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# CO<sub>2</sub> and CH<sub>4</sub> fluxes from abandoned peat extraction areas: the role of berry cultivation

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

EGU general assembly 2018. 9.04.2018

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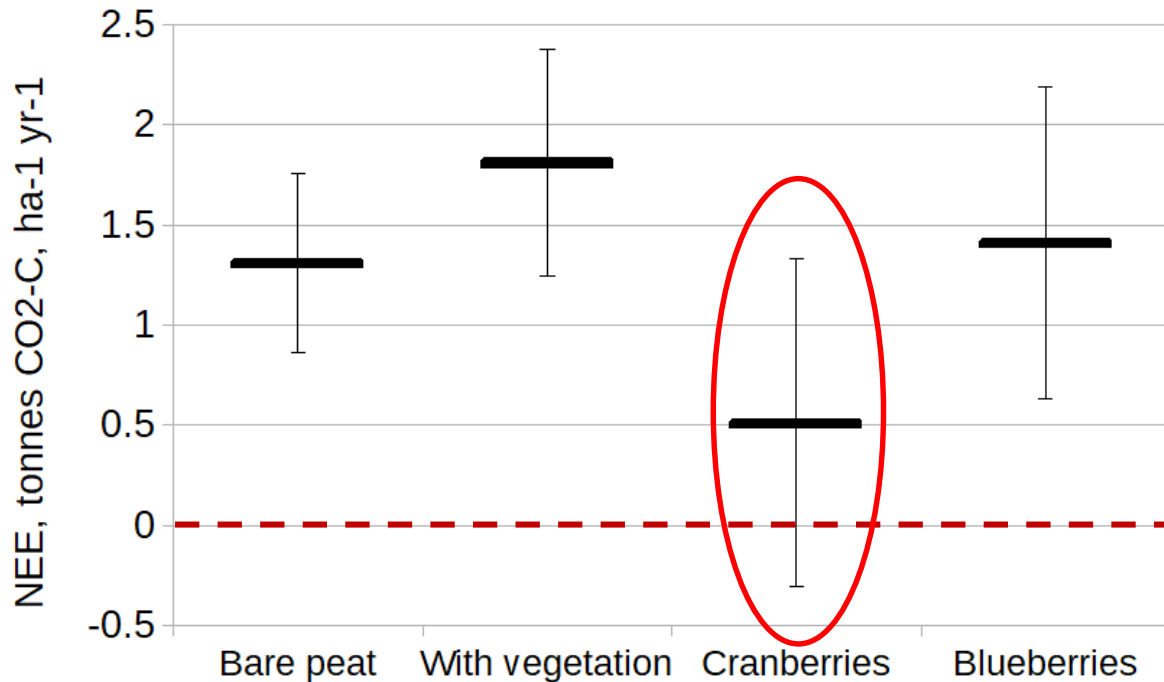
LSFRI Silava, Rīgas 111, Salaspils, LV-2169



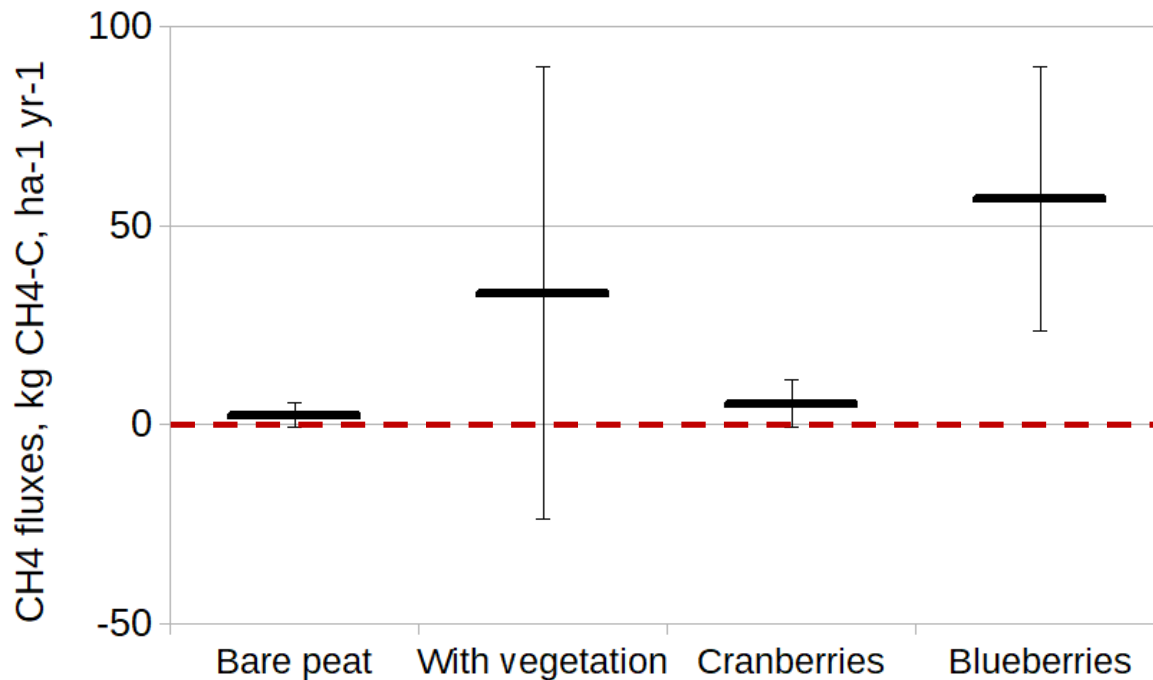
# Extracted peatlands = source of CO<sub>2</sub>-C



# Berry cultivation may reduce net CO<sub>2</sub> emissions !



# Soil CH<sub>4</sub>-C fluxes





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# Various after use scenarios



# Gas measurements

- Transparent and opaque chambers

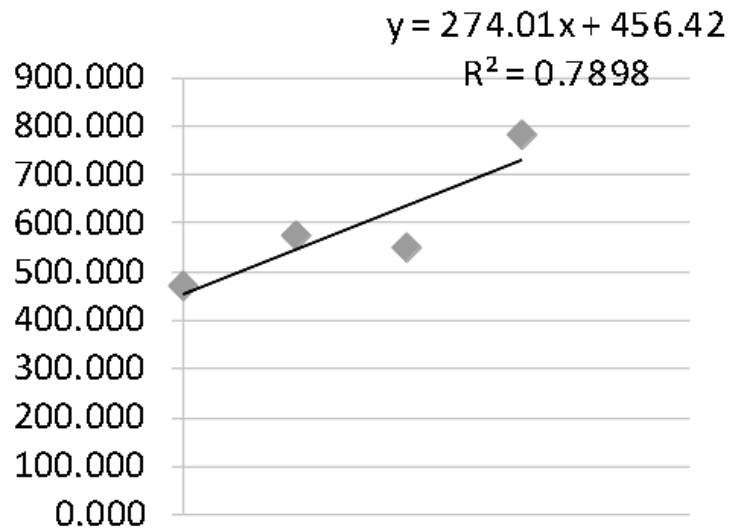
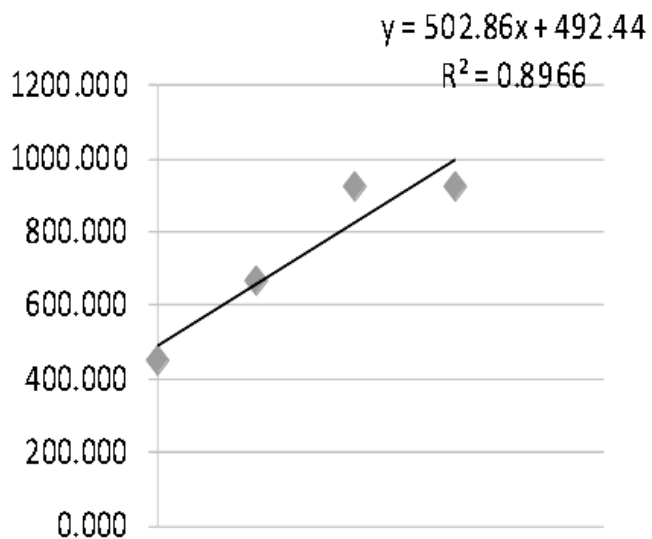


# Sampling design

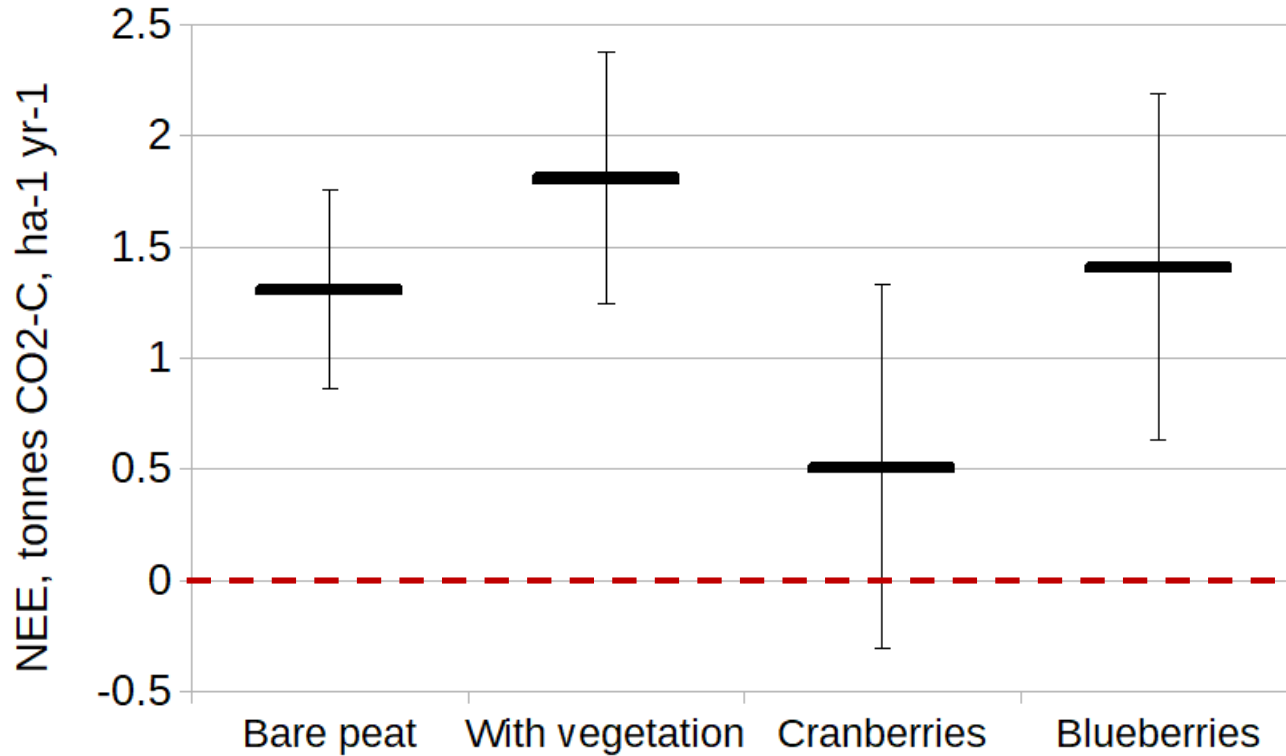
- 3 sample plots for each land use (bare peat, abandoned field with vegetation, cranberries, blueberries).
- Each sample plot measured once in a month.
- Transparent and opaque chambers used.



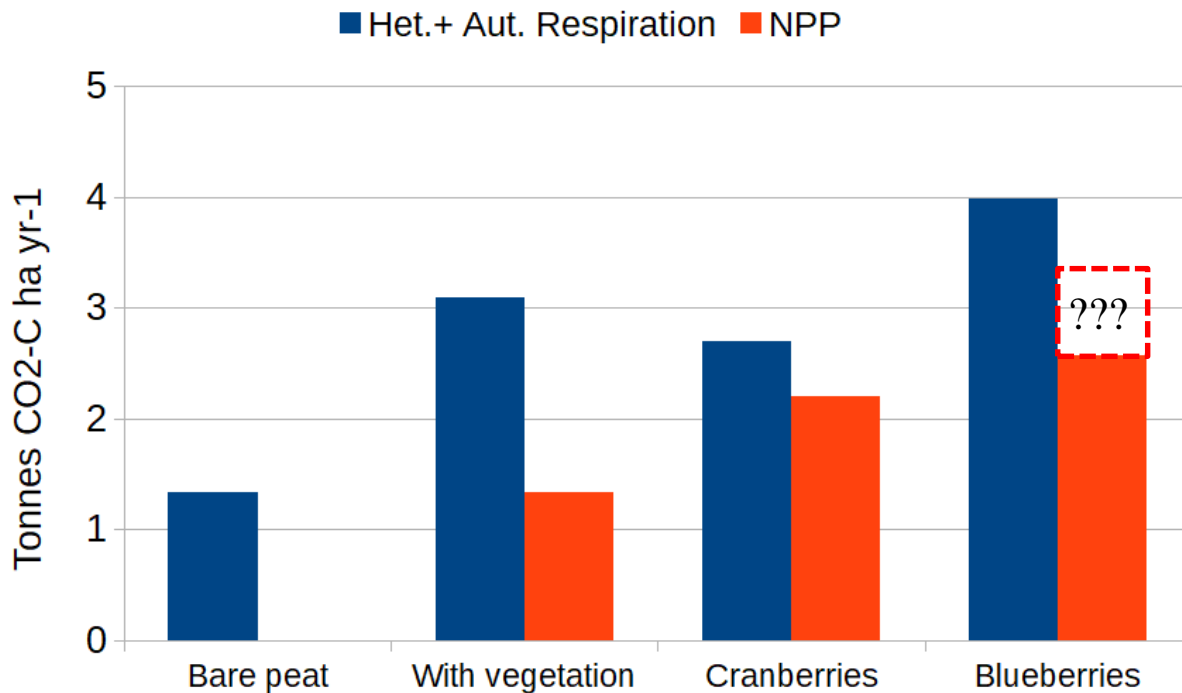
# Data processing



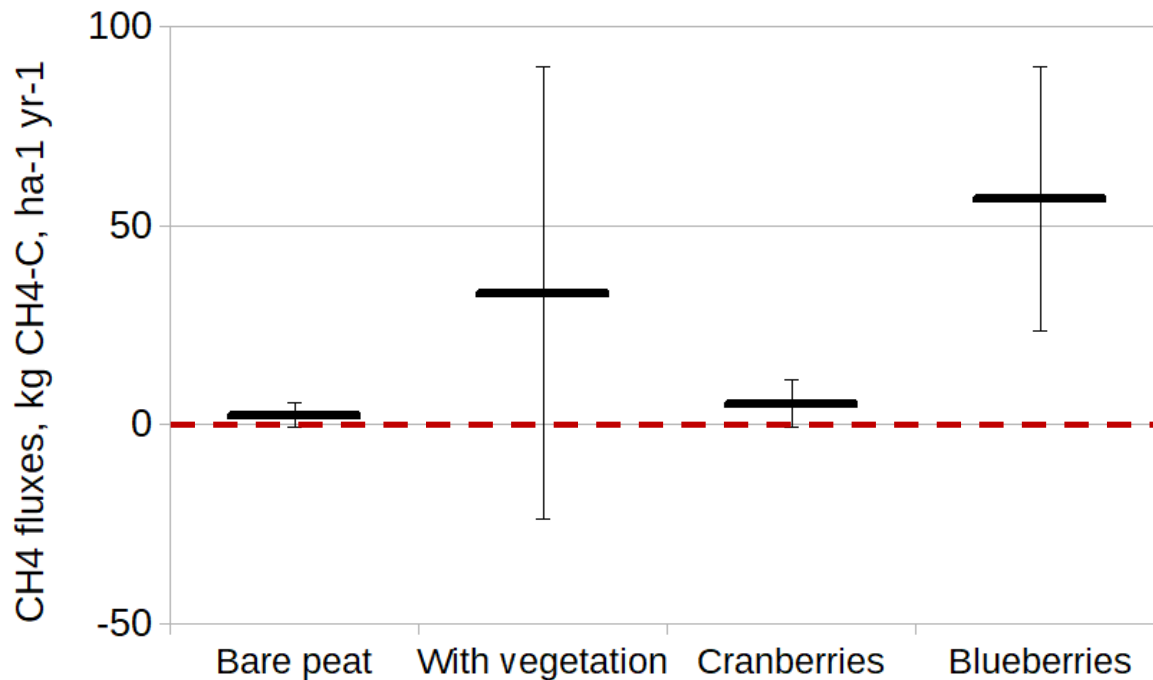
# Net ecosystem exchange



# Soil CO<sub>2</sub>-C respiration + NPP



# Soil CH<sub>4</sub>-C fluxes





# Berry cultivation and climate change mitigation

- Reduces the CO<sub>2</sub>-C fluxes compared to unmanaged peat extraction sites.
- Keeping the high ground water table may be option to reach neutral or even negative CO<sub>2</sub>-C fluxes.

The activities are implemented with the financial support of the EU LIFE program within the project "Sustainable and responsible management and re-use of degraded peatlands in Latvia" (LIFE REstore, LIFE14 CCM/LV/001103). The project is coordinated by the Nature Conservation Agency in cooperation with the Association "Baltic Coasts", the Latvian State Forest Research Institute "Silava" and the Latvian Peat Association from September 1, 2015 to August 31, 2019.

# Thank you!



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