

Information paper

Peatlands as a natural defence: An innovative approach to security in Europe and worldwide

Background

The geopolitical reality in Europe has changed dramatically. The Russian war of aggression against Ukraine since 2022 and the upheavals in transatlantic relations have made it clear that Europe needs to rethink its defence capabilities. While billions are being spent on conventional armaments, there is a lack of innovative, cost-efficient and synergetic solutions. One such approach is the rewetting of peatlands - a measure that serves both security and defence capability as well as climate and nature conservation.

Peatlands as a strategic line of defence

Wetlands have historically played a decisive role in military defence. In 1500, the farmers of Dithmarsch defeated the Danish army in the "Hemmingstedter Moor", which they knew and used wisely. Napoleon was defeated by the impassable wetlands of Russia, and in 2022, the Ukraine used flooding to defend Kyiv. There is no military equipment that can drive through natural, wet peatlands. According to a book on military technology by V.V. Baluta, published in Belarus in 2018, the passability drops from 1.0 kg cm^{-2} in drained peatland to 0.25 kg cm^{-2} in a moist peatland. All major offensives through the peatlands during the Second World War were carried out in winter with frozen peat soils and with the participation of peatland researchers. This knowledge has recently been **rediscovered** in modern Ukraine.

Naturally wet and equally rewetted peatlands are impassable for tanks, slowing down troop movements and forcing predictable corridors that are easier to defend. In the future, global warming will shorten frost periods in many regions and thus further limit the passability of peatlands.

Border regions of nation states and their military alliances are particularly relevant regions for strategic rewetting. For example, peatlands in the border regions of Poland and the Baltic states are particularly relevant for NATO's defence capabilities. In addition to their direct military benefits, peatlands offer additional protection for critical infrastructure by making troop movements near transport routes, energy facilities and strategic supply points more difficult.

Synergies with climate protection, the economy and nature conservation

In addition to their importance in terms of security policy, wet peatlands also have climate policy and economic benefits. Drained peatlands release large quantities of CO_2 - rewetting them could bind millions of tonnes of CO_2 per year. On average, every hectare of rewetted peatland saves emissions of **at least 10 tonnes of CO_2 equivalents per year**, and in many cases significantly more. Stopping drainage not only contributes to achieving climate targets, but can also create future-proof economic prospects for rural regions in conjunction with sustainable management models such as paludiculture.

The economic benefits include

- Creating new value chains through wet farming
- Promotion of companies specialising in biomass use from wet peatlands
- Contribution to regional development and job security in rural areas

In addition to the major potential contribution to achieving global climate targets, the rewetting of peatlands in the EU also supports the objectives of the **EU Nature Restoration Law**, which prescribes the large-scale restoration of damaged ecosystems. Natural and rewetted peatlands provide habitats for numerous endangered species, regulate the landscape water balance, cool their surroundings, provide clean water and improve resilience to extreme weather events.

Different types of peatland landscapes

It is important to distinguish between two main types of peatlands for effective use as an instrument of defence:

1. **Large-scale, still largely intact peatlands** - These areas are mostly located in regions close to borders and are particularly effective as natural barriers, even in the past, due to their vastness.
2. **Fragmented, drained peatlands used for agriculture** - These areas are more heavily developed, but could also offer strategic advantages through targeted rewetting. Here, however, it would have to be examined how settlements, roads and other infrastructure influence the defence effect.

Financing and market development: Use of the EU CRCF

One key to the successful implementation of peatland rewetting lies in financing. The **EU Carbon Removal Certification Framework (CRCF)** can be used here to incentivise investment in rewetting. Specifically, the EU could guarantee to purchase a portion of the greenhouse gas emission reductions generated by peatland projects over the next ten years. The remaining certificates could be taken over by the private sector, which would strengthen the market for peatland rewetting and mobilise additional investment.

A possible financing framework:

- Establishment of an **EU fund with € 250-500 million** to finance the planning and implementation of the rewetting of 100,000 ha
- **EU as anchor buyer** for 50% of the emission certificates generated over ten years
- **Mobilisation of the private sector** to take over the remaining 50% in order to establish the market for CO₂ credits from peatlands

This combination of public funding and private participation could not only strengthen defence, but also establish a new economic sector.

Implementation: From vision to reality

Concrete measures are required for peatlands to be effective as a defence strategy:

1. Integration into security strategies:

- Consideration in national defence plans and the joint defence plans of military alliances
- Involvement of environment and infrastructure ministries in planning

2. Identification, status assessment and prioritisation of peatlands in strategically particularly relevant regions

3. Creation of legal and financial framework conditions:

- Rapid approval processes for defence peatlands (national interest)
- In the EU: Utilisation of the EU CRCF for financing through CO2 certificates
- Financial incentives for farmers and private owners

4. Implementation of technical measures for the rewetting of drained peatlands:

- Stop pumping water, block drainage ditches, build sluices and flooding infrastructure
- Restoration of near-natural water balances on a minimum area relevant for defence.

Summary: A new perspective on security

In a massively changing, new geopolitical reality, we need innovative defence strategies that go beyond conventional armament and guarantee long-term security even after the end of military conflicts. The rewetting of peatlands is a cost-effective, sustainable and strategic investment in security, climate protection and economic stability. In addition to protection against military threats, it offers long-term economic and ecological benefits. By linking with the EU CRCF, targeted market development for peatland projects can be initiated in the EU. In addition, rewetting is an important building block for the implementation of the EU Nature Restoration Law, which contributes to the restoration of European landscapes. Now is the time to seriously introduce this solution into the political debate.

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Recommended reading:

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