

What is Climate Change Adaptation?



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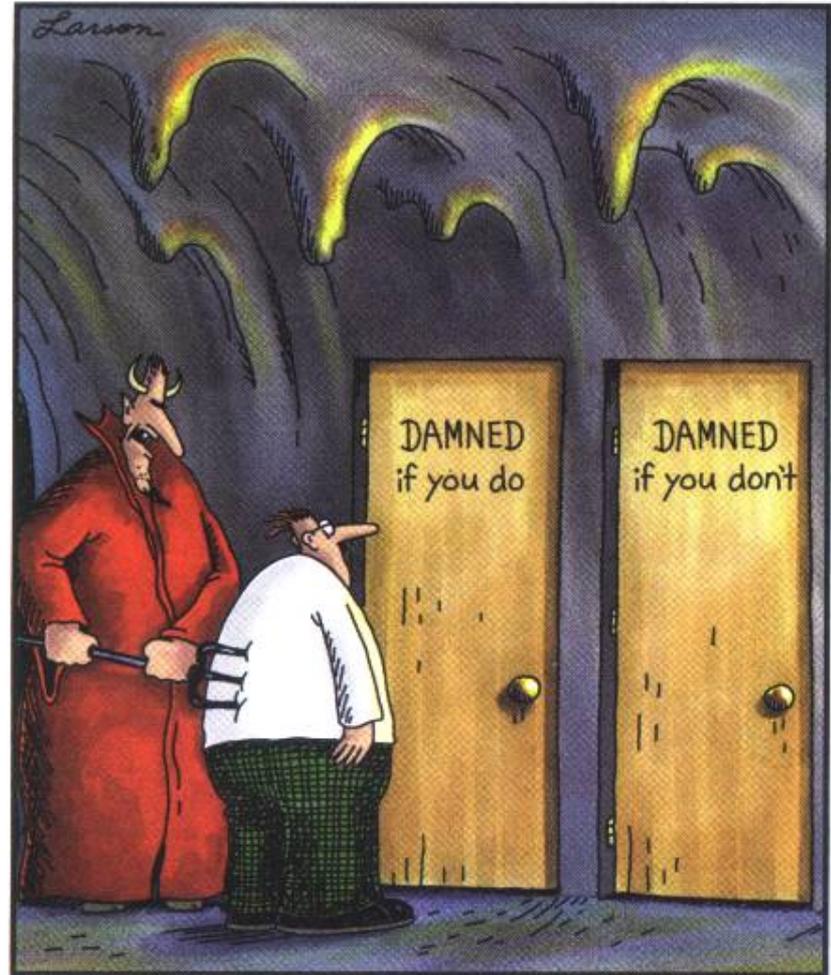
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What is climate change adaptation?

An effort to reduce the potentially negative consequences of climate change

AND transition ecosystems and natural resources to a warmer climate.



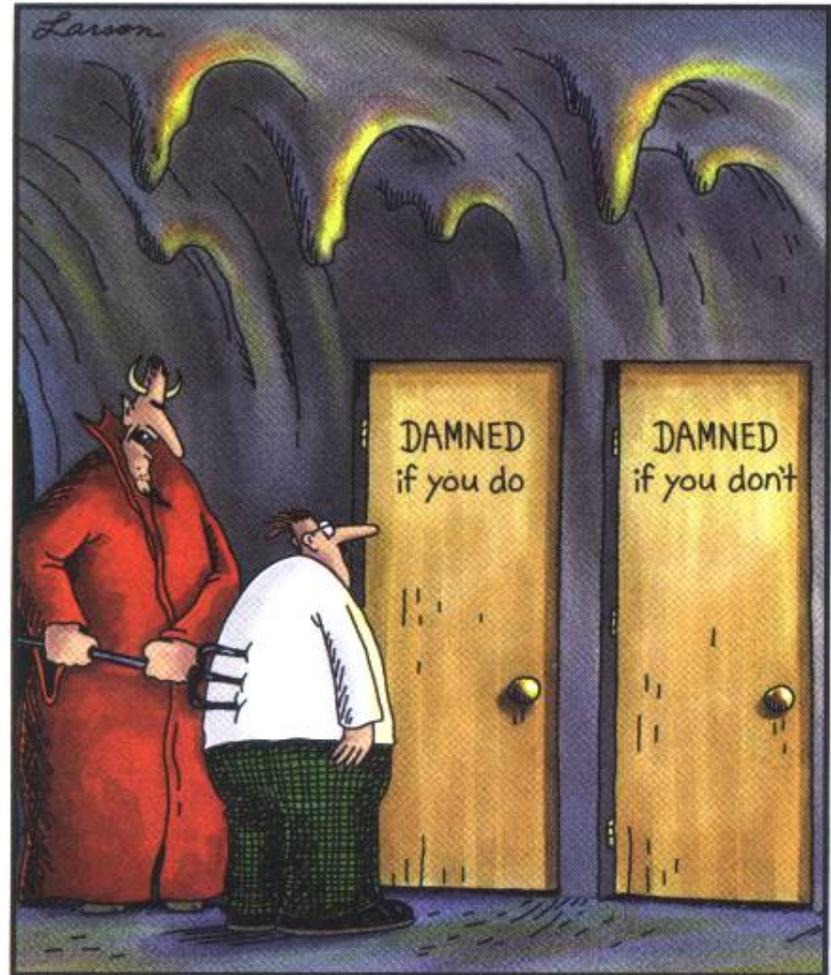
“C’mon, c’mon – it’s either one or the other.”

What is climate change adaptation?

Fine tuning and prioritizing current planning and management

Component of sustainable resource management

A form of risk management



"C'mon, c'mon – it's either one or the other."

What is climate change adaptation?

Strategic

Overarching guidance to maintain ecosystem function and sustainability



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Strategic

Overarching guidance to maintain ecosystem function and sustainability



Tactical

On-the-ground actions that address specific vulnerabilities and resources



Vulnerabilities and adaptation

WATER

Vulnerabilities and adaptation

WATER

Vulnerability

- Higher peak flows in fall and winter



Vulnerabilities and adaptation

WATER

Vulnerability

- Higher peak flows in winter



Adaptation strategy

- Design infrastructure to accommodate higher peak flows



Vulnerabilities and adaptation

WATER

Vulnerability

- Higher peak flows in winter



Adaptation tactics

- Install larger culverts
- Decommission roads in floodplains
- Relocate campgrounds subject to flooding



Vulnerabilities and adaptation

VEGETATION

Vulnerabilities and adaptation

VEGETATION

Vulnerability

- Wildfire will burn more area and over a longer fire season



Vulnerabilities and adaptation

VEGETATION

Vulnerability

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Adaptation strategy

- Increase resilience of forest ecosystems to more frequent fire



Vulnerabilities and adaptation

VEGETATION

Vulnerability

- Wildfire will burn more area and over a longer fire season



Adaptation tactics

- Reduce stand densities
- Accelerate hazardous fuel treatments
- Manage for diversity of stand ages





Vulnerabilities and adaptation

SUMMER RECREATION

Vulnerabilities and adaptation

SUMMER RECREATION

Vulnerability

- Increasing temperatures and earlier snowmelt



Vulnerabilities and adaptation

SUMMER RECREATION

Vulnerability

- Increasing temperatures and earlier snowmelt

Adaptation strategy

- Provide sustainable recreation opportunities in response to changing demands



Vulnerabilities and adaptation

SUMMER RECREATION

Vulnerability

- Increasing temperatures and earlier snowmelt

Adaptation tactics

- Understand changing patterns of use
- Adjust capacity of recreation sites
- Adjust timing of road and trail closures



Vulnerabilities and adaptation

WINTER RECREATION



Vulnerabilities and adaptation

WINTER RECREATION

Vulnerability

- Shorter winters with less snow, and wetter or icier snow





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Adaptation strategy

- Increase recreation management flexibility



Vulnerabilities and adaptation

WINTER RECREATION

Vulnerability

- Shorter winters with less snow, and wetter or icier snow

Adaptation tactics

- Expand facilities in areas where concentrated use increases
- Develop options for diversifying snow-based recreation



TODAY'S TASK

Identify the most important climate sensitivities

Identify (1) adaptation strategies for each climate sensitivity, and (2) adaptation tactics for each adaptation strategy

→ Use the *Climate Change Adaptation Library*

Provide supporting information that will facilitate decision making

(e.g., opportunities, relationship to other resources)

1	Sensitivity to climatic variability and change: Loss of snowpack			
2	Adaption Strategy / Approach: Develop approaches to compensate for loss of snowpack location and duration			
		Specific Tactic – A	Specific Tactic – B	Specific Tactic – C
3	Tactics	Reduce impacts from winter recreation as recreation is concentrated into smaller areas	Maintain thermal and security refugia	Utilize methods that retain snowpack and associated moisture (tree retention and meadow restoration)
4	Where can tactics be applied?	-Areas of potential high visitor use -Areas of high erosion potential	-Talus and rimrock areas -High elevation grasslands	-Alpine meadow/wetland are areas to capture and retain snowmelt
5	Opportunities for implementation	Long-term recreation planning with climate change in mind		
6	Comments	Monitor to determine if goals are achieved	Monitor to determine if goals are achieved	Monitor to determine if goals are achieved

Questions?



Climate change adaptation is a marathon, not a sprint.