

Title: Effect of 2014 temperature anomalies on gross ecosystem production, ecosystem respiration, net carbon uptake and environmental conditions among plant functional types

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2014 has taken the title of hottest year on record (with particular high Temperature in Europe) . The average temperature was 0.27 °C above the 20th century average according to JMA's data (http://ds.data.jma.go.jp/tcc/tcc/news/press_20141222.pdf). This exceeds 1998, the previous warmest year.. Spring, summer and fall were all record-setting hot. Last winter was the only season not to set a record, and even that was still the sixth-warmest winter.

In this paper, we compare weekly, monthly, and annual dynamics in GEP, Re and NEP by biome of boreal hemisphere with their "long term" averages values.

Questions are:

Does the high Temp of 2014 strongly impact on Re, GEP and NEP ?

Which is the more important season T anomaly?

Do the relations and lags differ by biome and different geographic areas?

Which are the differences with the 2003 summer European anomalies?

Sites: all (except cropland and strongly managed ones) with relatively long-term data (10 yr+)

We will follow FLUXNET procedures (e.g. as defined in "Policy_LaThuile_Final.pdf") for keeping data providers informed as we make progress on this analysis, and for inviting data providers to make an intellectual contribution to the project. We will share preliminary results with site PIs whose data we use.

Following initial manuscript review, we will invite all PIs who provide data and make a significant intellectual contribution to be coauthors on the subsequent draft and submission. All other data providers will be identified by name in the manuscript acknowledgements.