

EXPERT JUDGMENT AND ELICITATION IN VA

- All models rely on some degree of expert judgment
 - Climatic envelope models need best estimates of what comprises current climatic "range"
 - Deterministic models need judgments about (e.g.,) physiological tolerances
 - Judgments about resiliencies or adaptive capacities of organisms/habitats/processes

EXPERT ELICITATION APPROACHES

- Rely more heavily on expert judgments to project into future
- Can range from highly formal and controlled elicitation-based models and processes to less formal
- All may have merit, depending on how they were done
- Defensible? Depends on arena and for what purposes.

EXPERT ELICITATION APPROACHES

- Long history in conservation and regulation:
- ESA – listing species and critical habitat designation (legally defensible)
 - CERCLA – ecological risk assessment (legally defensible)
 - NRDA – injuries to resources (legally defensible)
 - State-level – identifying habitat acquisitions (not required to be legally defensible)
 - Instream flow assessment

WHY EXPERT ELICITATION APPROACH?

- Often do not have current data
- We are projecting into future – don't have "future data"
- Reservoir of detailed knowledge and expertise
 - ecology
 - current extents and change
 - threats
- "Ownership" and buy-in
- Relatively rapid with low resource costs

WHY EXPERT ELICITATION APPROACH?

- We may not have the luxury of a rain-check – answers needed, and fast!

EXPERT ELICITATION IN VA – THE NEAFWA MODEL

- The Northeast Association of Fish and Wildlife Agencies Regional Habitat Vulnerability Model
- Finalized last month
- Objective is to help map geographical variation in habitat vulnerabilities across 13 NE states
- Combination of Excel-based formal model and expert elicitation

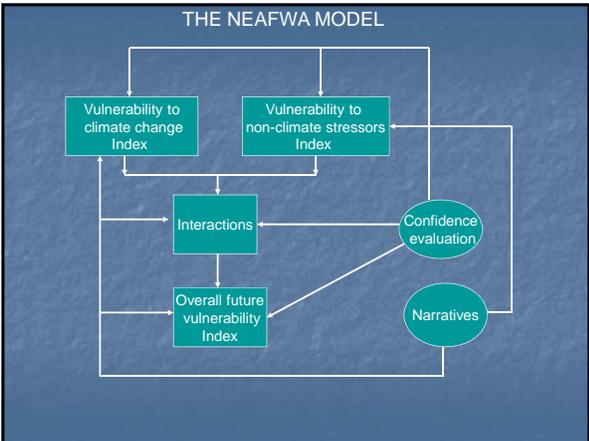
THE NEAFWA MODEL

Has six major elements:

1. Assessment of vulnerability to climate change
2. Assessment of vulnerability to non-climate stressors
3. Interaction potential
4. Assessment of overall future vulnerability
5. Confidence evaluation
6. Narratives (transparency)

THE NEAFWA MODEL - REGIONAL CONTEXT

- Intended to scale-up to entire NE Region
- Regional context essential for effective decision-making
- Also provides individual states with preliminary VA



NEAFWA MODEL EXPERT ELICITATION PROCESS

- Expert panel formed:
 - 40 participants from 13 NE states, feds and NGOs
 - Wildlife biologists, ecologists, habitat specialists, regulators
 - Given education in likely future climates in NE
 - Informed about how systems/species already reacting

NEAFWA MODEL EXPERT ELICITATION PROCESS

- First task of EP - to review and comment on draft model
- Second task – to help finalize model
- Third task – to participate in habitat workgroups
- Fourth task – to review and critique model runs from Manomet
- Fifth – to help produce consensus habitat vulnerability assessments

NEAFWA MODEL TIMELINE

- Expert panels formed in fall 2010
- Draft model reviewed in winter 2010
- Model finalized – March 2011
- Workgroups - formed
- Model runs – summer 2011
- 12 habitat evaluations completed winter 2011/spring 2012

EXPERT ELICITATION – CRUCIAL ISSUES

- Confidence evaluation – quantify
- Transparency – no smoke and mirrors!
