

Soil and Water Sciences Department Graduate Student Exit Seminar

Speaker: Claire Friedrichsen
Ph.D. Degree Candidate

Advisor: Samira Daroub, Ph.D.

Title: Identifying Communication Barriers to Successful Implementation of Soil and Water Technology for Improving Food Security

Date: Monday, March 25, 2019

Time: 3:00 pm – 4:00 pm

Location: McCarty Hall A, Room G186



In 2015, the United Nations called for improving global food security through sustainable intensification. Sustainable intensification will only occur through improving our understanding of the food system and improving stakeholder communication surrounding soil and water. This research looks at stakeholder communication concerning soil and water technology development and dissemination through the lens of three case studies: soil health for food security in India, the food value chain in south Florida, and maintenance of constructed wetlands for decentralized wastewater treatment in India. Each of these case studies uses the framework of mental models within the frame of natural resource communication. Stakeholder mental models are elicited indirectly through semi-structured interviews, participant drawings, and observations. The interviews are analyzed with cultural discourse analysis to identify the tacit cultural models held by each stakeholder group. Case study one identifies four ways that mental models can be used to understand stakeholder communication. New relationships and dimensions of theoretical concepts arose from case study 1 and 2. The fifth dimension of food security, the perceived risk to food security by lack of culturally appropriate production methods, was identified in case study one. Case study two identified the relationship of soil as related to the food value chain, and its implications for stakeholder communication as related to technology development and transfer in south Florida. Finally, case study 3 challenges the idea that constructed wetlands are a simple technology solution for developing nations and suggests removing the ecological knowledge burden required for long-term maintenance of the constructed wetlands for future design and transfer of the wastewater treatment system.

This seminar can be viewed via live or watched later via this link: [Claire Friedrichsen](#). Viewers of the live stream may now ask questions by clicking on the message icon at the bottom. Questions will be read at the end during the question and answer portion. In addition, all seminars are archived for viewing on our [SWSD Seminar Page](#).