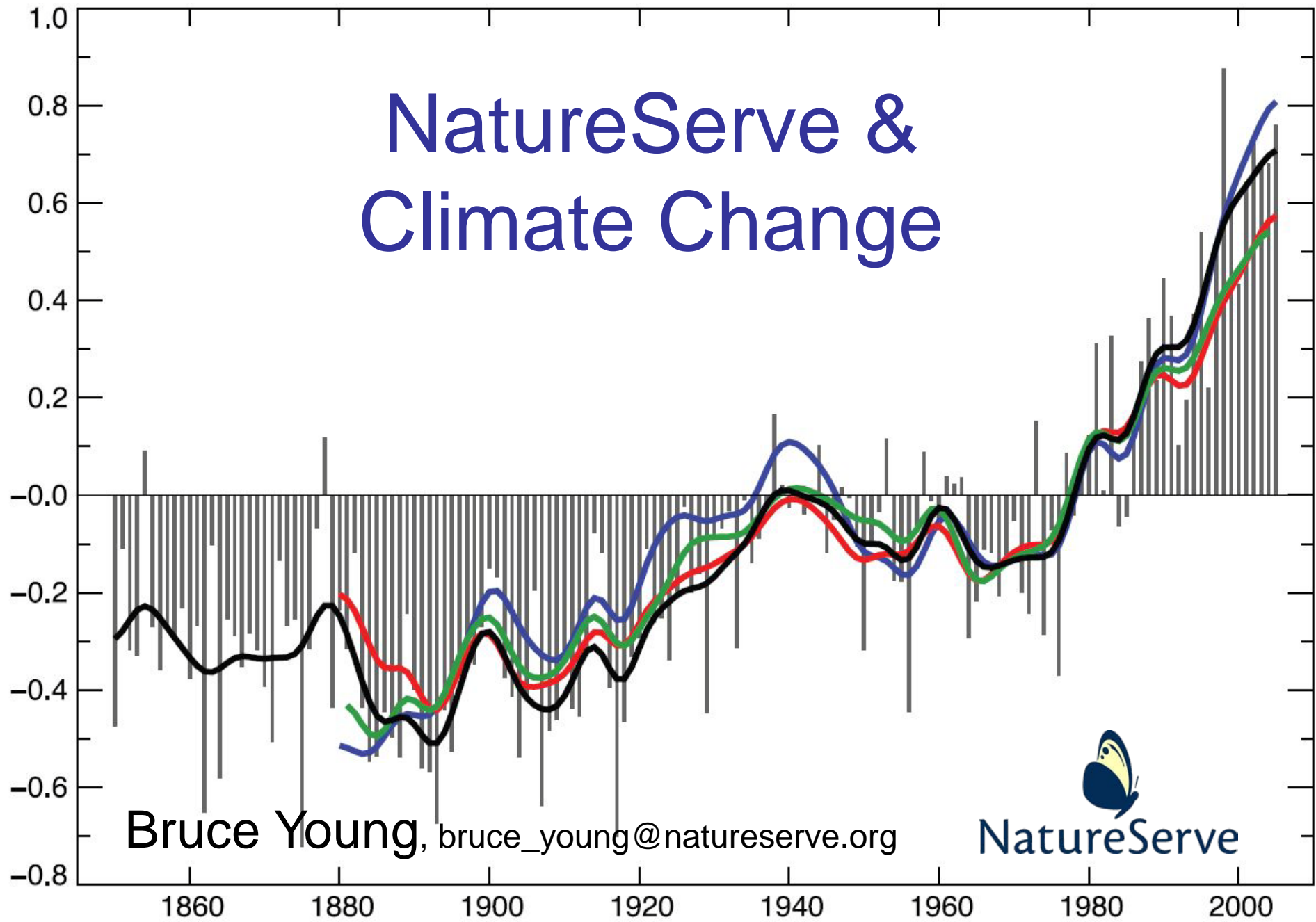


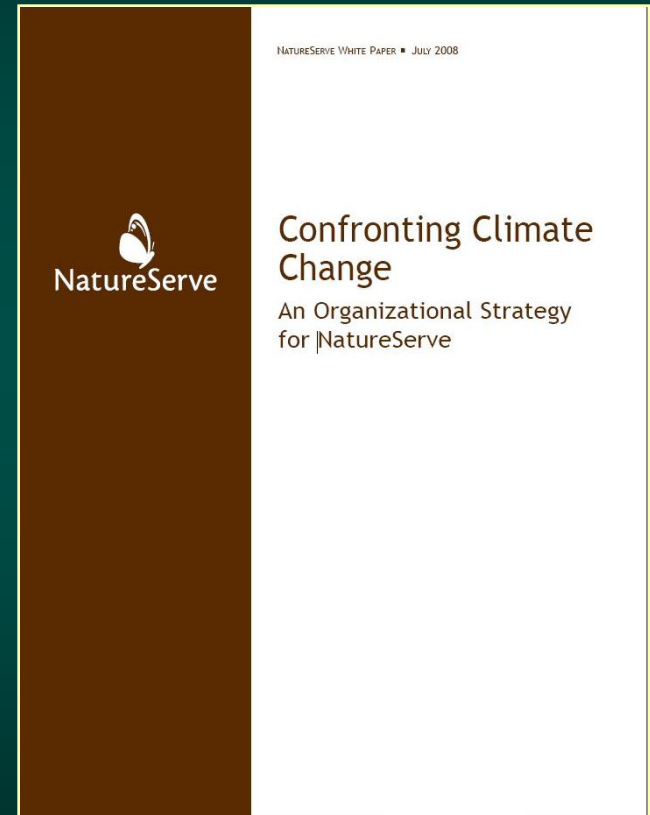
NatureServe & Climate Change



Bruce Young, bruce_young@natureserve.org



- Late 1980s: Report on climate change and plant extinctions
- 2006: *Nature* paper on climate change & tropical frog extinctions
- 2008: Climate change and wildlife habitat
- 2008: Climate change strategy



NatureServe Strengths

- Geographically distributed network
- Expertise in:
 - Survey & inventory
 - Assessment & mapping
 - Maintaining long-term biodiversity databases
- Focus on translating data into information products



Strategy Goals

- 1) Understand Impacts on Biodiversity



Strategy Goals

- 1) Understand Impacts on Biodiversity
- 2) Reduce Adverse effects from Human Responses



Strategy Goals

- 1) Understand Impacts on Biodiversity
- 2) Reduce Adverse effects from Human Responses
- 3) Facilitate Adaptation of Biodiversity

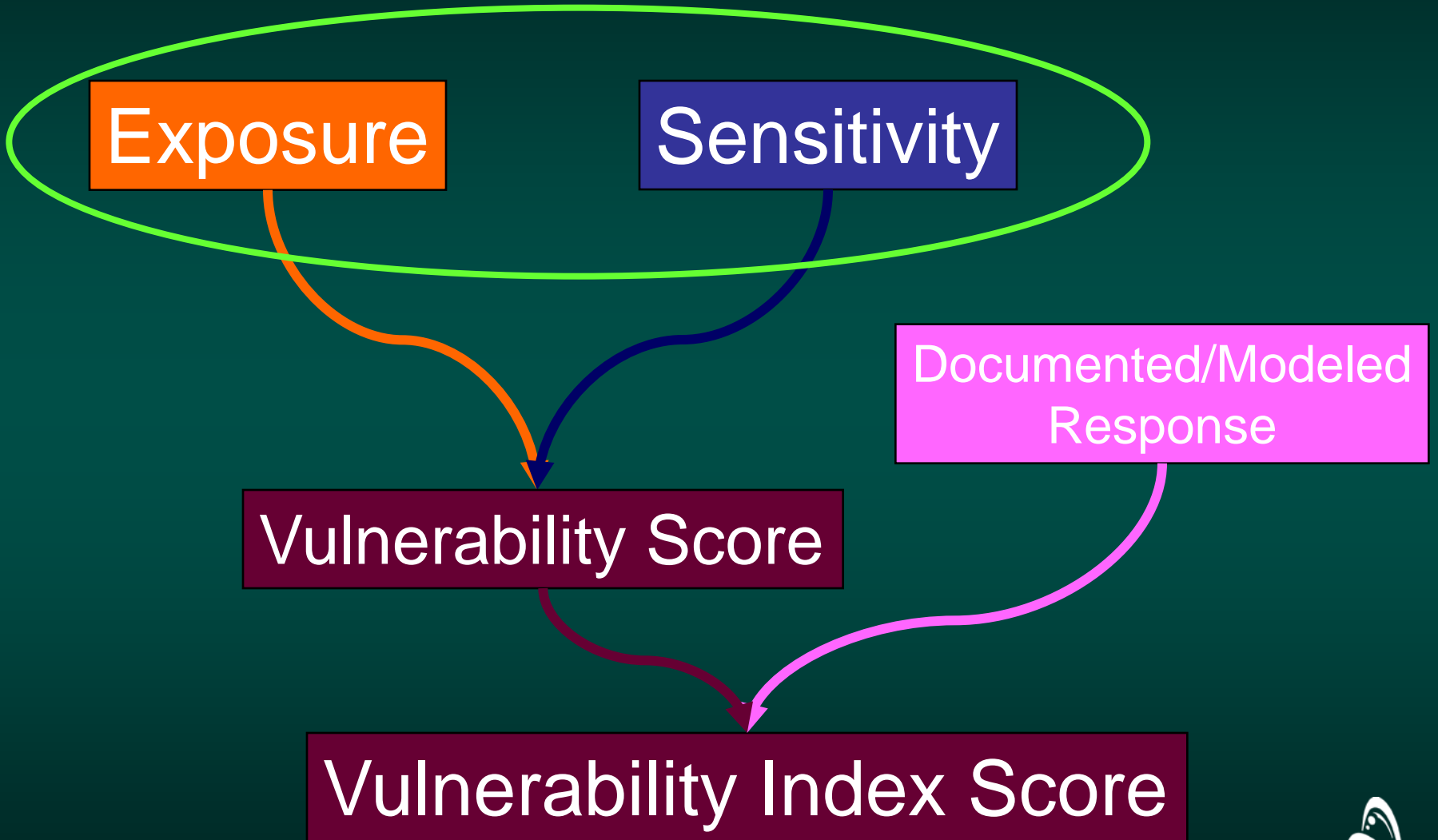


Goal 1: Vulnerability Index

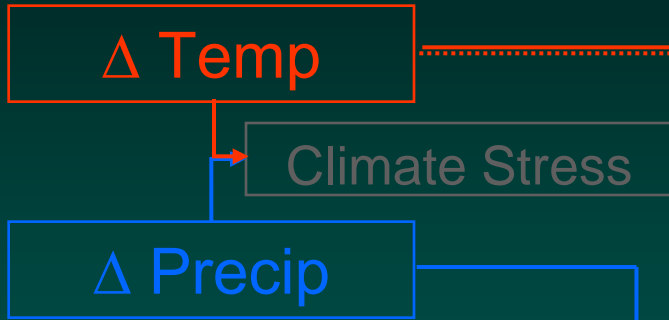
- Excel tool; written documentation
- Climate predictions from Climate Wizard
- Distribution and natural history info
- Complements status assessments



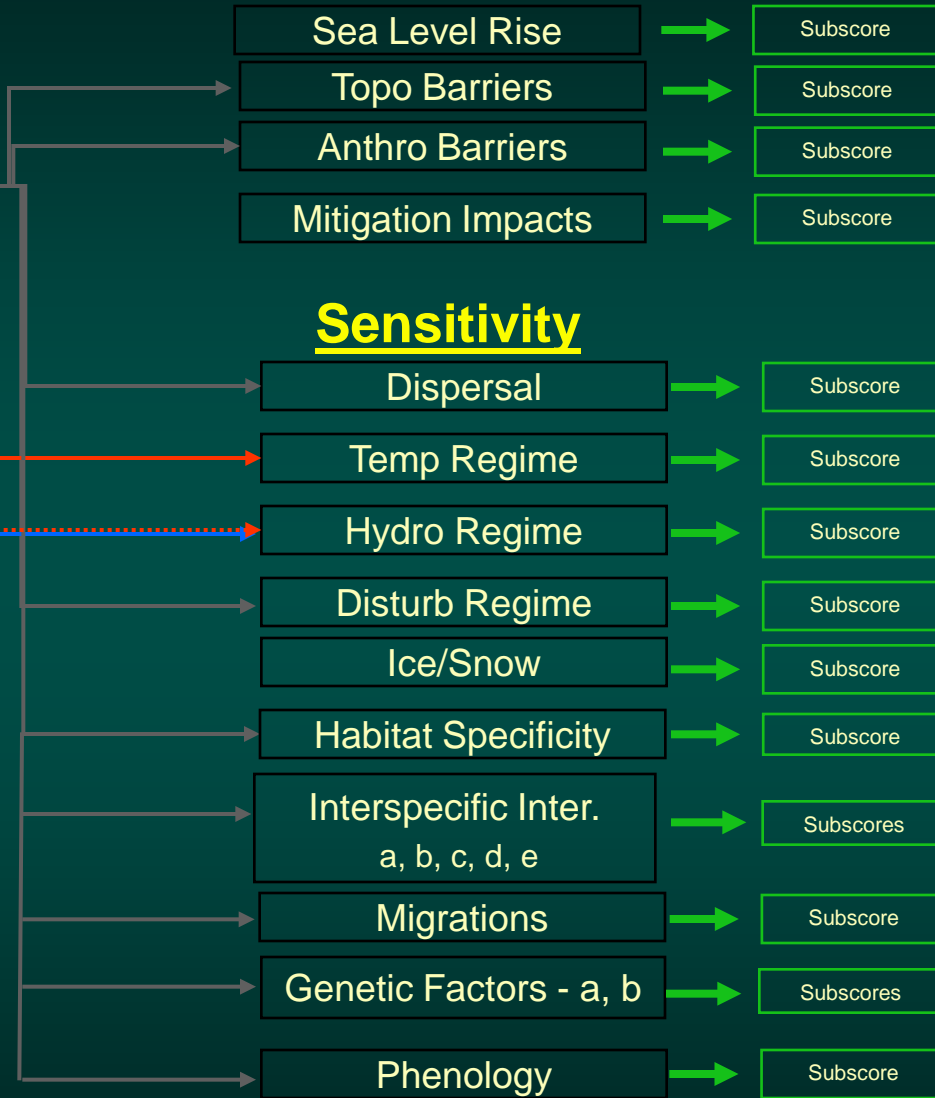
How it Works



Direct Climate Exposure


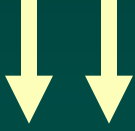






Indirect Climate Exposure



Σ = Overall Score

Index Scores

	Extremely Vulnerable
	Highly Vulnerable
	Moderately Vulnerable
	Not Vulnerable/Presumed Stable
	Not Vulnerable/Increase Likely
	Insufficient Evidence



Uses of the Index

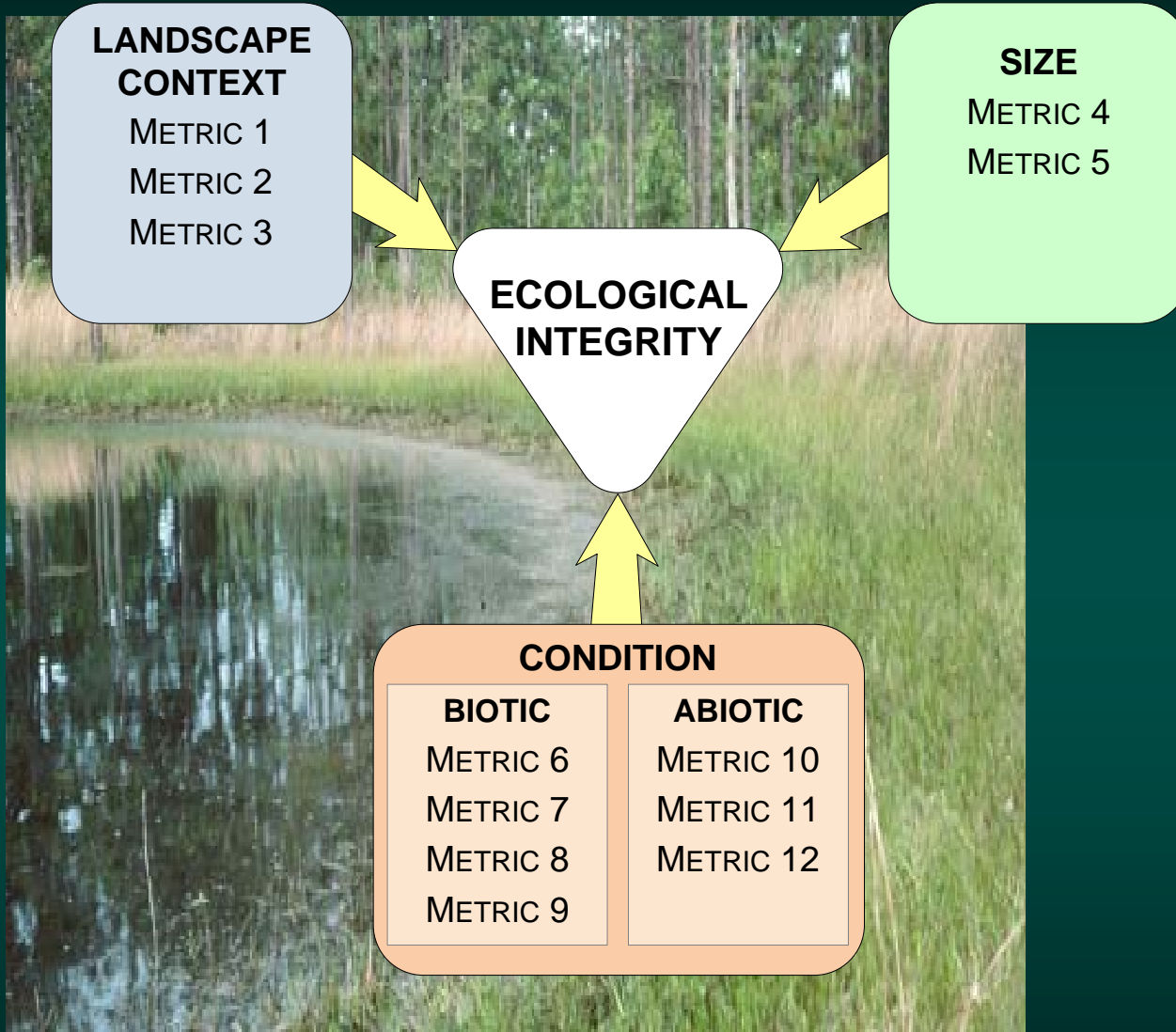
- Assess the relative risk of species
- Identify factors causing vulnerability
- Input to priority-setting exercises
- Identify areas with concentrations of vulnerable species
- Publicize the vulnerability of a fauna/flora



Ecological Integrity Assessments

- Assessment of structure, composition, and function of an ecosystem
 - Compared to reference ecosystem with natural disturbance regimes
 - ID key ecological attributes of ecosystems





Application

- Track ecosystem shifts
- As targets for carbon sequestration sites
- As guidelines for minimizing damage caused by wind farms
- As targets for management of habitats altered by climate change



Influence Policy

- Council for Sustainable Biomass Production (CSBP)
- AFWA Climate Change/Wildlife Action Plan Workgroup
- USGS Climate Change & Wildlife Center
- Western Governors Association



Data Needs

- Network-generated population data
 - Occurrences
 - Observations
 - Range predictions
- Climate Predictions
- Human impact



Opportunities for Collaboration

- States/provinces – Heritage programs
 - Regional coordination
- Agencies
 - Tools
 - Data products
- NGOs
 - All of the above

