

PROPOSAL FOR FLUXNET SYNTHESIS PUBLICATION FOR OPENED FLUXNET-LA-THUILE DATA SET



Initial coordinators:: Susanne Rolinski¹
Collaborators Christoph Müller¹,
needing Alberte Bondeau¹,
access to Lex Bouwman²,
data: Johnny te Roller³
Affiliations: ¹Potsdam Institute for Climate Impact Research,
²PBL Bilthoven, ³Alterra Wageningen

TITLE OF PAPER AND OUTLINE

MODEL EVALUATION OF GRASSLAND CO₂ AND H₂O FLUXES FROM LPJML WITH FLUXNET DATA

Natural and managed grasslands are dominant land-use types at the global scale, yet their productivity and carbon balance are poorly represented in global-scale models. We here aim at a revision of the grass and grassland management parameterizations in LPJmL to improve the modeling of the carbon and water cycle at regional and global scales. Model refinements will lead to better assessments of the grasslands' carbon balance and grassland productivity, constraining livestock production.

In this process, available data on simultaneous fluxes of carbon and water from different climatic regions all over the world are essential for evaluating alternative parameterizations. Assessment of fluxes will enhance comprehension of the processes determining water usage, net primary production, and biomass of grass in the model. We anticipate to implement various management options, including grazing by cattle, mowing as well as fires. Thus, measurements from natural and managed grassland sites are desirable for the definition and refinement of the management options for grass functional types in the carbon and water cycle model.

PROPOSED SITES TO BE INVOLVED

All the sites on grassland and those on cropland with pasture (e.g. BR-Sa2)

PROPOSED RULES FOR CO-AUTHORSHIP

Our policy will be to provide co-authorship to those who made a significant intellectual contribution to the article. Those responsible for collecting and providing the data used in the proposed analyses will be acknowledged.