

PhD Dissertation
Department of Environmental Science and Policy
College of Science
George Mason University

Candidate: Christopher Round

Defense Date and Time: April 19, 2024 at 11:00am

Defense Location: Virtual on Zoom

Title: Digitizing Responsibility: Emerging Technologies and Power in Environmental and Informational Governance

Dissertation Directors: Dr. Karen Akerlof and Dr. Ingrid Visseren-Hamakers

Committee: Dr. Susan Crate, Dr. Jennifer Salerno, and Dr. Victoria Adams

ABSTRACT

This dissertation examines the influence of information and communication technology (ICT) on environmental governance, how it changes power dynamics, and how to evaluate the role it may play in creating transformative change to address environmental problems. This research was approached using a pragmatic perspective towards theoretical assumptions. Data was gathered using a modified snowball sampling approach. Three different technologies were analyzed: blockchain, artificial intelligence, and a data analytics platform. The results indicate that ICT can unexpectedly and dramatically impact relationships between stakeholders.

Environmental and Transformative Governance scholars should consider the impacts of ICT on stakeholders to address global environmental problems.