

The LULUCF accounting should reflect what the atmosphere sees

The transition towards a low-carbon and circular economy and the attempt of the European Commission to help Member States to prepare their post-2020 energy and climate strategies to achieve the target of the Paris Agreement and the 2030 Agenda is a positive step forward. We welcome the proposal of the EC to include the Land Use, Land Use Change and Forestry (LULUCF) sector in the EU climate and energy framework for 2030. It is of utmost importance to determine how this sector will be included in the framework as of 2021, and to make sure that its ambition and its mitigation objectives are the highest possible. The EU has a great opportunity to play a leading role in the global action against climate change by including the disproportionately large emissions from drained and otherwise degraded peatlands in the accounting.

Concerns

While welcoming the attempt of the European Commission to upgrade the current methodology regarding land use for a post-Kyoto protocol period, we call on the EU to do more to deliver an improved accounting system by 2020 by including all land emissions in this proposal, phasing the voluntary approach out. Decision 529/2013/EU defines the new accounting rules and we welcome the fact that accounting for GHG emissions and removals from Cropland Management and Grazing Land Management are mandatory and we expect Managed wetlands to be mandatory as well.

Despite the improvements in the Regulation, there are some concerns to be highlighted:

1) The proposed accounting system does not include all land use categories

Excluding organic soil outside forest and agriculture means that there is no incentive to reduce emissions from these lands, so that important opportunities to achieve more ambitious emissions

Base vear Debit/credit Commitment period Net-net: a loss compared to a base year is accounted as a Carbon stock Gross-net: the same loss is accounted as a credit, because only changes within the commitment period are considered Carbon stock Reference level: the same loss is accounted as a credit, when this loss is smaller than an imaginary Carbon stock 'expected loss'

reductions targets are missed. Moreover, excluding land use categories means that the no-debit rule can on paper be kept but in reality violated.

2) Different accounting systems and base years

The use of three conceptually non-fungible accounting systems and different base years (1990, 2005) undermines the climate integrity of forest accounting. In comparison to net-net accounting, which applies to all other reporting sectors and all non-forest LULUCF activities, gross-net and reference level accounting of forests may deliver 'credits', where from a climate perspective real debits occur (see figure). Not only does the use of three different reference systems result in complexity and intransparency, the divergent accounting modalities also create 'credits' of completely different denomination (in terms of 'what the atmosphere sees'). With gross-net and reference level accounting the principle 'a tonne is a tonne' simply does not hold. This has major – but largely unnoted – consequences for equitable emissions trading and the fair fungibility of units.

The use of these different systems in parallel furthermore leads to perverse effects, e.g. when drained and forested peatland is rewetted but loses its 'forest' status; and the area is accounted for as 'deforestation'; the resulting gross-net accounting will always lead to debits (as minor but net emissions will persist), even when the rewetting leads to much less emissions compared to the initial drained status.

With regard to the use of a base year or the reference level approach for managed wetlands, we support the base year, because it explicitly reflects the annual differences that 'the atmosphere sees'. In most countries of the European Union the choice of a more recent base period 2005-2007 will lead to approximately 10% smaller baseline emissions from cropland, managed grassland and managed wetlands compared to the earlier base year 1990. This is, because the area of drained organic soils has between 1990 and 2007 decreased as a result of ongoing peat oxidation and subsidence, changing organic soils into mineral soils. The proposed change of the base year is at odds with the IPCC 2014 '2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol', which states that "It is good practice to apply the activity to all land with an organic soil that has been drained or rewetted since 1990 even if the soil on these lands has converted to mineral soil before or in the commitment period".

In contrast, **the reference level approach** may highlight the efforts done by the sector, but severely obscures the actual effect on atmospheric greenhouse gas concentrations (*cf. fiqure left*).

3) LULUCF and the flexibility rules

A Member State could fairly compensate for emission from one land accounting category by removals from another land

accounting category in their territory, if the 'credits' and 'debits' were generated under a single reference system. As it is now, with three different systems, the flexibility rule cannot be applied fairly. Equally it prohibits a fair transfer of excess removals to another Member State to help ensure their compliance with the 'no-debit rule'. In an extreme example it is conceivable that 'fake' credits from forest management (e.g. when less wood is cut than originally envisaged but in fact real emissions take place) have to compensate for unfair 'debits' from peatland rewetting (when rewetting leads to a substantial reduction of emissions but simultaneously to deforestation).

4) Mitigation activities

In LULUCF mitigation activities should not only address the enhancement of GHG sinks, but also the reduction of sources. Next to carbons sequestration in wood, the most effective mitigation activity in the LULUCF sector is reducing soil carbon emissions by peatland rewetting.

What does the category 'Managed wetland' stand for?

In the EC proposal, Managed wetlands are defined as "land use reported as wetland remaining wetland, and settlement, other land converted to wetland and wetland converted to settlement and other land". The category 'managed wetlands' includes peatland drained and used for peat extraction and peatlands used for settlement and other land incl. infrastructure, e.g. windmills. These land use types are in some countries the largest causes of peatland drainage.

Why a mandatory accounting for wetlands in the LULUCF?

LULUCF accounting should reflect what the atmosphere sees. We therefore strongly call on the EU to install a complete LULUCF accounting which includes all significant sources, sinks, pools and gases in all land use categories. Member States should not be allowed to pick and choose.

There is no valid argument – neither importance nor lack of guidance – to exclude wetlands/peatlands from mandatory accounting. Wetlands/peatlands are in the EU important sources of greenhouse gas emissions and should in the same way be included as cropland and grassland on mineral soil, which are only minor sources or sinks. The 2013 IPCC Supplement Wetlands with guidance on accounting GHG fluxes from wetlands/peatlands is furthermore much more up-to-date than the 2003 GPG on which the accounting for forest, cropland and grassland on mineral soils is based on.

According to a joint briefing of Wetlands International and Greifswald Mire Centre¹, in many countries land use on peat is a substantial source of emissions from the land. In Germany, for example, organic soils used for agriculture comprise 7.3% of the agricultural land, but emit more than one third of all emissions from agriculture, including those from enteric fermentation and

fertilization. Generally these soil emissions remain concealed in overall LULUCF reporting. Ongoing drained peatland emissions will in several countries with decreasing forest sinks frustrate compliance with a 'no debit rule' of no net emissions from LULUCF as proposed by the EU.

The figure² below shows that the contributions of the 16 EU countries are together responsible for 99 % of EU and 17 % of global emissions from organic soils.

Accounting for all land use categories would:

- Give a better understanding of all GHG released into the atmosphere
- Incentivise the protection of existing carbon reservoirs
- Promote new land management practices and technologies (e.g. paludiculture) that reduce greenhouse gas emissions by rewetting drained organic soils and increase additional environmental co-benefits (improving air, soil and water quality, biodiversity) while maintaining productivity.

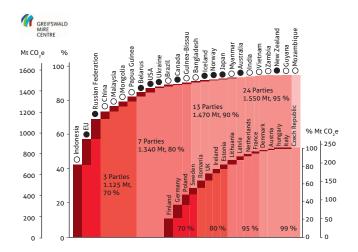


Figure 2: Emissions from drained organic soils for the 25 UNFCCC Parties responsible for 95% of the emissions in descending order. White dots denote non-Annex 1 Parties, black dots Annex 1 Parties. Red shades indicate where the 70, 80, 90 and percent marks are crossed. The inset depicts the contributions of the 16 EU countries that are together responsible for 9 of EU and 17% of global emissions from organic soils. Presented emissions values concern microbial oxidation only; fires raise the importance of particularly Indonesia and Russian Federation. All data from the Global Peatland Database/Greifswald Mire Centre: http://tiny.cc/globalpeat

- 1. Briefing: Peat for speed in land sector mitigation and adaptation.
 Nov, 2016 Wetlands International and Greifswald Mire Centre
- 2. idem
- 3. Assessment on Peatlands, Biodiversity and Climate change, 2008 Global Environmental Centre and Wetlands International

Consistency with other policies

EU bioenergy

Biomass use in the energy sector should not be zero rated, as long as the emissions associated with the production of that biomass, above all those from peatlands in and outside Europe, are not adequately accounted for.

Biogas produced from biomass crops grown on drained peatlands (which, as a result of subsidence inevitably involves the drainage of previously undrained peat) represents a severe loophole. Biogas from maize cultivated on drained peatland, for example, has a carbon footprint per energy unit that is 8 times higher than that of fossil fuel. We ask for an accurate accounting of emission resulting from the production and use of bioenergy. GHG emissions from land used for biomass production must be accounted for in the energy sector of the EU, in case the producing countries do not fully account for their land use associated GHG emissions.

We recommend the following:

- Accounting for managed wetlands should become mandatory, and be included in the list of land accounting categories of the scope (art.2) of the Proposal. This would recognize the mitigation potentials of peatlands.
- Conservation, restoration and wise use of peatlands are essential and very costeffective measures for long term climate change mitigation and adaptation as well as biodiversity conservation³.
- Rewetting of peatlands should be promoted to reduce or halt emissions. Sufficient
 information is already available on peatland location and status, as well as on
 rewetting techniques and monitoring methodologies. In case of agriculturally used
 land, paludiculture enables to reduce the GHG emissions, while at the same time
 maintaining the production function of the land.
- Subsidies and regulations that drive peatland drainage and destruction must be eliminated.
- 3. Assessment on Peatlands, Biodiversity and Climate change, 2008 Global Environmental Centre and Wetlands International

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