This thesis seeks to develop quantitative tools to operationalize conservation’s goal of valuing human well-being alongside ecological integrity.

Another goal is to seek to quantitatively understand social-ecological systems, and develop intuition on how human dynamics are affected by, and affect, ecological processes.

People are important and this thesis explores three different ways things can change and people end up mediating resulting ecological outcomes

1. Ecology drives change in fish, mediated by people: Changes in ecology due to climate change, outcome depends on fishing effort reallocated over space
2. Management change drives ecological change: Changes in management end up changing patterns of participation across unaffected fisheries
3. Social conditions drive ecological change: Differences in socio-economic conditions drive differences in fishing strategy and harvesting pressure.