



## **large-scale Climate And Vegetation Changes Over the last Deglaciation (CLAVICHORD)**

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The last deglaciation (from 21,000 to 9,000 years ago) is a period of tremendous climate and environmental changes. These changes are documented by physically based paleoenvironmental indicators (e.g. oxygen or carbon isotopes in ice cores and marine cores) and by biologically based data (such as paleo-vegetation). One of this study aims, for this period of the last deglaciation, at building a comprehensive documentation of climate changes over terrestrial areas from widely available pollen data. This study will provide new benchmarking data for understanding environmental changes and evaluating climate models that are used for climate projections. Here, we develop pollen/biome-based global climate reconstructions with an inverse (equilibrium) vegetation modeling approach over the last deglaciation. The approach is implemented by searching for a set of climate values which, when input to a vegetation model, simulates vegetation that is consistent with the paleovegetation reconstructed from fossil pollen data. The approach allows us to avoid both no-analog and wrong-analog problems and to assess the potential bias in reconstructions that may result from varying atmospheric CO<sub>2</sub> concentrations.