

Appendix One: New Zealand's international forestry and land use accounting under the UNFCCC, Kyoto Protocol and Paris Agreement

International forestry rules

Forests and other land uses can play a significant role in helping to meet our international climate change targets. How their mitigation contribution is counted towards our international targets is determined by international accounting rules.

These rules allow us to recognise and credit the contribution of new forestry activities towards our targets. They differentiate human activities from background trends in emissions and removals. They are particularly important for New Zealand, due to the legacy of uneven historical planting rates in our production forests. This gives our forests a strongly cyclical emissions/removals profile from decade to decade. The rules aim to ensure that in accounting for our targets, only 'new and additional' changes in forest carbon relative to background rates are recognised.

This means that a subset of our net removals from forestry and land use reported in our GHG Inventory is counted towards our targets. For any target period, this subset comprises those net removals reflecting changes in carbon stocks which are directly attributable to new human activities since 1990.

International rules that apply to New Zealand's 2020 target

The international forestry accounting rules that apply to New Zealand's current target (for the period 2013-2020) are those agreed by countries for the second commitment period of the Kyoto Protocol (2013-2020).

These Kyoto rules define the forestry activities which are accounted for as emissions ('debits') or removals ('credits') towards our target:

- **Afforestation and reforestation** activities since 1990 earn credits for the net carbon stock increase resulting from forest growth over the target period. These forests also earn debits for any carbon losses resulting from management, including from harvest.
- **Deforestation** activities are debited for the full carbon lost on the clearance of forest land that occurs over the target period.
- **Forest management** activities, in forests that were already in existence on 31 December 1989 (pre-1990 forests), are only credited or debited for carbon stock changes resulting from departures from existing management. This is defined by an emissions baseline or 'reference level' projected forward from 2009 management practices. This means that the contribution of these forests to our targets is limited to measurable changes from business-as-usual.
- **Other land use activities** since 1990, which don't involve forest (ie, cropland management, grazing land management, revegetation, and wetland drainage and rewetting), involve predominantly soil carbon and low-level vegetation changes which are more difficult to measure, and are voluntary for accounting under the Kyoto Protocol. New Zealand did not elect to account for these non-forest activities in the period 2013-2020.
- **Additional Kyoto Protocol forestry rules apply**, including to accommodate flexible land use (the forest offsetting rule), to define how harvested wood products should be accounted, and to allow for major natural disturbance events to be excluded if needed.

Rules that New Zealand will apply to its Paris Agreement target

The Paris Agreement requires Parties to apply accounting rules to be negotiated for subsequent NDCs but countries are able to voluntarily apply their own accounting approach to their first Nationally Determined Contribution (NDC), subject to general integrity principles set out in the Paris Agreement's Article 4.13. It also requires countries to take into account the existing rules and guidance under the United National Framework Convention on Climate Change (UNFCCC), and its Kyoto Protocol.

New Zealand has set out an accounting approach for forestry and land use under its first NDC which builds on the current Kyoto Protocol rules. This approach was communicated to the UNFCCC in October 2016 on ratification of the Paris Agreement.

Under this approach, New Zealand's international accounting after 2021 will adopt a modified version of the current Kyoto Protocol accounting rules, to better accommodate the cyclical nature of our fast-growing production forests. It will do this by incorporating an 'averaging' approach to crediting new afforestation/reforestation activities, which will smooth out the harvest and regrowth cycles of our fast-growing production forests over time.

The approach means that new forests will be credited up to their long-term average carbon stock only. This will take into account the carbon stored in harvested wood products. Once the average carbon has been reached, they earn no further credits or harvest debits for business-as-usual forest management activities, so long as the land is kept in forest. This avoids the same forest being credited more than once, and ensures that only long-term enhancements to our forest carbon sinks are counted towards our targets.

No changes are proposed to how New Zealand will account for deforestation or forest management over the 2021-2030 period. As a result of introducing averaging, however, afforestation/reforestation land that has reached its long-term carbon stock average will shift into the forest management category. In this category, it will be accounted for under a BAU baseline (the forest management reference level), similarly to pre-1990 forests. Whether the Kyoto Protocol or the GHG Inventory terminology for these land use categories will apply in our formal accounting after 2020 has yet to be decided.

The full details of the accounting approach New Zealand will apply to its first NDC (2030 target) will be reported in New Zealand's first progress report under the Paris Agreement, expected to be in 2023.