

## **Post-doctoral Researcher, Impacts of Climate Change on the Value of Ecosystem Services Provided by the California National Forests**

**Job Title:** Post-Doctoral Researcher (ecosystem services scientist)

**Location:** University of California, Davis

**Timing and Duration:** The position is available immediately and is funded for 1 year with a possible 2<sup>nd</sup> year

### **Project Background:**

This study seeks to better understand the vulnerability of people and communities in the USDA Forest Service Pacific Southwest region (Region 5) to climate-related changes to National Forests and provide information to managers in support of forest planning activities. Forest ecosystems are susceptible to a changing climate through multiple pathways, both directly and indirectly through changes in vegetation. The alteration of ecosystem function then impacts the quantity and quality of goods and services provided by forests. In addition, climate-related changes may also affect disturbance regions, such as wildfire, that can directly affect the well-being of people and communities.

This research will contribute to an existing research program developed for other geographic regions within the US Forest Service on the economic relationships between ecosystem services and the people and communities who may be affected by ecosystem changes. The primary contribution of this post-doctoral position is to conduct an assessment of the socio-economic impacts of climate-related changes to National Forest lands in the Pacific Southwest (primarily California).

### **Job Description:**

The research will involve conducting an assessment of the ecosystem services provided by Region 5 (Pacific Southwest) National Forests, and estimating how these services will change in the future. The objective of the research is to quantify the changes in the value of market and non-market services, including use and non-use values, provided by National Forests in response to climate-related changes, such as changes in the fire regime frequency. An economic household production model will be used to connect changes in these goods and services to changes in the well-being of people and communities.

Essential features of this position include:

- Apply appropriate valuation methods to estimate how climate-related changes to ecosystem services may affect the well-being of people and communities in the Pacific Southwest.
- Identify and evaluate potential tools and management policies available to managers to respond to climate-related changes in National Forests.
- Assess the exposure, sensitivity and adaptive capacity of people and communities in the face of climate-related forest changes.
- Prepare reports of findings and peer-reviewed scientific publications.

The post-doctoral researcher will be an employee of the University of California, Davis for one year, with a possible second year extension. He/she will be jointly supervised by university faculty (James Quinn) at UC Davis and research economists within the USDA Forest Service (Michael Hand, Rocky Mountain Research Station). The position also requires regular communication with key partners on another ecosystem service project within the USFS Region 5 who are based at UC Davis, the Region 5 Regional Office, and Michigan State University.

**Qualifications:**

The successful candidate will have a Ph.D. in environmental economics, natural resource economics, or related field. Specific skills required include:

- Experience with economic models and modelling techniques.
- Familiarity with the current field of economic valuation and ecosystem services.
- Experience with empirical applications that incorporate biophysical or ecological processes.
- Familiarity with geo-spatial environmental data, analysis, and interpretation, and working with GIS software (e.g., ArcMap).
- Knowledge of readily available ecosystem service tools useful (e.g., InVEST).
- Knowledge of statistical analyses and programs (e.g., R, Stata, SAS).
- Strong written and oral communication skills, particularly ability to communicate with people in a range of disciplines.
- Ability to travel occasionally within California.

**Application Process:**

Interested applicants should send a CV, writing samples, and a list of references to Dr. James Quinn, Department of Environmental Science and Policy, [jfquinn@ucdavis.edu](mailto:jfquinn@ucdavis.edu). Review of applications will begin immediately and continue until the position is filled.

For more information, contact Professor James F. Quinn, Department of Environmental Science and Policy, UC Davis. Phone: (530) 752-8027.