

Unit 2. Elements of a Vulnerability Assessment

Goals

Goal 1. *Be able to identify, recognize, and discuss the different components of vulnerability and how they are measured (scientific basis).*

Goal 2. *Recognize how to assess those components by comparing the data, tools, and models used in the assessment.*

Vulnerability

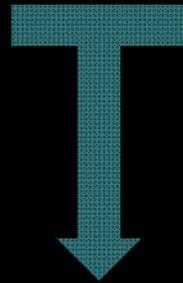
Sensitivity – the degree to which the persistence or functioning of a species or system is dependent on climate or factors driven by climate

Exposure – the magnitude of the change in climate or climate driven factors that the species or system in question will likely experience

Adaptive capacity – the degree to which a species or system can change or respond to address climate impacts

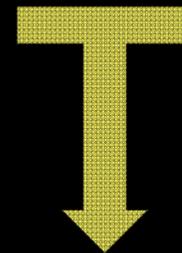
Sensitivity

Exposure



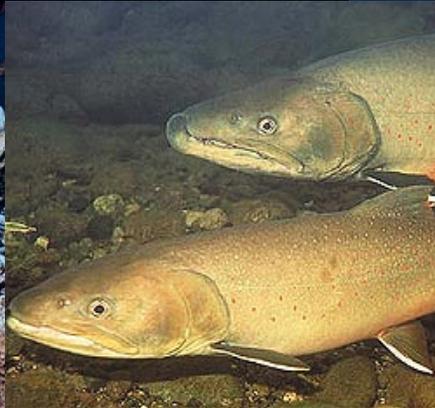
Impacts

*Adaptive
capacity*



Vulnerability

Sensitivity



Sensitivity of species



Species' Sensitivities to Climate Change

Physiological sensitivity



Species' Sensitivities to Climate Change

Physiological sensitivity
Sensitive habitats and
disturbance regimes



Species' Sensitivities to Climate Change

Physiological sensitivity

Sensitive habitats and
disturbance regimes

Interspecific interactions



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Location and range



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Phenology



Species' Sensitivities to Climate Change

Physiological sensitivity

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Additional stressors



Species sensitivities: Examples

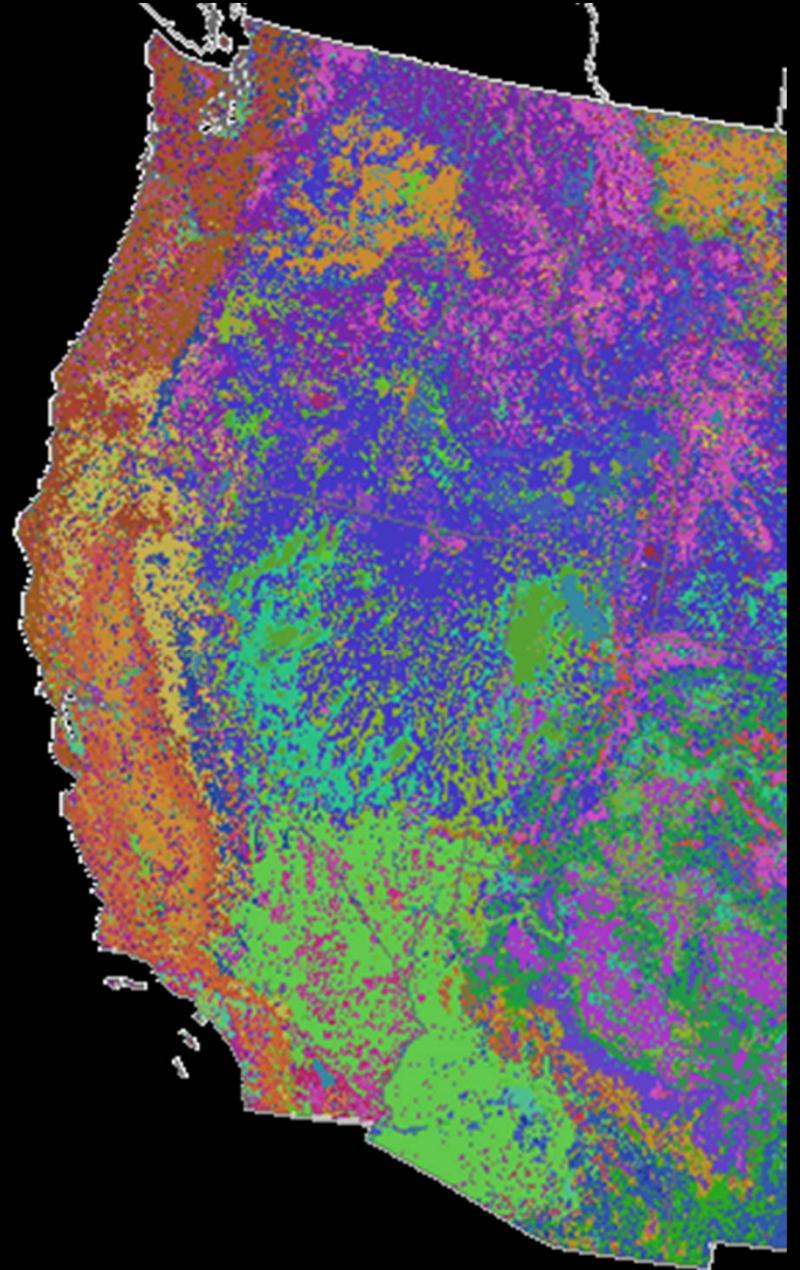


Sensitivity of Ecological System



System sensitivities to climate change

Climate breadth



System sensitivities to climate change

Climate breadth

Individual species sensitivities



System sensitivities to climate change

Climate breadth

Individual species sensitivities

Disturbance regimes



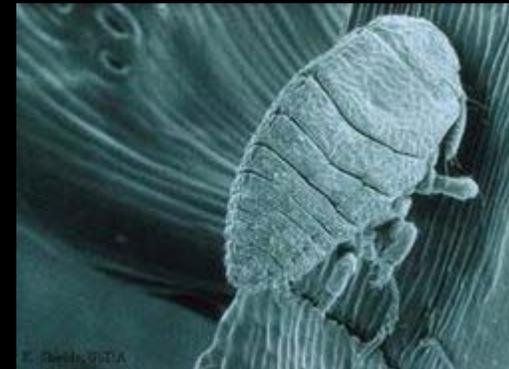
System sensitivities to climate change

Climate breadth

Individual species sensitivities

Disturbance regimes

Other stressors



System sensitivities: Examples



Activity 1. Assessing sensitivity



*Photos: Northern Guardian News Paper
Blair Wolf, UNM*