



SPECIAL BULLETIN

2011

Part 1 CALL FOR TRUTH IN TARGETS

■ TRUTH IN TARGETS!

It is time for developed countries to get real about the real impact of land and forestry sector emissions on their economy wide emission reduction targets. Action in the Land use, land use change and forestry (LULUCF) sector can – and should - strengthen ambition in setting higher targets. Instead, current accounting rules, and proposed changes to them, actually improperly inflate the targets of Annex 1 Parties.

A UNFCCC workshop to clarify the assumptions and the conditions related to the attainment of these targets, and options and ways to increase the level of ambition, is to be held in Bangkok this April, pursuant to the LCA decision in Cancun.

This workshop is to specifically address LULUCF, pursuant to paragraph 38 of the LCA decision (as well as considering the use of carbon credits from the market-based mechanisms)¹.

Up to 1 billion tons a year of CO₂ emissions, equal to about 10% of 1990 benchmark emissions, may vanish from the national accounts of developed countries through LULUCF loopholes. Such a situation is unacceptable.

Failure to account for these emissions knocks several percentage points off Annex 1 country targets. These emissions must be brought onto the books, and targets lowered accordingly to reflect what the atmosphere sees.

Parties must now adopt 'truth in targets' accounting rules that will close the LULUCF loopholes. In the meantime, current negotiations on the level of ambition must be based on numbers that do not include this LULUCF 'hot air'. The world needs Truth in Targets, not slippery targets based on hiding actual emissions that are really affecting the atmosphere. We all have an interest in confronting the reality of the situation.

Parties should also take up the opportunity to increase their level of ambition by realising the potential of the land and forestry sector. Improved land management and forest protection can contribute, alongside other sectors, towards achieving deep and early cuts in emissions.

¹ 38. Requests the secretariat to organize workshops to clarify the assumptions and conditions related to the attainment of these targets, including the use of carbon credits from the markets-based mechanisms and land use, land-use change and forestry activities, and options and ways to increase their level of ambition





WELCOME TO THIS SPECIAL BULLETIN ON TRUTH IN TARGETS. It outlines how unaccounted land and forestry emissions of developed countries are undermining emissions reduction targets and what can be done about it. Future bulletins will address other aspects of this problem.

In this bulletin:

- Page 1: Truth in Targets Editorial
- Page 2: Existing Emissions Loophole in LULUCF must be closed
- Page 3: Planned New Logging Loophole – how it works and why it is unacceptable
- Page 4: How Forests of Developed Countries can contribute
- Page 5: 'Do as I say, not as I do' Hypocrisy of developed countries on REDD and LULUCF
- Page 6: Bioenergy and Harvested Wood Products – an accounting trick
- Page 7: Land-based Accounting - the key to sensible accounting

■ EXISTING EMISSIONS LOOPHOLE IN DEVELOPED COUNTRY LAND SECTOR ACCOUNTING RULES MUST BE CLOSED

Under the accounting rules of the Kyoto Protocol there is no requirement to account comprehensively for all emissions from land use, land use change and forestry (LULUCF). In a nutshell, this allows Annex 1 developed country Parties to pick and choose what they will account for and, as a result, they tend not to select to account for emissive activities. Their accounts are thus skewed by the incorporation of removals (sequestration) whilst leaving out emissions (logging).

This is the existing emissions loophole. Targets for Annex 1 developed countries are being undermined by the failure to even get important emissions onto the books.

The present accounting system is activities-based. It does not cover the entire land sector as would occur if land-based accounting was instituted. This is another problem for getting a real reflection of what is happening in land and forests into the accounts. The current LULUCF system defines several activities occurring in the land and forests sector but only mandates accounting for three activities¹, leaving it voluntary for Parties to select to account for any other identified activities². For instance there is no requirement to account for the drainage of peat soils and use of drained peatlands although both are known to be highly emissive.

The three activities that are currently **mandated** for accounting are:

- Afforestation: this means planting trees on an area not previously forested, usually it is plantation establishment;
- Reforestation: this means replanting trees (plantations) on an area that has been previously deforested and maintained as non-forested land; and
- Deforestation: this comprises land use change through clearing forest and using that land for other purposes than growing forest again.

Afforestation and Reforestation (known as A & R) deliver removals of carbon from the atmosphere via sequestration within the growing vegetation and soils.

Deforestation involves carbon emissions attributable to land use change, but this activity is restricted in the emissions it includes because it does not encompass the major emitting activity of logging when that area is subject to ongoing logging cycles, nor does it encompass the conversion of natural forest to plantations. In both cases no land use change is involved. These instead fall under the voluntary activity of Forest Management, which is only selected by some of the Parties.

A cynic might note that the current accounting system is basically constructed to indicate when land enters or leaves the control of the forest industry while hiding harm industry does with the forest it controls.

The current **voluntary** activities for LULUCF accounting are:

- Forest management (logging, and conversion of natural forests to plantations);
- Cropland management; and
- Grazing land management.

Each of these activities is generally emissive in nature and they are not frequently selected for accounting.

This loophole is of a significant size. For example drained organic soils in developed countries emit about half a billion tonnes of CO₂ emissions every year.

Encouragingly, it was decided in Cancun that a new, voluntary activity of 'Drainage and rewetting' of peatland should be adopted. This is welcome progress, as emissions from drained peatlands are large and ongoing until such drainage is reversed and the peat is rewetted or the peat exhausted. It can be predicted that Annex 1 Parties will select this new activity only when they are rewetting peatland and can gain from accounting for the emissions reductions involved, but this is an important and welcome initiative.

Currently, there is not even a proposal to make all of the remaining voluntary LULUCF activities mandatory for accounting let alone a commitment to do so. Mandatory accounting is the least that should be expected in terms of

a move towards more comprehensive coverage in LULUCF in the Second Commitment Period. A 'hot spots' approach involving applying higher tier accounting to areas known to be of significant emissions impact, whilst the remainder is dealt with by lower tier accounting, is being discussed within the EU in order to overcome objections to the accounting impost entailed with a move to mandatory accounting. This is a commendable idea.

Proposed new accounting rules for logging ('forest management') are problematic and introduce their own emissions accounting loophole. See article below.

¹ Article 3.3, Kyoto Protocol

² Article 3.4, Kyoto Protocol & Decision 16CMP.1



This developed country logging and burning (Australia) is not accounted for under current LULUCF rules because it is voluntary for Annex 1 Parties to account for forest management (logging)

■ PLANNED NEW ACCOUNTING METHOD FOR 'FOREST MANAGEMENT' HIDES EMISSIONS IN A LARGE NEW LOOPHOLE

Criticism over the serious inadequacies of accounting for land sector emissions of developed countries under current LULUCF rules has prompted negotiations to construct new rules that will encourage most or all Annex 1 Parties to account for forest management (logging).

The problem is that the new accounting method that is proposed is more perverse than those we have now.

Developed countries are pushing hard for a new accounting framework that allows them to increase logging emissions without taking responsibility for them. This planned increase in emissions has been estimated at around half a billion tonnes of CO₂ in total¹.

The proposed approach simply removes logging emissions from the books.

How does the logging loophole happen?

This is called the 'reference level' approach. It works by allowing each developed country to pick any level of emissions it likes and use it as a baseline.

Many Annex 1 countries have indicated that they intend to use forward looking (or projected) baselines. These countries plan to use Business As Usual (BAU) emissions, including any planned increases, based on their existing national forest and forest industry policy settings, as their baseline. Only deviations in emissions from this baseline will be accounted for. In other words, however grandiose their LULUCF growth plans may be, if they meet them, their accounting liability would be zero. Perversely, if actual emissions turn out to be less than their grandiose plans, the LULUCF system will book an undeserved accounting credit.

Such a projected reference level is designed to measure deviation from planned growth. It also serves to hide any increases in emissions associated with such planned growth. It prevents any level of ambition being imposed upon the sector.

Logging emissions should be measured relative to historical emissions data, and the intent should be to reduce them relative to those emissions levels. Use of a long term historical average as the baseline is the only option that closes the accounting loophole in a realistic and acceptable way.

Why has the logging loophole been designed?

Annex 1 Parties are failing to conserve stores (reservoirs) and enhance sinks and reservoirs. Many Parties intend to increase harvest rates and emissions from forest management. They are under pressure to account for forest management in the second Commitment Period.

However most of those Parties find owning up to the real emissions to be inconvenient. *These emissions would not be reflected in accounts using the projected reference level approach.*

Why does it matter?

If LULUCF is to strengthen ambition, the proposed accounting loophole for more logging must be closed.

It is a serious departure from what a climate agreement should set out to achieve. Such perverse rules are not being constructed for other industry sectors. The forest industry is stitching up a deal all of their own with the complicit support of developed country Party negotiators. It is unlikely that other industries have been consulted as to whether they think it acceptable that forestry gets such a free ride and they do not.

There is significant carbon contained in developed country forests, and a large amount of emissions will arise from logging them. Three of the top five forested countries of the world are developed countries (Canada, USA, Russia) and Australia has the most carbon dense natural forests in the world. (see chart: Global Carbon Stocks)

Developed countries must reduce their logging emissions, not increase them. The first necessary step is that they agree to account for them properly and comprehensively.

Hiding logging emissions in this new forward looking baseline accounting loophole will significantly undermine the targets of developed countries to make quantified economy wide emissions reductions while encouraging them to miss a great opportunity to increase ambition.

¹ CAN International LULUCF working group, August 2010, on the basis of material submitted to the UNFCCC by Parties.

■ WHY LAND AND FORESTS SECTOR EMISSIONS FROM DEVELOPED COUNTRIES MATTER AND HOW THEY CAN CONTRIBUTE TO INCREASED TARGETS FOR EMISSIONS REDUCTIONS

Emissions from the land use sector are estimated to comprise 26% of global emissions¹, undeniably a significant contributor to anthropogenic climate change. The land sector (and oceans) also provides the only known mechanism for drawing down and sequestering atmospheric carbon.

Securing emissions reductions from the land sector alongside those in industrial sectors is imperative for achieving stabilisation scenarios which require a 25-40% reduction in emissions from developed countries. Under current forecasts Annex 1 land and forests fall far short of their potential to contribute.

Global Carbon Stocks	Mt C
Boreal forests	559,000
Temperate forests	159,000
Temperate grasslands	304,000
Wetlands	349,000**
Tropical forests	428,000

Source: IPCC AR4, CH9; **Joosten, 2009

Boreal and temperate forests contain over 700,000 Mt carbon, the vast majority of which is in developed countries, whilst tropical forests contain over 400,000 Mt carbon, the vast majority of which is in developing countries. Temperate grasslands contain over 300,000 Mt carbon much of which is in developed countries. Clearly there is a leading role that the land sector of developed countries should play.

How these developed country carbon reservoirs are managed, and the expectations that are placed on them for contribution to mitigation and sequestration, are important to achieving global climate outcomes.

At the time when past commitments were made, management of Annex 1 forests maintained a large aggregate sink. Annex 1 Parties relied on this sink to help meet their targets for the first commitment period. Now, projections outline large increases in developed countries' forestry emissions due to rising demand for wood and wood products including bioenergy. As outlined on the previous page regarding the proposed new accounting method, such emissions, including these planned increases, would not be accounted for by the proposed LULUCF accounting method employing forward looking baselines.

How can forests contribute to mitigation?

The answer to this question should be well known to those who have focused on the REDD+ mechanism developed to encourage mitigation in developing country forests. Such

actions should also be expected to be taken in the forests of Annex 1 Parties.

- Forest area: maintain or increase
- Landscape carbon density: maintain or increase through forest conservation (protect intact forests and restore degraded ones)
- Stand-level carbon density: maintain or increase by reducing forest degradation (including industrial scale logging), encouraging restoration, improving management

What measures can be agreed at the international level?

Normalise the treatment of LULUCF: All land sector stores, emissions and sinks, should be brought into the accounts in a comprehensive and transparent manner. There is no incentive to reduce emissions for which there is no recognition and no penalty.

Introduce a forest sectoral target: A sectoral target should also be applied to developed country land sector emissions just as other industry sectors have accepted emissions reduction targets as their contribution to meeting national targets. This will compel emissions reductions in this sector, and can be used to increase the ambition of developed country Parties. Such a step opens up the possibility of readily and substantially increasing national targets.



The LULUCF loophole: maize for biogas grown on peat, Germany. Energy accounted, peat emissions unaccounted. Source Hans Joosten, ECA side event presentation, Tianjin, 2010.

¹ Garnaut, R (2011) Garnaut Climate Change Review – Update 2011 Update, Paper 4: Transforming rural land use

■ HYPOCRISY: REDD+ AND LULUCF 'DO AS I SAY, NOT AS I DO'

Developing countries are being asked to reduce emissions from deforestation and forest degradation via participation in the REDD+ mechanism. Developed countries meanwhile, have no such expectation placed upon them, in fact most explicitly intend to increase their forestry emissions while using accounting rules for LULUCF allowing such increases to be ignored.

Yet the forests of developed countries contain much greater carbon stores than those of developing countries with equivalent greater emissions reduction potential which needs to be realised if we are to avoid dangerous climate change.

There is an unacceptable double standard at play. It is hypocritical of developed countries to expect to buy offset credits from REDD+ in developing countries, but not to commit to reducing emissions from, and restoring their own forests.

Neither are there any safeguards in LULUCF like those contained in the REDD+ decision in Cancun. Biodiversity is being eroded and lost by the logging of primary forests and other natural forests in developed countries as well as developing countries. Countries such as Australia have gone on a spree converting natural forests to plantations without restraint from international LULUCF rules – in fact they haven't accounted for this logging and conversion at all because self serving definitions mean no 'deforestation' was involved.



Plantation conversion Tasmania, Australia, Blakers

Plantation conversion Styx Valley Tasmania, Australia. Blakers 2008.
There is no safeguard against this conversion of natural forest to plantation in Annex 1 countries



BIOENERGY AND HARVESTED WOOD PRODUCTS – AN ACCOUNTING TRICK

The prompt introduction of land-based accounting could serve to clarify and improve how both bioenergy (including biofuels) and harvested wood products (HWP) are dealt with by UNFCCC negotiators – and by regulators, processors and consumers.

Notwithstanding the unintended consequences problems surrounding an expanding bioenergy sector's potential to constrain food supply and destroy biodiversity, there are a suite of problems flowing directly from failure to adopt prudent and sensible accounting rules covering emissions associated with the supply and use of both bioenergy and harvested wood products.

Use of bioenergy is often asserted by both policy makers and regulators, and thence assumed by the general public, to be 'carbon-neutral' – rather naively by those who don't know the reality – and very cynically by those who do. For EU regulators, for instance, such a 'carbon neutral' assertion is based on the assumption that emissions associated with the supply of bioenergy have been fully reported and fully accounted for in their sector of origin in their country of origin and netted out against carbon sequestration in growing the bioenergy crop in the first place.

In developed countries, such an assumption falls down because the LULUCF accounting rules, while obliging Annex 1 countries to report emissions from forest management (logging), allow them to choose not to account for them. Not surprisingly, many exercise this option in deceptive accounting. In developing countries, such an assumption also falls down simply because, while the same obligation to report exists, there is no accounting liability because there are no binding international targets to be met.

The result is that **bioenergy resources in the energy or transport sector (whether purchased from a developed or developing country) carry with them a carbon 'footprint' which has not been fully accounted for.** In many situations, this carbon footprint accounting gap is so large as to make bioenergy a perverse substitute for fossil fuels. An obvious example is the consumption of oil palm-derived liquid fuel from plantations established on land converted from native forest, especially if it involves drained peatland. Less well known is the consumption of biogas derived from maize grown on drained peatland.

Conventional fossil fuels	Emission factor [t CO ₂ /TJ]
Natural gas	52.2
Fuel oil	73.3
Coal (anthracite)	98.3
Peat	106
Biomass burning, from peat soil	Emission factor [t CO ₂ /TJ]
Coniferous wood, net energy (Scandinavia)	225
Maize, net energy (Germany)	240
Sugar Cane, net energy (Florida)	350
Biofuels, from peat soil	Emission factor [t CO ₂ /TJ]
Sugar cane, ethanol (Brasil)	570
Maize, biogas (Germany)	880

Source: Hans Joosten, ECA side event presentation, Tianjin, 2010

Note: The bioenergy emission factors shown are for crops grown on peat soil and fuels derived from such crops. For crops grown on mineral soils the numbers would be significantly smaller but, in most situations, emission factors are higher for biomass fuels for both stationary energy and liquid fuels than for fossil fuels.

The LULUCF negotiators, not content with accounting rules to hide logging-derived emissions, are also seeking to claim credit for wood exported from their part of the land sector and still held as wood products within other industrial sectors (harvested wood products). In conventional economic



analysis, such inter-sectoral transfers are dealt with by using 'input-output' tables – any export from one sector is numerically matched by an equivalent import into another.

The current LULUCF accounting rules, quite properly and sensibly, require forest managers to assume that 100% of the carbon in the 'harvested wood products' they sell has been emitted to the atmosphere as carbon dioxide at the time of sale. Any potential accounting gains should be available for those industrial sectors which have purchased wood or wood products – not for those who've just got rid of them! It is ludicrous for forest managers to expect to benefit from someone else's good behaviour. The use of wood and wood products in our economies should be dealt with by:

- using land-based accounting so that all stores, emissions and sequestration can be fully and fairly accounted for;

- using 'input-output' tables such that 100% of the emissions attributable to consumption of wood is debited to the forestry sector and credited to the wood/wood products industry sector at the time of sale (and, like consumption taxes, on down the value chain, while sensible to do so, before being written off); and,

- if a price is put on carbon, creating incentives for forest managers to differentially hold onto wood in high carbon footprint forests (like primary forests and swamp forests) and for industrial sectors to use wood-based inputs more efficiently (and, where it is true to say so, to preferentially source them instead of higher carbon footprint materials, e.g., timber instead of cement and steel in the construction sector).

Additionally, the actual size of the 'carbon footprint' associated with specific 'drivers' of forest degradation, including deforestation, can be established because chain of custody can be

established throughout the value chain to the informed benefit of processors, retailers and consumers.

■ LAND-BASED ACCOUNTING THE KEY TO SENSIBLE ACCOUNTING BASED ON PROPER REPORTING OF WHAT'S REALLY HAPPENING

If the world is to make sense of what is happening to terrestrial carbon stores (or 'reservoirs' as they are referred to in the text of both the UNFCCC and Kyoto Protocol), including their behaviour as both sinks and sources of emissions, terrestrial carbon needs to be accounted for with the same degree of coherent rigour as we expect of our financial affairs. This approach is known as 'land-based accounting' – full, comprehensive and transparent reporting of the status of all terrestrial carbon stores (just as 'assets' are reported in conventional financial accounts) and changes in those stores (just like statements of 'income and expenditure').

The debacle over renegotiation of the LULUCF accounting rules illustrates all too clearly what happens if everyone gets to choose their own accounting rules. Regardless of how the LULUCF rules might eventually be set at the Durban COP for the Kyoto Protocol second commitment period, it is essential that negotiators also decide – in Durban – on the use of full, comprehensive land-based accounting for the KP third commitment period. As soon as a deadline is set for the introduction of land-based accounting, much of the heat goes out of the LULUCF accounting rules debate – which is just an argument about evading accountability for the large emissions associated with wood harvesting and supply – and defending their privileged position is worth a lot of heat. Negotiators owe it to themselves to set such a deadline – as the only way to prevent the LULUCF problem from plaguing them for evermore.

When the UNFCCC and Kyoto Protocol were being negotiated, the nature and scale of the climate change problem attributable to customary management of terrestrial carbon went largely unrecognised. Today, the scientific community is beginning to marshal available information to indicate that the problem is too great for UNFCCC negotiators to continue to leave to benign neglect. Taken as a whole (deforestation, forest degradation, intensification of cropping, drainage of wetlands, more ruminants, etc.), current terrestrial carbon emissions from land use sectors probably account for around 30% of all greenhouse gas emissions – and about the same proportion of historical responsibility for accumulated past emissions. The problem is further exacerbated insofar as these emissive activities also tend to degrade the capacity of the biosphere to buffer atmospheric carbon dioxide concentrations by absorbing it (sequestration).

It is time that these very significant contributors to the global climate change problem (where degradation not only causes emissions but

continued overleaf



from page 7

■ LAND-BASED ACCOUNTING THE KEY TO SENSIBLE ACCOUNTING BASED ON PROPER REPORTING OF WHAT'S REALLY HAPPENING

also inhibits sequestration) were given their own sectoral emissions reduction targets just like other industry sectors. Such target-setting needs proper reporting and elimination of perverse accounting rules. As we know from the world of finance, reporting rules can be evaded by fiddling with the data but this problem pales into insignificance compared with the problems associated with fiddling with the accounting rules.

'Terrestrial carbon' is used to describe those carbon stores created in recent geological time by prevailing biological processes that can be regarded as 'labile' – that is to say, they can be readily degraded or enlarged (either by natural processes and events or by human activities). Other labels such as 'biological' carbon or 'green' carbon are sometimes used to differentiate between part or all of such carbon and 'fossil' carbon (from which fossil fuels and associated emissions are derived).

At its simplest, we are referring to carbon in the biosphere – in soils and vegetation. The vast majority of which is to be found in soils (especially peatlands, tundra and other wetlands) where chemical processes allow perpetual accumulation of some of the organic matter created by biological processes driven by 'above-ground' vegetation or biomass. If undisturbed, the vegetation above will reach a steady state of maximum carbon content – known as natural carbon carrying capacity (CCC).

This is the benchmark against which the extent of both past degradation and potential restoration can be estimated. Importantly, the scientific evidence clearly shows that forests,

in particular, continue to accumulate above-ground biomass for much longer and to much higher levels than is generally appreciated by managers and decision-makers. Protecting intact wetlands or forests from initial degradation (e.g., protecting forests from logging) and ongoing degradation (e.g., rewetting drained swamps) is a much more attractive option for immediate, cost-effective emissions reduction than is generally appreciated by negotiators.

In its latest report, the IPCC refers to this sector as 'AFOLU' – agriculture, forestry and other land uses which includes activities in developed countries, some of which are covered by self-serving LULUCF accounting rules, and activities in developing countries where there is still considerable fluidity as to the extent of their inclusion in any REDD, REDD+ or REDD++ mechanism (which we hope will be finalised in Durban).

At present, reporting and accounting rules adopted by UNFCCC focus on emissions (despite the treaty obligations to focus on 'reservoirs' as well) – and taking such an 'income and expenditure' accounting approach is fine if negotiators limit their attention to addressing use of fossil fuels. Where terrestrial carbon management is concerned, however, proper balance sheet accounting is needed. While such a need can fairly be regarded as a self-evident 'no-brainer', getting agreement on its introduction is being severely hampered by the desperate determination of the forestry sector in developed countries to keep their LULUCF accounting rules which allow them to hide emissions and set reference levels that evade accountability.

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