



Wetland management and more comprehensiveness in LULUCF and REDD

Susanna Tol, Tianjin, 2010



- 'Wetland management'
- Elements of a roadmap towards more comprehensive, accounting in LULUCF



Emissions from wetland drainage

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- Emissions from drained peatland:
 - Disproportionally large: 0.3% of global land surface ~6% of global anthropogenic CO₂ emissions (2000 Mt/2Gton)
 - Annex 1: 0.5 Gton CO₂
- What to do about it?
 - Drainage can only be halted by rewetting
 - Huge emissions reduction potentials are readily available
 - Incentive: accounting for the emissions



New Activity Wetland Management

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- Applies to:
All land that has been drained
and/or rewetted since 1990.
- Currently, when accounting for ‘drainage’ and ‘rewetting’ (e.g. under cropland- or grazing land management) all emissions relevant to land activities must be accounted
- Under new activity Wetland Management, rewetting becomes:
 - a practice under a new activity ‘wetland management’
 - applicable to the categories forestland, cropland or grazing land when the associated activities (FM, CM, GM) are NOT elected.



Is Wetland Management Cherry Picking?

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- Yes it is.
- As long as no LBA or mandatory accounting of 3.4 activities, key 'wetland management' practices (incl. rewetting drained peatlands) could achieve substantial emissions reductions.
- Problems should be solved in the most cost-effective way.

Cherry pick the best for the climate!

- Drained peatlands are such '**hotspots**:
 - Responsible for large emissions from land use (>25%, IPCC AR4)
 - Rewetting is relatively cost-effective.
- Perverse cherry picking: if only positive practises are selected while associated negative ones neglected.
- Wetland management: fully symmetrical.

Is methane a problem?

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- In some cases, but generally not.
 - Peatland drainage: CH₄ from peat soils ↓ whereas CO₂ (and N₂O) ↑
 - Peatland rewetting: CO₂ (+ N₂O) strongly ↓ CH₄ emissions ↑
(but less important than the decrease of CO₂ and N₂O)
Methane emissions strongly depend on water level
- substantial positive balance
- Only in case when luscious crops or grasses are flooded CH₄ climatic effects > CO₂ and N₂O emissions reduction (only short term)
 - The scientific data base for methane is good

Can we monitor emissions from peatlands adequately?

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- Yes we can.
- Some particularities, not unique for WM
- IPCC default values exist → need for revision. Already concrete proposals.
- Detailed methodologies (all gases, all significant situations) either well established or rapidly developing.
- But generally too expensive for widespread application
- Apply parameters 'mean water level' and 'vegetation type' as proxies



How to deal with uncertainties?

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- Some uncertainties (some countries, some situations)
- Apply in such cases 'the principle of conservativeness':
 - reductions should be estimated at low side of the range.
 - in the baseline accounting: lowest reasonable emissions
 - In the commitment period: the highest reasonable emissions
 - is already applied in the Kyoto Protocol
 - contributes to the climatic integrity of LULUCF
 - will stimulate increase of quality of reporting and more accuracy in estimates

Wetland management a 'risk'?

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- No
- Interesting for countries with:
 - substantial areas of drained peatlands
 - that are abandoned and/or can easily be rewetted
 - and used for wet agriculture (*'paludiculture'*), nature conservation, or improved water management.
- Annex I countries have hardly drained new areas since 1990.
- Therefore:

Drained peatland area in 2010 can – in absence of other data - be used as reliable and conservative proxy for the area of drained peatland in 1990.



- All emissions and removals (from all managed land) are accounted as reported in Parties national greenhouse gas inventories.
 - Provides a complete picture of what is really happening in the landscape across the entire land use sector
 - No emissions can be hidden
 - No perverse selection of activities
 - No (unaccounted) displacement of emissions between sectors and land categories
 - No emission can increase without being accounting for
- Best incentives to reduce emissions

Mitigation potential huge

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- Mitigation potential is huge.
- Largest share of emissions takes place on concentrated areas of land.
- In the EU, for example, emissions from cropland management amount to 70 Megatonnes CO₂/yr (*Personal communication by Giacomo Grassi (JRC)*)
- Only 12% of the cropland area is responsible for over 95% of the emissions



Concerns more comprehensive accounting¹²

Include:

- The consequences of land-based accounting are not foreseeable.
- Not yet able to manage the necessary inventory and monitoring.
- While such methods exist, they tend to be expensive.
- Indeed:
 - Data are needed before conclusions can be drawn
 - And countries need to monitor their carbon reservoirs (pools) and GHG fluxes with reliable methods.

More comprehensive accounting

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- Since 2005 AI Parties already report emissions and removal data (since 1990) following IPCC land categories → no additional burden on the reporting system
- Although reporting data from CP1 are overall inadequate
- Getting the data right is most and for all a matter of political will
- Technical capacity, practical methodologies, user-friendly guidance already available or within reach before start of CP2 for reporting and accounting for the most significant sources of emissions.
- Any outstanding issues during CP2 → adoption of a strong roadmap
- SBSTA conclusion to improve reporting guidelines on annual inventories and exploring the clarification of methodological issues

- Make all existing 3.4 activities mandatory (not elected when voluntary).
- Add 'wetland management' as an accounting activity
- Collect better data, with requirements for spatially explicit Tier 3 reporting.
- Concentrate MRV efforts on 'hotspots' (most significant sources)
- Review the proposed SBSTA work programme to support and facilitate countries in meeting these more onerous reporting requirements.
- Establish a work programme for joint effort (joint implementation) to support countries that lack capacity.
- Reduce compliance risk, deal with natural disturbances and catastrophic events
- Apply the conservativeness principle

Hotspot Approach

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- Estimate the most significant sources with Tier 2 or 3 methods.
- Tier 1 is sufficient (and available) for remaining area of land activities.
- Thus, accounting for an activity does not mean estimating everything, everywhere with tier 2/3 methods
- Concerns on accuracy of data are addressed
- Feasible because most emissions take place on concentrated areas of land and are a result of a limited subset of activities

*From personal communication
by Giacomo Grassi (JRC)*

Picture: Holme Post UK: 4 m subsidence in 150 years...



REDD+: Should incentivize reducing emissions from organic soils:

- Protecting intact natural peat swamp forests
- Restoring degraded peat swamp forests

BUT:

Emissions from loss and degradation of **other natural ecosystems** are also significant (e.g. emissions from non-forested peat soils: 500 Mtons per year)

Work towards REDD++, with incentives for:

- **Protection** and restoration of other carbon rich natural ecosystems



Further reading...

On AFOLU, 'wetland management' and
the road to land-based accounting

Q&A

Questions and answers



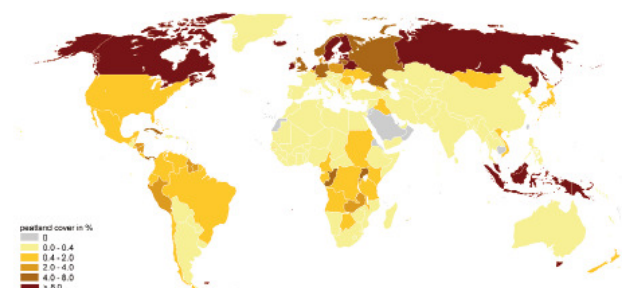
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Downloadable from
www.wetlands.org/peatclimate
and www.imcg.net

THANK YOU

The Global Peatland CO₂ Picture

Peatland status and emissions in all countries of the world



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