

Outlook of 2023 *Sargassum* blooms in the Caribbean Sea and Gulf of Mexico\* March 31, 2023, by University of South Florida Optical Oceanography Lab (bbarnes4@usf.edu, yuyuan@usf.edu, huc@usf.edu)



The maps below show *Sargassum* abundance, with warm colors representing higher values. The *Sargassum* quantity in the Great Atlantic *Sargassum* Belt (extending from west Africa to the Gulf of Mexico) continued the overall increasing trend, again setting a record abundance (~13 million tons) for this time of year. Additionally, the low quantity recorded in February was determined to be the result of persistent cloud cover in the eastern Atlantic.

Such a record-high quantity for the month of March is mostly due to *Sargassum* in the central East Atlantic. In the central West Atlantic, the Caribbean Sea, and the Gulf of Mexico, *Sargassum* quantity all exceeded the 75th percentile for the same month between 2011 and 2022 but did not reach the historical record. As a result, major beaching events are inevitable around the Caribbean, along the ocean side of Florida Keys and east coast of Florida, although the exact timings and locations are difficult to predict.

**Looking ahead**, the total *Sargassum* quantity will continue to increase, and *Sargassum* in the east Caribbean will continue to accumulate and migrate westward, some of which will be transported to the Gulf of Mexico to impact Florida. As previously predicted, although the peak month of June or July is several months away, there is already a sign that this year's *Sargassum* bloom will likely be the largest ever recorded, with major impacts throughout the next few months. We will continue to closely monitor and track *Sargassum* in each region, with more summary updates provided by the end of April 2023. Meanwhile, daily updates through near real-time imagery can be found under the *Sargassum* Watch System (SaWS, <u>https://optics.marine.usf.edu/projects/saws.html</u>).

**Clarification:** some news reports called this year's *Sargassum* bloom a giant "blob." In reality, however, the bloom refers to *Sargassum* clumps and mats scattered randomly within the 5000-mile *Sargassum* belt. Although the total quantity is large, the average density within the belt is rather low (<0.1%, i.e., less than 0.1% of the ocean is covered by *Sargassum*).



Disclaimer: The information bulletin is meant to provide a general outlook of current bloom condition and future bloom probability for the Caribbean Sea. By no means should it be used for commercial purpose, or used for predicting bloom conditions for a specific location or beach. The authors of this bulletin, as well as USF and NASA, take no responsibility for improper use or interpretation of the bulletin.