Geophysical Research Abstracts
Vol. 18, EGU2016-16021, 2016
EGU General Assembly 2016

Extent and status of mires, peatlands, and organic soils in Europe

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Key words: peatland distribution, peatland drainage, GIS, Global Peatland Database, European Mires Book

The relevance of drained peatlands to climate change due to emission of huge amounts of greenhouse gases has recently been recognised e.g. by IPCC, FAO, and the European Union. Oppositely, natural and restored peatlands provide ecosystem services like enhancing biodiversity, nutrient retention, groundwater storage, flood mitigation, and cooling. To evaluate the drainage status of peatlands and organic soils and to develop specific restoration strategies comprehensive and exact geospatial data are needed.

The Global Peatland Database (GPD) is hosted at Greifswald Mire Centre (http://tiny.cc/globalpeat). Currently, it provides estimates on location, extent, and drainage status of peatlands and organic soils for 268 countries and regions of the world. Due to the large diversity of definitions and terms for peatlands and organic soils, this mapping follows the broad definition of organic soils from IPCC that gives a minimum soil organic carbon threshold of 12% and considers any depth of the organic layer larger than 10 cm. GIS datasets are continuously collected, specific terms and definitions analysed and the completeness and accuracy of the datasets evaluated. Currently, the GPD contains geospatial data on peatlands and organic soils for all European countries (except Moldova).

Recent information on status, distribution, and conservation of mires and peatlands in Europe is summarised in the European Mires Book. It includes descriptions from 49 countries and other geographic entities in Europe. All country chapters follow a generic structure and include also extensive descriptions of national terminology (also in national languages and script) and typologies as well as up to date area statistics and maps. They are complemented by integrative chapters presenting mire classification, mire regionality, peatland use, and mire conservation in Europe. The European Mires Book is a project of the International Mire Conservation Group (IMCG) started in 1990. The volume contains contributions of 130 mire scientists from all over Europe and is published in 2016.