

## The Evolution of Social-Ecological Systems

February 10, 2020 10:30 – 11:30 am
Prairie Room, Diefenbaker Building
Video-conferenced to CB 349, College Avenue Campus

To solve the modern environmental predicament we must understand how humans created it. Beyond emitting carbon, over-populating, polluting, or over-consuming, humans have come to dominate the planet, surviving in all terrestrial environments from the tropics to the arctic. We have achieved this through a mix of cooperation and cumulative adaptation to the environment. Dr. Waring argues that the factors that make the human species special, ultra-sociality and cumulative cultural adaptation, also present the best and only hope for surviving and managing modern ecological crises. This talk will explain how human culture and cooperation both evolve, and how their dynamics play out at multiple levels of social organization in different social ecological systems, with detailed examples from around the world. Finally, Dr. Waring explains how to harness the power of human cooperation and cultural adaptation to achieve environmental sustainability.

**Dr. Tim Waring** is associate professor of social-ecological systems modeling at the University of Maine. He studies how cooperation and culture determine social and environmental outcomes. Using economic experiments and agent-based simulations, he builds and tests evolutionary models of social and economic change to learn how sustainable behaviors and durable institutions arise and persist.

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