

The Waikato River Authority

Responding to Climate  
Change for the Waikato and  
Waipā rivers – implications for  
Te Ture Whaimana/Vision &  
Strategy

Hui summary and notes

Waikato-Tainui Endowed College, Ngaruawahia  
12 December 2019

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## About the climate hui

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Waikato River Authority hosted the first hui focused on climate change and implications for the Vision and Strategy. The workshop is seen as a start to the conversation how can Waikato River Authority pursue more purposefully solutions for water and climate and further leverage the Vision and Strategy for the well-being of generations into the future.

The workshop took place at Waikato-Tainui Endowed College and was attended by over 60 participants from a wide range of stakeholders including regional and district councils, iwi, business and industry, and research (Appendix 1 List of Participants). Presenters at the workshop included representatives from Waikato-Tainui, Waikato Regional Council, Ministry of the Environment, Ministry of Primary Industries, NIWA, KPMG, Pathfinder and WeEnergy Trust.

WRA Co-Chairs John Luxton and Roger Pikia open the workshop with statements about the interest of this generation to address climate change and the opportunity for WRA to use its mandate and the legacy for restoring the Waikato and Waipa river catchments to support climate solutions.

At the end of the event, the co-chair reflected on the discussions during the day and how the Board can support the level of interest in, and opportunity for seeking climate solutions that build on the WRA work to date.

Specifically, co-design and solutions at catchment and sub-catchment model present great potential moving forward and a natural progression of the WRA approach and experience. This will involve continuing to focus on building trust and work in partnership on solutions that leverage matauranga maori knowledge and breaks down silos.

The event was facilitated by Rahui Papa.

## Science and Māori knowledge for climate resilience

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### Speakers:

- Iwi perspective on the Climate Change challenge, **Tipa Mahuta**, WRC
- NZ/Waikato Climate Change projections, risks and adaptation, **Petra Pearce**, NIWA
- Regional resilience, **Dr Mike Scarsbrook**, WRC
- Addressing biological emissions: mitigation and co-benefits on farms, **Dr Stewart Ledgard**, Principal Scientist AgResearch

### Summary Notes

There is a generational difference in responding to climate change

- Never has the younger generation been so articulate and united over a cause. The next generation is not fighting wars but is bringing information to the table.
- A generational debate exists, the questions that will come from mokopuna/grandchildren will ask us about what we did when we held the responsibility to respond to climate change.

Māori, Iwi must be included in the conversation from the outset.

- The next decade does not need to be spent debating if iwi should be at the table. Include iwi in the conversation from the start and get on with developing solutions.
- There is an urgent need for the different organisations, iwi and communities to form relationships to share and transfer information between one another so that we might be better positioned to tackle climate change.

#### New Zealand is already observing changes and impacts brought upon by climate change.

- The temperature has increased over the last 100 years, ocean acidification is occurring, and glaciers are retreating. 2016 was the warmest year on record in New Zealand and 2018 equalled this record.
- The globe is following the RCP 8.5 scenario, the worst-case projected scenario modelled by the IPCC.
- As national territories do not bind the emissions contributing to global warming, there must be a global response to climate change.

#### There are a wide range of impacts expected for the Waikato Region

- Warming of 1 – 3.5 degrees Celsius expected to occur in the Waikato.
- The impacts that are predicted to include increased risk of disease, increased invasions/occurrences by pest species.
- Some impacts will be seasonal such as the increased risk of wildfire, low river flows, drought, and greater pressure on water resources in Summer and Spring. A doubling of the number of 'hot days' will occur by the end of 2090. While in Winter and Autumn, more frequent and extreme rainfall will occur bringing cloudbursts, thunderstorms, and larger flooding events.
- Along the coast, there will be 0.5 – 1m sea-level rise by 2100. Where the narrow band of habitat between the ocean and coastal development lies, a 'coastal squeeze' effect is likely to occur as the area for these habitats decrease, this will also place pressure on those places and sites along the coast that are treasured e.g. waahi tapu. Saltwater incursions into freshwater aquifers and other habitats will also occur.

#### Pursuing resilience and working with nature to respond to climate change in Waikato

- The Waikato Regional Council is simultaneously considering the resilience of ecosystems and of the communities that it works to support. The three relevant priorities include; forge and strengthen partnerships to achieve positive outcomes for the region, positively influencing future land use choices to ensure long term sustainability, increase communities' understanding of risk and resilience to change.
- Helping to increase community resilience through education and planning is critical.
- The conversation needs to occur to decide what will be done to build resilience, transition or absorb climate change impacts? What is the future sustainable infrastructure strategy? What will the Waikato landscape look like in 2050?
- Any changes that occur will need to be carried out in a responsible manner. To build local resilience, significant changes will need to be made to deal with climate change.
- WRC is focused on three significant environmental science challenges in Waikato to be able to answer these questions: Climate adaptation, land-use suitability and floodplain management need to be better understood so that information can be provided to assist in developing solutions.

#### Waikato needs to consider how to respond to GHGs national reduction targets

- The Waikato region needs to respond to the targets set by the New Zealand Government, through the Climate Change Response (Zero Carbon) Amendment Act 2019.
- As agricultural emissions make up ~75% of the emissions of the region, there will likely be a focus on reduction of biological emissions – with implications for land use and agriculture.
- Already, the GHGs intensity (carbon dioxide equivalent per kilogram of product) are low compared to agricultural systems globally. However, the 2050 reduction targets require very large reductions. The average dairy farm emissions sources are animal methane, animal excreta and fertiliser. Some of the options for reduction that already exist include low methane feeds, low methane animals, methane inhibitors and methane vaccines. (See table of reduction options in PowerPoint by Dr Steward Ledgard).
- Co-benefits exist between reductions in emissions and water quality improvements. The reduction of fertiliser use can improve water quality through a reduction of nitrogen inputs and therefore nitrogen runoff from farms into waterways.
- The use of known developing technologies and possible technologies that are already available will only meet the low-end targets which have been set, but there will always be emissions.
- There is a need for future options for farmers to reduce emissions e.g. spatial positioning of land use, diversification, alternative systems, greater integration, and circular economy.

## Questions

### **Why has a range been used as a target for the reduction of biological methane?**

The Paris Agreement sets a goal to limit the global temperature increase to well below two degrees Celsius and pursue efforts to limit it to 1.5 degrees Celsius above pre-industrial levels. New Zealand is aligned with limiting the global average temperature rise to 1.5 degrees Celsius. The targets for carbon dioxide and biological methane are intended to broadly align with the central range of global scenarios identified by the Intergovernmental Panel on Climate Change (IPCC) as being consistent with staying within 1.5 degrees Celsius of warming. In these IPCC scenarios, global biological methane emissions from agriculture are reduced by 11-30 per cent by 2030 and 24-47 per cent by 2050, relative to the 2010 level.

### **Why haven't all sources and sinks of carbon, e.g. pasture and soil, been included as part of accounting for on-farm emissions?**

For some sources and sinks of carbon on-farm, the system is not understood well or is too complex to be confident when accounting for emissions or sequestration. For example, pasture both sequesters carbon from the air and takes it up from the soil. It has a relatively short lifespan before it is broken down and that carbon is released.

There are also further considerations that need to be taken into account. The volcanic soils in the Waikato region are a carbon sink different land uses such as soya bean, can draw this carbon out, resulting in a release of carbon dioxide to the atmosphere.

### **Will there be a return to the command and control of the economy by the government to regulate land use?**

The use of command and control would be an option available to the government. However, the use of this would depend on what is signalled by communities as they consider if, how and when they want to adapt and transition to climate change.

## **The WRA is set up to protect and restore the Waikato River, but history has shown that the landscape has already been radically modified, can the environment be fully restored if this is the case?**

From a scientific perspective, it is not achievable to restore to the historical state. However, as an aspiration for the community to hold it is entirely appropriate to aim to restore the environment to the historical state. It is a question of what we want the restoration to mean as a society.

## Potential implications for regions and catchments

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### Speakers:

- Iwi perspective on policy direction, **Manaaki Nepia**, Waikato-Tainui
- What does the Zero Carbon Bill mean for regions and catchments? **Craig Salmon**, Manager Climate Change Policy, Ministry for the Environment
- The challenge of climate adaptation and mitigation in the Waikato region, **Blair Dickie**, WRC
- Freshwater policy and Climate Change: synergy and co-benefits, **Rachelle Linwood**, Manager Freshwater Policy, Ministry of Primary Industries

### Summary Notes

#### Waikato-Tainui want to ensure the wellbeing of their people when tackling climate change

- For Iwi, adaptation to a changing climate is not new. During the migration voyages to Aotearoa, ancestors had to adapt and build resilience to thrive within a new landscape. For Waikato-Tainui ngā tangata (people), wai (water) and whenua (land) are inseparable.
- The wellbeing of one is intertwined with the wellbeing of the other two. This is reflected in the 5-year plan for Waikato-Tainui. The focus is now on the people of the iwi, and if our whenua is not well, then we are not well.
- Te Ture Whaimana, the strategy, is not silent of climate change. The architects who created it designed it in such a way that future issues, such as climate change, could be tackled. Waikato-Tainui sees climate change within the remit of Te Ture Whaimana. The term 'climate change' may not be within the strategy but the intent to take it on is. As such Waikato-Tainui has developed objectives for climate change in line the strategy.
- Waikato-Tainui wants to be early adapters and wants to be in a position to influence climate legislation, such as a seat on the Climate Change Commission.
- Information needs to be shared and transparency needs to be in place around the impact of different financial levers designed to tackled climate change. Waikato-Tainui need your knowledge, need your help, and access to your information and resourcing to take on climate change.

#### Climate change policy is being implemented now and critical changes are taking place

- The government has done the vast majority of work around climate change policy already. Within the new Climate Change Response (Zero Carbon) Amendment Act 2019, there are for four critical changes that are set out:

- 1) The establishment of an Independent Climate Change Commission
  - 2) Reduction targets set for 2050
  - 3) Sets in place a system of emissions budgets and emissions reduction points.
  - 4) Legislates for a National Climate Change and Risk Assessment and a National Adaptation Plan.
- The Independent Climate Change Commission will be established by January 2020, and the first national risk assessment will take place in 2020.
  - As of yet, the Ministry for the Environment does not have an engagement plan for this but is taking advice on how this can happen. This will inform the package of policies that are being developed for climate change adaptation.

#### The Waikato Region plays a key role in the New Zealand economy

- The mining, hydropower and agriculture in the region being significant to the entire country. Whatever happens in the Waikato Region will have impacts on the rest of the country.
- Local Government regulates access to natural resources through the Resource Management Act. However, regulation is not the only mechanism that is needed to be utilised to tackle climate change; there is a need for incentives.
- Unconventional opportunities for carbon sequestration and storage exist. Riparian habitat and wetlands could be included within the Emissions Trading Scheme as one such incentive.

#### Incentives alongside simple shifts in management practices could produce significant climate change outcomes

- The Waikato Regional Council and Waikato River Authority has been planting predominantly for water quality purposes. The riparian plantings have mainly consisted of native shrubs.
- If there were a shift in the planting make up to include 20% of plantings as trees then there would be a significant change in carbon uptake of these plantings, an increase to 50% trees would be even more. This has been determined up using a model developed by the Waikato Regional Council.
- If this could be included in the ETS there significant outcomes could be achieved through incentives.
- Ministry for the Primary Industries is currently looking at options for accounting for carbon in riparian planting.

#### New Zealand's clean green image is under threat and tackling climate change can help

- The clean green image needs to be maintained to help ensure overseas market access.
- MPI has a role in facilitating the co-benefits of improving water quality and accelerating climate change adaptation. The proposed changes in the Essential Freshwater packaged have been modelled to reduce agricultural GHG emissions by 2.5%. The co-benefits of decreasing soil erosion, reducing nutrient runoff and improving biodiversity also exist.

- He Waka Eke Noa is the farming industry proposal to build an enduring farm-level emission reduction framework in partnership between the agriculture sector and government.
- The proposal includes clear and measurable actions, outcomes and timeframes that will facilitate and support action across several environmental improvements such as climate change, water quality and biodiversity.

## Questions

### **Does afforestation for carbon sequestration risk the loss of grandparenting rights for loss in nitrogen?**

Unanswered

### **Green House Gas emissions mitigation and adaptation, if we think about the changes in the landscape that are being discussed, is the central government considering this?**

This is already a contentious, contemporary issue for local government. The action from central government around adaptation will be around investing in infrastructure.

### **How well can climate change policy and legislation be locked in if there are changes in central government?**

The future is unknown but the Climate Change Response (Zero Carbon) Amendment Act 2019 was passed with nearly unanimous support in parliament.

### **How do we ensure that we grow enough food for everybody if there is a growing global population?**

New Zealand is strategically pursuing high-value product market access. It has never been the country's goal to feed the world.

### **If we leave a market gap for cheap, inefficient production because of climate change adaptation will other countries fill the space left behind?**

All countries will need to respond to climate change and will have their challenges in doing so. Overseas markets may not be able to afford the food that we are producing.

A similar issue to this has already been tackled with carbon pricing, as a solution, free allocation of credits was implemented to avoid this.

## Financing our climate transition

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### Speakers

- Finance for climate action, **Charles Ehrhart**, Director Sustainable Value, KPMG New Zealand
- Addressing Climate Change through investment in global markets, **Paul Brownsey**, CIO Pathfinder Asset Management
- Climate Change and Impact Investment, **Raewyn Jones**, WEL Energy Trust

### Summary Notes

There is increasing competition for climate finance

- Climate Finance has been developed with the intent to help meet the challenge of reducing our emissions and adapt to the impacts and implications of climate change. Financing can occur locally, nationally, transnationally and might be public, private or blended in nature.
- The National Climate Change Risk Assessment beginning next year will help to open pathways to access this.
- There are new forms of financial instruments becoming more readily available in New Zealand; these include green loans, green bonds and sustainability linked loans.
- New Zealand is significantly behind the other OECD countries in adopting these financial instruments.

#### Businesses are starting to plan for climate change and recognise the risk

- Carbon Finance – mixed mitigation and adaptation area with multiple co-benefits. It has been an extraordinary opportunity, and the market is maturing right now.
- With regulations coming into place, companies are beginning to understand climate risk. A good business strategy is capturing a longterm supply chain of carbon credits.
- An important warning to consider for climate-related investment. There is competing demand and the landscape is changing. The way that finance is thought about in the future will not be able to be thought about in the same way. The way that land managers have accessed land and capital is changing and this need to be understood.

#### Ethical investing is on the rise and investors are considering climate risk

- Pathfinder Investments has built its portfolio based on how well each investment aligns with the United Nations Sustainable Development Goals.
- In response to the risk of climate change, the conversation has changed in as little as two years. This response has been a regulatory response, a consumer response, and an investor response.
- Low carbon emissions profiles are smart. Every market looked at by Forsyth Barr showed that companies that have lower emissions profiles performed better than those that are medium or high emitters.
- There is a real risk that those companies not preparing or planning for a transition have huge stranded asset risk.
- For long term investors 'transition risk' is becoming increasingly important. Companies have been ranked based on their transition risk, and investors want their money in low-risk options. Investors want to know that the company they invest into will be around in 10-20 years.

#### Impact investing has an important role to play in mitigating and adapting to climate change

- There is a need to align the invisible hand of impact investing with the invisible heart.
- While impact investing is not a panacea, it has extraordinary potential to create collective impact for the benefit of the commons.

- There is a need for innovation to address the climate crisis and this can't be left to government.
- An impact economy in the Waikato can drive a systems response but there is a need for collaboration to first determine what that system is.
- The Waikato Wellbeing Project is looking to achieve a more environmentally sustainable prosperous Waikato based on the United Nations Sustainability Goals, with a cross-sector and multi-partner approach for collective impact.

## Questions

### **Has the Waikato Region gone the wrong way by allowing low-value carbon credits to be captured early?**

There is a great opportunity in carbon credits, but there are sharks. Reputable companies are looking for high-value carbon credits. All carbon credits are equal in carbon value but they are not equal in the story they tell.

Do the credits help restore a river? There are ways of exploring these stories with these companies, and with the stories, the price of the carbon credit goes up. The landowner then signs onto a long-term agreement which can help improve the water.

### **How do you screen agriculture when ethically investing?**

A risk-based approach is taken. If it is an intensive farming company that is not considering climate change in its future, then you're exposed to transition risk.

### **How would you invest in water? Do you think anyone owns it?**

No investment from Pathfinder into water rights of water bottling. This is because one is unethical, and the other is a political question that needs to be resolved at a local level. However, water likely needs to be commodified to drive efficient use.

## Fit for the future: parallel working sessions to gather perspectives and ideas

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### **Sectoral perspectives – pastoral**

Farmers are facing many challenges and some are unaware of the impacts of climate change

- There are farmers that are already thinking about the impacts; they're considering the infrastructural needs to meet the challenge of climate change.
- Farmers face additional challenges as individuals, in their structures, the time they have to transition and their debt levels.
- The majority of farmers are just carrying on with business as usual, and they aren't aware of the challenges that climate change will bring.

There is a need for leadership in the transition that farmers face

- There is a need for individual farmers and organisations that will take a clear message of what is needed to be done to tackle these challenges. This needs to come from trusted leaders. In any transition, the farmers need to feel they are being supported.

- The WRA and Iwi are showing this leadership when it comes to water quality.

#### Information silos are an issue

- These exist between sectors but also there is siloed thinking regarding each issue.
- A response is needed at the catchment or sub-catchment level as farmers need to see it is relevant to them and that solutions will work for them.
- There is a need for natural capital accounting.

#### Sectoral perspectives – Forestry

- Deciding if land should be put into exotic or indigenous forestry is an investment decision.
- As it stands, it makes no economic sense to invest in indigenous forestry as it takes 85 years for it to mature – despite the additional benefits that indigenous forestry provides.

#### There is a need to understand the true costs of these decisions

- What role does the ETS play? Does it incentivise towards harmful outcomes e.g. growing pine for it to be sold and burnt overseas?
- Forestry is a land-use choice that depends on the capital value of the land. Once a tree is planted that land use is locked in but if the government changes and the regulations change, it can incentivise bad behaviour e.g. felling trees early to only to plant again straight away.
- The value of a carbon credit ignores the true cost. Even though indigenous forestry could provide biodiversity outcomes, this is not reflected in the value of the carbon credit.

#### The WRA needs to consider a long-term investment approach

- There is a challenge for the WRA – how to consider funding beyond 2030 – recognising that climate solutions require longer timeframes and that return on investments in natives takes longer (84 years for natives vs 30 years for pine).
- Should the funds be invested in carbon offsets or restoration? What is the true value?
- Considering the strategy, the restoration perspective has been focused on but not the long-term investment perspective?

#### Science and Technology – what are the opportunities for joint water/carbon outcomes

##### The restoration of wetlands and peatlands is key because of the joint outcomes for water and carbon

- This should be the top priority for reducing Waikato emissions. There is a lot of expertise internationally in applying these solutions.
- The protection of wetlands<sup>1</sup> and soil carbon are not in Overseer, if they were, then the economic incentives and benefits would be seen by those using it.

##### The future state needs to be better understood, and what is being managed for.

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<sup>1</sup> Overseer does include wetlands but not with a view to carbon sequestration.

- Is management to build resilience for the future state or is it for the current state? This relies on clarity of what the end goal is so that science and research can focus on that end goal for investment and management.
- The future changes in the hydrological system need to be understood. These changes need to be understood at a local level and at a smaller scale.
- Research into soil life – There is a general lack of soil science in New Zealand generally.
- The covering of high-quality soils with urban development and the caring for what is on the ground as opposed to what is in it.
- Regenerative agriculture poses a different approach that could be adopted.
- The trade-offs between different types of land use need to be understood. Land use mapping of the Waikato needs to be undertaken with the incorporation of water, soil and emissions. This needs to be provided to landowners and land users so that they understand what type of land use they could transition to in the future.
- Natural capital accounting at catchment level – an area of interest for natural resource managers and land managers – research gaps exist that need to be addressed

#### Māori involvement in developing solutions

- Māori want engagement in developing solutions. Matauranga Māori can bring different perspectives to the climate change space to deliver solutions. More Māori representation is needed and the use of indigenous solutions.

## Appendix 1 List of Participants

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Name	Organisation
<b>Aaliyah Abraham</b>	Waikato Tainui
<b>Alan Livingstone</b>	Waikato River Authority Crown Deputy Co-Chair
<b>Barry Harris</b>	Waikato River Authority Board Member
<b>Blair Dickie</b>	Waikato Regional Council
<b>Bob Penter</b>	Waikato River Authority CE
<b>Bryce Cooper</b>	NIWA
<b>Cerasela Stancu</b>	Envirostrat
<b>Charles Ehrhart</b>	KPMG
<b>Charlotte Rutherford</b>	Fonterra
<b>Christina Hanna</b>	University of Waikato
<b>Craig Salmon</b>	Ministry for the Environment
<b>Craig Stephen</b>	WEL Energy Trust
<b>Danny Loughlin</b>	Waikato River Authority Board Member
<b>David Burger</b>	Dairy NZ
<b>Debbie Care</b>	Whetu Consultancy
<b>Dennis Turton</b>	Trust Waikato
<b>Emily O'connel</b>	Ministry for the Environment

<b>Ethan Jerome-Leota</b>	Waikato Tainui
<b>Evelyn Forrest</b>	Ngati Tahu-Ngati Whaoa
<b>Gavin Williamson</b>	Mercury
<b>Georgina Hart</b>	Sustainable Business Network
<b>Gerald Lanning</b>	Simpson Grierson
<b>Graham Pollard</b>	Waipa District Council
<b>Grant Jackson</b>	Miraka
<b>Heemi Biddle</b>	Tuwharetoa
<b>Hon. John Luxton</b>	Waikato River Authority Crown Co-Chair
<b>Ian Cathart</b>	Waikato District Council
<b>Irene Kereama-Royal</b>	Nga Wai a te Tui Research
<b>Jackie Colliar</b>	Hamilton City Council
<b>James Whetu</b>	Whetu Consultancy
<b>Jiafa Luo</b>	AgResearch
<b>Jim Ebenhoh</b>	Waikato District Council
<b>Julian Williams</b>	Waikato River Authority
<b>Karen Bennet</b>	Waikato Regional Council
<b>Kelvyn Eglinton</b>	Momentum Waikato
<b>Keri Mills</b>	James Henry Maori Research Centre
<b>Kurt Abbott</b>	Waikato District Council
<b>Laise Harris</b>	Raukawa Chartiable Trsut
<b>Lorraine Dixon</b>	Waikato Tainui
<b>Louise Cullen</b>	Director - Tatua
<b>Manaaki Nepia</b>	Waikato Tainui
<b>Marama Muru-Lanning</b>	James Henry Maori Research Centre
<b>Maria Nepia</b>	Tuwharetoa
<b>Matt McCracken</b>	Climate Change Commission
<b>Michelle Hodges</b>	Waikato River Authority
<b>Mike Newton</b>	Newton Ross
<b>Mike Scarsbrook</b>	Waikato Regional Council
<b>Murray Hemi</b>	Miraka
<b>Murray Parrish</b>	
<b>Nerissa Linwood</b>	
<b>Nevada Huaki-Foote</b>	
<b>Paul Brownsey</b>	
<b>Paul van Boheemen</b>	Tatua
<b>Paula Balckett</b>	NIWA
<b>Perrine Gilkison</b>	Ministry for the Environment
<b>Peter Buckley</b>	Waikato River Authority Board Member
<b>Peter Drury</b>	Photographer
<b>Philip Burton</b>	Waikato River Authority
<b>Rachel Linwood</b>	Ministry of Primary Industries
<b>Raewyn Jones</b>	Well Energy Waikato

<b>Reremoana Stephens</b>	Waikato River Authority
<b>Roger Pikia</b>	Waikato River Authority River Iwi Co-Chair
<b>Sandy Morrison</b>	University of Waikato
<b>Sarah Thomson</b>	Hamilton City Council Councillor
<b>Sean Newland</b>	Tawera Consulting
<b>Shakyrā Te Ao-Maniapoto</b>	
<b>Shannon Te Huia</b>	Puniu River Care
<b>Shaun Awatere</b>	Manaaki Whenua, Deep South, National Science Challenge
<b>Sian Flynn-Coleman</b>	Oxygen Consulting
<b>Sue Clearwater</b>	Department of Conservation
<b>Sue Edmonds</b>	The Farming and Science Writer
<b>Sue McConnochie</b>	Waikato River Authority
<b>Susan Stephens</b>	Waikato River Authority
<b>Taha Brown</b>	Simpson Grierson
<b>Tasman Gillies</b>	Envirostrat
<b>Tawhiao McAllister</b>	Simpson Grierson
<b>Tia Greenway</b>	Interim Climate Change Committee
<b>Tihau Bishop</b>	Climsystems
<b>Tipa Mahuta</b>	Waikato Regional Council Deputy Chair
<b>Tony Petch</b>	Tony Petch Consulting
<b>Tracey May</b>	Waikato Regional Council
<b>Traci Houpapa</b>	Waikato River Authority Board Member
<b>Tredegar Hall</b>	Tuwharetoa Maori Trust Board
<b>Troy Baisden</b>	University of Waikato
<b>Wayne Ross</b>	Newton Ross
<b>Weo Maag</b>	Waikato River Authority Deputy Co-Chair
<b>Yvonne Taura</b>	Landcare Research