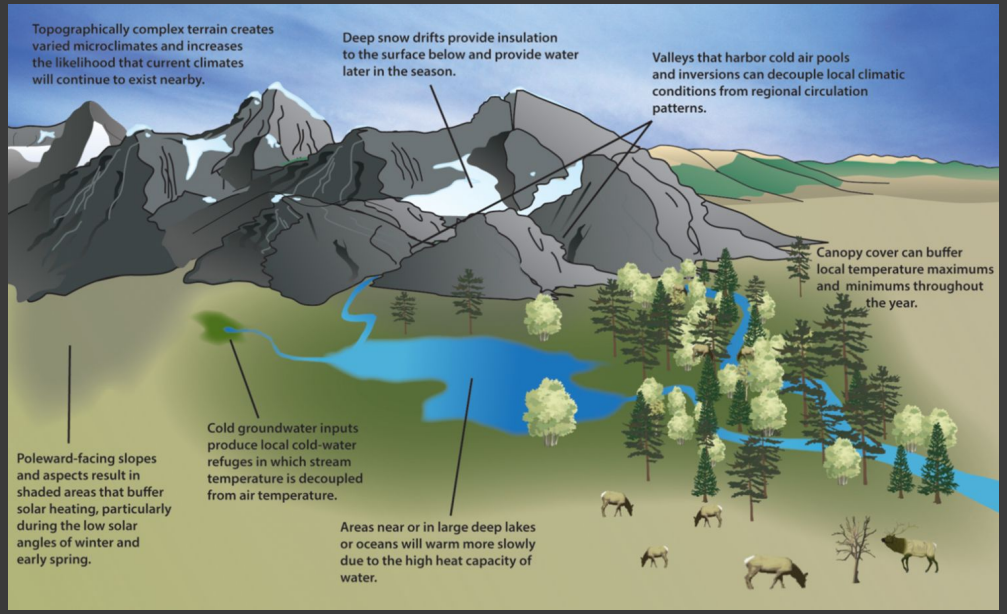
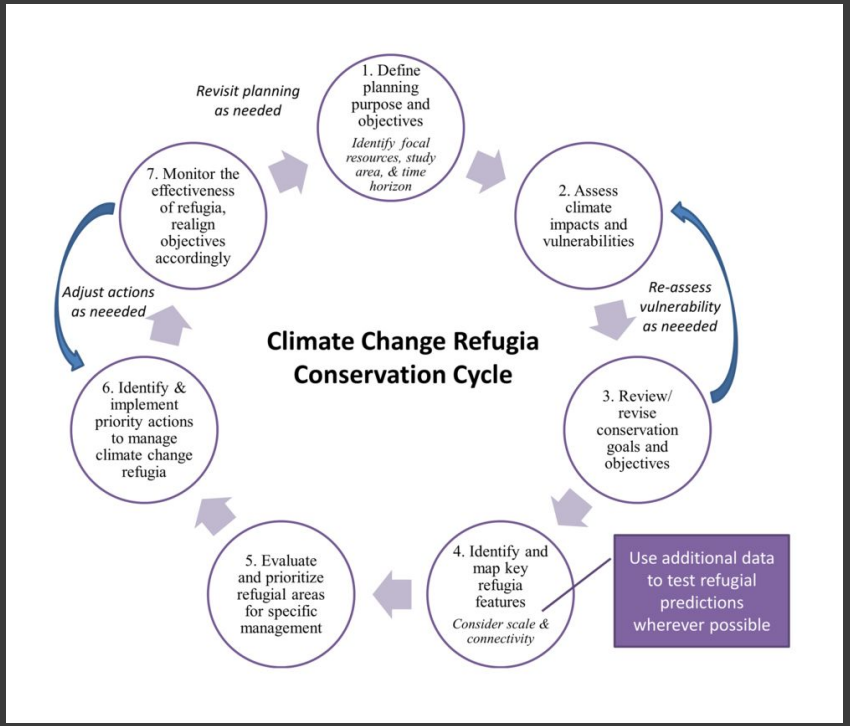
Climate-Adapted Refugia

Refugia are areas that remain relatively buffered from contemporary climate change over time and enable persistence of valued physical, ecological, and socio-cultural resources.

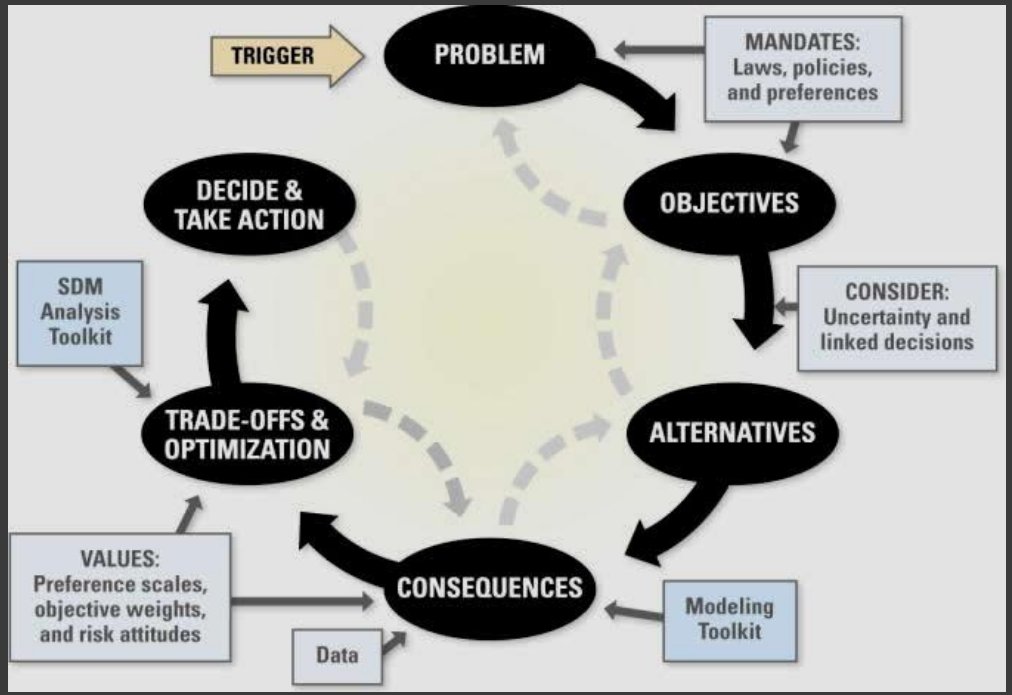
—*Morelli et al 2016*



—*Morelli et al 2016*



Structured decision-making

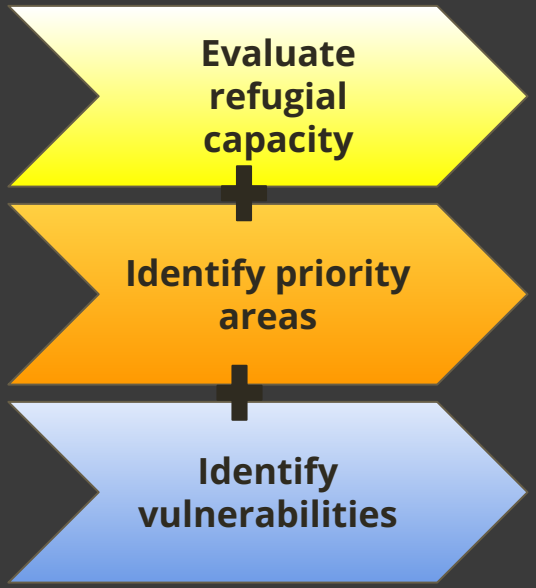


- Separate facts and values
- Framing the Problem through our Values and Preferences first
- Science, data, facts, are brought in after we understand what we value and care about
- New science is only developed if the decision is improved with new knowledge (value of information analysis)

FRAMEWORK FOR STRATEGIC, CLIMATE-INFORMED MANAGEMENT

Goal: Retain and build resilience in southern California's montane forests

Three key processes

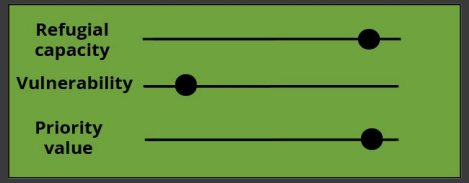


Response Strategies

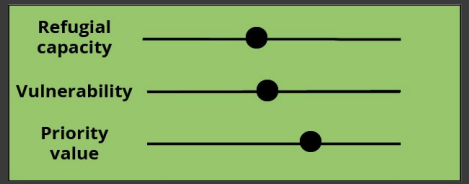
- Resist
- Accommodate
- Transition-Transform
- No Action

RISK ASSESSMENT AND STRUCTURED DECISION MAKING

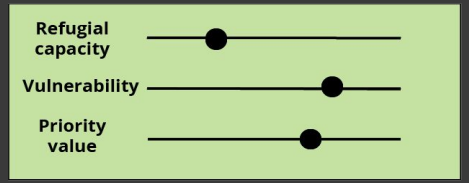
a) Resist



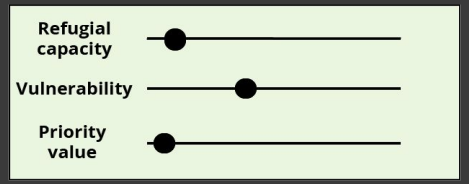
b) Accommodate



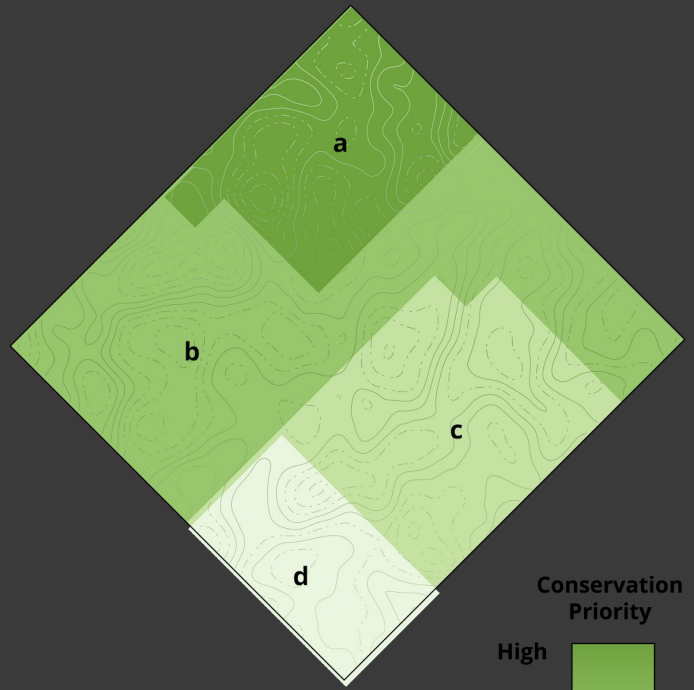
c) Transform



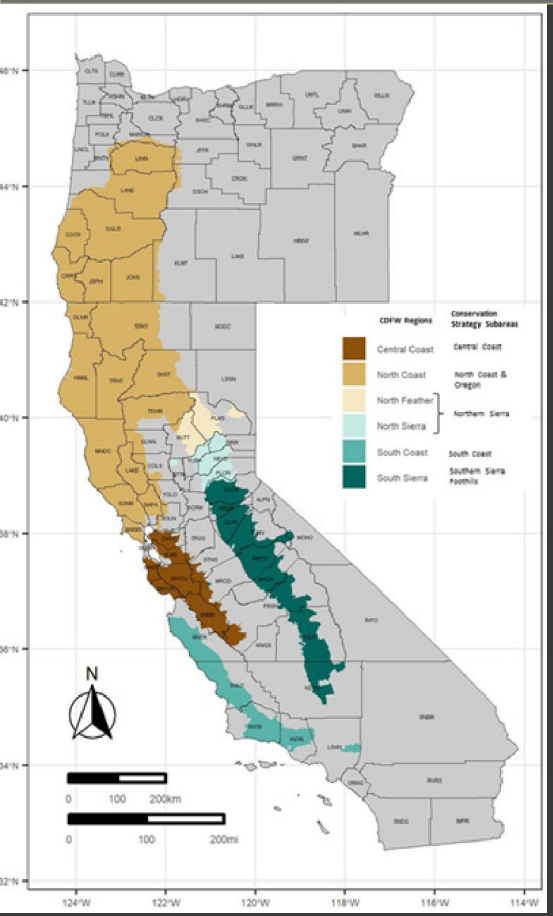
d) No Action

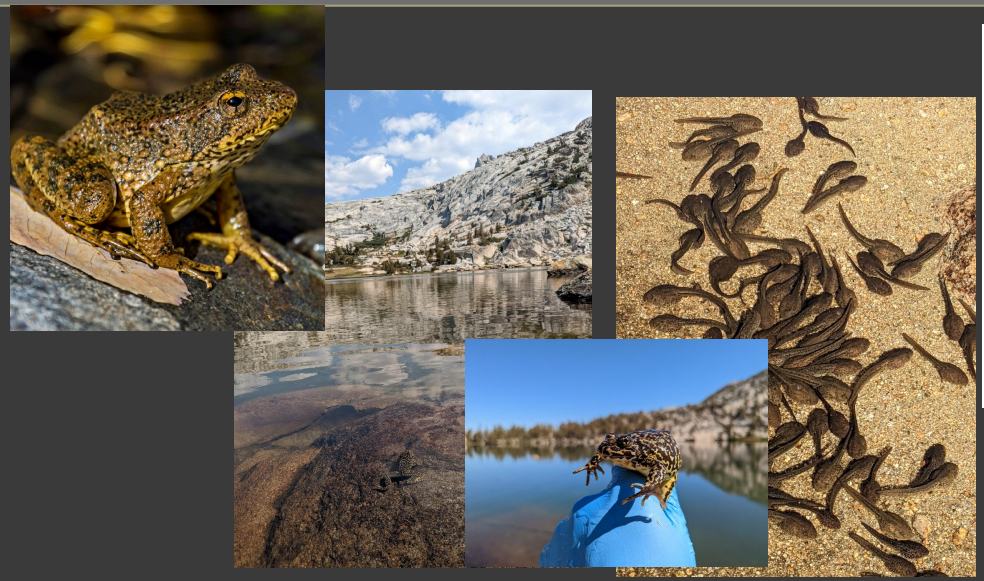


Low ◄—— Value ——► High



Example from the Sierra Nevada

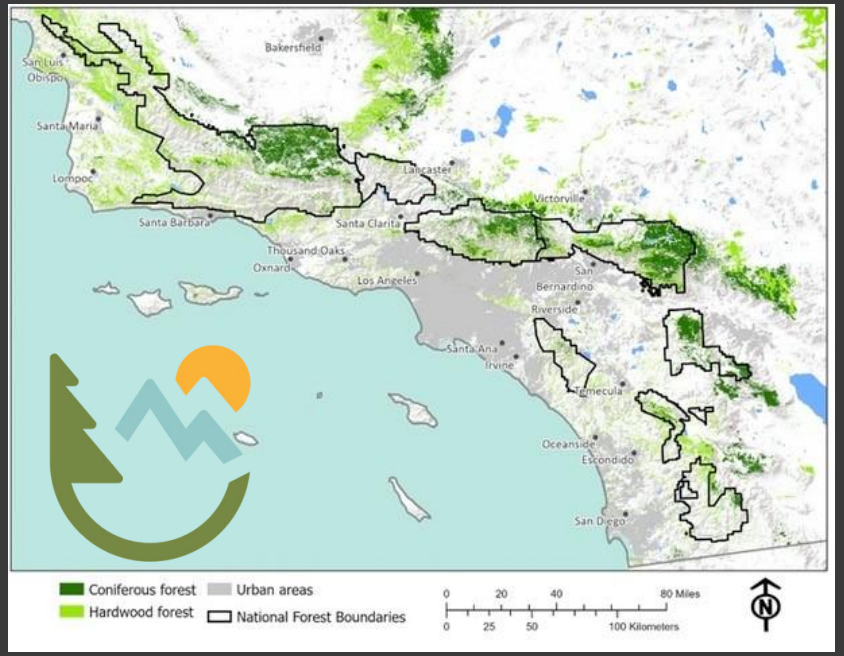




The foothill yellow-legged frog (FYLF), *Rana boylii*, had historically occurred throughout most of California and western Oregon but is now considered near local extinction in its most southern clade, as well as across two thirds of its range within the Sierra Nevada

Example from Southern California

A Climate-Adapted Conservation Strategy for Southern California Montane Forests



These forests are “sky islands” of mountain habitat that feature conifers and several oak species that face rapidly intensifying stressors and disturbances exacerbated by climate change.

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