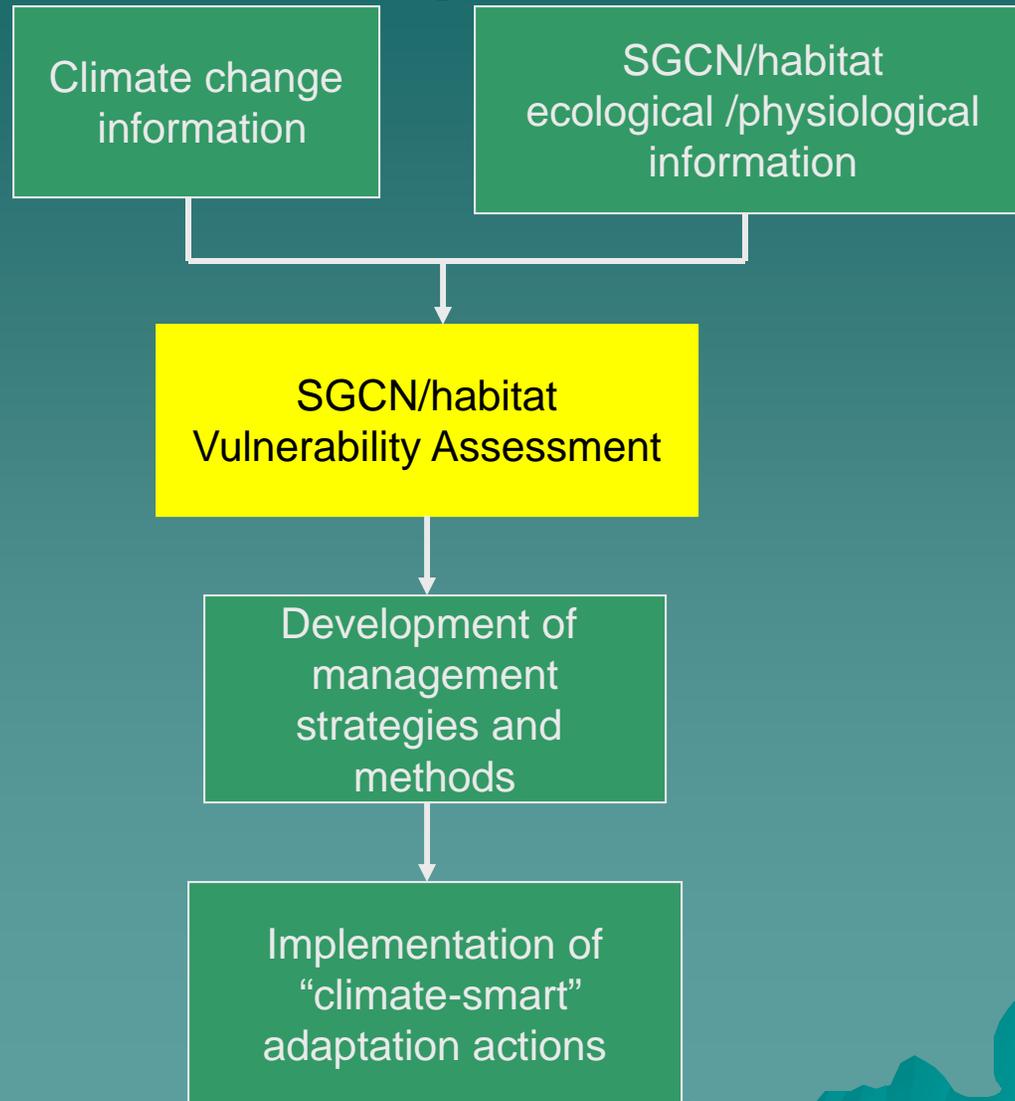


# Unit 5. Application of Vulnerability Assessment



# Vulnerability Assessment is Essential Component of Adaptation Planning and Implementation



# Vulnerability Assessment is Essential Component of Adaptation

Central adaptation question: how to allocate limited resources to meet real challenges and avoid poor investment decisions?

- ◆ Which ecosystems/species/sites are vulnerable to cc?
- ◆ Which ecosystems/species/sites may benefit or be unaffected?
- ◆ Which systems/species can be managed under cc?
- ◆ How will systems change – time line?
- ◆ State and regional vulnerabilities?

Vulnerability assessment is focusing process for adaptation – the road to adaptation lies through VA.

# Application of Vulnerability Assessment

- ◆ Can be stand-alone (e.g., to support listing)
- ◆ Most valuable as a stepping stone to adaptation action:
  - Removal of a threat
  - New management actions
  - Changes to existing management actions
  - Acquisition of new lands
  - Planning monitoring strategies
  - Allows us to begin planning for change, rather than stasis

# Application of Vulnerability Assessment

Threat amelioration:

- ◆ VA allows us to identify (and ameliorate?) existing stressors that reduce system/species resilience
- ◆ Allows us to assess the relative importance of climate and non-climate stressors
- ◆ Allows us identify systems/species that will *benefit* from cc
- ◆ Allows us to identify potentially maladaptive responses

# Application of Vulnerability Assessment

Management of habitats/species:

- ◆ VA helps us understand which current management actions will “work” under cc
- ◆ Helps us identify and formulate new management options
- ◆ Helps us plan for the future

# Application of Vulnerability Assessment

Identify potentially maladaptive responses:

- ◆ Armoring coastlines
- ◆ Water draw-downs

# Application of Vulnerability Assessment

Management of habitats/species (examples):

- ◆ White-tailed deer in Northeast
- ◆ Forest stand age structure
- ◆ Management of “doomed” habitats/species

# Application of Vulnerability Assessment

Acquisition of new holdings:

- ◆ Is it worth allocating scarce resources to habitats/species that will become more abundant?
- ◆ Is it worth allocating scarce resources to habitats/species that are "toast"?
- ◆ Is it worth allocating scarce resources to habitats/species that may be "safe" in another part of the region?

# In Summary

- Searches for adaptation solutions should consider consequences both for multiple sectors and for the short and the long term.
- In addition, a comprehensive understanding of the psychological, social, and political obstacles to adaptation is required, as well as an understanding of how to overcome them.
- Failure to do so frequently increases both vulnerability to climate change and the costs of adaptation over the longer term; it may also reduce incentives to explore more effective long-term solutions.