

# Setting New Zealand's post-2020 climate change target

## Submission form

### Contact information

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### Objectives for the contribution

**1a. We have set the following three objectives for our contribution:**

- **it is seen as a fair and ambitious contribution – both by international and domestic audiences**
- **costs and impacts on society are managed appropriately**
- **it must guide New Zealand over the long term in the global transition to a low emissions world.**

**Do you agree with these objectives for our contribution?**

Yes

No

**1b. What is most important to you?**

What is most important is how these three objectives are applied in practice.

**Fairness:** The concept of fairness has multiple dimensions extending beyond equal mitigation cost and equal mitigation effort, whether measured per tonne of abatement, per capita, per unit of GDP, or relative to base-year or projected emissions. It should also encompass our historical contribution to the problem, our capacity (resources, expertise and opportunities) to contribute toward achieving the global temperature goal, and the strategic benefits we stand to gain by transitioning toward a zero-net-emission economy and joining collective action to avoid the worst impacts of climate change. We should also consider the fairness to the most vulnerable populations globally and to future generations of New Zealanders of advancing versus delaying mitigation action, locking ourselves into emissions-intensive development, and shifting the cost of stranded assets and climate impacts to others.

**Ambition:** The IPCC advises that globally, a least-cost pathway to achieve the global goal of limiting temperature increases below 2 degrees Celsius entails reductions of 40-70% below 2010 levels by 2050 on the way to a zero-net-emission global economy by the end of the century. Countries with more developed economies, capacity and capability should make a relatively more ambitious contribution to global mitigation than those struggling to meet basic development needs. The ambition of New Zealand's 2030 contribution should have a domestic element (shifting the domestic economy toward zero net emissions) and a global element (supporting collective effort to achieve the global temperature goal).

**Consideration by domestic and international audiences:** A [2014 Horizon Research survey](#) designed jointly by researchers at Motu and Victoria University of Wellington with support from the Sustainable Business Council found that 87% of New Zealanders have at least some level of concern about climate change, but only 42% believe that their actions can make a difference to help reduce the impacts of climate change. Most New Zealanders are taking at least some household actions that reduce emissions, but they lack information about what types of activities across households, businesses and governments will make the most difference. The government needs to do more to inform the public about the strategic importance of New Zealand's mitigation effort. Each tonne of emissions from New Zealand has the same climate change impact as a tonne from anywhere else; according to a [US government study](#), a conservative central estimate of the social cost of CO<sub>2</sub> is US\$37 in 2015, rising to US\$52 in 2030. We need to understand that our actions as individuals, businesses and communities and as a country can make a difference, both by contributing to global mitigation and inspiring others to follow our leadership. In terms of international audiences, New Zealand could face damage to its international reputation and relationships, with both trade and political repercussions, if it does not contribute responsibly to global mitigation. As a small country we benefit greatly from our positive image. Climate change has been widely recognised as a global security issue, and as New Zealand moves into chairing the UN Security Council it would be well served to show leadership on climate change mitigation.

**Costs and impacts on society:** The assessment of costs and impacts of different target choices and policy pathways should encompass costs and benefits of mitigation (including improving economic efficiency, innovation, diversification and resilience) as well as helping to avoid climate change impacts. Such assessment should be based on an appropriate counterfactual scenario, not "zero action at zero cost." It should also consider transitional and distributional effects. The time horizon

for assessing costs, benefits and impacts should be sufficient to capture their long-term implications. Decisions based on analysis with a short time horizon may fail to capture the full costs of delaying mitigation that will accrue after 2050. The government's policy approach should be designed to support a just and beneficial transition to a zero-net-emission economy and should account for the social cost of carbon.

**Providing long-term guidance:** New Zealand's INDC for 2030 should guide not just long-term effort but also near-term effort to shift New Zealand toward a zero-net-emission economy by mid-century and encourage joint mitigation effort with other countries.

## What would be a fair contribution for New Zealand?

### 2. What do you think the nature of New Zealand's emissions and economy means for the level of target that we set?

The nature of New Zealand's emissions and economy constitutes an invitation to ambitious action because it places a zero-net-emission future within our reach. We have the renewable energy resources, land-use opportunities, infrastructure, institutional and educational capacity, democratic decision-making processes, ingenuity and economic opportunities that would enable us to shift toward:

- a. Zero-net-emission stationary energy, industrial production and transport supported by renewable generation, domestic biofuels, rapid uptake of new technologies (e.g. electric vehicles), improved urban design and infrastructure and increased support for public and active transport
- b. Highly efficient and increasingly diversified agricultural production that responds quickly to new technologies and rewards best practice
- c. More strategic forestry development to increase carbon sequestration and enable sustainable biofuel production.

These activities would generate important co-benefits, including improvements to human health, air and water quality, resilience to natural hazards and biodiversity; more sustainable use of nonrenewable resources; improved energy security through lower reliance on imported fossil fuels; new economic opportunities arising from increased innovation in technologies and practices; and an enhanced international reputation and relationships.

The ambition of New Zealand's 2030 target should not be constrained by relatively high domestic marginal abatement costs when we can also contribute to global mitigation effort through emissions trading and extending other forms of mitigation support to developing countries. We should think strategically about the appropriate balance between domestic and international mitigation investment by New Zealanders in order to achieve our country's longer-term development objectives.

## How will our contribution affect New Zealanders?

### 3. What level of cost is appropriate for New Zealand to reduce its greenhouse gas emissions? For example, what do you think would be a reasonable impact on annual household consumption?

The framing of this question and the supporting information cited in the discussion document do not support a constructive evaluation of the costs and benefits of New Zealand's contribution to global mitigation through both domestic and overseas investment at different levels of ambition. Further analytical work and cross-stakeholder dialogue are required.

The modelling prepared by Infometrics and Landcare Research provides useful information for reference but should not be interpreted as predictive of actual costs or be used as the sole basis for public judgments on cost acceptability or government decision making. First, the modelling excludes important mitigation opportunities and benefits for New Zealand. The authors of both studies are transparent about the limitations of their methodology (although these are not explicit in the discussion document). For example, they exclude mitigation from the forestry sector, the potential for transformational technology changes (e.g. electric vehicles and improved batteries), and the value to society of co-benefits to human health, the environment and New Zealand's international standing (e.g. clean-green branding) as well as avoided climate change impacts. Costs are evaluated relative to a baseline of "zero action and zero cost," which is not realistic and does not reflect New Zealand's existing mitigation targets for 2020 and 2050.

Even with these exclusions, 2030 targets ranging up to 40% below 1990 levels have a relatively small impact on underlying economic growth – if New Zealand can invest in lower-cost mitigation in other countries. For example, Infometrics found that under 2030 targets ranging from -5% to -40% relative to 1990 levels with a global carbon price of NZ\$50 and access to the global carbon market, across the 2020s:

- Average annual growth in GDP would be shaved from 2.2% (with no target) to 2.1% (across all targets modelled)
- Average annual growth in RGNDI would be shaved from 2.4% to 2.3%
- Average annual growth in household consumption would be shaved from 2.3% to 2.1%.

Modelling suggests that under a -10% target with a global price of NZ\$50, 80% of reductions would need to happen offshore. More ambitious targets at the same global price would require even more offshore investment. If New Zealand had to achieve its target only through domestic action, it could not even achieve a reduction target of 10% below 1990 levels at a domestic price of NZ\$300 per tonne. This would have more significant impacts on our international competitiveness and GDP. The high cost of domestic-only action is consistent with the findings from a [simpler model](#) developed by Motu researchers.

Landcare Research reached similar conclusions, although its modelling showed slightly smaller target impacts on GDP and RGNDI and greater domestic mitigation for a given carbon price. It would be useful to compare domestic mitigation responses in the two models.

Given our higher domestic mitigation costs, helping other countries to reduce their emissions is likely to be an important part of New Zealand's optimal contribution to global mitigation. However, we need to think carefully about what we can and want to achieve strategically through domestic action.

- First, investing in offshore mitigation has domestic costs. Infometrics estimated that every \$1 million spent to purchase mitigation units overseas would cost the economy \$1.8 million from declining terms of trade and reduced efficiency by our export industries. This does not take into account other lost co-benefits from investing domestically.
- Second, while investing in offshore mitigation can buy us time for emerging technologies to mature and support poorer countries with lower-emission development, it will not shift New Zealand to a zero-net-emission economy. New Zealand will need to join the rest of the world in finding a pathway to zero net emissions.
- Third, reducing New Zealand's emissions could produce strategic benefits if we are smart about how we do it. The value of such benefits should be accounted for.

The cost evaluation in the discussion document is based upon incremental thinking. In the context of future transformation:

- Mitigation costs become an investment with powerful economic, environmental and social returns.
- Emission reduction targets are not the end we seek but one of many indicators of the progress we are making toward achieving a high quality of life with a zero-net-emission economy.
- Our choice of targets should reflect our strategic direction for the future and not more of the same.

We would be happy to work with the government and other stakeholders to improve our national understanding of the costs and benefits from New Zealand's efforts to reduce domestic emissions and contribute to global mitigation.

#### **4. Of the opportunities for New Zealand to reduce its emissions (as outlined on page 15 of the discussion document), which do you think are the most likely to occur, or be most important for New Zealand?**

Based on Motu's ongoing work with cross-sector participants in its Low-Emission Future Dialogue, we consider that New Zealand could design policy pathways toward zero net emissions that would generate all of these opportunities, and that all of them could be significant for New Zealand.

Although international targets are calculated on a production basis, New Zealand should also consider its opportunities to reduce emissions on a consumption basis. Motu has been researching consumption emissions by New Zealand households and can share its findings to help inform domestic policy development.

The characterisation of competitiveness benefits appears defensive. This is not just about maintaining our competitiveness by keeping pace with others but also about creating new competitive advantages through proactive leadership. There could be positive opportunities for New Zealand to capitalise on new technologies and practices by taking a leading role in technology experimentation and adoption.

We could also generate valuable economic and political opportunities by engaging further in joint mitigation research and investment with other countries.

## Summary

### **5. How should New Zealand take into account the future uncertainties of technologies and costs when setting its target?**

Assuming that New Zealand can achieve its target through a combination of domestic emission reductions, forest carbon sequestration and investment in mitigation overseas, then future uncertainties around mitigation technologies and costs in the domestic context can be managed strategically and with flexibility. If we start making emission reductions earlier and bank excess reductions, we have another tool to protect ourselves against risk. In New Zealand's INDC, the government can stipulate its preferred rules for access to international carbon markets, banking/carry-over, recognition of other forms of joint mitigation efforts with other countries, and rules for accounting of greenhouse gases from both emission sources and forest sinks. If the rules ultimately agreed by the Parties diverge from those stipulated in New Zealand's INDC, then the government would have reasonable grounds to revise its INDC accordingly.

## Other comments

### **6. Is there any further information you wish the Government to consider? Please explain.**

Ultimately, there is one critical target number that we must achieve, and that is zero net emissions as an economy between the middle and end of the century. The strategic decisions we face are how quickly to strive for net zero, how many opportunities we can create along the way, how we can best manage the transitional costs, how we can safeguard New Zealanders who are disadvantaged in the transition, and how we can help other countries along the same path. Whether we get to net zero by 2040 or 2060 is much less important than getting there as soon as we can through strategic choices that support the wellbeing of New Zealanders both during and after the transition and fulfill our moral obligation to other countries and future generations.

Informed decisions about the ambition and cost of New Zealand's 2030 target, and the appropriate balance between domestic and international investment, should be made in the context of the policy pathways available to us for achieving a zero-net-emission economy over time. We are pleased to see that the government has pledged to consult further on its climate change policies and measures. However, brief periods of formal consultation will not be sufficient to achieve broad public understanding and enduring public and cross-party support for mitigation policies that will

support our strategic development as a country. Across sectors, we need to focus attention and resources in order to:

1. Enable long-term, progressive dialogue across government, businesses, researchers and civil society on New Zealand's strategic mitigation pathway options for transitioning to a zero-net-emission economy
2. Improve public education and engagement about climate change impacts and opportunities for mitigation and adaptation
3. Build capacity and direct investment to implement mitigation and adaptation solutions.

Targets are useful only to the extent they inspire a shared commitment to ambitious action. We should not let fear of ambition and the possibility of falling short justify a commitment to mediocrity. Ultimately what matters is what we actually do. While a target may define the least we commit to, it does not limit how much we can achieve. Regardless of the target tabled in the negotiations, we can create a bright low-carbon future for New Zealand as long as we decide as a country that we want to act.

We would like to offer the following recommendations for New Zealand's INDC to be tabled in negotiations leading to an agreement in Paris in 2015:

1. New Zealand's INDC should include a quantified emission reduction target for the year 2030 but also for the period from 2020 to 2030.
2. The level of ambition for our net global contribution should align with the IPCC's recommendations for achieving the global temperature goal and be predicated on the assumption that we can achieve part of our target through joint effort with other countries.
3. The level of ambition for our domestic contribution should be consistent with a shift toward a zero-net-emission economy by mid-century.
4. The narrative should contain New Zealand's commitment to engagement processes and policies that will deliver a strategic transition toward a zero-net-emission domestic economy before the end of the century. This should include achieving:
  - a. Zero-net-emission stationary energy, transport and industrial production
  - b. Highly efficient and diversified agricultural production
  - c. Strategic land use for increased forest carbon sequestration and sustainable biofuel production while maintaining biodiversity
  - d. Policy commitment to a rising price on emissions under the New Zealand Emissions Trading Scheme that incentivises mitigation consistent with achieving the global temperature goal over time, and ETS linkages with strong environmental integrity
  - e. Policy commitment for the government to factor the social cost of carbon into its policy decisions and public investment criteria
  - f. A just and beneficial transition toward a zero-net-emission economy for New Zealanders, including for those facing disproportionate impacts
  - g. Ongoing research and education on climate change impacts and mitigation solutions
  - h. Broader collaboration on mitigation policy development between government and stakeholders, including through appointment of an independent climate body to

provide advice on climate change science and policy, and launching long-term multi-stakeholder engagement processes to develop a broadly accepted national low-emission development strategy which continues to evolve over time

- i. Joint action with other countries to support global mitigation at least cost in alignment with the global temperature goal.