

# Legal regulatory framework of peatland exploitation, draining and restoration in Poland

## LIFE Peat Restore

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Reduction of CO2 emissions by restoring degraded peatlands in Northern European Lowland  
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## Introduction

In Poland, the surface of peatlands is estimated, according to various sources, at 1,2-1,3 Million ha (= 12.000-13.000 km<sup>2</sup>, which is approx. 4% of the country area). The number of peatlands bigger than 1 ha is estimated at ca 50.000. Fens predominate (92%), whereas raised bogs constitute only ca 4.3-4,7% of all peatlands.

Living mires, which still accumulates peat, are rare. Their area is estimated at a less than 2.000 km<sup>2</sup> (16% of peat deposits, 0.6% of the country's area). Over 80% of Polish peatlands are drained and strongly degraded by draining; the majority of which are used as meadows and pastures. The peat in the top layer was transformed into marsh (peat earth). Most of the peatlands under forests was also drained. As a result of mineralization of organic matter, many of the shallower (up to 1 m thick) peatlands have completely disappeared. At almost all Polish peatlands, evidence of drainings can be found. Typical peat forming bog vegetation has been maintained mainly where drainage was ineffective (Dembek et al 1999, Dembek et al. 2000, Piaścik and Gotkiewicz 2004, Oświęcimska-Piasko and others 2006, Joosten and others 2017).

Consequently, Czaplak and Dembek (2000) estimated that from around 817.000 ha of peatlands used as meadows, 14.5 million tons of CO<sub>2</sub> is emitted annually, which corresponds to approx. 4% of the annual Polish emission of carbon dioxide from fossil fuels. Jurczuk (2012) estimates the current emission of carbon dioxide from Polish peatlands, meliorated for agricultural purposes, at 6.7 Mt. However, these estimates do not take into account peatlands covered by forest. Joosten (2010), based on the area of forested and cultivated peatlands and average emission factors, estimates annual CO<sub>2</sub> emissions from all degraded peat bogs in Poland at 25.8 Mt, which is 7.5% of emission from the fossil fuels. This would put Poland in the group of the world's 10 largest CO<sub>2</sub> emitters from the degraded peatlands.

On the same scale, other functions of peatlands and ecosystem services provided by peatlands are impaired. However, there are no more precise quantitative estimates of these aspects.

Restoration of peat bogs, including the restoration of their water conditions, is undertaken as part of nature conservation projects, but on a minimal scale compared to the area of degraded peatlands. The restored peatland area to date is estimated at approx. 7,500 ha only (Kozub and Kotowski oral information in Peteres and Unger 2017).

This report presents legal and strategic framework of the processes responsible for degradation and restoration of mires in Poland.

## Legal framework

**Environmental Impact Assessment framework:** The screening of the need of an Environmental Impact Assessment and completion of the so called "environmental consent" is necessary for each exploitation of peat or lacustrine chalk; each deforestation of bog forests; each new draining of meadows or pastures; each new draining of other grounds in protected areas or buffer zones of protected areas; draining of other grounds > 5 ha or cumulating to > 5 ha in last 5 years; new water basins > 0,5 ha in protected areas or buffer zones of protected areas outside arable grounds; each dams in protected areas or buffer zones of protected areas with the exception of dams built according to protected area management plan; each dams > 1m high. In most cases, the relevant authority decides (on the base of basic environmental information) if the full EIA procedure is needed. Location of project in wetlands must be taken into consideration in this decision.

**Nature conservation framework:** Peatlands may be a component of protected areas: national parks, nature reserves, landscape parks, areas of protected landscape, Natura 2000 sites, ecological grounds, natural monuments, nature & landscape grounds, geological documentary spots. Destruction or change of wetlands in protected areas, including deterioration of hydrological regime, is generally forbidden; nevertheless, some exemptions exists. In national parks and nature reserves the exemptions are applied only to private grounds. In Natura 2000 sites, European rules apply. In other protected areas

general exemptions for projects of public interest, projects of water management, agriculture and forestry are applied. Peat exploitation is considered as public interest.

For national parks, nature reserves, landscape parks and Natura 2000 sites management plans are required and may include peatlands restoration measures.

Many mire species, including all *Sphagnum spp.*, are protected species, i.e. their deterioration or deterioration of their habitats is forbidden. Derogation may be granted if no other alternatives exist and impact on the species will not be significant. If real or expected environmental changes threaten protected species or habitats, the regional environmental authority is obliged to take appropriate mitigating measures. Earthworks changing water conditions, including river maintenance works, must be submitted to regional environmental authority, which may object.

**Land use planning framework:** Land use studies cover whole national territory, but are not legally binding. Binding land use plans covers ca 27% of territory. All plans should “take into consideration maintaining the natural equilibrium”.

**Forest law framework:** All forest owners are obliged to „maintaining in forest natural mires and peatlands”, nevertheless this obligation is generic only. Mostly, it is interpreted as the prohibition of destroying peatlands by forest management, not as an obligation to restore them.

**Agricultural law framework:** Peatlands are protected against use for non-agricultural and non-forest purposes. Such transformation may be done only on base of land use plan established by local community. There is no regulation of farming activities on peatlands, as maintenance of existing farmland-draining systems and ploughing.

**Water law framework:** Environmental objectives for water-dependent protected areas are established, including at least some of peatlands water needs. The objectives are binding for all aspects of water management. For building of water facility (including ditches, dams etc.), so called water consent is usually necessary, following analysis of the impact of the project for watercourses and groundwater. This requirement allows control of the impact of all water facilities on the water resources, but on the other hand makes also peatland water conditions restoration more complicated.

**Mining regulations:** Every exploitation of peat requires mining consent. In case exploitation is < 20.000m<sup>3</sup> and < 2 ha, simplified consent procedure is applied. After finalizing exploitation, land remediation is obligatory, but the mire does not always need to be restored: land may be also transformed into agricultural land, forest or water basins. Peat exploitation is charged 0,3€/m<sup>3</sup>, in case of exploitation without consent the punishment 12€/m<sup>3</sup> is applied.

## National strategies

**Biodiversity National Programme:** Adopted by the government in 2015. Peatlands are mentioned as habitats crucial for biodiversity. Among prescribed measures, preparing protected areas management plans, preparing and implementing wetlands restoration plans, enhancing water retention of forest areas, improving integration of water management with nature conservation are mentioned. No other peatland-specific actions are prescribed.

**Wetlands Conservation Strategy:** Adopted by Ministry of Environment in 2006; it contains 88 specific actions for maintaining natural character, ceasing degradation, and consecutive restoration of wetlands, including mires. Only 4 actions have been implemented so far. The rest of strategy is presently forgotten, not implemented and not updated.

**Strategy of sustainable development of rural areas, agriculture and inland fishing:** Adopted by the government in 2012. Biodiversity conservation and enhancing carbon sequestration are mentioned among objectives, nevertheless no concrete measures targeting peatlands are included. Carbon accumulation in peatlands is ignored.

**Strategy „Energetic Safety & Environment, 2020 perspective”:** Adopted by the government in 2014. Extensive degradation of peatlands is cited as part of its diagnosis. Maintaining of biodiversity, enhancing of water retention, maintaining and restoration of ecosystems storing water, improving coherence of river valleys ecosystems and flood protection and water retention are declared as

objectives. Nevertheless no concrete peatland-related measures are prescribed. Peat is not considered among potential energy sources.

**National Action Plan for Renewable Energy:** Adopted by the government in 2010. Neither peatlands, peat or biomass from peatlands are mentioned.

**Strategic plan of adaptation to climate change (2030 perspective):** Elaborated by the Ministry of Environment in 2012. Peatlands are mentioned as sensitive ecosystems, nevertheless no peatlands-related measures are prescribed, with exception of indirectly linked “*enhancing water retention in forest, meadows and pastures*” only.

**Rural Development Plan:** Agri-environmental-climatic schemes are available. Among others, the scheme “Peatlands” may be applied if the peatland character of the ground is confirmed by certified expert. The payment ca 150 €/ha annually is paid for maintaining peatland by avoiding or ceasing: draining, peat excavation, fertilization and the removal of trees and sprouts. If mowing is necessary and prescribed by expert the payment may be increased to ca 300 €/ha. In all agrienvironmental contracts, new draining or restoring old drainings are forbidden, with the exception of measures necessary for biodiversity conservation and prescribed by expert. On the other hand, regular mowing is obligatory in most of the schemes, which exclude ground too wet to be mowed.

### Problematic aspects and bottlenecks

- The legal framework is relevant mostly for preventing deterioration of the most natural mires, hosting typical species and habitats, important for biodiversity, especially if the mire is designated as natural protected area. But, although the system seems to be “theoretically” appropriate and sufficient, in practice, some small but dispersed implementation gaps exist. The most important gaps are:
  - draining peatlands by renewing and “maintenance” of old ditches,
  - dispersed exploitation of small amounts of peat by digging small ponds,
  - protected area general exemption for “projects of public interests”, general exemption for “landscape protection zone” even in national parks and nature reserves,
  - low quality of many impact assessment reports, followed by low quality of impact assessment procedures,
  - ineffective system of enforcing existing law and pursuing violations.
- The same legal framework is not effective in stimulating restoration of degraded peatland. In practice, the system prioritises the conservation and maintenance of the present status and “business as usual”, which means the system prefers to freeze the peatlands in their unfavourable status.
- Peatland restoration is blocked, limited or slowed down mainly by:
  - lack of effective system of land acquisition, not considering the restoration of ecosystem services as public interest for legal purposes,
  - Difficult formal requirements for implementing restoration measures (collecting all necessary permits for blocking ditches by small dams may be two times more expensive and 20 times more time consuming as building these dams).
- Due to above limitations, only small part of degraded peatlands seems to be “restorable”.
- One of the main weakness of the system is focusing on biodiversity only (species, habitats), not on the function of peatlands in the landscape and ecosystem services provided. There are only a few examples of real estimation & valuation of peatlands & wetlands ecosystem services applied in Poland and no experience of taking it into consideration in the environmental impact assessment procedures or in the land use planning.
- Although the agri-environmental policy contains some measures supporting conservation of certain mire habitats, it generally requires the application of regular annual mowing, which is followed by at least some draining.

- Peatlands are almost absent in national strategic planning, despite the real peatlands importance for achieving objectives like carbon storage, water retention, natural flood protection.

## Recommendations

- The legal system does not need to be substantially changed; rather the practice of implementation should be improved. Guidances on including peatlands in environmental impact procedures, enforcing formal protection requirements for peatlands and peatland's protected species, formulating conservation objectives, establishing water-environmental objectives for water management, are needed.
- Guidance on field estimation and valuation of peatlands ecosystem services, and including the services in land use planning and impact assessment procedures.
- Simplification of formal requirements for peatlands restoration measures. Defining restoration formally as public interest and allow compensations and expropriations if necessary.



## Literature

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