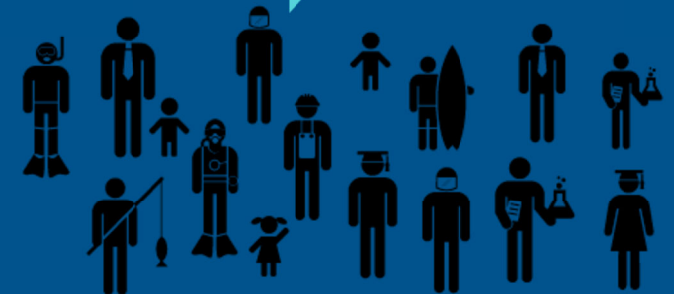


CINMS Management Plan Update Process

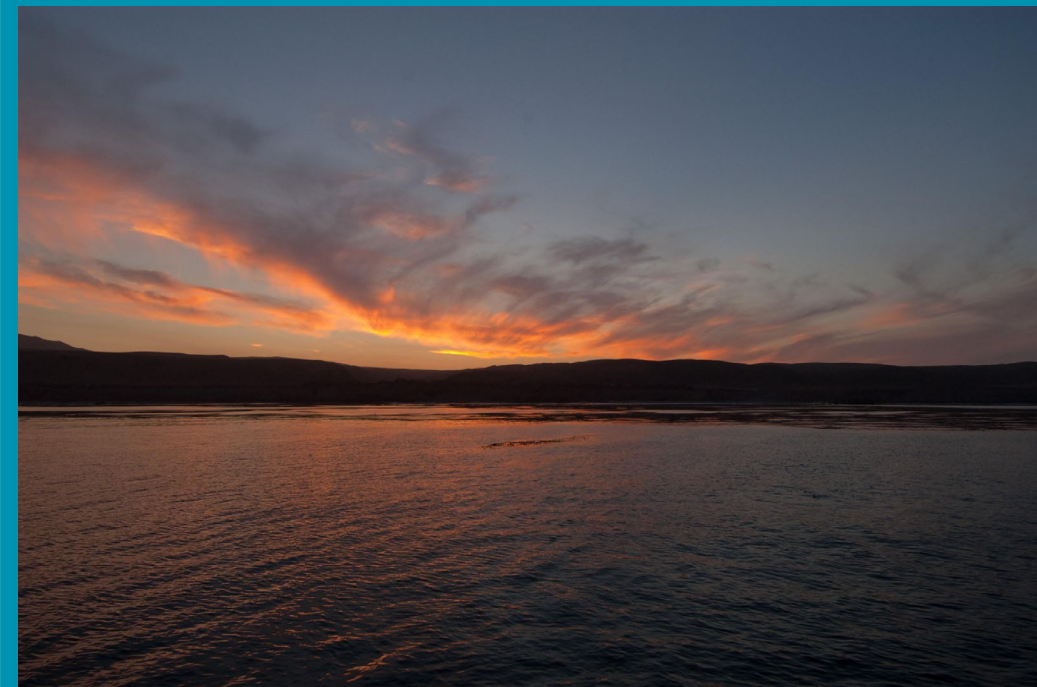
Update for the Sanctuary Advisory
Council

May 15, 2020



Agenda

1. Status Update
2. Management Plan Structure
3. Action Plan Topics
4. CINMS Climate Change Impacts:
Zachary Cannizzo, Ph.D.
5. Next Steps - Options for Council
Assistance
6. Possible council action:
Subcommittees for Climate
Change & Marine Debris



1. Status of Management Plan Update Process



= public and advisory council input



= step complete



1. Status of Management Plan Update Process, continued

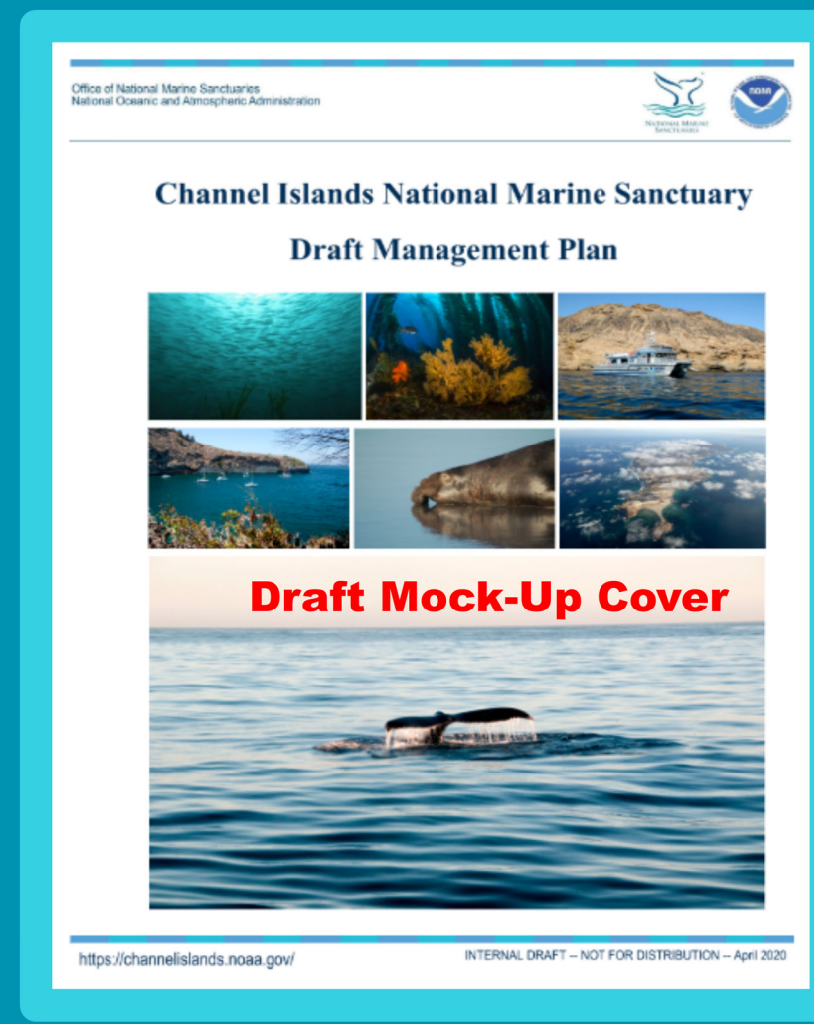
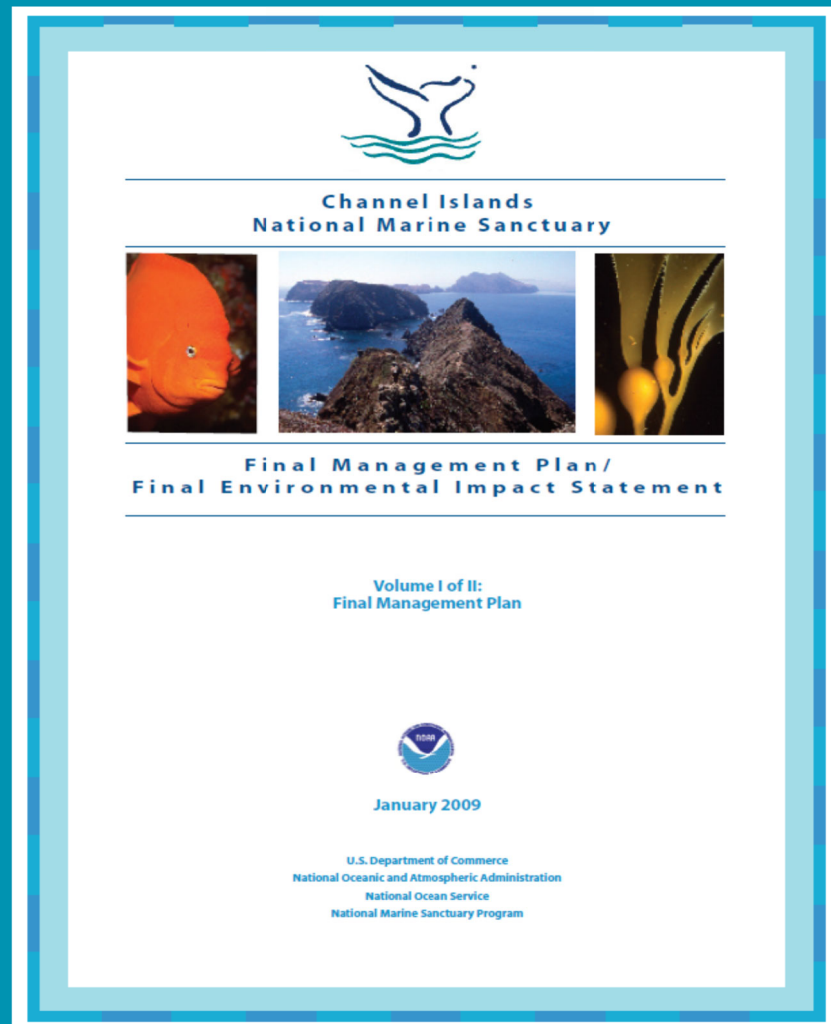
At the last council meeting (March 20):

- Review of council and staff ratings of public scoping comments

Recent staff progress:

- Program coordinator meetings
- Reviewing proposed structure of the draft management plan
- Discussion of NEPA Environmental Review assessment requirements
- Discussion of issues that could be high priority within the plan (we have more to cover)

2. Management Plan Structure



2. Management Plan Structure



Section 1 - Introduction

Section 2 - Issue based action plans

Section 3 - Program based action plans

2. Management Plan Structure: Section 1

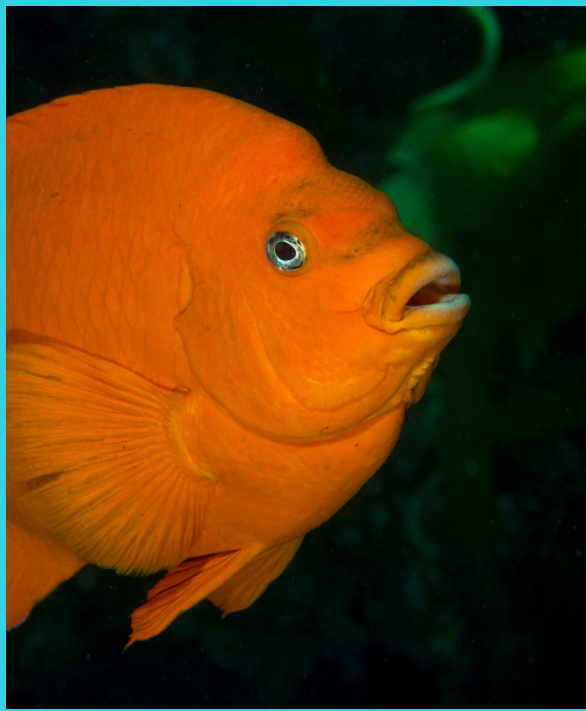
Section 1 - Introduction

1.1 Background

1.2 Setting

1.3 Regulations

1.4 Process and
Implementation



2. Management Plan Structure: Section 1

Section 1 - Introduction

1.1 Background

1.2 Setting

1.3 Regulations

1.4 Process and
Implementation



Introduction to CINMS and management plan

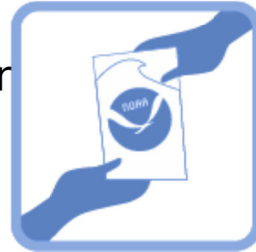
National Marine Sanctuaries
Act

Ecosystem-Based
Management

CINMS Designation

History

Mission and Goals



Focus and Accomplishments

Research and Monitoring Program

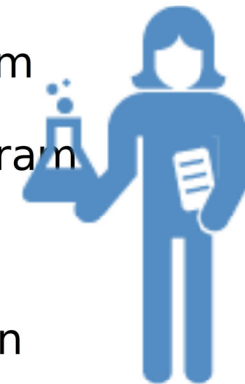
Resource Protection Program

Education & Outreach Program

Maritime Heritage Program

Operations & Administration

Public Participation in SAC



2. Management Plan Structure: Section 1

Section 1 - Introduction

1.1 Background

1.2 Setting

1.3 Regulations

1.4 Process and
Implementation



Human Environment

Regional Context
Socio-Economic Environment
Cultural Significance
Resource Use



Physical Environment

Regional Geography
Geology
Oceanography



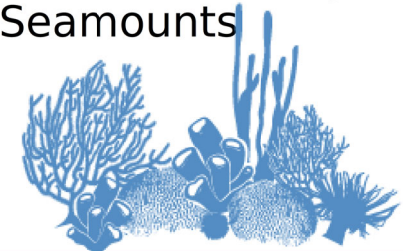
Living Marine Resources

Marine Mammals
Seabirds and Shorebirds
Fishes
Invertebrates
Algae and Surf Grass
Species of Special Concern



Natural Habitats of the Sanctuary

Rocky Shores
Kelp Forests
Sandy and Mud
Seafloor
Estuaries
Open Ocean
Deep Sea
Submarine Canyons
Seamounts



2. Management Plan Structure: Section 1

Section 1 - Introduction

1.1 Background

1.2 Setting

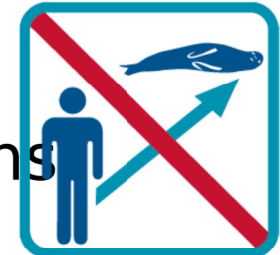
1.3 Regulations

1.4 Process and
Implementation

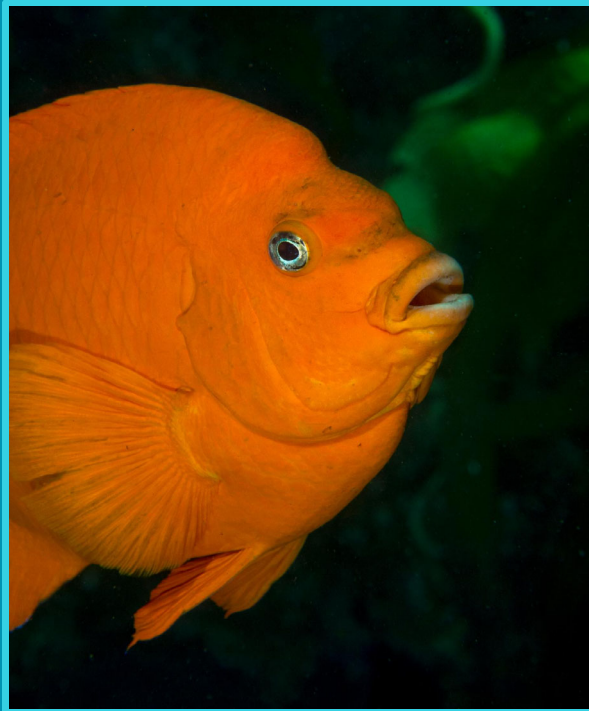


Brief Intro to Existing CINMS Regulations

- Scope of Regulations
- Prohibitions
- Marine Zones
- Exceptions to Prohibitions



2. Management Plan Structure: Section 1



Section 1 - Introduction

1.1 Background

1.2 Setting

1.3 Regulations

1.4 Process and
Implementation

Implementation

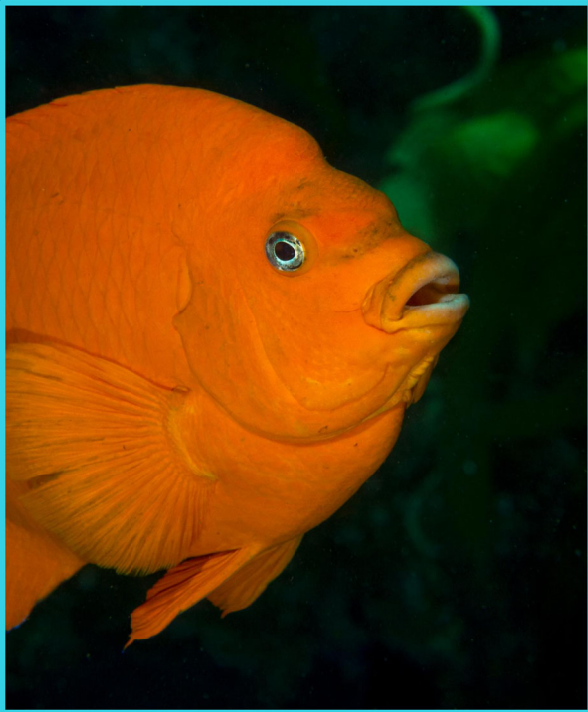
Performance Evaluation
Action Plan Prioritization
Implementation Table

Process

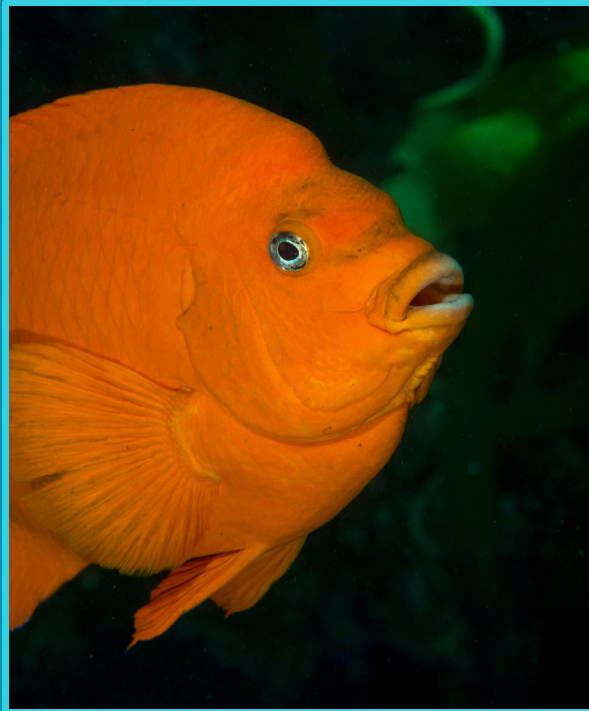
Management Plan Review
Condition Report
Public Scoping
Identification and Issue
Prioritization
Action Plan Development

Table I-2: Implementation Table

Implementation (w/ federal funding): H – High M – Medium L – Low			Implementation 5% per year increase	Implementation 5% decrease		
ISSUE BASED ACTION PLANS						
Action Plan #1			+	-		
Strategy 1: Title here	○	M	M → L	●	◐	



2. Management Plan Structure: Section 1



Section 1 - Introduction

1.1 Background

1.2 Setting

1.3 Regulations

1.4 Process and
Implementation

**Section 2 - Issue based action
plans**

**Section 3 - Program based action
plans**

2. Management Plan Structure: Section 2

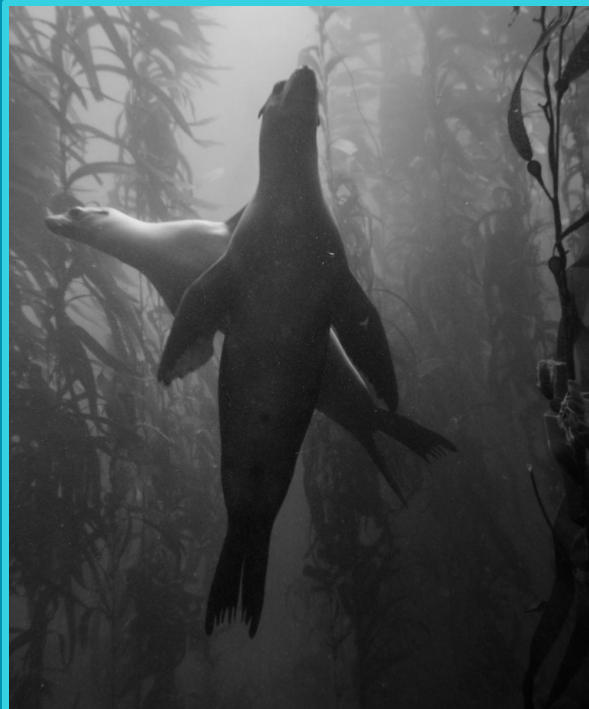
Section 2 - Issue based action plans

2.1 TBD

2.2 TBD

2.3 TBD

2.4 TBD



Issue-Based Action Plans will focus strategies and activities to address select high priority themes, bringing together sanctuary programs and tools. E.g., “climate change” or “marine debris”.

2. Management Plan Structure: Section 3

Section 3 - Program based action plans

3.1
Education &
Outreach

3.2
Research &
Monitoring

3.3
Maritime
Heritage

3.4
Resource
Protection

3.5 Operations
&
Administration

Program-Based Action Plans will describe strategies and activities that support ongoing core functions/departments at CINMS



3. Action Plan Components & Issue Topics



Action Plan Components

- Goal statement, Background on the issue, Strategies CINMS will use to address the issue, Specific planned activities; Performance metrics.

Issue-Based Action Plan Topics

- Staff first considered resource protection threats that received high levels of interest/support based on advisory council ratings worksheets.

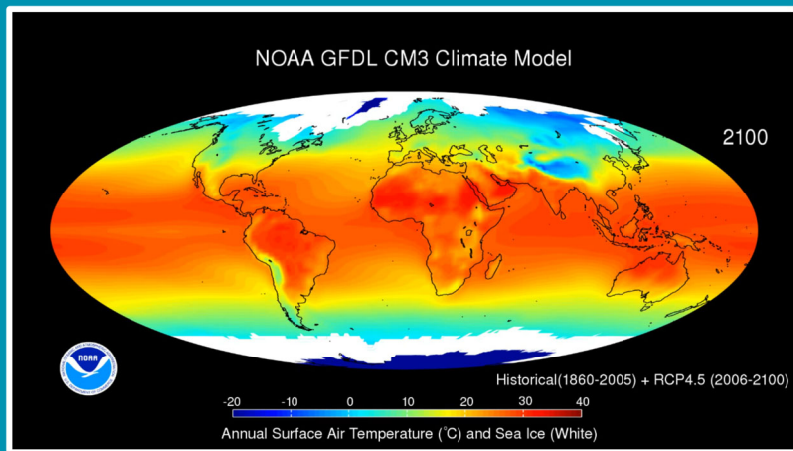
3. Action Plan Components & Issue Topics

Three topics (thus far) staff agree should be Issue-Based Action Plans:

climate change

marine debris

vessel traffic



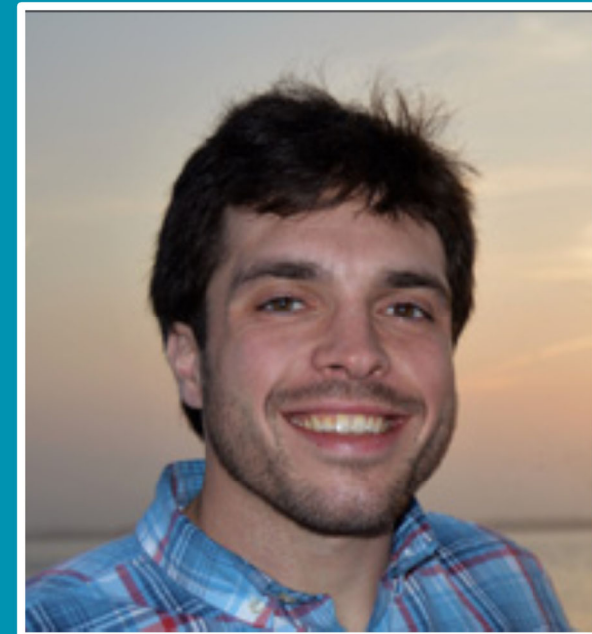
4. Climate Change Impacts Profile for Channel Islands National Marine Sanctuary

Guest Speaker:

Dr. Zachary Cannizzo

Visiting Climate Scientist & Climate
Coordinator,
NOAA Office of National Marine
Sanctuaries & NOAA Climate Program
Office

zac.cannizzo@noaa.gov



Climate Change Impacts Profiles



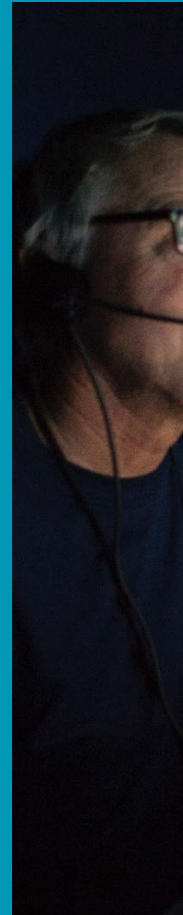
Purpose and Process



- Four major climate drivers
- Two case-studies
 - Regional-scale issue
 - Focal resource
- What is the sanctuary doing?

Science Driven

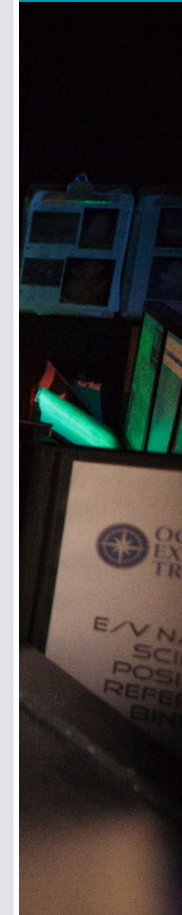
- Extensive Literature Review
- Expert Input
- CINMS Profile – 71 cited sources



Citations

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To view the full report online visit: <https://sanctuaries.noaa.gov/management/climate/impact-profiles.html>



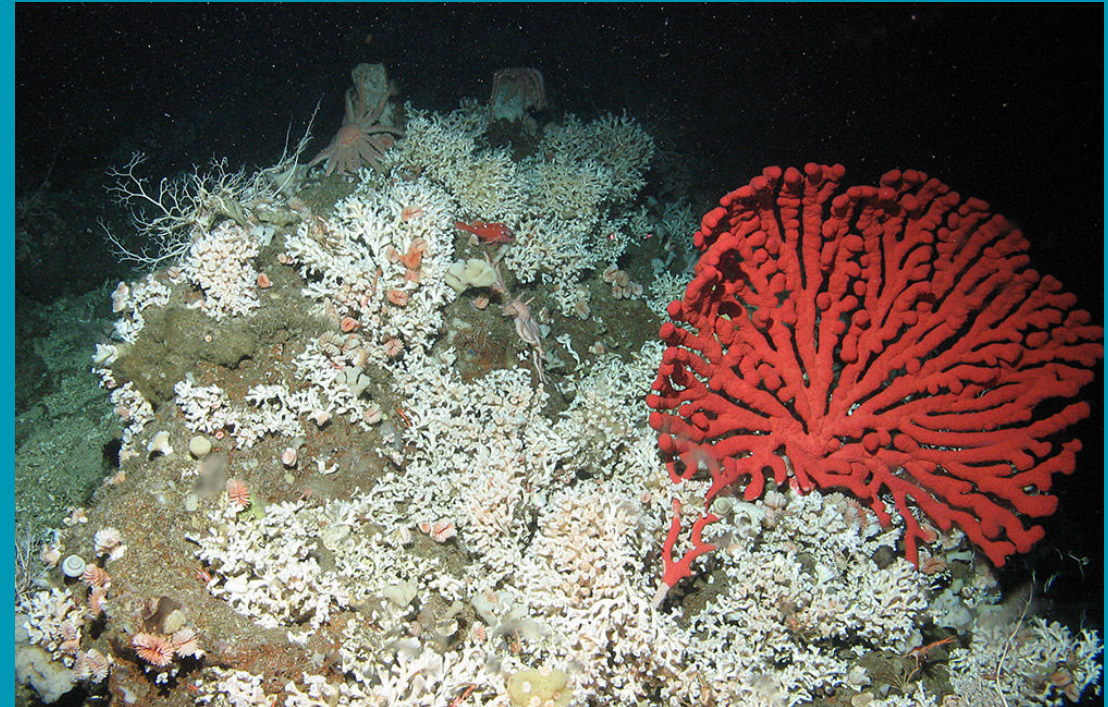
Channel Islands NMS Profile

- Major Climate Drivers
 - Ocean Acidification
 - Increasing Water Temperatures
 - Changing Oceanographic Processes
 - Rising Ocean Waters
- Regional-Scale Issue
 - Harmful Algal Blooms
- Focal Resource
 - Kelp



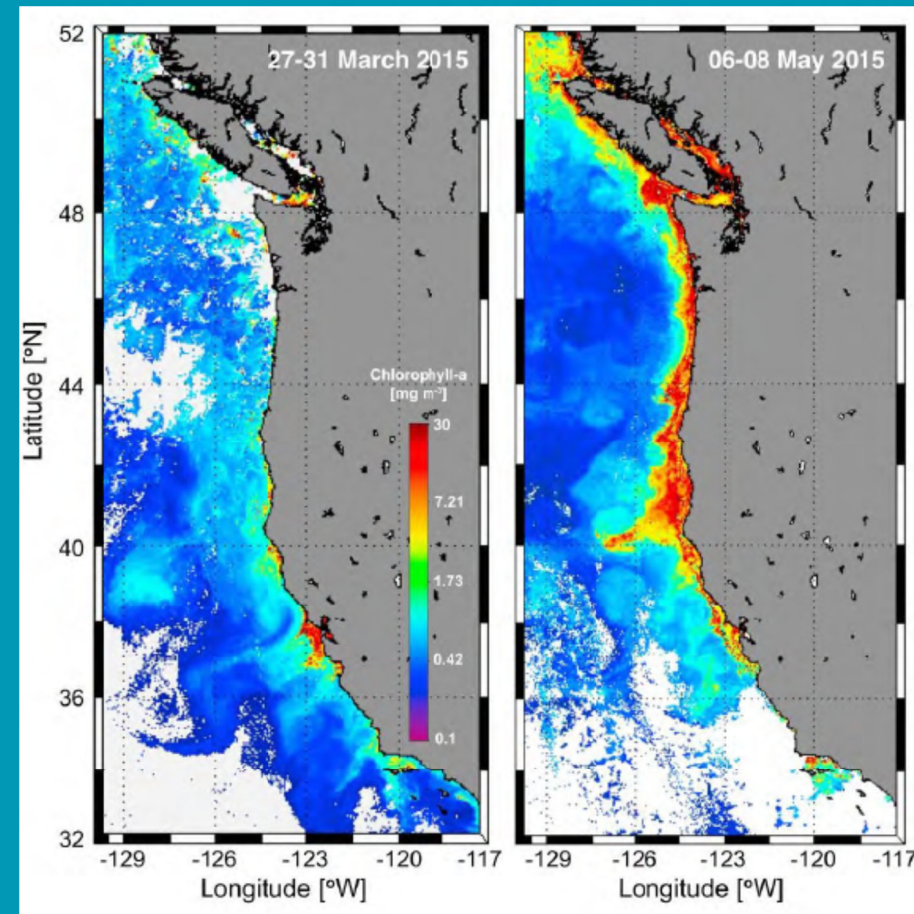
Ocean Acidification

- CA waters increasing in acidity much faster than global average
 - 60% since 1895 vs 30% since 1790
- Sanctuary resources are vulnerable
 - Deep water corals
 - Trophic effects
- Northern islands may be a refuge



Harmful Algal Blooms

- The Santa Barbara Channel has been a HAB hot-spot since 1998
- HABs could become larger, more frequent, more toxic, and increase in duration



ONMS 2019; adapted from McCabe et al. 2016

Kelp and Climate Change



- Kelp as Blue Carbon
 - Globally, macroalgae could sequester 13% more carbon than annual emissions of LA
- Warming could reduce reproduction
- Kelp in CINMS appear resilient to warming
 - Compared to other west coast populations

Increasing Water Temperatures



- Could warm 7°F by 2100
- Contributing to deoxygenation
- Community sensitive to ecological shifts

Changing Oceanographic Processes

- Changes to currents uncertain
 - Could have large impacts
- El Niño events to increase in frequency and intensity
- 2013-2016 marine heatwave
 - Could be good predictor of future conditions



Rising Ocean Waters



- Impacts on the islands uncertain
- Could threaten haul-out and intertidal habitat
- Could “drown” seagrasses

An Eye on the Future



5. Next Steps: Options for Council Assistance

1. Wait for complete Draft Management Plan to be ready for presentation to the SAC, then provide review

comments
from least involved to most involved

2. Receive process updates at SAC meetings and provide input/feedback on select issues/items

3. Participate in and comment during some single-issue Webinar sessions open to all council members and the public

4. Schedule some expert speakers/panels at select SAC meetings to discuss management plan topics, with council

5. Establish a limited number of short-term council Subcommittees inviting a few members to work with staff on action plan development during key stages

6. Request specific existing council Working Groups to take on development of action plan recommendations for select topics

7. Form and convene new short-term Working Groups to focus on development of action plan recommendations for select topics

6. Request for Council Action

Council authorization to convene two Subcommittees

1 - Climate Change



2 - Marine Debris



Purpose: To assist with development of action plans on these topics, receiving and responding to information from staff. Recommendations to be brought back to the full council for review/forwarding to CINMS.

Timing: Probably within the next three months, then disbanding.

Membership: To be determined soon. 2-3 council members. Ideal participants would have some subject matter knowledge and good awareness of CINMS programs/capabilities.

For More Information

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Program Support Specialist

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[https://channelislands.noaa.gov/
manage/plan/revision.html](https://channelislands.noaa.gov/manage/plan/revision.html)