SUSTAINABLE AND RESPONSIBLE MANAGEMENT AND RE-USE OF DEGRADED PEATLANDS IN LATVIA

INVENTORY OF TERRITORIES DEGRADED BY PEAT EXTRACTION

Foto: M.Pakalne

PEAT EXTRACTION is the most important source of GHG emissions in the category of managed wetlands – areas where peat is being extracted and areas not re-used after peat extraction completion. Within the framework of LIFE REstore Project it was important to determine the impact of peat extraction in Latvia. Therefore, an inventory of areas affected by peat extraction has been carried out in 2016-2018.

AIM was to identify all areas affected by peat extraction in Latvia and which of those are still used for peat extraction, which have been re-cultivated, and which still need to be re-cultivated. To clarify the situation of peat extraction in degraded peatlands to facilitate decision-making on most advantageous ways of re-cultivation of degraded territories.

INVENTORY

IDENTIFIED AREAS

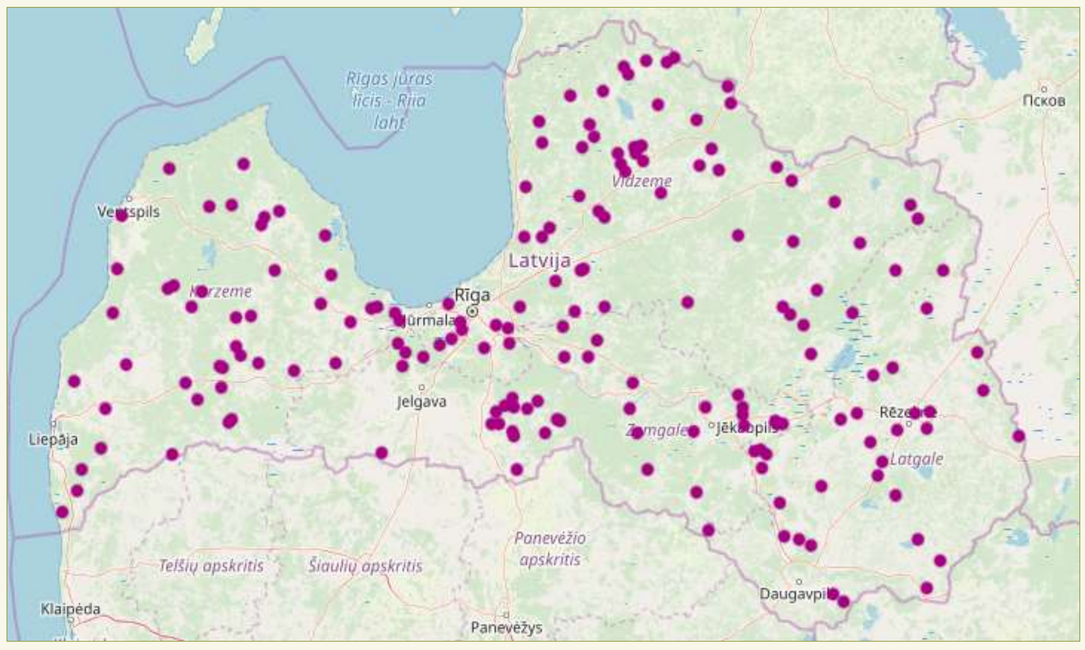
- In total, 237 peatlands impacted by peat extraction were identified
- Identified peatlands are located in 180 peat deposits
- Former state of the sites: raised bog – 77, 29 – fen, 74 – mixed
- Average size – 200 ha, largest impacted area >5100 ha, largest of current peat extraction >100 ha, smallest – 13 ha

PEAT EXTRACTION

- Harvested peatlands with total area ~50 000 hectares were identified
- 90 territories had valid peat extraction licenses on January 1, 2016
- Peat extraction was continued in 71 territories (~15 000 ha (30%)
- In 107 areas, peat extraction was completed or discontinued

RE-USE

- In ~17 000 ha (34%), re-use is occurring or has occurred (natural regeneration, flooded areas, forests, grasslands, building construction, berry plantations, etc.).
- ~ 18 000 ha (36%) are degraded, re-use measures necessary



MATERIALS AND METHODS

Identification of extracted peatlands

- Cameral identification (orthophoto images)
- Interviews with municipalities (information on existing of former sites)
- Expert interviews

Data

- From landowners and operators (7 sites)
- Detailed information from State Geological Fund (95 sites)
- Field works (78 sites)

FIELD WORKS

Information on 78 peat extraction areas was obtained in field works. Peat samples were collected and photographs taken. The following parameters were determined and characterised:

- **Thickness of residual peat layer**
- Type of upper peat layer (up to 0.3 m depth)
- Degree of decomposition
- Water pH and
- Groundwater level
- Ditch systems and access roads
- Sediments below the peat

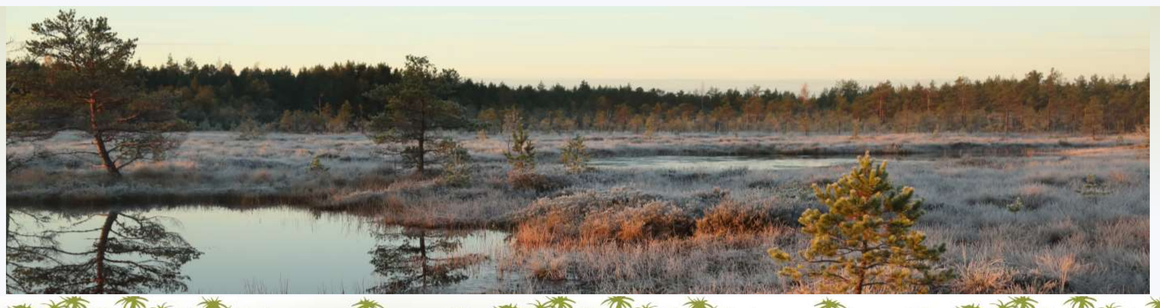
PEAT SAMPLES OBTAINED IN FIELD WORKS

RESULTS AND CONCLUSIONS

The data obtained in the inventory was comprised in a data base developed by LIFE REstore project, which is the first source of this kind of data, where information on harvested peatlands is compiled. The information available in the database is extensive, and data can be used for various types of analysis. The form and type of information processing is determined by the purpose of data processing. For example, the information of LIFE REstore database was processed to identify areas that do not comply with the requirements of LULUCF Regulation, as well as to develop and recommend the best after-use types for degraded peatlands.

The Law on the Subterranean Depths determines an obligation for peat extractors to ensure rehabilitation of degraded peatland at their own expense, within the time limit specified in the license. However, for about half of the territories, there is no peat extractor, since the extraction has taken place before Latvia regained its independence (1991).

The rehabilitation of such areas can be seen as a joint work that involves the state, municipalities and landowners. Using the database created by the LIFE REstore, it is possible to identify municipalities where this issue can be topical, and solutions should be sought in the near future.



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