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# Climate and Communities Initiative

 21 August 2019      Modified 2 February 2024

The California Current Ecosystem (which extends from the southern tip of the Baja Peninsula up to waters off Vancouver Island) supports the economies and social fabric of at least 125 communities in California, Oregon and Washington. As fish populations and the ecosystems that sustain them change in response to climate shifts, there may be profound consequences for the fisheries and the communities that they support.



This ecosystem is affected by "normal" multi-year and multi-decade climate variability that has major effects on fisheries productivity. In addition, with climate change, there will be changes to temperature, ocean surface water pH (acidity versus alkalinity), and deep-water oxygen. Other changes are less predictable but also likely, such as changes in upwelling, seasonal timing, and changes in the frequency and intensity of El Niño and the Pacific Decadal Oscillation.

At its September 2017 meeting, the Council decided to embark on the Climate and Communities Initiative pursuant to its Fishery Ecosystem Plan. The purpose of this initiative is to help the Council, its advisory bodies, and the public to better understand the effects of near-term climate shift and long-term climate change on our fish, fisheries, and fishing communities and identify ways in which the Council could incorporate such understanding into its decision making.

Under this initiative, the Council is exploring the longer-term effects of climate change on its managed species. While individual fishery management plans will likely examine the impacts of climate change on particular species, this initiative focuses on the combined, long-term effects of changes on multiple species across all management plans.

In early 2018 the Council's Ecosystem Workgroup, working with scientists at National Marine Fisheries Service Northwest and Southwest Fisheries Science Centers, organized a series of webinars to present information relevant to this initiative. These webinars help to educate the Council, advisory bodies, and the interested public about current research and forecasts related to the effects of climate variability/change on the California Current Ecosystem. [Recordings of these webinars are available.](#)

In support of the launch of this initiative, The Nature Conservancy hosted a *Climate and Communities Initiative Workshop* in May 2018. The goals of the workshop were to provide an opportunity for managers, scientists, and stakeholders to provide input into the Pacific Fishery Management Council's development of a climate and communities initiative. The results of the workshop are described in a [report](#), which was included in the September 2018

This work led the Council to embark on a climate change scenario planning process, described below.

## Climate change scenario planning

Scenario planning is a well-established planning process that helps organizations think about and meet new challenges. It is based around constructing a few alternative plausible descriptions for how the future might play out. These descriptions – called scenarios – are not predictions about what will happen. Instead, they are possibilities about what might happen. The scenarios are designed to help us think creatively about the risks and opportunities ahead, and to make decisions today that will help us prepare effectively for the future. In recent years, it has become popular in natural resource management as organizations grapple with the uncertainty of climate change and other environmental shifts, though it is relatively untested in fisheries management. The Council initiated its climate change scenario planning process in early 2019. The steps involved are described below.

### Establishing the project and researching drivers of change

In March 2019 the Council formed the Climate and Communities Core Team (CCCT) to manage a scenario planning exercise on the topic of shifting stock availability (including shifting distribution) across species, fishery management plans, and communities. The Council set a goal for this exercise of defining tools, products, and processes necessary to react to potential future ecosystem states resulting from climate variability and climate change over the 20 years, 2020 to 2040. The CCCT's first task was to develop [summaries of forces that may drive change to 2040](#) based on research and interviews with key informants.

### Developing scenarios

In January 2020 the Council and The Nature Conservancy jointly sponsored a

workshop to develop alternative scenarios about what west coast fishing communities might look like in 2040 based on the inventory of driving forc compiled during the research phase. Over 80 scientific experts, fishery experts, and stakeholders participated in the workshop (see [workshop speaker and panelist biographies](#)). Results were reported to the Council in March 2020.

## Validating and deepening the scenarios

Between April and July 2020 the CCCT fleshed out the underlying conditions of each of the four scenarios developed at the January workshop and engaged with the Council's advisory bodies to add details to the scenarios, including the development of examples for key species within and across the Council's four fishery management plans. The [scenario descriptions are available on this page](#) and include detailed written descriptions of each of the four scenarios, a high level written summary, and a short video.

## Applying the scenarios

This final stage of the scenario planning exercise involves a series of [four online workshops](#) during which participants considered the implications of possible changes described in the scenarios and identify actions the Council and stakeholders may take in response. These workshops occurred between December 2020 and February 2021. [Results were reported to the Council at its March 2021 meeting](#).

## Using the results of the scenario planning process

In September 2021 the [CCCT submitted a report](#) to the Council with recommendations on future activities to address the goal of the Climate and Communities Initiative based on the results of the scenario planning process. Other Council advisory bodies also weighed in with recommendations for future actions the Council could take to address the effects of climate change. The Council then directed the Ecosystem Workgroup to review the recommendations in the CCCT Report, and from other advisory bodies, and [report to the Council in March 2022 on potential activities that may be](#)

Report to the Council in March 2022 on potential activities that may be incorporated into the ongoing work of the Council under its Fishery Management Plans, candidate FEP initiatives, or other Council-relevant activities.

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## Webinar series on climate and communities

What do we expect to happen in the California Current under climate ch...



[Slides in PDF format](#)

Distributional changes of west coast species and impacts of climate c...



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Slides in PDF format

Slides in PDF format

# Recent Council meeting briefing materials for this initiative



Climate and Communities Initiative implications workshops generic agenda

4 February 2021



Oregon region climate implications workshop completed worksheets

4 February 2021



Washington region climate implications workshop completed worksheets

4 February 2021



Northern California climate implications workshop completed worksheets

4 February 2021



Southern California climate implications workshop completed worksheets

4 February 2021



Agenda December 16-17 climate change implications in Southern California workshop

24 November 2020



Preface: Scenarios for west coast fisheries 2040

23 November 2020



Scenarios for west coast fisheries, Climate and Communities Initiative

4 November 2020



F.1, Attachment 2: Climate Change Scenarios for West Coast Fishing: Proposal for Implications Workshops

21 August 2020



F.1, Attachment 1: Scenarios for West Coast Fisheries in 2040

21 August 2020



## C.5.a, Supplemental CCCT Report 1

17 June 2020

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## May 20 agenda Highly Migratory Species Advisory Subpanel and Management Team webinar on scenario deepening

12 May 2020



## Scenarios for West Coast Fisheries 2040: Highly Migratory Species

12 May 2020



## G.3.b, Supplemental GMT Report 1

7 March 2020



## G.3.b, Supplemental EWG Report 1

7 March 2020



## G.3.b, Supplemental GAP Report 1

6 March 2020



## G.3.b, Supplemental EAS Report 1

6 March 2020



## G.3.a, Supplemental CCI Workshop PPT 1: Follow up from a Workshop Co-Sponsored by The Nature Conservancy and Pacific Fishery Management Council in Support of the Fishery Ecosystem Plan Climate and Communities Initiative

5 March 2020



## G.3, Supplemental Attachment 3: Illustrative Climate and Communities Scenario Alternatives

5 March 2020



## G.3.b, Supplemental SSC Report 1

5 March 2020



## G.3, Supplemental Attachment 2: Concepts and Questions for the Next Phase of the Climate and Communities Initiative (Jonathan Star)

26 February 2020



## CCI scenario planning workshop speaker and panelist bios

19 February 2020

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 CCI workshop driving forces summary

18 February 2020

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 G.3, Attachment 1: Developing Climate Change Scenarios for the California Current Ecosystem –Workshop Report

14 February 2020

**Filed under:**

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FEP Initiative

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Ecosystem-Based Management

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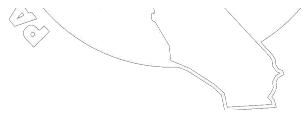
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