



Remote Sensing Harmful Algal Bloom Workshop

CHESAPEAKE AND COASTAL BAYS REGION

Thursday, May 1, 2014

O'Callaghan Hotel, 174 West Street, Annapolis, Maryland



PRE-WORKSHOP NEEDS ASSESSMENT SURVEY

SUMMARY OF RESULTS

Before conducting the remote sensing harmful algal bloom workshop, a needs assessment survey was distributed to all potential attendees in February 2014. This survey was aimed at identifying the participants' understanding of harmful algal blooms and remote sensing and to obtain guidance as to what the participants hoped to learn from the workshop. The questions were related to harmful algal blooms (HABs) and remote sensing technologies in the Chesapeake and coastal bays. Specifically, these included questions regarding background information on HABs and remote sensing; current tools and products for HAB detection; workshop expectations; and HABs role in water quality and human health risks. We received twenty-five responses and used these results to help plan the workshop. Additionally based on the survey results, we developed a list of harmful algae species of concern and listed them in a "Harmful Algae Species of Concern" handout for workshop participants. Below are the key findings from the survey summarized and organized by topic. Expanded details from the survey are available from Maryland Sea Grant upon request.

HABS TOOLS AND PRODUCTS

This section of questions covered what HAB tools and products are used, what may be needed in the future, and what are our current limitations in HAB understanding and management. In particular, respondents noted the following limitations:

- Timely detection and confirmation of HABs (including analysis time) (9)
- Funding for research, sampling, monitoring stations, and general resources (7)
- Lack of knowledge of the toxicity and human impacts of HABs (5)
- Lack of staff for sampling and trained HAB experts (4)
- Lack of single point of contact with a clear message about HABs (4)
- Limited information on temporal and spatial extent of blooms (2)
- Lack of understanding of environmental triggers (2)

Note: Responders were asked for their top three, thus explaining the large sample size (n=40).

NEW PRODUCTS FOR THE DETECTION AND TRACKING OF HABS

The questions in this section asked about the background knowledge of responders to remote sensing technologies used for HAB detection including use of remote sensing data and familiarity of the NOAA HABViewer website. Most (13/20) answered that they haven't used any remote sensing data for HABs previously. Seven people reported having used either remote sensing reflectance or aerial photography.

When further asked about the reasons for not using remote sensing data, the following barriers were identified from a list of choices provided in the survey:

- Do not know where to find it (6)
- Do not know how to process it (8)
- Do not have appropriate GIS software (3)
- In general, do not know what to do with it (6)

ROLE OF HABS IN WATER QUALITY AND HUMAN HEALTH

We asked a couple of questions to understand what were the major concerns regarding HABs. The top four concerns about HABs were public health response (76.2%), environmental response (71.4%), routine monitoring (71.4%), and impacts on fisheries/aquaculture (66.7%). (n=21)

WORKSHOP EXPECTATIONS

The last section of the survey included questions on what attendees would like to gain from the workshop and how they would quantify workshop success. When asked about specific components of the workshop, most said they would like to gain background knowledge of HABs, learn about current HAB research, and participate in discussions of research and development priorities for remote sensing in the Chesapeake and coastal bays. Over half also said that they would like to see demonstrations of existing remote sensing tools for HAB detection.

Finally, when asked what would be the most important outcome(s) of this workshop, the summarized responses mostly clustered around the following: create greater collaboration between members in the community; improve understanding of current research; learn about remote sensing monitoring technology for HABs; and inform future HAB management and research activities.