

Post-doc Quantifying uncertainty in benthic trawling impacts on marine carbon

The Aquatic Ecology and Global Change Lab, led by Dr. Trisha Atwood, (<https://trishaatwood.weebly.com/>) at Utah State University is recruiting a postdoctoral fellow to develop uncertainty and sensitivity analyses on the impact of trawling on seabed carbon. This position will be based at Utah State University (Logan, Utah, USA). However, for the right candidate, we will consider remote work with some travel to Utah State University. Candidates applying to work remotely must be eligible to work in the USA.

Project overview

A study by Sala et al. 2021 suggested that benthic trawling has the potential to contribute to the loss of ancient carbon stored in marine sediments, potentially exacerbating climate change. Sala et al.'s findings have the potential to significantly influence fisheries management and the development of new marine protected areas.

The postdoctoral fellow will design and lead research that quantifies uncertainty and variation in parameters of Sala et al.'s model and examine their impacts on estimates of trawling-induced CO₂ emissions. The postdoc will relate these results to scientists and policymakers through published manuscripts in peer-reviewed journals, whitepapers/policy papers, and presentations to mixed audiences.

Project Collaborators

The successful applicant will work closely on uncertainty analyses with the Null Lab (<http://sarahnull.org>) at Utah State University, The Devries lab at the University of California, Santa Barbara (<https://tdevries.eri.ucsb.edu/>), and Dr. Anastasia Romanou at NASA's Goddard Institute for Space Studies (<https://www.giss.nasa.gov/staff/aromanou/>). This project will also provide opportunities for the postdoctoral fellow to collaborate with international scientists, policymakers, and NGOs and may include travel within the USA and abroad.

Required Qualifications:

The candidate must hold a PhD in ecology, environmental science, computer science, geospatial studies, environmental engineering, or a closely related discipline

Demonstrated expertise in geospatial analysis using ArcGIS, QGIS, R, or similar software.

Extensive experience scripting in R, MatLab, and/or Python

Experience developing, managing, manipulating, and processing large datasets

Proven ability to write for and present to science and lay audiences in English

Excellent communication and interpersonal skills with the ability to work independently or collaboratively

Excellent time management skills and the proven ability to meet project deadlines

A background in carbon cycling or biogeochemistry is ideal, but not required

Appointment Details and Application

A review of applications will begin in September 2022 and continue until the position is filled. The appointment start date is negotiable, but will start no later than Jan 4, 2023. The initial commitment is expected to be 1.5 years with the potential for an additional term contingent upon performance and the availability of funding. Starting salary is \$60k, with a full benefits package.

In your application, please include:

1. A cover letter that explains how your research and experience align with the skills and research activities listed above
2. A CV or resume
3. A list of three professional references and their contact information.

For any questions, contact Trisha Atwood: trisha.atwood@usu.edu

About Utah State University

Utah State University is a highly selective, public, land-grant university and is classified as a Carnegie R1 Research University. The main campus is located in Logan, a community of 100,000 people. Logan is 85 miles north of Salt Lake City in scenic Cache Valley, a semi-rural mountain basin with nearby ski resorts, lakes, rivers, and mountains providing many recreational opportunities. The area has a low cost of living and provides a high quality of life. For more information on Logan see <http://www.tourcachevalley.com>.