

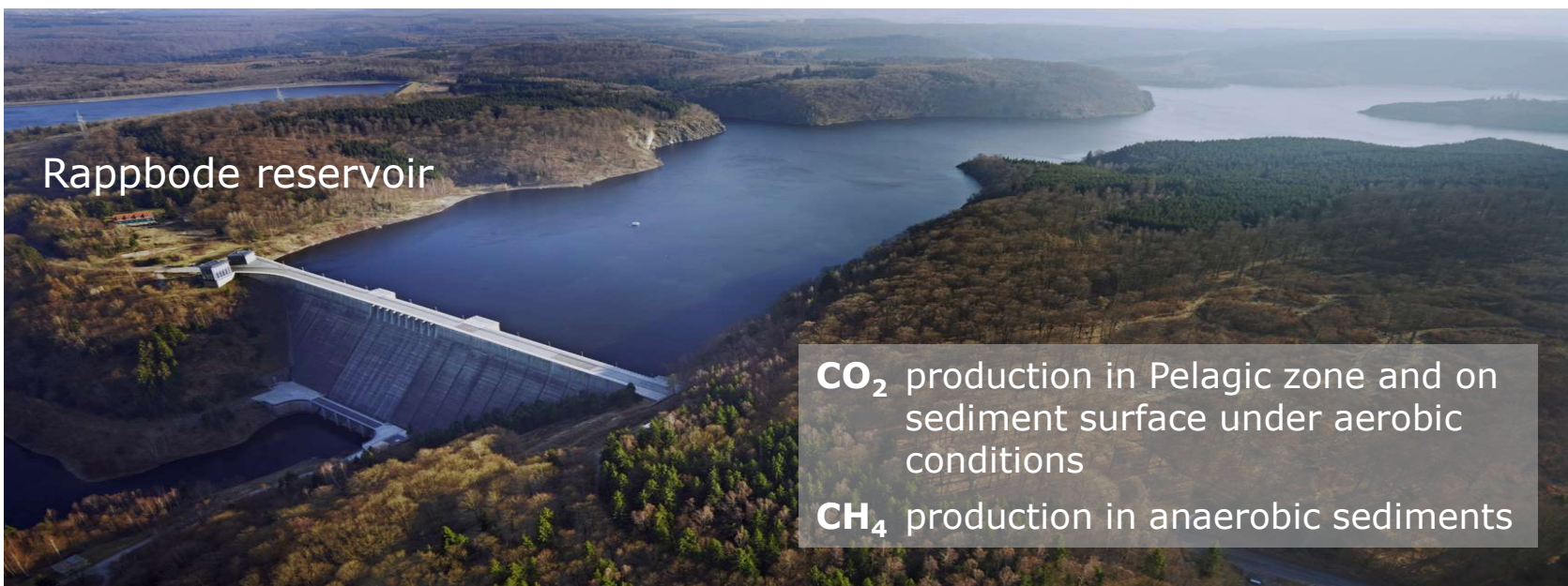
DFG funded CAWR-Project (TUD-Meteorology, UFZ-Lake Research) combining process-oriented research (Methane emissions) and long-term monitoring (TERENO, ICOS)

Methods:

- hydro-chemical (UFZ) and micrometeorological (TUD) observations of flux exchange
- spatially integrating (eddy covariance, energy, water, CO₂, methane) and point measurements (floating chamber and bubble traps) to capture spatial heterogeneity

Aims:

- Understanding the temporal dynamics of green house gas emissions from reservoirs
- Better source/sink estimates under climate change via model improvements

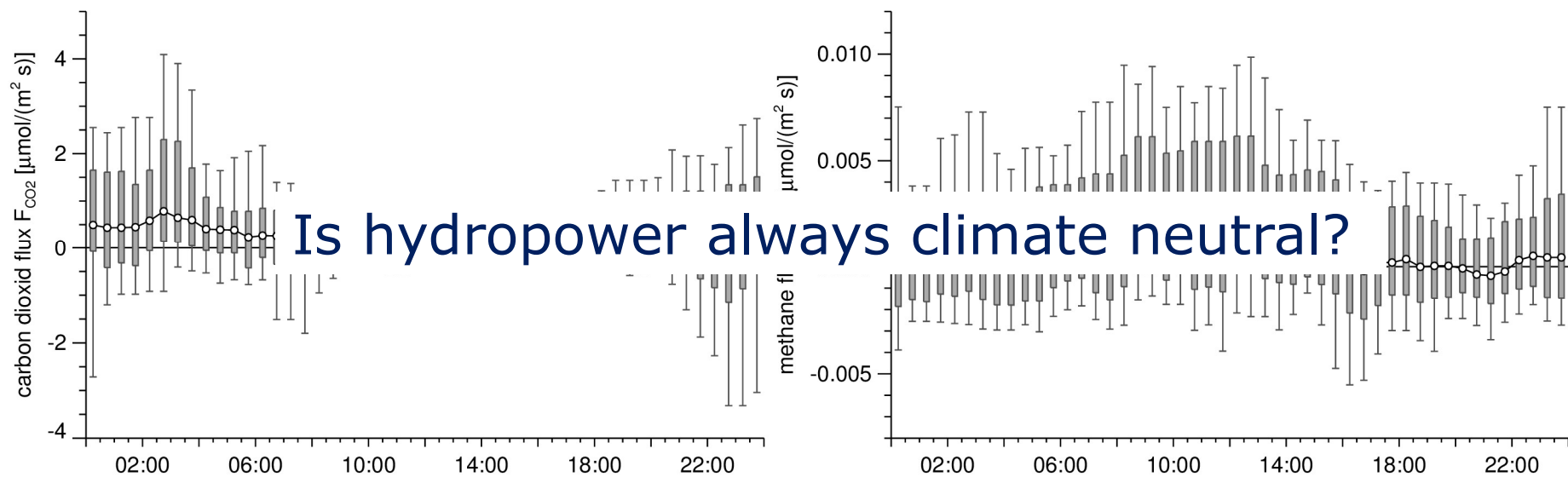


source: André Künzelmann, UFZ; <http://www.ufz.de/index.php?de=35315>, access: 16.08.2017



Floating Flux Tower

- First flux results of methane, CO₂, and water from a reservoir (Rappbode, 2017)
 - Energy balance components
 - Heat storage (complete T profile)
 - Wave recording and flux correction acc. to waves
- Large dynamics of photosynthesis, respiration and methane emissions



Is hydropower always climate neutral?

Mean diurnal courses of CO₂ (left) and CH₄ (right) flux exchange, period 20.06. - 27.07.2017