

# Climate Change Task Force: Climate Readiness Synthesis

Council Climate Scenario Workshop  
June 5, 2024



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# ACLIM3 Decision Support System

## Scenario Discussions



### Climate Scenarios Multiple ESMs



### Alternative Food Web & Climate Coupling



### Distribution Biomass



- ▲ Carrying Capacity
- ▲ Distribution
- ▲ Biomass
- ▲ Fish Condition

### PROJECTIONS Species distribution & biomass

### ADVICE CI harvest recommendation

## Decision Support & Adaptation Planning

### Climate Integrated Assessments Climate Smart HCRs Climate Informed BRPs

### Fishing Scenarios Climate Informed Policies



### ABC

- ▲ Catch
- ▲ Value
- ▲ Cost
- ▲ Wellbeing

### TOOL BOX CI mart tools

### Bycatch

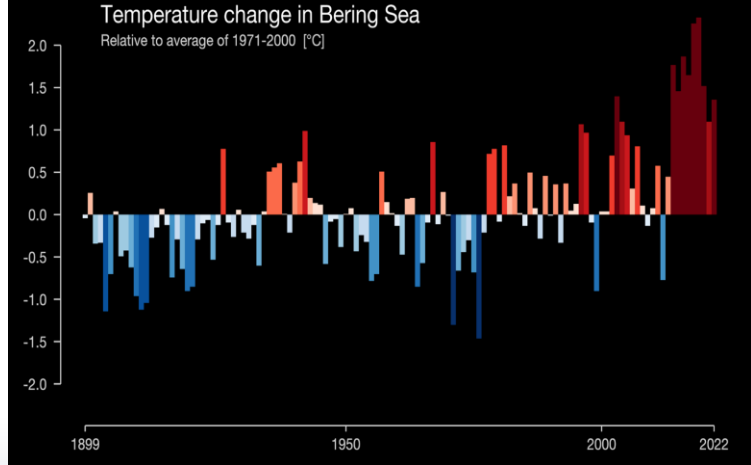
### Wellbeing

### \$\$\$

### RISK ASSESSMENT Risk & Adaptation

### Catch

### Food Security



# Interdisciplinary climate planning for EBFM in the eastern Bering Sea (USA)

2019

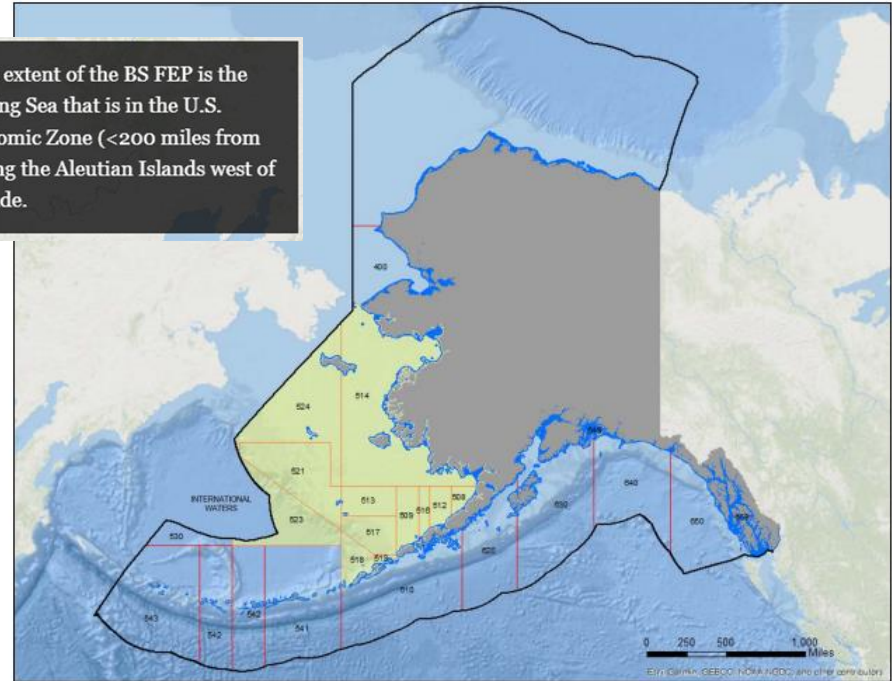
# Bering Sea Fishery Ecosystem Plan



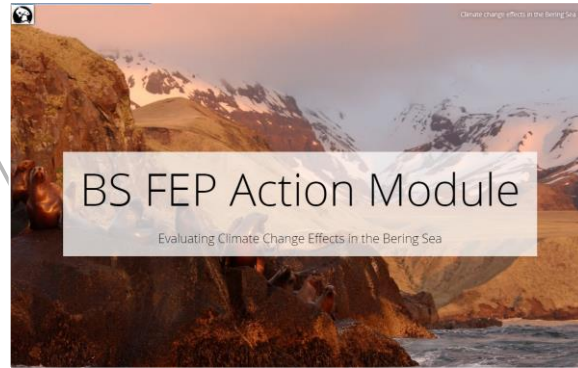
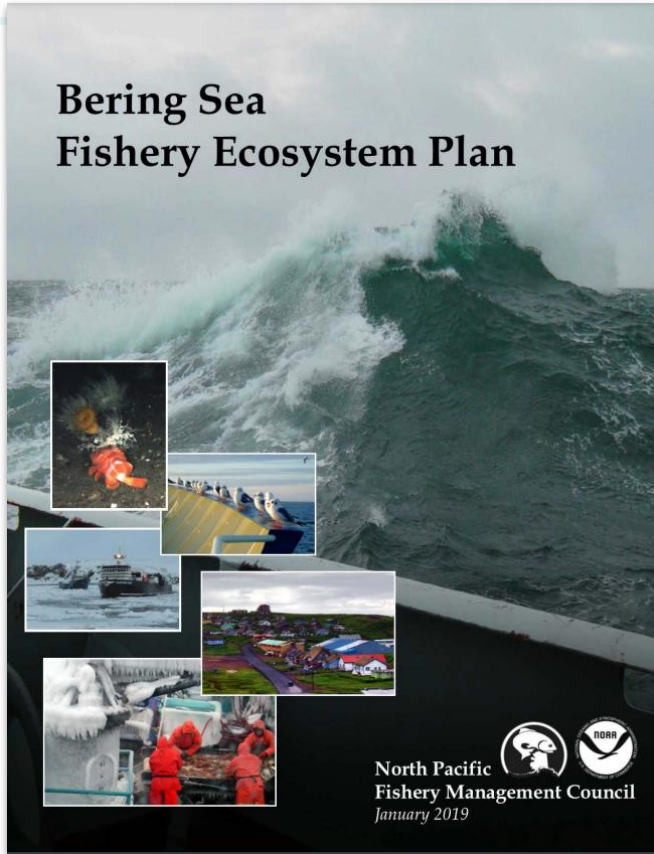
Figure 6-2 Map of Federal groundfish management areas in the Bering Sea ecosystem

Note, areas in blue denote State waters that are outside of Federal jurisdiction. Yellow is BS FEP area.

The geographic extent of the BS FEP is the area of the Bering Sea that is in the U.S. Exclusive Economic Zone (<200 miles from shore), excluding the Aleutian Islands west of 169° W. longitude.



2019



2020

Local Knowledge, Traditional Knowledge & Subsistence Information Task Force

Climate Change Task Force



## CLIMATE CHANGE TASK FORCE MEMBERS

Co-chair: Diana Stram (NPMFC): [diana.stram@noaa.gov](mailto:diana.stram@noaa.gov)

Co-chair: Kirstin Holsman (NMFS- AFSC) : [kirstin.holsman@noaa.gov](mailto:kirstin.holsman@noaa.gov)

Lauren Divine (Aleut Community of Saint Paul Island)

Scott Goodman (Natural Resources Consultants/BS Fisheries Res. Foundation)

Jason Gasper (NMFS-Regional Office)

Mike LeVine (Ocean Conservancy)

Steve Martell (SeaState)

Brenden Raymond-Yakoubian (Sandhill Culture Craft)

Jeremy Sterling (AFSC Marine Mammal Lab)

Todd Loomis (Ocean Peace, Inc.)

# Climate Change Task Force Steps

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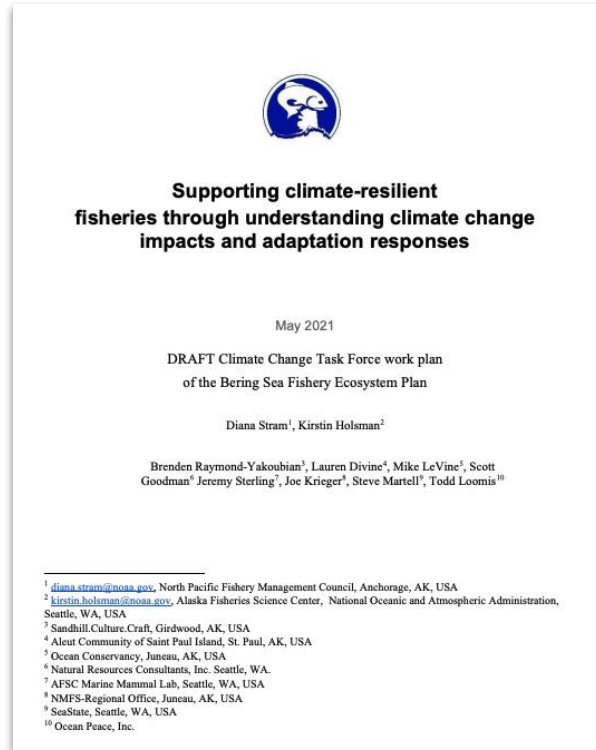
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## **CLIMATE CHANGE TASK FORCE**

2020- now

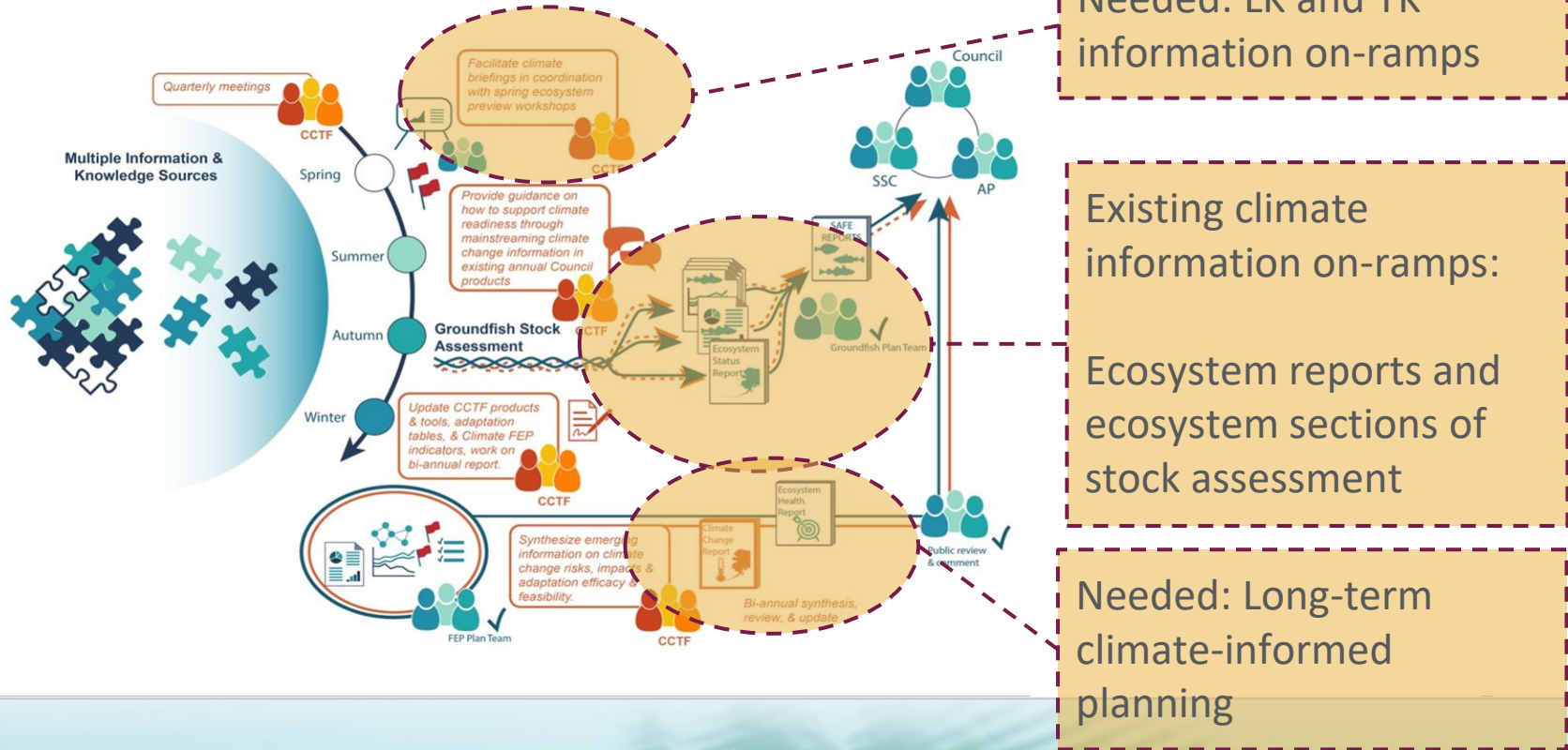
- (1) Map existing management process & identify climate information on-ramps
- (2) Develop living definitions of resilience and adaptation
- (3) Use case studies to explore climate impacts, responses, and indicators
- (4) Review existing climate readiness
- (5) Provide framework for climate-informed decision making

# Climate Change Task Force Steps



- (1) Map existing management process & identify climate information on-ramps
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## Climate-informed fisheries management: Proposed “on-ramps” and existing coordination



Needed: LK and TK information on-ramps

Existing climate information on-ramps:  
Ecosystem reports and ecosystem sections of stock assessment

Needed: Long-term climate-informed planning



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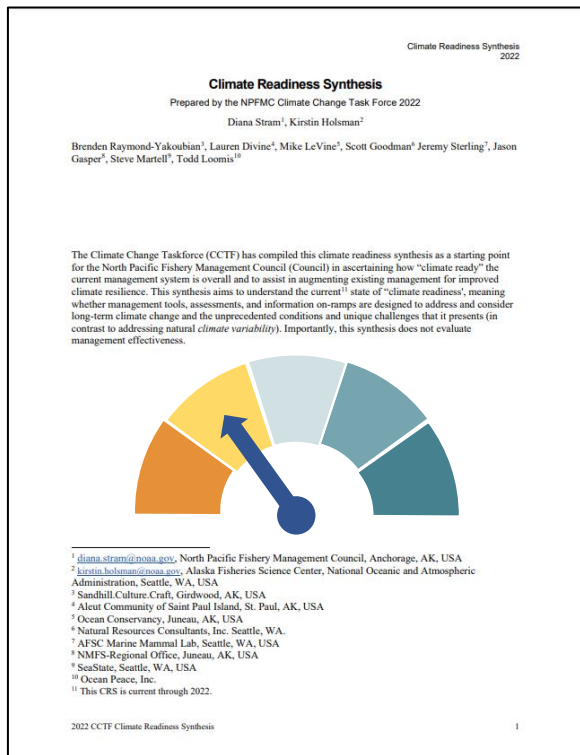


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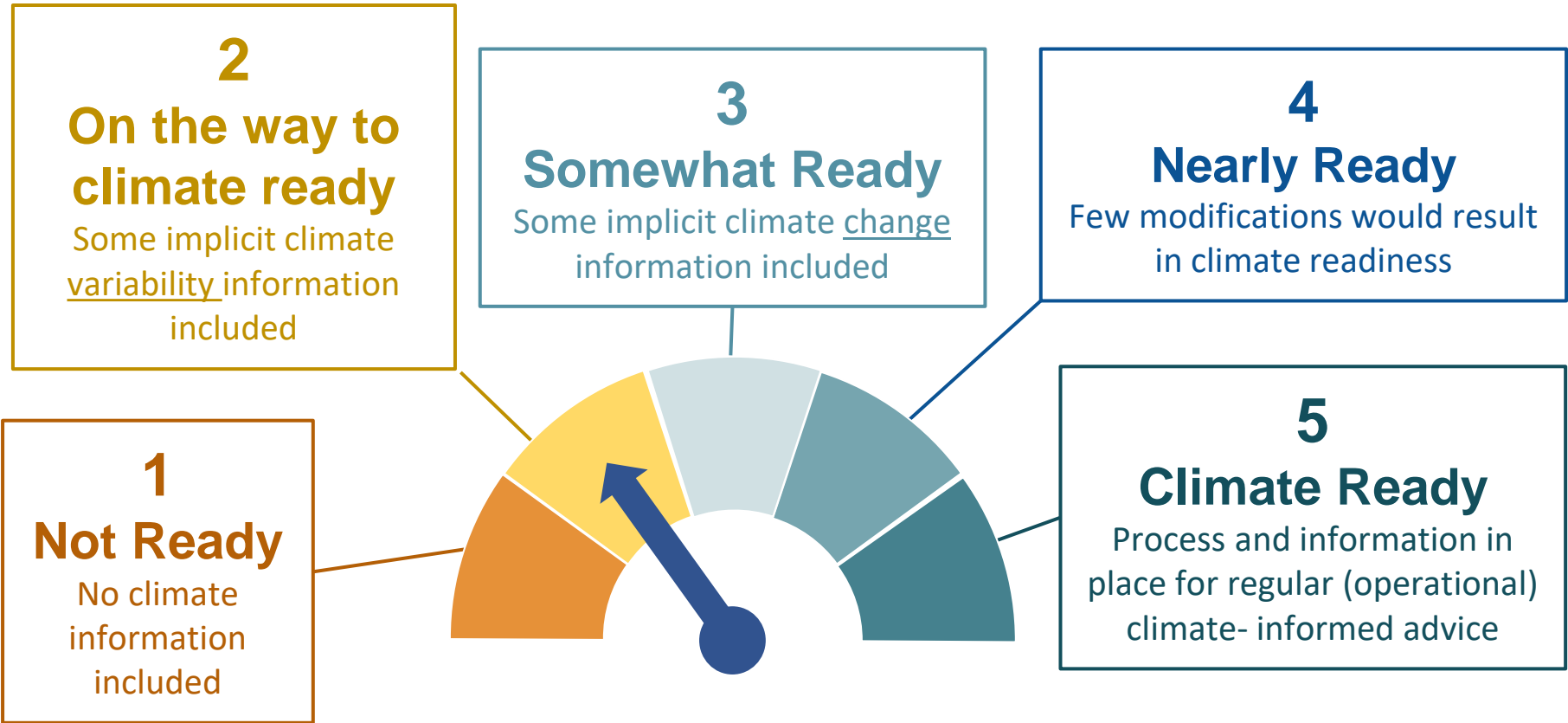
# Climate Readiness Synthesis 2022



## Management Process



# 2022 NPFMC Climate Readiness Synthesis



# 2022 NPFMC Climate Readiness Synthesis

## Management Process



- Implicit climate variability information associated with some management measures
- Conceptually climate information informs management measure but is not directly implemented

## Status reports



- Some implicit climate information included via EBFM processes & reports
- Climate and ecological information is increasingly included in a few assessments, but for most climate change information is absent or implicit in assessment models & text

**KEY: Some EBM measures (e.g., closure areas) can provide climate resilience in the near term but may lose effectiveness with higher warming**

**KEY: Consider potential climate strengths, weaknesses, & opportunities for improvement across management tools**

# 2022 NPFMC Climate Readiness Synthesis

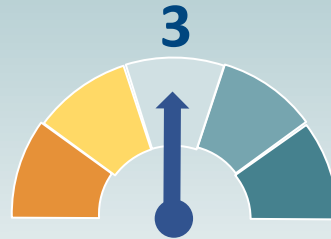
Management  
Process 

Status  
reports 

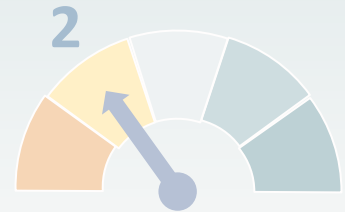
Knowledge &  
Information 

## KEY: Systematically increase climate information in EBM process & reports

- Implicit climate variability information associated with some management measures
- Conceptually climate information informs management measure but is not directly implemented



- Some implicit climate information included via EBFM processes & reports
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- Management measures include some/limited information from various knowledge bases and not others
- Integration into the NPFMC & NMFS system of information from the knowledge base of Indigenous communities is extremely limited
- Integration into the system from industry, agency, and other knowledge bases is a bit higher in general

## Management

Process 

## Status reports



## Knowledge & Information



**KEY: Expand (or create) processes, collaborations, & partnerships that facilitate multiple knowledge sources in climate planning & response**

- Implicit climate variability information associated with some management measures
- Conceptually climate information informs management measure but is not directly implemented

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# Participatory planning and decision making

## Conditions for transformative climate action & planning


Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

 **ScienceDirect**



**Does public participation lead to more ambitious and transformative local climate change planning?**★

Massimo Cattino<sup>1</sup> and Diana Reckien



The scientific literature is inconclusive with regard to whether public participation leads to more ambitious and transformative local climate governance. We review the scientific literature and, for climate adaptation, interpret whether the level of participation is associated with transformative potential of adaptation. For mitigation, we analyze whether public participation in local climate plans is significantly related to local greenhouse gas reduction targets. We find that public participation has a positive impact on both, the transformative potential of adaptation and the ambition for mitigation. The influence of participation on adaptation is stronger than the influence on mitigation. Based on our review, we highlight four conditions under which public participation can lead to potentially transformative action and greater local climate ambition, that is, recognition of all actors, their clear and meaningful engagement in all decision making stages, full consideration to public input in making that decision' [2]. Often, it refers to 'a deliberative process by which interested or affected citizens, civil society organisations, and government actors are involved in policy-making before a political decision is taken' [3]. We use the term 'public participation' synonymous with citizen participation and community participation, acknowledging that there are different types, forms and levels of participation (see Ladder of Participation by Arnstein [4\*]). These different levels can be placed on a 'continuum of interaction between government and the public, ranging from informing and listening at one end, to implementing jointly agreed solutions at the other; and in between there is dialogue, debate and analysis' [3]. Important aspects of genuine participation is the possibility for involved citizens to come to a shared understanding of

1. **Recognition of all actors**, roles, and portions of the population and of the socio-political context
2. **Clear and meaningful engagement in all the stages** of the decision-making process
3. **Full decision-making power**, that is, ability of citizens to steer the climate change planning process
4. Availability of adaptation options and processes that **support a logic of welfare instead of safety**, or of social rather than human security

Cattino and Reckien. Does public participation lead to more ambitious and transformative local climate change planning? <https://doi.org/10.1016/j.cosust.2021.08.004>

**Thank you!!!**

**Thanks to all CCTF members for all their work and  
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