenses	1,554	2,396	2,228	2,130	3,296
Net surplus (deficit)	22	-	-	97	-

At Main Estimates, the 2018/19 budget for this output class was \$2.396 million. During the year, this output class decreased by \$168,000 to \$2.228 million.

The decrease was due to:

- a fiscally neutral transfer of \$150,000 to other departmental output expenses to progress work on water management
- a decrease of \$18,000 relating to third-party revenue.

Departmental Output Expense: Waste Management and Minimisation

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	845	585	1,685	1,769	585
Departmental	32	19	7	12	19
Other	33	18	18	18	18
Total revenue	910	622	1,710	1,799	622
Total expenses	936	622	1,710	1,781	622
Net surplus (deficit)	(26)	-	-	18	-

At Main Estimates, the 2018/19 budget for this output class was \$622,000. During the year, this output class was increased by \$1.088 million to \$1.710 million.

This increase is due to a fiscally neutral transfer of \$1.1 million from other departmental output expenses to accelerate policy work on New Zealand's transition to a circular economy.

This was partially offset by a decrease of \$12,000 related to third-party revenue.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Technical quality of advice papers (assessed by a survey with a methodical robustness of 100%)	20%	70%	75%

Environmental Hazards and Waste Policy Advice

This category is intended to achieve quality advice to ministers on the hazardous substances and new organisms management regime.

Develop a National Implementation Plan for the Stockholm Convention	New measure	31 December 2018	Achieved
Develop policy papers/case studies weighing risks and potential benefits of hazardous substances and new organisms to New Zealand	New measure	4	4

Waste Management and Minimisation

This category is intended to achieve support to ensure Crown's obligations under the Waste Minimisation Act 2008 are met.

Secretariat functions for the Waste Advisory Board are undertaken in accordance with the Board's terms of reference	Achieved	Achieved	Achieved The Board and the Minister agreed to updated terms of reference
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Environmental Management Obligations and Programmes Multi-Category Appropriation

This appropriation is intended to achieve solutions to environmental problems through community involvement and international cooperation.

Departmental Output Expense: Domestic Obligations and Programmes

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	1,448	1,528	1,078	1,156	1,528
Departmental	17	17	111	75	17
Other	12	15	323	184	15
Total revenue	1,477	1,560	1,512	1,415	1,560
Total expenses	1,515	1,560	1,512	1,375	1,560
Net surplus (deficit)	(38)	-	-	40	-

At Main Estimates, the 2018/19 budget for this output class was \$1.56 million. During the year, this output class was decreased by \$48,000 to \$1.512 million.

This decrease was due to a fiscally neutral transfer of \$450,000 to other departmental output expenses to progress climate change related work programmes.

This was partially offset by an increase of \$402,000 related to third-party revenue.

Departmental Output Expense: International Obligations and Institutions Policy Advice

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	2,090	1,830	830	900	1,830
Departmental	28	70	1	2	70
Other	17	7	5	3	7
Total revenue	2,135	1,907	836	905	1,907
Total expenses	2,048	1,907	836	878	1,907
Net surplus (deficit)	87	-	-	27	-

At Main Estimates, the 2018/19 budget for this output class was \$1.907 million. During the year, this output class was decreased by \$1.071 million to \$0.836 million. This decrease was due to:

- a fiscally neutral transfer of \$1 million to other departmental output expenses to progress climate change related work programmes
- a decrease of \$71,000 related to third-party revenue.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Technical quality of advice papers (assessed by a survey with a methodical robustness of 100%)	33%	70%	67%

Domestic Obligations and Programmes

This category is intended to achieve the efficient administration of grant schemes through which parties can seek funding to achieve environmental objectives.

Stage 1 ²² of the Community Environment Fund is completed in under 60 working days	Not achieved (Explanation: the completion of stage 1 took 67 days. Due to panel availability, the assessment panel meeting was held slightly later than expected and the recommendations briefing was delivered seven days later than planned)	Achieved	No funding round held in financial year 2018/19
The Contaminated Sites Remediation Fund Priority List is reviewed by the Ministry and provided to the Minister for the Environment	Achieved	30 June 2019	Achieved

International Obligations and Institutions Policy Advice

This category is intended to achieve cooperation with other countries to promote action on international environmental issues and to ensure that New Zealand's interests are protected and advanced, and obligations met.

Introduce regulations relating to phasing down hydrofluorocarbons to enable New Zealand to ratify the Kigali Amendment to the Montreal Protocol	New measure	31 December 2018	Achieved Regulations introduced and Amendment ratified
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22 Stage 1 begins when applications to the fund close and ends once assessment of applications is complete and funding recommendations are provided to the Minister.

Waste Minimisation Administration

This appropriation is intended to achieve the effective and efficient administration of the functions required under the Waste Minimisation Act 2008.

Departmental Output Expense: Waste Minimisation Administration

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Revenue					
Crown	2,500	2,500	5,906	5,906	5,906
Departmental	-	-	-	-	-
Other	-	-	-	-	-
Total revenue	2,500	2,500	5,906	5,906	5,906
Total expenses	2,435	2,500	5,906	3,766	5,906
Net surplus (deficit)	65	-	-	2,140	-

At Main Estimates, the 2018/19 budget for this output class was \$2.5 million. During the year, this output class was increased by \$3.406 million to \$5.906 million.

This increase is due to a fiscally neutral transfer from the Contestable Waste Minimisation Fund, which is a non-departmental output expense. This increase in funding was to meet the cost of managing and monitoring a higher number of projects being funded through the Contestable Waste Minimisation Fund.

Actual expenditure was lower than the revised budget due to delays in implementing a new funds management system and administering other waste minimisation projects. Under the Waste Minimisation Act 2008, there is no provision for the return of a year-end surplus from the Waste Minimisation Fund to the Crown. Any year-end surplus must be retained within the fund.

Performance information for the appropriation

PERFORMANCE MEASURE	2017/18 PERFORMANCE	2018/19 TARGET	2018/19 PERFORMANCE
Stage 1 of the Waste Minimisation Fund funding round (recommendations for funding) is completed within four months of round closing	Achieved	Achieved	Achieved
Percentage of instances when action is taken against disposal facility operators who have outstanding levy payments (over 120 days)	Achieved	100%	Achieved No disposal facility operator has had an outstanding levy payment of over 120 days. The levy collector ensures payment schedules are maintained. We have compliance assurance in place to ensure landfill operators comply with the requirements of the regulations

Capital Expenditure

This appropriation is intended to achieve the renewal, upgrade and/or redesign of assets in support of the delivery of the Ministry for the Environment's service.

	2017/18 Actual \$000	2018/19 Budget \$000	2018/19 Revised budget \$000	2018/19 Actual \$000	2019/20 Unaudited forecast \$000
Expenditure is in accordance with the Ministry's capital asset management plan					
Property, plant and equipment	(1,128)	200	200	303	200
Intangibles	483	1,100	1,100	353	1,000
Total	(645)	1,300	1,300	656	1,200

Total expenditure in this output class was overall lower than budget. Expenditure for property, plant and equipment exceeded budget mainly due to a refresh of computer hardware. Expenditure for intangibles was under budget, representing some delays in purchasing and developing computer software such as the document management system Te Puna. Some of this work will be progressed in 2019/20.





03

Our finances *Kōrero pūtea*

In part three we report on the financial resources we have used to deliver our services. This part also includes an independent audit report on our annual report.

Key topics

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Financial statements for the Ministry for the Environment

for the year ended 30 June 2019

Performance indicators for the year ended 30 June 2019

	Unit	2018/19 Actual	2018/19 Revised Budget*
Operating results			
Revenue: Crown	\$000	75,955	75,955
Revenue: Departmental and other	\$000	1,507	1,500
Output expenses	\$000	72,075	77,455
Gain on sale of assets	\$000	-	5
Net surplus	\$000	5,387	5
Working capital			
Net current assets	\$000	5,172	5,164
Current ratio	Ratio	1.34	1.63
Resource utilisation			
Plant and equipment			
Plant and equipment at year end	\$000	621	638
Value per employee	\$000	1.67	1.77
Additions as % of plant and equipment	%	48.79	31.35
Plant and equipment as % of total assets	%	2.78	4.04
Intangible assets			
Intangible assets at year end	\$000	1,135	1,833
Value per employee	\$000	3.05	5.09
Additions as % of intangible assets	%	31.10	60.01
Intangible assets as % of total assets	%	5.08	11.60
Taxpayers' funds			
Level at year end	\$000	5,992	5,992
Level per employee	\$000	16.12	16.64
Net cash flows			
Surplus/(deficit) from operating activities	\$000	3,013	3,592
Surplus/(deficit) from investing activities	\$000	(655)	(1,295)
Surplus/(deficit) from financing activities	\$000	(2,227)	(2,227)
Net increase/(decrease) in cash held	\$000	131	70
Human resources			
Staff turnover	%	24.8	21.6
Average length of service	Years	3.5	3.8
Total staff	No.	372	360

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Statement of comprehensive revenue and expense for the year ended 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Budget* \$000	2018/19 Actual \$000	2019/20 Forecast* \$000
Revenue					
Funding from the Crown		68,466	67,914	75,955	86,269
Other revenue	2	1,927	955	1,507	955
Gains		-	5	-	5
Total revenue		70,393	68,874	77,462	87,229
Expenses					
Personnel costs	3	38,030	41,865	42,386	51,883
Depreciation and amortisation expense	9, 10	929	1,326	1,111	1,165
Capital charge	4	360	360	360	360
Finance cost	5	35	-	-	-
Other expenses	6	28,812	25,318	28,218	33,816
Total expenses		68,166	68,869	72,075	87,224
Net surplus and total comprehensive revenue and expense		2,227	5	5,387	5

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 19.

Statement of financial position as at 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Budget* \$000	2018/19 Actual \$000	2019/20 Forecast* \$000
Assets					
Current assets					
Cash and cash equivalents	7	3,157	4,349	3,288	3,765
Receivables	8	12,183	10,028	17,128	9,800
Pre-payments		206	300	170	300
Total current assets		15,546	14,677	20,586	13,865
Non-current assets					
Plant and equipment	9	974	373	621	517
Intangible assets	10	1,242	2,161	1,135	1,989
Total non-current assets		2,216	2,534	1,756	2,506
Total assets		17,762	17,211	22,342	16,371
Liabilities					
Current liabilities					
Payables	11	5,207	7,330	6,417	5,465
Return of operating surplus	12	2,227	5	5,387	5
Provisions	13	32	-	777	-
Employee entitlements	14	2,661	2,307	2,833	2,693
Total current liabilities		10,127	9,642	15,414	8,163
Non-current liabilities					
Employee entitlements	14	866	800	936	866
Provisions	13	777	777	-	-
Total non-current liabilities		1,643	1,577	936	866
Total liabilities		11,770	11,219	16,350	9,029
Net assets		5,992	5,992	5,992	7,342
Equity					
Taxpayers' funds		5,992	5,992	5,992	7,342
Total equity		5,992	5,992	5,992	7,342

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 19.

Statement of changes in equity for the year ended 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Budget* \$000	2018/19 Actual \$000	2019/20 Forecast* \$000
Balance at 1 July		5,992	5,992	5,992	5,992
Comprehensive revenue and expense					
Surplus for the year		2,227	5	5,387	5
Total comprehensive revenue		2,227	5	5,387	5
Return of operating surplus to the Crown	12	(2,227)	(5)	(5,387)	(5)
Capital contribution		-	-	-	1,350
Balance at 30 June		5,992	5,992	5,992	7,342

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Statement of cash flows for the year ended 30 June 2019

	2017/18 Actual \$000	2018/19 Budget* \$000	2018/19 Actual \$000	2019/20 Forecast* \$000
Cash flows from operating activities				
Receipts from the Crown	67,593	67,914	70,356	86,269
Receipts from other revenue	1,510	955	2,112	955
Payments to suppliers	(29,487)	(25,318)	(27,462)	(34,680)
Payments to employees	(37,629)	(41,865)	(42,176)	(51,796)
Payments for capital charge	(180)	(360)	(540)	(360)
Goods and services tax (net)	296	-	723	-
Net cash flow from operating activities	2,103	1,326	3,013	388
Cash flows from investing activities				
Receipts from sale of plant and equipment	1,698	5	-	5
Purchase of plant and equipment	(569)	(200)	(302)	(200)
Purchase of intangible assets	(483)	(1,100)	(353)	(1,000)
Net cash flow from investing activities	646	(1,295)	(655)	(1,195)
Cash flows from financing activities				
Capital contribution received	-	-	-	1,350
Return of operating surplus	(3,667)	(5)	(2,227)	(5)
Net cash flow from financing activities	(3,667)	(5)	(2,227)	1,345
Net increase/(decrease) in cash	(918)	26	131	538
Cash at the beginning of the year	4,075	4,323	3,157	3,227
Cash at the end of the year	3,157	4,349	3,288	3,765

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

The GST (net) component of operating activities reflects the net GST paid and received with the Inland Revenue Department. The GST (net) component has been presented on a net basis, as the gross amounts do not provide meaningful information for financial statement purposes and to be consistent with the presentation basis of the other primary financial statements.

Statement of cash flows for the year ended 30 June 2019 (continued)

Reconciliation of net surplus to net cash flow from operating activities

	2017/18 Actual \$000	2018/19 Actual \$000
Net surplus	2,227	5,387
Add/(less) non-cash items:		
Depreciation and amortisation expense	929	1,111
Restoration costs	35	-
Total non-cash items	964	1,111
Add/(less) items classified as investing or financing activities:		
(Gains)/losses on disposal of plant and equipment	-	5
Add/(less) movements in statement of financial position items:		
(Increase)/decrease in receivables	(1,437)	(4,945)
(Increase)/decrease in pre-payments	217	36
Increase/(decrease) in payables ²³	(269)	1,209
Increase/(decrease) in provisions	(19)	(32)
Increase/(decrease) in employee entitlements	420	242
Total net movement in working capital items	(1,088)	(3,490)
Net cash flow from operating activities	2,103	3,013

The accompanying accounting policies and notes form part of these financial statements.

23 Creditors and accruals for capital expenditure are excluded when calculating this increase or decrease.

Statement of commitments as at 30 June 2019

Capital commitments

Capital commitments are the aggregate amount of capital expenditure contracted for the acquisition of plant, and equipment and intangible assets that have not been paid for or not recognised as a liability at balance date.

Non-cancellable operating lease commitments

The Ministry leases plant and equipment in the normal course of its business. The majority of these are for premises and photocopiers in Wellington and Auckland, which have a non-cancellable leasing period ranging from one to six years.

The Ministry's non-cancellable operating leases have varying terms, escalation clauses, and renewal rights. There are no restrictions placed on the Ministry by any of its leasing arrangements.

The total amount of future sub-lease payments expected to be received under non-cancellable sub-leases at the balance date are \$62,965 (2017/18: \$131,653).

	2017/18 Actual \$000	2018/19 Actual \$000
Capital commitments		
Intangible assets	69	142
Total capital commitments	69	142
Operating leases as lessee		
The future aggregate minimum lease payments to be paid under non-cancellable operating leases are as follows:		
Not later than one year	2,425	2,020
Later than one year but not later than five years	2,020	-
Later than five years	-	-
Total non-cancellable operating lease commitments	4,445	2,020
Total commitments	4,514	2,162

Statement of contingent liabilities and contingent assets as at 30 June 2019

Contingent liabilities

There were four potential liabilities in relation to legal matters, with a total contingent liability of up to \$290,000 as at 30 June 2019 (2017/18: one potential liability in relation to a legal matter at up to \$30,000).

Contingent assets

There were no contingent assets as at 30 June 2019 (2017/18: nil).

Notes to the financial statements

1. Statement of accounting policies for the year ended 30 June 2019

Reporting entity

The Ministry for the Environment (the Ministry) is a government department as defined by section 2 of the Public Finance Act 1989 and is domiciled and operates in New Zealand. The relevant legislation governing the Ministry's operations includes the Public Finance Act 1989 and the Environment Act 1986. The Ministry's ultimate parent is the New Zealand Crown.

In addition, the Ministry has reported on Crown activities, which it administers.

The primary objective of the Ministry is to provide advice to the Government on the New Zealand environment and international matters that affect the environment. The Ministry does not operate to make financial returns. Accordingly, the Ministry has designated itself as a public benefit entity (PBE) for the purpose of financial reporting.

The financial statements of the Ministry are for the year ended 30 June 2019. The financial statements were authorised for issue by the Chief Executive of the Ministry on 30 September 2019.

Basis of preparation

The financial statements have been prepared on a going concern basis, and the accounting policies have been applied consistently throughout the period.

Statement of compliance

These financial statements have been prepared in accordance with the requirements of the Public Finance Act 1989, which includes the requirement to comply with the New Zealand generally accepted accounting practices (NZ GAAP) and Treasury instructions. They comply with Tier 1 Public Benefit Entity (PBE) accounting standards and other applicable financial reporting standards, as appropriate for public benefit entities.

Measurement base

The financial statements have been prepared on the basis of historical cost.

Function and presentation of currency

The financial statements are presented in New Zealand dollars and all values are rounded to the nearest thousand dollars (\$000) unless otherwise stated. The functional currency of the Ministry is New Zealand dollars.

Accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

The accrual basis of accounting has been used unless otherwise stated.

Accounting standard early adopted

In line with the Financial Statements of the Government, the Ministry has elected to early adopt PBE IFRS 9 Financial Instruments from 1 July 2018. This standard replaces PBE IPSAS 29 Financial Instruments: Recognition and Measurement. The application of the new PBE standard has not had a material impact on the Ministry's financial statements (refer note 20 for further information).

All other accounting policies adopted in these financial statements are consistent with those of the previous financial year.

Accounting standards issued and not yet effective and not early adopted

Standards and amendments, issued but not yet effective, that have not been early adopted are:

Amendment to PBE IPSAS 2 Statement of Cash Flows

An amendment to PBE IPSAS 2 Statement of Cash Flows requires entities to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. This amendment is effective for annual periods beginning on or after 1 January 2021, with early application permitted. The Ministry does not intend to early adopt the amendment.

PBE IPSAS 34-38

PBE IPSAS 34-38 replace the existing standards for interests in other entities (PBE IPSAS 6-8). These new standards are effective for annual periods beginning on or after 1 January 2019. The Ministry will apply these new standards in preparing the 30 June 2020 financial statements. No effect is expected as a result of this change.

PBE IPSAS 41 Financial Instruments

The XRB issued PBE IPSAS 41 Financial Instruments in March 2019. This standard supersedes PBE IFRS 9 Financial Instruments, which was issued as an interim standard. It is effective for reporting periods beginning on or after 1 January 2022. Although the Ministry has not assessed the effect of the new standard, it does not expect any significant changes as the requirements are similar to PBE IFRS 9.

PBE FRS 48 Service Performance Reporting

PBE FRS 48 replaces the service performance reporting requirements of PBE IPSAS 1 and is effective for reporting periods beginning on or after 1 January 2021. The Ministry has not yet determined how application of PBE FRS 48 will affect its statement of performance.

Significant accounting policies**Budgeting and forecasting figures**

The budget figures are those included in the Estimates of Appropriations (Budget) for the year ending 30 June 2019 (the Budget is 2018 Budget Economic and Fiscal Update (BEFU 2018) out-year 1 figures) and were published in the 2017/18 annual report.

The budget figures have been prepared in accordance with NZ GAAP, using accounting policies that are consistent with those adopted in preparing these financial statements and are based on PBE accounting standards.

The forecast figures are those included in the Estimates of Appropriations for the year ending 30 June 2020 (the Forecast is 2019 Budget Economic and Fiscal Update (BEFU 2019) out-year 1 figures).

The forecast figures are unaudited and have been prepared in accordance with the requirements of the Public Finance Act 1989, and comply with Tier 1 PBE accounting standards and other applicable financial reporting standards, as appropriate for public benefit entities. They are to be used in the future for reporting historical general purpose financial statements.

The Chief Executive is responsible for the forecast financial statements, including the appropriateness of the assumptions underlying them and all other required disclosures. The forecast financial statements were approved for issue by the Chief Executive on 24 April 2019.

The forecast figures contained in these financial statements reflect the Ministry's purpose and activities and are based on a number of assumptions on what may occur during the year 2019/20. Events and circumstances may not occur as expected. Factors that could lead to material differences between the forecast financial statements and the 2019/20 actual financial statements include changes to the baseline forecast through new initiatives, or technical adjustments.

Significant assumptions – forecast figures

The forecast figures have been compiled on the basis of existing government policies and Ministerial expectations at the time the BEFU 2019 was finalised.

The main assumptions were as follows:

- The Ministry's activities will remain substantially the same as the previous year, based on the Government's current priorities. These priorities include the major themes of waste minimisation, climate change policy, resource management, and water management.
- Personnel costs were based on 503 full-time equivalent staff, which takes into account staff turnover.
- Operating costs were based on historical experience and various other factors that were believed to be reasonable under the circumstances.
- The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revisions and future periods if the revision affects both current and future periods.
- Estimated year-end information for 2018/19 was used as the opening position for the 2019/20 forecasts.

Expenses

Cost allocation

The Ministry derives the cost of outputs using a cost allocation system. Direct costs are charged directly to the Ministry's outputs. Indirect costs are charged to outputs based on a primary cost driver of salaried full-time equivalents. There were no material changes to the cost allocation model during the 2018/19 year.

Direct costs are those costs directly attributed to an output. Indirect costs are those costs that cannot be directly associated with a specific output. For the year ended 30 June 2019, direct costs accounted for 51 per cent of the Ministry's costs (2017/18: 50 per cent) and indirect costs accounted for 49 per cent of the Ministry's costs (2017/18: 50 per cent).

Foreign currency

Transactions in foreign currencies are initially translated at the foreign exchange rate at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies at balance date are translated to New Zealand dollars at the foreign exchange rate at balance date. Foreign exchange gains or losses arising from translation of monetary assets and liabilities are recognised in the statement of comprehensive revenue and expense.

Cash and cash equivalents

Cash and cash equivalents include cash on hand and funds on deposit with banks.

The Ministry is only permitted to expend its cash and cash equivalents within the scope and limits of its appropriations.

While cash and cash equivalents at 30 June 2019 are subject to the expected credit loss requirements of PBE IFRS 9, no loss allowance has been recognised because the estimated loss allowance for credit losses is trivial.

Statement of cash flows

Cash means cash balances on hand and cash held in bank accounts.

Operating activities include cash received from all income sources of the Ministry and the cash payments made for the supply of goods and services.

Investing activities are those activities relating to the acquisition and disposal of non-current assets.

Financing activities comprise capital injections by, or repayment of capital to, the Crown.

Goods and Services Tax (GST)

All items in the financial statements, including appropriation statements, are stated exclusive of GST, except where otherwise stated. Receivables and payables in the statement of financial position are stated inclusive of GST. Where GST is not recoverable as an input tax, then it is recognised as part of the related asset or expense. The GST payable or receivable at balance date is included in payables or receivables in the statement of financial position.

Income tax

The Ministry is a public authority and consequently is exempt from the payment of income tax. Accordingly, no provision has been made for income tax.

Critical accounting estimates and assumptions

The preparation of financial statements in conformity with PBE accounting standards requires judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, revenue and expenses.

The estimates and associated assumptions are based on historical experience and other factors that are considered to be reasonable under the circumstances. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised, if the revisions affect only that period, or in the period of the revisions and future periods if the revisions affect both current and future periods.

Judgements that have a significant effect on the financial statements and estimates with a significant risk of material adjustments in the next year are discussed in the notes to the financial statements.

Note 14 provides the key assumptions used in determining the estimates for long service leave and retirement gratuities.

Commitments

Commitments are future expenses and liabilities to be incurred on contracts that have been entered into as at balance date. Information on non-cancellable capital and lease commitments are reported in the statement of commitments.

Contingencies

Contingent liabilities and contingent assets are reported at the point at which the contingency is evident or when a present liability is unable to be measured with sufficient reliability to be recorded in the financial statements (unquantifiable liability). Contingent liabilities, including unquantifiable liabilities, are disclosed if the possibility that they will crystallise is not remote. Contingent assets are disclosed if it is probable that the benefits will be realised.

Comparatives

When presentation or classification of items in the financial statements is amended or accounting policies are changed voluntarily, comparative figures are restated to ensure consistency with the current year.

2. Revenue

Accounting policy

Revenue Crown

Revenue from the Crown is measured based on the Ministry's funding entitlement for the reporting period. The funding entitlement is established by Parliament when it passes the Appropriation Acts for the financial year. The amount of revenue recognised takes into account any amendments to appropriations approved in the Appropriation (Supplementary Estimates) Act for the year and certain other unconditional funding adjustments formally approved prior to balance date.

There are no conditions attached to the funding from the Crown. However, the Ministry can incur expenses only within the scope and limits of its appropriations.

The fair value of Revenue Crown has been determined to be equivalent to the funding entitlement.

Revenue other

The Ministry derives revenue through the provision of services to third parties. Such revenue is recognised when earned and is reported in the financial period to which it relates.

Breakdown of other revenue

	2017/18 Actual \$000	2018/19 Actual \$000
Departmental	1,338	938
Other	589	569
Total other revenue	1,927	1,507

3. Personnel costs

Accounting policy

Salaries and wages

Salaries and wages are recognised as an expense as employees provide services.

Superannuation schemes

Defined contribution schemes

Employee contributions to the State Sector Retirement Savings Scheme, KiwiSaver, and the Government Superannuation Fund are accounted for as defined contribution superannuation schemes and are expensed in the surplus or deficit as incurred.

Breakdown of personnel costs

	2017/18 Actual \$000	2018/19 Actual \$000
Salaries and wages	35,886	40,107
Employer contributions to defined contribution plans	1,118	1,258
ACC Levy	88	84
Net employee entitlements	781	902
Other	157	35
Total personnel costs	38,030	42,386

4. Capital charge**Accounting policy**

The capital charge is recognised as an expense in the financial year to which the charge relates.

Further information

The Ministry pays a capital charge to the Crown on its equity as at 30 June and 31 December each year. The capital charge rate for the year ended 30 June 2019 was 6% (2017/18: 6%).

5. Finance costs

	2017/18 Actual \$000	2018/19 Actual \$000
Discount unwind on provisions (note 13)	35	-
Total finance costs	35	-

6. Other expenses

Accounting policy

Operating leases

An operating lease is a lease where the lessor does not transfer substantially all the risks and rewards of ownership of an asset. Lease payments under an operating lease are recognised as an expense in a systematic manner over the term of the lease.

Lease incentives received are recognised evenly over the term of the lease as a reduction in rental expense.

Grants/subsidies

Where grants and subsidies are discretionary until payment, the expense is recognised when the payment is made. Otherwise, the expense is recognised when the specified criteria have been fulfilled and notice has been given to the recipient.

Other expenses

Other expenses are recognised as goods and services are received.

Breakdown of other expenses and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Audit fees for the financial statement audit	206	224
Operating lease expenses	2,503	2,425
Advertising and publicity	760	609
Contributions and sponsorship	541	859
External resources:		
Advisory groups	459	207
Services provided by other government agencies	2,858	3,801
Data/imagery	1,011	329
Annual outsourced specialist services	3,623	3,729
Other professional consulting fees	8,640	7,957
Contracted research	1,097	327
General and administration	3,486	3,807
Net loss on disposal of property, plant and equipment	-	5
Other expenses	3,628	3,939
Total other operating expenses	28,812	28,218

7. Cash and cash equivalents

Accounting policy

Cash and cash equivalents include cash on hand, deposits held on call with banks, and other short-term highly liquid investments with original maturities of three months or less.

Breakdown of cash and cash equivalents and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Cash at bank and on hand	3,157	3,288

While cash and cash equivalents at 30 June 2019 are subject to the expected credit loss requirements of PBE IFRS 9, no loss allowance has been recognised because the estimated loss allowance for credit losses is trivial.

8. Receivables

Accounting policy

Receivables are initially measured at their face value, less an allowance for expected credit losses. The Ministry applies the simplified expected credit loss model of recognising lifetime expected credit losses for receivables.

In measuring expected credit losses, short-term receivables have been assessed on a collective basis as they possess shared credit risk characteristics. They have been grouped based on the days past due.

Short-term receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include the debtor being in liquidation.

Previous accounting policy for impairment of receivables

In the previous year, the allowance for credit losses was based on the incurred credit loss model. An allowance for credit losses was recognised only when there was objective evidence that the amount due would not be fully collected.

Breakdown of receivables and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Receivables from non-exchange transactions		
Debtor Crown	11,410	17,009
GST refund	-	-
Total receivables from non-exchange transactions	11,410	17,009
Receivables from exchange transactions		
Debtors other	773	119
Total receivable from exchange transactions	773	119
Total receivables	12,183	17,128

There have been no changes during the reporting in the estimation techniques or significant assumptions used in measuring the loss allowance.

The allowance for credit losses at 30 June 2019 and 1 July 2018 was determined as follows:

30 June 2019	Receivable days past due				Total
	Current	More than 30 days	More than 60 days	More than 90 days	
Expected credit loss rate	0%	0%	0%	0%	-
Gross carrying amount (\$000)	17,121	7	-	-	17,128
Lifetime expected credit loss (\$000)	-	-	-	-	-

1 July 2018	Receivable days past due				Total
	Current	More than 30 days	More than 60 days	More than 90 days	
Expected credit loss rate	0%	0%	0%	0%	-
Gross carrying amount (\$000)	12,183	-	-	-	12,183
Lifetime expected credit loss (\$000)	-	-	-	-	-

The movement in the allowance for credit losses is as follows:

	2017/18 Actual \$000	2018/19 Actual \$000
Allowance for credit losses as at 1 July calculated under PBE IPSAS 29	-	-
PBE IFRS 9 expected credit loss adjustment	N/A	-
Opening allowance for credit losses as at 1 July	-	-
Increase in loss allowance made during the year	-	421
Receivables written off during the year	-	(421)
Balance at 30 June	-	-

9. Plant and equipment

Accounting policy

Plant and equipment consists of furniture and fittings (including leasehold improvements), office equipment and computer hardware. Plant and equipment are recognised and disclosed at cost less accumulated depreciation and impairment losses.

Additions

Individual assets, or group of assets, are capitalised if their cost is greater than \$1,500. The value of an individual asset that is less than \$1,500 and is part of a group of similar assets is capitalised.

Work in progress is recognised at cost less impairment and is not depreciated.

Disposals

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of the asset. Gains and losses arising from disposal of plant and equipment are recognised in the statement of comprehensive revenue and expense in the period in which the transaction occurs. Any balance attributable to the disposed asset in the asset revaluation reserve is transferred to retained earnings.

Depreciation

Depreciation is provided on a straight-line basis on all plant and equipment, at a rate that will write off the cost (or valuation) of the assets, over their useful lives. The depreciation charge for each period is recognised in the statement of comprehensive revenue and expense. The useful lives and associated depreciation rates of major classes of assets have been estimated as follows:

Asset class	Useful life (years)	Depreciation rate (%)
Furniture and fittings	2-13	8.39-20.0
Office equipment	2-5	20.0
Computer hardware	2-4	25.0-33.33

Leasehold improvements (included in furniture and fittings) are capitalised and depreciated over the unexpired period of the lease or the estimated remaining useful lives of the improvements, whichever is shorter. Items classified as furniture and fittings but not deemed to be part of leasehold improvements are depreciated over their useful lives.

Impairment

Plant and equipment that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised in the statement of comprehensive revenue and expense for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

Value in use is depreciated replacement cost for an asset where the future economic benefits or service potential of the asset are not primarily dependent on the asset's ability to generate net cash inflows and where the Ministry would, if deprived of the asset, replace its remaining future economic benefits or service potential.

Breakdown of plant and equipment and further information

	Furniture and fittings \$000	Office equipment \$000	Computer hardware \$000	Total \$000
Cost				
Balance at 1 July 2017	4,127	348	2,370	6,845
Additions	285	5	234	524
Add: Closing work in progress	-	-	46	46
Less: Opening work in progress	(1,698)	-	-	(1,698)
Disposals	-	-	-	-
Balance at 30 June 2018	2,714	353	2,650	5,717
Balance at 1 July 2018	2,714	353	2,650	5,717
Additions	-	13	336	349
Add: Closing work in progress	-	-	-	-
Less: Opening work in progress	-	-	(46)	(46)
Disposals	-	(4)	(795)	(799)
Balance at 30 June 2019	2,714	362	2,145	5,221
Accumulated depreciation and impairment losses				
Balance at 1 July 2017	2,248	313	1,549	4,110
Depreciation expense	176	24	433	633
Balance at 30 June 2018	2,424	337	1,982	4,743
Balance at 1 July 2018	2,424	337	1,982	4,743
Depreciation expense	175	14	462	651
Elimination on disposal	-	(3)	(791)	(794)
Balance at 30 June 2019	2,599	348	1,653	4,600
Carrying amounts				
At 1 July 2017	1,879	35	821	2,735
At 30 June/1 July 2018	290	16	668	974
At 30 June 2019	115	14	492	621

Restrictions

There are no restrictions over the title of the Ministry's plant and equipment, nor are any plant and equipment pledged as security for liabilities.

10. Intangible assets

Accounting policy

Software acquisition and development

Acquired computer software licenses are capitalised on the basis of the costs incurred to acquire and bring to use the specific software.

Costs that are directly associated with the development of software for internal use by the Ministry are recognised as an intangible asset.

Costs associated with staff training and the maintenance of computer software is recognised as an expense when incurred.

Costs of software updates or upgrades are only capitalised when they increase the usefulness or value of the software.

Costs associated with development and maintenance of the Ministry's website are recognised as an expense when incurred.

Amortisation

The carrying value of an intangible asset with a finite life is amortised on a straight-line basis over its useful life. Amortisation begins when the asset is available for use and ceases at the date the asset is derecognised. The amortisation charge for each period is recognised in the statement of comprehensive revenue and expense.

Typically, the estimated useful lives and associated amortisation rates of intangible assets have been estimated as follows:

Asset class	Useful life (years)	Amortisation rate (%)
Acquired computer software	3–6	16.67–33.33
Acquired computer software licences (Land Use and Carbon Analysis System)	7.5	13.33
Developed computer software	3	33.33

Impairment

Intangible assets that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised in the statement of comprehensive revenue and expense for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

Value in use is depreciated replacement cost for an asset where the future economic benefits or service potential of the asset are not primarily dependent on the asset's ability to generate net cash inflows and where the Ministry would, if deprived of the asset, replace its remaining future economic benefits or service potential.

An intangible asset that is not yet available for use at the balance date is tested for impairment annually.

Critical accounting estimates and assumptions

Useful lives of software

The useful life of software is determined at the time the software is acquired and brought into use and is reviewed at each reporting date for appropriateness. For computer software licences, the useful life represents management's view of the expected period over which the Ministry will receive benefits from the software, but not exceeding the licence term. For internally generated software developed by the Ministry, the useful life is based on historical experience with similar systems as well as anticipation of future events that may impact the useful life, such as changes in technology.

Breakdown of intangible assets and further information

Movements in the carrying value for each class of intangible asset are as follows:

	Acquired software \$000	Acquired software licences \$000	Internally generated software (others) \$000	Internally generated software (LUCAS) \$000	Total \$000
Cost					
Balance at 1 July 2017	2,960	25	1,429	1,843	6,257
Additions	633	-	-	-	633
Add: Closing work in progress	93	-	-	-	93
Less: Opening work in progress	(243)	-	-	-	(243)
Balance at 30 June 2018	3,443	25	1,429	1,843	6,740
Balance at 1 July 2018	3,443	25	1,429	1,843	6,740
Additions	340	-	-	-	340
Add: Closing work in progress	106	-	-	-	106
Less: Opening work in progress	(93)	-	-	-	(93)
Balance at 30 June 2019	3,796	25	1,429	1,843	7,093
Accumulated amortisation and impairment losses					
Balance at 1 July 2017	2,005	25	1,329	1,843	5,202
Amortisation expense	291	-	5	-	296
Balance at 30 June 2018	2,296	25	1,334	1,843	5,498
Balance at 1 July 2018	2,296	25	1,334	1,843	5,498
Amortisation expense	460	-	-	-	460
Balance at 30 June 2019	2,756	25	1,334	1,843	5,958
Carrying amounts					
At 1 July 2017	955	-	100	-	1,055
At 30 June/1 July 2018	1,147	-	95	-	1,242
At 30 June 2019	1,040	-	95	-	1,135

Restrictions

There are no restrictions over the title of the Ministry's intangible assets, nor are any intangible assets pledged as security for liabilities.

11. Payables

Accounting policy

Creditors and other payables are non-interest bearing and are normally settled within 30 days, therefore payables are recorded at the amount payable.

Breakdown of payables and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Payables under exchange transactions		
Creditors	2,904	2,946
Accrued expenses	2,062	2,507
Total payables under exchange transactions	4,966	5,453
Payables under non-exchange transactions		
GST payable	241	964
Total payables	5,207	6,417

12. Return of operating surplus

	2017/18 Actual \$000	2018/19 Actual \$000
Net surplus	2,227	5,387
Total return of operating surplus	2,227	5,387

The return of the operating surplus to the Crown is required to be paid by 31 October of each year.

13. Provisions

Accounting policy

A provision is recognised for future expenditure of uncertain amount or timing when:

- there is a present obligation (either legal or constructive) as a result of a past event
- it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation
- a reliable estimate can be made of the amount of the obligation.

Provisions are not recognised for net deficits from future operating activities.

Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax discount rate based on market yields on government bonds at balance date with terms to maturity that match, as closely as possible, the estimated timing of the future cash outflows. The increase in the provision due to the passage of time is recognised as an interest expense and is included in 'finance costs' (see note 5).

Breakdown of provisions and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Current portion		
Holiday pay	32	-
Restoration costs	-	777
Total current portion	32	777
Non-current portion		
Restoration costs	777	-
Total provisions	809	777

Movements for each class of provision are as follows:

	Restoration costs \$000	Holiday pay \$000	Total \$000
Balance at 1 July 2017	742	51	793
Additional provisions made	-	-	-
Discount unwind (note 5)	35	-	35
Amounts used	-	(19)	(19)
Unused amounts reversed	-	-	-
Balance at 30 June 2018	777	32	809
Balance at 1 July 2018	777	32	809
Additional provisions made	-	-	-
Discount unwind (note 5)	-	-	-
Amounts used	-	(32)	(32)
Unused amounts reversed	-	-	-
Balance at 30 June 2019	777	-	777

Provisions represent:

- restoration costs in respect of the Ministry's leased premises. The Ministry is required at the expiry of the lease term to make good any damage caused to the premises and to remove any signage, fixtures and fittings installed by the Ministry
- holiday pay costs arising from a review of the application of the Holidays Act 2003 to annual leave payments.

14. Employee entitlements

Accounting policy

Short-term employee entitlements

Employee entitlements that are due to be settled within 12 months after the end of the period in which the employee renders the related service are measured based on accrued entitlements at current rates of pay.

These include salaries and wages accrued up to balance date, annual leave earned but not yet taken at balance date, long service leave, and retirement gratuities expected to be settled within 12 months.

Long-term employee entitlements

Employee entitlements that are due to be settled beyond 12 months after the end of the reporting period in which the employee renders the related service, such as long service leave and retirement gratuities, are calculated on an actuarial basis. The calculations are based on:

- likely future entitlements accruing to staff, based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement, and contractual entitlements information
- the present value of the estimated future cash flows.

Presentation of employee entitlements

Salaries and wages accrued, annual leave, vested long service leave, and non-vested long service leave and retirement gratuities expected to be settled within 12 months of balance date are classified as a current liability. All other employee entitlements are classified as a non-current liability.

Superannuation schemes

Obligations for contributions to defined contribution schemes such as the State Sector Retirement Savings Scheme, KiwiSaver, and the Government Superannuation Fund are recognised as an expense in the statement of comprehensive revenue and expense as incurred.

Critical accounting estimates and assumptions

Long service leave and retirement gratuities

The measurement of the long service leave and retirement gratuities obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions. Two key assumptions used in calculating this liability include the discount rate and the salary inflation factor. Any changes in these assumptions will affect the carrying amount of the liability.

Expected future payments are discounted using discount rates derived from the yield curve of New Zealand government bonds. The discount rates used have maturities that match, as closely as possible, the estimated future cash outflows. The rates used range from 1.03 per cent to 2.23 per cent (2017/18: 1.78 per cent to 3.55 per cent) and a long-term salary growth of 2.92 per cent (2017/18: 3.1 per cent) were used. The discount rates and salary inflation factor used are those advised by the Treasury.

If the discount rate were to differ by 1 per cent from the Ministry's estimates, with all other factors held constant, the carrying amount of the liability and the surplus/deficit would be an estimated \$10,000 higher/lower.

If the salary inflation factor were to differ by 1 per cent from the Ministry's estimates, with all other factors held constant, the carrying amount of the liability and the surplus/deficit would be an estimated \$10,000 higher/lower.

Breakdown of employee entitlements

	2017/18 Actual \$000	2018/19 Actual \$000
Current portion		
Salary accruals	274	307
Annual leave	2,063	2,231
Long service leave and retirement gratuities	324	295
Total current portion	2,661	2,833
Non-current portion		
Long service leave and retirement gratuities	866	936
Total employee entitlements	3,527	3,769

15. Capital management**Accounting policy**

The Ministry's capital is its equity, which comprise taxpayers' funds and is represented by net assets.

The Ministry manages its revenues, expenses, assets, liabilities, and general financial dealings prudently. The Ministry's equity is largely managed as a by-product of managing revenue, expenses, assets, liabilities, and compliance with the government budget processes, Treasury instructions, and the Public Finance Act.

The objective of managing the Ministry's equity is to ensure that the Ministry effectively achieves its goals and objectives for which it has been established while remaining a going concern.

16. Related party transactions

The Ministry is a wholly owned entity of the Crown. The Government significantly influences the roles of the Ministry as well as being its major source of revenue.

Related party disclosures have not been made for transactions with related parties that are within a normal supplier or client/recipient relationship on terms and condition no more or less favourable than those that it is reasonable to expect the Ministry would have adopted in dealing with the party at arm's length in the same circumstances.

The Ministry enters into transactions with government departments, Crown entities, and state-owned enterprises on an arm's length basis. Transactions with other government agencies are not disclosed as related party transactions when they are consistent with the normal operating arrangements between government agencies and undertaken on the normal terms and conditions for such transactions.

Key management personnel compensation

	2017/18 Actual	2018/19 Actual
Environmental Leadership Team, including the Chief Executive		
Remuneration	\$1,830,387	\$1,897,448
Full-time equivalent staff	5.4	5.8

The above key management personnel compensation excludes the remuneration and other benefits received by the Minister for the Environment and the Minister for Climate Change. The Ministers' remuneration and other benefits are not received only for their role as a member of key management personnel of the Ministry. The Ministers' remuneration and other benefits are set by the Remuneration Authority under the Members of Parliament (Remuneration and Services) Act 2013 and are paid under Permanent Legislative Authority, and not paid by the Ministry.

17. Events after the balance sheet date

No significant events which may impact on the results have occurred between year end and the signing of these financial statements.

18. Financial instruments

Financial instrument categories

The carrying amounts of financial assets and financial liabilities in each of the categories are as follows:

	2017/18 Actual \$000	2018/19 Actual \$000
Financial assets measured at amortised cost (2018: Loans and receivables)		
Cash and cash equivalents	3,157	3,288
Receivables	773	119
Total financial assets measured at amortised cost	3,930	3,407
Financial liabilities measured at amortised cost		
Payables	5,207	6,417

Financial instrument risks

The Ministry's activities expose it to a variety of financial instrument risks, including market risk, credit risk, and liquidity risk. The Ministry has policies to manage the risks associated with financial instruments and seeks to minimise exposure from financial instruments. These policies do not allow any transactions that are speculative in nature to be entered into.

Market risk

Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

The Ministry makes purchases of goods and services overseas that require it to enter into transactions denominated in foreign currencies and as a result, exposure to currency risk arises. This is considered to be immaterial and accordingly, no sensitivity analysis has been completed.

Fair value interest rate risk

Interest rate risk is the risk that the return on invested funds will fluctuate due to changes in market interest rates.

The Ministry has no significant exposure to interest rate risk because it has no interest-bearing financial instruments.

Credit risk

Credit risk is the risk that a third party will default on its obligations to the Ministry, causing the Ministry to incur a loss.

In the normal course of its business, credit risk arises from receivables and deposits with banks.

The Ministry is permitted to deposit funds only with Westpac, a registered bank. Westpac bank has a high credit rating of AA- (Standard and Poor's credit rating). For its other financial instruments, the Ministry does not have significant concentrations of credit risk.

The Ministry's maximum credit exposure for each class of financial instrument is represented by the total carrying amount of cash and cash equivalents, and receivables. There is no collateral held as security against these financial instruments, including those instruments that are overdue or impaired.

Cash and cash equivalents (note 7) and receivables (note 8) are subject to the expected credit loss model prescribed by PBE IFRS 9. The notes for these items provide relevant information on impairment.

Liquidity risk

Management of liquidity risk

Liquidity risk is the risk that the Ministry will encounter difficulty raising liquid funds to meet commitments as they fall due.

As part of meeting its liquidity requirements, the Ministry closely monitors its forecast cash requirements with expected cash draw-downs from the New Zealand Debt Management Office. The Ministry maintains a target level of available cash to meet liquidity requirements.

Contractual maturity analysis of financial liabilities

The table below analyses the Ministry's financial liabilities that will be settled based on the remaining period at the balance sheet date to the contractual maturity date. The amounts disclosed are the contractual undiscounted cash flows.

	Carrying amount \$000	Contractual cash flows \$000	Less than 6 months \$000	6 months - 1 year \$000	1-5 years \$000	More than 5 years \$000
2019						
Payables (note 11)	6,417	6,417	6,417	-	-	-
2018						
Payables (note 11)	5,207	5,207	5,207	-	-	-

19. Explanations of major variances against budget

Explanations for major variances from the Ministry's original 2018/19 budget figures are:

(i) Statement of comprehensive income

	2018/19 Actual \$000	2018/19 Budget \$000	2018/19 Variance \$000
Revenue Crown	75,955	67,914	8,041
Revenue other	1,507	955	552
Personnel costs	42,386	41,865	521
Contribution and sponsorship	859	285	574
External resources	16,350	14,705	1,645

Revenue Crown: The actual Crown revenue was higher than budget mainly due to:

- additional funding allocated for costs of collecting and administering waste levies and monitoring projects funded by the levy
- additional funding allocated for provision of policy advice related to the domestic climate change programme
- additional funding allocated for development of a national carbon accounting system and policy advice related to international climate change issues and agreements
- additional funding allocated to progress work to establish an Independent Climate Change Commission.

Revenue other: The actual other revenue was higher than budget primarily due to: revenue received from other agencies for staff secondments, international travel reimbursements, and other services provided by the Ministry.

Contribution and sponsorship: The actual expense was higher than budget due to the Ministry providing additional contributions towards the costs of Fox River clean-up, Sustainable Business EMBARK and other climate change related programmes.

Personnel costs and external resources: The actual personnel and the external resources costs were higher than budget because additional resources were employed to continue the Ministry's work programmes. The Ministry received additional funding for progressing water management reforms and the climate change work programme.

(ii) Statement of financial position

	2018/19 Actual \$000	2018/19 Budget \$000	2018/19 Variance \$000
Cash and cash equivalents	3,288	4,349	(1,061)
Receivables	17,128	10,028	7,100
Intangible assets	1,135	2,161	1,132
Payables	6,417	7,330	(913)
Employee entitlements	2,833	2,307	526

Cash and cash equivalents: The actual cash position was lower than budget due to a larger number of 2018/19 liabilities paid out prior to year-end than expected, as reflected in the lower payables balance below.

Receivables: The higher level of receivables primarily relates to amounts receivable from the Crown. Funds drawn down by the Ministry during the year differed from budget, leaving an increased amount receivable at year-end.

Intangible assets: The actual intangible assets position was lower than budget due to delayed start for projects, such as, development of the Funds Management System, Document Management System Stage 3 (Workflow and Fileshares).

Payables: The actual payables were lower than budget due to lower than expected year-end accruals. A larger number of 2018/19 liabilities were paid out prior to year-end than expected, and this is reflected in the lower cash balance above.

Employee entitlements: The higher level of employee entitlements primarily relates to increase in annual leave payable, salary accruals at the year end.

(iii) Statement of cash flows

	2018/19 Actual \$000	2018/19 Budget \$000	2018/19 Variance \$000
Receipts from the Crown	70,356	67,914	2,442
Receipts from revenue other	2,112	568	1,544
Payments to suppliers	27,462	25,423	2,039

Explanations for variances in the Statement of cash flows are explained above.

20. Adoption of PBE IFRS 9 Financial Instruments

In accordance with the transitional provisions of PBE IFRS 9, the Ministry has elected not to restate the information for previous years to comply with PBE IFRS 9. Adjustments arising from the adoption of PBE IFRS 9 are recognised in opening equity at 1 July 2018.

Accounting policies have been updated to comply with PBE IFRS 9. The main update is:

- Note 8 Receivables: This policy has been updated to reflect that the impairment of short-term receivables is now determined by applying an expected credit loss model.

On the date of initial application of PBE IFRS 9, being 1 July 2018, the classification of financial instruments under PBE IPSAS 29 and PBE IFRS 9 is as follows:

	Measurement category		Carrying amount		
	Original PBE IPSAS 29 category	New PBE IFRS 9 category	Closing balance 30 June 2018 (PBE IPSAS 29) \$000	Adoption of PBE IFRS 9 adjustment \$000	Opening balance 1 July 2018 (PBE IFRS 9) \$000
Cash and cash equivalents	Loans and receivables	Amortised cost	3,157	0	3,157
Receivables	Loans and receivables	Amortised cost	12,183	0	12,183
Total financial assets			15,340	0	15,340

The measurement categories and carrying amounts for financial liabilities have not changed between the closing 30 June 2018 and opening 1 July 2018 dates as a result of the transition to PBE IFRS 9.

Non-departmental statements and schedules

for the year ended 30 June 2019

The following non-departmental statements and schedules record the revenue, expenses, assets, liabilities, commitments, contingent liabilities, and contingent assets the Ministry manages on behalf of the Crown.

Schedule of non-departmental revenue for the year ended 30 June 2019

	2017/18 Actual \$000	2018/19 Mains Forecast*	2018/19 Actual \$000	2019/20 Forecast*
Revenue				
Royalties	616	750	773	750
Levies	37,786	38,100	41,546	40,100
Emissions trading	669,392	783,818	846,396	1,054,518
Emissions Trading Scheme penalty revenue	103	-	674	-
Grants refund	23	-	3	-
Total non-departmental revenue	707,920	822,668	889,392	1,095,368

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 9.

Schedule of non-departmental capital receipts for the year ended 30 June 2019

The Ministry on behalf of the Crown has no capital receipts (2017/18: \$nil).

Schedule of non-departmental expenses for the year ended 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Mains Forecast*	2018/19 Actual \$000	2019/20 Forecast*
Expenses					
Grants and settlements		41,352	53,122	42,963	67,290
Promotions		800	800	800	800
Subscriptions and contributions to international forums		1,092	1,185	1,074	1,185
Crown entity funding		25,369	25,217	25,517	26,117
Levy disbursement		17,371	18,000	18,489	18,000
Allocation of New Zealand Units		719,667	521,093	543,251	565,922
Net changes in carbon price of New Zealand units	6	462,273	-	224,494	-
GST input expense		10,864	13,295	11,166	15,916
Other		3,607	1,677	3,062	2,327
Total non-departmental expenses		1,282,395	634,389	870,816	697,557

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 9.

Schedule of non-departmental assets as at 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Mains Forecast*	2018/19 Actual \$000	2019/20 Forecast*
Assets					
Current assets					
Cash and cash equivalents	2	5,900	4,715	6,487	4,838
Receivables	3	8,997	8,750	8,983	8,750
Total current assets		14,897	13,465	15,470	13,588
Non-current assets					
Total non-departmental assets		14,897	13,465	15,470	13,588

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 9.

In addition, the Ministry monitors the Environmental Protection Authority which is a Crown entity. The investment in this entity is recorded within the Financial Statements of the Government on a line-by-line basis. No disclosure is made in this schedule.

Schedule of non-departmental liabilities as at 30 June 2019

	Notes	2017/18 Actual \$000	2018/19 Mains Forecast*	2018/19 Actual \$000	2019/20 Forecast*
Liabilities					
Current liabilities					
Payables	4	45,462	36,139	50,096	45,461
Provisions	6	2,543,281	2,357,436	2,883,678	2,182,284
Total current liabilities		2,588,743	2,393,575	2,933,774	2,227,745
Non-current liabilities					
Payables	4	114,230	107,687	109,503	104,489
Provisions	6	-	4,182	-	-
Total non-current liabilities		114,230	111,869	109,503	104,489
Total non-departmental liabilities		2,702,973	2,505,444	3,043,277	2,332,234

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

Explanations of significant variances against budget are detailed in note 9.

Schedule of non-departmental commitments as at 30 June 2019

The Ministry, on behalf of the Crown, has no non-cancellable capital or lease commitments (2017/18: \$nil).

Schedule of non-departmental contingent liabilities and contingent assets as at 30 June 2019

Unquantifiable contingent liabilities and contingent assets

Environmental liabilities

Under common law and various statutes, the Crown may have responsibility to remedy adverse effects on the environment arising from Crown activities.

Liabilities for contaminated sites are recognised in accordance with PBE IPSAS 19: Provisions, Contingent Liabilities and Contingent Assets. Obligations for the clean up of contaminated sites expressed in announcements or legislation are not recognised where they are executory in nature or have not created a valid expectation in other parties that the Crown will discharge the obligation.

New Zealand Emissions Trading Scheme

Post-1989 forest land

Owners of post-1989 forest land (or those with a registered interest in the forest on the land) may voluntarily become participants in the New Zealand Emissions Trading Scheme (NZ ETS), and in so doing are entitled to receive New Zealand Units (NZUs) for the increase in carbon stock in their forests.

Those landowners who have not registered their post-1989 forest land or who have deregistered from the scheme have until the end of 2022 (the third five year period beginning 1 January 2018 to 31 December 2022) to decide whether to re-register post-1989 forest land and receive NZUs for the period beginning from 1 January 2018. If they re-register, they can claim NZUs for all the carbon stored in their forest from 1 January 2018, subject to review and approval of their applications.

Participants also have various legal obligations including the surrender of units if the carbon stocks in their registered forest areas fall below a previously reported level (for example, due to harvesting or fire). However, the surrender liability is capped at the amount of units previously received by the participant for that area of forest land (if any).

Assets and liabilities relating to the post-1989 forestry sector have only been recognised in these non-departmental financial statements and schedules to the extent that participants have registered in the scheme at 30 June 2019.

Pre-1990 forest land

Pre-1990 forest land is an area that was forest land on 31 December 1989, and that on 31 December 2007 is still forest land and is covered by predominantly exotic forest species.

Subject to various exemptions, if an area of more than two hectares of pre-1990 forest land is deforested in any five year period from 1 January 2008, the landowner becomes a mandatory participant in the NZ ETS. The landowner must submit an emissions return and either surrender units or pay cash at a rate of \$25 per NZU for emissions resulting from deforestation.

At 30 June 2019, there may be some deforestation which has not yet been reported to the Crown.

Quantifiable contingent liabilities

Sand royalties

Customary marine title holders under the Marine Coastal Area (Takutai Moana) Act 2011 could have payments issued to them retrospectively with regard to sand and shingle royalties, if the royalty is taken in the customary marine title area. The amount could be between \$500,000 and \$2 million (2017/18: \$nil).

The Ministry on behalf of the Crown has no other contingent liability or assets (2017/18: \$nil).

Notes to the non-departmental financial statements

1. Statement of accounting policies for the year ended 30 June 2019

Reporting entity

These non-departmental statements and schedules present financial information on public funds managed by the Ministry on behalf of the Crown.

These non-departmental balances are consolidated into the Financial Statements of the Government. For a full understanding of the Crown's financial position, results of operations, and cash flows for the year, refer to the Financial Statements of the Government for the year ended 30 June 2019.

Basis of preparation

These non-departmental statements and schedules have been prepared in accordance with the Government's accounting policies as set out in the Financial Statements of the Government, and in accordance with relevant Treasury instructions and Treasury circulars.

Measurements and recognition rules applied in the preparation of these non-departmental statements and schedules are consistent with New Zealand generally accepted accounting practice (Tier 1 Public Sector Public Benefit Entity Accounting Standards) as appropriate for public benefit entities.

Accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

The accrual basis of accounting has been used unless otherwise stated.

Accounting standard early adopted

In line with the Financial Statements of the Government, the Ministry has elected to early adopt PBE IFRS 9 Financial Instruments from 1 July 2018. This standard replaces PBE IPSAS 29 Financial Instruments: Recognition and Measurement. The application of the new PBE standard has not had a material impact on the Ministry's financial statements (refer note 10 for further information).

All other accounting policies adopted in these financial statements are consistent with those of the previous financial year.

The following particular accounting policies have been applied:

Significant accounting policies

Budgeting and forecasting figures

The budget figures are those included in the Estimates of Appropriations (Budget) for the year ending 30 June 2019 and the Supplementary Estimates of Appropriations (Revised Budget) for the year ending 30 June 2019 (the Budget is 2018 Budget Economic and Fiscal Update (BEFU 2018) out-year 1 figures and the Revised Budget is SUPPS 2019 out-year 0 figures).

The budget figures have been prepared in accordance with NZ GAAP, using accounting policies that are consistent with those adopted in preparing these financial statements and are based on PBE standards.

The Budget figures used in these financial statements for the New Zealand Emissions Trading Scheme (NZ ETS) surrender of units and allocation of NZUs were valued using market prices per carbon unit at the time of the Budget forecast. Similarly, the liability provision for the NZ ETS was valued using market price per carbon unit at the time of Budget forecast. Budget (mains forecast) figure for the appropriation of Allocation of New Zealand Units is based on NZ\$25 per carbon unit and the budget (revised forecast) figure for the appropriation of Allocation of New Zealand Units is based on NZ\$30 per carbon unit to mitigate the risk of breaching the appropriation.

The forecast figures are those included in the Estimates of appropriations for the year ending 30 June 2020 (the Forecast is 2019 Budget Economic and Fiscal Update (BEFU 2019) out-year 1 figures) except for the figures used in these financial statements for the NZ ETS surrender of units and allocation of NZUs. These are valued using market prices per carbon unit at the time of the BEFU 2019 forecast. Similarly, the liability provision for the NZ ETS is valued using market prices per carbon unit at the time of BEFU 2019 forecast. The forecast figure for the appropriation of Allocation of New Zealand Units was valued at NZ\$25 per carbon unit.

The forecast figures are unaudited and have been prepared in accordance with the requirements of the Public Finance Act 1989, and comply with Tier 1 PBE accounting standards and other applicable financial reporting standards, as appropriate for public benefit entities. They are to be used in the future for reporting historical general purpose financial statements.

The forecast figures contained in these financial statements reflects the Ministry's purpose and activities and are based on a number of assumptions on what may occur during the year 2019/20. Events and circumstances may not occur as expected. Factors that could lead to material differences between the forecast financial statements and the 2019/20 actual financial statements include changes to the baseline forecast through new initiatives, or technical adjustments.

New Zealand Emissions Trading Scheme

The NZ Emissions Trading Scheme (NZ ETS) is New Zealand's primary response to global climate change. It puts a price on greenhouse gases to provide an incentive to reduce emissions, invest in energy efficiency, and plant trees.

The purpose of the scheme is to help reduce New Zealand's emissions to below business-as-usual levels and help New Zealand meet its international obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. This is achieved by establishing a price on emissions, which creates a financial incentive for emitters to reduce their emissions.

In operation since 2008, the mandatory NZ ETS currently covers emissions from forestry, stationary energy, industrial processes and liquid fossil fuels, which are collectively responsible for roughly 50 per cent of New Zealand's emissions. Emissions from waste are covered by the NZ ETS from 2013, while emissions from synthetic gases are covered by the NZ ETS or a levy from 2013. Since 1 January 2012, the agricultural sector has had mandatory reporting obligations under the NZ ETS.

The New Zealand Emissions Trading Scheme is the system in which New Zealand Units (NZUs) are traded. Under the NZ ETS, certain sectors are required to acquire and surrender NZUs or other eligible emission units to account for their direct greenhouse gas emissions or the emissions associated with their products.

Detailed information can be found on the [Ministry for the Environment's website](#).

The Ministry collects forecast information in relation to the allocation and surrender of units from different agencies:

- The Ministry for Primary Industries provides information on post-1989 and Permanent Forest Sink Initiative allocation, deforestation and deregistration forecast.
- The Ministry of Business, Innovation and Employment provides information for surrender of units for Liquid fossil fuels and Stationary energy and industrial processes.
- The Environmental Protection Authority provides information on allocation of units to industrial sectors and other removable activities.
- The Ministry for the Environment provides surrender forecast for Synthetic Greenhouse Gases (SGG) and the Waste sectors; and allocation forecast for SGG, Waste sectors, and the Negotiated Greenhouse Agreements.

Revenue

The Ministry collects revenue on behalf of the Crown. This revenue includes the Waste Disposal Levy which is legislated under the Waste Minimisation Act 2008, the Synthetic Greenhouse Gas Levy under the Climate Change Response Act 2002, and the Climate Change (Synthetic Greenhouse Gas Levies) Regulations 2013 and from the surrender of units under the New Zealand Emissions Trading Scheme (NZ ETS).

The Waste Disposal Levy revenue is recognised in the month when waste is disposed at landfill.

The Synthetic Greenhouse Gas Levy revenue is recognised in the month when it is collected by the New Zealand Transport Agency.

Revenue (including accruals) arising from the NZ ETS is recognised when a participant makes emissions or a liability to the Crown is incurred.

Expenses

Grant expenditure

Non-discretionary grants are those grants awarded if the grant application meets the specified criteria. They are recognised as expenditure when an application that meets the specified criteria for the grant has been received.

Discretionary grants are those grants where the Ministry has no obligation to award on receipt of the grant application.

For discretionary grants without substantive conditions, the total committed funding over the life of the funding agreement is recognised as expenditure when the grant is approved by the relevant committee or body and the approval has been communicated to the applicant for example, Environmental Legal Assistance.

Grants with substantive conditions are recognised as an expense at the earlier of the grant payment date or when the grants conditions have been satisfied.

Allocation of New Zealand Units (NZUs) under the NZ ETS

Expenses (including accruals) arising from the allocation of NZUs under the NZ ETS is recognised as follows:

- For NZUs issued as one-off compensation (such as the pre-1990 forestry allocation), expenditure is recognised at the point that the participant has provided all relevant information to the Government to show they have met the criteria and rules for the issue of NZUs and are entitled to them under the NZ ETS.
- For NZUs issued for carbon sequestration (such as post-1989 forestry) or as annual compensation for NZ ETS costs (such as the industrial allocation), expenditure is recognised when the carbon is sequestered (based on forecasts of sequestration for registered participants in the scheme at each reporting date) or as the emissions compensated by the industrial allocation occur.

The methodology used to approximate the price at the date of each transaction is the lower of the monthly average NZU price and the spot NZU price at the end of each month.

Levy disbursement

Expenses arising from waste levy disbursements are recognised in the month the waste is disposed at landfill. Under the Waste Minimisation Act 2008, 50 per cent of the levy collected must be distributed to territorial local authorities.

Settlement expenditure

An expense and an associated provision is recognised for settlement agreements with Waikato River iwi and other iwi on the initialling of the deeds of settlement by the Crown and the relevant iwi.

Foreign exchange

Foreign currency transactions are translated into New Zealand dollars using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of the monetary assets and liabilities denominated in foreign currencies are recognised in the schedule of non-departmental revenue or expenses.

Goods and services tax

All items in the financial statements, including appropriation statements, are stated exclusive of GST, except for receivables and payables, which are stated on a GST inclusive basis. In accordance with the Treasury instructions, GST is returned on revenue received on the behalf of the Crown, where applicable. However, an input tax deduction is not claimed on non-departmental expenditure. Instead, the amount of GST applicable to non-departmental expenditure is recognised as a separate expense and eliminated against GST revenue on consolidation of the Financial Statements of the Government.

Commitments

Future expenses and liabilities to be incurred on non-cancellable contracts that have been entered into as at balance date are disclosed as commitments to the extent that there are equally unperformed obligations.

Cancellable commitments that have penalty or exit costs explicit in the agreement on exercising that option to cancel are included in the statement of commitments at the lower of the remaining contractual commitment and the value of that penalty or exit cost.

Contingent liabilities

Contingent liabilities are disclosed at the point at which the contingency is evident.

Critical accounting estimates and assumptions

The preparation of financial statements in conformity with PBE accounting standards requires judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, revenue and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are considered to be reasonable under the circumstances. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised, if the revisions affect only that period, or in the period of the revisions and future periods if the revisions affect both current and future periods.

Judgements that have a significant effect on the financial statements and estimates with a significant risk of material adjustments in the next year are discussed in the notes to the financial statements.

Note 6 provides the key assumptions used in determining the provision for the allocation of NZUs.

2. Cash and cash equivalents**Accounting policy**

Cash and cash equivalents include cash on hand, deposits held on call with banks, and other short-term highly liquid investments with original maturities of three months or less.

Breakdown of cash and cash equivalents and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Cash at bank and on hand	5,900	6,487

While cash and cash equivalents at 30 June 2019 are subject to the expected credit loss requirements of PBE IFRS 9, no loss allowance has been recognised because the estimated loss allowance for credit losses is trivial.

3. Receivables

Accounting policy

Receivables are initially measured at their face value, less an allowance for expected credit losses. The Ministry applies the simplified expected credit loss model of recognising lifetime expected credit losses for receivables.

In measuring expected credit losses, short-term receivables have been assessed on a collective basis as they possess shared credit risk characteristics. They have been grouped based on the days past due.

Short-term receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include the debtor being in liquidation.

Previous accounting policy for impairment of receivables

In the previous year, the allowance for credit losses was based on the incurred credit loss model. An allowance for credit losses was recognised only when there was objective evidence that the amount due would not be fully collected.

Breakdown of receivables and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Receivables	5,855	5,992
Fines and penalties receivable	46	77
Accrued revenue	3,194	3,664
Total receivables	9,095	9,733
Less allowance for credit losses	(98)	(750)
Total receivables – non-exchange	8,997	8,983

The expected credit loss rates for receivables at 30 June 2019 and 1 July 2018 are based on the payment profile of revenue on credit over the prior 12 months at the measurement date and the corresponding historical credit losses experienced for that period. Judgement is also applied to determine whether historical loss rates are expected to continue into the future, and any adjustment to the loss rates due to current and forward-looking macroeconomic factors that might affect the recoverability of receivables.

There have been no changes during the reporting in the estimation techniques or significant assumptions used in measuring the loss allowance.

The allowance for credit losses at 30 June 2019 and 1 July 2018 was determined as follows:

	Receivable days past due				Total
	Current	More than 30 days	More than 60 days	More than 90 days	
30 June 2019					
Expected credit loss rate	0%	0%	0%	0%	-
Gross carrying amount (\$000)	8,943	0	3	37	8,983
Lifetime expected credit loss (\$000)	0	0	0	0	0

	Receivable days past due				Total
	Current	More than 30 days	More than 60 days	More than 90 days	
1 July 2018					
Expected credit loss rate	0%	0%	0%	0%	-
Gross carrying amount (\$000)	8,982	0	13	2	8,997
Lifetime expected credit loss (\$000)	0	0	0	0	0

The movement in the allowance for credit losses is as follows:

	2017/18 Actual \$000	2018/19 Actual \$000
Allowance for credit losses as at 1 July calculated under PBE IPSAS 29	-	-
PBE IFRS 9 expected credit loss adjustment	N/A	-
Opening allowance for credit losses as at 1 July	-	-
Increase in loss allowance made during the year	98	750
Receivables written off during the year	(98)	(750)
Balance at 30 June	-	-

4. Payables

Accounting policy

Short-term payables are recorded at the amount payable.

Breakdown of payables and further information

	2017/18 Actual \$000	2018/19 Actual \$000
Current payables are represented by:		
Waikato River Co-management	5,708	5,708
Waikato River Clean-up Fund	6,904	6,904
Te Pou Tupua	590	590
Transitional Support for Local Government and Iwi	-	2,795
GST payable	521	517
Other payables	31,739	33,582
Total current portion	45,462	50,096
Non-current payables are represented by:		
Waikato River Co-management	35,863	33,382
Waikato River Clean-up Fund	76,459	74,304
Te Pou Tupua	1,908	1,817
Total non-current portion	114,230	109,503
Total payables - non-exchange	159,692	159,599

The carrying value of payables approximates their fair value.

Payables are non-interest bearing and are normally settled within 30 days except for the Waikato River Co-management and the Waikato River Clean-up Fund. These payments are settled on the due dates.

Recognition of future discounted cash flows for the Waikato River Funds

	Payables					Total \$000
	2019-2020 \$000	2021-2025 \$000	2026-2030 \$000	2031-2035 \$000	2036-2040 \$000	
Co-management						
Nominal	6,000	25,000	23,000	-	-	54,000
Discount	(292)	(5,260)	(9,358)	-	-	(14,910)
Recognised	5,708	19,740	13,642	-	-	39,090
Clean up						
Nominal	7,333	36,665	36,665	36,665	22,008	139,336
Discount	(429)	(7,717)	(15,085)	(20,539)	(14,358)	(58,128)
Recognised	6,904	28,948	21,580	16,126	7,650	81,208

The table above reconciles the cash outflows that will occur over the next 19 years.

Recognition of future discounted cash flows for the Whanganui River Funds

	Payables				Total
	2019-2020	2021-2025	2026-2030	2031-2034	
	\$000	\$000	\$000	\$000	\$000
Te Pou Tupua					
Nominal	600	1,000	1,000	800	3,400
Discount	(10)	(190)	(381)	(411)	(993)
Recognised	590	810	619	389	2,407

The table above reconciles the cash outflows that will occur over the next 15 years.

5. Financial instruments

The carrying amounts of financial assets and financial liabilities in each of the categories are as follows:

	2017/18 Actual \$000	2018/19 Actual \$000
Financial assets measured at amortised cost (2018: Loans and receivables)		
Cash and cash equivalents	5,900	6,487
Receivables (excludes fines and penalties receivable)	8,951	8,906
Total financial assets measured at amortised cost	14,851	15,393
Financial liabilities measured at amortised cost		
Payables	159,692	159,599

Credit risk

Credit risk is the risk that a third party will default on its obligation, causing a loss to be incurred. Credit risk arises from deposits with banks and receivables.

The Ministry is permitted to deposit funds only with Westpac, a registered bank. Westpac bank has a high credit rating of AA- (Standard and Poor's credit rating). For its other financial instruments, the Ministry does not have significant concentrations of credit risk.

The maximum credit exposure for each class of financial instrument is represented by the total carrying amount of cash and cash equivalents and net receivables. There is no collateral held as security against these financial instruments, including those instruments that are overdue or impaired. Other than Westpac bank, there are no significant concentrations of credit risk.

Cash and cash equivalents (note 2) and receivables (note 3) are subject to the expected credit loss model prescribed by PBE IFRS 9. The notes for these items provide relevant information on impairment.

6. Provisions

Accounting policy

A provision is recognised for future expenditure of uncertain amount or timing when there is a present obligation (either legal or constructive) as a result of a past event, it is probable that an outflow of future economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. Provisions are not recognised for future operating losses.

Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as a finance cost.

The provision for the allocation of NZUs is remeasured using the current spot price at each reporting date.

	2017/18 Actual \$000	2018/19 Actual \$000
Current portion		
Allocation of New Zealand Units	2,541,706	2,883,678
Transitional Support for Local Government and Iwi*	1,575	-
Total current portion	2,543,281	2,883,678
Non-current portion		
Total non-current portion	-	-
Total provisions	2,543,281	2,883,678

- * Transitional Support for Local Government and Iwi payments relate to:
- Tauranga Moana Framework Co-management arrangements - \$575,000
 - Hauraki Collective: Natural Resources Arrangements - \$500,000
 - Ngati Tuwharetoa: Final redress - \$400,000
 - Ahuriri Hapu Deed of Settlement Natural Resources Arrangements - \$100,000.

	Te Awa Tupua Putea \$000	Te Awa Tupua Whole of River Strategy \$000	Te Pou Tupua \$000	Transitional Support for Local Government and Iwi \$000	Allocation of New Zealand Units \$000	Total \$000
Balance at 1 July 2017	30,000	430	2,791	1,575	2,028,535	2,063,331
Additional provisions made	-	-	107	-	719,667	719,774
Amounts used	(30,000)	(430)	(400)	-	(668,769)	(699,599)
Amounts transferred	-	-	(2,498)	-	-	(2,498)
(Gains)/losses	-	-	-	-	462,273	462,273
Balance at 30 June 2018	-	-	-	1,575	2,541,706	2,543,281
Balance at 1 July 2018	-	-	-	1,575	2,541,706	2,543,281
Additional provisions made	-	-	-	1,620	543,251	544,871
Amounts used	-	-	-	(400)	(425,779)	(426,179)
Amounts transferred	-	-	-	(2,795)	-	(2,795)
(Gains)/losses	-	-	-	-	224,500	224,500
Balance at 30 June 2019	-	-	-	-	2,883,678	2,883,678

Provision for NZ ETS credits

	2017/18 Units in million	2017/18 Amount in \$million	2018/19 Units in million	2018/19 Amount in \$million
Opening provision	118.0	2,028	120.5	2,541
New provision recognised during the period	34.3	720	22.5	543
Provision used during the period	(31.8)	(669)	(18.5)	(426)
(Gains)/losses	-	462	-	225
Closing provision	120.5	2,541	124.5	2,883

Allocation of New Zealand Units

The New Zealand Emissions Trading Scheme (NZ ETS) was established to encourage a reduction in greenhouse gas emissions. The NZ ETS creates a limited number of tradable units (the NZ Unit) which the Government can allocate freely or sell to entities. The allocation of NZ Units creates a provision. An expense is recognised in relation to the allocation of free units. The provision is reduced, and revenue recognised, as NZ Units are surrendered to the Crown by emitters. Emitters can also use the NZ\$25 price option to settle their emission obligation.

The Ministry has classified the provision for allocation of NZ Units as a current liability, because it does not have an unconditional right to defer settlement of the liability for at least 12 months after the reporting date. Based on forecasts of ETS activity, expected recovery/settlement is expected to occur as follows:

- within 12 months: \$950.997 million (2017/18: \$785.680 million)
- after more than 12 months: \$1,932.681 million (2017/18: \$1,756.026 million).

The carbon price of NZ\$23.15 (2017/18: NZ\$21.10) has been used to value NZ Units. This price is determined based on the current quoted NZ Units spot price at the end of the reporting date published by OM Financial Limited and reported on their CommTrade carbon website.

Details of current climate change policies are listed at on the [Ministry for the Environment's website](#).

New Zealand's obligation under the Kyoto Protocol

New Zealand has fully complied with its CP1 commitments and met obligations under the Kyoto Protocol with a surplus of 123.7 million units.

New Zealand's CP1 surplus units have no market value as they cannot be traded (2017/18: \$nil). However, New Zealand will recognise some of these surplus units to meet its 2020 emissions reduction target.

New Zealand's 2020 target under the UNFCCC

New Zealand's unconditional target is to reduce emissions to 5 per cent below 1990 gross GHG levels for the period 2013 to 2020. New Zealand chose to take its 2020 emission reduction target under the United Nations Framework Convention on Climate Change (UNFCCC) and not under the Kyoto Protocol, as it did for the 2008 to 2012 first commitment period (CP1). However, New Zealand continues to apply the Kyoto Protocol framework of rules in tracking progress towards its target.

Because the 2020 target was taken under the UNFCCC it does not place any legally binding fiscal liability on the Crown. Therefore, this does not give rise to an obligation under PBE IPSAS 19: Provisions, Contingent Liabilities, and Contingent Assets.

However, the Ministry continues to report progress towards this target through its [2020 net position web page](#) and in [Progress towards our international climate-change commitments web page](#).

New Zealand's 2030 climate change target under the UNFCCC

New Zealand signed the Paris Agreement on 22 April 2016 at a ceremony in New York and ratified the Paris Agreement on 4 October 2016 (New York time).

On 4 October 2016, New Zealand helped make history by depositing an 'instrument of ratification' with the UN Secretary General, therefore agreeing to be bound by the terms of the agreement. The following day, the threshold for the agreement to enter into force was met (when 55 countries responsible for 55 per cent of global emissions ratified the agreement). The agreement entered into force on 4 November 2016, 30 days after the threshold was met.

By ratifying the agreement New Zealand commits to having an emissions reduction target and regularly updating it.

Ratification also commits New Zealand to:

- continue to regularly report on our emissions and how we're tracking towards meeting our target
- continue to provide financial support to assist developing countries' mitigation and adaptation efforts
- plan for adaptation.

The rules under which the Paris Agreement will operate, including for accounting, were almost all finalised in December 2018. The exception is the ruleset for how carbon markets and emissions trading will operate under the Agreement. In addition, given that targets in nationally determined commitments sit outside the Agreement, the targets themselves are not legally binding. For more information on the Paris Agreement, refer to the Ministry's [Paris Agreement web page](#).

7. Events after the balance sheet date

After balance date the price of the New Zealand Unit (NZU) has increased to \$24.85 per carbon unit as at 30 August 2019. This increase has effect on the Allocation of New Zealand Units provision which has increased to \$3,095.438 million from \$2,883.678 million.

There have been no other significant events after the balance date.

8. Memorandum account for the Waste Minimisation Fund

	2017/18 Actual \$000	2018/19 Actual \$000
Provision for statutory information		
Balance at 1 July	44,058	46,366
Revenue from waste levy collection	34,804	36,912
Expenses	(32,496)	(37,778)
Balance at 30 June	46,366	45,500

The memorandum account records the Waste Disposal Levy collected which has not been spent to date. As at 30 June 2019, the Waste Minimisation Fund has \$19.3 million commitments to be paid on delivery of projects. The revenue represents the levy that is collected by waste disposal facilities. The expenses represent the disbursement of the received levy to territorial authorities, the Waste Minimisation Fund, and the administration cost incurred by the Ministry. The disbursements of the levy to territorial authorities and the Waste Minimisation Fund are included as part of the Non-departmental schedules of revenue and expenses.

9. Explanations of major variances against mains forecast

Explanations for major variances from the Ministry's non-departmental mains forecast figures are as follows:

(i) Schedule of non-departmental revenue

	2018/19 Actual \$000	2018/19 Mains Forecast \$000	Variance \$000
Emissions trading	846,396	783,818	62,578

Emissions trading: The actual revenue from surrendering units under the New Zealand Emissions Trading Scheme from emitters was higher than mains forecast primarily due to an increase in the price of New Zealand Units. This was partially offset by lower than forecast units surrendered by the industrial sector.

There were no other significant variances to mains forecast.

(ii) Schedule of non-departmental expenses

	2018/19 Actual \$000	2018/19 Mains Forecast \$000	Variance \$000
Grants and settlements	42,963	53,122	(10,159)
Allocations of New Zealand Units	543,251	521,093	22,158
Net changes in carbon price of New Zealand units	224,494	-	224,494

Grants and settlements: Expenditure on grants and settlements were lower than mains forecast primarily due to the following:

- **Community Environment Fund:** Expenditure was lower than mains forecast due to the process of negotiating contracts with successful applicants took longer than anticipated. An expense transfer of funding from 2018/19 to 2019/20 is sought to ensure each project has sufficient funds to complete their programme of work that support the implementation of freshwater and resource management reforms, and other initiatives. This transfer represents the rephasing of funds to match the expected delivery of project milestones.
- **Contestable Waste Minimisation Fund:** Expenditure was lower than mains forecast due to projects experiencing delays. Further, each year there is a time lag between the Waste Disposal Levy and the funding round opening. Baseline updates are used to match expected spend over the forecast period, once it is known following the funding round.
- **Contaminated Sites Remediation Fund:** Expenditure was lower than mains forecast due to projects experiencing delays because of significant weather events and seasonal climate conditions. An expense transfer of funding from 2018/19 to 2019/20 is sought to ensure each project has sufficient funds to complete their programme of work.
- **Te Mana o Te Wai:** Expenditure was lower than mains forecast due to the process of negotiating contracts for the projects took longer than anticipated due to the targeted nature of the funding. This resulted in delayed start of the projects. An expense transfer of funding from 2018/19 to 2019/20 is sought to match the expected delivery of project milestones.
- **The Freshwater Improvement Fund:** Expenditure was lower than the mains forecast due to the negotiation phase taking longer than expected, and projects being approved for delayed starts (large scale environmental projects can be susceptible to delays because of external factors such as significant weather events and seasonal climate conditions, contractual obligations and supplier/contractor availability). An expense transfer of funding from 2018/19 to 2019/20 is sought to ensure each project has sufficient funds to complete their programme of work.

Allocation of New Zealand Units: Expenditure for Allocation of New Zealand Units was higher than mains forecast due to an increase in the price of New Zealand Units. This was partially offset by lower than anticipated units allocated to Industrial sector.

Net changes in carbon price of New Zealand units: The actual expense recognised is in relation to changes in carbon price of New Zealand Units. These changes are considered as a remeasurement under the Public Finance Act 1989 and do not require appropriation.

(iii) Statement of assets

	2018/19 Actual \$000	2018/19 Mains Forecast \$000	Variance \$000
Cash and cash equivalents	6,487	4,715	1,772

Cash and cash equivalents: The Ministry drew more funding from the Crown in anticipation of payments due to certain grants and settlements, and this has resulted in higher than the forecast cash and cash equivalents.

(iv) Statement of liabilities

	2018/19 Actual \$000	2018/19 Mains Forecast \$000	Variance \$000
Payables	159,599	143,826	15,773
Provisions	2,883,678	2,361,618	522,060

Payables: The actual payables were higher than mains forecast due to higher than anticipated accruals for both Grants and settlements and Levy disbursement expenses.

Provisions: Provisions relate to Allocation of New Zealand Units. This was higher than mains forecast primarily due to increase in the price of New Zealand Units. Further, higher than forecast units were allocated to post-1989 forestry sector. This increase was partially offset by lower than forecast units were allocated to the industrial sector.

10. Adoption of PBE IFRS 9 Financial Instruments

In accordance with the transitional provisions of PBE IFRS 9, the Ministry has elected not to restate the information for previous years to comply with PBE IFRS 9. Adjustments arising from the adoption of PBE IFRS 9 are recognised in opening equity at 1 July 2018.

Accounting policies have been updated to comply with PBE IFRS 9. The main update is:

- Note 3 Receivables: This policy has been updated to reflect that the impairment of short-term receivables is now determined by applying an expected credit loss model.

On the date of initial application of PBE IFRS 9, being 1 July 2018, the classification of financial instruments under PBE IPSAS 29 and PBE IFRS 9 is as follows:

	Measurement category		Carrying amount		Opening balance 1 July 2018 (PBE IFRS 9) \$000
	Original PBE IPSAS 29 category	New PBE IFRS 9 category	Closing balance 30 June 2018 (PBE IPSAS 29) \$000	Adoption of PBE IFRS 9 adjustment \$000	
Cash and cash equivalents	Loans and receivables	Amortised cost	5,900	0	5,900
Receivables	Loans and receivables	Amortised cost	8,997	0	8,997
Total financial assets			14,897	0	14,897

The measurement categories and carrying amounts for financial liabilities have not changed between the closing 30 June 2018 and opening 1 July 2018 dates as a result of the transition to PBE IFRS 9.

Statement of expenses and capital expenditure

for the year ended 30 June 2019

The following statements report information about the expenses and capital expenditure incurred against each appropriation administered by the Ministry for the year ended 30 June 2019.

Statement of budgeted and actual expenses and capital expenditure incurred against appropriations for the year ended 30 June 2019

Annual and permanent appropriations for Vote Environment

	2017/18 Expenditure \$000	2018/19 Budget* \$000	2018/19 Revised Budget* ²⁴ \$000	2018/19 Expenditure ²⁵ \$000	2019/20 Forecast* \$000	Location of end-of-year performance information ²⁶
Departmental output expenses						
Independent Climate Change Committee Set Up Costs	-	-	516	248	-	1
Ministerial Services	2,202	2,183	1,651	1,650	2,183	1
Waste Minimisation Administration	2,435	2,500	5,906	3,766	5,906	1
Total departmental output expenses	4,637	4,683	8,073	5,664	8,089	
Departmental capital expenditure						
Capital Expenditure – Permanent Legislative Authority under section 24(1) of the Public Finance Act 1989	(645)	1,300	1,300	656	1,200	1
Non-departmental output expenses						
Administration of New Zealand Units held on Trust	130	177	177	177	177	4
Community Environment Fund	2,065	2,822	2,213	1,501	3,172	4
Contaminated Sites Remediation Fund	6,457	4,117	2,992	1,975	3,617	4
Contestable Waste Minimisation Fund	12,690	16,797	20,797	15,523	20,797	2
Emissions Trading Scheme	6,392	6,392	6,392	6,392	6,392	3
Environmental Protection Authority: Decision Making functions	12,383	12,383	12,383	12,383	12,448	3
Environmental Protection Authority: Monitoring and Enforcement functions	6,594	6,442	6,742	6,742	7,277	3
Environmental Training Programmes	1,900	1,900	1,900	1,900	1,900	4
Lake Taupo Protection Programme	2,950	-	-	-	-	4
Promotion of Sustainable Land Management	800	800	800	800	800	4
Te Mana o Te Wai – Restoring the Life-giving Capacity of Fresh Water	1,535	1,500	1,216	1,037	500	4
The Freshwater Improvement Fund	1,433	10,800	9,067	5,068	15,500	2

24 This includes adjustments made in the Supplementary Estimates and transfers under the Public Finance Act 1989.

25 Departmental appropriations amounts exclude remeasurement of \$236,135 (2017/18: \$151,719).

26 The numbers in this column represent where the end-of-year performance information has been reported for each appropriation administered by the Ministry, as detailed below:

1. The Ministry's annual report.
2. To be reported by the Minister for the Environment in a report appended to this annual report.
3. To be reported by the Environmental Protection Authority in their annual report.
4. No reporting due to an exemption obtained under section 15D of the Public Finance Act.

	2017/18 Expenditure \$000	2018/19 Budget*	2018/19 Revised Budget* ²⁴ \$000	2018/19 Expenditure ²⁵ \$000	2019/20 Forecast* \$000	Location of end-of-year performance information ²⁶
Total non-departmental output expenses	55,329	64,130	64,679	53,498	72,580	
Non-departmental other expenses						
Allocation of New Zealand Units	719,667	618,875	627,747	543,251	551,298	2
Climate Change Development Fund	300	300	300	300	300	4
Environmental Legal Assistance	595	600	600	432	600	4
Exclusive Economic Zone Major Prosecutions Fund	-	-	500	-	-	4
Framework Convention on Climate Change	131	140	140	135	140	4
Fresh Start for Fresh Water: Waikato River Clean-up Fund	5,302	5,178	5,178	5,178	5,044	2
Impairment of Debt relating to Climate Change Activities	98	22,750	47,500	750	47,500	4
Impairment of Debt relating to Environment Activities	-	1,500	1,500	-	1,500	4
International Subscriptions	137	152	152	108	152	4
Te Pou Tupua	107	109	109	109	109	4
Transitional Support for Local Government and Iwi	-	1,470	1,620	1,620	-	4
United Nations Environment Programme	524	593	593	531	593	4
Waikato River Co-governance	910	910	910	910	910	4
Waikato River Co-management	2,664	2,519	2,519	2,519	2,365	4
Loss on Sale of New Zealand Units	-	-	189,300	6	189,300	4
Waste Disposal Levy Disbursement to Territorial Authorities	17,371	18,000	18,000	18,489	18,000	2
Total non-departmental other expenses	747,806	673,096	896,668	574,338	817,811	
Multi-category appropriations						
Climate Change MCA	16,454	17,147	25,964	23,878	19,701	1
Departmental output expenses						
Carbon Monitoring Programme	3,777	2,187	4,000	4,114	2,187	
Domestic Climate Change Programme Policy Advice	7,848	10,958	16,572	14,639	13,512	
International Climate Change Programme Policy Advice	4,784	3,953	5,343	5,080	3,953	
Synthetic Greenhouse Gas Levy	45	49	49	45	49	
Environmental Management Obligations and Programmes MCA	3,563	3,467	2,348	2,253	3,467	1
Departmental output expenses						
Domestic Obligations and Programmes	1,515	1,560	1,512	1,375	1,560	

	2017/18 Expenditure \$000	2018/19 Budget* \$000	2018/19 Revised Budget**24 \$000	2018/19 Expenditure ²⁵ \$000	2019/20 Forecast* \$000	Location of end-of-year performance information ²⁶
International Obligations and Institutions Policy Advice	2,048	1,907	836	878	1,907	
Improving Environmental Management MCA	44,399	42,054	39,533	38,498	54,199	1
Departmental output expenses						
Developing and Implementing Treaty Settlements and Environmental Accords Policy Advice	2,778	1,900	2,160	2,127	1,900	
Marine Environment Policy Advice	3,030	3,919	1,339	1,425	3,919	
Resource Management Implementation	14,436	12,556	13,461	13,054	13,260	
Resource Management Policy Advice	6,626	6,666	7,647	7,683	11,646	
Water Management Implementation	2,078	2,305	2,114	2,026	5,837	
Water Management Policy Advice	12,040	13,208	10,411	10,054	15,487	
Non-departmental output expenses						
Water science and economics	3,411	1,500	2,401	2,129	2,150	
Mitigating Environmental Hazards and Waste MCA	2,490	3,018	3,938	3,911	3,918	1
Departmental output expenses						
Environmental Hazards and Waste Policy Advice	1,554	2,396	2,228	2,130	3,296	
Waste Management and Minimisation	936	622	1,710	1,781	622	
Total multi-category appropriations	66,906	65,686	71,783	68,540	81,285	
Total annual and permanent appropriations	874,033	808,895	1,042,503	702,696	980,965	

Remeasurement

In 2018/19, the Crown has reported a remeasurement loss of \$225 million in relation to the provision of the allocation of New Zealand Units under the Emissions Trading Scheme (2017/18: the Crown reported a remeasurement loss of \$462 million).

The remeasurement of the provisions takes account of the revisions in the price of emission units. In accordance with section 4(2)(a) of Part One of the Public Finance Amendment Act 2004, changes in assets and liabilities due to remeasurements do not require appropriations.

Statement of budgeted and actual expenses and capital expenditure incurred against appropriations for the year ended 30 June 2019 (continued)

Details of multi-year appropriations

On 1 July 2015, a multi-year appropriation, Fresh Start for Fresh Water: Rotorua Te Arawa Lakes Programme was established in Vote Environment, non-departmental output expenses for maintaining and improving the water quality of the Rotorua Lakes. This appropriation expires on 30 June 2020.

	2017/18 Actual \$000	2018/19 Revised Budget* \$000	2018/19 Actual \$000
Appropriation for non-departmental output expenses:			
Fresh Start for Fresh Water: Rotorua Te Arawa Lakes Programme**			
Cumulative expenses to 1 July	3,080	5,824	5,824
Current year expenses	2,744	4,400	5,191
Cumulative expenses to 30 June	5,824	10,224	11,015
Remaining appropriation	17,176	12,776	11,985
Total appropriation	23,000	23,000	23,000

* The statement of accounting policies provides explanations of these figures which are not subject to audit.

** The year-end information for the above multi-year appropriation is reported by the Minister for the Environment in a report appended to this annual report.

Statement of expenses and capital expenditure incurred without, or in excess of, appropriation or other authority for the year ended 30 June 2019

A breach of appropriation occurred in Vote Environment, Non-Departmental Other Expense: Waste Disposal Levy Disbursements to Territorial Local Authorities in June 2019 due to the Waste Levy revenue being slightly higher than the forecast amount of \$36 million for the 2018/19 year. As per the Waste Minimisation Act 2008, 50 per cent of revenue collected must be distributed to territorial local authorities. This has resulted in actual amount to be paid to the territorial local authorities exceeding by \$488,624 (2017/18: \$nil).

This expenditure breach will be validated under Section 26C of the Public Finance Act 1989 and explanation for the breach tabled in Parliament.

Statement of departmental capital injections for the year ended 30 June 2019

The Ministry did not have any capital injections for the year ended 30 June 2019 (2017/18: \$nil).

Statement of departmental capital injections without, or in excess of, authority for the year ended 30 June 2019

The Ministry has not received any capital injections during the year without, or in excess of, authority.

Statement of responsibility

I am responsible, as Chief Executive of the Ministry for the Environment (the Ministry), for:

- the preparation of the Ministry's financial statements, and statements of expenses and capital expenditure, and for the judgements expressed in them
- having in place a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting
- ensuring that end-of-year performance information on each appropriation administered by the Ministry is provided in accordance with sections 19A to 19C of the Public Finance Act 1989, whether or not that information is included in this annual report
- the accuracy of any end-of-year performance information prepared by the Ministry, whether or not that information is included in the annual report.

In my opinion:

- the financial statements fairly reflect the financial position of the Ministry as at 30 June 2019 and its operations for the year ended on that date
- the forecast financial statements fairly reflect the forecast financial position of the Ministry as at 30 June 2020 and its operations for the year ending on that date.



Vicky Robertson
Chief Executive

30 September 2019

Independent Auditor's Report

To the readers of the Ministry for the Environment's annual report for the year ended 30 June 2019.

The Auditor General is the auditor of Ministry for the Environment (the Ministry). The Auditor General has appointed me, Rehan Badar, using the staff and resources of Audit New Zealand, to carry out, on his behalf, the audit of:

- the financial statements of the Ministry on pages 84 to 110, that comprise the statement of financial position, statement of commitments, statement of contingent liabilities and contingent assets as at 30 June 2019, the statement of comprehensive revenue and expense, statement of changes in equity, and statement of cash flows for the year ended on that date and the notes to the financial statements that include accounting policies and other explanatory information;
- the performance information prepared by the Ministry for the year ended 30 June 2019 on pages 28 to 79;
- the statements of expenses and capital expenditure of the Ministry for the year ended 30 June 2019 on pages 131 to 135; and
- the schedules of non departmental activities which are managed by the Ministry on behalf of the Crown on pages 112 to 129 that comprise:
 - the schedules of assets; liabilities; commitments; and contingent liabilities and assets as at 30 June 2019;
 - the schedules of expenses; and revenue for the year ended 30 June 2019; and
 - the notes to the schedules that include accounting policies and other explanatory information.

Opinion

In our opinion:

- the financial statements of the Ministry on pages 84 to 110:
 - present fairly, in all material respects:
 - its financial position as at 30 June 2019; and
 - its financial performance and cash flows for the year ended on that date; and
 - comply with generally accepted accounting practice in New Zealand in accordance with Public Benefit Entity Reporting Standards.
- the performance information of the Ministry on pages 28 to 79:
 - presents fairly, in all material respects, for the year ended 30 June 2019:
 - what has been achieved with the appropriation; and
 - the actual expenses or capital expenditure incurred compared with the appropriated or forecast expenses or capital expenditure; and
 - complies with generally accepted accounting practice in New Zealand.
- the statements of expenses and capital expenditure of the Ministry on pages 131 to 135 are presented fairly, in all material respects, in accordance with the requirements of section 45A of the Public Finance Act 1989.
- the schedules of non departmental activities which are managed by the Ministry on behalf of the Crown on pages 112 to 129 present fairly, in all material respects, in accordance with the Treasury Instructions:
 - the assets; liabilities; commitments; and contingent liabilities and assets as at 30 June 2019; and
 - expenses; and revenue for the year ended 30 June 2019.

Our audit was completed on 30 September 2019. This is the date at which our opinion is expressed.

The basis for our opinion is explained below. In addition, we outline the responsibilities of the Chief Executive and our responsibilities relating to the information to be audited, we comment on other information, and we explain our independence.

Basis for our opinion

We carried out our audit in accordance with the Auditor General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of the Chief Executive for the information to be audited

The Chief Executive is responsible on behalf of the Ministry for preparing:

- financial statements that present fairly the Ministry's financial position, financial performance, and its cash flows, and that comply with generally accepted accounting practice in New Zealand.
- performance information that presents fairly what has been achieved with each appropriation, the expenditure incurred as compared with expenditure expected to be incurred, and that complies with generally accepted accounting practice in New Zealand.
- statements of expenses and capital expenditure of the Ministry that are presented fairly, in accordance with the requirements of the Public Finance Act 1989.
- schedules of non departmental activities, in accordance with the Treasury Instructions, that present fairly those activities managed by the Ministry on behalf of the Crown.

The Chief Executive is responsible for such internal control as is determined is necessary to enable the preparation of the information to be audited that is free from material misstatement, whether due to fraud or error.

In preparing the information to be audited, the Chief Executive is responsible on behalf of the Ministry for assessing the Ministry's ability to continue as a going concern. The Chief Executive is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless there is an intention to merge or to terminate the activities of the Ministry, or there is no realistic alternative but to do so.

The Chief Executive's responsibilities arise from the Public Finance Act 1989.

Responsibilities of the auditor for the information to be audited

Our objectives are to obtain reasonable assurance about whether the information we audited, as a whole, is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit carried out in accordance with the Auditor General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures, and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers, taken on the basis of the information we audited.

For the budget information reported in the information we audited, our procedures were limited to checking that the information agreed to the Ministry's Statement of Intent 2017-2021 and Estimates and Supplementary Estimates of Appropriation 2018/2019, and the 2018/2019 forecast financial figures included in the Ministry 2017/2018 Annual report.

We did not evaluate the security and controls over the electronic publication of the information we audited.

As part of an audit in accordance with the Auditor General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

- We identify and assess the risks of material misstatement of the information we audited, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Ministry's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Chief Executive.
- We evaluate the appropriateness of the reported performance information within the Ministry's framework for reporting its performance.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Chief Executive and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Ministry's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the information we audited or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Ministry to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the information we audited, including the disclosures, and whether the information we audited represents the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Chief Executive regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Other information

The Chief Executive is responsible for the other information. The other information comprises the information included on pages 1 to 140, but does not include the information we audited, and our auditor's report thereon.

Our opinion on the information we audited does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

Our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the information we audited or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

We are independent of the Ministry in accordance with the independence requirements of the Auditor General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1 (Revised): Code of Ethics for Assurance Practitioners issued by the New Zealand Auditing and Assurance Standards Board.

Other than in our capacity as auditor, we have no relationship with, or interests, in the Ministry.



Rehan Badar

Audit New Zealand
On behalf of the Auditor General
Wellington, New Zealand

Appendix

Implementation requirements for the New Zealand Business Number

New Zealand Business Number Act 2016

The Ministry is required to report on its progress to give effect and have regard to requirements under the provisions of the New Zealand Business Number Act 2016. As a tier 3 agency within the New Zealand Business Number regime for public sector entities, we are required to have regard to requirement 1 by 31 December 2018; to have regard to requirements 2–4 by 31 December 2020; and to give effect to requirements 5–8 as relevant and necessary.

The Ministry continues to have regard to these requirements and will give them due consideration during a planned upgrade of its financial systems during the 2019/20 year. We continue to maintain links with other agencies, to learn from the way they implement the requirements.



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Manatū Mō Te Taiao

New Zealand Government

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