Workshop on opportunities for mitigation and adaptation related to land use
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Introduction

- With approximately one third of greenhouse gases generated in the land sector, there is important potential for increased ambition - but it needs to be done in a way that fits with broader land sector priorities (e.g. food security).

New Zealand circumstances

- The land sector is important to New Zealand too. New Zealand's economy and its greenhouse gas emissions are dominated by the land sector with 72% of our exports and half of our greenhouse gas emissions coming from the land sector. A third of New Zealand land is protected native forest. Another 6% of our total land is under sustainable plantation forestry, providing an important sink equating to around 20% of gross emissions.

- Land sector mitigation is important for New Zealand and our unusual emissions profile means we have focused a lot of effort in that sector, and that we also understand the importance of land sector issues for many other countries.

New Zealand policy approach

- New Zealand's climate change policy approach in the land sector includes emissions trading, investment in research and development, and an adverse events policy (i.e. dealing with floods and droughts, important adaptation).

- New Zealand's emissions trading scheme (ETS) has been designed to cover all sectors and all gases, and is being implemented in stages, with forestry the first sector to enter in 2008.

- Those who plant new forests can receive emissions units for the carbon their forests sequester, while those who deforest must surrender emission units equivalent to the carbon lost.

- Since the introduction of the ETS, deforestation has been reversed and 43,000 hectares of new forest have been planted. We also have a Permanent Forest Sinks Initiative to promote the establishment of new forests. Participants commit to maintain land permanently in forest (via registration on the land title) even if the land is subsequently sold.

- Agriculture has reporting obligations under the ETS. There are no surrender obligations yet as there are particular challenges regarding **viable** and **practical technologies** to reduce emissions. Even at this stage reporting is important – it sensitises producers to the emissions associated with agricultural activity.

- The technology challenge underlines the importance of research. We have established the New Zealand Agricultural Greenhouse Gas Research Centre and we are a founding member of the Global Research Alliance on Agricultural Greenhouse Gases. The Alliance brings 33 developed and developing countries together to find ways to grow more food, without increasing

greenhouse gas emissions. Through the pooling of research funds the aim is to find 'game changing' solutions, and through information sharing on best practices, constant simple improvements through better productivity.

- Domestically, investments by the Government and the private sector have improved land use efficiency. Such measures have multiple economic and environmental benefits. Win-win-win solutions covering both mitigation and adaptation.

- To put some numbers around that, on an aggregate basis, New Zealand's agricultural emissions have increased 12% since 1990, but with productivity gains our emissions per unit of production have decreased by approximately 30% since 1990 (and keep reducing).

- A good example is New Zealand's production of lamb, where we've bred ewes that will produce twins rather than a single lamb. As a result, lamb production has gone up, but sheep numbers have almost halved since 1990 i.e. fewer mums, more babies.

Primary Growth Partnership

- To promote further sustainable land sector development, NZ has launched a Primary Growth Partnership, with industry and Government collaboratively developing and funding projects that are good for the enviornment, economically sound, and foster innovative solutions.

- Current projects span the land sector including pastoral agriculture, forestry, horticulture, fisheries and aquaculture. One example is a "best practice" programme for nutrient management on dairy farms. Farms identified as having poor nutrient efficiency are coached through an 'environmental improvement plan', to improve local water quality, increase production and farm profitability while also reducing greenhouse gas emissions.

Lessons learned

What have we learnt along the way?

- The land sector includes both sinks and sources of emissions. It is comprised of **complex** biological systems and it fulfils many sustainable development objectives, like improved economic development, improved water quality, and food security. This makes an integrated approach essential covering both mitigation and adaptation, using emissions pricing where practical, but along with other policies.

- We have a challenge to contain emissions while at the same time increasing food production for a growing global population. Becoming more efficient in food production is vital. Our significant investment in global research could have far-reaching effects in this regard.

- Partnership with the private sector is a powerful tool to drive action and to focus on capacity building. Private sector involvement ensures initiatives have long-term commercial viability.

Thoughts for a future agreement

- Under the ADP we are designing a future-focused agreement – one that's durable, flexible, and "applicable to all".

- New Zealand experience with land sector mitigation shows an integrated approach is an important pathway to increased ambition.
- We believe the post-2020 agreement will need to:
    - Give thought to the design of a system that is sufficiently **simple and flexible** for application to all lands and forests, in countries at all stages of development.
    - Support Parties' efforts by providing an agreement that provides **incentives for land sector mitigation**, and avoid creating arbitrary winners and losers.
    - Recognise **sustainable development needs** by taking account of national land sector priorities.
- Options that would meet these criteria include the use of reference levels for forestry (and possibly the wider land sector), combined with efficiency improvement targets for agriculture.
- We should start with an open, scientific and technical discussion to inform the design of a framework that supports an integrated approach and that will foster enhanced ambition.
- With a third of global emissions coming from the land sector, we will have to think about how to deal effectively with the land sector under the new legal agreement. Getting it right will be crucial to the development of a successful collective response through the ADP.