



SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES

# GRADUATE EXIT SEMINAR

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## Credibility, Saliency, and Legitimacy of Outcomes in Participatory Modeling



Traditional modeling approaches like expert-led, top-down and in closed spaces, have been found to fall short to address peoples' needs and complex sustainability challenges. They fail to generate societal trust in the models and in actual use of the models. Moreover, while the importance of science in environmental management cannot be overstated, the difficulty lies in generating scientific knowledge that is both credible and salient to decision-makers, while also being perceived as legitimate by other stakeholders. Societal acceptance and use of the models is more likely to be achieved when people/stakeholders are engaged into the design and evaluation of socio-environmental models. This has led to a growing field called 'participatory modeling' (PM) where researchers collaborate with diverse stakeholders in the modeling process and identify plausible solutions for complex sustainability challenges, especially at the nexus of food-energy-water systems. Stakeholder engagement is also believed to strengthen the credibility, saliency, and legitimacy (CSL) of the PM process and the models. Evaluation studies assessing the CSL of a PM process and models are sparse. In my research, I address these gaps based on the endline evaluation of a PM project called Dynamic Regional Food, Energy, and Water Systems (DRFEWS). The DRFEWS project was designed to engage stakeholders and scientists to develop an integrated sustainability model of the Great Lakes region's FEWS under alternative future scenarios. The key research question examined is 'whether both groups of participants (scientists and stakeholders) perceive the project outcomes (i.e., process and results) as credible, salient, and legitimate?' Results suggest that broadly all participants felt that the project outcomes are credible, salient, and legitimate.

Advisor: Dr. Doug Jackson-Smith

**Friday, December 15, 2023**  
**11:30 A.M.**

**Join the seminar via Zoom:**

<https://osu.zoom.us/j/91000245525?pwd=YUgyMGhEdklmQWdqaHEybVZmcEUQT09>

Meeting ID: 910 0024 5525

Password: 874223

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