

ADAPTING FORESTS TO CLIMATE CHANGE

Approaches for Action

ADAPTATION VS. MITIGATION

ADAPTATION.

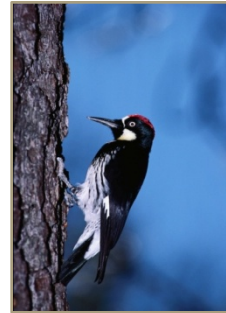
- Actions to moderate the vulnerability of forests to climate change
- Promotes forests to become more healthy, resistant, & resilient

MITIGATION.

- Use of forests to sequester carbon, provide renewable energy from biomass, & avoid carbon losses from fire, mortality, conversion, etc.

ADAPTATION

Adaptation is the adjustment of human or natural systems in response to climate change.



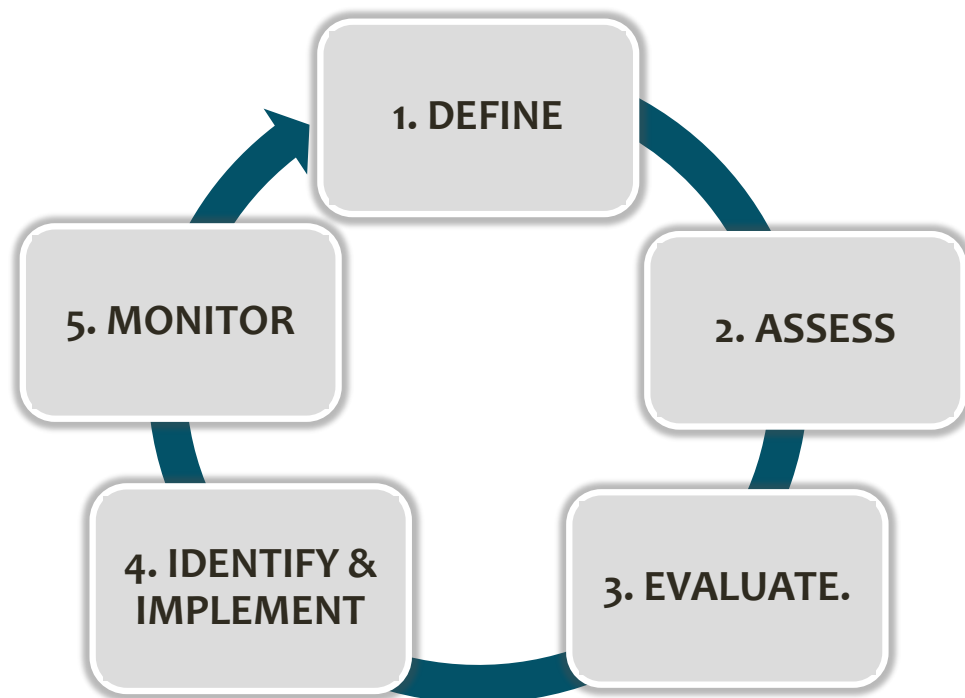
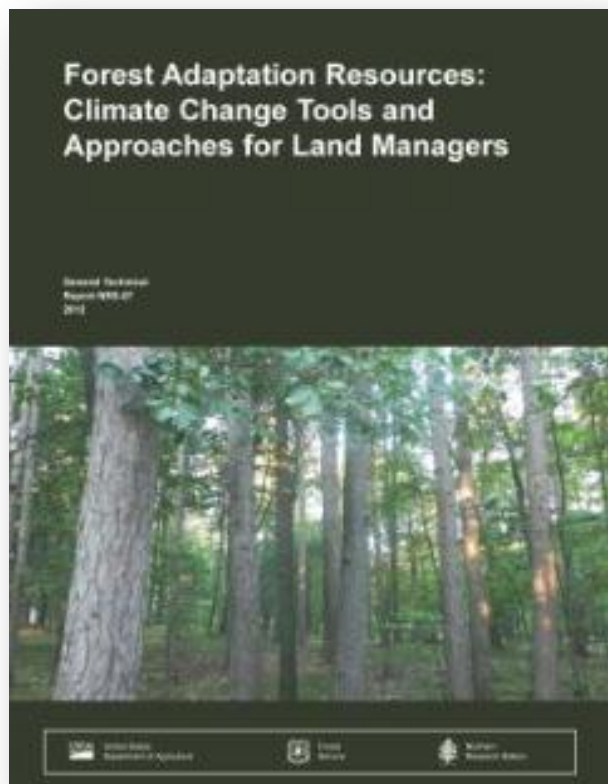
ADAPTATION

Adaptation is the adjustment of systems in response to climate change.



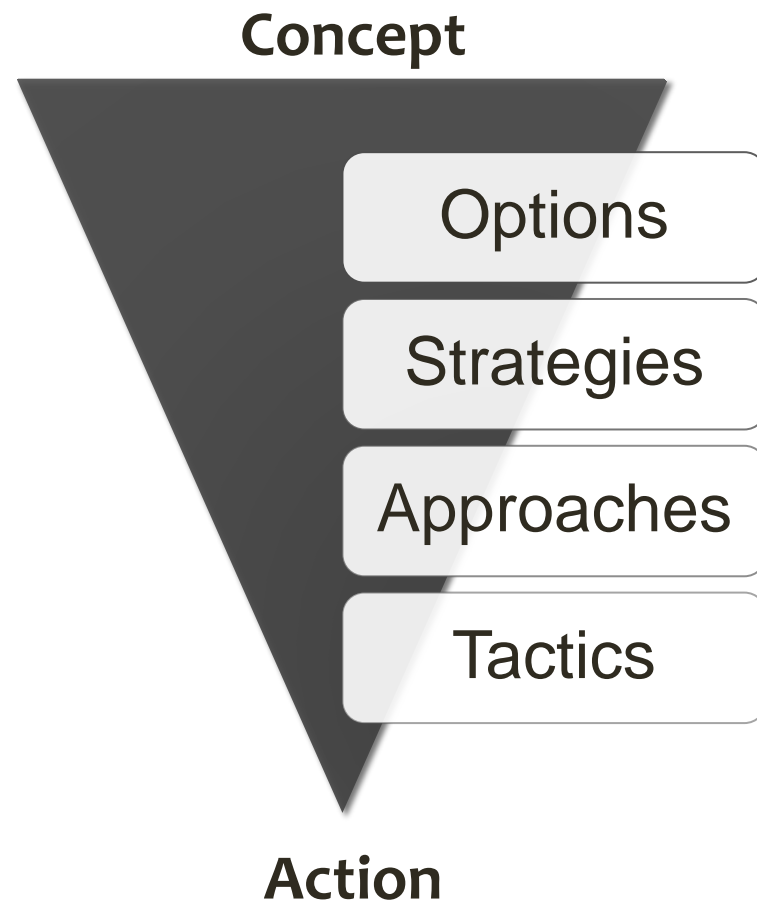
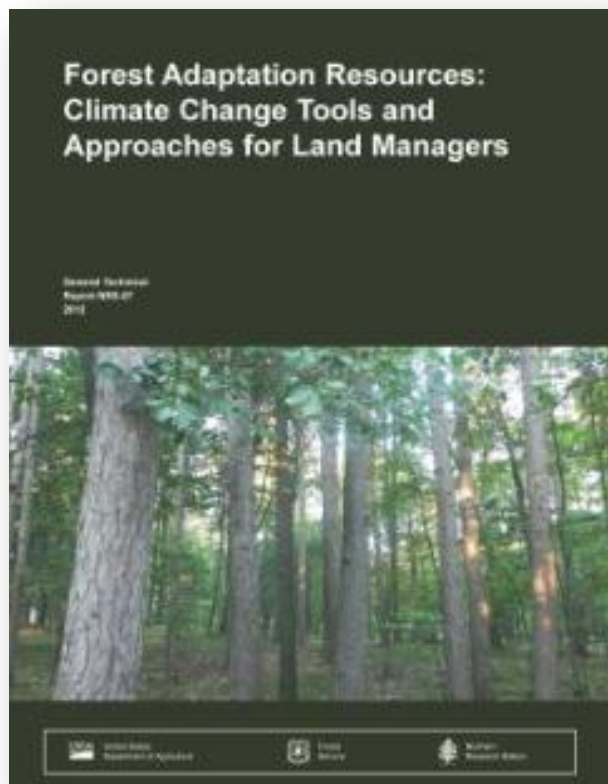
Adaptation activities can build on sustainable management, conservation, and restoration of forests

FOREST ADAPTATION RESOURCES



Adaptation Workbook

FOREST ADAPTATION RESOURCES



Menu of adaptation actions

ADAPTATION STRATEGIES & APPROACHES

- Reviewed adaptation literature
- Developed 10 strategies and 39 approaches
- Refined based on 30+ reviewer comments



ADAPTATION OPTION #1: RESISTANCE

Improve the defenses of the forest against effects of change.

- Short-term
- High-value

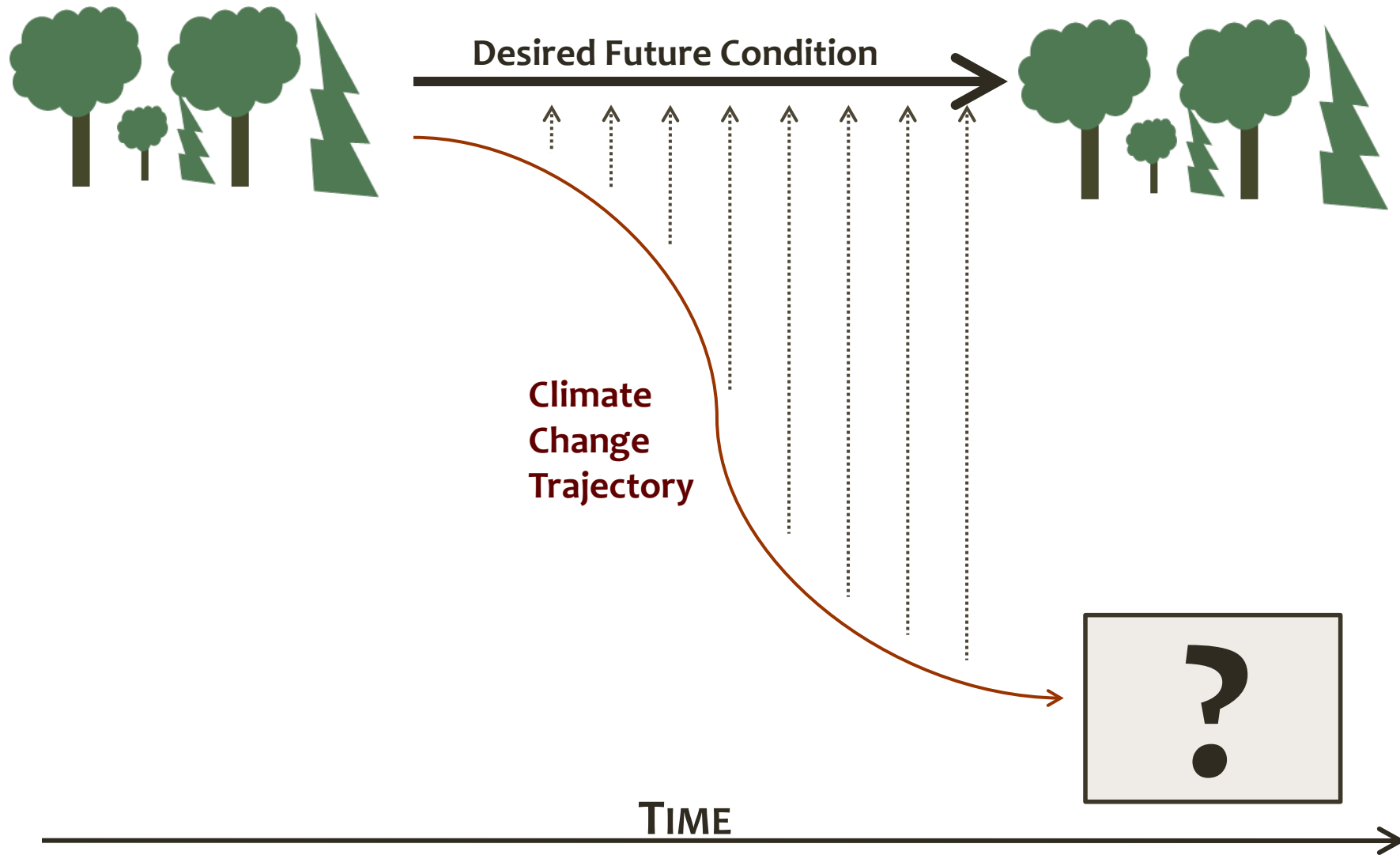


Photo: USFS



Millar et al. 2007

ADAPTATION OPTION #1: RESISTANCE



ADAPTATION OPTION #2: RESILIENCE

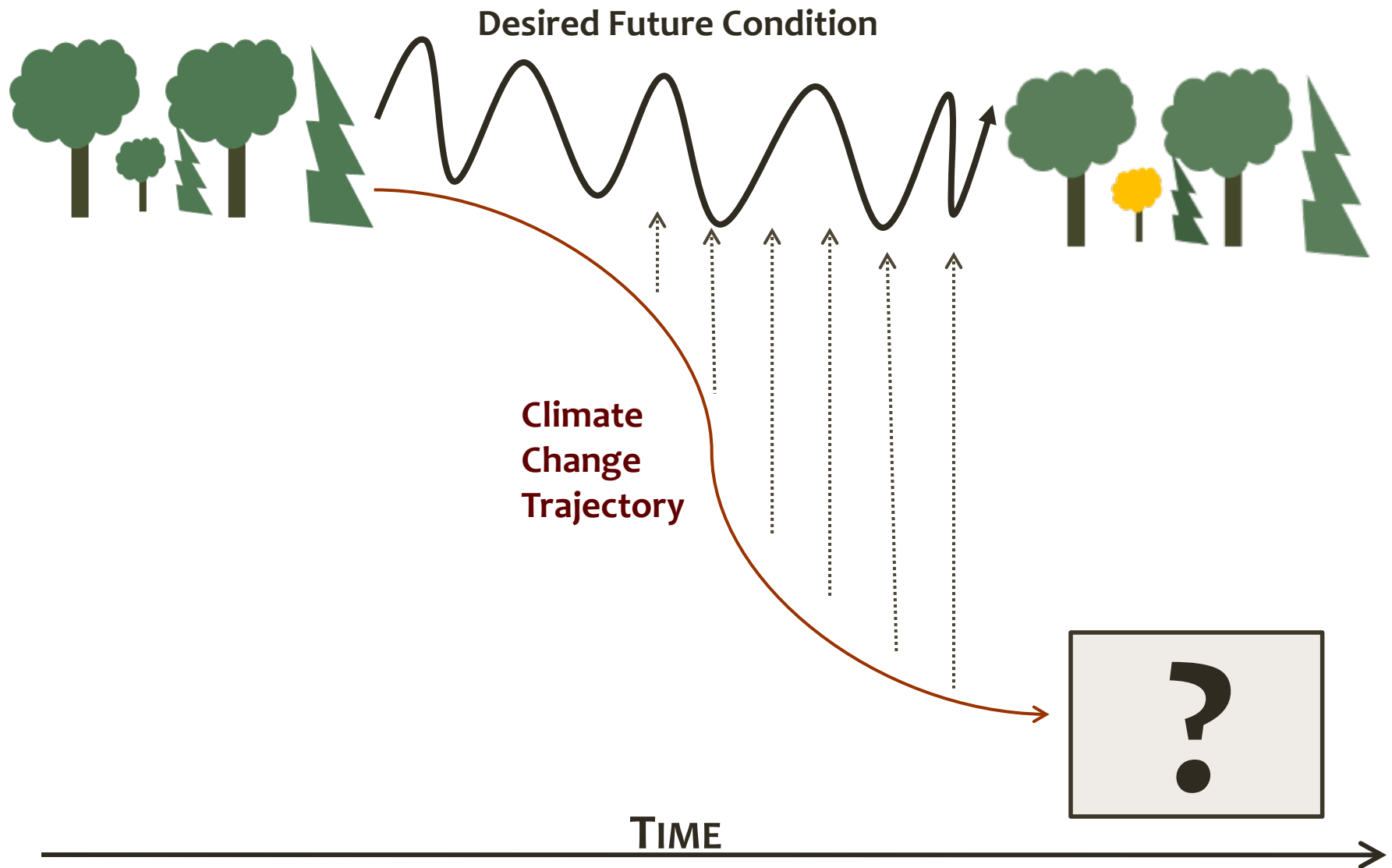
Accommodate gradual change, usually returning to a prior condition after disturbance



Photo: USFS

Millar et al. 2007

ADAPTATION OPTION #2: RESILIENCE

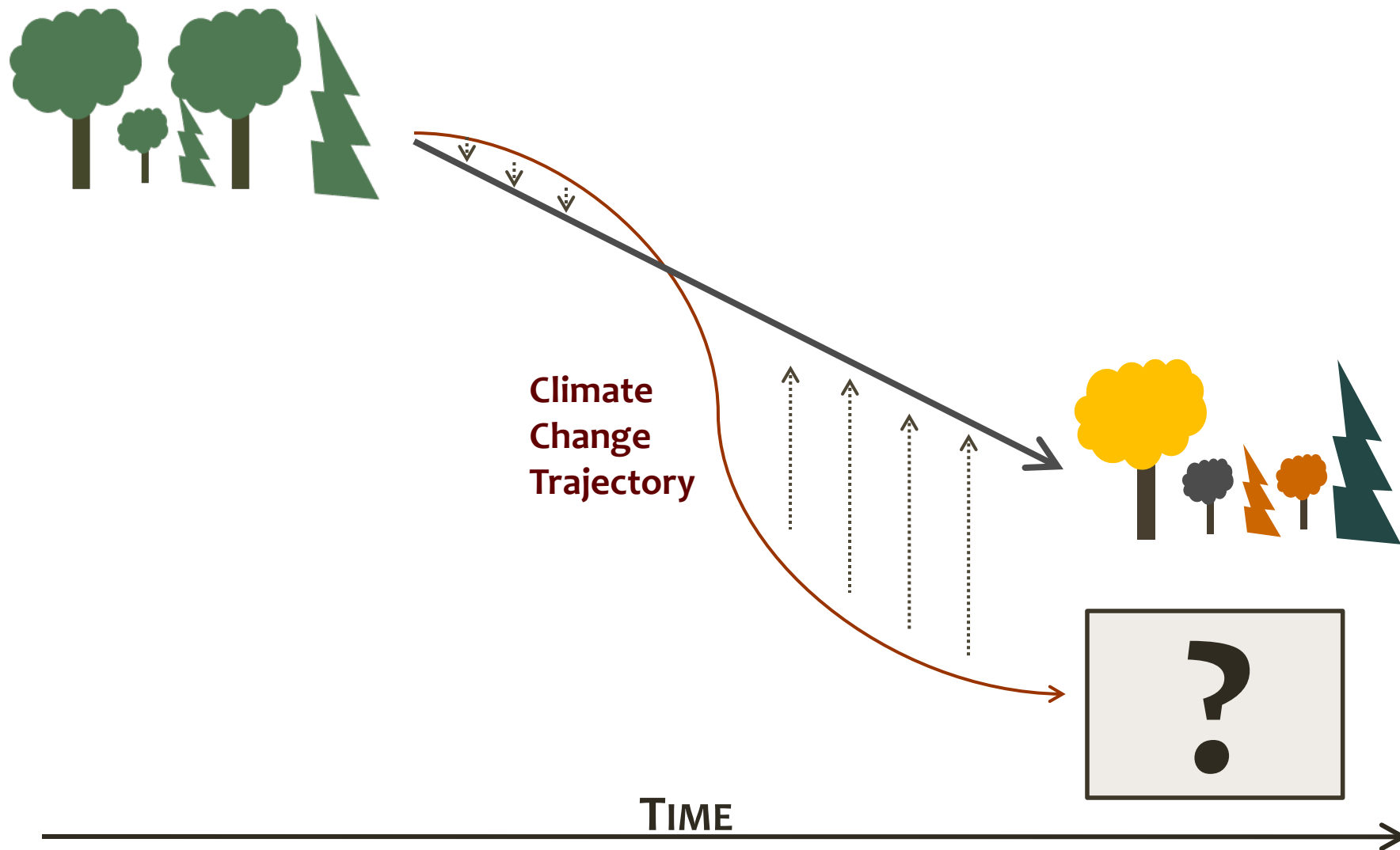


ADAPTATION OPTION #3: TRANSITION

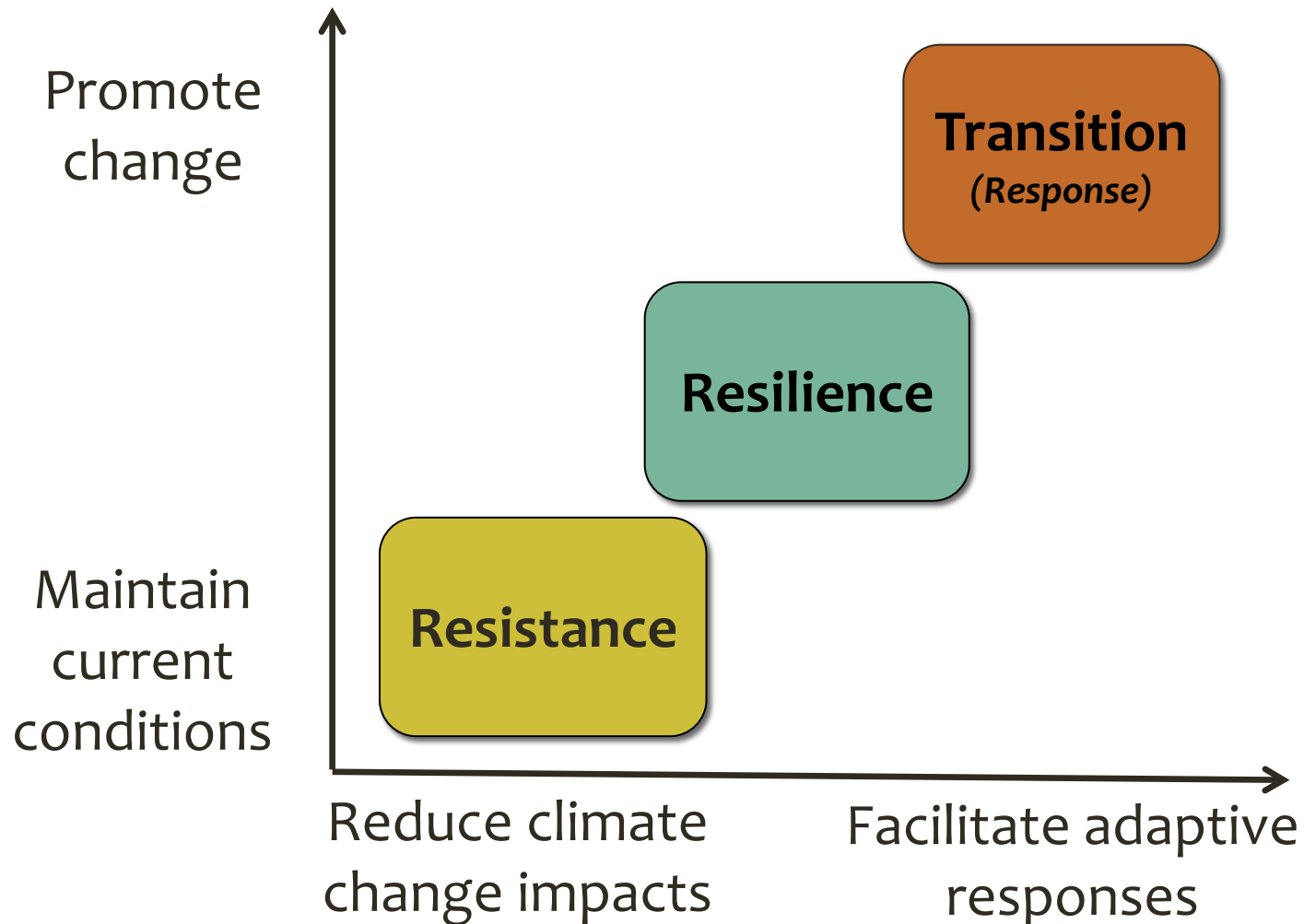
Intentionally encourage change, help ecosystems respond in a targeted fashion



ADAPTATION OPTION #3: TRANSITION

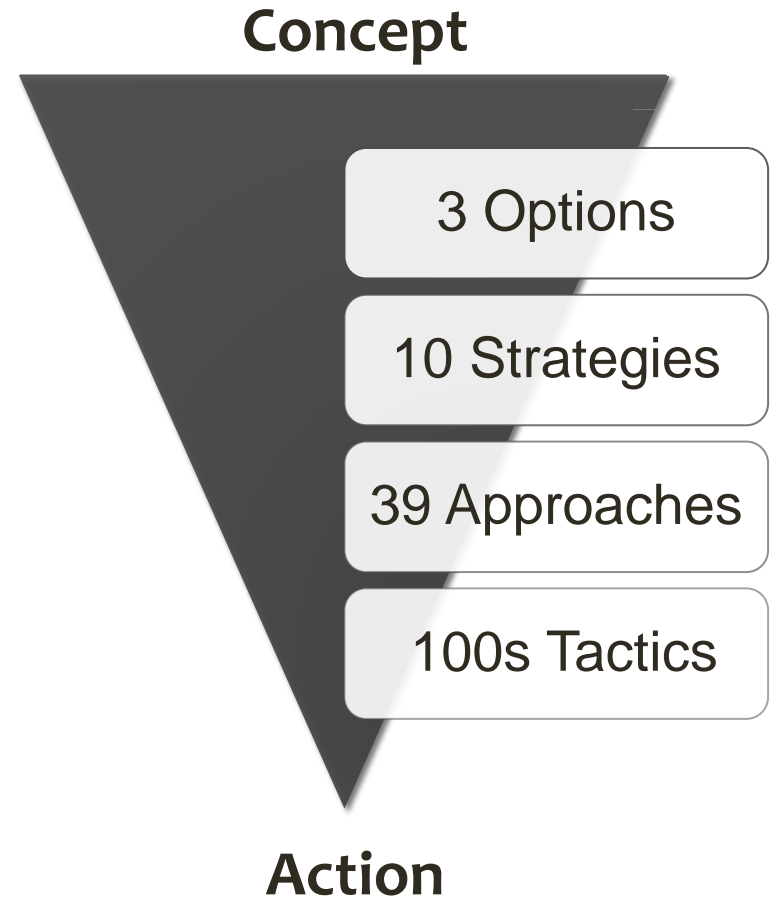


ADAPTATION OPTIONS

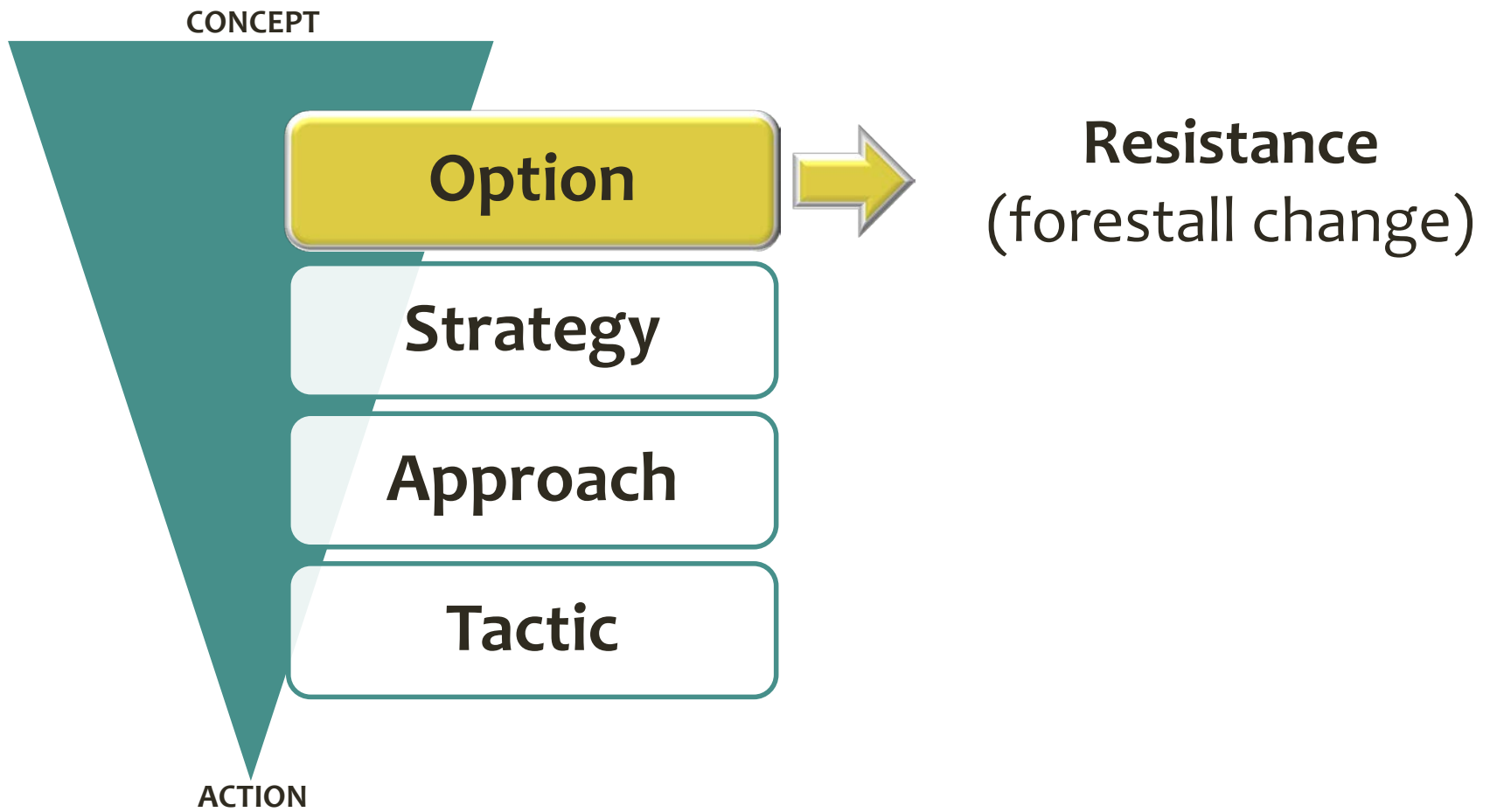


ADAPTATION STRATEGIES & APPROACHES

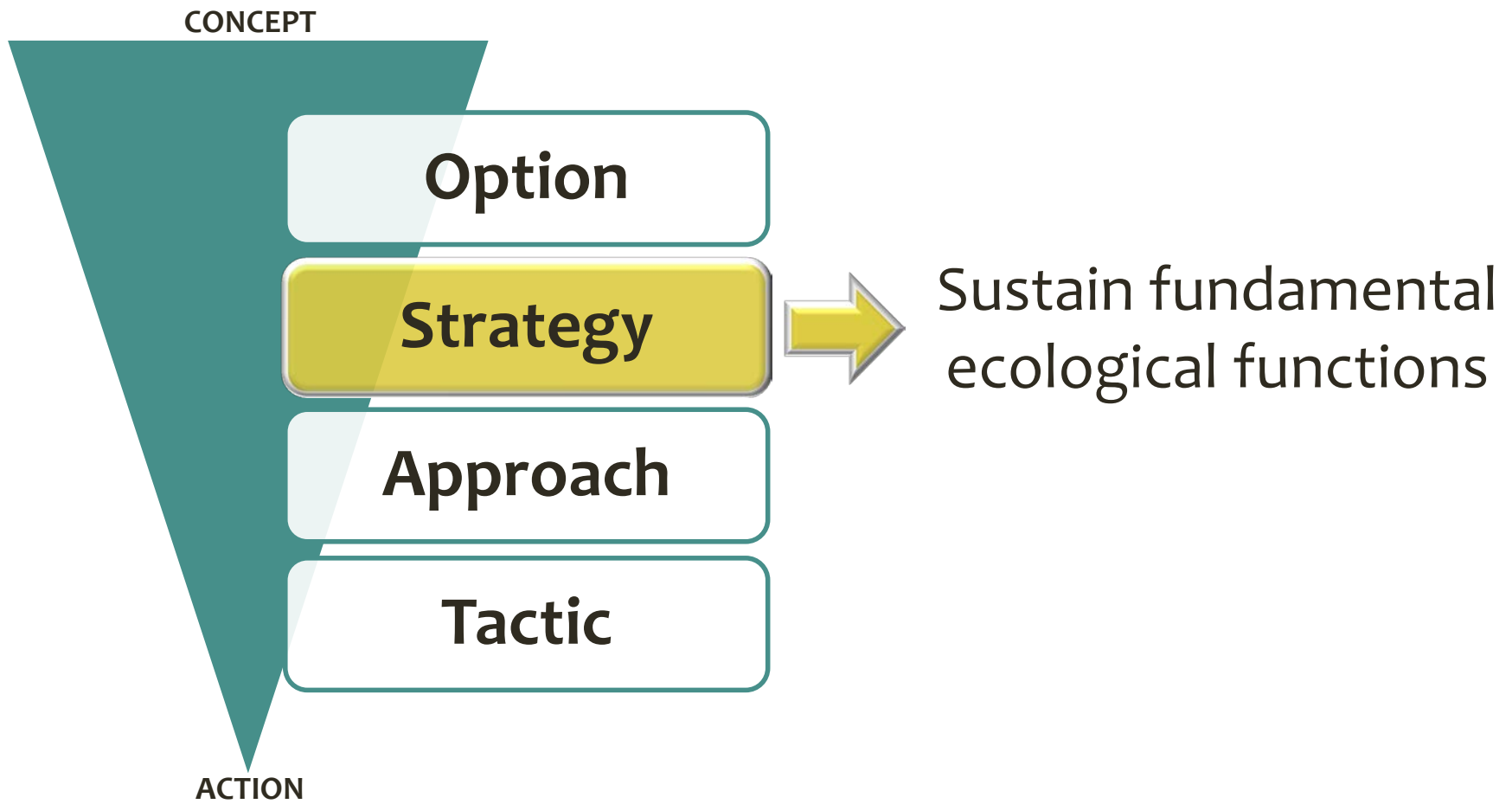
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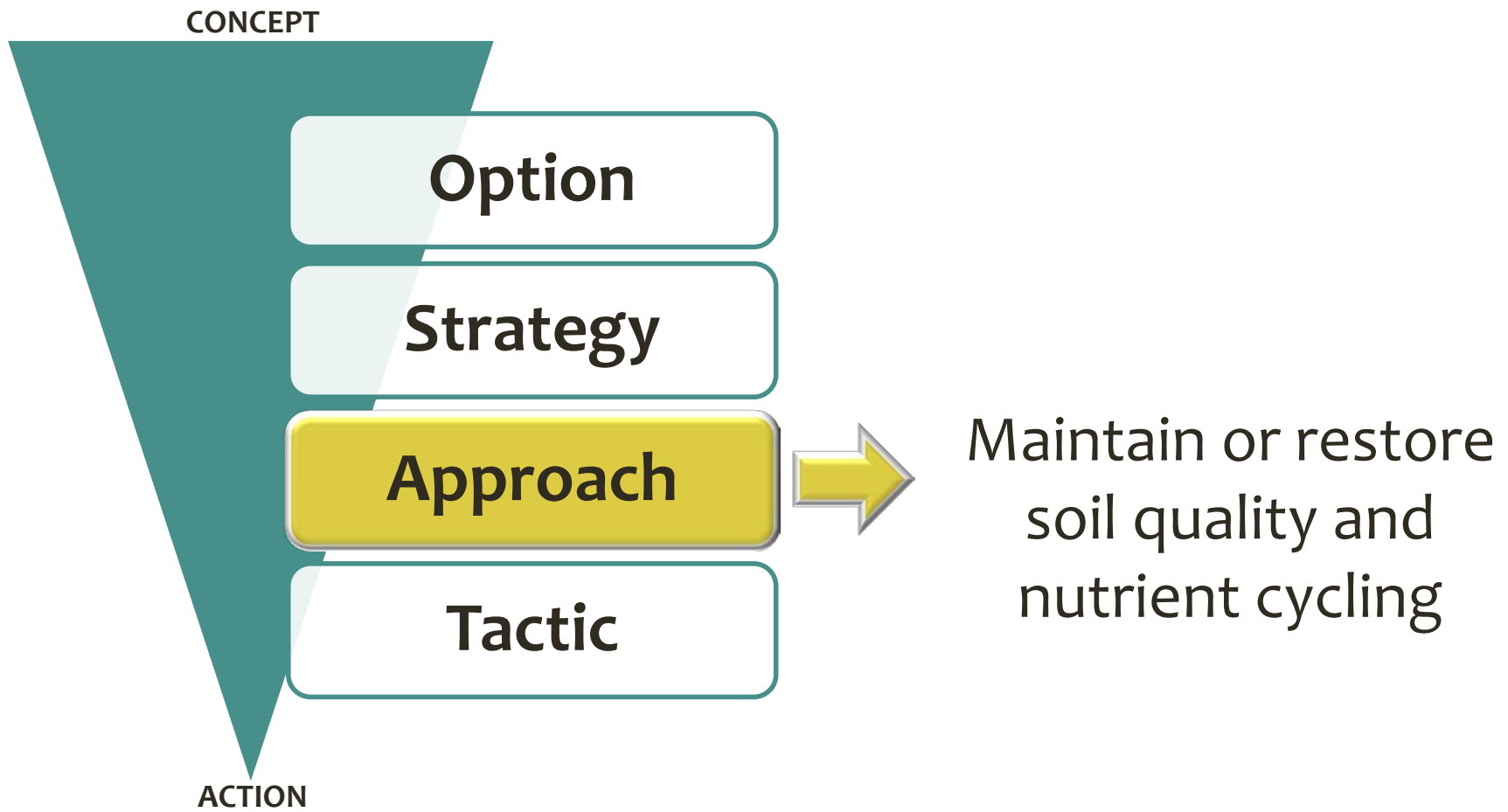
ADAPTATION STRATEGIES AND APPROACHES



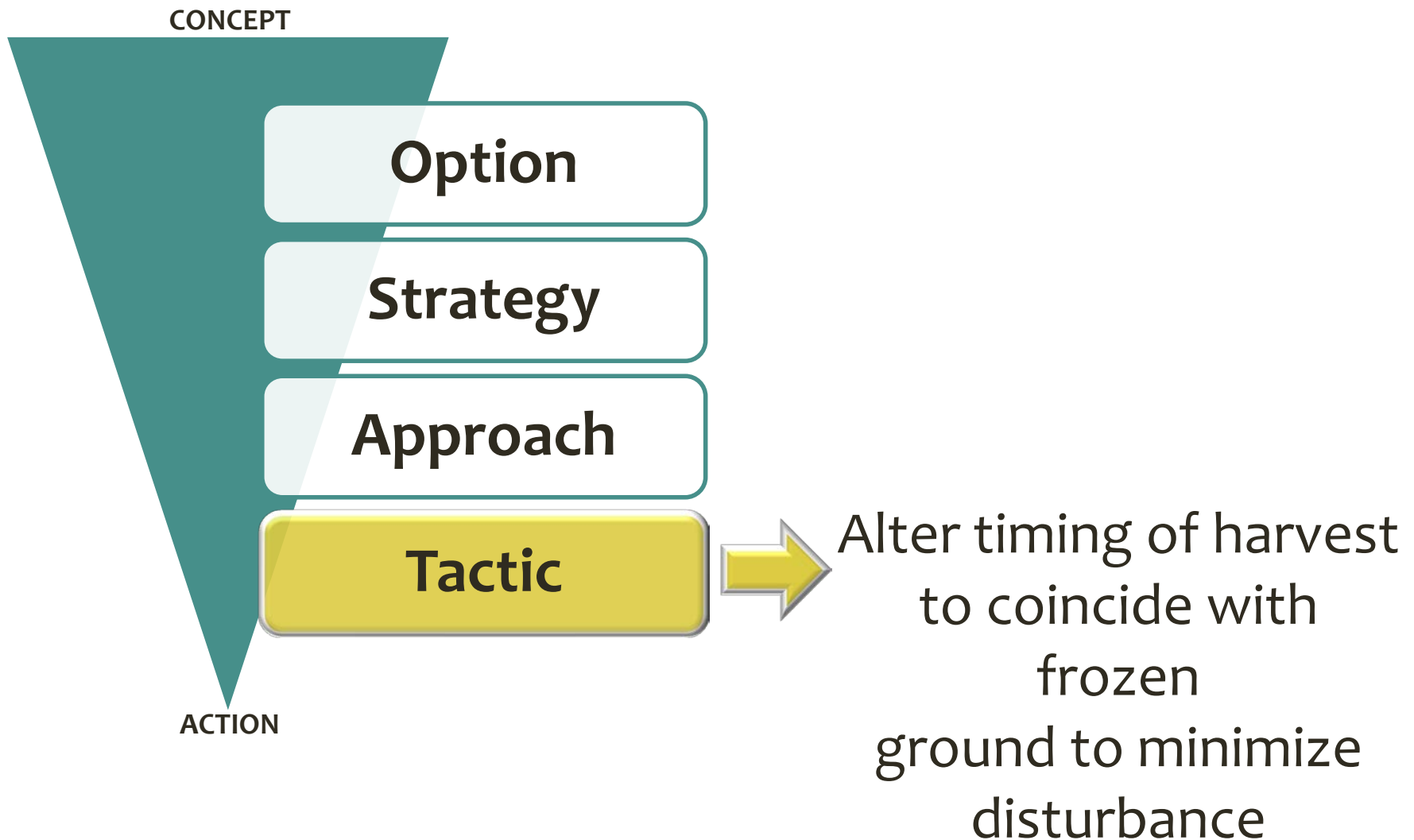
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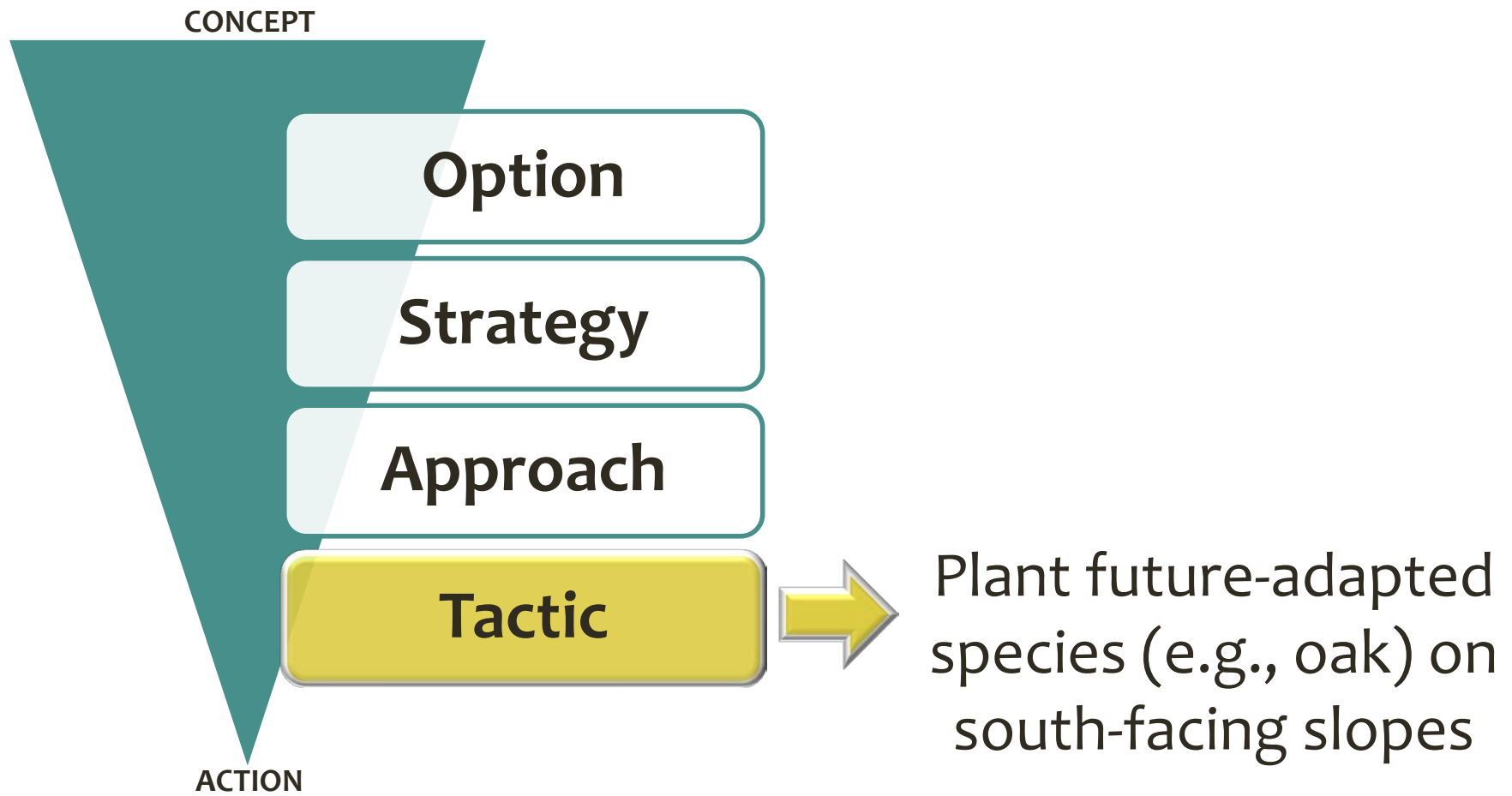
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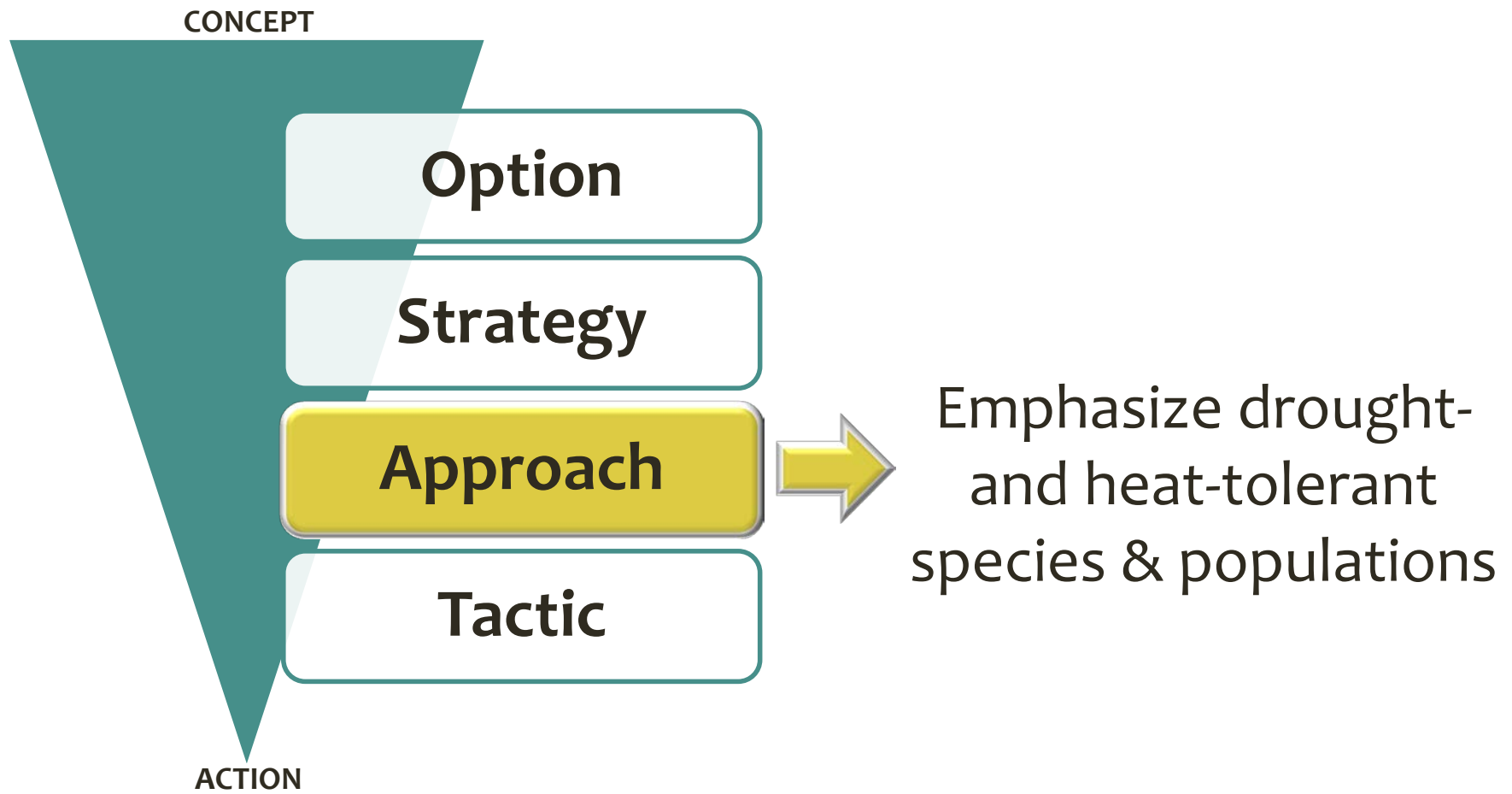
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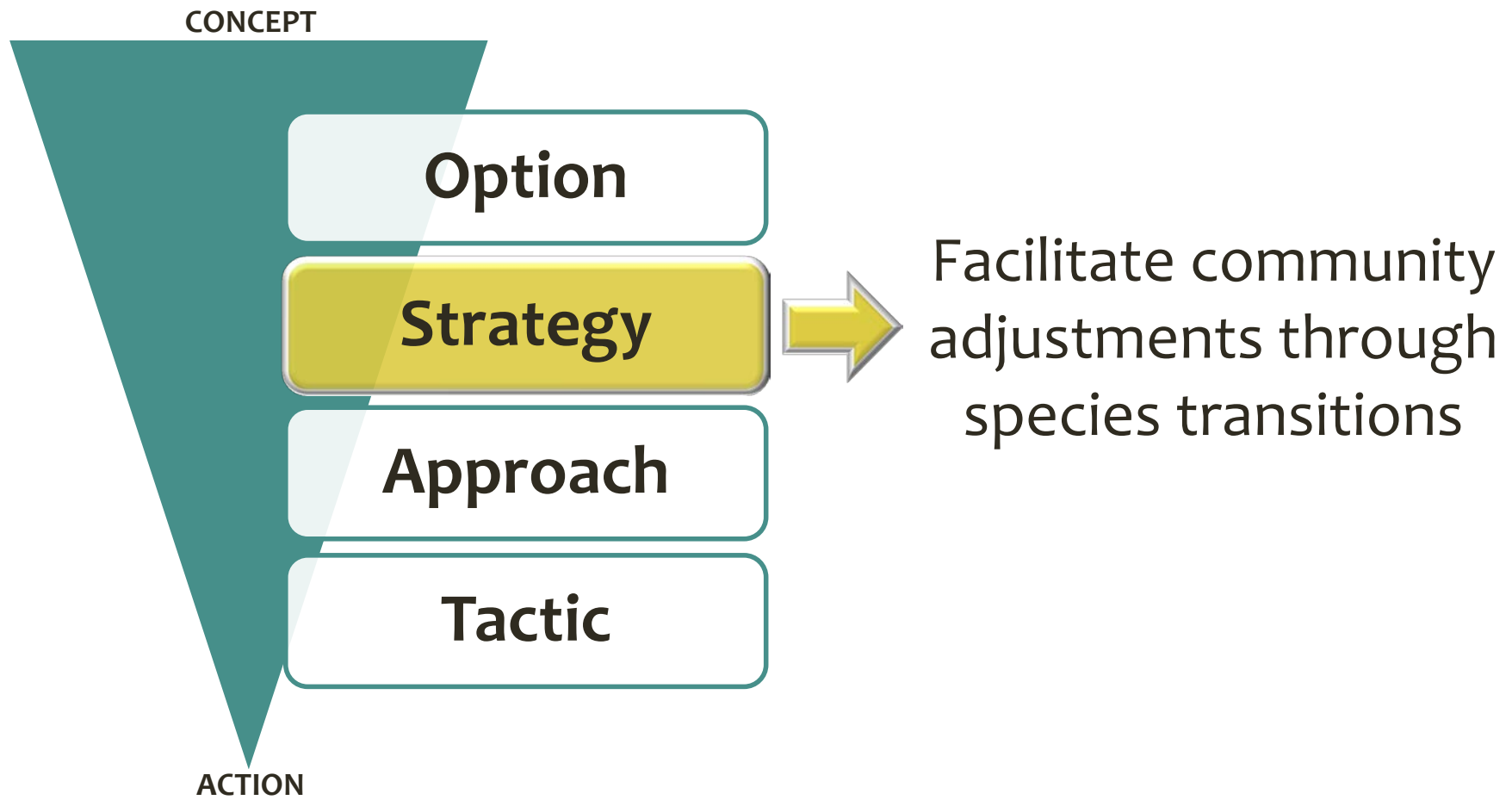
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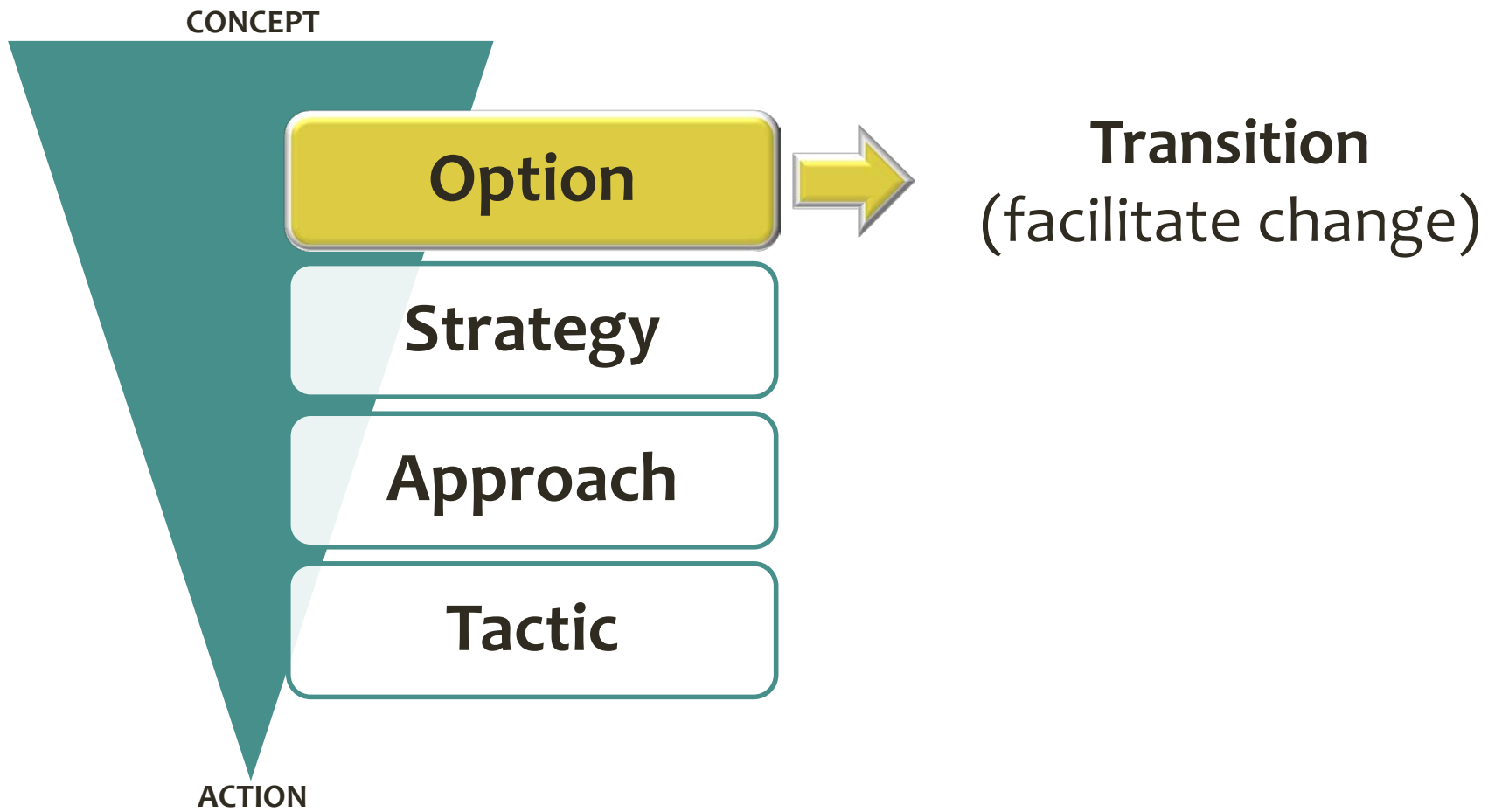
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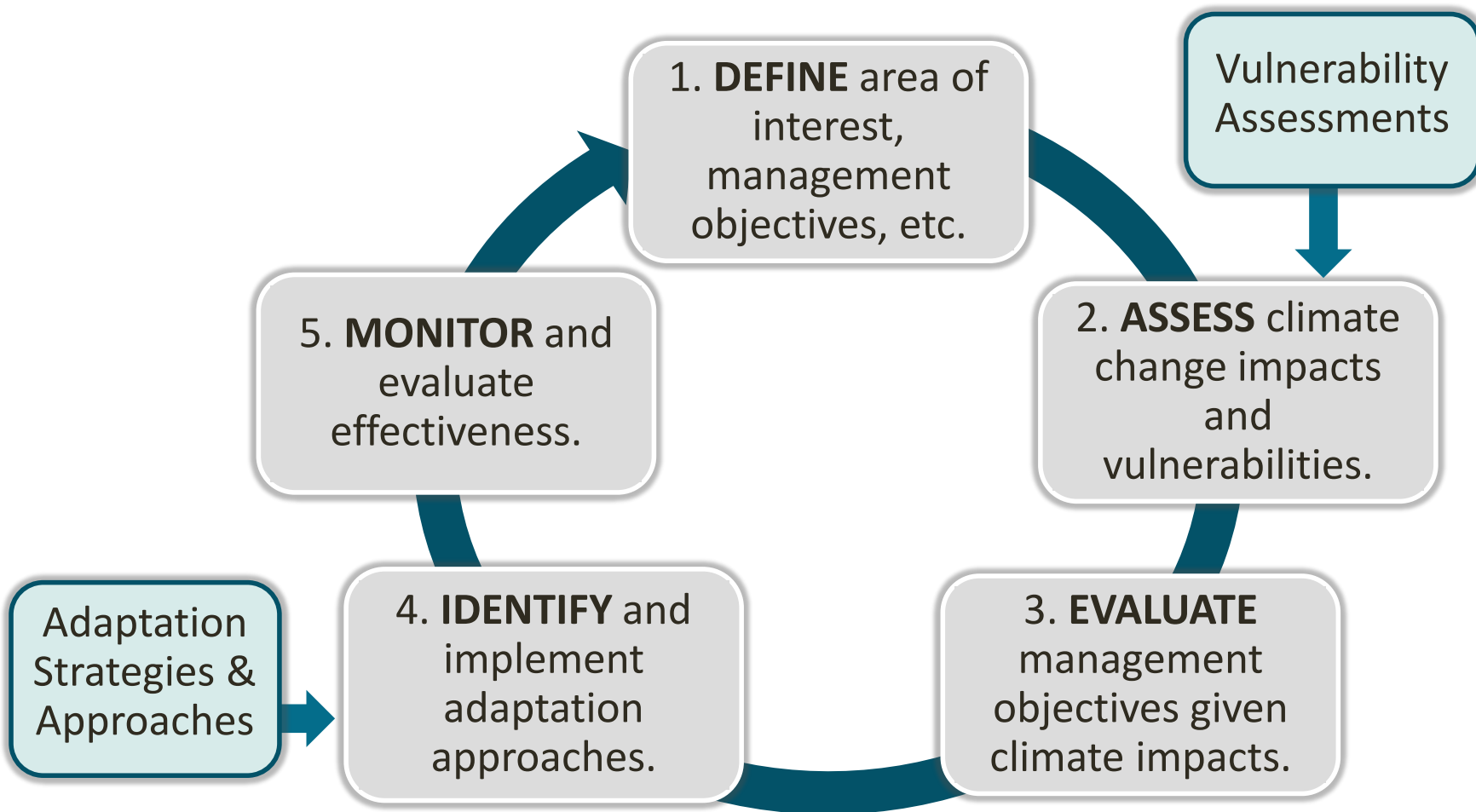
ADAPTATION STRATEGIES AND APPROACHES



ADAPTATION STRATEGIES AND APPROACHES



ADAPTATION WORKBOOK



PRINCIPLES OF ADAPTATION

- May need to prioritize actions based on vulnerability and ability to manage/adapt
- “No regrets” actions that have many benefits and low risk may be the easiest in the short term
- Reduce risk and plan ahead, not just for climate change, but for extreme events
- Adaptive management maintains flexibility and incorporates new information over time