



In Partial Fulfillment of the Requirements for the Degree of

**Doctor of Philosophy**  
**Susan Spierre Clark**

Will defend her dissertation

**Examining a Sustainable Approach to Global  
Climate Change Policy**

**Abstract**

The United Nation's Framework Convention on Climate Change (UNFCCC) recognizes *development* as a priority for carbon dioxide (CO<sub>2</sub>) allocation, under its principle of "common but differentiated responsibilities". This was codified in the Kyoto Protocol, which exempt developing nations from binding emission reduction targets. Additionally, they could be the recipients of financed sustainable development projects in exchange for emission reduction credits that the developed nations could use to comply with emission targets. Due to ineffective results, post-Kyoto policy discussions indicate a transition towards mitigation commitments from major emitting nations at a range of development levels, supplemented by market-based mechanisms to reduce mitigation costs. Although the likelihood of achieving substantial emission reductions is increased, a review of climate policy proposals reveals a paucity of consideration on how an ethic of development might be advanced by the new plan.

To inform future climate policy, this research empirically investigates the role that CO<sub>2</sub> plays in advancing a nation's human development in terms of the Human Development Index (HDI), which includes indicators of health, education, and standard of living. Based on empirical evidence, a theoretical CO<sub>2</sub>-development framework is established using the capabilities approach, which provides a basis for designing a novel policy proposal that integrates mitigation efforts with human development objectives. Additionally, non-cooperative game-theory is employed to study how students from developed and developing countries negotiate when confronted with a common collective action problem. The goal is to offer potential models of cooperation that may alleviate some of barriers to global collective action toward mitigating climate change.

Wednesday, April 17, 2013  
10:00 AM  
ISTB1, 227

Faculty, students, and the general public are invited.

Supervisory Committee:

Dr. Thomas Seager, Chair  
Dr. Braden Allenby, Member  
Dr. Sonja Klinsky, Member