

# Scanning the Conservation Horizon

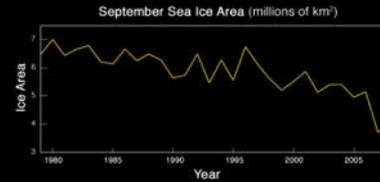
*A Guide to Climate Change  
Vulnerability Assessment*



## Climate Change Vulnerability Assessment Training Course

Unit 1: Presentation 1  
Overview of Vulnerability  
Assessment

# The Future is Now



# Adaptation Defined

Initiatives and measures designed to *reduce the vulnerability* of natural and human systems against actual or expected climate changes

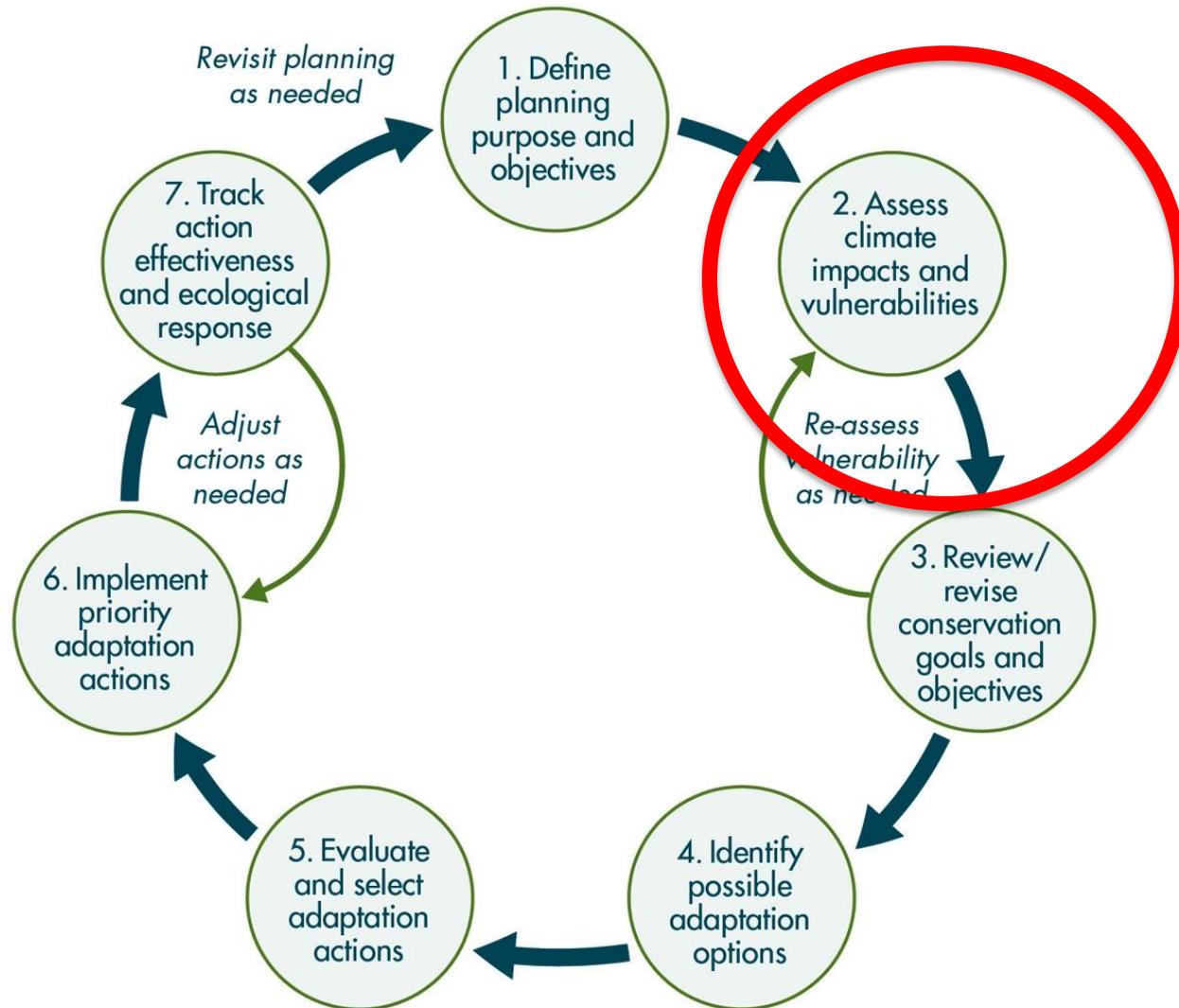


Adaptation



Adaptive Management

# Climate-Smart Conservation Cycle

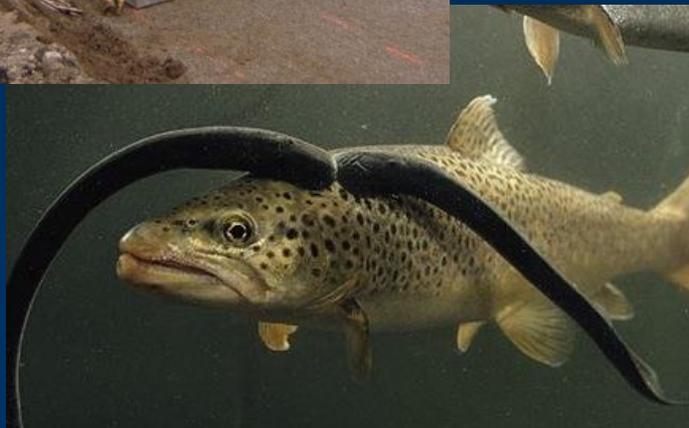
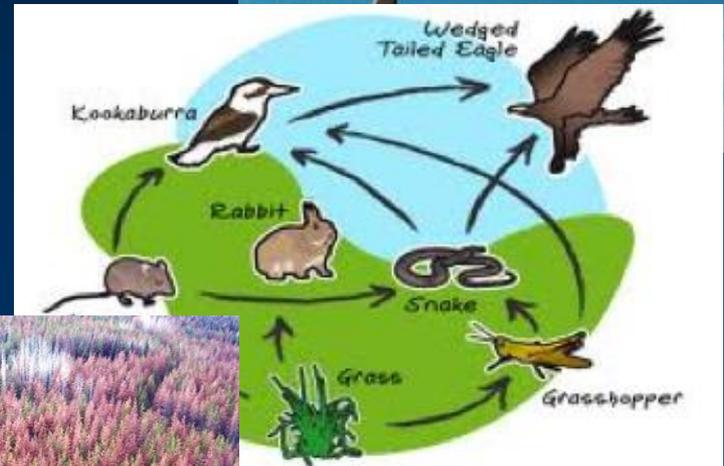


# Defining Vulnerability

The extent to which something is susceptible to harm from climate change impacts

- *What* things are most or least vulnerable
- *Why* they are vulnerable

# “Are VAs for the built environment only?”



# Why Assess Vulnerability?

Vulnerability assessments can help:

- Develop strategies to address climate change
- Inform decisions or plans
- Build staff capacity for climate smart thinking

What vulnerability assessments *don't* do:

- Make a conservation decision for you



# Key Course Objectives

- Understand VA in context of adaptation planning
- Evaluate factors influencing vulnerability and how they affect an assessment
- Understand strengths and limitations of approaches
- Ability to design a VA applicable to your needs
- Ability to interpret and disseminate results

## Unit 1: Presentation 2

# Foundational Concepts and Overview of Key Steps

# Components of Vulnerability

- Sensitivity
- Exposure
- Adaptive Capacity

# Sensitivity

*Would the target be affected by change?*



- **Sunburn example:**

- Amount of melanin in skin is key physiological factor
- Melanin absorbs UV rays, which cause sunburn
- Skin with lower melanin levels is more sensitive to sunburn

# Exposure

*How much change will the target experience?*

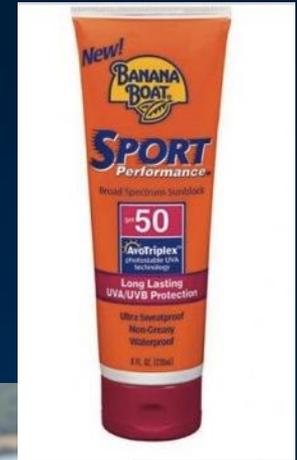
- **Sunburn example:**
  - The amount of UV rays determines exposure
  - Strength of rays depends on latitude, season & weather
  - With enough exposure, most anybody can burn



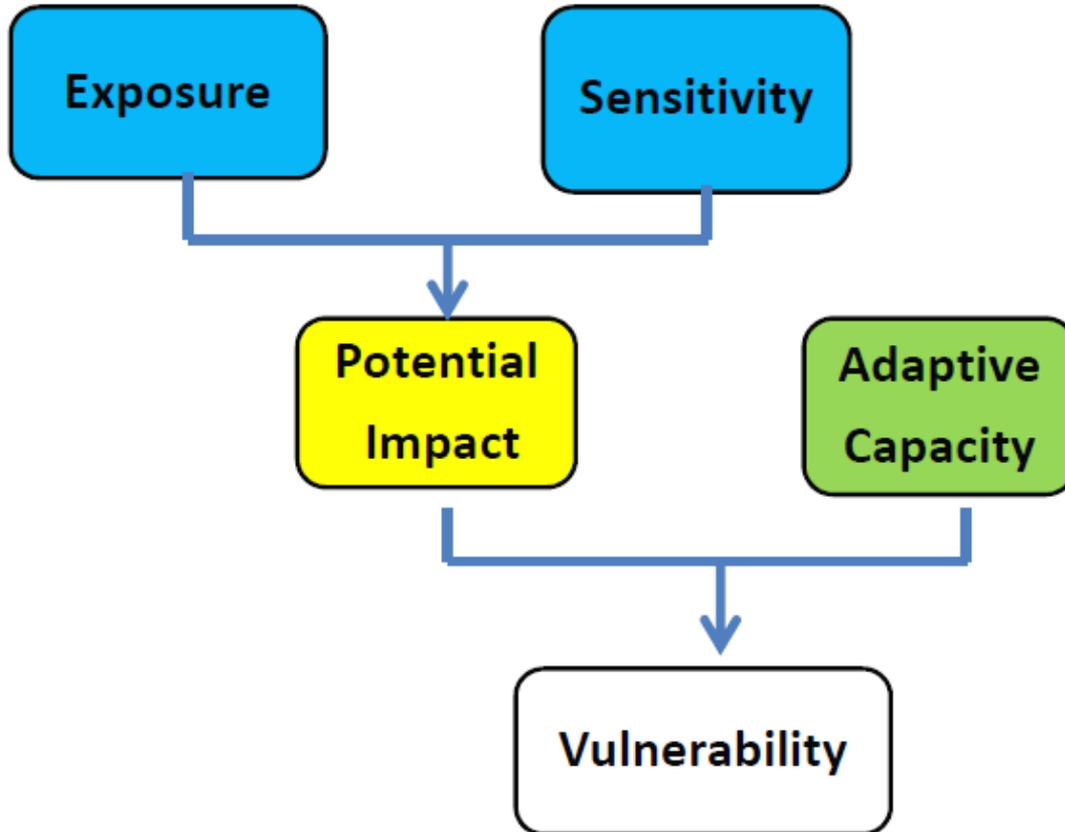
# Adaptive Capacity

*Can the target adjust to changes?*

- **Sunburn example:**
  - Can be intrinsic (reduce sensitivity) or extrinsic (reduce exposure)
  - For sunburn, extrinsic adaptations includes sunblock, protective clothes, shelter
  - Intrinsic adaptations include UV-induced increase in melanin production (i.e., tanning )



# Putting it Together



# Key Steps

1. Determine objectives and scope
2. Gather relevant data and expertise
3. Assess the components of vulnerability
4. Apply assessment results



# Step 1

## 1. Determine objectives and scope

- Why?
- Targets?
- Scale?
- Approach?

“How detailed should assessments be?”

“How to properly conduct a CCVA?”

“I want to know the ultimate GOAL of doing a VA, and how it will be applied.”

“I question if the assessments will be site specific enough to be helpful”

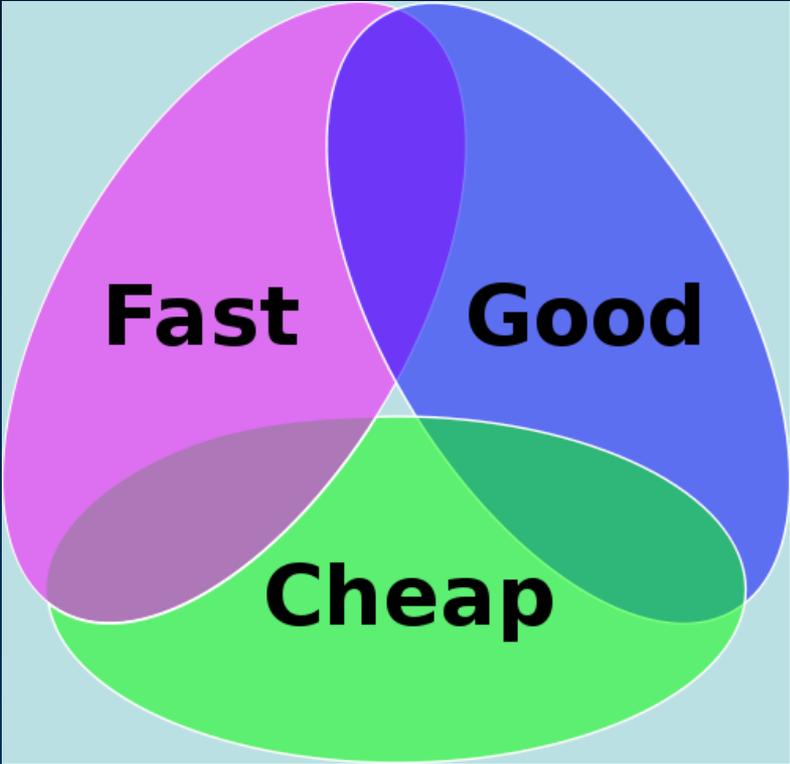
*All VAs involve answering a set of questions about the target*

Vary in terms of:

- Focus?
- Which components of vulnerability?
- Information sources?
- Output?

**Quantitative**

**Qualitative**



**Specificity**

**Complexity**

# Step 2

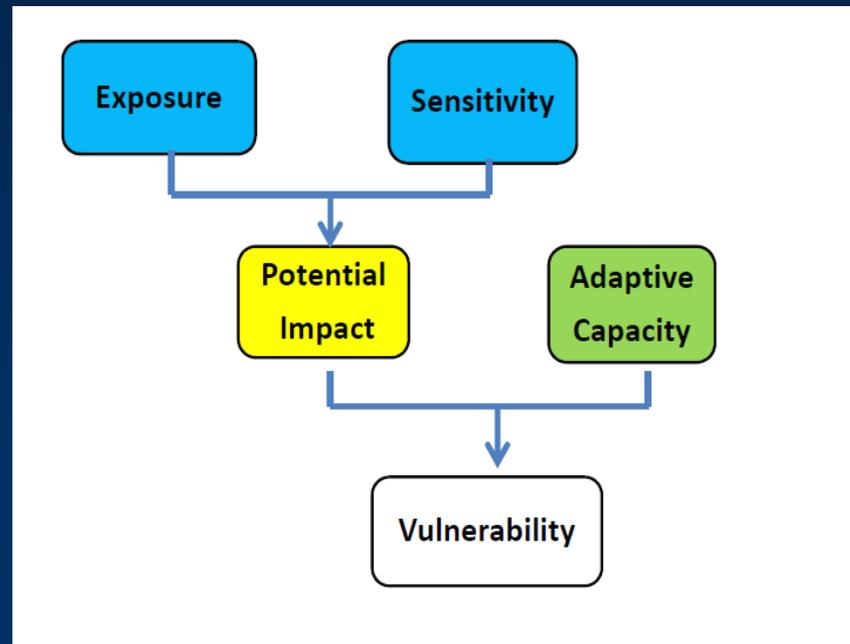
## 2. Gather relevant data and expertise

- Review existing literature
- Reach out to experts
- Obtain/develop climate and ecological response projections

# Step 3

## 3. Assess components of vulnerability

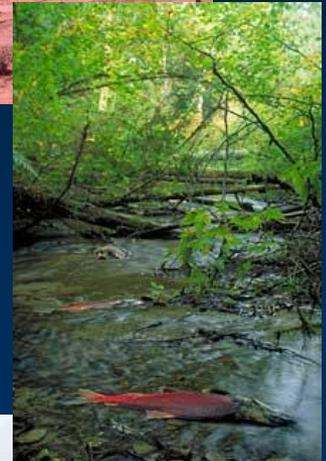
- Assess sensitivity, exposure, adaptive capacity
- Estimate overall vulnerability
- Document confidence levels/uncertainties



# Step 4

## 4. Apply assessment results

- *Reduce sensitivity*
- *Reduce exposure*
- *Enhance adaptive capacity*
  
- *Support continued learning and action*



# The importance of process

## Share of performance explained by given element

(based on multivariate regression analysis), %

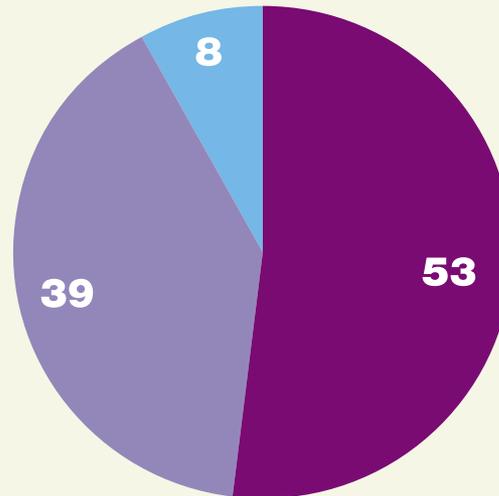
**SCIENCE**

### Quantity and detail of analysis performed

—eg, detailed financial modeling, sensitivity analysis, analysis of financial reaction of markets

**CONTEXT**

**Industry/company variables** —eg, number of investment opportunities, capital availability, predictability of consumer tastes, availability of resources to implement decision



**Quality of process to exploit analysis and reach decision** —eg, explicit exploration of major uncertainties, inclusion of perspectives that contradict senior leader's point of view, allowing participation in discussion by skill and experience rather than by rank

**PROCESS**