

Hon Judith Collins KC



Attorney General
Minister of Defence
Minister for Digitising Government
Minister Responsible for the GCSB
Minister Responsible for the NZSIS
Minister of Science, Innovation and Technology
Minister for Space
Lead Coordination Minister for the Government's Response to the
Royal Commission's Report into the Terrorist Attack on the Christchurch Mosques

Dr Priyanka Dhopade
Email: priyanka.dhopade@auckland.ac.nz

Dear Dr Dhopade

Thank you for your letter and briefing on sustainability and aerospace of 24 June 2024.

As Minister for Space, an important focus for me is the sustainability of the space environment. In New Zealand, this is managed primarily through payload permitting and launch licencing where applicants must provide an acceptable orbital debris mitigation plan that sets out mitigation measures to ensure risks are minimised. We have also developed policy for the regulation of active debris removal and on-orbit servicing missions to enable the remediation of space debris.

New Zealand works with other countries and space sector actors in international fora, most notably the UN Committee on the Peaceful Uses of Outer Space, to develop guidelines for long term sustainability of the space environment.

Thinking about sustainability and space more broadly, the government has already demonstrated a strong interest in using space technologies to address challenges on Earth. These include combatting climate change, improving agricultural productivity and natural resource management, and improving management of risks from natural hazards. I would like to highlight several key initiatives (which include participation from the University of Auckland):

- We currently have joint research projects, including 12 feasibility studies on Earth observation involving New Zealand organisations and NASA, to inform the study of Earth systems (including environment and climate) via satellite technology.
- We have ratified a space, science and technology partnership agreement with Australia's leading space research organisation, SmartSat CRC, a collaboration with universities and other research organisations to tackle significant science-based challenges including space situational awareness and Earth observation.

- The MethaneSAT space mission's objectives are to detect major oil and gas methane emissions to combat climate change and for New Zealand to be at the leading edge of scientific research related to agricultural methane detection from space.
- The Rongowai GNSS-Reflectometry project involves NASA, Air New Zealand and academic institutions in the US and New Zealand. Every day, this project is generating high resolution soil moisture data across the country which then feeds into global water cycle models and understanding of climate change impacts.

Additionally, the Ministry for the Environment (MfE) administers legislation to promote the sustainable management of natural resources of the exclusive economic zone and continental shelf. This allows for certain permitted activities to take place in these areas and requires the Environmental Protection Agency (EPA) to monitor compliance with those conditions, including the launch of space vehicles. We work with MfE and EPA and industry stakeholders such as Rocket Lab to ensure that potential harms to the environment are monitored and mitigated.

I acknowledge that space activities have greenhouse gas emissions and other impacts on Earth, including in the atmosphere. Further research will help to better understand these impacts. However, in a world of limited resources, the government must make choices as to where it focuses its efforts. In a New Zealand context, this includes sectors such as agriculture, energy, and land transport. The Emissions Trading Scheme (ETS) is the government's main policy lever to achieve emissions reductions. New Zealand has one of the most comprehensive ETSs in the world and since 2020 the scheme has been 'capped'. This cap on emissions reduces over time, in line with emissions reduction targets. This means emissions reductions can be achieved on a least-cost basis, and mitigation can occur across the economy in those sectors where it is most efficient.

I also note your recommendation for us to establish standardised practices for aerospace emissions accounting. The Minister of Climate Change is responsible for emissions accounting. New Zealand's greenhouse gas inventory is set according to United Nations Framework Convention on Climate Change (UNFCCC) global reporting standards. Currently, aerospace emissions are not explicitly disaggregated under UNFCCC reporting, and no default methodologies are provided by the IPCC guidelines. It should also be noted that emissions from fuel used for international transport are currently not included in national totals under UNFCCC reporting. It is expected that New Zealand would follow best practice and implement any changes of international reporting guidelines that are agreed to in the future.

New Zealand also has international partnerships with governmental and research institutes and engage with those partners to monitor developments in practices for emissions accounting and reporting standards which will over time, inform our domestic policy settings.

As demonstrated above, the government has been proactively taking steps in improving sustainability in space and reducing emissions across our economy and we will continue to do so in lockstep with best international practice. I trust that you find the above information useful.

Yours sincerely



Hon Judith Collins KC
Minister for Space

cc: Hon Penny Simmonds, Minister for the Environment
By email: P.Simmonds@ministers.govt.nz

Hon Simeon Brown, Minister for Energy
By email: S.Brown@ministers.govt.nz