

Applying social-ecological networks to analyze collaborative management in the High Divide

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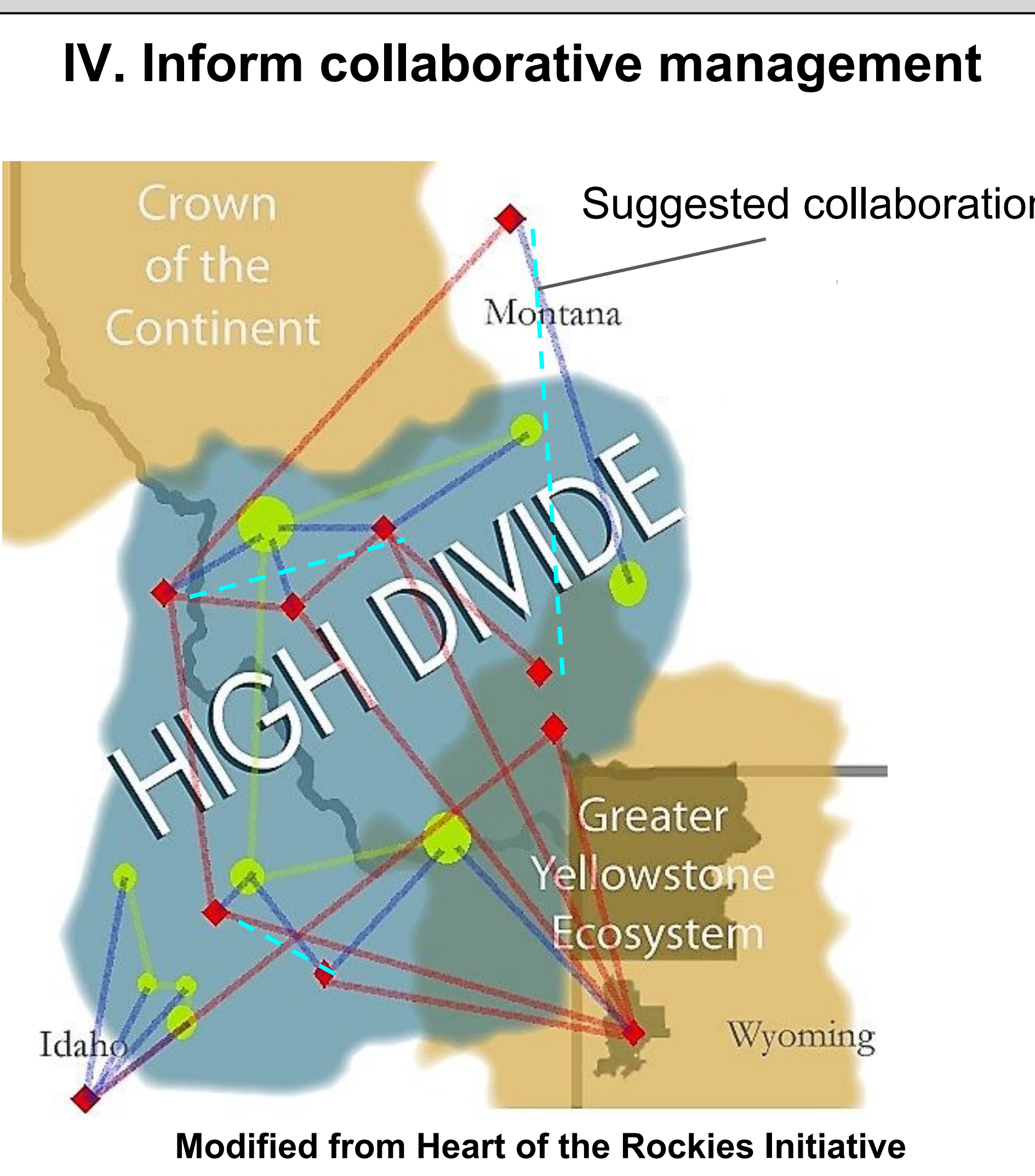
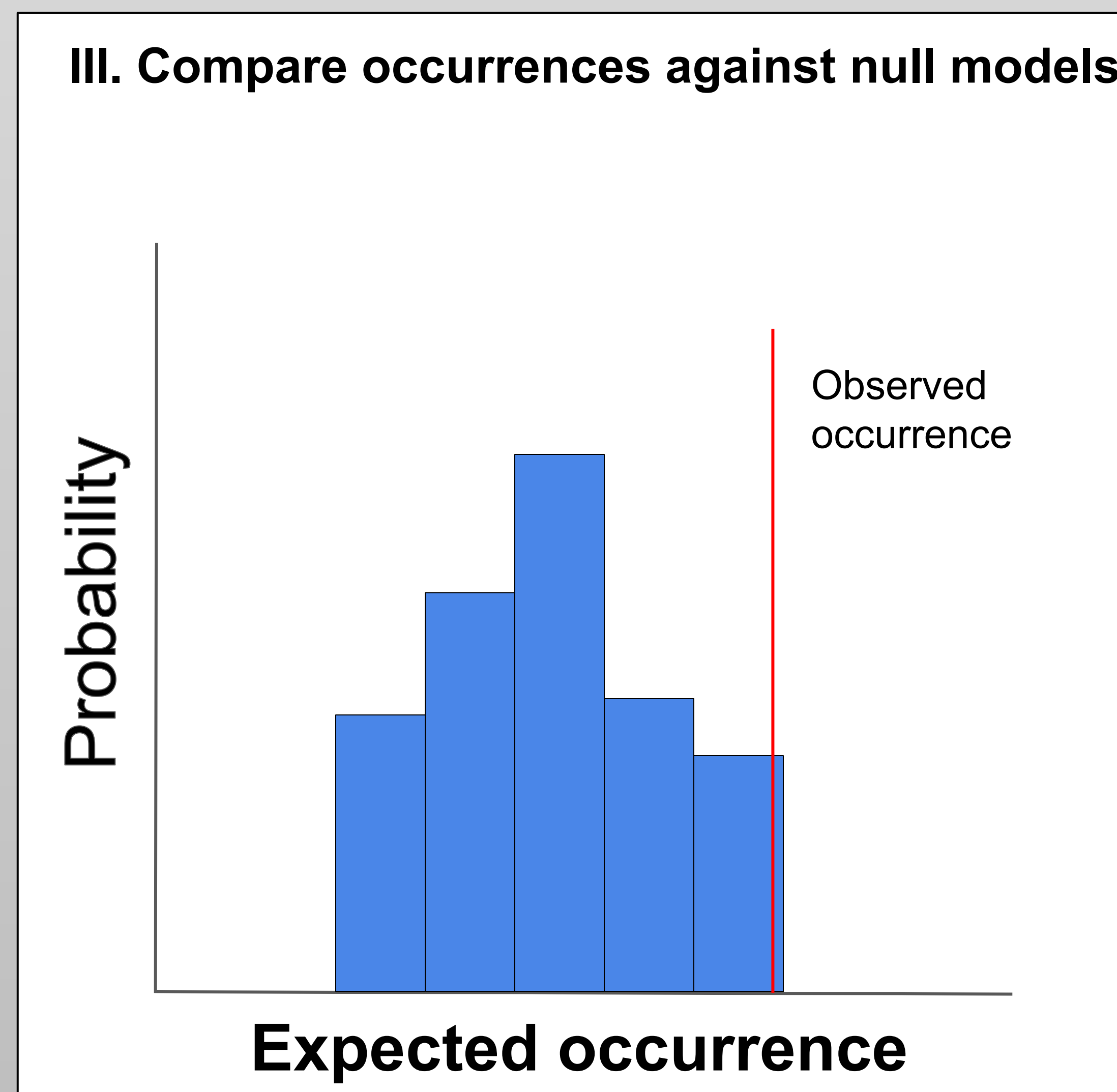
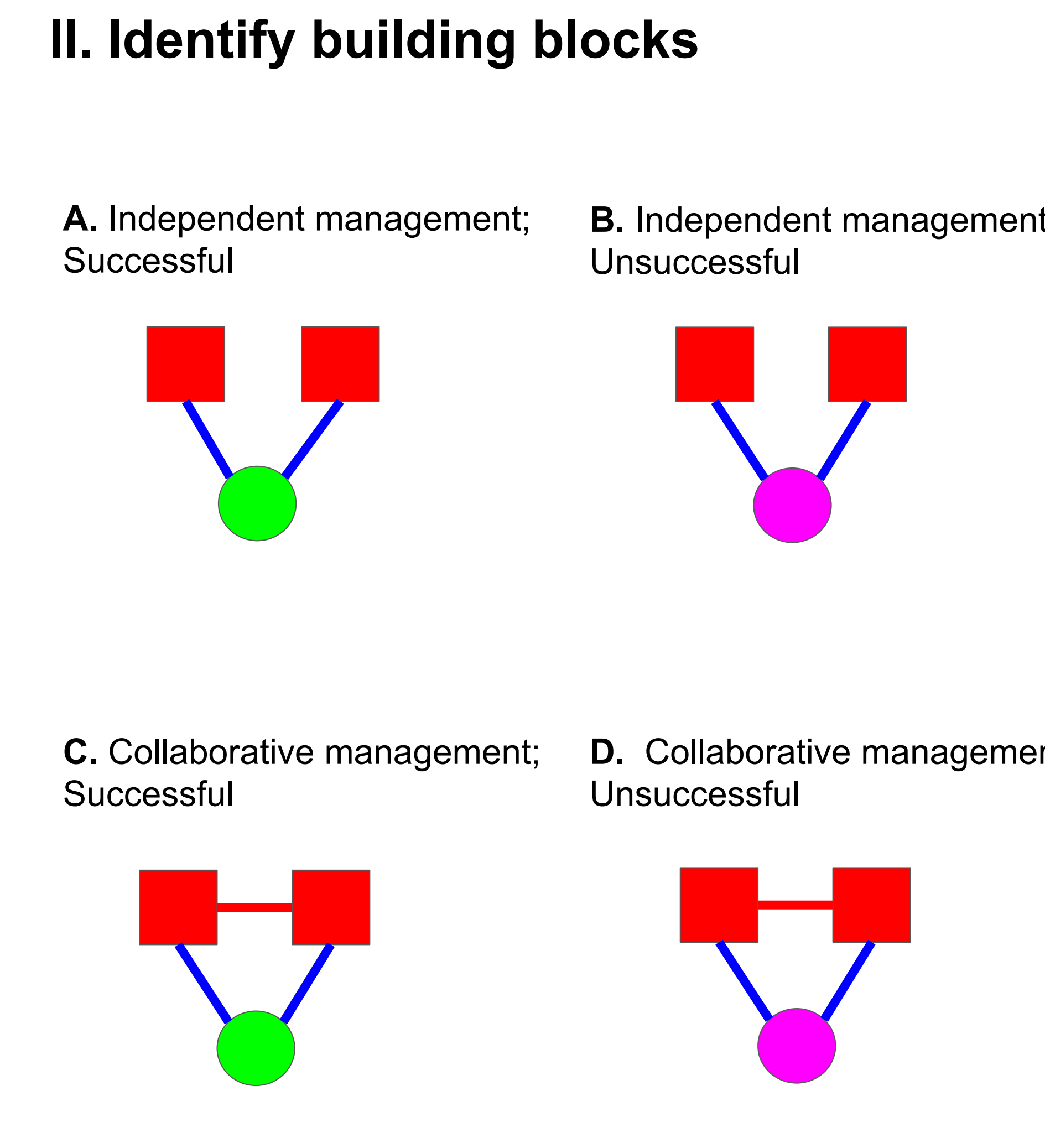
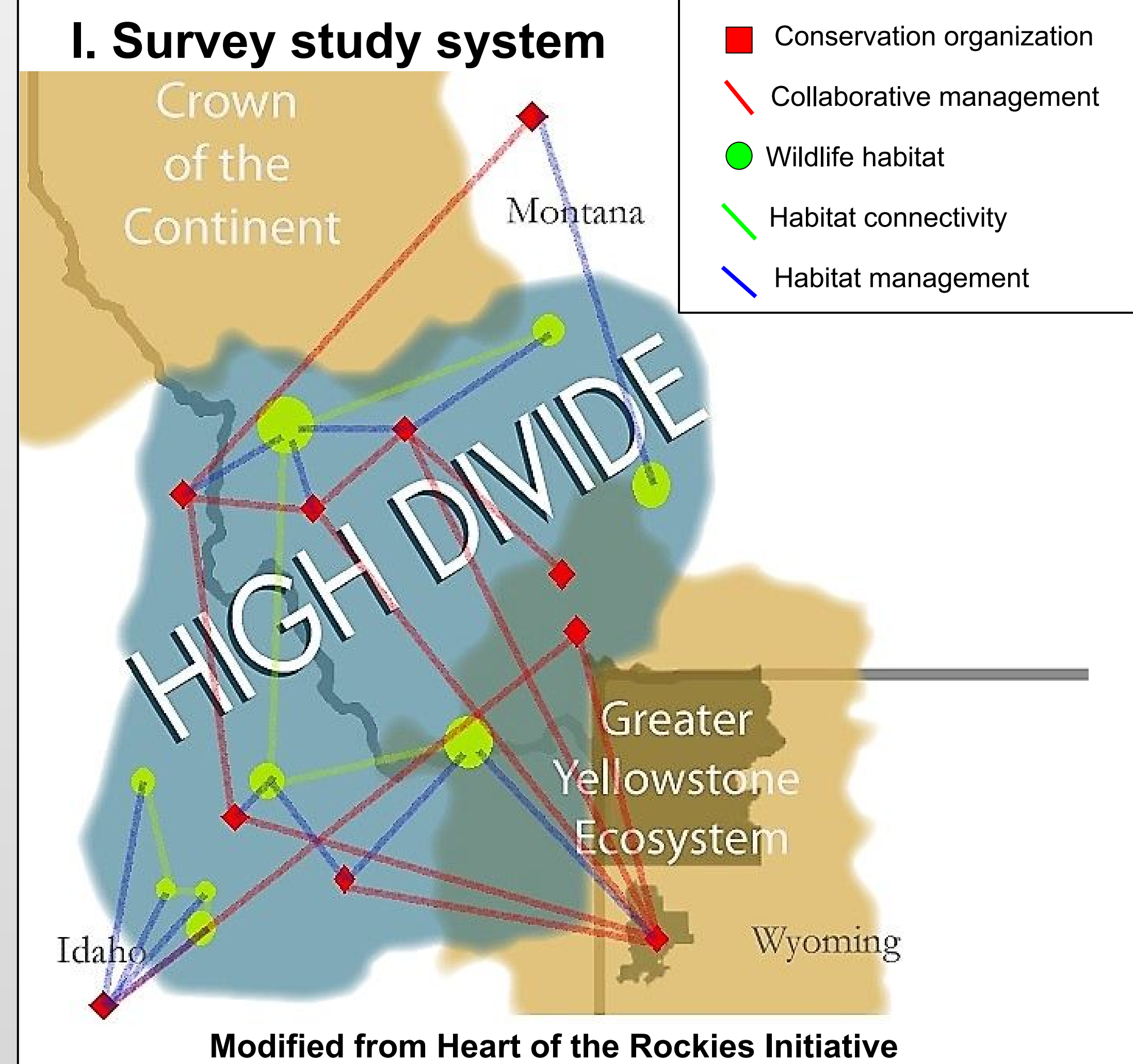
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Introduction

Organizational and individual-level social dynamics have dramatic effects on the environment; likewise, societal structures are, to varying degrees, governed by environmental factors. These two intimately connected systems have largely been analyzed as separate entities. Considering these systems as a whole allows us to understand and modify the feedbacks between human activity and environmental outcomes. This project will use social-ecological network analysis to evaluate these feedbacks and improve collaborative environmental management in the High Divide.

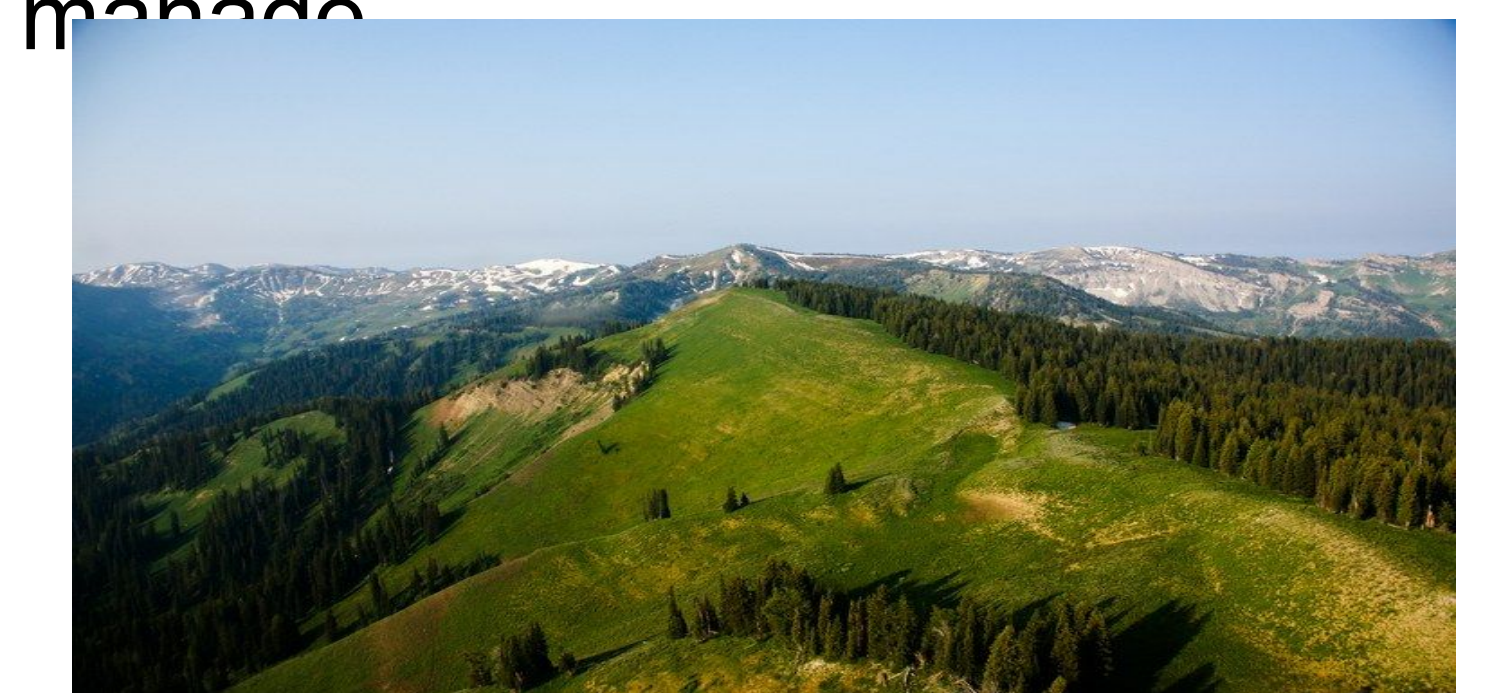
Methods

We will survey conservation organizations to identify collaborative relationships, habitat connectivity, management links, and ecological outcomes (I). We will identify network building blocks of theoretical interest (II) and compare observed frequencies of building blocks against the null (III). This will distinguish collaboration patterns that are more frequently associated with successful environmental outcomes than predicted by null models. Analyzing social-ecological networks in this way will allow us to identify specific areas where more collaboration is warranted in the High Divide (IV).



Study System

The High Divide straddles the Greater Yellowstone Ecosystem (GYE) and the Crown of the Continent Ecosystem (CotC) and plays a crucial role for the habitat connectivity between the two major ecosystems. The High Divide also contains the headwaters of both the Missouri and Mississippi Rivers. Because the High Divide does not have major funding anchors like Yellowstone National Park and Glacier National Park in the GYE and CotC respectively, it has proven difficult to protect and manage.



Expected Results

We expect to identify specific collaboration patterns that are associated with success in joint resource management. There is much intellectual progress to be made in social-ecological network analysis. This research will be the first social-ecological network analysis to include both collaborative relationships and environmental outcomes. We hope to create actionable knowledge that can help improve collaborative environmental management in the region.

Literature Cited

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Further Information

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