

PROPOSAL FOR FLUXNET SYNTHESIS PUBLICATION



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Collaborators needing access to data:

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Affiliations:

DATASET PROPOSED

LaThuile

TITLE OF PAPER AND OUTLINE

Use of remote sensing indicators for estimating drought impacts on flux data.

Drought events can severely impact ecosystem functioning and the associated carbon fluxes. Remote sensing techniques are valuable for estimating plant biomass and vegetation structure, and different remote sensing indicators are potentially useful also for estimating plant functioning. The latter is, however, more complicated, because the traditional remote sensing indicators (such as NDVI) provide estimates of green biomass, but not necessarily reflect plant activity. Especially during drought periods, these indicators may be poor estimators of vegetation functioning, as was shown by for example Lloret et al 2007.

Via comparison of time series of different remote sensing indicators and flux data (primarily GPP), we want to test (i) which remote sensing indicator, or combination of indicators, relates best to field data, (ii) how this relation holds during drought periods, and (iii) if and how PRI can be used for improving estimates of GPP based on remote sensing data, especially during drought periods.

References

Lloret F, Lobo A, Estevan H, Maisongrande P, Vayreda J, Terradas J. 2007. Woody plant richness and NDVI response to drought events in Catalanian (Northeastern Spain) forests. *Ecology* 88, 2270-2279.

PROPOSED SITES TO BE INVOLVED

All sites suitable for intercomparison of fluxdata and remote sensing data. Primary criteria: homogeneous, flat area; more than 1 year of data; high quality flux data.

PROPOSED RULES FOR CO-AUTHORSHIP

All PIs and collaborators will be invited to contribute to the work following the data policy proposed in the disclaimer for the FLUXNET2007 synthesis.