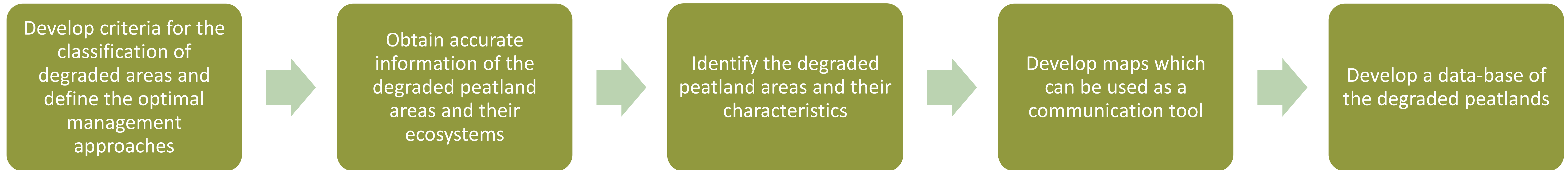




Administration of
Latvian Environmental
Protection Fund

Inventory of degraded peatlands

The objective of inventory is to identify areas of degraded peatlands and their criteria: vegetation, hydrological regime, peat layer thickness and composition, characteristics of drainage systems.



Cena mire, birch plantation, M. Pakalne



Strūžānu mire, flooded peatland



Lielsalas mire, rewetted territory, L. Grīnberga



Melnā ezera mire, abandoned peatland, L. Grīnberga



Rekšņu mire, abandoned peatland



Vārnēnu mire, abandoned peatland, M. Pakalne

Project demo-sites

Choice of the most efficient land-use scenario for the degraded peatland provides economic benefits to the land owner at the same time taking into consideration environmental factors



Kaigu peatland Afforestation

Land-use scenario foresees planting of different tree species (black alder, poplar, birch, pine tree), monitoring interaction with each other by planting the species in different combinations, as well as measuring how four different fertilizer doses impact those combinations.
Total area: 9,4 ha



Kēmeri Mire Sphagnum planting

Land-use scenario foresees renaturalization of the territory by leveling of the area and planting of sphagnum.
Total area: ~ 2 ha

Kaigu peatland Growing berries

Land-use scenario foresees implementation of high-bush blueberry crop.
Total area: 4,2 ha



Kalna peatland Growing berries

Land-use scenario foresees implementation of cranberry crop.
Total area: ~ 2 ha



Lauga Mire Restoration

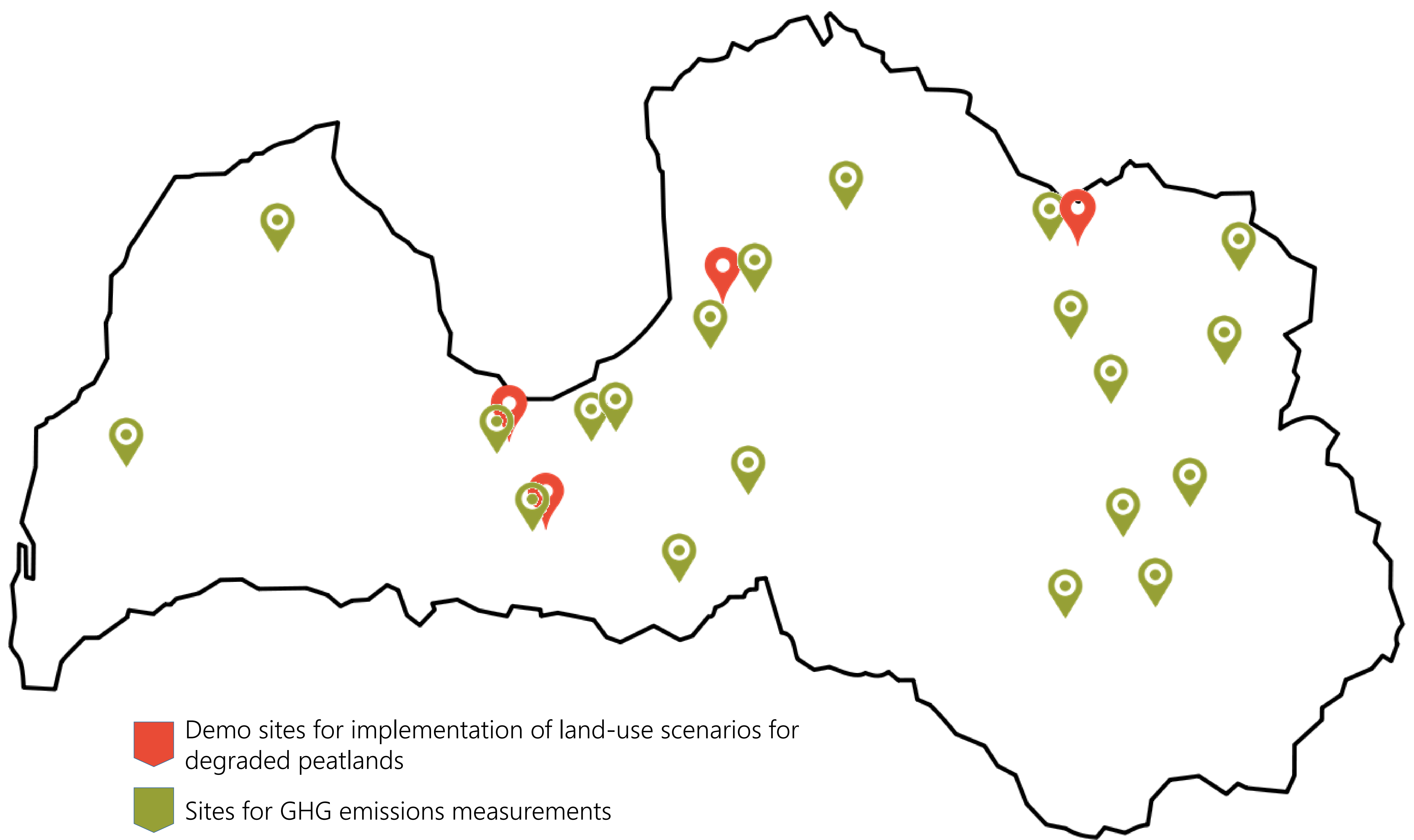
Land-use scenario foresees water level re-establishment works in Natura 2000 site according to elaborated Nature Management Plan for Lauga Mire.
Total affected area: ~ 309 ha

Material is prepared and published within EU LIFE program Climate Action sub-program Climate Change Mitigation priority area project "Sustainable and responsible management and re-use of degraded peatlands in Latvia" (LIFE REstore, LIFE14 CCM/LV/001103).

Project period: 01/09/2015 – 30/08/2019. Total budget 1 828 318 EUR, EU contribution 1 096 990 EUR.

Sustainable and responsible management and re-use of degraded peatlands in Latvia

The aim of LIFE REstore Project is to develop recommendations for sustainable use of degraded peatlands



Project implementators



LIFE REstore results will be available to the land owners for practical use

Benefits

For Climate

GHG emission factors suitable for the climatic conditions of Latvia have been developed for managed transitional mire and raised bog soils.

GHG emission reduction has been achieved by implementing different land-use scenarios in the demo-sites.

Performance data for the calculation of GHG emissions and the conversion of GHG emissions from organic soils into the national GHG inventory report have been prepared.

For Biodiversity

Recommendations for implementation of the most appropriate land-use scenarios in degraded peatlands have been developed.

For Economics

Solutions found for effective use of degraded peatland areas and local resources, balancing climate, economic and environmental aspects.

GHG emissions measurements

To elaborate a gas flux measurement based emission factors for GHG (CO₂, N₂O and CH₄) emissions accounting in managed wetlands and restored peat-lands in accordance with the Supplement to the 2006 Guidelines for National Greenhouse Gas Inventories: Wetlands (Wetlands Supplement).

Study sites are established in areas where peat extraction is ongoing or has ceased at least 20 years ago. GHG emissions from following types of land use will be measured:

1. Peat extraction sites – milled peat extraction;
2. Abandoned peat extraction sites – vegetation has not emerged after the cessation of peat extraction;
3. Abandoned peat extraction sites – vascular plants (except the common Reed) have colonized the area;
4. Perennial grasslands on former peat extraction fields – grass is grazed or collected for the forage;
5. Arable land on former peat extraction fields – crops are grown;
6. Arable land on former peat extraction fields – vegetables are grown;
7. Blueberry plantations on former peat extraction fields;
8. Cranberry plantations on former peat extraction;
9. ≥ 20 years old Norway spruce or Scots pine stands on the former peat extraction sites – peat layer is ≥ 30 cm;
10. ≥ 20 years old birch stands on the former peat extraction sites – peat layer is ≥ 30 cm;
11. Intact or relatively intact raised bog – water table has not been intentionally regulated, and the area can be defined as a forest according to the Forest Law of Latvia;
12. Intact or relatively intact transitional mire – water table has not been intentionally regulated, and the area cannot be defined as a forest according to the Forest Law of Latvia;
13. Former peat extraction sites which have been re-colonized by common Reed (Phragmites);

The field data are obtained using the closed chamber methodology elaborated and approved by University of Tartu.



Sampling equipment – rings and chambers for collection of GHG.

Choice of the most efficient land-use scenario for a degraded peatland provides economic benefits to the land owner at the same time taking into consideration environmental factors

