Learning to Adapt: Monitoring Design and Data Analysis for Adaptive Management

SERNW conference, Monday, April 4, 2016 1pm-5pm

Overview

Workshop participants will learn key technical skills needed to effectively design monitoring programs and analyze data to inform adaptive management. This workshop is intended for both novices and experienced professionals alike to develop and refine their skills in building an effective adaptive management monitoring program. A key point of emphasis will be leveraging modern tools to improve the quality of your results and the efficiency of your monitoring.

The workshop will be taught as two parts, Monitoring Design and Data Analysis.

Monitoring Design

This portion of the workshop will help you:

- Decide what to measure.
- Decide how much data to collect.
- Incorporate temporal considerations in study design to maximize power and satisfy multiple objectives.
- Build stratified, randomized spatial sampling plans with GRTS.
- Select appropriate reference conditions.
- Select appropriate protocols and sampling approach to leverage existing data.

Data Analysis

This portion of the workshop will help you:

- Build a reproducible analytical pipeline with the R software package.
- Utilize basic QA/QC and data management processes and considerations.
- Move beyond t-testing with Bayesian analysis, relative risk, and other indicators of success.
- Analyze trend and control for landscape variables.
- Make your data available and accessible with ESRI geo-databases and Github.
- Analyze and express uncertainty in your results.