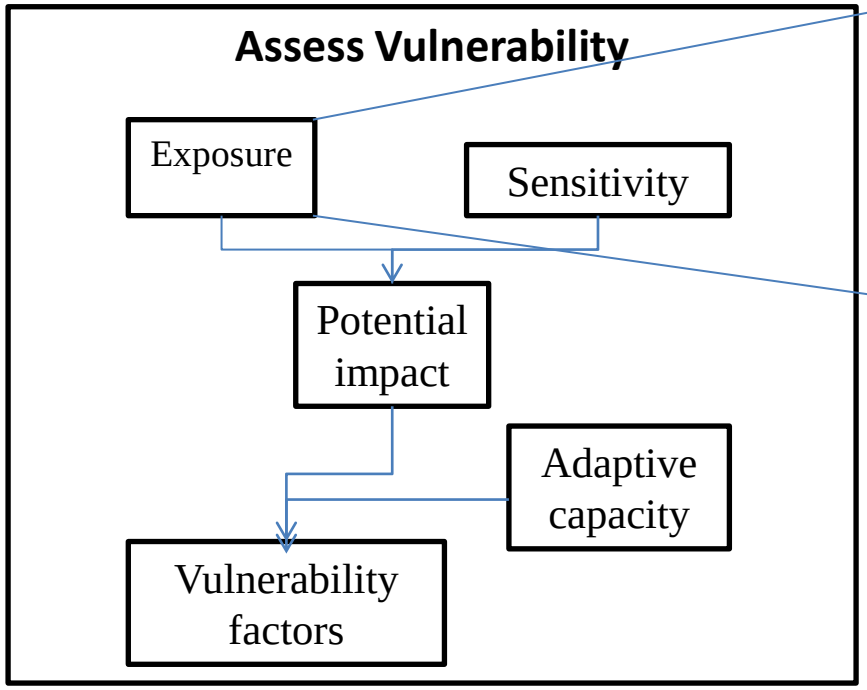
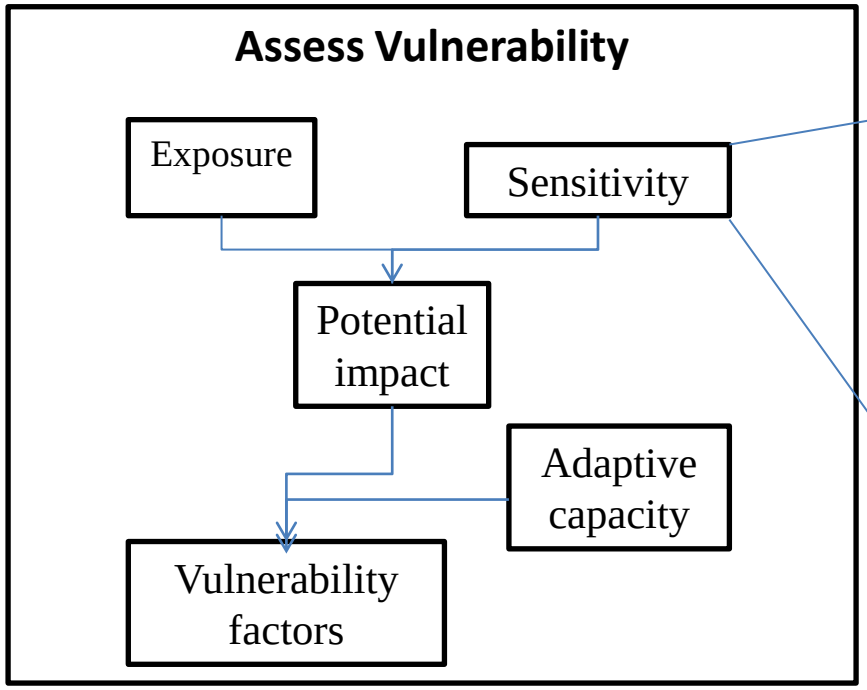
Conceptual Map of the Landscape of Climate Adaptation Activities



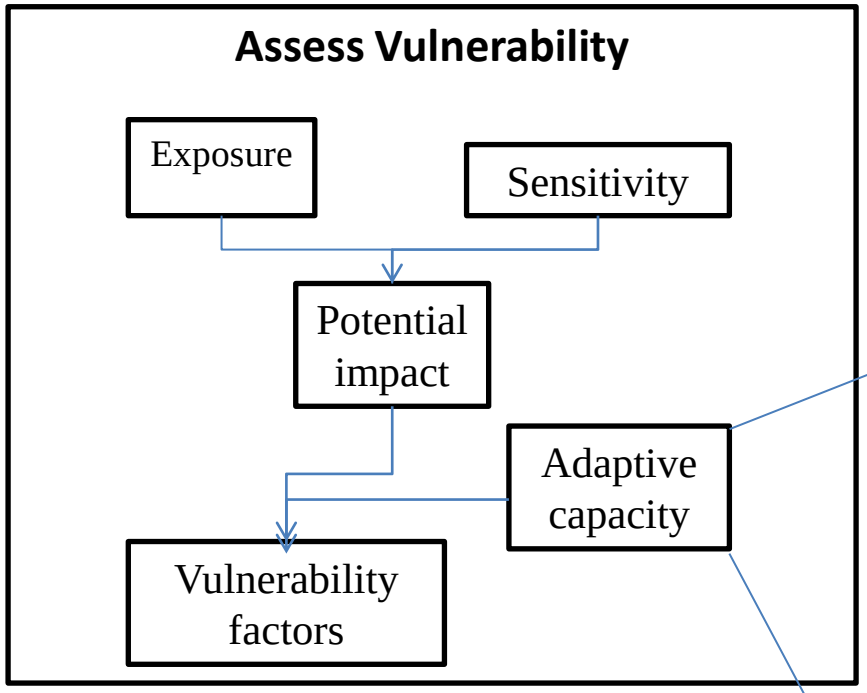
Exposure: Projecting Future Conditions

- Identify management needs/conservation targets
- Identify projection needs
- Identify and make available existing projections
- Evaluate utility of projections for specific needs
- Where needed, develop new projections



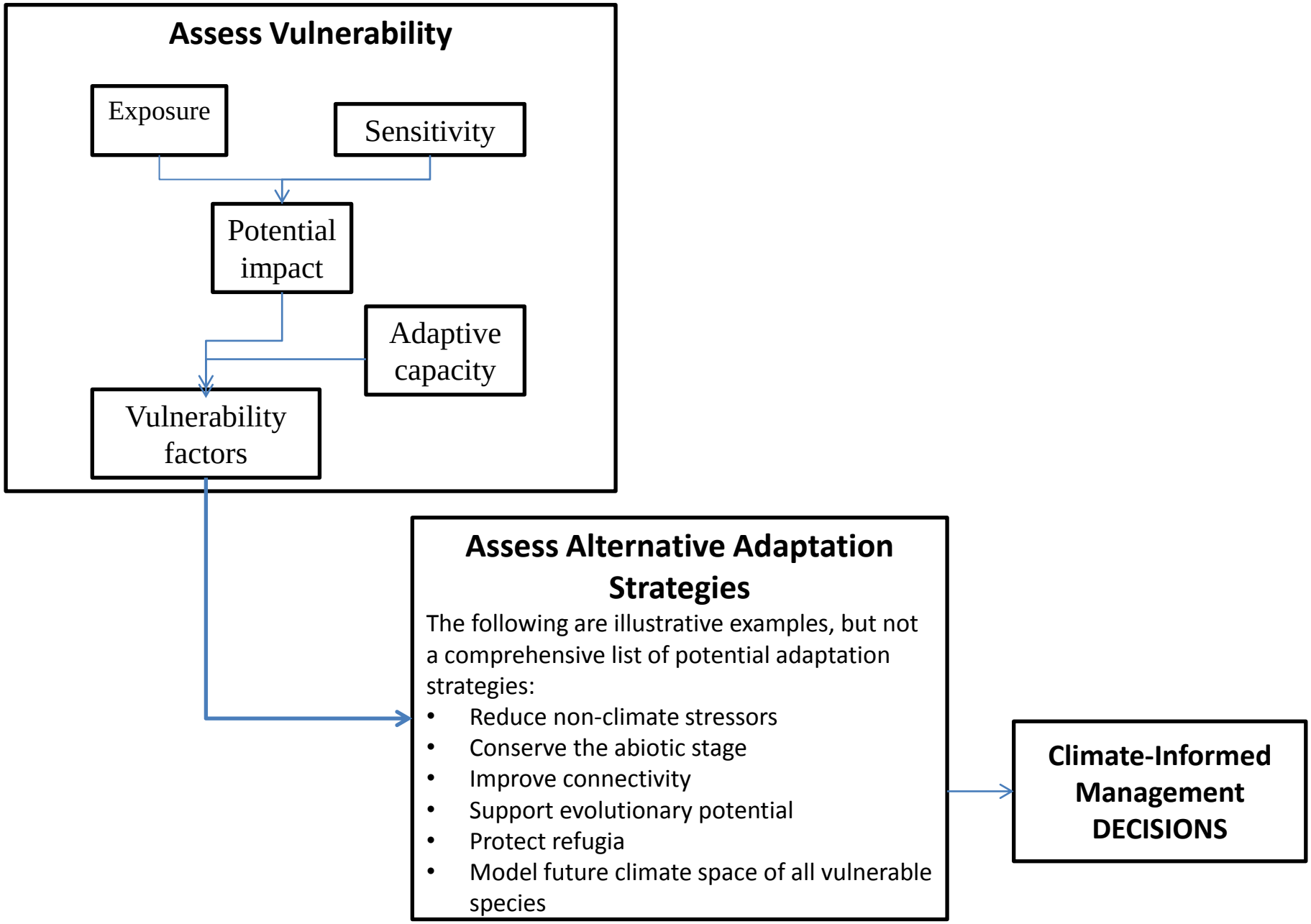
Sensitivity

- Often inferred from exposure or distribution characteristics
- Ideally based on assessments of physiological limits and thresholds for key stresses (temperature, pH, water availability)
- Should consider realistic current as well as future projections for combinations of factors
- Closely linked to adaptive capacity in some ways



Adaptive Capacity

- Characterize components of AC (e.g. ecological and life history characteristics, genetic variation/evolvability, phenotypic plasticity)
- Develop a methodology for experimental design to assess adaptive capacity
- Focus efforts on keystone/foundation or otherwise highly valued species
- Aim to seek generalities to assist in predictive power, but keep in mind interactive nature of components
- Identify factors that enhance/reduce phenological plasticity
- Develop an open access 'clearing house' for information on focal elements' adaptive capacity in a format that is readily accessible to resource managers

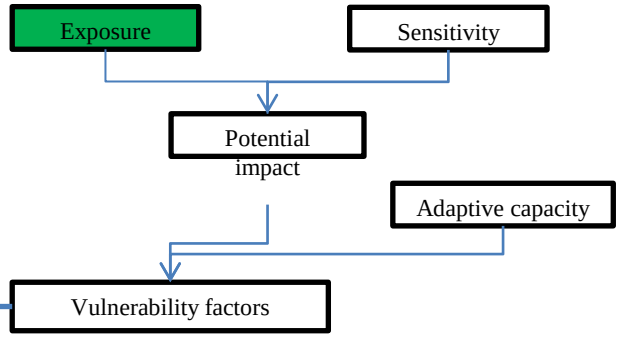

Assess Vulnerability
Exposure
Sensitivity
Potential impact
Adaptive capacity
Vulnerability factors
Assess Alternative Adaptation Strategies
The following are illustrative examples, but not a comprehensive list of potential adaptation strategies:
• Reduce non-climate stressors
• Conserve the abiotic stage
• Improve connectivity
• Support evolutionary potential
• Protect refugia
• Model future climate space of all vulnerable species
Climate-Informed Management DECISIONS

NCCWSC-CSC Science & Activities to Inform Climate Adaptation

Partnerships and Co-Production

Data Management Policies and Practices

Assess Vulnerability of Fish, Wildlife, Ecosystems, and Cultural Resources



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The NCCWSC and CSCs are conducting some work in all areas of climate adaptation. Areas of significant NCCWSC-CSC activity are shown in green.

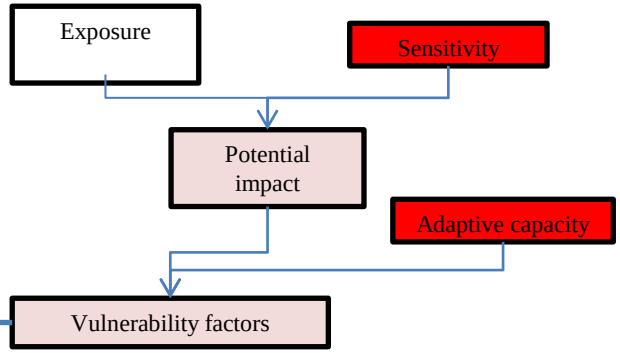
Climate-Informed Management DECISIONS

Gaps in Science for Climate Adaptation Activities

Partnerships and co-Development

Data Management Policies and Practices

Assess Vulnerability



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Areas where more information is needed to support management decisions are shown in red.

Climate-Informed Management DECISIONS