

Effect of land use change and global warming on winter albedo

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Abstract

Albedo is a major driver of the surface energy balance and plays an important role in determining the present and future climate. Since General Circulation Models (GCMs) are very sensitive to this parameter, the FLUXNET database represents a valuable product to test new parameterization and to support scenario analysis. For this purpose we will use the FLUXNET experimental data of hemispherical albedo to drive a GCM and to verify the strength of the potential feedbacks between land use change, surface albedo and global temperature. We will focus in particular on the potential climatic impact of future changes in winter albedo due to variation in surface temperature and/or in land use.

Sites

All FLUXNET sites with measurements of incoming and outgoing shortwave radiation

Co-authorship strategy

Members of the FLUXNET community are welcome as coauthors given that they provide academic input for the analysis. Any collaborator not in the FLUXNET community who is willing to provide substantial intellectual input to the analysis is also welcome as a co-author. If a site PI would rather their data not be used in the synthesis activity, data from their site will not be included in the analysis.