

The Northeastern Regional Association of Coastal Ocean Observing Systems

*Our mission is to produce, integrate and communicate
high quality information that helps ensure safety,
economic and environmental resilience, and
sustainable use of the coastal ocean.*

NERACOOOS



IOOS | EYES ON THE OCEAN™

The Integrated Ocean Observing System (IOOS)



Produce | Integrate | Communicate

Operated By:

Federal Component:



Regional Component:



IOOS | EYES ON THE OCEAN™





79%

of NERACOOS funds go toward
ocean observations, modeling,
and data management



48,597

people used the
NERACOOS website
in 2016



organizations receive
funding
from NERACOOS



1.8 MILLION

web page views were
recorded for NERACOOS.org
and NERACOOS-funded buoys
on NDBC.NOAA.gov

160+

organizations
distribute **NERACOOS data**
on their websites

NERACOOS
had a



28%

increase in likes
on Facebook

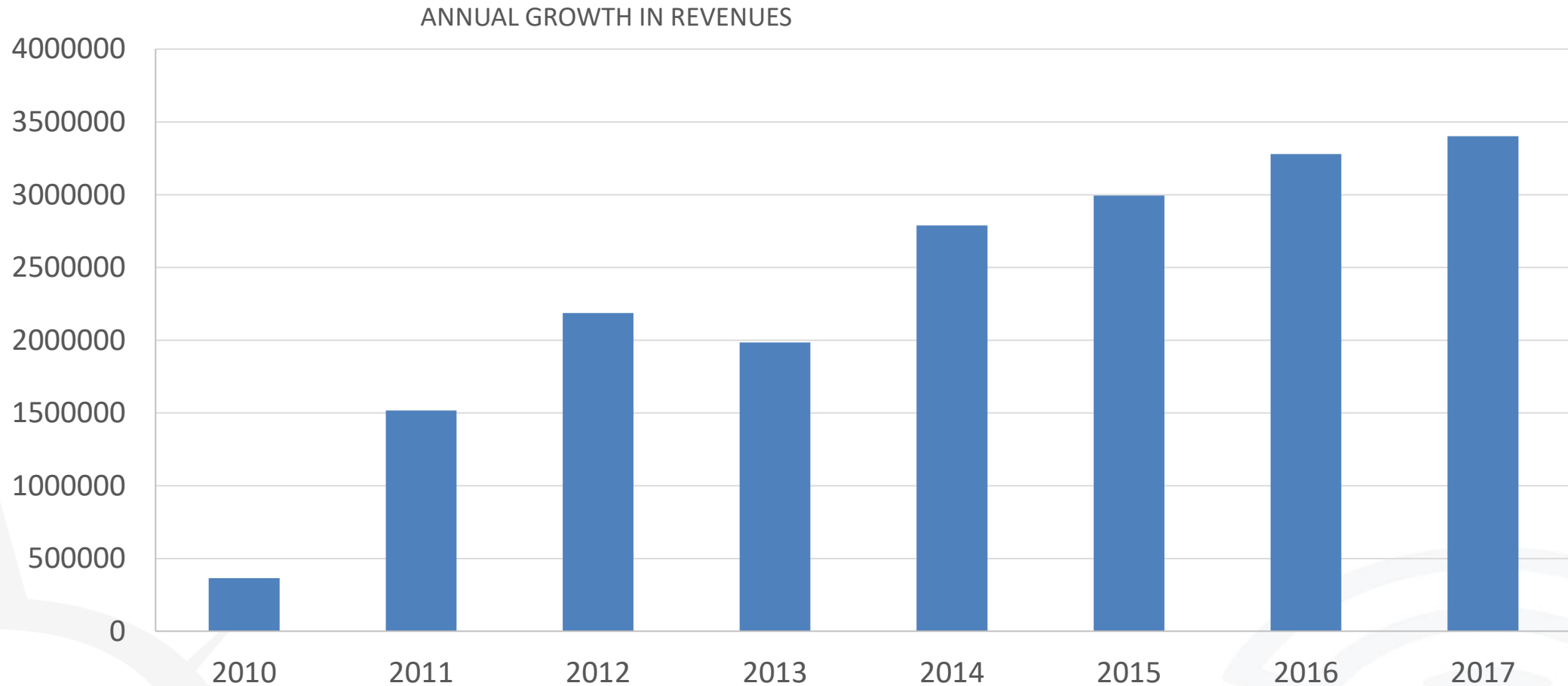
245

Ocean and atmospheric sensors
transmit environmental data **24/7**
with support from NERACOOS



IOOS | Integrated Ocean Observing System

How do you measure success?





'I am just one representative of the industry, everybody I know uses these [NERACOOS] buoys and they have them on their phones, so it's extremely important to us.'

- Jim Dow, Lobsterman, Maine Lobstermen's Association



“We use the buoy to help us manage the risk of navigating the oil barges through the canal.”

- Ed LeBlanc, US Coast Guard

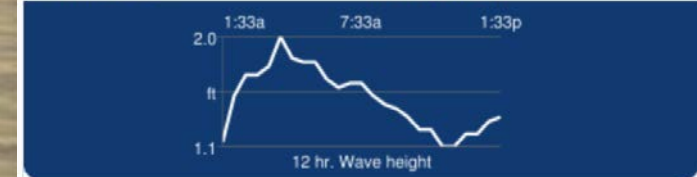


CDIP Wave Buoy - Cape Cod Bay, MA

Lat: 41.83 Lon: -70.32

Latest Observation: 03/12 1:33 PM EDT

Variable	Value
Wave height	1.3 ft (0.4 m)
Wave period	4.3 sec
Wave direction	N (1°)
Water temp	40 ° F (4.6 ° C)



Owned/Operated by:







Seacoast
Science
Center



US Army Corps
of Engineers.



Building a Region-Wide Information System from the Bottom Up



NORTHEASTERN REGIONAL ASSOCIATION
of COASTAL OCEAN OBSERVING SYSTEMS

SYSTEM OPERATORS

79% of NERACOOS funds go directly to our partners to produce and integrate ocean information.



University of Maine

- ✂ Regional satellite images
- 📡 7 Buoys
- 📡 3 High-frequency radar stations

Bedford Institute of Oceanography

- 📡 Harmful algal bloom monitoring
- 📡 Nutrient monitoring
- 🌊 Regional wave forecast

Gulf of Maine Research Institute

- 💻 Data integration and products
- 💻 Website development

University of New Hampshire

- 📡 3 Buoys
- 📡 Coastal monitoring station

Charybdis Group, LLC

- 📡 3 Water level stations

University of Massachusetts Dartmouth

- 💻 Regional ocean modeling

Woods Hole Oceanographic Institution

- 📡 1 High-frequency radar station

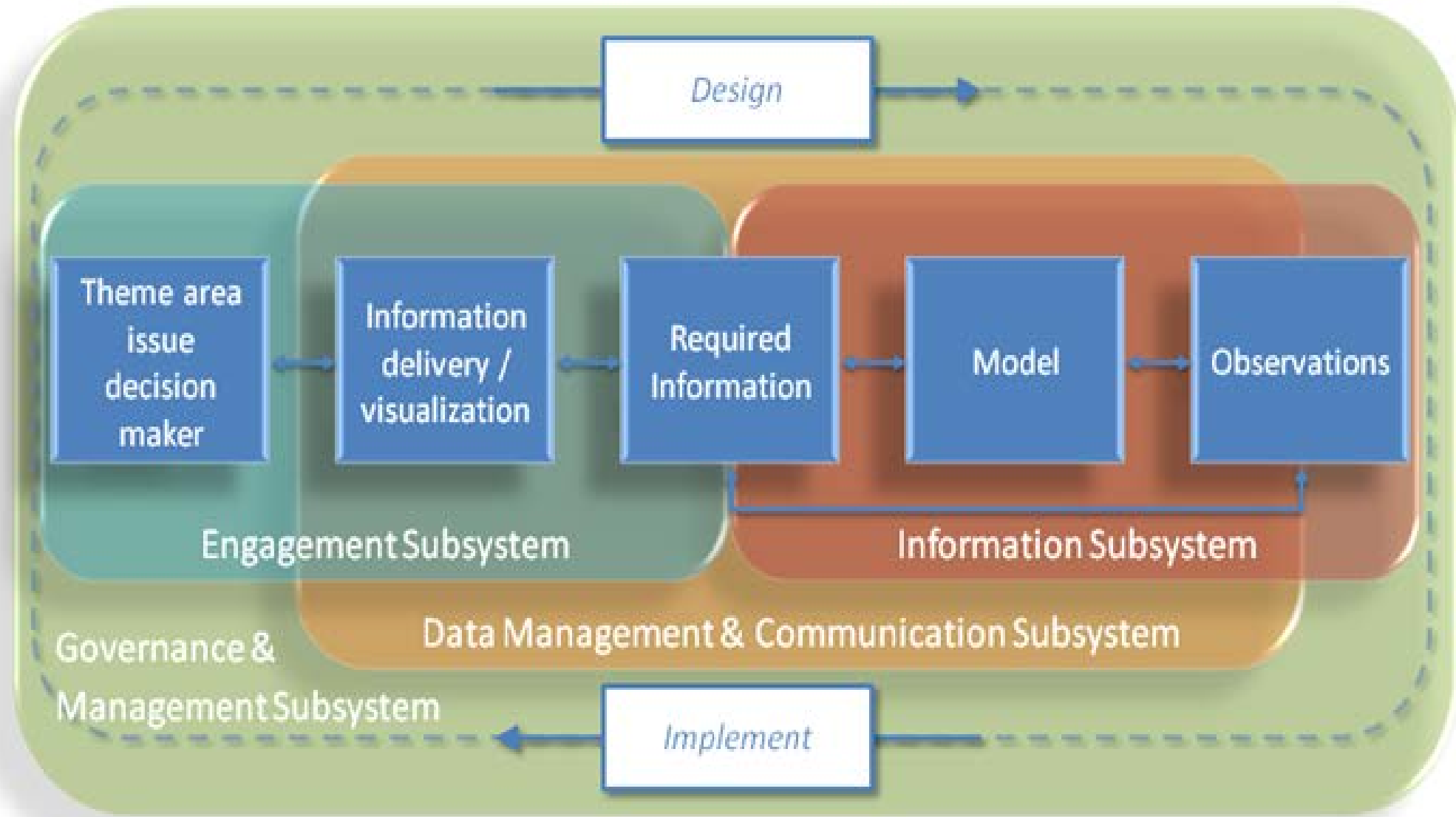
University of Rhode Island

- 📡 Nutrient monitoring

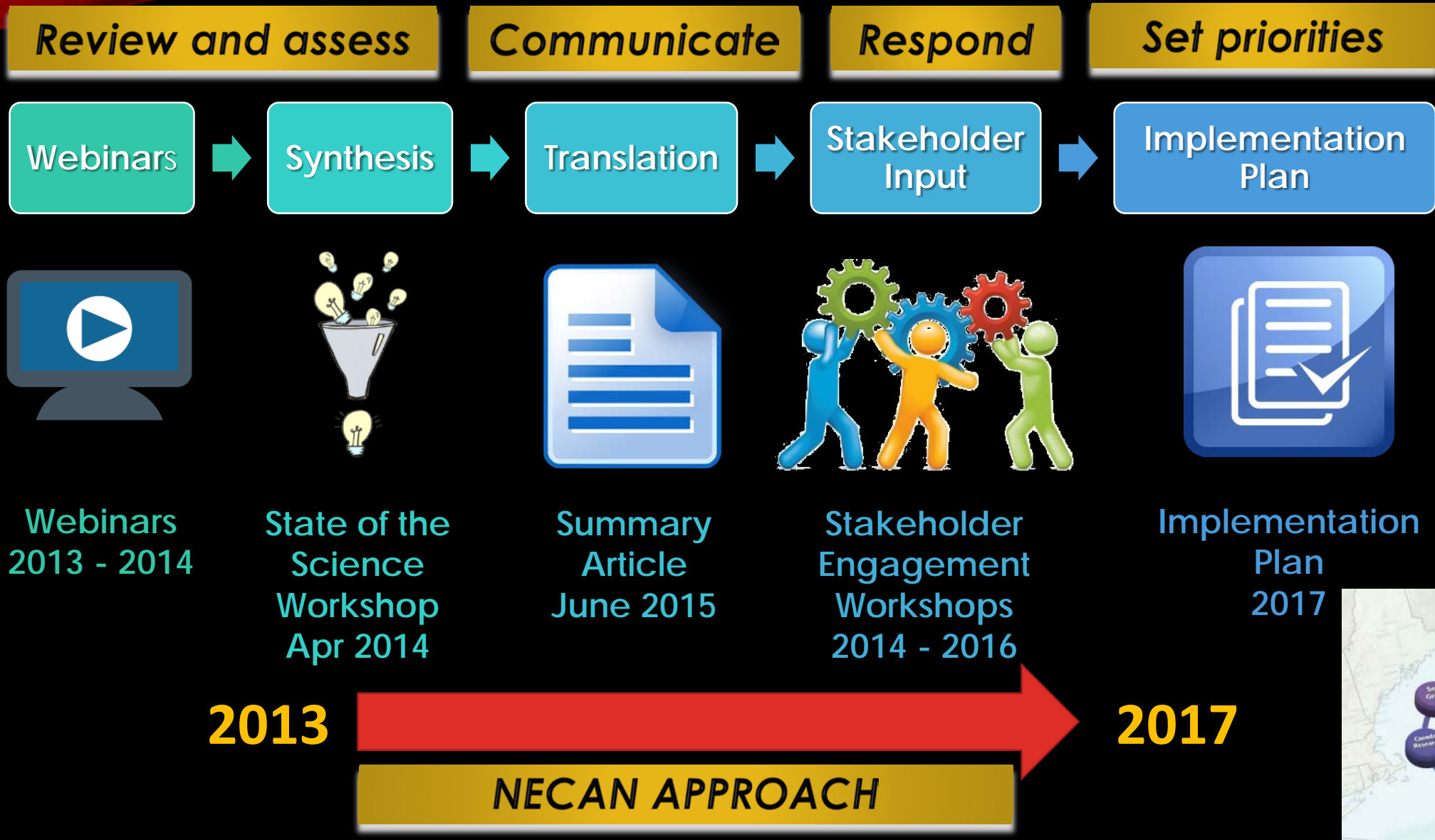
University of Connecticut

- 📡 3 Buoys
- 💻 Short-term predictive modeling

Engage and Collaborate



The Northeast Coastal Acidification Network - NECAN





Integrated Sentinel Monitoring Network - ISMN

A wide-angle photograph of a coastal station in winter. The ground is covered in a thick layer of snow. In the foreground, a long, single-story yellow building with a dark roof and several windows is visible. To its right, there's a small yellow shed and a tall, yellow water tower on a wooden frame. Further back, another yellow building with a gabled roof stands near a large, dark evergreen tree. The background shows a flat landscape under a bright blue sky with scattered white clouds. The text "Regional Harmful Algal Bloom workshop – March 2018" is overlaid in white on a semi-transparent dark grey banner at the bottom of the image.

Regional Harmful Algal Bloom workshop – March 2018



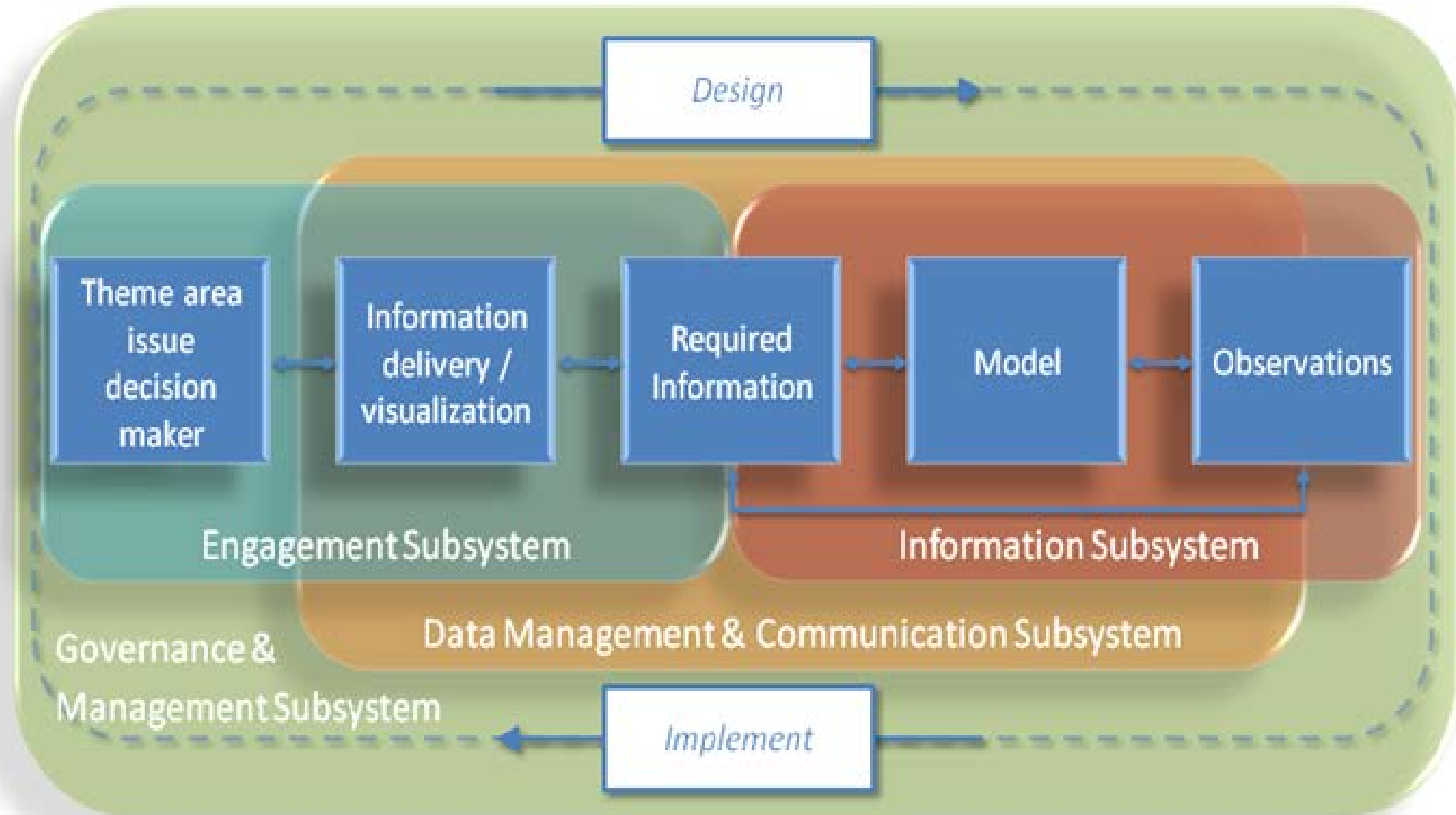
NCCOS

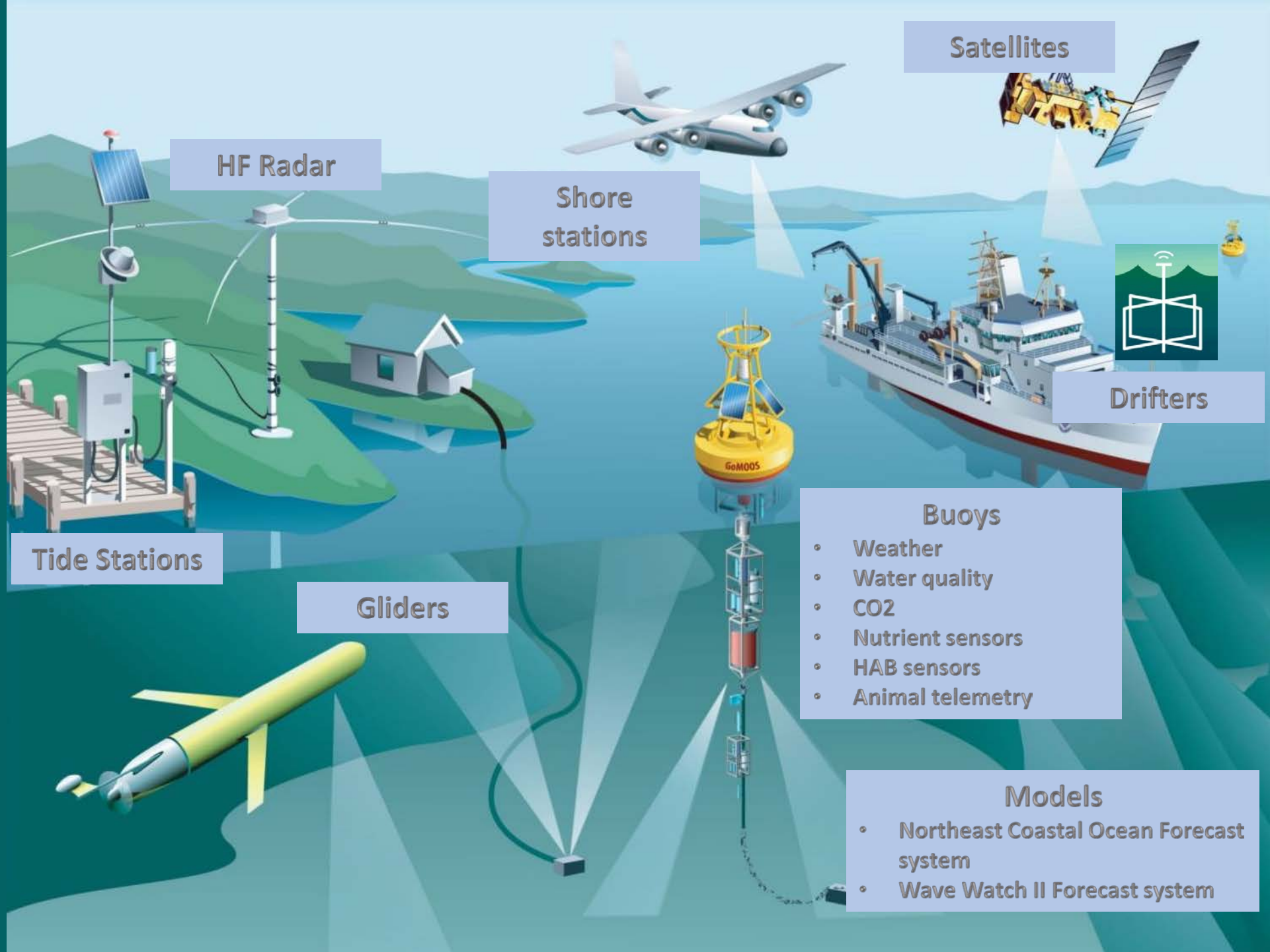
NATIONAL CENTERS FOR
COASTAL OCEAN SCIENCE



Regional Partner Meetings

Generate Information



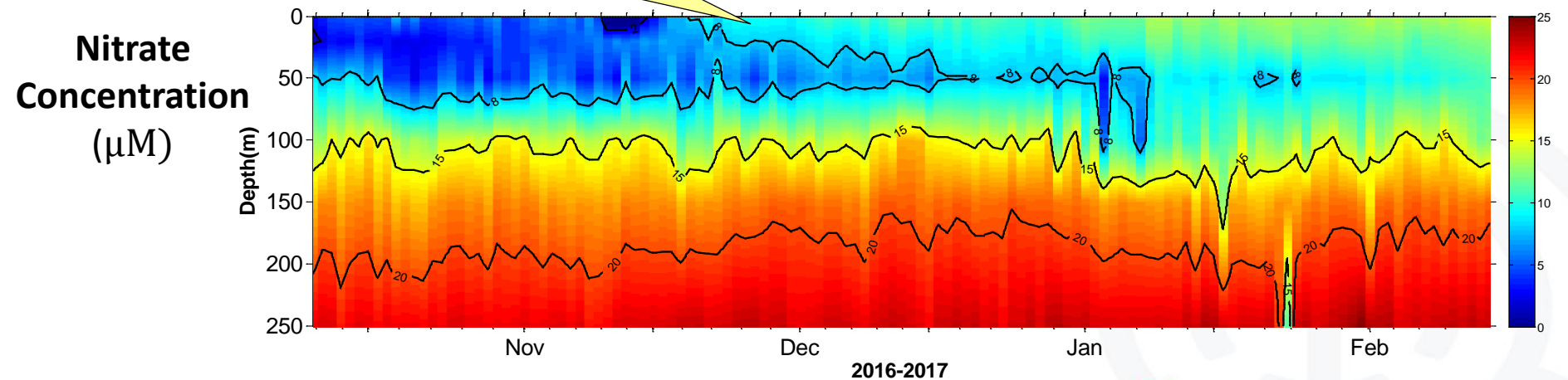
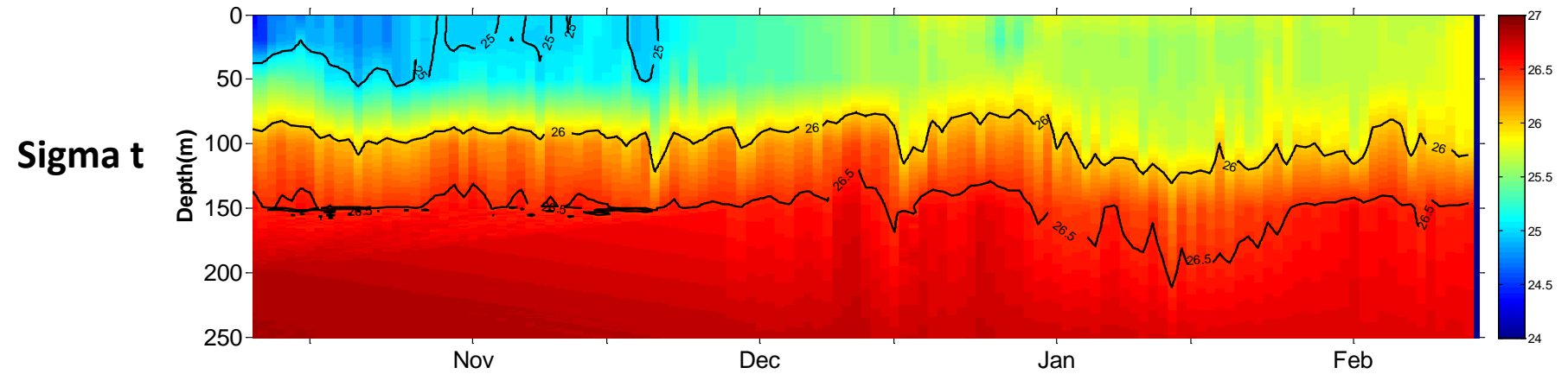




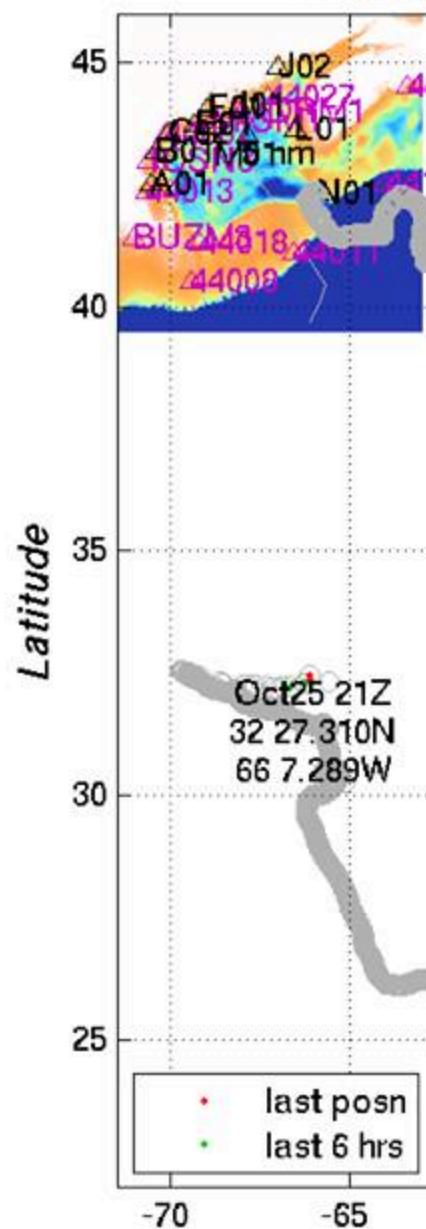
2017
85%
of SUBSURFACE
MEASUREMENTS
DEEPER THAN
15 METERS

Nutrient Observatory – Buoy M

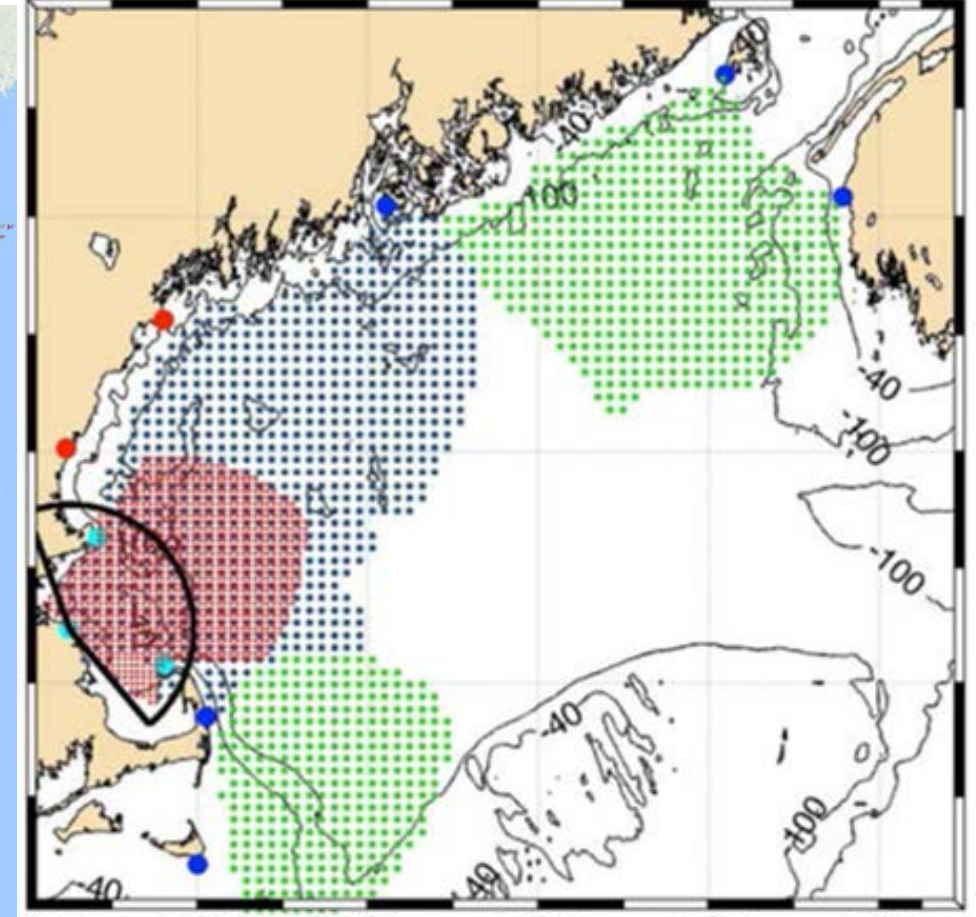
Reprocessed
data
Oct. 9, 2016 to
Feb.14, 2017



Mooring N0116 Positions: as of 2017-10-26 04:40:07







SeaTrac Development Platform



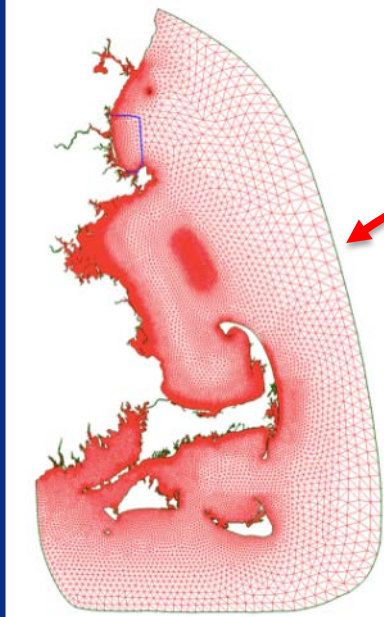
Two pilot projects selected for 2018



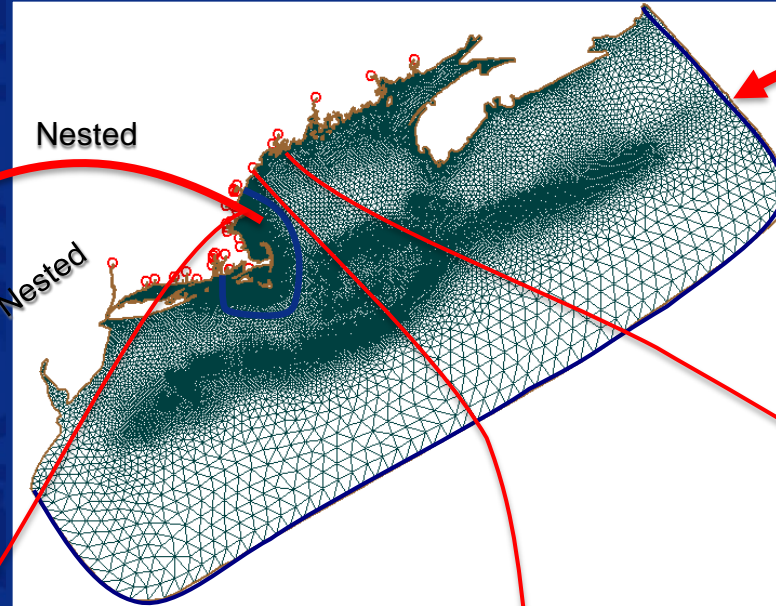
Northeast Coastal Ocean Forecast System (NECOFS)



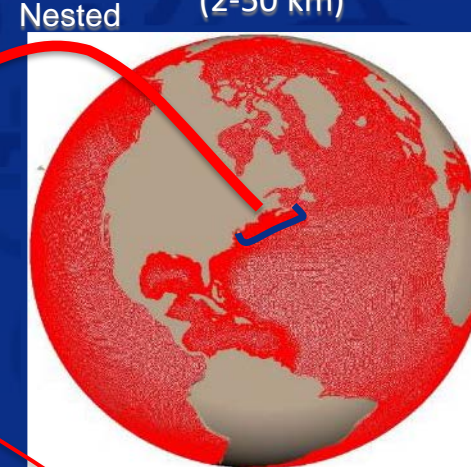
Mass-Coastal FVCOM
(10 m-5 km)



GOM-FVCOM (0.3-15 km)



Global-FVCOM
(2-50 km)



Nested



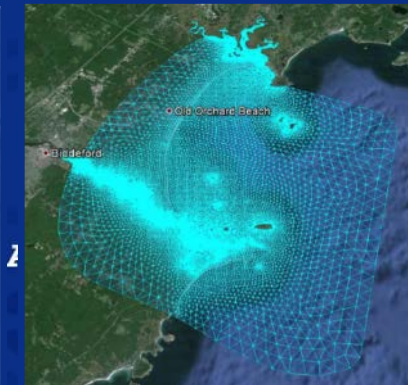
Scituate, MA (up to 10 m)



Boston Harbor, MA (up to 10 m)



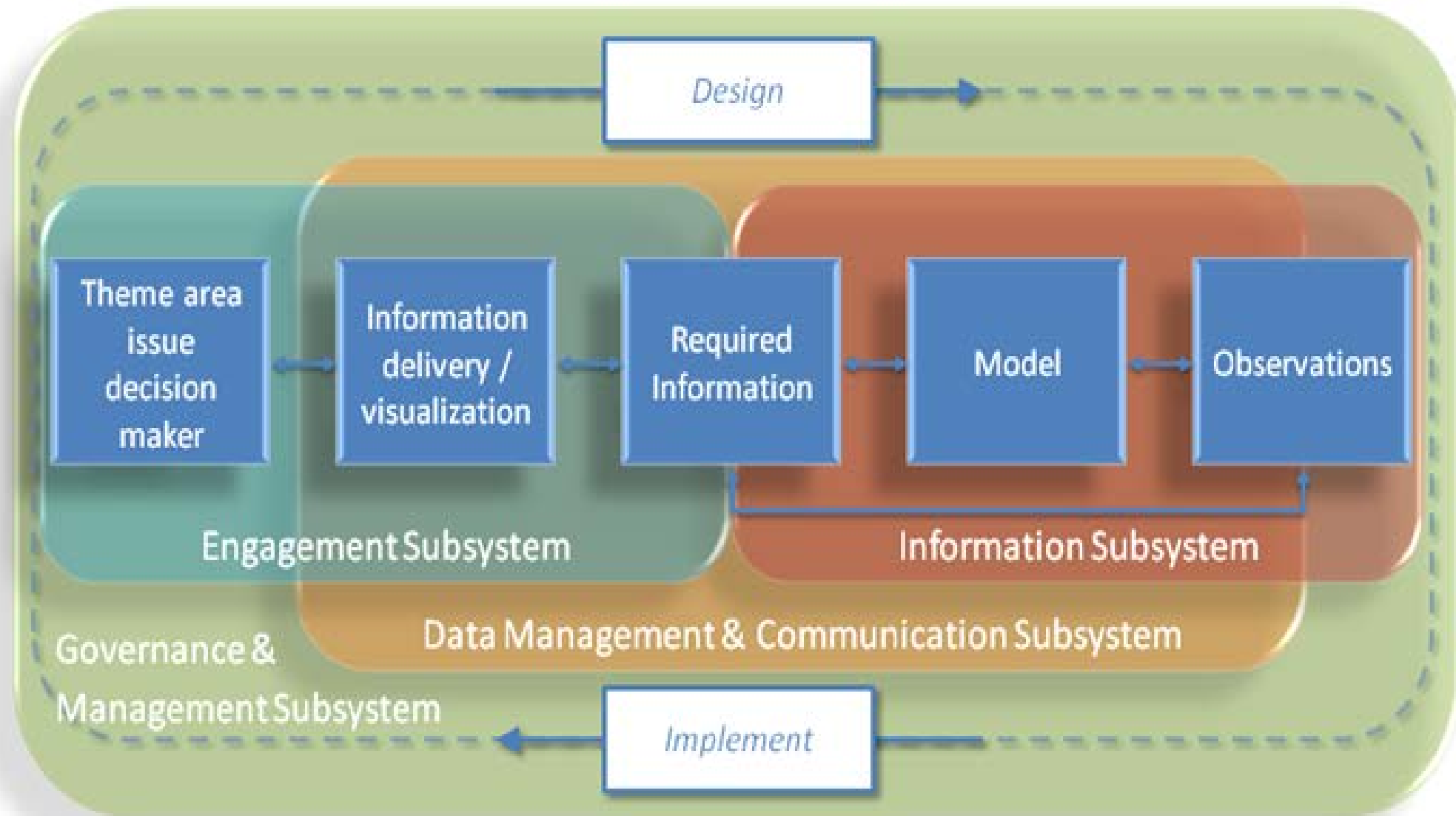
Hampton, NH (up to 10 m)



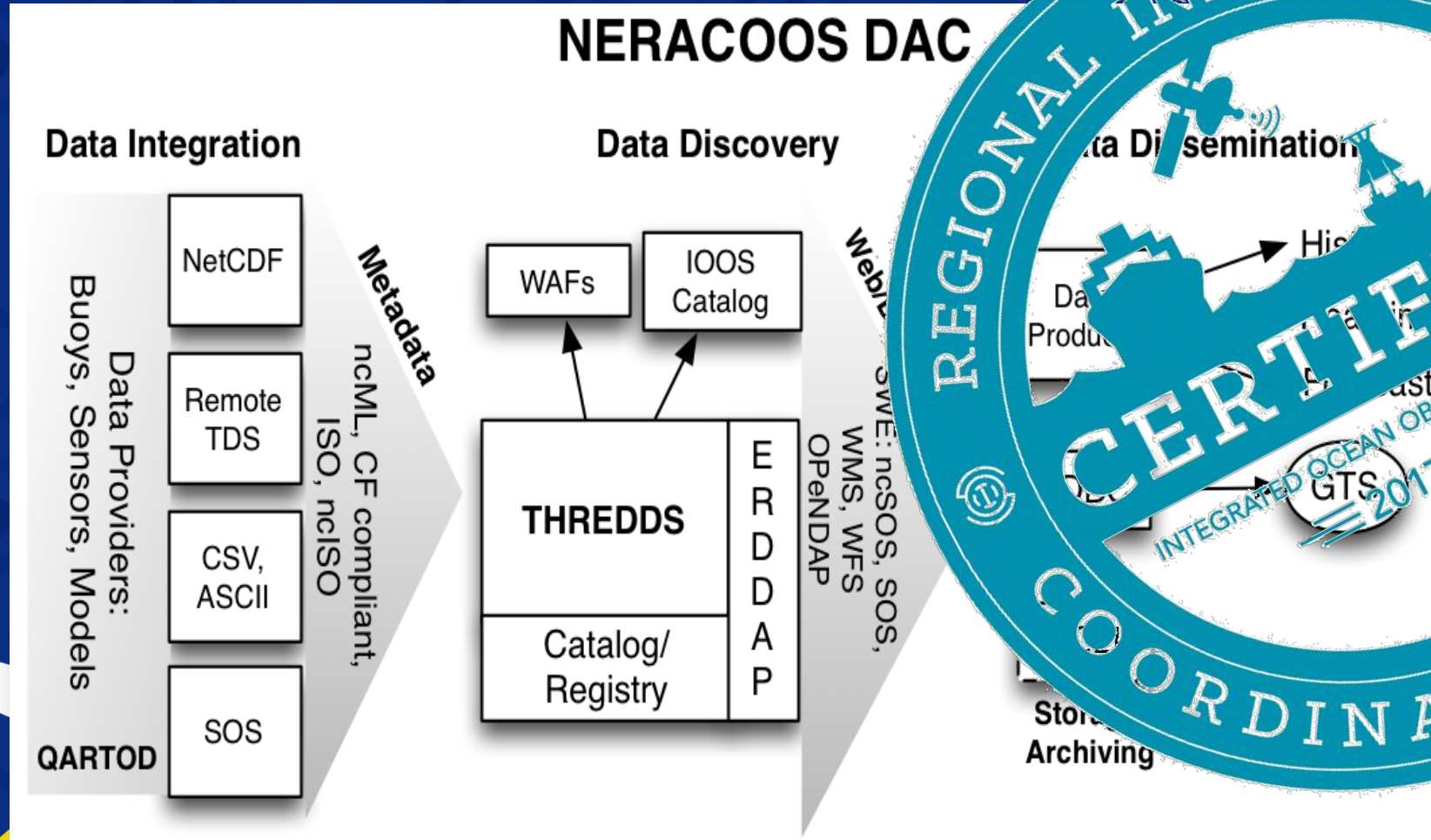
Saco Bay (up to 10 m)



Manage the data



Data Management Framework





ERDDAP > List of All Datasets

Pick a Dataset

158 matching datasets, listed in alphabetical order.

Or, Do a Full Text Search for Datasets:

Or, Search for Datasets by Category:
[cdm_data_type](#), [institution](#), [ioos_category](#), [keywords](#),
[long_name](#), [standard_name](#), [variableName](#)

Or, Search for Datasets with [Advanced Search](#)

Grid DAP Data	Sub-set	Table DAP Data	Make A Graph	W M S	Source Data Files	Title	Summary	FGDC, ISO, Metadata	Background Info	RSS	E mail	Institution	Dataset ID
	set	data	graph			* The List of All Active Datasets in this ERDDAP *	?	M	background			NERACOOS	allDatasets
	set	data	graph			A01 Aanderaa - Historic Surface Currents	?	F I M	background			Univ. of Maine	A01_aanderaa_hist
	set	data	graph			A01 Accelerometer - Waves	?	F I M	background			Univ. of Maine	A01_accelerometer_all
	set	data	graph			A01 Directional Waves (waves.mstrain Experimental)	?	F I M	background			Univ. of Maine	A01_e_waves_mstrain_all
	set	data	graph			A01 Met - Meteorology	?	F I M	background			Univ. of Maine	A01_met_all
	set	data	graph			A01 Optics - Chlorophyll / Turbidity	?	F I M	background			Univ. of Maine	A01_optics_s_all
	set	data	graph			A01 Optode - Oxygen	?	F I M	background			Univ. of Maine	A01_optode_all
	set	data	graph			A01 SBE16 - CTD Transmissivity	?	F I M	background			U.S. Geological ... ?	A01_sbe16_trans_all
	set	data	graph			A01 SBE16 Oxygen	?	F I M	background			Univ. of Maine	A01_sbe16_disox_all
	set	data	graph			A01 Sbe37 - CTD	?	F I M	background			Univ. of Maine	A01_sbe37_all
	set	data	graph			B01 Aanderaa - Realtime Surface Currents	?	F I M	background			Univ. of Maine	B01_aanderaa_all
	set	data	graph			B01 Accelerometer - Waves	?	F I M	background			Univ. of Maine	B01_accelerometer_all
	set	data	graph			B01 Met - Meteorology	?	F I M	background			Univ. of Maine	B01_met_all
	set	data	graph			B01 Optics	?	F I M	background			Univ. of Maine	B01_optics_hist
	set	data	graph			B01 SBE16 - CTD Transmissivity	?	F I M	background			Univ. of Maine	B01_sbe16_trans_all
	set	data	graph			B01 Sbe37 - CTD	?	F I M	background			Univ. of Maine	B01_sbe37_all
data			graph	M		BIO WW III Latest Forecasts East Coast	?	F I M	background			Bedford Insitut ... ?	WW3_EastCoast_latest
data			graph	M		BIO WW III Latest Forecasts Gulf Of Maine	?	F I M	background			Bedford Insitut ... ?	WW3_GulfOfMaine_latest
data			graph	M		BIO WW III Latest Forecasts North Atlantic	?	F I M	background			Bedford Insitut ... ?	WW3_NorthAtlantic_latest



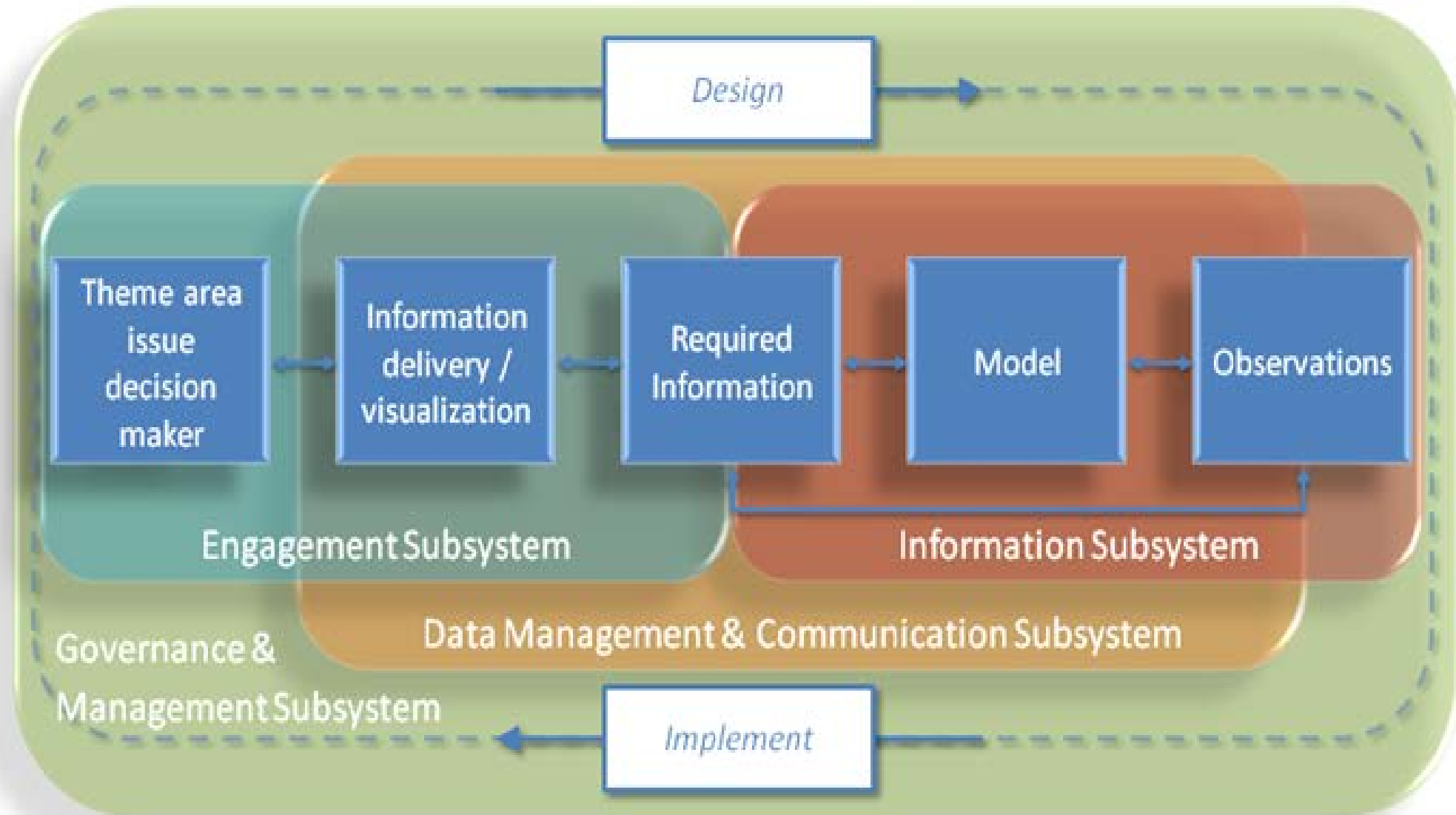


I WANT DATA

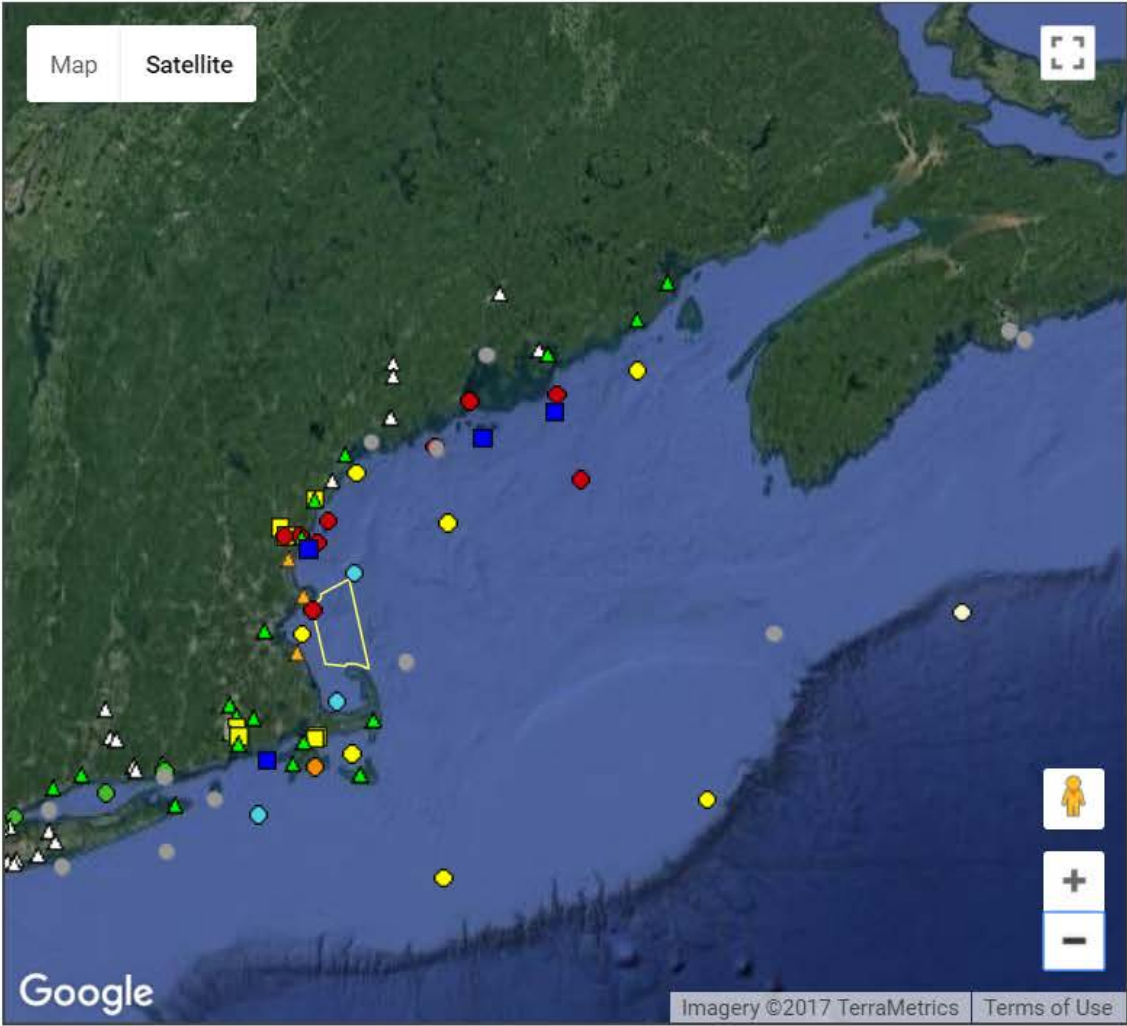


**KEEP
CALM
AND
DO BOOT
CAMP**

Deliver the Information - Products



Hourly Buoy Data



View full screen map.

Legend

☐ Deselect all

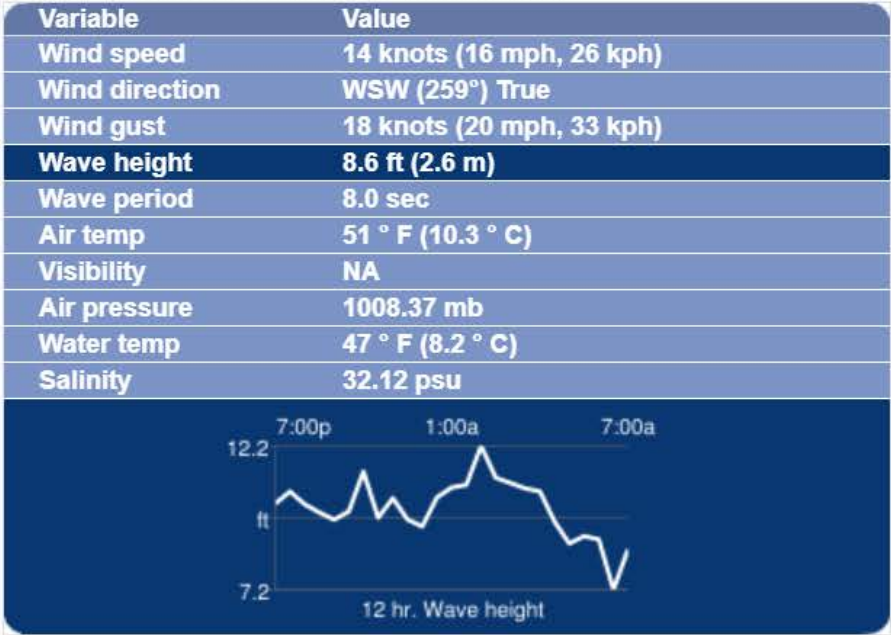
Zoom to location:

NERACOOS Region

▼

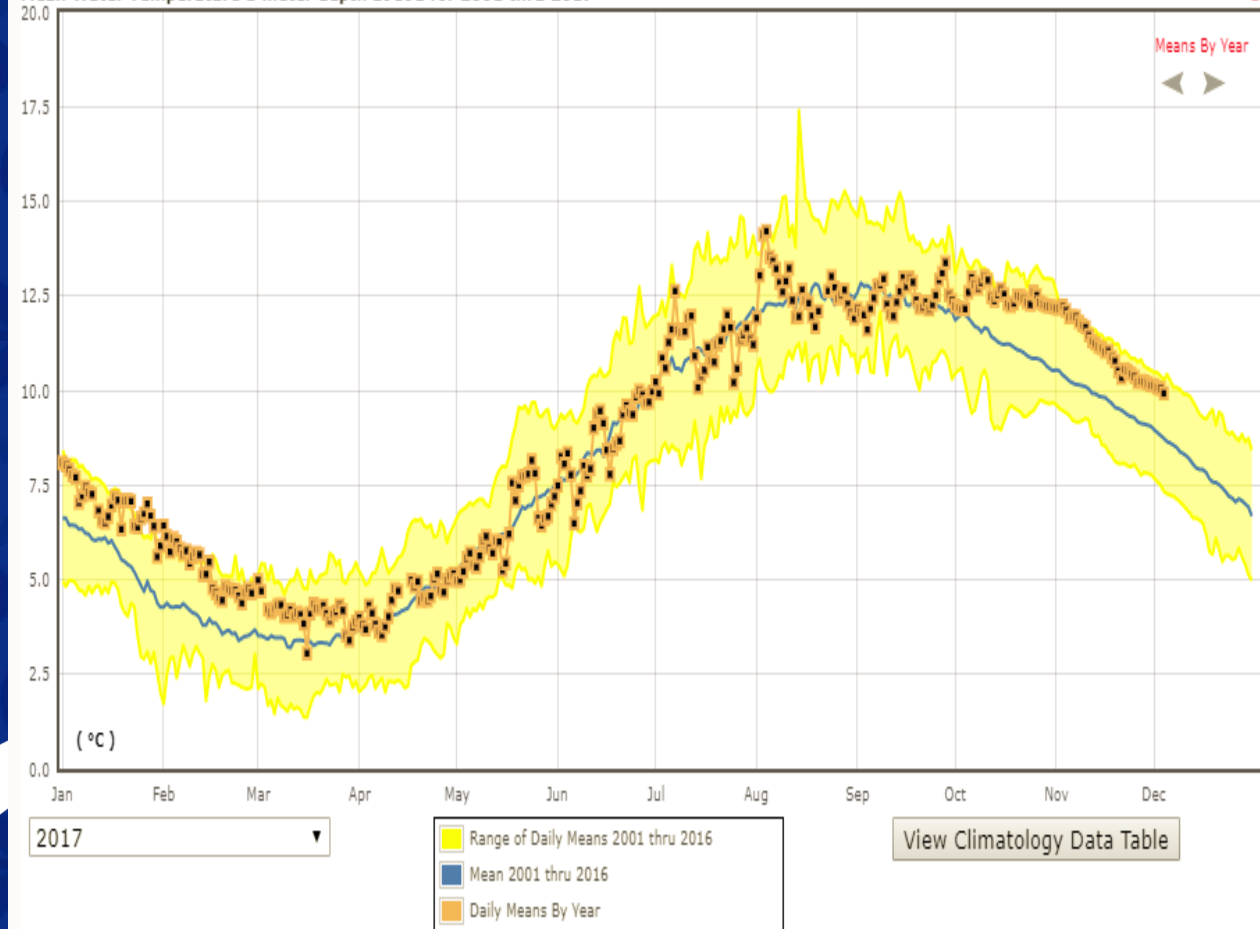
☒ Region Wide View ☐ Preserve My View

NERACOOS Gulf of Maine
B - Western Maine Shelf
Lat: 43.18 Lon: -70.42
Latest Observation: 12/06 7:00 AM EST

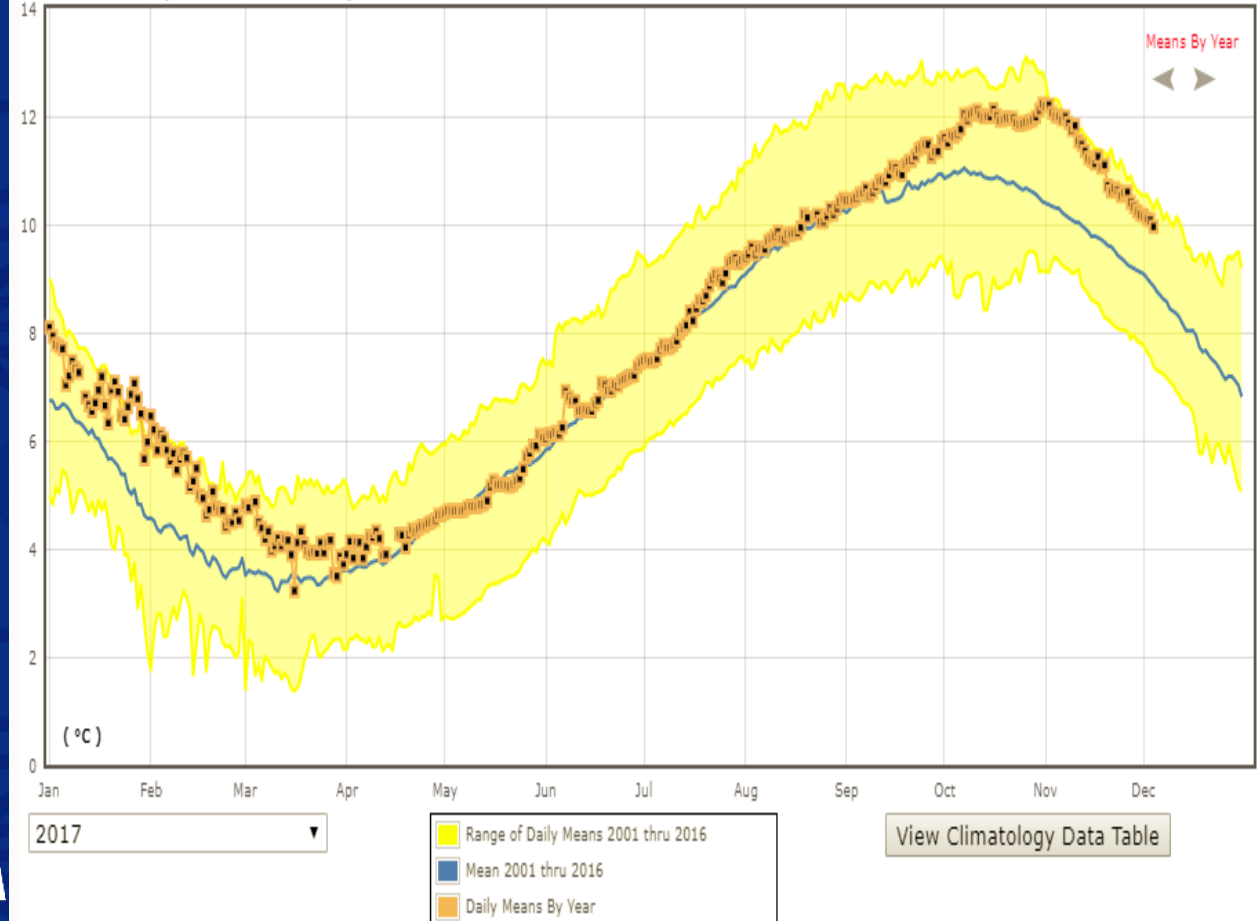


Ocean Climate

Mean Water Temperature 1 meter depth at I01 for 2001 thru 2017



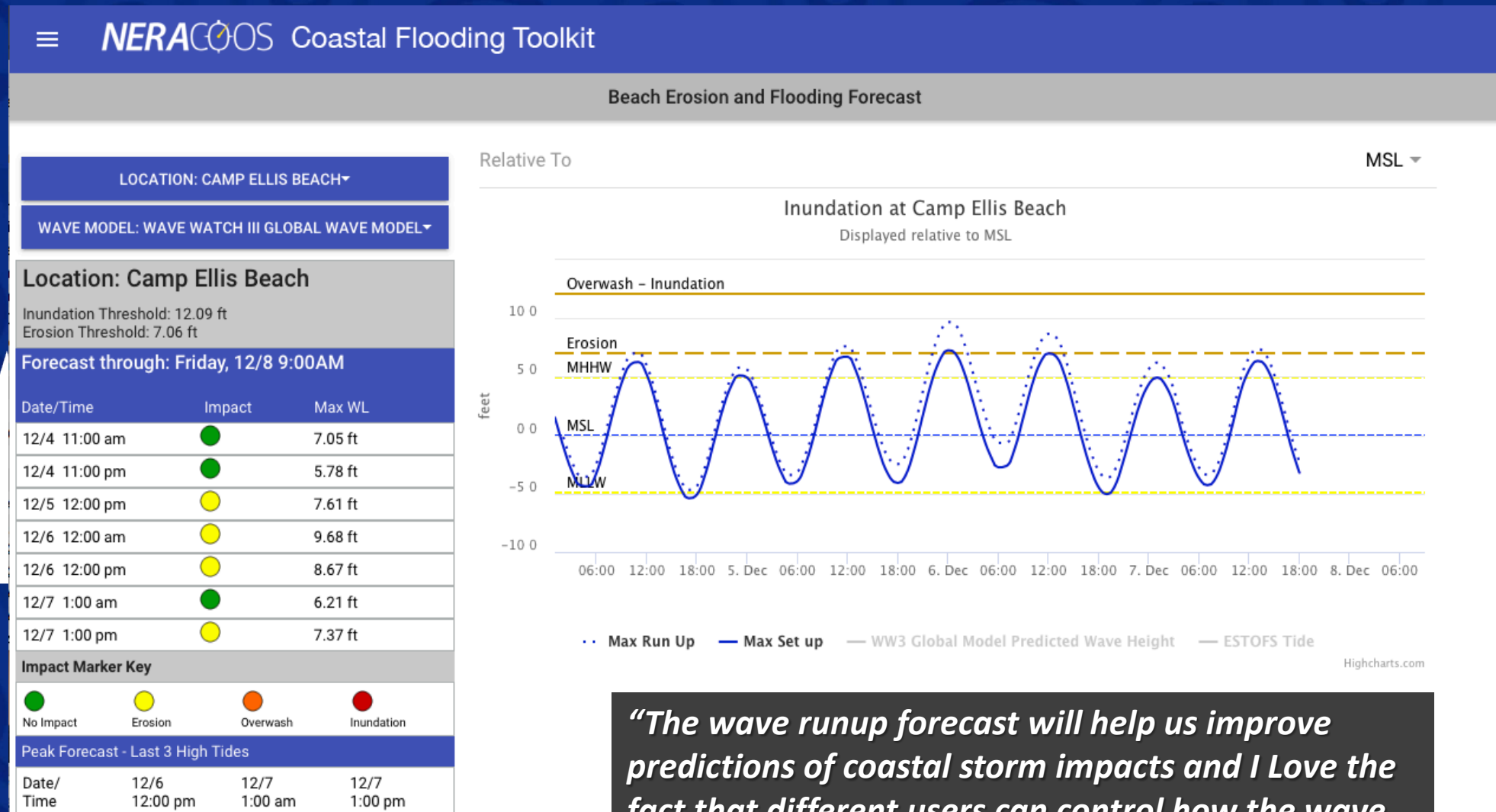
Mean Water Temperature 50 meter depth at I01 for 2001 thru 2017



IOOS

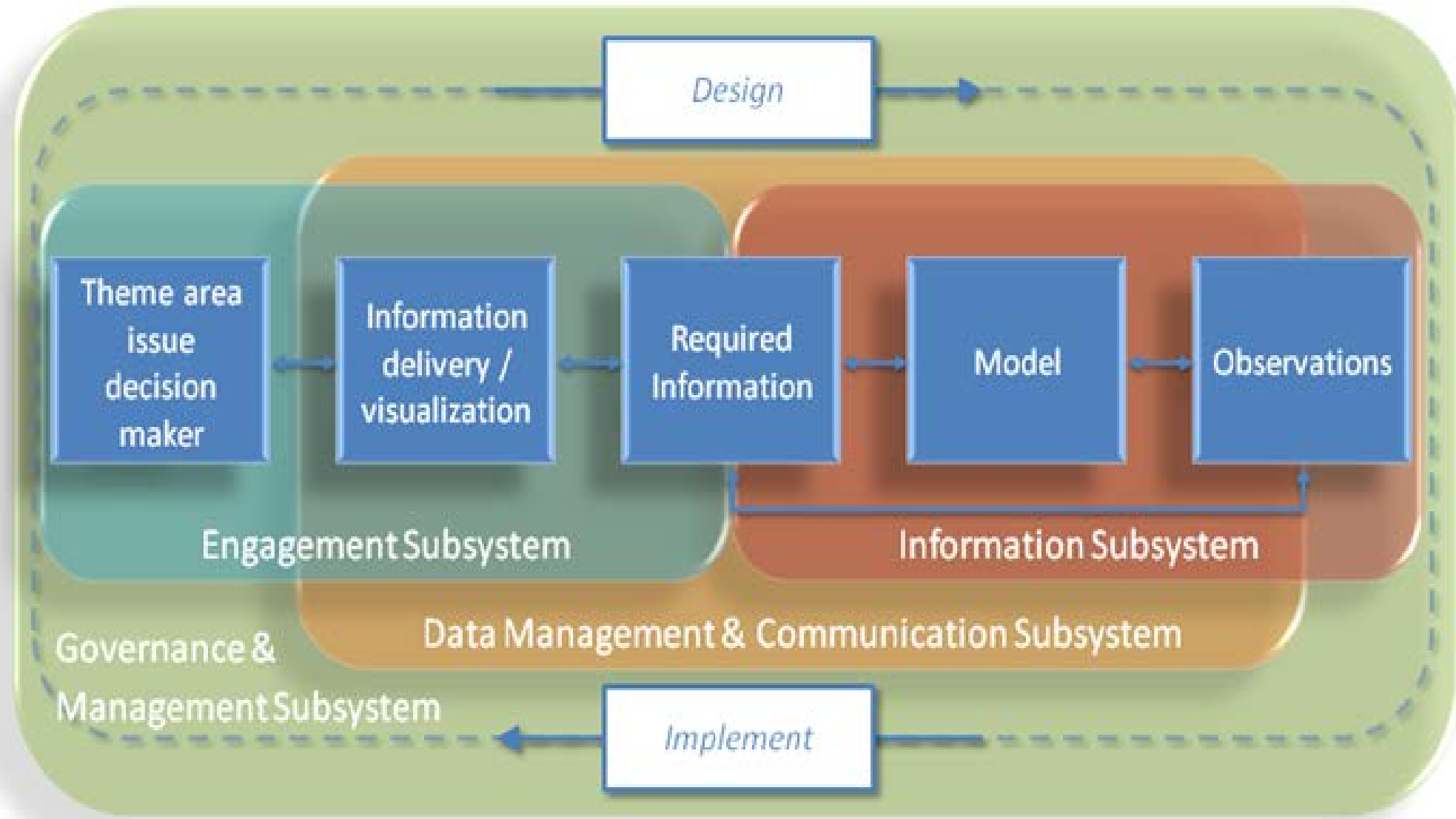
EYES ON THE OCEAN™

Wave Runup Forecast

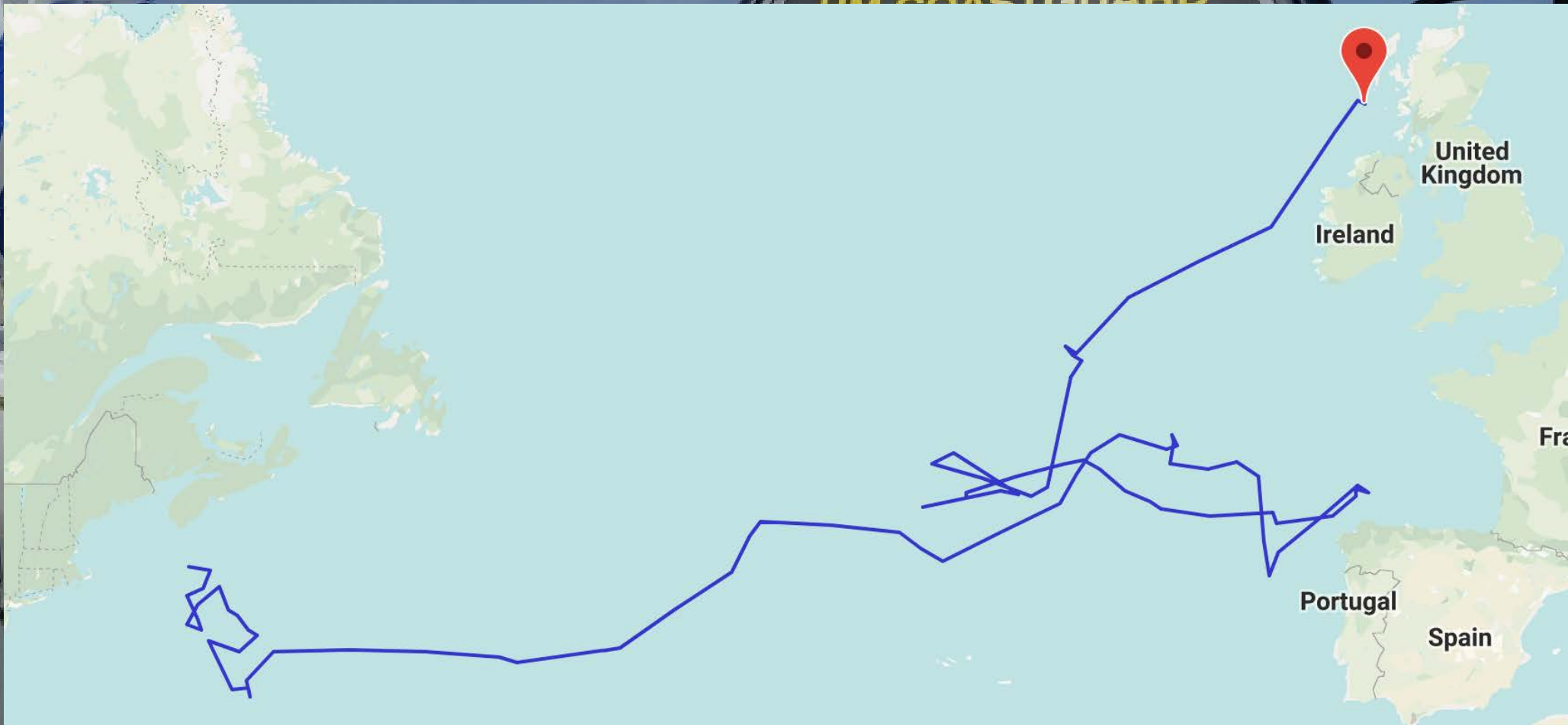


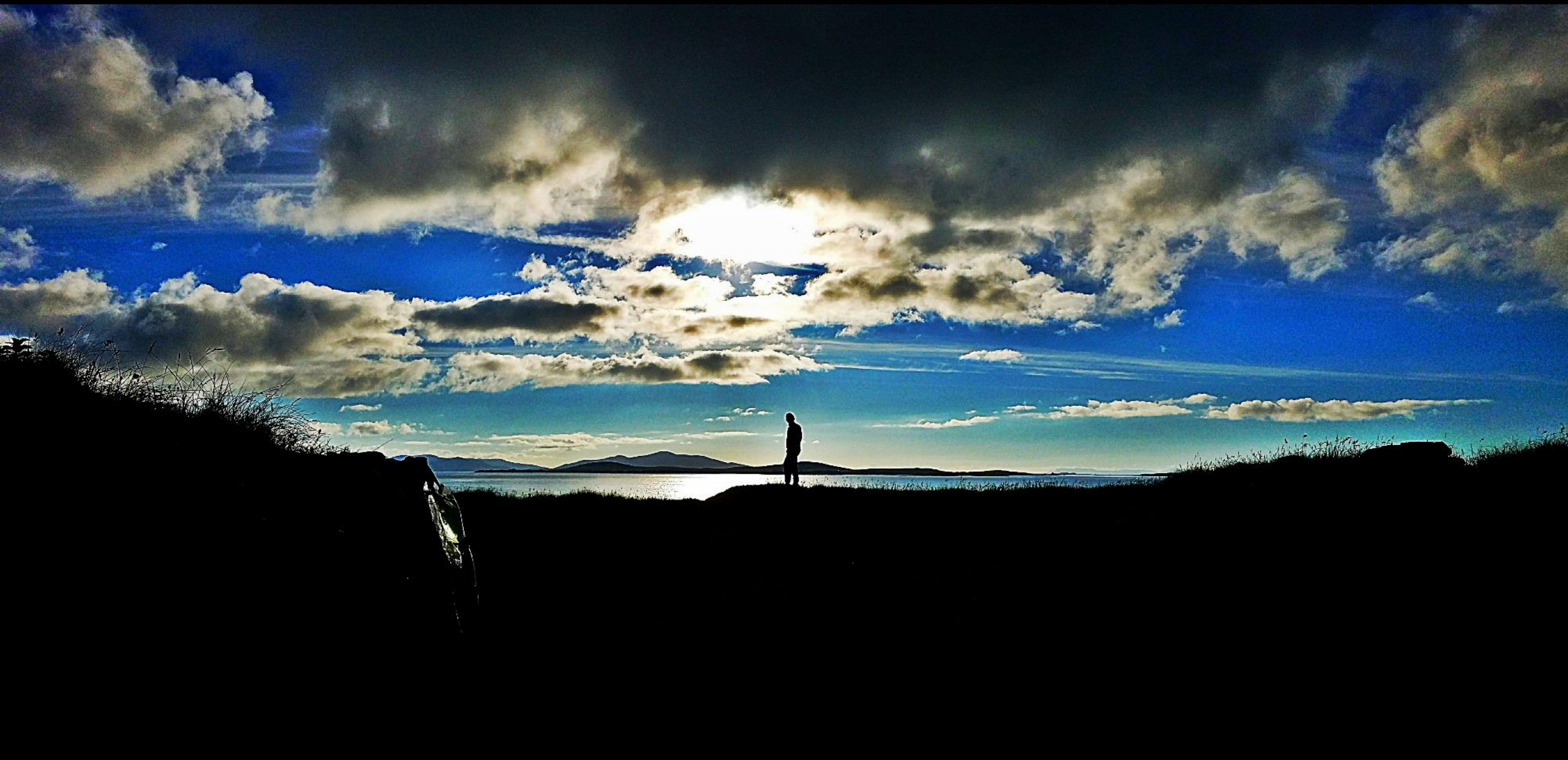
"The wave runup forecast will help us improve predictions of coastal storm impacts and I Love the fact that different users can control how the wave runup output is displayed." John Cannon, NWS

Govern and Manage the System









Thank you

Ru.Morrison@neracoos.org

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