



Environmental Science Graduate Program Student Seminar Series

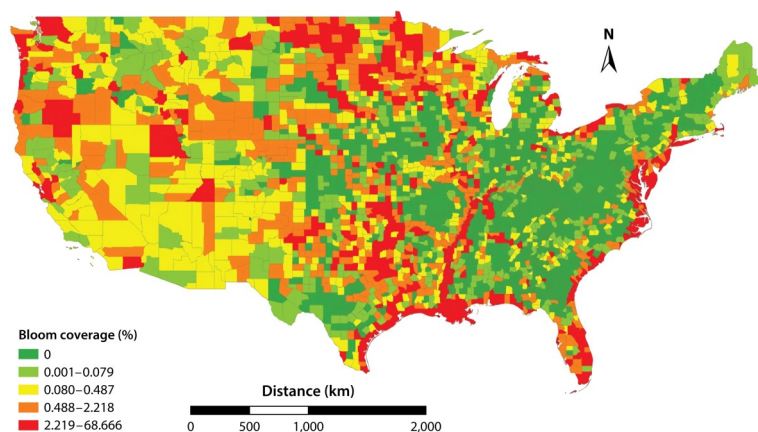
Solar-powered Drinking Water Stations in Egypt's Deserts, and How They Tie to Water Quality and Cyanobacteria in Ohio

● **Angela Davis**

Cunz 330 | 10 - 5 - 18 | 3 - 4 pm

Abstract:

In Egypt, 7.3 million citizens lack access to safe water, especially in rural areas. The Research Institute for a Sustainable Environment (RISE) has implemented 18 sustainable drinking water stations across Egypt's Western Desert. More specifically, RISE is focusing on the effectiveness of the technology within these communities and the way that the water stations, affected by complex community dynamics, influence the overall impact of the technology itself. To assess effectiveness, data points were taken via a portable field lab kit to test water quality before and after water treatment, and then compared across the different stations to look at potential trends and overall water station productivity. This research has motivated my continued research at Ohio State, where my new lab, led by Dr. Jiyoung Lee, studies the impact of cyanobacteria on the environment and human health. The lab focuses on conducting health impact studies, examining exposure pathways, especially via food and soils, as



as well as identifying solutions, such as cyanophages, cold plasma and UV, for reducing cyanobacteria exposure and presence in our water. These topics all focus on green infrastructure as a whole, and how communities can be impacted by these in-depth studies and applications.

Lee J, et al. 2017.
Annu. Rev. Food Sci. Technol. 8:281-304