

2021 Supporting Evidence Consultation Feedback and Updates

Part 1: Our place in the world

Themes we heard through consultation

During consultation, we heard feedback on a range of themes relevant to *Part 1* of our *Evidence Report: Our place in the world*. These mostly related to the science of climate change and greenhouse gas (GHG) emissions accounting decisions and approaches. We also heard from people that highlighted some of the recent climate actions and announcements made by other countries.

On the science of climate change, we heard from many stakeholders about the different temperature effects of emissions of different GHGs, the factors underpinning this, and the importance of accurately reflecting these differences in our advice and evidence. The impact of biogenic methane on temperature tended to be of particular importance.

We heard general support for our emissions accounting approach, with specific comments falling largely into one of two categories: technical or coverage related.

On the technical front, there was significant interest in metrics for combining emissions of different GHGs into a single number. This included a desire from some submitters for GWP* to be considered as an alternative to GWP₁₀₀ in certain circumstances. Other technical themes that came through were the potential for greater use of consumption emissions accounting and the *New Zealand's Greenhouse Gas Inventory* (the GHG Inventory) reporting approach to account for land emissions, and frustration with the pre-1990/post-1989 distinction for forestry emissions.

We heard a strong interest in expanding the coverage of GHG emissions accounting. In particular, we heard a desire from many to account for emissions and removals from wetlands and peatlands, international aviation and shipping, small areas of trees such as riparian strips, and marine ecosystems or 'blue carbon' towards our budgets and targets.

Errors and misrepresentations

Some submitters noted that our section on the relative impacts of the main GHGs overly simplified complex relationships and interactions in the atmosphere. In particular, the section did not explain how the ability of a gas to absorb energy radiating of the earth's surface, its concentration in the atmosphere, and the presence of other GHGs, all interact to determine its overall effect.

We also heard some suggestions that our description of the GWP* metric was incomplete. We appreciate the interest in this topic and have improved our discussion of it in *Chapter 1: The science of climate change*, including by noting the potential for exploring its uses in Aotearoa.

Some stakeholders also questioned our decision to use gross-net accounting for emissions budgets and targets. We heard that it sounded to some like a deliberate manoeuvre to obfuscate progress (or lack thereof) and make it easier to meet targets. This is a misrepresentation of our decision.

There are a number of good reasons for using gross-net accounting in Aotearoa – including that it presents a more accurate picture of the country’s efforts to address climate change. We have attempted to clarify these reasons in our discussions of rules for measuring progress in *Chapter 3: How to measure progress*.

New evidence and analysis

Some additional and updated evidence has emerged since the release of our *2021 Draft Advice for Consultation* advice relevant to *Part 1* of this report. This includes the release of the latest GHG Inventory by the Ministry for the Environment, and a series of new climate target announcements by major countries including the US, EU, Japan, and Canada. We have also conducted additional analysis on the relative contribution of fossil fuel combustion and land-use change to global emissions.

Regarding the science of climate change, we considered recent information about what the warming effect of methane means for reduction pathways. This included the 2021 *Global Methane Assessment* report by the UN Environment Programme and the Climate and Clean Air Coalition.

Based on questions raised during our consultation, we also conducted some additional analysis on the potential for method changes to the GHG Inventory to affect emissions budgets and targets. As part of this we considered the potential options for addressing this and evaluated them against the relevant accounting principles.

What we have changed in Part 1 as a result of consultation

Many of the themes we heard through consultation as related to *Part 1* are ones that are already addressed at length in the Supporting Evidence. Some, however, have given us good reason to make updates and changes to the final chapters.

Based on consultation, we have made the following changes to *Part 1: Our place in the world*.

Chapter 1: The science of climate change

- Added more detail and nuance to our account of the different warming impacts of emissions of different greenhouse gases
- Added a new short section and graph that highlights the relative contribution of fossil fuel combustion and land-use change to global warming
- Added a note explaining the role that water vapour plays as a greenhouse gas
- Updated our discussion of GWP*

Chapter 2: What are other countries doing?

- Updated information about other countries climate targets, namely the USA, EU, Japan, and Canada
- Added information about the recent climate announcements from Aotearoa relating to the public sector and climate-related financial disclosures

Chapter 3: How to measure progress

- Updated emissions figures based on the latest GHG Inventory
- Noted 'blue carbon' as an area that could be investigated for future emissions accounting potential
- Improved our explanation of gross-net accounting
- Added a section about dealing with the effect of method updates to the GHG Inventory