

New Zealand

A submission to the Ad hoc Working Group on Long term Cooperative Action under the Convention

Cooperation on research and development of current, new and innovative technologies, including win-win solutions

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Enabling environments

1. Creating “enabling environments” is very important for research and development (R&D) and commercial deployment of current, new and innovative technologies. When creating enabling environments, governments need to recognise the important role of the investment/business community in developing and deploying technology, and make full use of the range of policy support measures available to them.
2. For R&D and deployment of mitigation technologies the investment community needs clear incentives. New Zealand considers that a carbon price signal and removal of environmentally harmful subsidies are critical foundations. To maximise incentives and to minimise leakage, this carbon price signal needs to apply as broadly as possible. There may be a need for transitional financial incentives to supplement the carbon price signal, as well as other policy measures to overcome non-price barriers.
3. It is important to recognise that the technology pathway for adaptation may be different than for mitigation. The characteristics of “enabling environments” need to reflect these differences. For example, the introduction of a carbon price will not provide an effective signal for research and development on adaptation technologies.

Cooperation on R&D of current, new and innovative technologies

4. Cooperation is important to increase the size of investment and to speed up the development and deployment of technologies.
5. New Zealand welcomes more discussion on the early stages of the technology pathway; we consider it necessary to draw a distinction between the transfer of existing, commercially-available technologies; and R&D and commercial deployment of new and innovative technologies.
6. The latter will be essential to achieve stabilisation of greenhouse gases at safe levels. Accelerated development and deployment of future technologies is also essential to avoid lock-in from major capital investments with long life-spans taking place in the near-term. New Zealand encourages scaled-up international technology cooperation in key sectors with large mitigation potential and where significant knowledge gaps exist.
7. New Zealand considers that technology should be defined in the broadest context and in this regard technology includes “soft technology” such as information and knowledge sharing.

The role of the UNFCCC in promoting cooperation on R&D

8. The most important contribution that the UNFCCC can make is the development of an effective global agreement on climate change that establishes a price on carbon to apply as broadly as possible, and sends a clear signal to the global investment community to set up and direct resources to towards technology development and innovation.
9. New Zealand also considers that we should look to strengthen the catalytic role of the Convention¹ to promote and facilitate multilateral technology cooperation inside and outside of the Convention, and build upon existing initiatives/institutions. In this regard, Parties could make an explicit political commitment to actively promote and resource global technology cooperation.
10. For cooperation in specific sectors², all countries should clearly articulate technology needs, including identifying where significant information gaps or barriers exist, and areas where potential future technologies could enable additional mitigation.

Cooperation in agriculture technology R&D

11. New Zealand considers that we need to focus more attention on cooperation on research and development of innovative technologies for the agriculture sector.
12. The IPCC Fourth Assessment Report³ identifies a number of important considerations:
 - Globally, agricultural CH₄ and N₂O emissions have increased by nearly 17% from 1990 to 2005
 - During that period, the five regions composed of Non-Annex I countries showed a 32% increase, and were, by 2005, responsible for about three-quarters of total agricultural emissions.
 - The other five regions, mostly Annex I countries, collectively showed a decrease of 12% in the emissions of these gases.
 - Many mitigation opportunities use current technologies and can be implemented immediately, but technological development will be a key driver ensuring the efficacy of additional mitigation measures in the future.
 - Despite significant technical potential for mitigation in agriculture, there is evidence that little progress has been made in the implementation of mitigation measures at the global scale.

¹ Decision 1/CP.13, paragraphs 1(b) (vii) and 1(c)(v)

² Decision 1/CP.13, paragraphs 1(b)(iv) *Cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph 1(c), of the Convention;* and 1(d)(iii) *Cooperation on research and development of current, new and innovative technology, including win-win solutions;* and 1(d)(iv) *The effectiveness of mechanisms and tools for technology cooperation in specific sectors.*

³ Smith, P., D. Martino, Z. Cai, D. Gwary, H. Janzen, P. Kumar, B. McCarl, S. Ogle, F. O'Mara, C. Rice, B. Scholes, O. Sirotenko, 2007: Agriculture. In *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

- Barriers to implementation are not likely to be overcome without policy/economic incentives and other programmes, such as those promoting global sharing of innovative technologies.
 - Current GHG emission rates may escalate in the future due to population growth and changing diets. Greater demand for food could result in higher emissions of CH₄ and N₂O if there are more livestock and greater use of nitrogen fertilizers.
 - Deployment of new mitigation practices for livestock systems and fertilizer applications will be essential to prevent an increase in emissions from agriculture after 2030.
13. New Zealand is committed to international cooperation on research and development of technologies in the livestock agriculture sector and we are seeking other countries to actively cooperate with us in this effort. We established the Livestock Emissions and Abatement Research Network (LEARN www.livestockemissions.net) to facilitate collaborative research and development on non-CO₂ greenhouse gases in livestock production systems.
14. Agricultural systems are highly differentiated with more variability between production systems than in any other sector. When developing mitigation strategies we need to better understand the processes involved in the production of greenhouse gases and the social and environmental context in which agricultural production occurs.
15. In the context of food security concerns, New Zealand strongly believes that we need to develop mitigation practices that do not threaten food production and that enable economic development to proceed in a sustainable manner. In this regard, cooperation on research and development of win-win solutions will be critical.

Cooperation in energy technology R&D

16. New Zealand is committed to international cooperation on research and development of technologies in the energy sector, and we are always seeking new opportunities to enhance our existing cooperative relationships with other countries in this respect.
17. The key focus of our international energy technology research and development effort is our work under a number of IEA Implementing Agreements.
18. There are also number of other energy technology cooperation efforts taking place under the umbrella of organisations such as APEC, and via bilateral relationships with countries like Australia (notably CCS) and the US.

Measurement, Reporting and Verification

19. Greenhouse gas inventories are important tools for research and development of technologies. Regular reporting combined with a facilitative review process is extremely beneficial for inventory improvement.
20. For mitigation in the agriculture sector, national greenhouse gas inventories can allow for mitigation opportunities to be more readily identified. New Zealand is willing and able to provide information and advice on the development of greenhouse gas inventories in the livestock agriculture sector. New Zealand

launched the LEARN Fellowship Programme⁴ on World Environment Day in June 2008 to provide capacity building opportunities for researchers from developing countries.

Linkages

21. Parties should build upon existing work in the UNFCCC, should consider what can be pursued outside of the UNFCCC process, and whether additional financing or institutional structures are required.

⁴ See www.newzealandeducated.com/int/en/institutions_courses/scholarships/incoming/