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## Status, needs and potential bottlenecks for developing good peatland management practices - results from a European stakeholder survey

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Today, peatland management is more and more perceived as a fundamentally important land use based greenhouse gas (GHG) mitigation option. Understanding current peatland use and expected changes provides a background to develop recommendations for future management frameworks and can facilitate good peatland management practices (PMP) permitting long-term emission mitigation in Europe.

The objective of this study was to exemplify knowledge and stakeholder's views on peatland management status and development in Europe and to show the relationship between PMP with climate mitigation potential under different environmental conditions and institutional settings. Our research questions, to facilitate in-depth examination of PMP were: i) Which PMP exist and what are expected trends? ii) What is the current implementation status of PMP with regards to evaluating their GHG mitigation potential? iii) How are GHG emissions and removals from organic soils currently reported to the UNFCCC and what are the challenges in reporting development? iv) Are there governmental incentive-based policy instruments and innovative voluntary private sector initiatives, aiming at PMP that support climate change mitigation?

We carried out a web-based survey in eight peatland-rich European countries (Finland, Sweden, Norway, Denmark, UK, the Netherlands, Germany, Poland). 60 experts, including researchers, stakeholders acting as multipliers for farmers (e.g. farmer's associations, NGOs) and government representatives, provided valuable insights on a regional and national level.

In our survey, stakeholders saw agriculture as main driver to peatland use, with increased GHG emissions, biodiversity loss and declined water quality as its main impacts. Majority of the stakeholders expected croplands to be used as grasslands and agricultural areas to be rewetted. However, geographic variability of expected land use changes was apparent. Prevailing PMP (such as drainage methods) were also reported to vary significantly across Europe. Therefore, the development and assessment of PMP and especially the policy instruments guiding them should account for the regional drivers and bottlenecks. Survey results further show that a range of PMP, aiming at GHG emission reduction while maintaining production options, are in testing phases across Europe. Only a few, however, can be considered mitigating climate impacts (i.e. good PMP) to the date. It is therefore required to promote further research on the mitigation potential of currently tested PMP. The lack of data (activity, mapping, and emission) and in some cases poor separation of peatlands from other land use types was also seen as a bottleneck for developing evaluation methods for national greenhouse gas reporting to the Intergovernmental Panel on Climate Change (IPCC). Integrating identified good PMP as part of the IPCC reporting, however, would provide positive feedback and motivation for practical implementation. Only few policies and policy instruments directly aiming at GHG mitigation on peatlands exist. Other policy instruments mentioned, may not set GHG mitigation on peatland as the main goal but might have a spill-over effect. Cross-sectoral institutional interlinkages on multiple governance levels indicate that climate change mitigation is just starting to be mainstreamed.

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