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# Implementation of action C2: Tools for modelling of impact of climate change on GHG emissions

Lithuanian Research Centre for Agriculture and Forestry

## Task 1: Integration of GHG EFs and CC scenarios

### LAMMC MI responsibility

Task 1 should be divided into two parts for implementation:

- Collection of data needed for projections:
  - Collection of existing and evaluation of new greenhouse gas emission factors related to organic soils;
  - Activity data needed for biomass carbon stock changes in lands with organic soils;
- Collection and/or definition of climate change scenarios.

# Collection of data needed for projections (1)

- Collection of existing and evaluation of new greenhouse gas emission factors related to organic soils
  - Compile database of emission factors already used for GHG inventory (to estimate emissions from drained/rewetted organic soils), databases used to calculate national emission factors (if any).
  - Compile database of outcomes from other projects (LIFE and SNS120) related to organic soils in various land uses and management suggestions for such soils.
  - Evaluate region-specific emission factors (EFs) from the LIFEOrgBalt project.
  - Collect estimates of soil carbon stock changes in organic soils (drained/undrained/rewetted) due to different management regimes.

## Collection of data needed for projections (2)

- Activity data needed for biomass carbon stock changes in vegetation on organic soils under different management regimes:
  - Compile database on organic soil properties in participating countries, in order to define the conditions for forest growth on organic soil areas in Baltic States, Germany and Finland.
  - Prepare data needed to estimate growing stock volume changes in forest on organic soils – i.e. growing stock volume increment, natural mortality (losses), harvest (amount and time of occurrence); collect values of carbon stock changes in non-woody vegetation.

# Collection and/or definition of climate change scenarios

- Compile dataset of climate change scenarios in participating countries – changes in temperature, precipitation, vegetation period, etc.
- Prepare database of climate change mitigation measures planned and/or adopted in participating countries, related to organic soils.
- Evaluate the effect of mitigation actions planned in participating countries.

# Dataset of input factors for SUSI Peatland Simulator

- Cooperation with the authors of SUSI Peatland Simulator is necessary.
- Dataset of input factors needed to run the Simulator will be compiled taking into account:
  - Soil carbon stock changes due to the management (drainage/rewetting/use of undrained) of organic soils;
  - Carbon stock changes in woody vegetation biomass (under different management regimes);
  - Carbon stock changes in non-woody vegetation biomass (under different management regimes);
  - Other emissions ( $\text{CH}_4$ ,  $\text{N}_2\text{O}$ ) due to the management (drainage/rewetting/use of undrained) of organic soils.



LIFE **Peat** Land Use

