



COLLABORATIVE
NETWORK

CLIMATE AND THE COAST

CATALINA ISLAND



Catalina Island MPA
Collaborative

Perspectives on climate change, the coast, and
California's Marine Protected Area Network

*A summary of the greatest concerns, needs, and
priorities from a survey and focus group of Catalina
Island residents on climate change, the coast, and
marine protected areas (MPAs).*

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EXECUTIVE SUMMARY

This report is a summary of 2 survey respondents and 6 focus group attendees from Catalina Island.

Participants discussed climate resiliency and benefits of MPAs, climate change-related risks to MPAs, and avenues for ensuring MPAs continue to promote a healthy ocean.

Recommendations for decision makers can be found on page 3.

Key Takeaways

The following key takeaways are highlighted in further detail throughout the report.

Respondents believe...

- **climate change is negatively impacting MPA effectiveness**, coastal ecosystems and coastal communities
- **MPAs are helping address climate change** impacts on local coastal ecosystems and communities
- **marine management is a priority** for addressing climate change
- **climate action is a high priority** for their community

Some takeaways **unique to Catalina Island** include:

- Concerns about sea level rise impacts to **infrastructure** (roads, piers, businesses), which also impacts **access**
- Solutions included **education** (through camps), **community science/monitoring**, and **integrating climate change** into the existing City of Avalon local coastal/general plan
- Concern about **climate change impacts** on kelp ecosystems, invasives (e.g., *Sargassum*), and related impacts to local tourism (e.g., diving)

Recommendations

The following recommendations represent the perspectives of respondents and do not necessarily represent the perspectives of the MPA Collaborative Network, which represents many diverse viewpoints

Develop...

- **outreach and education materials** (messaging) that clearly and succinctly communicates the intersections of climate change and MPAs
- **positions** within each organization/agency/department dedicated to climate change
- **co-management agreements** for MPAs between Tribes and state governing agencies
- **funding streams** towards projects focused explicitly on climate change and MPAs
- **learning opportunities** for partners and the public to learn about the intersections of MPAs and climate change
- **clear communication** to partners and the public about how **adaptive management** will address climate change

Prioritize...

- **Traditional Ecological Knowledge (TEK)** in management and research practices
- **Protection of blue carbon ecosystems**
- **Research and monitoring** projects focused on MPAs and climate change to inform management decisions

Assess potential positive climate impacts of...

- **allowing for restoration** activities within MPAs
- **expanding protected areas** and **implementing stronger protections**
- additions of **dynamic MPAs** that address changing conditions

Conduct...

- a **blue carbon inventory** for California's MPAs (either as a whole or individually) that estimates how much blue carbon they sequester, as well as how much greenhouse gases are created through the management program
- a **climate change vulnerability assessment** for California's MPAs (either as a whole or individually)



Casino Point No-Take State Marine Conservation Area

TAKEAWAY #1

Respondents believe climate change is highly impacting MPA effectiveness and coastal ecosystems.

1.1 Indicate how strongly you agree or disagree with the following statement: **Climate change is impacting MPA effectiveness.**



Somewhat agree
100%

1.2 Rank your **biggest concerns about how climate change impacts** your local coastal ecosystems and marine protected areas (MPAs).

Concerns ranked from highest to lowest

- 1 Increased ocean temperatures and marine heatwaves
- 2 Ocean acidification
- 3 Invasive species
- 4 Coastal Storms
- 5 Sea level rise
- 6 Climate driven shift in human impacts
- 7 Wildfire runoff
- 8 Other *



“[Concerned about] ancestral burial grounds being washed out due to more frequent storms and difficulty preserving cultural and historic sites.” - Respondent

TAKEAWAY #2

Respondents believe MPAs are helping address climate change impacts on local coastal ecosystems

2. Indicate how strongly you agree or disagree with the following statement:

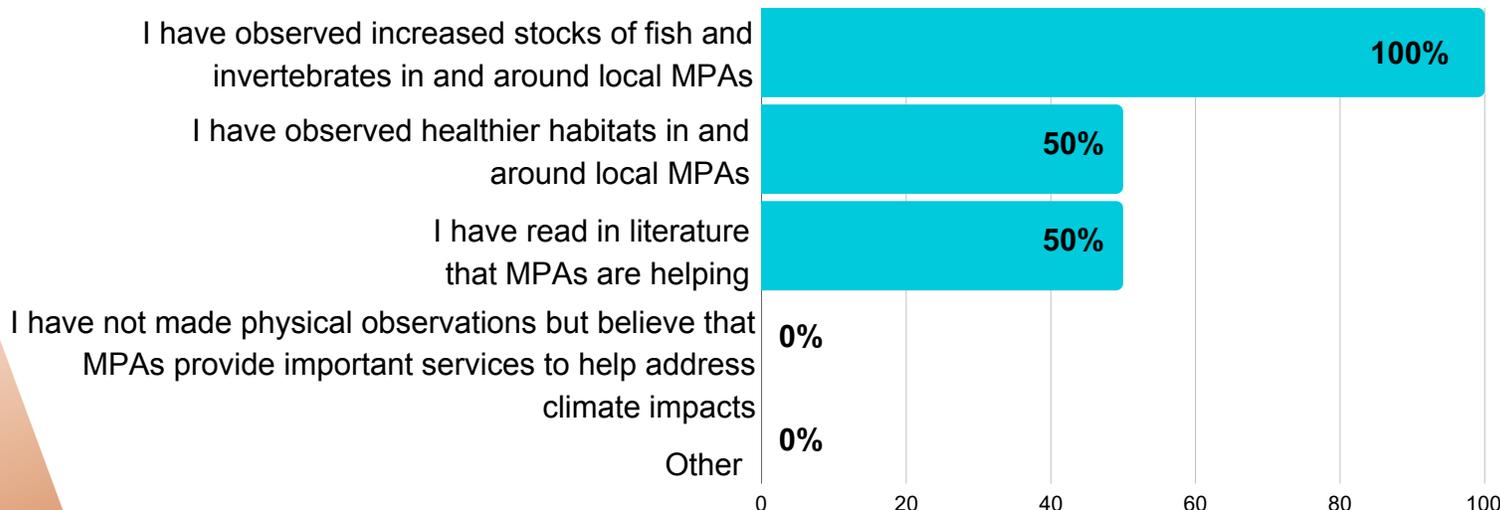
My local MPAs are offsetting/helping address these impacts to my local coastal ecosystems.

A majority of respondents felt that their local MPAs are offsetting/ helping address impacts to local coastal ecosystems. In particular, 100% agreed that MPAs are strongly (0%) or somewhat (100%) helping to address climate impacts to local ecosystems.



“Our MPAs are helping increase fish stocks and healthy ecosystems, providing fish for local recreational, commercial, and subsistence anglers and building a strong ecosystem that will handle climate impacts better.” - Respondent

Respondents who **agreed** local MPAs are offsetting/helping address impacts to your local coastal ecosystems were asked why*



*Respondents were allowed to choose more than one answer



TAKEAWAY #3

Respondents are concerned about the impacts of climate change on coastal communities

3. Rank your biggest concerns about how the following **climate impacts affect the health** (ability to function and thrive) **of your community or your community's resilience** (ability to bounce back).

Concerns ranked from biggest to smallest:

- 1 Warming and changing oceans further accelerating and exacerbating climate change on a larger scale
- 2 Impacts to species used for sustenance
- 3 Impacts to infrastructure
- 4 Widening of existing social inequalities
- 5 Loss of economic resources or opportunities
- 6 Impacts to culturally important species
- 7 Loss of aesthetically, culturally, and/or spiritually important sites
- 8 Reduction of recreational opportunities
- 9 Diversion of resources that could be used for other community programs/priorities



“Road out to Hamilton and Descanso beach area - not sure if related to [climate change] but if there was an increase in storms with increased intensity, and increase in runoff will cause issues for that hillside. Increased cost to city to repair it and diversion of funds that could otherwise be used elsewhere.” - Respondent

“Parsons [Landing has the] biggest kelp issues - due to water temperature and movement.” - Respondent



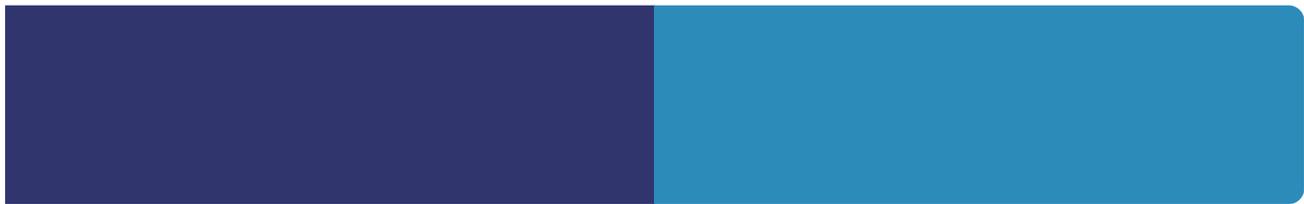


TAKEAWAY #4

Respondents believe MPAs are helping address climate impacts on communities

4. Indicate how strongly you agree or disagree with the following statement:

My local MPAs are offsetting/helping address climate impacts that affect the health (ability to function and thrive) **of my community or my community's resilience** (ability to bounce back)



Agree
50%

Neither agree nor disagree
50%



“I agree that my local MPAs are offsetting/helping address climate impacts since there is scientific evidence that MPAs are at the very least protecting the biodiversity and resilience of wildlife that are found within the MPAs. Biodiversity alone is crucial for thriving ecosystems. Although there is not enough evidence just yet that this expands to also climate resilience, protecting and helping ecosystems will in turn make them more resilient to external factors.” - Respondent

TAKEAWAY #5

Respondents believe marine management is a priority for addressing climate change

5.1 How would you **prioritize marine management alongside other climate change solutions** (such as renewable energy and carbon sequestration)?



5.2 Rank what you believe are the **most important priorities for adaptively managing MPAs** specifically in the face of climate change.

Priorities ranked from most to least important

- 1 Allow for restoration activities within MPAs
- 2 Protection of blue carbon ecosystems (kelp, seagrasses)
- 3 Research and monitoring projects to collect more data to inform decisions
- 4 Expansion of protected areas and stronger protections
- 5 Integration of Traditional Ecological Knowledge (TEK) into MPA management and research
- 6 Consider addition of dynamic MPAs that address conditions impacting California currents
- 7 Co-management of MPAs between tribes and state governing agencies
- 8 Take necessary management action to allow for landward migration of submerged aquatic habitats



TAKEAWAY #6

Respondents believe climate action is a high priority for their community

6. How would you **prioritize climate change alongside other drivers of political, demographic, and/or socioeconomic change** impacting your community?



Respondents had the option to mention **the most important general climate change solution along the coast** (i.e. offshore wind, managed retreat, return of coastal land to tribal management, etc.)?

Understanding infrastructure impacts Infrastructure Improvements
 Renewable energy

Integrated Land/Water Management

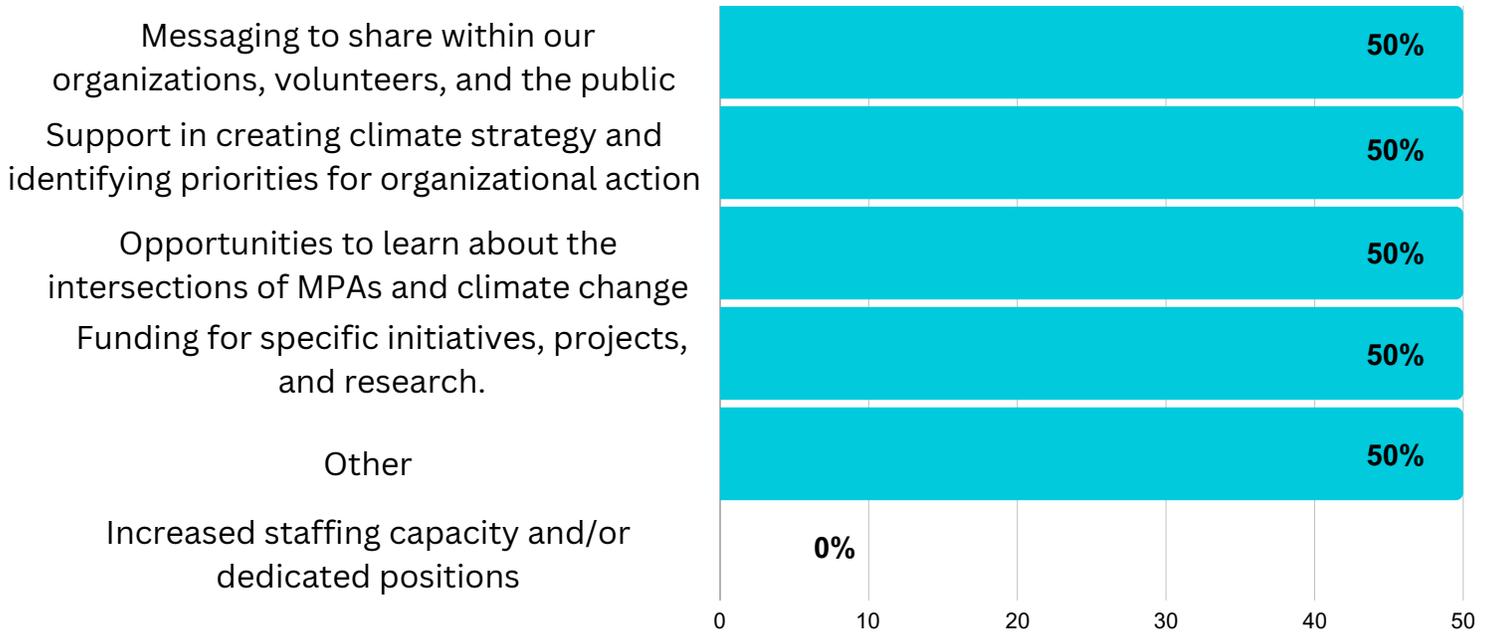
Allowing Restoration inside MPAs



TAKEAWAY #7

Highest needs of respondents

7. What are the **needs of your organization/agency/tribe/business/community** in relation to MPAs and climate change?*



“A climate action plan for Catalina (an all encompassing plan, not just for [sea level rise], related to the Avalon 2030 general plan but not specific to climate change) since the climate plan has not been updated since 2018, education and outreach, infrastructure improvements, restoration within MPAs, and integrated land/water management.” - Respondent

“Community science” - Respondent

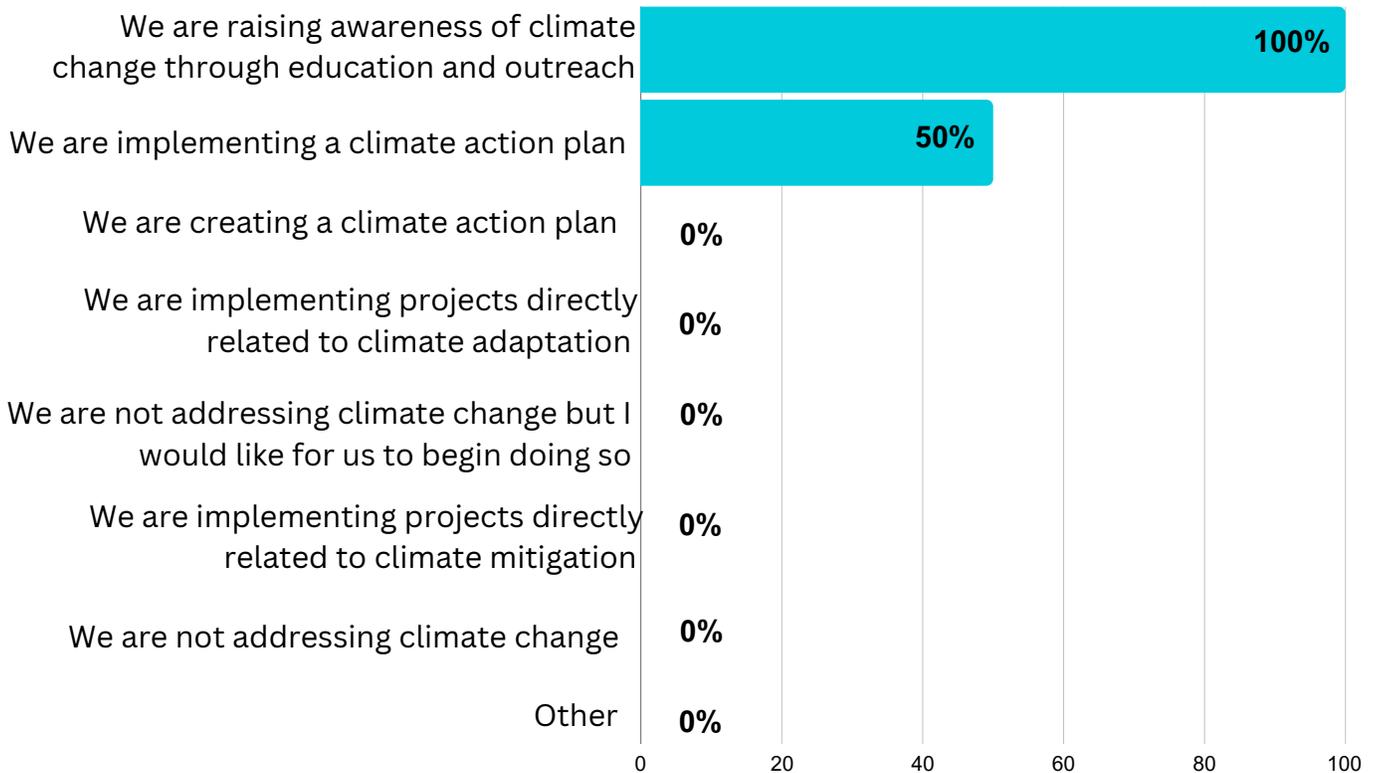


*Respondents were allowed to choose more than one answer

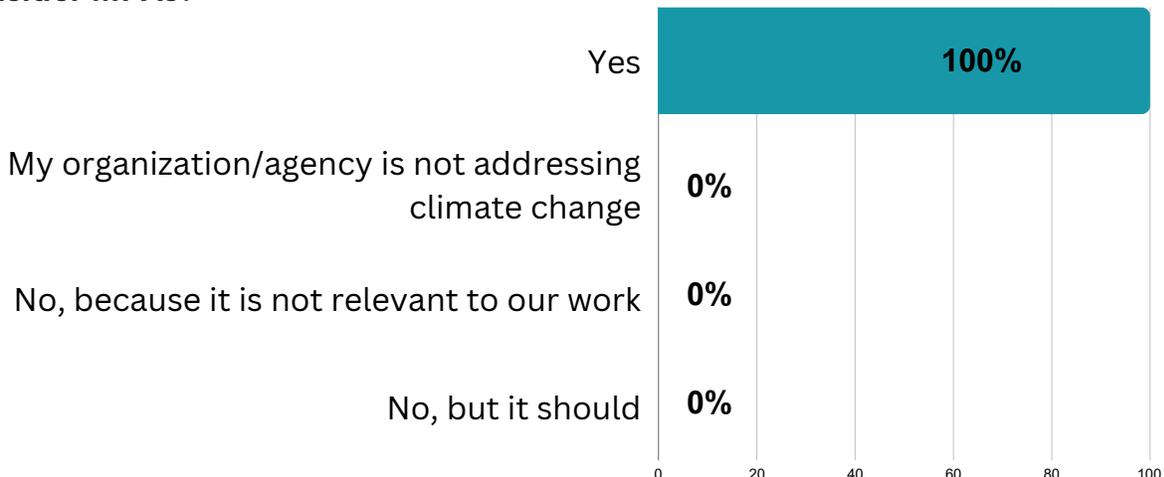
APPENDIX A

Community Work

How is your organization/agency/tribe/business/community addressing climate change?*



Do the climate actions of your organization/agency/tribe/business/community incorporate or consider MPAs?



*Respondents were allowed to choose more than one answer

APPENDIX A

Community Work and Resources

The following information/resources were provided by participants in regards to the work that is already occurring within Catalina Island and relevant community resources.

What is currently being done to address climate change:

- [City of Avalon Sea Level Rise Vulnerability Assessment](#) & [City of Avalon 2030 General Plan/Local Coastal Plan](#)
- Catalina Island Conservancy is doing [restoration](#)
- [Reef Check](#), [Partnership for Interdisciplinary Studies of Coastal Oceans](#) (PISCO) biodiversity sites, Multi-Agency Rocky Intertidal Network ([MARINe](#)), Bird Rock 41-year-old dataset, and [California King Tides Project](#)
- Some educators and camps are developing climate change curriculum (environmental stewardship, kelp forests, tragedy of the commons)
- MPA Collaborative's [climate kickoff webinar event](#) and [climate change 2-pager](#)
- [Southern California Edison Community Engagement Plan](#)

Resources

For resources on Climate Change and MPAs, as well as resources specific to your region, [visit our resources document \(click on this link or scan QR code\)](#).



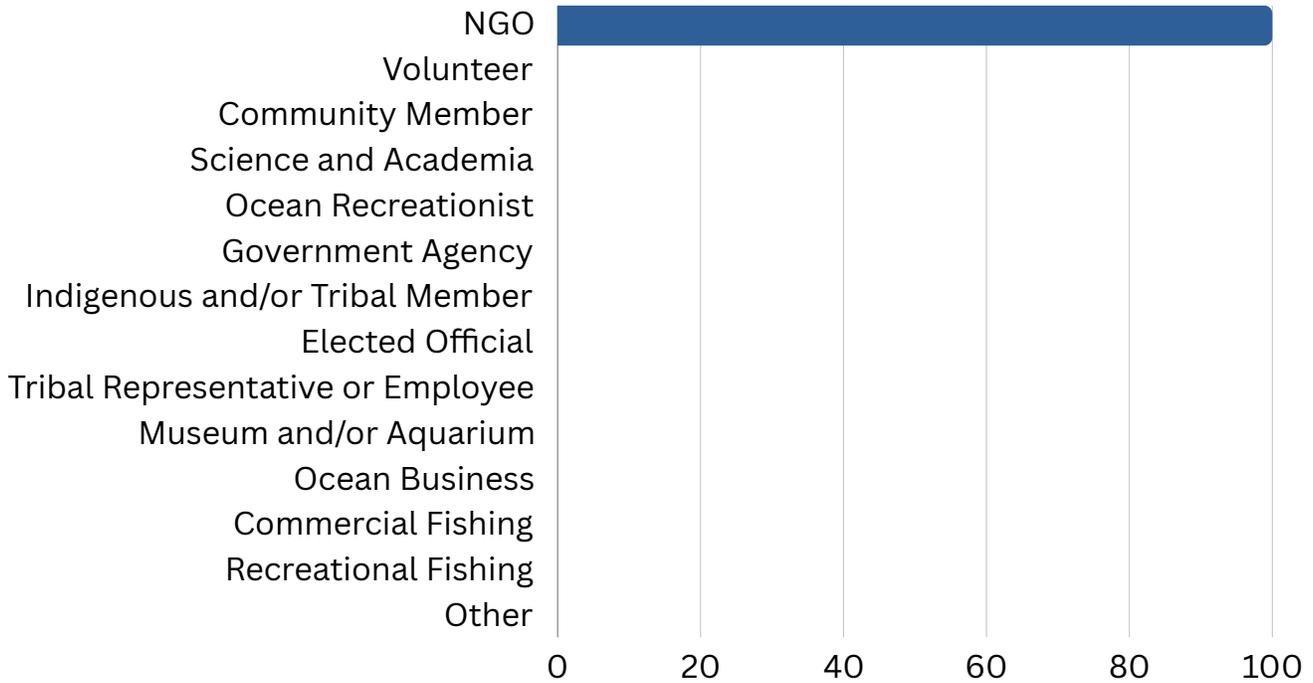
Resources



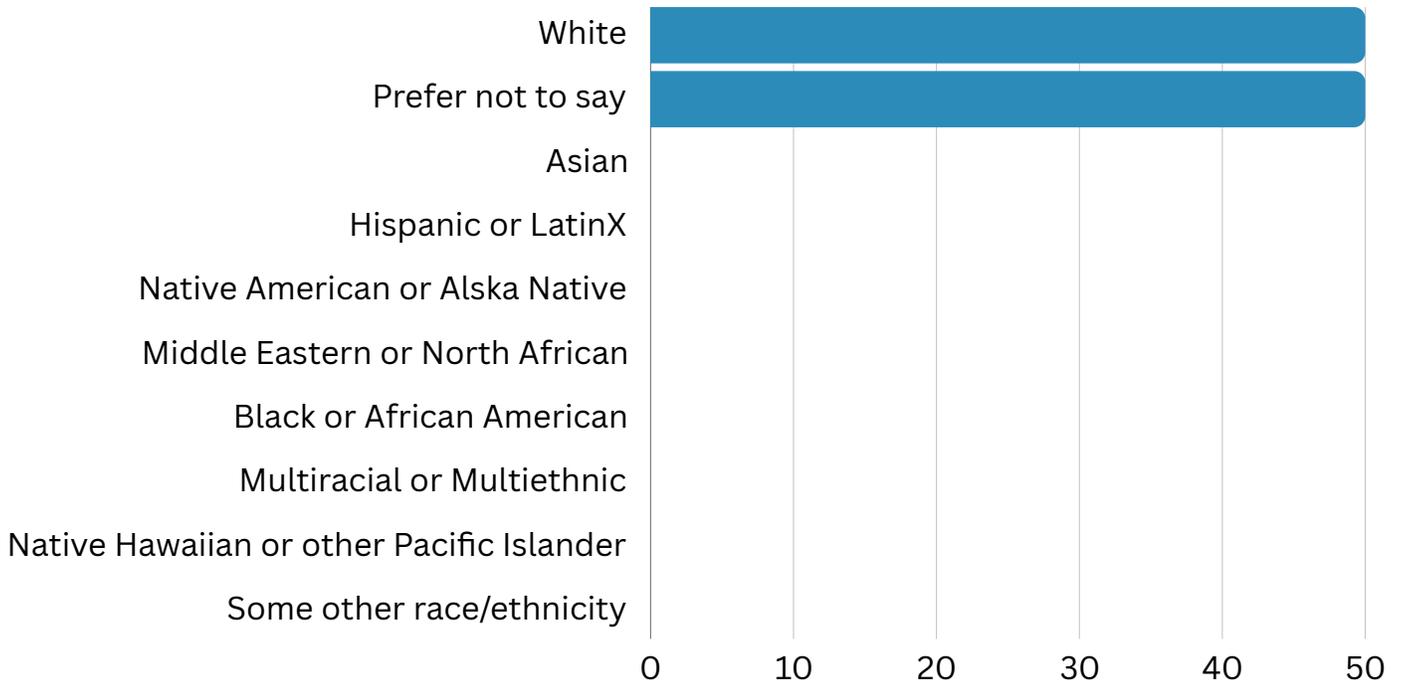
APPENDIX B

Demographics of survey respondents

Sector Affiliation (%)*

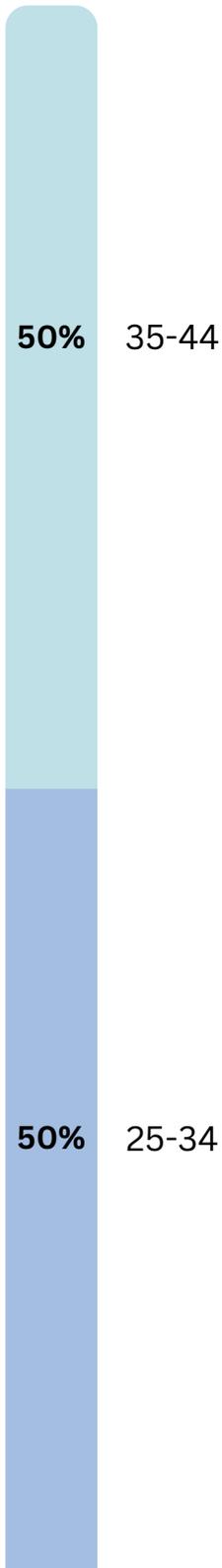


Which race, ethnicity and/or origin categories describe you? (%)*



*Respondents were allowed to choose more than one answer

Age Groups



APPENDIX B

Gender Identity



50% of respondents selected “**male**” as their gender identity.



50% of respondents selected “**female**” as their gender identity.



0% of respondents selected any of the following gender identities: “Non-binary”, “Transgender”, “Not listed/Option to specify”

Highest level of education



Bachelor’s degree



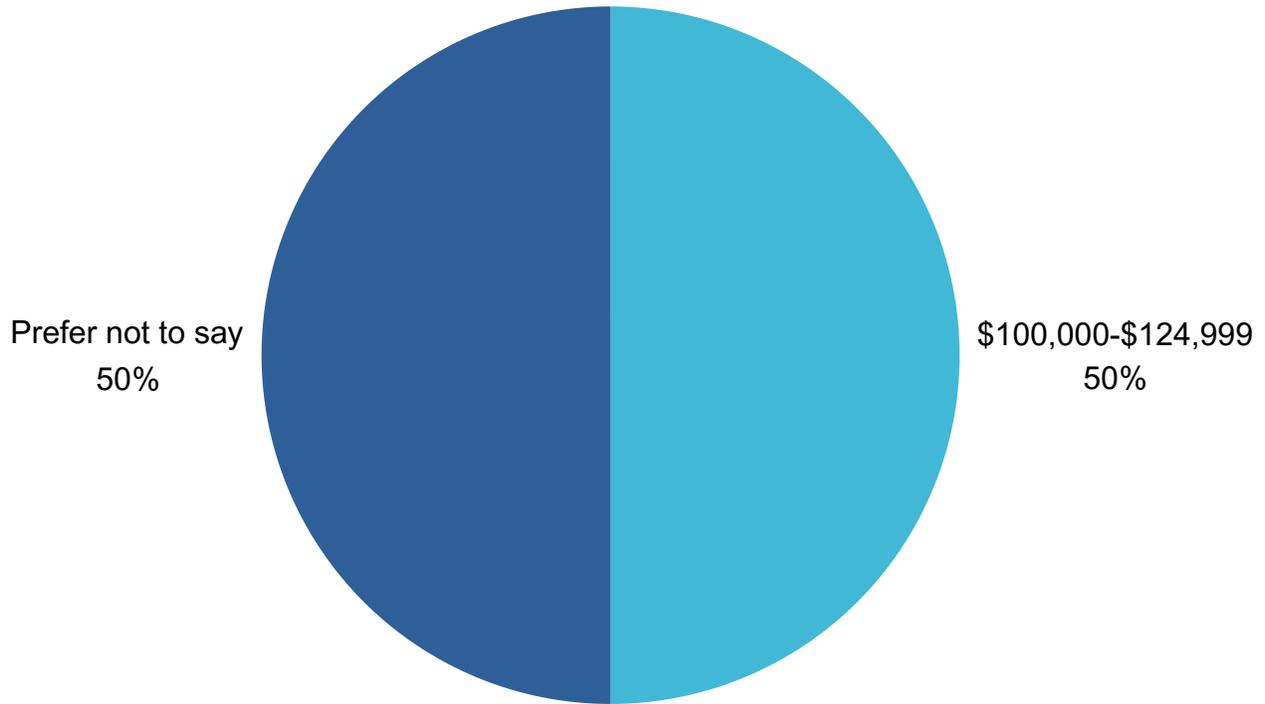
Master’s degree

0% of respondents selected any of the following: “some high school or less,” “high school or GED,” “some college, but no degree,” “associate’s or technical degree”

0% of respondents selected any of the following age groups: “Under 18,” “18-24,” “45-54,” “55-64,” “65-74,” “75-84” and “over 85”.

APPENDIX B

Annual household income (before taxes) in 2022





ABOUT THE MPA COLLABORATIVE NETWORK

The MPA Collaborative Network (CN) ensures that MPAs are effective by providing a robust structure for civic engagement in MPA management. The CN's 14 county-based volunteer groups (collaboratives) bring together over 1,700 members representing hundreds of distinct and diverse Californian organizations, agencies, Tribes, individuals, interests, and backgrounds for a more comprehensive and localized approach to resource management.

For more information about the MPA Collaborative Network, visit <https://www.mpacollaborative.org/>

For more information about California's MPA Network, visit <https://wildlife.ca.gov/Conservation/Marine/MPAs>

Photo credit: Aubrie Fowler, South Coast Specialist,
MPA Collaborative Network