

3) mid-IR estimation of changes in organic carbon (ΔOC)

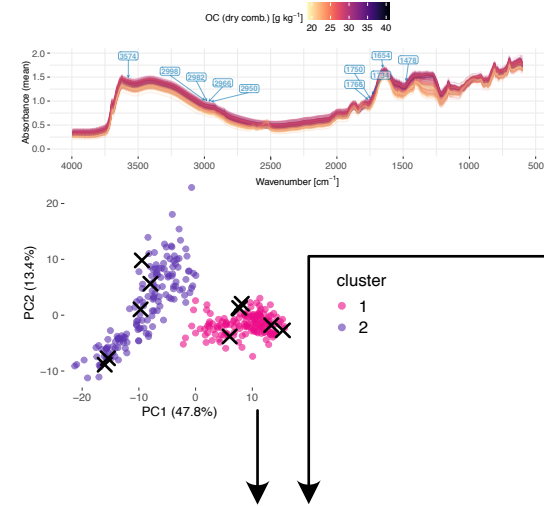


Calculated differences in OC (ΔOC) per plot and depth across consecutive years

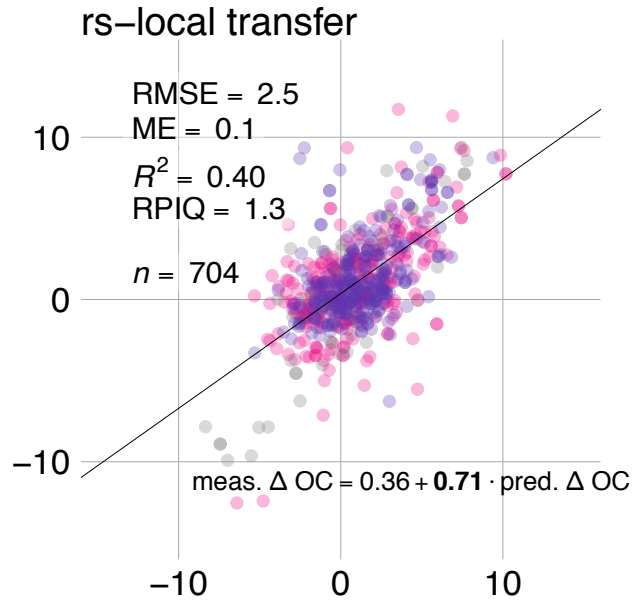
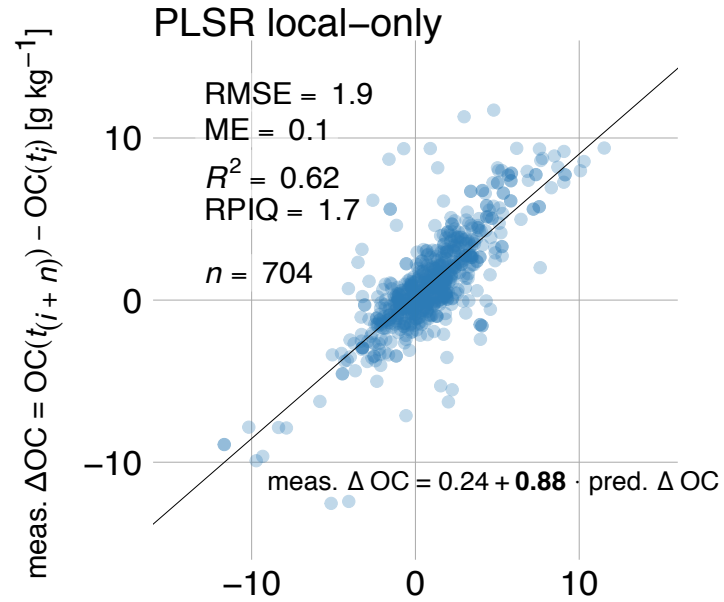
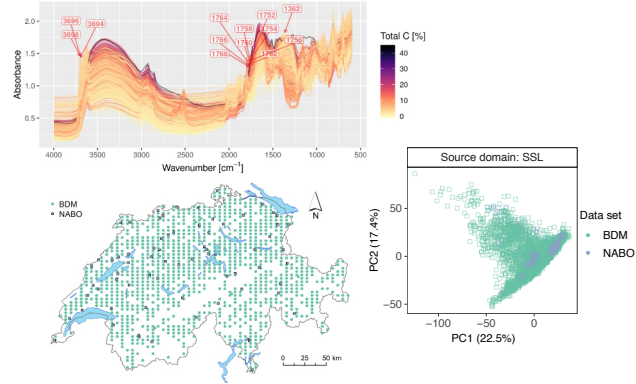
- for dry combustion measurements (meas.)
- for mid-IR predictions (pred.)
- 2018–2002, 2018–2005, 2018–2009, 2018–2011
- 2011–2002, 2011–2005, 2011–2009,
- 2008–2002, 2008–2005
- 2005–2002

– All 311 samples from the Frick trial
used for modeling (cross-validation)

– 10 local adaptation samples (5 per cluster)



– Selected relevant samples with OC
measurements from the Swiss mid-IR SSL



pred. $\Delta OC = \text{pred. } OC(t_{i+n}) - \text{pred. } OC(t_i)$ [g kg⁻¹]

Data-driven transfer
from **Swiss mid-IR SSL**
with **rs-local** required
only **3% of local samples**
with analytical OC values
and had only **1.3 times**
the error (RMSE) for ΔOC
compared to the local-only
calibration