

## If we cannot define it, we cannot save it: forest definitions and REDD



**Ambiguous forest definitions may become a major bottleneck in reaching REDD agreements at and beyond UNFCCC COP15**

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### Key Observations

- 1. UN Framework Convention on Climate change (UNFCCC) guidelines for setting forest definitions have created ambiguous forest categories and inconsistencies between countries about what qualifies as deforestation**
- 2. In many countries, forest loss or conversion is not officially counted as deforestation**
- 3. The ground-level implications of the current framing of REDD-plus will depend on the operational definition of a forest**

### Implications

- Application of UNFCCC accounting rules for Agriculture, Forestry and Other Land Use (AFOLU) can help countries bypass the need for clear definitions, reduce leakage and promote multifunctional landscapes such as agroforestry
- The scope of emission reduction agreements needs further negotiation alongside the overall commitments for emission reductions
- Before new emission reduction targets are set, no credible way of reducing emissions should be left untested



When do trees become a forest? Photo © V. Meadu/ASB

In the discussion on reducing emissions from forests and other aspects of land use, the negotiators and their supporters appear to have assumed so far that ‘forest’ is a clear concept, that can be used in negotiated agreements for the post-Kyoto period.

The lessons from the implementation of afforestation/reforestation in the Clean Development Mechanism (A/R-CDM) of the Kyoto protocol, however, show that the definition that has so far been agreed on, does not capture what most of public discourse sees as forest or non-forest. A major challenge for the Copenhagen COP15 is therefore to either come up with a more operational concept for selective policy applications within the broader land use categories, move to a more comprehensive approach to land-based emissions that don't depend on a forest definition, or accept that the agreements will remain a paper construct without implementation.

## Forest definitions

Policies depend on definitions. Many policies have failed or been sidetracked when the subsequent application included non-intended beneficiaries or victims and excluded those intended. Additional rules are then usually made to “repair” the rules and close its mazes, adding to complexity, verification bureaucracy and transaction costs. The fear is that this is going to happen with the COP 15 discussions on forests. What is a forest? What is not a forest? Forests were originally defined in reference to an institution, e.g. a king, who claimed control over it, not based on the presence or absence of trees. The king has been replaced by forestry departments, but the dichotomy between village/community and forest has usually remained. Villagers do not voluntarily describe their tree-based vegetation as a forest, as this implies a risk of denial of their rights and can lead to “trouble.”

The forest definition agreed on by UNFCCC in the context of the Kyoto protocol has three significant parts, only the first of which has received a lot of attention:

- Forest refers to a country-specific choice of a threshold canopy cover (10–30 percent) and tree height (two to five m);
- These thresholds are applied through “expert judgment” based on the potential to be reached in situ, not necessarily to the current vegetation; and
- Temporarily unstocked areas (without “temporarily” being defined) remain forest as long as a state forest entity thinks they will, can or should return to tree cover conditions.

Rules 2 and 3 were added to restrict the concept of reforestation and afforestation and allow forest management practices including clear-felling followed by replanting within the forest domain. They make direct observation of forest difficult. This forest definition has a number of counter-intuitive consequences:

- Deforestation is not considered to have occurred in the conversion to oil-palm plantations, as such plantations meet the definition of forest;
- There is no deforestation in a country like Indonesia, as land remains under the institutional control of forest institutions and is only “temporarily unstocked”;
- Swiddening and shifting cultivation can finally be removed from the list of drivers of deforestation, as long as the fallow phase can be expected to attain minimum tree height and crown cover;
- Most tree crop production and agroforestry systems meet the minimum requirements of forest; unpruned coffee, for example, can easily reach a height of five metres;
- The transformation of natural forest into fastwood plantations after rounds of logging is considered to occur fully within the “forest” category, out of reach of RED policies;
- A substantial proportion of peatland emissions are not governed by forest-related emission prevention rules if they involved lost forest cover and were excised from the “forest estate” before a cut-off date that has yet to be specified; integral protection of peat domes will likely have to deal with both forest and non-forest rules.
- Substantial tree-based land cover types fall outside of the current institutional and legal framework for forests and require broad-based implementation arrangements.

There is probably no single definition of forest that can apply in the continuum of landscapes with trees. From a biodiversity perspective, a cut-off between “natural” and “planted” forest may seem desirable, but there are many intermediate forms.



## Leakage

Any attempt at partial accounting or selective policies for emission reduction within the broad land-use category will still require leakage to be considered, as attempts to reduce emissions in one place may well lead to increased emissions elsewhere. Four forms of leakage merit specific attention:

- Leakage through shifts in spatial planning: if spatial planning shifts pressures to convert high-C-stock lands to other uses, the impact on these other lands needs to be considered, even if they are outside of the project area. This applies to land-use planning exercises at the district, provincial, and national scale and to logging or tree crop concessions. Leakage changes character at national borders, as shifts in emissions are supposed to be reflected in other countries' emission accounts.
- People-based leakage: if a landscape will provide livelihoods for fewer people after a forest-based emission reduction program is implemented, the project is responsible for where the people go and their emission consequences. If the project attracts more people and still achieves emission reductions, real progress is being made.
- Commodity-based leakage: if an area currently provides markets with goods that tend to reduce C stocks, such as charcoal or agricultural products, any project that reduces emissions and local commodity production is likely to shift pressures elsewhere. Only if total production is constant, or the external demand is reduced, can a project claim

emission reduction. Otherwise, partial leakage needs to be accounted for.

- Cross-sectoral leakage: absorbing more labour in productive parts of the landscape to avoid the forms of leakage mentioned above may well increase greenhouse gas emissions from an agricultural sector within a landscape that is being assessed. Agricultural intensification can well be part of an emission reduction package, but its emissions need to be accounted for as part of the project design, or as leakage if outside of the project boundary.

## From RED to REALU

The international debate has partially recognized these issues and a progression of concepts — from RED to REDD to REDD+ to REDD++ — reflects the tendency to include an ever larger share of total land-use change. The logical end point of this is to apply the same rules in developing countries that apply within Annex I countries: account for all land use with a measurement protocol that ensures that there are no gaps between categories and that therefore is not sensitive to details of definition (i.e., if the C stock in a type of land cover is not captured by one category it has to be included in another). Reducing Emissions from Any Land Use (or across all land uses) or REALU is the logical next step in the REDD debate. **Figure 1** shows the part of a land cover change matrix that is included in the accounts under four possible international regimes.

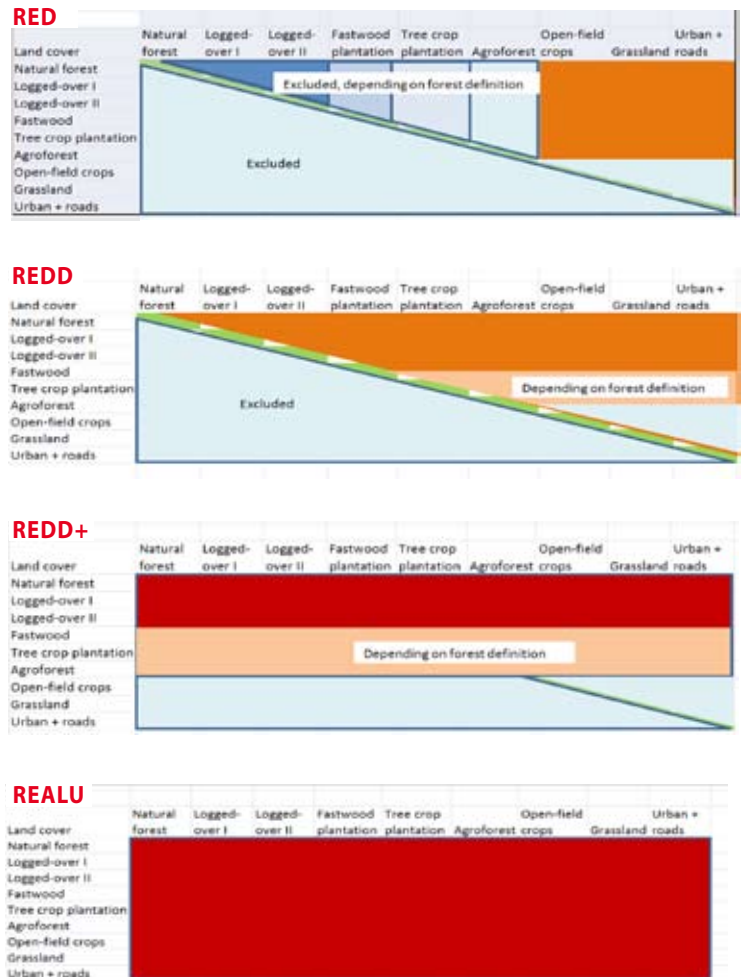
**Figure 1 - Emissions captured under different REDD scenarios**

**RED** = Reducing emissions from (gross) deforestation: only changes from forest to non-forest land cover types are included and details very much depend on the operational definition of forest;

**REDD** = RED plus forest degradation, or the shifts to lower C-stock densities within the forest; details very much depend on the operational definition of forest;

**REDD+** = REDD plus restocking within and towards forest; in some versions REDD+ will also include peatlands, regardless of their forest status; details still depend on the operational definition of forest;

**REDD++ = REALU** = REDD+ plus all transitions in land cover that affect C storage, whether peatland or mineral soil, trees outside forest, agroforest, plantations or natural forest. It does not depend on the operational definition of forest.



From the perspective of efficiency as well as fairness there is very little reason to pay selective attention to forest rather than other land uses. A more comprehensive REALU approach is likely to allow trees outside forest, agroforestry systems and community-based forest management to be treated fairly in the rules, proportional to C storage achieved and emissions avoided. It will likely also further reduce emissions by boosting carbon storage in agricultural production systems and systems in between agriculture and forests.

Recent analysis by the World Agroforestry Centre suggests that 1 billion ha, or one fifth of the agricultural lands of the world, have at least ten percent tree cover <sup>(1)</sup>.

## Accounting

There still are valid questions about how the accounting regime for Annex 1 countries should be applied to developing countries. In the simplest form, Tier 1 accounting, the data requirements are slight, but there is a substantial uncertainty margin about the estimates as default assumptions are used. Tier 2 accounting, which makes use of nationally-derived default values, is within the capabilities of any country

that involves universities and research institutions in the relatively simple measurements. Tier 3 accounting, the most sophisticated form and the one with the lowest uncertainty margins, requires a substantial investment in databases and data collection. Such investments will be justified only for those low-income countries with external assistance and/or when financial incentives for emission reduction emerge.

## The way forward

The ASB Partnership for the Tropical Forest Margins, hosted by the World Agroforestry Centre, will try to highlight the REALU option for national negotiators and provide quantitative analysis of the part of total land-based emissions that will be covered by the various types of rules under current discussion. A key lesson from Kyoto may be that the scope of emission reduction agreements outside industrialized countries needs to be negotiated alongside the commitments for overall emission reduction. Once such numbers are set, further flexibility in mechanisms to achieve the targets will undermine the credibility of the effort. Before such targets are set, no credible way of reducing global emissions should be left untested.



Re-forestation in Africa. Photo © T. Yatich/ICRAF

The ASB Partnership for the Tropical Forest Margins is working to raise productivity and income of rural households in the humid tropics without increasing deforestation or undermining essential environmental services.

ASB is a consortium of over 90 international and national-level partners with an ecoregional focus on the forest-agriculture margins in the humid tropics, with benchmark sites in the western Amazon basin of Brazil and Peru, the Congo Basin forest in Cameroon, southern Philippines, northern Thailand, and the island of Sumatra in Indonesia.

The ASB Policybriefs series aims to deliver relevant, concise reading to key people whose decisions will make a difference to poverty reduction and environmental protection in the humid tropics.

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## References

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## Cover photo

A landscape in Sumatra, Indonesia clearly shows where natural forests have been replaced by oil palm plantations or removed completely. Yet according to Indonesia's forest definition all of these land uses meet the criteria for being a forest. Photo by V. Meadu.

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