

Sandra R. Dooley



Graduate Institution: University of California, Irvine

Location: Irvine, CA

Graduate Discipline: Ecosystem Ecology and Global Change Biology

Hometown: Corvallis, OR

Research Interests:

My research examines the role of soil microorganisms in mediating feedbacks between terrestrial ecosystems and global change. Soil microorganisms play a fundamental role in regulating carbon losses from ecosystems via decomposition and thus have the potential to influence ecosystem responses to global change. In particular, I am interested in understanding how climate warming and environmental disturbance alter the structure, function, and activity of soil microbial communities and how this in turn feeds back to affect ecosystem carbon storage. I utilize molecular approaches in concert with isotopic techniques to study soil microbial communities in situ. My research is primarily focused on boreal forests because these ecosystems store a significant portion of global carbon and are predicted to warm substantially in the 21st century. Through my research I hope to improve our power to predict how terrestrial ecosystems will respond to environmental changes and to develop policy recommendations for global change mitigation.

About me:

I am currently a PhD student in the Department of Ecology and Evolutionary Biology at the University of California, Irvine where I study feedbacks between terrestrial ecosystems and global change. Prior to graduate school, I obtained my B.S. summa cum laude in biology and environmental studies from Gonzaga University. A productive undergraduate career afforded me the opportunity to travel in both Latin America and sub-Saharan Africa and as a result of my experiences abroad I developed an early interest in research related to global change. To complement my graduate studies, I am an active member of the Ecological Society of America and the Society for Conservation Biology, Orange County Chapter. In addition to studying ecology, I enjoy camping, running, traveling, gardening, cooking, reading, and being outdoors. I also enjoy sharing my passion for ecology and the environment through outreach in the public sector. I currently volunteer with CLEAN Education, a non-profit organization that brings unbiased climate change education to public schools. In my career I ultimately hope to obtain a faculty position in which I maintain a balance between research, teaching, and collaboration with policy makers.



U.S. DEPARTMENT OF
ENERGY

Office of
Science