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# Forestry and Land Use Policy Basics (LULUCF)

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## What is forestry and land use policy (LULUCF)?

Forestry and land use rules, or “Land Use, Land-Use Change, and Forestry” (LULUCF) refers to rules under the Kyoto Protocol that govern the accounting for carbon from certain activities by Annex 1 developed) countries that add and/ or remove carbon in the atmosphere. These activities occur when, for example, carbon is absorbed (removed) from the atmosphere by trees or grasslands, or when carbon is added to the atmosphere, like when these plants die from being cut down, or are hit by diseases.

Unlike other economic sectors, like transportation, which only generate carbon emissions, LULUCF activities need special rules because they generate both carbon emissions (“debits”) and carbon removals (“credits”). Under the Kyoto Protocol, LULUCF is a part of a country's emissions reduction target, meaning that emissions from this sector will be counted in the same way as emissions from the energy sector, and thus beneficial for countries to use LULUCF activities to reduce carbon emissions and increase carbon removals. Below are explanations of some crucial elements of LULUCF.

## Key components of LULUCF policy

**1) The accounting framework**

The accounting framework refers to how a baseline for LULUCF activities are set, and how credits or debits from these activities are counted. LULUCF activities were occurring long before efforts were made to account for them, so much of the debate concerns how to set a baseline for past carbon emissions and reductions, and provisions for crediting carbon removals in the future. The baseline should reflect a country’s expectation of net emissions from “business-as-usual” (BAU) management – that is, the emissions that would occur in the absence of any climate policy-related incentives and disincentives. The most common frameworks under consideration include:

- **Gross-net accounting** – The baseline for the mandatory activities – afforestation (planting trees where there were none), reforestation (planting trees where forests had originally stood and been cleared), and deforestation (clearing forests) – is equal to the level of emissions and removals at the start of the commitment period.
- **Net-net accounting** – The baseline is set at the rate of emissions in 1990 (as opposed to the start of the commitment period) for activities where accounting is not mandatory, including forest management, cropland management, grazing land management and devegetation. By using that baseline, countries won’t be able to intensify current activities at the start of the commitment period just in order to create a high-emissions baseline to

then elect to account for the activity, which would have given them the opportunity to create credits with no environmental benefit.

- **Reference level** – To account for voluntary actions, particularly forest management, a baseline would be set by each country through consideration of historical data and projections of future LULUCF activities. Proposed by the EU in 2009, this framework intends to create a more realistic baseline from which to judge changes in behavior; however, there are concerns that countries could abuse a system in which they set the reference level for their own performance.
- **Land-based accounting** – A wall-to-wall, comprehensive inventory of carbon in all land-uses in a country. While this framework has the advantage of including emissions and reductions from all land-use activities, not just forests, it is far more demanding in terms of data collection, analysis, and expense. And by adding more land to countries' accounts, it also increases their exposure to the risk of emissions that are outside of their control, like permafrost collapse or droughts. Many countries find this approach either out of reach or unacceptably costly. Nevertheless, all countries recognize that such a comprehensive approach should be their goal in the future.

**2) Critical definitions**

Definitions are the fundamental elements on which the accounting framework is based. LULUCF policy includes definitions for basic terms like "forest" as well as the activities to be accounted for (e.g., "forest management"). Several new proposed definitions are important to the current debate:

- Defining **"wetland/peatland management"** would allow for accounting of activities in wetlands and would help countries create incentives for protecting and restoring wetlands. Wetlands are among the most impacted ecosystems historically, but because they generally do not contribute many credits or debits to a country's greenhouse gas inventory, they have been overlooked in the accounting framework. Including a definition for wetland/peatland management would set the stage for countries to reverse the loss of wetlands and improve wetland management in order to claim climate benefits.
- A **"planted production forest"** definition would differentiate these plantation forests from native forests, which deliver far more benefits, including many ecological co-benefits. A loophole in the current rules doesn't distinguish between the two, even though conversion from native forest to a planted production one creates emissions and destroys many collateral environmental amenities without penalty.
- ***Force majeure*** and **"time out"** are definitions linked to the treatment of natural disturbances. These natural disturbances (*force majeure*), such as fires and pest outbreaks, create emissions that are often outside a country's control, thus creating a compliance risk for the country. To mitigate this risk, definitions have been proposed that would allow countries to specify the area of land affected by a natural disturbance and to temporarily remove that land from the accounting – imposing a "time out" – until it has recovered. Though this approach faces many technical challenges, if achieved it would pave the way for more ambitious reduction targets and greater incentives for changes in forest practices, because those efforts will no longer be eliminated from the accounting in the event of a *force majeure*.

**3) Activities**

Eligible activities vary depending on the LULUCF accounting framework being used. These activities are the types of management that are accounted for under LULUCF, such as forest management, cropland management, grassland management, and devegetation.

Under the Kyoto Protocol, countries can choose to account for these activities, but the voluntary nature of activities reporting causes overall accounting to be incomplete and imbalanced across countries. While the election of these activities remains voluntary, it is possible for countries to intensify emissions from these activities without accounting for the increased emissions. To prevent this possibility, there is an effort to make accounting for more activities mandatory. However, this would also increase the compliance risks and the monitoring costs for most countries. To alleviate the burden of increased risks and costs, increasing the comprehensiveness of accounting for activities will probably need to be linked to measures that reduce compliance risk, such as a provision to deal with force majeure. Also, it may be unreasonable to expect countries to collect the data needed to properly account for activities on which there is little historical data (e.g., cropland management, grassland management and devegetation). However, because good data are available for forest management, it seems possible to add forest management as a mandatory activity at this stage without imposing unreasonable burdens on Annex 1 countries. This is a necessary step toward more comprehensive and/or land-based accounting, which most countries have indicated they would like to work toward.

## Building a complete LULUCF package

The interrelationships between the components of the LULUCF accounting system mean that the overall structure of the rules is important for environmental integrity. For example, clarifying the baseline for accounting and adding definitions of *force majeure*, time out, and planted production forest would reduce compliance risk for key countries, removing a major barrier to the acceptance of mandatory accounting for forest management and, ultimately, comprehensive land-based accounting. Also, actions that carefully alter key elements in the accounting framework. the definitions, and the inclusion of appropriate activities can create opportunities to reward good practices. Because of the interrelationships in the elements, changing one or two elements requires re-evaluation of the whole system to ensure that new loopholes have not been created; ultimately, improvements to LULUCF accounting should be made with an understanding of the holistic impacts.

**Work at the Tenth session of the AWG-KP in June 2010 will focus on resolving issues related to the accounting framework, including refinement of rules around reference levels, adjustments for natural disturbances, and the move towards more comprehensive accounting.**