

Committee on Natural Resources
Subcommittee on Water, Wildlife and Fisheries
Legislative Hearing
1324 Longworth House Office Building
January 18, 2024
10:00 AM

- **H.R. 897 (Rep. Carl)**, “Alabama Underwater Forest National Marine Sanctuary and Protection Act”;
- **H.R. 3925 (Rep. Salazar)**, “Youth Coastal Fishing Program Act of 2023”;
- **H.R. 5441 (Rep. LaLota)**, “Long Island Sound Restoration and Stewardship Reauthorization Act of 2023”; and
- **H.R. 6235 (Rep. Bonamici)**, “Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2023”.

Questions from Rep. Jenniffer González-Colón of Puerto Rico for Mr. Paul M. Scholz, Deputy Assistant Administrator of the National Ocean Service, National Oceanic and Atmospheric Administration (NOAA)

1. H.R. 6235, the *Harmful Algal Bloom and Hypoxia Research and Control Amendments Act*, would amend current law to explicitly include *Sargassum* within the definition of a harmful algal bloom. I am very supportive of this and understand it was NOAA who recommended updating the definition to clarify that *Sargassum* is classified as such.

Sargassum blooms have become a major problem for coastal communities in Puerto Rico, washing ashore and covering our beaches. It not only has a terrible odor, but once nearshore or on land *Sargassum* can have extremely negative effects, releasing irritants, smothering coral reefs, altering water pH balance, and disrupting the local tourism economy.

Could you discuss how NOAA—using the authorities provided in the *Harmful Algal Bloom and Hypoxia Research and Control Act*—partners with other agencies and stakeholders to research, monitor, and improve forecasting of *Sargassum* blooms? And could you discuss, if possible, any specific investments or work conducted in Puerto Rico and the U.S. Caribbean region to address this issue?

Answer: NOAA regularly coordinates cross-agency actions through the HABHRCA Interagency Working Group (HABHRCA-IWG). The IWG meets multiple times per month and provides a venue to quickly share information and coordinate actions so that Federal agencies are working efficiently and effectively. Federal agencies with whom we work most frequently during *Sargassum* inundation events and declared disasters include the EPA, US Fish and Wildlife Service, and FEMA.

In the Caribbean, NOAA is involved in monitoring *Sargassum* in open water and mapping risk of landfall – or *Sargassum* Inundation Events (SIE). NOAA works with the [Caribbean Coastal Ocean Observing System](#) (CARICOOS) to track *Sargassum*, using satellite imagery to determine the location and density of the floating mats. Results from this work are published in weekly [Sargassum Inundation Risk \(SIR\) reports](#), which help inform communities and managers of coastal inundation risk in regions close to current mats. NOAA is also advancing forecasting capabilities for *Sargassum* movement, including the ability to more reliably predict landfall. To do this, our scientists are developing and validating predictive models from the monitoring data, by pairing *in situ* trackers with satellite-based sensors that detect *Sargassum* from space. Links to *Sargassum* products such as the SIR can be found on the [Sargassum Information Hub](#), along with other information and resources for communities struggling with *Sargassum*. Additional information about *Sargassum* can be found on NOAA’s [Sargassum FAQs page](#). Key players in this work are NOAA’s Atlantic Oceanographic and Meteorological Laboratory; NOAA’s National Environmental Satellite, Data, and Information Service: NOAA CoastWatch, and the National Centers for Environmental Information; and the University of South Florida.

NOAA’s [National Centers for Coastal Ocean Science](#) (NCCOS) also funds and conducts research, including improvements to the Inundation Risk Reports, and engages with communities affected by *Sargassum* in Puerto Rico and the U.S. Virgin Islands. Current efforts focus on designing [more accurate and timely warnings](#), [understanding societal impacts](#), and informing best management practices for beached *Sargassum*. NCCOS is also detecting and analyzing chemical contaminants (trace metals and PFAS) in *Sargassum* mats from PR, USVI, and FL. This research will provide managers with information to safely manage, dispose, repurpose, or recycle *Sargassum* locally.

Our HABHRCA partners at EPA have also recently published online resources on SIEs in English, Spanish, and Vietnamese. These resources cover basic information on *Sargassum*; origin and drivers of SIEs; impacts and risks of SIEs to human health, the economy, and the environment; and management approaches.

2. What type of support or assistance, if any, can NOAA provide to help local governments and communities respond to and manage *Sargassum* inundation events, including to facilitate appropriate cleanup or removal efforts? Has NOAA conducted any efforts or outreach with coastal municipal governments in Puerto Rico to improve their capabilities to respond to these events?

Answer: NOAA provides scientific expertise and support during *Sargassum* inundation events, including, for example, supporting FEMA during the 2020 emergency declaration in the U.S. Virgin Islands. NOAA’s National Centers for Coastal Ocean Science (NCCOS) also has a [HAB Event Response Program](#) that can provide small amounts of financial assistance to municipalities and local partners in assessing and responding to these events. The NOAA Southeast and Caribbean Regional Team coordinates closely with partners in Puerto Rico to provide science-based resources and management advice. In 2023, NCCOS developed [an infographic](#) to explain what *Sargassum* is, where it comes from, and what happens when it

washes ashore. The infographic includes a summary of the challenges of removal, specifically that *Sargassum* is considered essential fish habitat when offshore and cannot be removed until it beaches.

In 2023, NCCOS initiated a [five year competitive award](#) to improve the effectiveness of *Sargassum* detection and forecasting capabilities, facilitate a better understanding of biochemical impacts associated with inundation or beaching events, and foster the autonomous and routine delivery of timely and accurate *Sargassum* nowcasts, forecasts, and warnings. The award recipient team includes University of South Florida; Florida Atlantic University; CARICOOS; U.S. Virgin Islands Department of Planning and Natural Resources, Division of Fish and Wildlife; and NOAA.

Lastly, we refer back to the EPA's newly published SIE web resources, which contain information on management of SIEs.

3. H.R. 6235 would also provide NOAA authority to enter into agreements or grants with states, territories, tribes, and local governments to help pay for or reimburse costs associated with a harmful algal bloom or hypoxia event of significance. The bill would establish an Event of Significance Fund and authorize NOAA to transfer up to \$2 million per fiscal year to support such efforts.

Could you discuss how this provision could impact or potentially improve NOAA's and other federal agencies' ability to respond to harmful algal bloom events, including *Sargassum* inundation events in the U.S. Southeast and Caribbean regions?

Answer: As written in the reauthorization, the Events of Significance Fund would fund data collection, sampling, and other assessment activities by States, Tribes, and territories. Currently, NOAA's National Centers for Coastal Ocean Science also has a harmful algal bloom Event Response Fund that can provide small amounts of financial assistance to municipalities and local partners in assessing and responding to these events.

4. In June 2022, the U.S. Government Accountability Office (GAO) released a report—titled *Agencies Should Take More Actions to Manage Risks from Harmful Algal Blooms and Hypoxia*—where it found the Harmful Algal Bloom and Hypoxia Research and Control Act Interagency Working Group had taken some actions, such as developing a Research Plan and Action Strategy, but had not implemented a national harmful algal bloom and hypoxia program nor developed performance measures to assess the results of federal agencies' efforts to manage the risks of these events. GAO recommended that NOAA and the EPA, as Co-Chairs of the Working Group, should define what a national program would entail and develop performance metrics to assess federal efforts, including the extent to which the recommended goals from the Research Plan and Action Strategy have been achieved.

Could you discuss what efforts NOAA has pursued to date, in partnership with the EPA, to address and meet GAO's recommendations?

Answer: The NOAA and EPA co-chairs have made progress towards addressing the GAO recommendations starting with the recommendations that are due in FY 2024. These efforts include refining a vision for a national program, including drafting a new goal on HAB and hypoxia prevention, developing IWG performance measures, and working with EPA to expand monitoring and forecasting of freshwater bodies. The working group has developed milestones and a timeline to maintain adequate expectations and progress in all avenues of these recommendations.

- Prevention Goal - EPA and NOAA, in coordination with other HABHRCA-IWG members, have drafted a national HAB program prevention goal. This new goal will be incorporated into the "Interagency Working Group One-pager" which will serve as an up-to-date summary of the working group's structure and function.
- National HAB and Hypoxia Program - EPA, NOAA, and HABHRCA-IWG members are continuing to work to define what a national program would entail, including identifying the program's goals, objectives, milestones, and resource needs. This information will be incorporated into the 2024 HABHRCA National Assessment.
- IWG Performance Measures - EPA, NOAA, and HABHRCA-IWG members are working to develop performance measures to assess the working group's efforts. This information will be incorporated into the 2024 HABHRCA National Assessment.
- Freshwater Monitoring and Forecasting - EPA and NOAA are working to develop an interagency framework, including prioritizing water bodies and identifying resource needs to expand monitoring and forecasting of freshwater HABs and hypoxia. This framework will be presented in a one-pager.