

## **Global Water Cycle**

NIFA-funded research on the global water cycle will focus on how natural and human activities influence the distribution and quality of water within the Earth system, whether changes are predictable, and the effects on human systems of variability and change in the water cycle. Specific foci include:

- identifying trends in the intensity of the water cycle and determining the causes of these changes (including feedback effects of clouds on the global water and energy budgets as well as the global climate system);
- predicting precipitation and evaporation on time scales of months to years and longer;
- modeling physical/biological and socioeconomic processes to facilitate efficient water resources management;
- developing a capability to predict where water management crisis will emerge due to a drought or extended flood conditions;
- the effects of large scale changes in land-use and climate on the capacity of societies to provide adequate supplies of clean water, and;
- how natural processes and human activities influence the distribution and quality of water within the regional and national systems.