



GREIFSWALD  
MIRE  
CENTRE

**Strategy** 2018-2022





Pictures explained clockwise:  
Mire of Jelnia in Belarus (Photo: Annett Thiele)  
Cranberry picker (Photo: Sergei Zuenok)  
Peatmoss cultivation at the lab (Photo: Dirk Wellner)  
Greenhouse gas measurements at a raised bog (Photo: Merten Minke)  
Moor frogs (Photo: Stephan Busse)  
2012 United Nations Climate Change Conference at Doha (Photo: Hans Joosten)



## Who we are

In Greifswald three non-profit, independent institutions with different expertise are working on mires and peatlands: University of Greifswald, Michael Succow Foundation, and the Institute of Sustainable Development of Landscapes of the Earth (DUENE e.V.). To consolidate achievements and to establish a permanent peatland centre in Greifswald, these three institutions joined forces and founded the Greifswald Mire Centre (GMC) in early 2015.

The Greifswald Mire Centre is a **strategic cooperation** between the three institutions, based on a Memorandum of Understanding. The legal form of GMC is a company under civil law, which itself does not participate in legal transactions.

The Greifswald Mire Centre has already developed within the last couple of decades, long before it got its name. It builds on:

- 200 years of Greifswald-based peatland expertise,
- Solid and innovative peatland oriented academic training,
- More than 50 competent and committed peatland scientists and conservationists, as well as
- Four major, well-established peatland databases (GPD, DPPP, PeNCIL, moorwissen.de).



# The global challenge

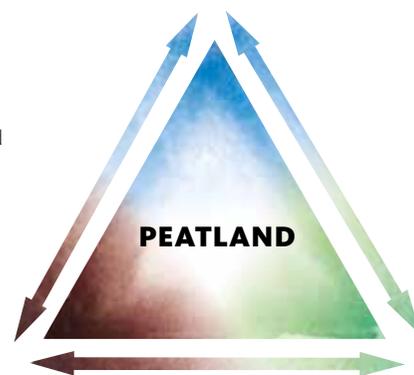
Peatlands are huge stores of carbon. When drained, they become hotspots of anthropogenic greenhouse gas (GHG) emissions. Although drained peatlands cover only 0.5% of the world's land area, they cause about 5% of all global anthropogenic CO<sub>2</sub> emissions (about 2 Gt CO<sub>2</sub> per year; Joosten et al. 2016a). In the peatland-rich German federal state of Mecklenburg-Western Pomerania (where Greifswald is located), drained peatlands are even the largest single source of greenhouse gases (MLUV MV 2009). The rewetting of peatlands reduces these emissions and can therefore play an important role in achieving the objectives of the United Nations Framework Convention on Climate Change (UNFCCC), and in particular of the Paris Agreement which aims at limiting the rise of global average temperature to well below 2° C above pre-industrial levels.

In addition to their climate impact, natural peatlands are of great importance to biodiversity, the protection of which has been agreed worldwide under the Convention on Biological Diversity (CBD) and the Ramsar Convention. Moreover, peatlands provide society with numerous other ecosystem services, for example

retention of pollutants and regulation of the local climate and water budget (Bonn et al. 2016). These functions are also lost when peatlands are drained. In coastal areas, peatland drainage also leads to land loss: significant tracts of land (for example in several Asian countries) are threatened by permanent flooding due to ongoing peatland subsidence.

Peatland rewetting is therefore urgently required from an environmental and climatic perspective (TEEB DE 2014). If peatlands need to be used productively, this should be done as paludiculture, i. e. as wet land use (SRU 2012, Joosten et al. 2012, Wichtmann et al. 2016). Paludiculture includes traditional peatland use (e.g. mowing for thatch), but primarily involves developing and implementing new ways of utilising biomass from rewetted peatlands for material and energy use. Peatland rewetting and paludiculture show great potential for linking many of the UN Sustainable Development Goals (SDGs) and promoting their convergence all over the world (Joosten et al. 2016b).

**Peatlands** are an interplay (system) of **water + peat + plants** (diagram developed in Greifswald and adopted and used worldwide, e.g. Turkey, China and Malaysia)



## Vision

Our vision is a world in which

- peatlands are recognised and understood as vital and vulnerable systems,
- natural peatlands are conserved,
- degraded peatlands are restored,
- any use of peatlands is sustainable.

## Mission

The **Greifswald Mire Centre** is – as an interface between **science, policy and practice** – innovator and originator in solutions for peatlands, locally and worldwide.



# Strategic objectives

The Greifswald Mire Centre strengthens and consolidates as an **integrative umbrella brand** all peatland-related activities in Greifswald and develops into a regionally and globally interconnected, influential interface, in which basic and applied research is carried out, know-how is transferred, and inter- and transdisciplinary science-based policy and corporate advice is provided.

Main topic	Societal challenge	Main goals of GMC 2018-2022 (research, implementation, advice)
<b>Climate change</b>	<ul style="list-style-type: none"> <li>- Reduction of GHG emissions from peatland globally (SDG target 13)</li> <li>- Implementation of the Paris Agreement</li> <li>- Climate change adaptation</li> </ul>	<ul style="list-style-type: none"> <li>- Fundamental research into peat formation and its climate dependency in natural and re-wetted peatlands</li> <li>- Further development of practical proxies for GHG emissions monitoring</li> <li>- Completion and maintenance of a worldwide, high-resolution GIS of distribution, status, and emissions of peatlands (Global Peatland Database GPD)</li> <li>- Initiation, implementation and scientific support of projects for rewetting- based mitigation and adaptation, regionally and globally</li> <li>- Advocacy for the conservation of peatland carbon stocks and required policy tools in the UNFCCC, IPCC, and EU Common Agricultural Policy</li> <li>- Further development and (inter)national proliferation of the MoorFutures®-concept</li> </ul>
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>- Peatland conservation and restoration: CBD Aichi Targets 5, 11, 12, 14, 15; Ramsar Convention, EU Habitats Directive</li> </ul>	<ul style="list-style-type: none"> <li>- Fundamental research on the biodiversity of natural and rewetted peatlands, including on pattern formation and ecosystem biodiversity</li> <li>- Integration of spatially explicit biodiversity data</li> <li>- Implementation of rewetting and restoration of peatlands in Germany</li> <li>- Preparation of concept proposals for Ramsar and World Heritage designation of important peatland areas worldwide</li> </ul>

The GMC's goals are detailed in a work plan, a working document for a 5-year-period (2018-2022) with information on concrete goals, staff capacity, time and details on financing. The **work plan** guides the work of the GMC management and is regularly (at least annually) discussed between the GMC management and the GMCCC.

Main topic	Societal challenge	Main goals of GMC 2018-2022 (research, implementation, advice)
<b>Other ecosystem services</b>	<ul style="list-style-type: none"> <li>– Securing sufficient (fresh) water availability</li> <li>– Reducing nutrient loads in surface and ground-water</li> <li>– Soil conservation to secure production</li> <li>– Flood protection</li> <li>– Maintenance of cooling effects</li> </ul>	<ul style="list-style-type: none"> <li>– Research on ecosystem services from natural and rewetted peatlands, including their monetisation</li> <li>– Monitoring and evaluation of rewetting and restoration projects with regard to their effect on ecosystem services</li> <li>– Development of innovative public and private financing instruments and commodification of ecosystem services</li> </ul>
<b>Sustainable use</b>	<ul style="list-style-type: none"> <li>– Preservation of productive land (SDG Target 12)</li> <li>– Stimulation of the productive use of rewetted and wet peatlands (paludiculture) as alternative to drainage based utilisation</li> <li>– Climate smart agriculture; CBD Aichi Targets 6 and 7; Obligations from EU-Directives, Energy revolution</li> </ul>	<ul style="list-style-type: none"> <li>– Integration of spatially explicit subsidence data in the Global Peatland Database (GPD)</li> <li>– Fundamental research with respect to paludiculture</li> <li>– Feasibility studies and scenario development for the application of paludiculture</li> <li>– Initiation and professional mentoring of demonstration sites and pilot farms in and outside Germany</li> <li>– Policy advice for improved framework conditions for paludiculture in Germany, the EU and globally</li> <li>– Moderation of multi-stakeholder dialogue to communicate paludiculture to practitioners and decision makers</li> <li>– Further coherence between various peatland relevant policy areas (agriculture, soil, water, nature conservation...)</li> </ul>

# Sphere of action

The Greifswald Mire Centre has a **global orientation** with respect to the collection and integration of data and the development of concepts and methodologies. It carries out research and implementation projects mainly **in temperate latitudes**, especially Europe, and with regional reference to Mecklenburg-Western Pomerania.

Global distribution of selected ongoing and completed peatland projects of the partners in the GMC



# Profile and niche – the unique character of GMC

GMC is a **source of inspiration and ideas** at the focal points of peatland research and conservation. It has first-hand knowledge of what is happening at the research front, what is going on in politics, and how implementation proceeds.

## Special strengths of GMC are

### Coordination of peatland knowledge:

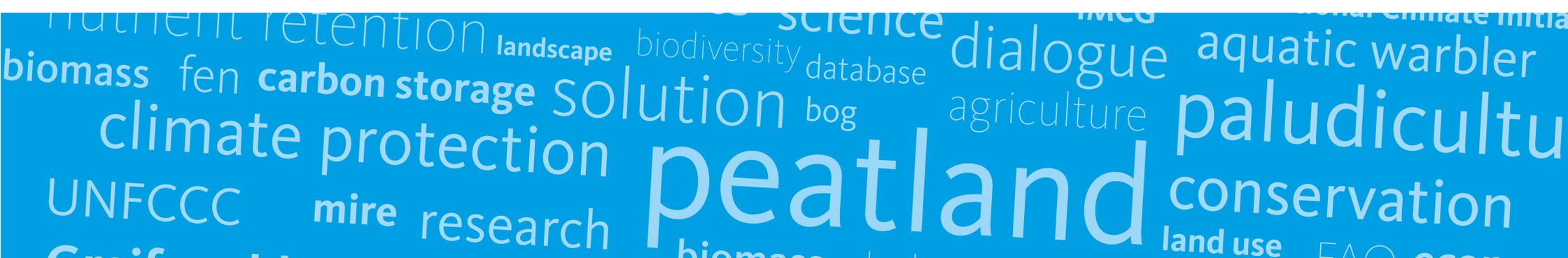
in national and international collaborative research projects (e.g. VIP – Vorpommern Initiative Paludikultur, ERA – Net Projects), organisations (e.g. Secretariat of the International Mire Conservation Group IMCG), book projects (e.g. Paludiculture – Productive use of wet peatlands, Mires and peatlands of Europe) and databases (e.g. Global Peatland Database GPD, Peatland and Nature Conservation International Library PeNCIL)

### Integration:

combined ecological, economic, and ethical competence, applied in research (e.g. the university research center for Environmental Change: Responses and Adaptation ECRA) and teaching (e.g. the international master course Landscape Ecology and Nature Conservation LENC), meta-analyses of worldwide relevance, and concrete activities, from basic research to global policy consulting

### Communication:

target group-oriented preparation and dialogue-oriented mediation of peatland knowledge, both regionally (e.g. project MoorZukunft in MV), nationally (e.g. German Moorschutzdialog) and globally (e.g. policy briefs and side events at environmental conventions, founding partner of the Global Peatlands Initiative GPI). An extensive peatland knowledge internet platform can be found in online.



# Roles of the GMC partners

The partners in the GMC are equally entitled. Their institutional and structural diversity brings various peatland expertise and strengths into the GMC:

**University of Greifswald:** high-quality (fundamental) research, research networks and projects, and acquisition of research funds, goal-oriented teaching and training, permanent and direct influx of qualified, motivated, and creative students

**Michael Succow Foundation:** national and international practical implementation (conservation, restoration, sustainable use), policy analysis and communication, trainee and international scholarship programs, acquisition of funds from public and private donors

**DUENE e.V.:** (policy) advice and transfer, analysis and development of economic incentives and financing instruments, monetisation, and commodification of ecosystem services, recruitment of public and private consultancy contracts

## Focal areas of the GMC partners

**UNIVERSITY OF GREIFSWALD**



**SUCCOW FOUNDATION**

**DUENE e.V.**

**RESEARCH**



**IMPLEMENTATION**

**ADVICE**

# Organisational structure and decision-making

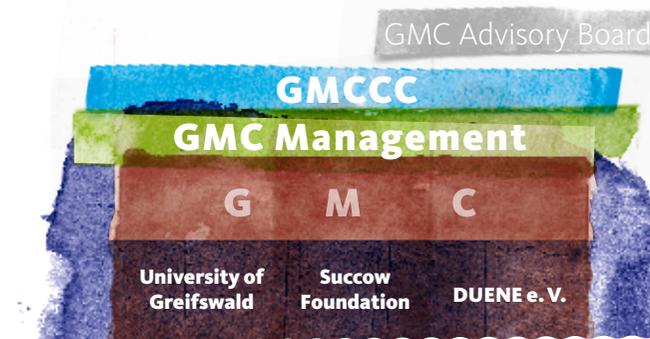
All persons dealing with peatlands in at least one of the GMC partner organisations belong to the GMC community. In regular meetings, information is exchanged and latest developments in- and outside of GMC are discussed. Currently more than 50 people (employed by or otherwise active in the partner organisations) are working on peatland issues under the umbrella of the GMC. Nearly 90% of the persons are third-party funded.

Essential decisions are taken by the **GMC Coordinating Committee (GMCCC)**, which comprises 1-3 representatives per partner, appointed by the individual partners. It has adopted rules of procedure, including on decision-making. The GMCCC appoints the directors of GMC (1-2 persons). The directors are the contact point for community members and intermediary for the GMCCC; they implement GMCCC's decisions, prepare, moderate, and record meetings, coordinate core tasks, especially acquisition of funds, public relations, strategic planning and networking.

Third-party funding acquired by individual partners or as joint projects is essential. Acquisition of third-party funding is facilitated by a GMC funding interface. Furthermore, GMC's public relations unit is responsible for outreach and communication, which are essential for branding and achieving goals. Extensive databases, including the Global Peatland Database (GPD), the Database of Potential Paludiculture Plants (DPPP), the Peatland Internet Platform (MoorWissen), and the Peatland and Nature Conservation International Library (PeNCIL) are coordinated and further developed as professional fundamentals of the GMC. Directors, funding interface, public relations unit and the coordinators of databases together form the **GMC Management**.

Next to the operational structures of the partner organisations, several thematic working groups meet regularly within GMC. These groups are, inter alia, fen paludiculture, bog paludiculture, and Global Peatland Database. More thematic working groups can be installed depending on the development of GMC.

GMC has an **Advisory Board** to advise on strategic issues, to expand the network, and to increase national and international visibility. Members are appointed by the GMCCC for three years.



[www.greifswaldmoor.de](http://www.greifswaldmoor.de)

# How our advisors perceive GMCs work in the peatland world

Since early 2017, an Advisory Board is supporting the work of GMC. The Advisory Board advises GMC on strategic issues. The Board consists of eight members jointly selected by the GMCCC and the GMC management. The first meeting of the Advisory Board took place on 26 September 2017 in Greifswald. The members of the Board were consulted on how they perceive the GMC and which focal points they recommend (statements shortened):



**Ab Grootjans** (University of Groningen, Netherlands):  
*Focus on greenhouse gas emissions and effects of global warming on mountain mires. This is urgent. Continue with paludiculture. Good examples are essential to make changes happening in society.*



**Marcel Silvius** (Green Global Growth Institute, Indonesia):  
*GMC is a key centre of expertise in relation to peatland issues and solutions. It is known for its database on peatland distribution and its leading knowledge on paludiculture.*



**Maria Nuutinen** (UN Food and Agriculture Organisation, Italy):  
*GMC's member organisations are well known and highly appreciated for their peat research, advocacy and applying the science. GMC's role has been instrumental in integrating peatlands into prominent international processes, such as UNFCCC negotiations and IPCC's technical guidance.*



**Chris Evans** (University of Bangor, UK):  
*In my experience the Greifswald group is very well known and respected amongst the peatland policy/practitioner/NGO community. It needs to raise the group's scientific profile through more high-impact publications.*



**Tobias Salathé** (Secretariat Ramsar-Convention, Switzerland):  
*GMC is a competence centre for peatlands. It is an independent and science-based institution with the capacity to undertake independent assessments and evaluations of established „truths“ and assumptions. GMC also holds a large information base (library, database) on peatland matters. This is completed by the GMC's own hands-on field experience. GMC is a reliable key partner for global peatland issues.*



**Tatiana Minayeva** (Care for Ecosystems, Germany):  
*The GMC is a global information centre on mires and peatlands but still under development. The large cross-cutting activity is to sustainably increase capacity.*



**Jutta Zeitz** (Humboldt-Universität zu Berlin, Germany):  
*GMC is a bundling of competencies especially long-term experience and knowledge about mires and peatlands in combination with modern alternative initiatives to protect and use mires worldwide.*



**Rob Stoneman** (Yorkshire Wildlife Trust, UK):  
*GMC is the most active mire research centre across the globe. The role of peatlands in reducing anthropogenic climate change and particularly the political process around that; inventory, typology and distribution of peatlands around the world; and establishing paludiculture as a method of maintaining agricultural productivity on organic rich soils with greater sustainability are areas where I perceive global leadership.*

## Partners and network

The Greifswald Mire Centre cooperates with many partners in numerous projects and sees itself as part of a global network of scientists, NGOs, and practitioners working in and on peatlands. Contacts that support the strategic objectives and complement current capabilities of GMC are pursued and intensified (for example with lawyers, hydrologists, hydraulic engineers, geographers, greenhouse gas measuring experts). In order to act as a stimulus, GMC persons participate in the management of important peatland organisations, e.g. the International Mire Conservation Group (IMCG) and the German Peatland Society (DGMT).

GMC was in 2016 one of the founding members of the Global Peatlands Initiative (GPI), in which leading experts, countries, and institutions gather to protect peatlands as the world's largest terrestrial carbon store, to reduce emissions from peatlands, and to progress peatland conservation as a crucial contribution to reach climate protection targets. The main task of GMC in GPI is professional advice.

Together with GPI partners GMC co-organises side events at global environmental convention meetings (in particular UNFCCC conferences) and prepares policy briefs and scientific input for delegations.



## Achieving the objectives

A review of the 2018-2022 strategy will take place at two levels. An important instrument for this is the work plan 2018-2022. The work plan is based on the main topics outlined in this strategy and the respective strategic goals in research, implementation and advice. The review is implemented by the GMC directors and presented on the annual reports.

In addition, the added value of GMC will be evaluated annually, involving both the GMCCC and other GMC representatives. The results will be presented to the entire community at GMC meetings.

The annual reports are publicly available on the website.



**»Peatlands must be wet: For nature, for people,  
for climate, for ever.«**

*Hans Joosten, Extraordinary Professor of Peatland Studies and Palaeoecology,  
University of Greifswald, Helsinki, September 2014*

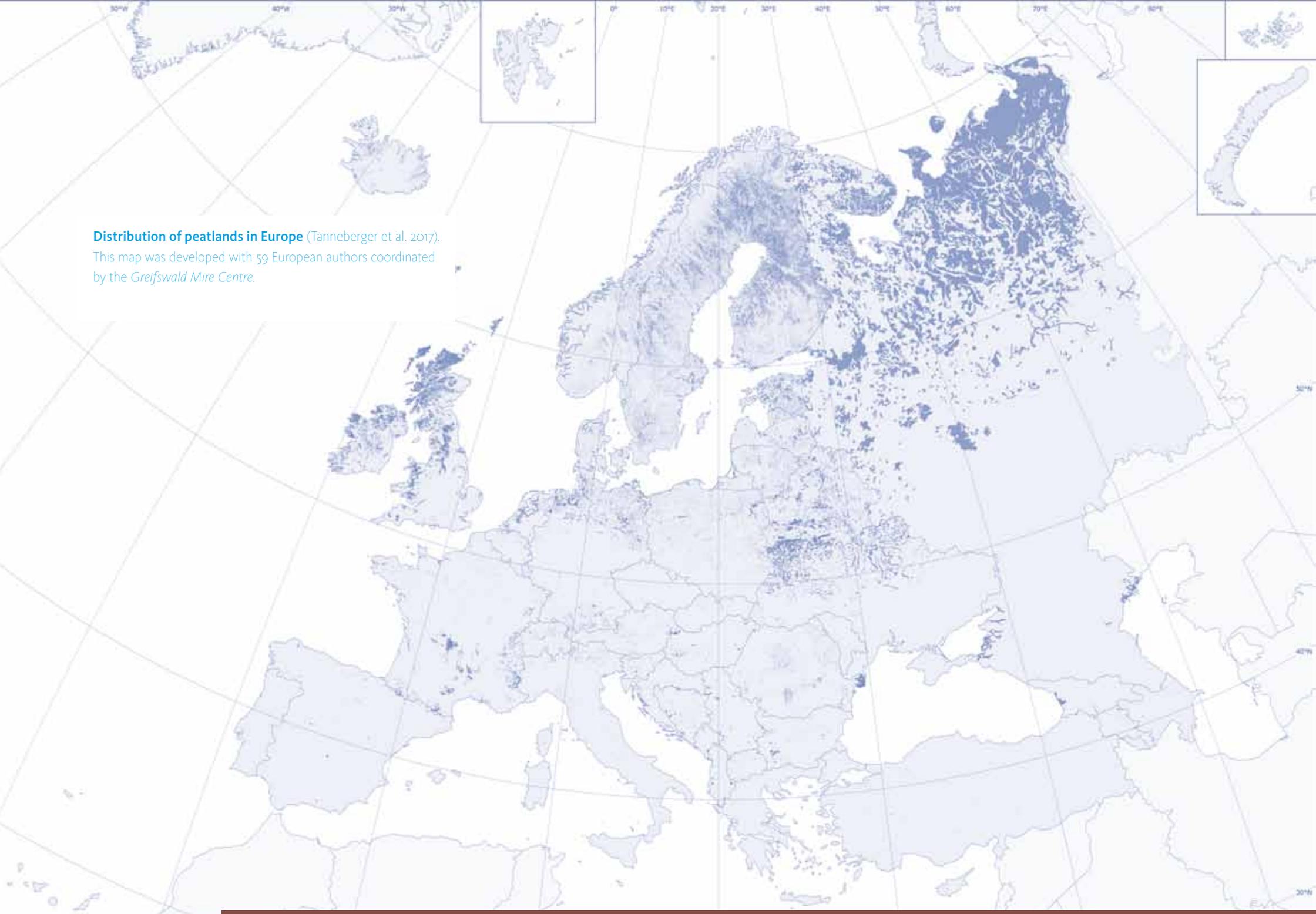
# List of abbreviations

CBD	<i>Convention in Biological Diversity</i>
DPPP	<i>Database on potential Paludiculture Plants</i>
FAO	<i>Food and Agriculture Organisation</i>
GEST	<i>Greenhouse gas emission site type</i>
GHG	<i>Greenhouse gas</i>
GIS	<i>Geographic Information System</i>
GPD	<i>Global Peatland Database</i>
GPI	<i>Global Peatlands Initiative</i>
IMCG	<i>International Mire Conservation Group</i>
IPCC	<i>Intergovernmental Panel on Climate Change</i>
LENC	<i>Landscape Ecology and Nature Conservation</i>
MV	<i>Mecklenburg-Western Pomerania</i>
NGO	<i>Non-governmental organisation</i>
PeNCIL	<i>Peatland and Nature Conservation International Library</i>
SDG	<i>Sustainable development goal</i>
UNFCCC	<i>United Nations Framework Convention on Climate Change</i>

# References

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**Distribution of peatlands in Europe** (Tanneberger et al. 2017).  
This map was developed with 59 European authors coordinated  
by the *Greifswald Mire Centre*.



# Acknowledgements

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## Partners in the Greifswald Mire Centre



# Imprint

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Photo backside:

Traditionally use peatland in the Biebrza valley in eastern Poland (Photo: Christian Schröder)



Pictures explained clockwise:  
 Mechanical harvest of cultivated peatmoss (Photo: Philipp Schroeder/  
 lensescape.org),  
 Models of pollen (Photo: Martin Theuerkauf),  
 Paludiculture study tour with colleagues from the Baltic states  
 (Photo: Jan Peters),  
 Mire in Western Siberia (Photo: Greta Gaudig),  
 Mesocosm experiment with sedges (Photo: Jürgen Kreyling),  
 Collection of mother plants for Sphagnum farming (Photo: Greta Gaudig),  
 Mechanical harvest of common reed  
 (Photo: Tobias Dahms/lensescape.org)





# GREIFSWALD MIRE CENTRE

»We have to rethink: In these days we have to aim to conserve all pristine and undisturbed peatlands around the globe. On the other hand there is a need to establish ways of using drained and eutrophic peatlands in a way that secures the numerous services peatlands provide to humans and nature.«

Prof. em. Dr. Michael Succow, *Laureate of the Right Livelihood Award*

