

# 6. Infographics

R<sup>3</sup> Training

[noaa-iaa.github.io/r3-train](https://noaa-iaa.github.io/r3-train)

Ben Best

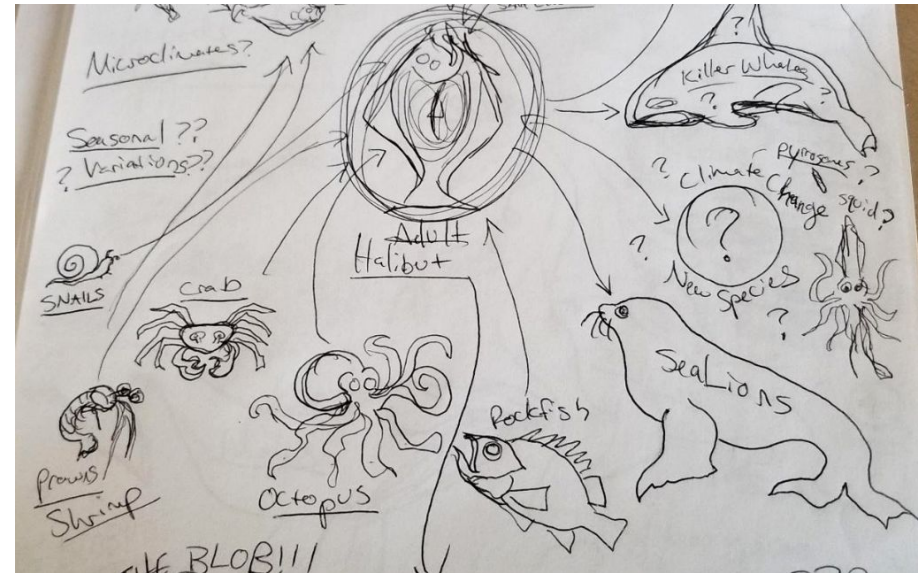
2021-07-26

# NOAA Integrated Ecosystem Assessment (IEA)

## Approach



## Define the System and Management Goals **conceptual model**

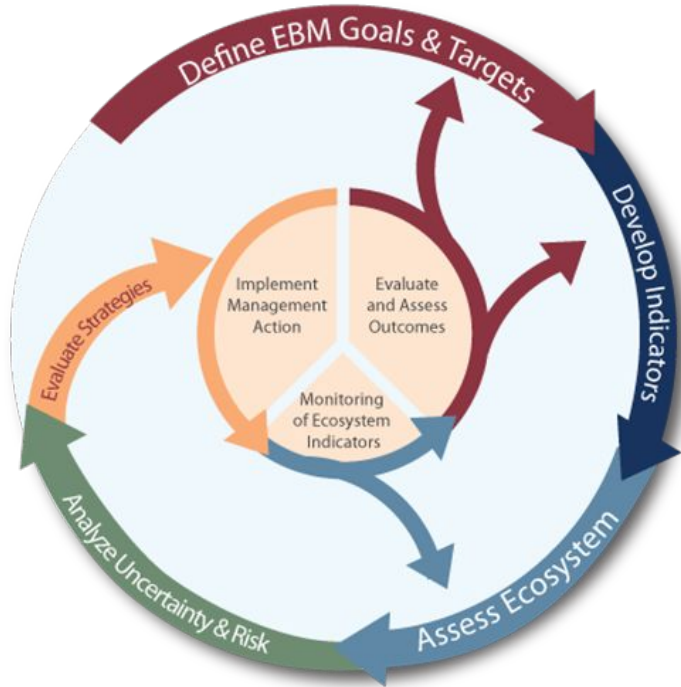


A halibut conceptual model developed during the Ecological Connections section of the workshop. Photo: NOAA IEA.

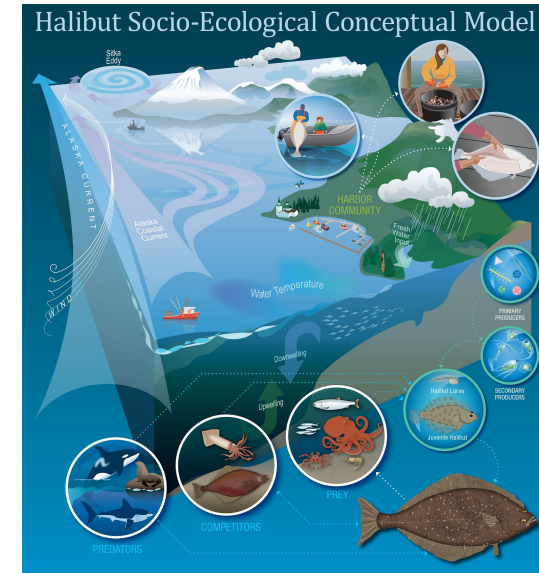
[IEA-Booklet.pdf](#)

# NOAA Integrated Ecosystem Assessment (IEA)

## Approach

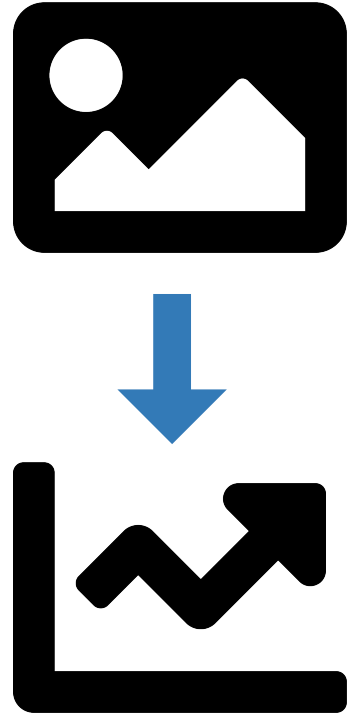


## Define the System and Management Goals *conceptual model*



This conceptual model depicts the social and ecological ecosystem around Halibut in the Gulf of Alaska. To learn more about how it was made go [here](#).

How to link  
conceptual model  
to  
indicators?

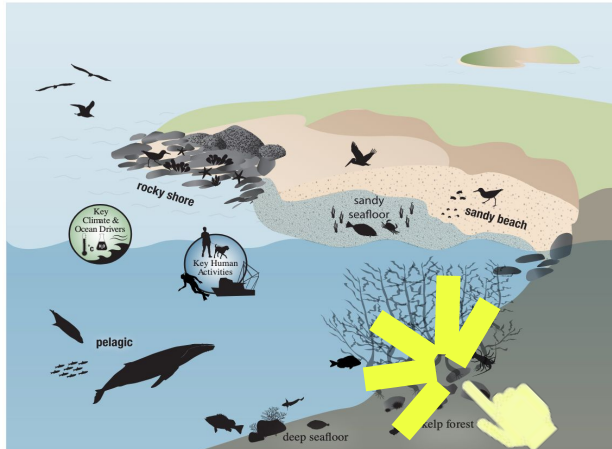


# Interactive Infographics

Navigate a *conceptual model* of the ecosystem by clicking an **icon** (or **text** in list)

## Overview

Please explore the interactive ecosystem for Channel Islands National Marine Sanctuary. Navigate by clicking on icons representing major habitats, species of interest, major climate and ocean drivers, and key human activities. These interactive icons and silhouettes access status and trend data, images, web stories and other supporting content.



Text: ☐ OFF

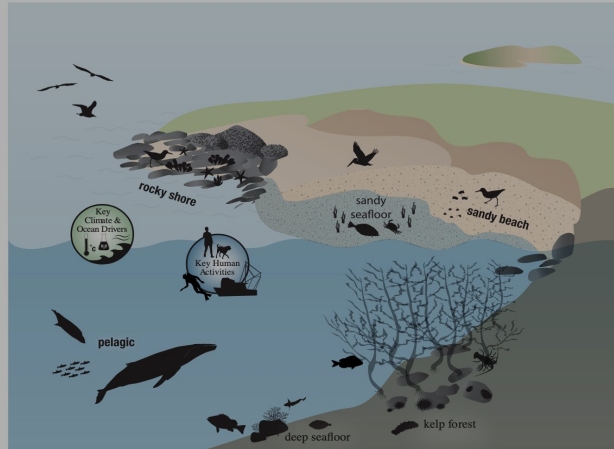
- Deep Seafloor
- Kelp Forest
- Pelagic
- Rocky Shore
- Sandy Beach
- Sandy Seafloor
- Key climate & ocean drivers
- Key human activities and impacts

# Interactive Infographics

Navigate a **conceptual model** of the ecosystem by clicking on **icon** (or **text** in list) to visit another **webpage** with ecosystem detail, then click on icon (or text)

## Overview

Please explore the interactive ecosystem for Channel Islands National Marine Sanctuary. Navigate by clicking on icons representing major habitats, of interest, major climate and ocean drivers, and key human activities. These interactive icons and silhouettes access status and trend data, images, stories and other supporting content.



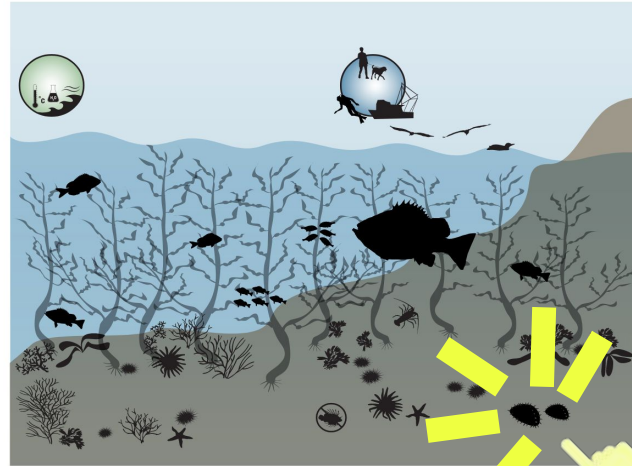
Text: OFF

- Deep Seafloor
- Kelp Forest
- Pelagic
- Rocky Shore
- Sandy Beach
- Sandy Seafloor
- Key climate & ocean drivers
- Key human activities impacts

## Kelp Forest



Like towering forests on land, kelp forests are as a biodiverse as they are productive. The giant kelp can grow to be over 100ft tall, drawing down carbon dioxide and towering over understory algae and providing food and shelter for many thousands of fishes, invertebrates, and algae.

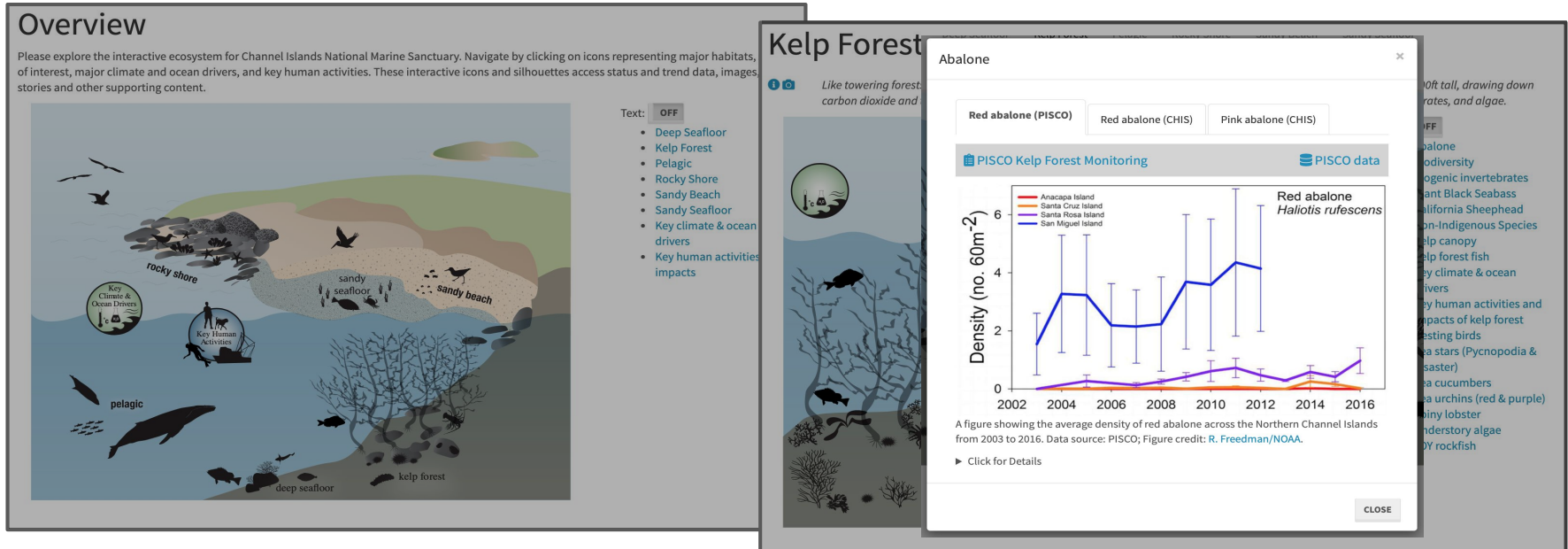


Text: OFF

- Abalone
- Biodiversity
- Biogenic invertebrates
- Giant Black Seabass
- California Sheephead
- Non-Indigenous Species
- Kelp canopy
- Kelp forest fish
- Key climate & ocean drivers
- Key human activities and impacts of kelp forest
- Nesting birds
- Sea stars (Pycnopodia & Pisaster)
- Sea cucumbers
- Sea urchins (red & purple)
- Spiny lobster
- Understory algae
- YOY rockfish

# Interactive Infographics

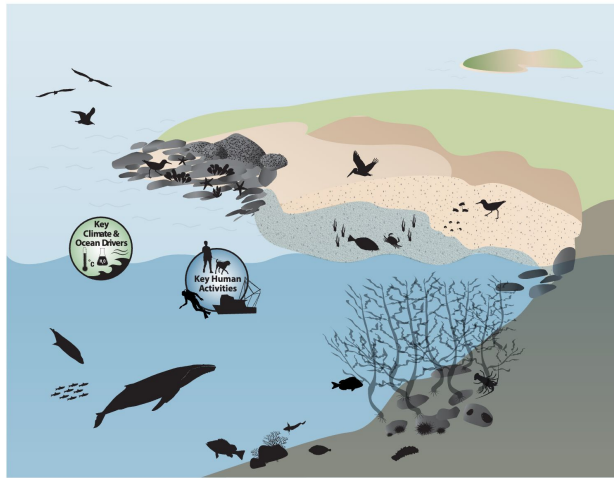
Navigate a **conceptual model** of the ecosystem by clicking on **icon** (or **text** in list) to visit another **webpage** with ecosystem detail, then click on icon (or text) to pop open a **modal** of data related figure(s)





# Interactive infographic website examples

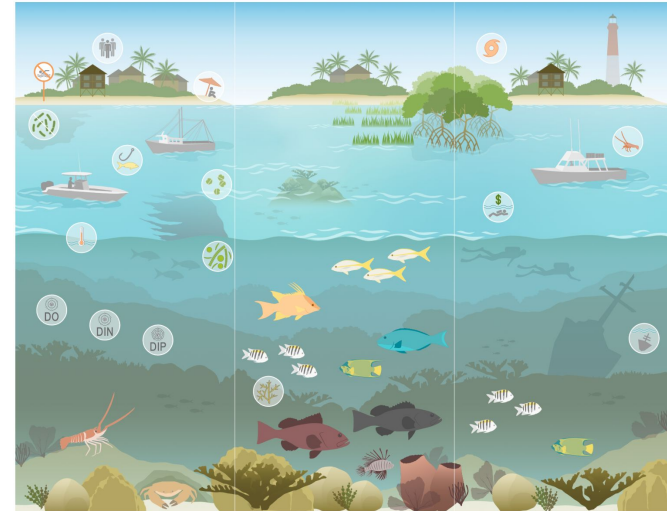
## [Channel Islands Sanctuary](#) ([source](#))



Text in image: **off**

- Deep Seafloor
- Kelp Forest
- Key climate & ocean drivers
- Key human activities and impacts
- Pelagic
- Rocky Shore
- Sandy Beach
- Sandy Seafloor

## [Florida Keys IEA](#) ([source](#))



### ECOSYSTEM SERVICES^

- Housing disruption
- Recreational fishing licenses
- Spiny lobster commercial fishing trips from Monroe County
- Total tourism value in Monroe County
- Value of reef and mangrove coastal protection from storms in Florida Keys

### HABITAT

### HUMAN ACTIVITIES

### LIVING RESOURCES

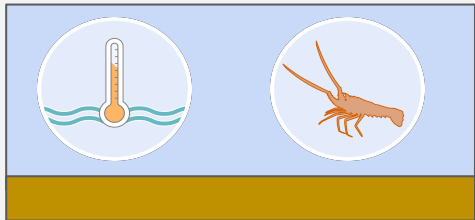
### MARITIME HERITAGE

### SANCTUARY WATERS



# Infograph*i*q: infographics that are intelligent ('iq')

**Art:** background + icons (\*.svg)



**Table:** link icons to modals (\*.csv)

icon	modal
temperature	temperature.html
lobster	lobster.html

[infographiqJS](#)

JavaScript libraries used:



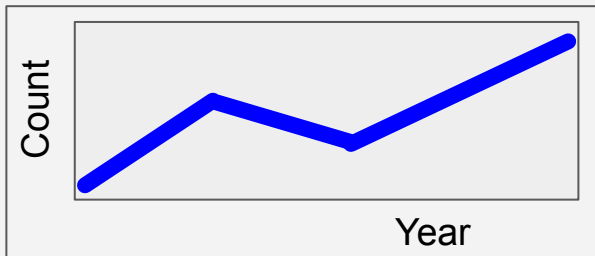
[D3](#):  
tweak SVG: color, links



[Bootstrap](#):  
modal windows

**Modal windows:** pages (\*.html)

**Figure(s)**



# infographiqJS demo

## Example of Infographic Functionality

Change the Infographic Display

**Outline color on infographic:**

- ☒ Yellow
- ☐ Red
- ☐ Blue
- ☐ Green

**Text list type:**

- ☒ Accordion
- ☐ List
- ☐ Sectioned List
- ☐ None

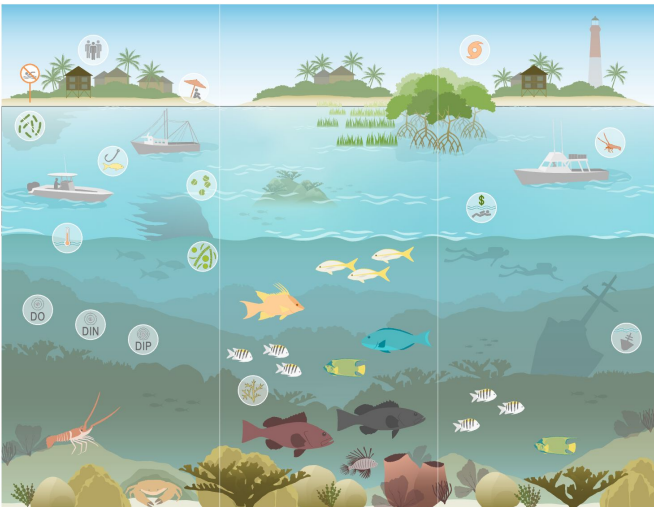
**Colored section headers:**

- ☒ None
- ☐ Default colors
- ☐ Ocean colors
- ☐ Summer colors

**Explanatory text toggle:**

- ☒ None
- ☐ Toggle off
- ☐ Toggle on

Redraw Infographic



Ecosystem services ^

- Housing disruption
- Recreational fishing licenses
- Spiny lobster commercial fishing trips from Monroe County
- Total tourism value in Monroe County
- Value of reef and mangrove coastal protection from storms in Florida Keys

Habitat v

Human activities v

Living resources v

Maritime heritage v

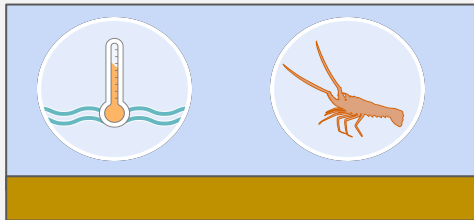
Sanctuary waters v

## Options:

- Outline color
- Text list type
- Colored section headers
- Explanatory text toggle

# Infographiq: broader approach to interactive infographics

**Art**: background + icons (\*.svg)



**Table**: link icons to modals (\*.csv)

icon	modal
temperature	temperature.html
lobster	lobster.html

*infographiqJS*

**Figure content:**

**Data** (\*.csv)

e.g. time series

Year	Count
2020	25
2019	31

**OR**

**Image** (\*.png)

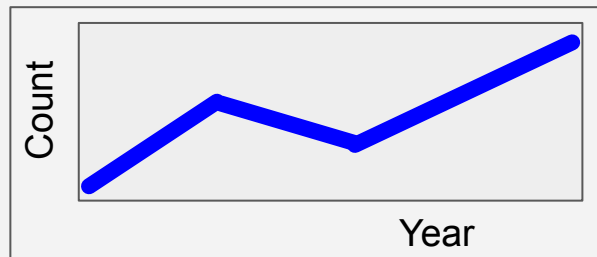
e.g. map



*infographiqR*,  
*plotJS-extra*,  
*onmsR*  
...

**Modal windows**: pages (\*.html)

**Figure(s)**



Lesson