



## Water Availability and the Production of Biofuels - An Integrated Assessment

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The prospect of producing large amounts of biofuels to replace substantial percentages of conventional gasoline is raising a number of environmental, engineering, and economic questions, both in the United Kingdom and in the United States. First, there are many unanswered engineering questions related to the efficient production of biofuels from biomass, and a number of crops and chemical processes still need to be investigated and/or improved to obtain economically attractive options. The potential environmental impacts of these chemical processes are also imperfectly known, which suggests the need to carry out Life Cycle Assessments. Second, planning the large scale production of biofuels requires understanding climatic factors and the potential implications of climate change at the regional level, especially with regard to precipitation. One key question in particular is: will there be enough (or too much) water to sustainably produce biomass in suitable agricultural areas? It is also important to understand the potential economic and social impacts of producing biomass on the cost of food and more generally, on economic welfare.

### Links

The project involved joint workshops between the Universities of Southampton and Bath in the UK and the University of California at Irvine, to address these issues and to look at potential research approaches and areas for collaboration.



Staff from Southampton visiting the Institute of the Americas in San Diego, California