Climate Variability and Global Food Security- With an Eye on France

Large variations in seasonal temperature and rainfall threaten crop production, food prices, and food security at local to global scales. This project focuses on the impacts of climate variability on Europe’s agricultural regions, with an emphasis on wheat in France. Although France has a relatively small agricultural area, it has among the highest wheat yields in the world. Climate-induced shocks to crop production thus influence global prices for wheat and other commodities linked to wheat through markets. The project will establish an interdisciplinary collaboration between the Center on Food Security and the Environment (FSE) at Stanford University and the Institut Pierre Simon Laplace (IPSL) in Paris. Our aim is to integrate climate dynamics, agricultural modeling, economics, and policy analysis in an area of climate science that is poorly understood by the economics and policy community—multi-decadal variability. Through a series of visits across institutions and the launch of a new research project, we will bring food security studies to IPSL, and new climate dynamics research to Stanford. Undergraduate and graduate students will be engaged in the research, and they will have an opportunity to visit nearby wheat producing areas in France, thus connecting theory and practice.