Sea Grant

HABCAST
Collaboration to Advance Stakeholder Tools

STATUS REPORT

September 13, 2022 – Sea Grant Week

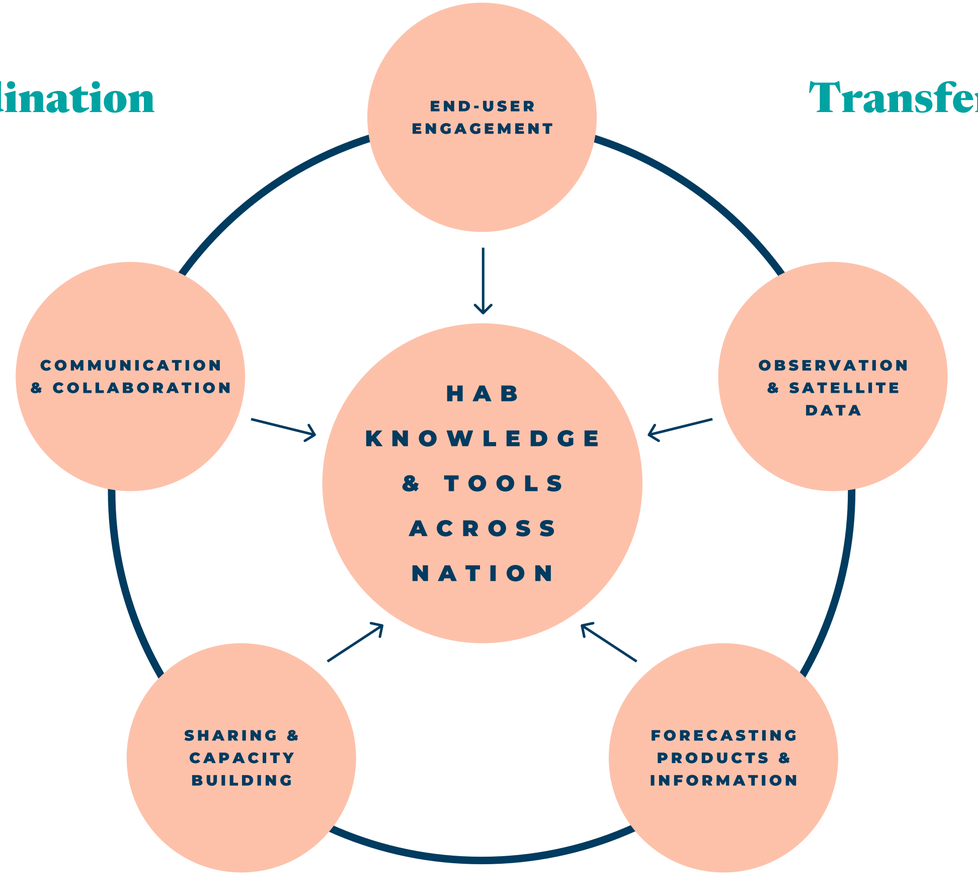
NOAA HARMFUL ALGAL BLOOM LIAISON FOR OAR, NOS AND NESDIS

VISION OF THE HAB LIAISON PROJECT

Integration

Coordination

Transference



Improved Decision-Making

TOPICS

1. APPROACHES
2. ACCOMPLISHMENTS
3. AIMS
4. ASKS

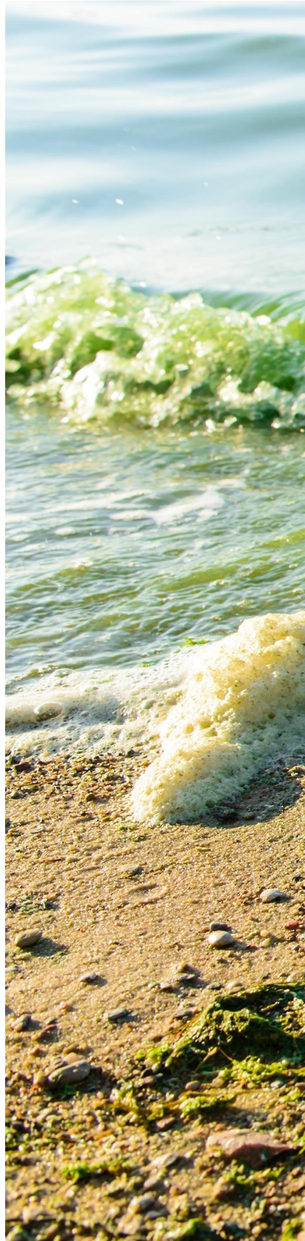
1 APPROACHES

Recognizing Realities

- Learning the Sea Grant landscape/priorities – HABs are ephemeral
- Receiving ongoing input from federal partners (NCCOS, CoastWatch)
- Coordinating with National Mandates (HABHRCA, National Office for HABs)

Embracing Opportunities

- Seeking national level engagement (e.g., 2-way communication with NSGO)
- Applying for HAB event response funding (e.g., organize to leverage opportunities ala USCRP)



HAB LIAISON PROJECT

2 ACCOMPLISHMENTS

904 engaged

- 201 Individual Contacts
- 703 Presentation Contacts

3 REVIEWS

- Publications
- Grant

1 workshops supported

- FL-HABON Steering Committee

3 MODERATED SESSIONS

34 CREATIVE WORKS

- Presentations
- Publications
- Training Module

DRAFT WEBPAGE

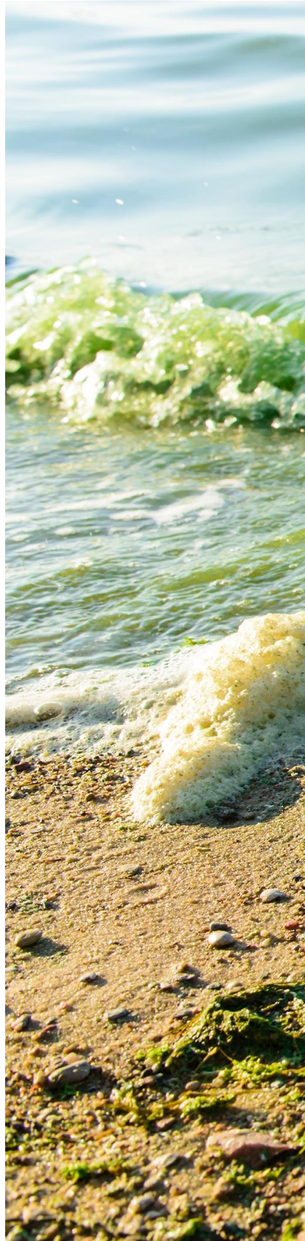
3 AIMS

a Supporting Network

- LASG – HAB Webinar (November)
- SG Water Resources Network – HAB Webinar (November)
- FLSG – State of the Science for Blue-green Algae in Florida Symposium (Spring 2023)
- Aquaculture
  - Satellite applications for aquaculture team (ongoing) – CW, NCCOS, SG
  - SG-NCCOS aquaculture siting & development workshop (Feb. 23, 2022)

b Webpage Link

- Project page – updates & progress
- CoP page – resources & opportunities



3 AIMS (cont'd)

c Detection Workshop – (Oct. 2022)

- GOAL: Improve satellite-based HAB detection in the Northeast U.S.
- OUTCOME: Needs assessment

d Forecasting Workshop – (Jan. or Feb. 2023)

- GOAL: Applying novel techniques to assess and forecast HABs in Chesapeake Bay to protect fisheries, aquaculture and human health
- OUTCOMES: Steering Committee, 2 Needs assessments, and Synergies with MARACOOS & VIMS

e CoastWatch Training – (Jan. 2023)

- GOAL: Increase capacity within Sea Grant and partner organizations
- OUTCOMES: Needs assessments and new materials

EXAMPLE 1

Chesapeake Bay Needs Assessment

(N = 22 & 26)

HOW INFORMED ARE YOU ABOUT THE FOLLOWING ASPECTS OF HABS?

Likert Scale (No prior knowledge – Well informed)

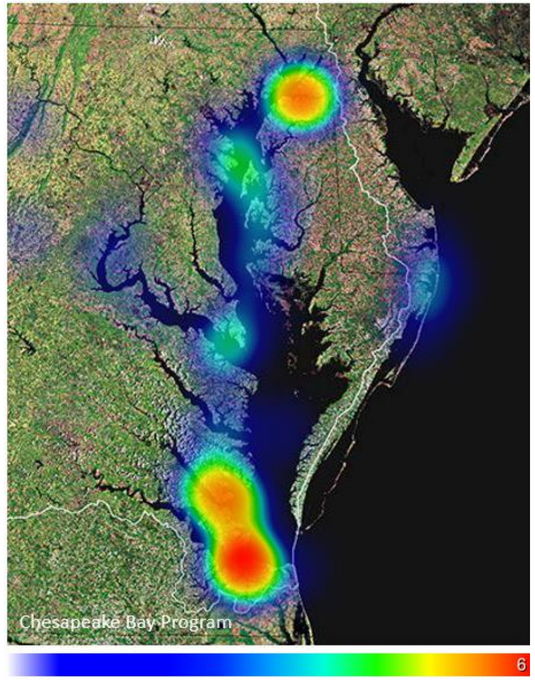
1. Different types of HABs in CB & Coastal Bay Regions
2. Biological components of HABs
3. Current methods of detection
4. Current methods of tracking
5. Link between HABs and adverse human health

Results

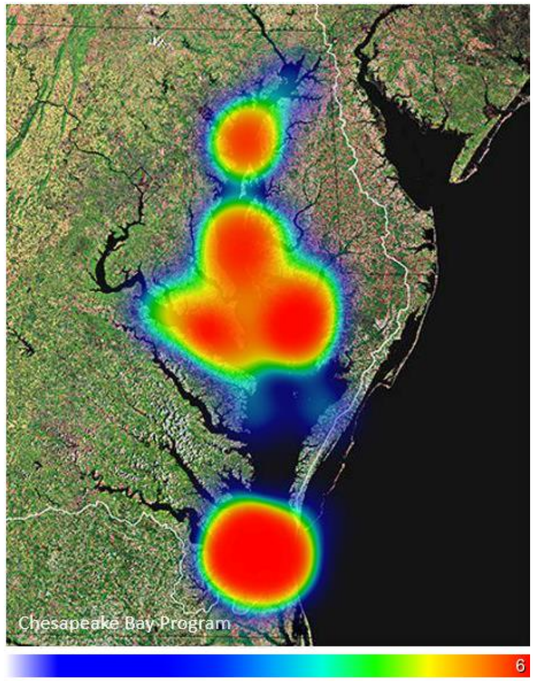
1. Natural resource managers – Not well informed to Well informed
2. Industry sector – Not well informed

WHERE IN THE CHESAPEAKE & COASTAL BAYS ARE HABS THE GREATEST PROBLEM?

Please use your mouse (or finger) to select up to three (3) spots



NATURAL RESOURCE MANAGERS



INDUSTRY SECTOR

WHAT IMPACTS OF HABS ARE OF THE GREATEST RISK FOR YOUR AGENCY/ORGANIZATION?

(ecological, human health (HH), and business operations)

NATURAL RESOURCE MANAGERS

1 **Ecological Risk**

- Toxicity to fish/shellfish
- Hypoxia

2 **Human Health Risk**

- HH Swimming exposure
- HH Shellfish consumption
- Toxicity to fish/shellfish

3 **Business Operations Risk**

- Toxicity to fish/shellfish
- HH Shellfish consumption
- HH Swimming exposure

VS.

INDUSTRY SECTOR

3 **Business Operations Risk**

- Hypoxia
- Toxicity to fish/shellfish

WHAT METHODS ARE USED FOR DETECTING AND RESPONDING TO HABS?

(ecological, human health (HH), and business operations)

NATURAL RESOURCE MANAGERS

- In situ HAB monitoring programs
- Emailed updates/mailing lists
- Integrated data portals
- Public reporting systems
- Websites

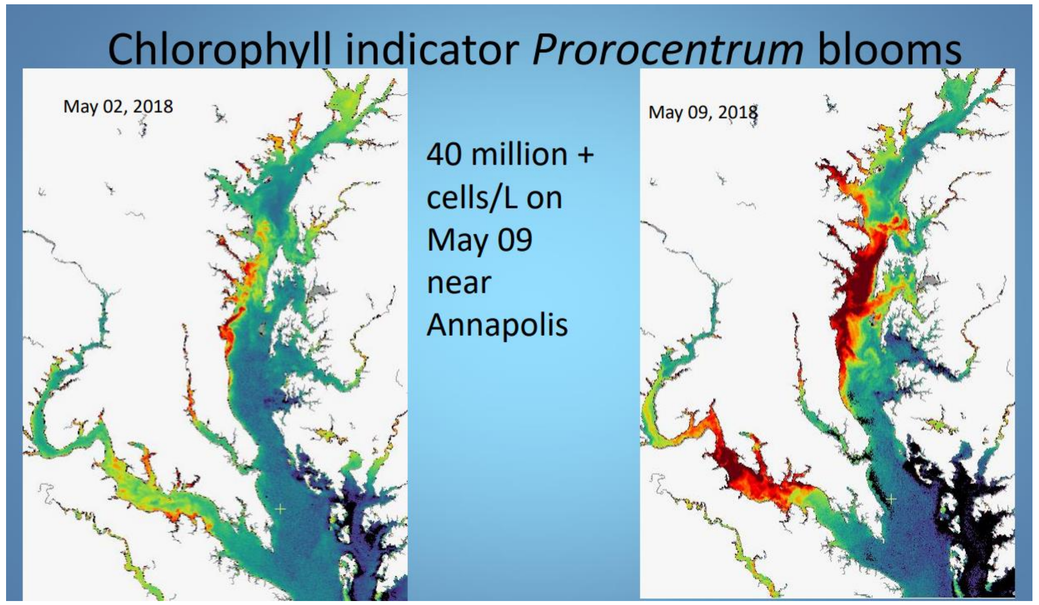
INDUSTRY SECTOR

- Others within networks

RECREATIONAL FISHERS

- Personal Observation
- Social Media
- Traditional News

WHAT ARE THE MOST USER-FRIENDLY PLATFORMS TO COMMUNICATE HAB DETECTION & FORECASTING INFO?



NATURAL RESOURCE MANAGERS

- Website
- Emailed Bulletin
- Collaborative Platform

INDUSTRY SECTOR

- Phone App
- Email Bulletin
- Website

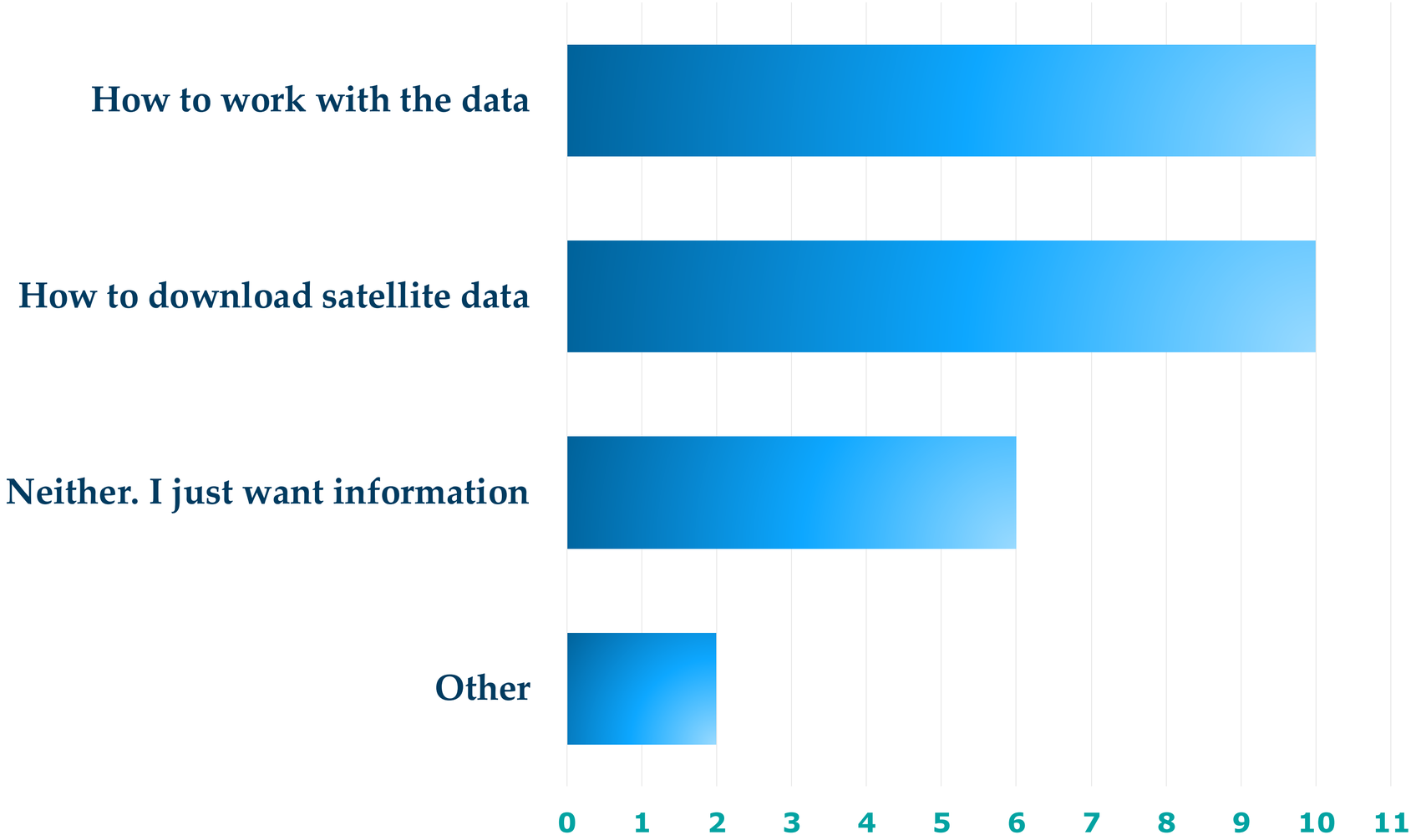
EXAMPLE 2

CoastWatch Training Needs Assessment

(N = 27)

DO YOU WANT TO LEARN?

(Check all that apply)



WHAT DO YOU WANT TO ACHIEVE WITH SATELLITE DATA?

○ Identify HABs that may be impacting shellfish
○ Understand satellite data and help to forecast blooms
○ Spatial/temporal spread of benthic HABs
○ Preparing maps showing trends in key areas over time (time series)
○ Higher temporal and/or spatial resolution of HABs blooms
○ General knowledge
○ Early warning/focused monitoring ○ Better understanding of spatial and temporal aspect of blooms ○ Helping ground truth satellite data ○ Analyzing SAV water quality requirements ○ Develop timeseries of blooms (monthly and annually)
○ Better understanding

HOW WOULD YOU USE THE INFORMATION, PRODUCT, TOOL DEVELOPED?

Expand our understanding of bloom dynamics in our region
To communicate with aquaculture practitioners about the spatial extent of a bloom; this would allow them to relocate animals to areas with lower impact during a bloom
focus monitoring, inform managers, protect public health
As a bloom approaches areas of interest, it can help to know to look out for the HABs
Publish scientific manuscripts
N/A
Advise bait stands when HAB might be in area to prevent monetary loss of live bait; and keep shellfish from being harvested in waters that have been impacted by toxic HABs
Share resource with others
Shareable infographics, blogs/links of compiled resources - info directed towards certain groups (could be same info but packaged to address those groups like "info for beach go-ers", "boaters", "anglers", "divers", "seafood consumers" to make it seem like we are addressing those specific concerns but they would pay more attention because it seems like it's directed towards them)?

HAB LIAISON PROJECT

4 ASKS → WHAT WE NEED FROM YOU

a Input into the "State of the States" Product

- Workshops – include needs assessments and workshop findings
- Informal question/discussion based – internal to Sea Grant meetings
- Collaborating with NCCOS on regional vignettes that they will be preparing soon

b Input into the Community of Practice

IN YOUR STATE…

- What has the legislature done to help or hurt HAB response?
- What have agencies done to help or hurt HAB response?
- What has the money done and where has it been used? - Can SG answer?
- What funding sources have you utilized to support HAB research/extension?
- What wicked HAB related problems are you facing?
- What wicked HAB related problems do you foresee facing?
- What are your 1-4 best HAB related outreach tools?
- What lessons have you learned when a new type of HAB occurs?
- What HAB communications lessons have you learned?
- What issues have you had with HABs (lack of support, lack of funding, etc.) and how did you overcome them?

Sea Grant

HABCAST
Collaboration to Advance Stakeholder Tools

QUESTIONS?

Forthcoming Advisory Committee Meeting – November 2022

NOAA HARMFUL ALGAL BLOOM LIASON FOR OAR, NOS AND NESDIS