Peat for speed

in land sector mitigation and adaptation

- Peat (organic) soils cover only 3% of the land but hold more carbon than all global forest biomass
- 15% of these soils (= 0.4% of the land) has been drained, mainly for cropland, grazing land, and forestry. As a result they emit 5% of the total global anthropogenic greenhouse gases (GHG)
- Most (>95%) peat emissions are caused by only 25 UNFCCC parties (incl. EU) (Fig. 1, Fig. 2)
- A substantial emission reduction can be achieved by rewetting drained peat soils.
- Rewetting also stops soil degradation, subsidence, salt intrusion, and consequent loss of productive land, and improves water purification, meso-climate, flood control, and biodiversity. Rewetting is thus consistent with a wide variety of global and regional policy agreements.
- Many countries can kick-start **national emission reductions** by focussing on drained peat soils. In 25 countries (18 developing and 7 European Annex-I countries), emissions from drained peat exceed 50% of the total emissions from fossil fuels and cement. In an additional 25 countries, emissions exceed 10% of those from fossil fuels and cement (Fig. 3).

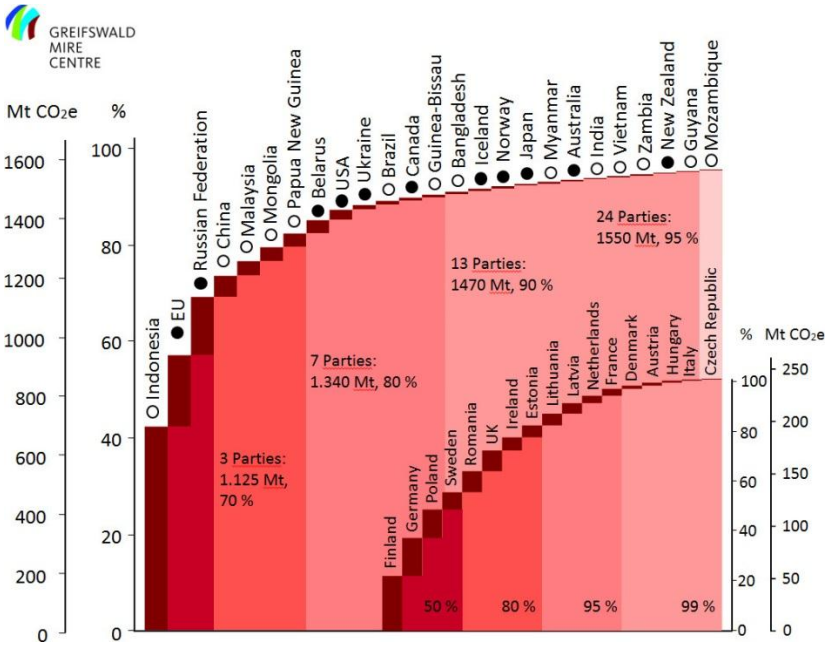

Fig. 1: Emissions from drained organic soils for the 25 UNFCCC Parties responsible for 95 % of the emissions in descending order. White dots denote non-Annex 1 Parties, black dots Annex 1 Parties. Red shades indicate where the 70, 80, 90 and 95 percent marks are crossed. The inset depicts the contributions of the 16 EU countries that are together responsible for 99 % 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

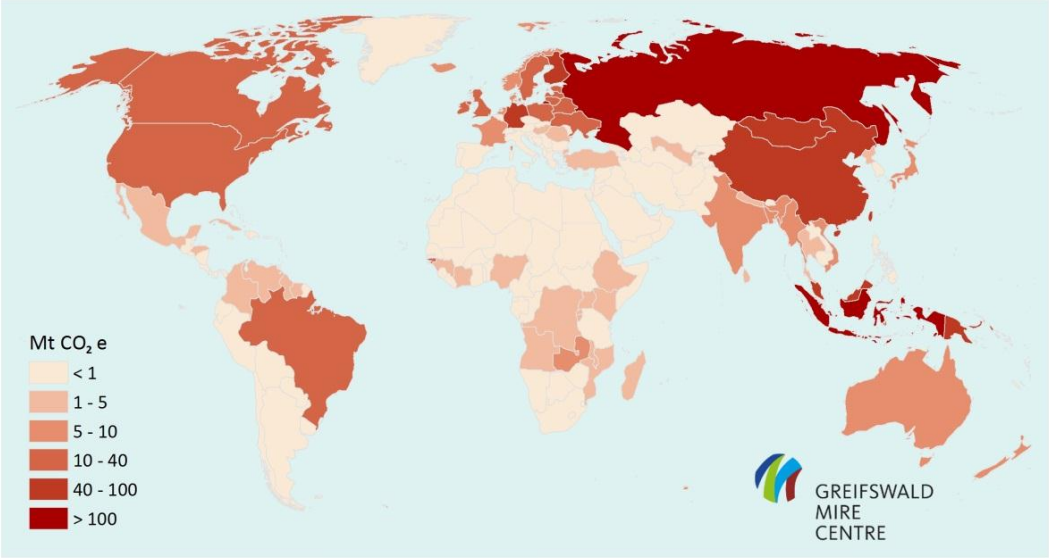

Fig. 2: Annual emissions from drained peatlands per country in Mt CO_2e/yr.

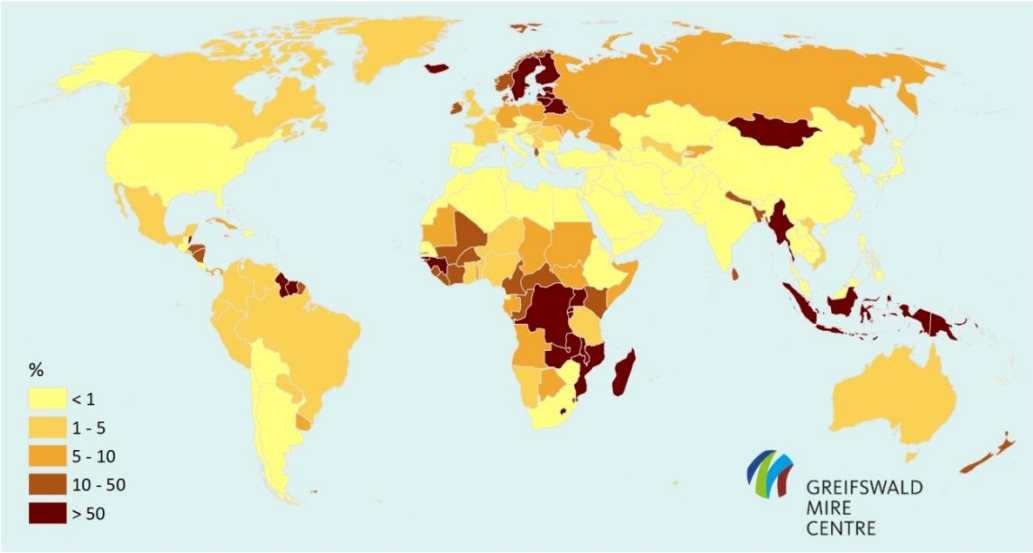

Fig. 3: Emissions from drained peatlands per country as a % of the emissions from fuel and cement from that country.

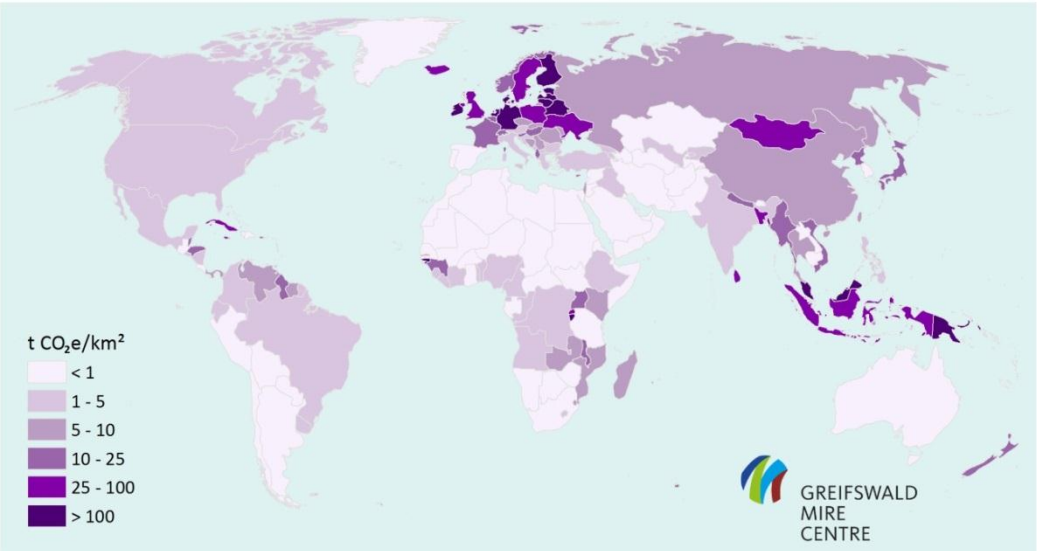

Fig. 4: Emissions from drained peatlands per country expressed per unit land area per country (in t CO_2e/km²/yr).

- In many countries, land use on peat is a substantial source of emissions from the land (Fig. 4). 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 (Fig. 5). 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.
- Rewetting organic soils concerns a minor part of total agricultural land only (Fig. 5). Reaching similar emission reductions in fertilization and animal husbandry will much stronger affect agricultural productivity.
- Furthermore, rewetting does not imply discontinuation of agricultural use. Paludiculture, the productive use of wet peatlands, provides ample opportunities to continue production while avoiding the environmental burden of drainage based agriculture.

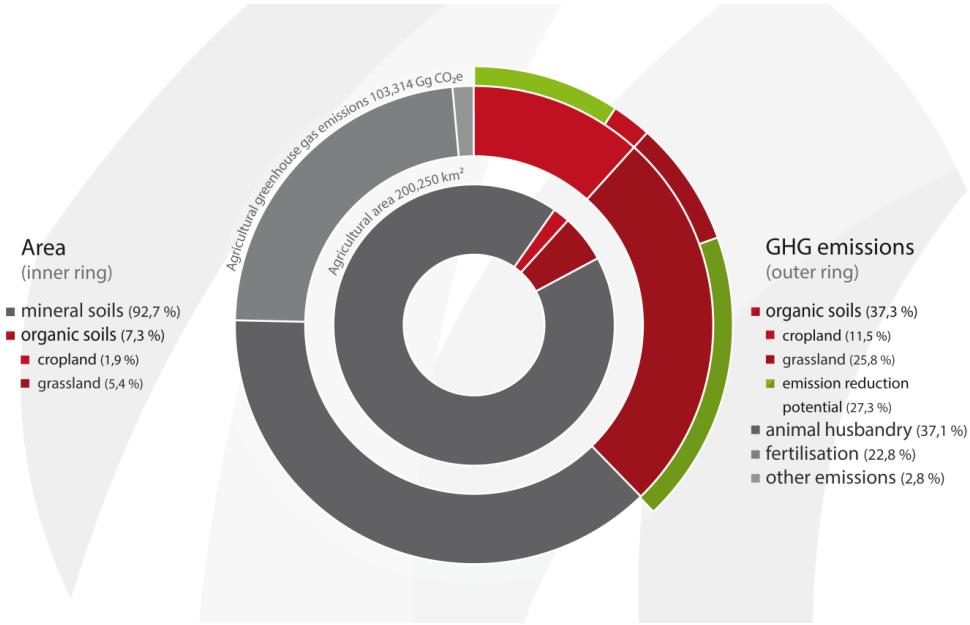

Fig. 5: GHG emissions from German agriculture (sectors Agriculture + LULUCF Cropland and Grazing Land Management). Graph based on data of the National Inventory Report, Germany 2016.

What is needed:

- The will to start: sufficient information is already available on peatland location and status, as well as on rewetting techniques and monitoring methodologies
- Communication of the societal benefits (ecosystem services) provided by wet peatlands and the costs arising from drained peatlands
- Local technical capacity for rewetting and paludiculture provided by sharing international expertise and innovation
- Research into regio-specific paludiculture opportunities
- Elimination of subsidies and regulations that drive peatland drainage and destruction
- Pilot and demonstration projects
- Financial support and direct funding via funding agencies, private sector and civil society

If you think about land use, think about peat!

1. Protect undrained peatlands
2. Rewet drained peatlands, while maintaining their production function (paludiculture)
3. Phase out drained peat land use

Wetlands International is the only global not-for-profit organisation dedicated to the conservation and wise use of wetlands. Our vision is of a world where wetlands are treasured and nurtured for their beauty, the life they support and the resources they provide.

Wetlands International is a leading science-based conservation organisation and is addressing peatland degradation related development issues word-wide through the promotion of conservation and sustainable alternative development.

We provide expertise regarding the rewetting and conservation of peatlands. We raise awareness on the impacts of peatland degradation caused by direct and indirect land-use (change), and the related emissions and other impacts such as soil subsidence, flooding and loss of biodiversity.

For more information

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The Greifswald Mire Centre (GMC) is the science-policy interface for all peatland related questions – locally and globally.
We are 50 peatland experts of various disciplines concentrated in one place. We offer science-based solutions for social challenges such as

- Climate protection: Reduction of greenhouse gas emissions from peatlands and ecosystem-based adaptation
- Biodiversity: Conservation and restoration of peatlands worldwide
- Sustainable use: Paludiculture and innovative financing such as carbon credits

We coordinate the 'Global Peatland Database', the largest database of distribution and status of peatlands worldwide. The extensive 'Peatland and Nature Conservation International Library' (PeNCIL) is part of the GMC.

For more information

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