

## GRADUATE STUDENT CLIMATE ADAPTATION PARTNERS (GRADCAP) WEBINAR SERIES

# FOSTERING CLIMATE CHANGE RESILIENCE: A SOCIO-ECOLOGICAL FOREST SYSTEMS APPROACH

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## Understanding forest stakeholder climate change perceptions can lead to increased resilience of forest socio-ecological systems.

Climate change is projected to impact Maine's forests in a variety of ways creating major implications for those communities heavily reliant on natural resources. As global markets change and climate projections suggest shifts in forest composition and weather patterns, there is increasing pressure on Maine's forest socio-ecological systems to adapt to, or cope, with climate variability. The goal of this project is to assess vulnerability and enhance resilience of Maine's forest socio-ecological systems to climate change. We will use a sequential mixed-methods approach to (1) examine forest stakeholders risk perceptions, management strategies, and socio-economics

through interviews and questionnaires, (2) implement an integrated socio-ecological vulnerability assessment combining biophysical and social data, and (3) leverage our understanding of drivers of risk perceptions and spatial vulnerability data products to conduct stakeholder-driven participatory workshops. The proposed research will lead to increased resilience of forest socio-ecological systems to respond to climate variability and aid decision makers in evaluating effective adaptation strategies. Due to the complexity of Maine's forest systems and the diversity of stakeholders, the lessons we learn in this project will have widespread application elsewhere.

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“ Things are changing in the forest they [foresters]... something has changed they see it on their own land they see it and they recognize that regardless of what is causing it there is change happening in the climate.

-Focus Group, 2018

“ It creates its challenges if you have a sudden warm spell in the middle of winter and you have to shut down operations.

-Focus Group, 2017

“ So in multiple ways... interaction between climate and invasive species and stress to trees there are unknowns but there could be big disruptions for certain species... also for operations so in a lot of parts of the states its much harder to reliably plan to conduct a winter harvest now cause we don't reliably have the same winter that we would have had twenty years ago.

-Focus Group, 2017