

Freshwater and climate change: synergy and co-benefits

Ministry for Primary Industries
Manatū Ahu Matua



We see a future where New Zealand will be the world's most sustainable provider of high-value food and primary products

- Protect and improve our environment
- Transition New Zealand to a sustainable, resilient, low emissions future; and
- Ensure the economy thrives within environmental limits, while enhancing New Zealanders' wellbeing.

To get there, everyone has an important part to play



Climate Change – Implications for the Waikato River

Impact

What does this mean for Waikato river?

Changes in seasonal rainfall



- Higher demands on water

Warmer temperatures



- Lower river flows in summer, higher flows in winter

Increased severity of weather extremes



- Higher river flows and storm events can aggravate water quality issues
- Increased erosion and sedimentation in river



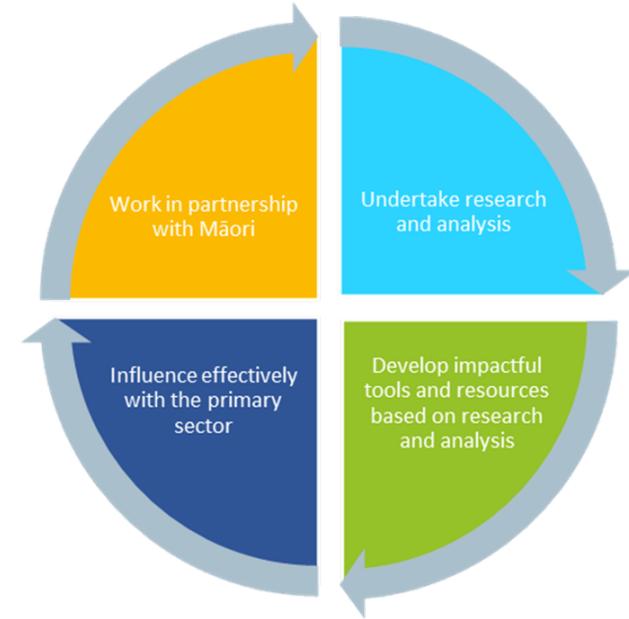
Source: Ministry for the Environment

Climate Change Adaptation, Reporting and Evidence at MPI

The goal: *The primary sector and rural communities proactively reduce risks and respond to the opportunities presented by climate change*

Priority areas for 2019/220:

- Primary sector risk assessment
- Adaptation Handbook
- Mainstreaming Climate Change Adaptation into MPI policies, legislation & reviews i.e Biosecurity Act Review
- Green Financing Project
- On-going stakeholder & Iwi/ Māori engagement



Essential Freshwater package

Background

The *Action for Healthy Waterways* discussion document was released by the Government on 5 September 2019 as a means to enhance the water quality of our waterways and freshwater ecosystems.

The consultation period included a number of public meetings, hui and meetings with local government across NZ.

Allocation was not included



Key points of the proposals

- Weave the principles of Te Mana o te Wai into freshwater management through the NPS-FM – improving the NPS-FM to recognise the intrinsic health and quality of waterways as the first priority
- New attributes, dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP) bottom lines
 - Reduce sediment loading into waterways
- New requirements for the stock exclusion limits for waterways >1m wide under section 360 of the RMA
- Impose interim restrictions to limit further land intensification
- Rules to control activities such as winter grazing and feedlots
- Every farm is to have a Farm Environment Plan (FEP)

Action across a catchment

This diagram shows proposed actions intended to limit pollution and improve the health of our waterways.



Next steps for the Essential Freshwater package

- Submissions closed on 31 October 2019 and 17,416 were received.
- Thorough analysis of the received submissions by officials and an independent advisory panel who will report recommendations to ministers
- Further impact analysis of the proposals is being conducted
- Final decisions on the proposals and options are expected from ministers early next year, and for regulations to be in force by the middle of the year (2020)



Co-benefits and synergies

Improving water quality and accelerating climate change adaptation

MPI's 2017 estimates suggest that due to the effect of water policy, GHG emissions in 2030 would be 2.5% lower.

Trees and vegetation/ afforestation can also improve resilience to weather events and provide important environmental co-benefits by

- Decreasing soil erosion
- Reducing nutrient run-off
- Improving biodiversity
- Sequestering carbon

Controlling phosphorus (P) and sediment through afforestation on sheep/ beef farms – biggest GHG co-benefits.



Co-benefits and synergies

Improving water quality and accelerating climate change adaptation

Nutrient management

- Fertiliser application and dairy farms
 - Reducing nitrogen (N) from dairy farms contributes to gross emissions reductions
 - Continued efficient use of N fertiliser



Areas in common - HE WAKA EKE NOA

- **Foundation of principles, partnerships and relationships**

Work streams

- **Farm emissions reporting**
- **Farm environment plans (FEPs)/Integrated Farm Planning**
- **Extension and engagement**
- **Innovation and uptake**



Areas in common - HE WAKA EKE NOA

- **On farm planting support**
- **Adaptation strategies**
- **On-Farm Emissions Pricing Mechanism**
- **International engagement**



Avoiding maladaptation to climate change

- **Climate change could change extreme events definitions**
 - E.g. 1 in 100 year flood events could now be 1 in 50 year events
- **Allowing for wider river corridors to reduce climate related flooding intensities/ frequencies**
 - Reduces flood risk
 - Enables the river to move and change as part of its natural process



Looking ahead

- **Support is available for the agriculture sector and rural communities to move towards sustainable land use practice and shifting to higher value production;**
- Budget 2019 allocated \$122 million to MPI to help farmers and growers improve the productivity and sustainability of how we use our land natural resources
 - **This includes:**
 - \$35 million to provide practical advice, information, tools and support for farmers and growers to improve operations on the ground;
 - \$12 million to support Māori landowners and agribusinesses to realise greater value and sustainability from their land;
 - \$5 million to build primary industry advisor capabilities and pathways;
 - Almost \$17 million to improve on-farm emissions data; and
 - \$43 million to upgrade relevant decision support tools, like Overseer.
- Extension programmes will support farmers and growers across the country to share practical information, insights and advice with like-minded people who understand local issues.

