Outlook of 2023 *Sargassum* blooms in the Caribbean Sea and Gulf of Mexico*
January 4, 2024, by University of South Florida Optical Oceanography Lab
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The maps below show *Sargassum* abundance, with warm colors representing higher values. Overall, the *Sargassum* quantity in the central Atlantic increased substantially from November to December 2023. The wet weight of *Sargassum* detected during December was just under 5 million metric tons (compared to roughly 1 million tons in November). Although we predicted an increase in the November 2023 bulletin, the magnitude of this growth is notable, with the December 2023 abundance representing a historical record for December. Nevertheless, this biomass largely remained in the interior of the central Atlantic basin (geographically between 800 km east of the Caribbean Sea and 700 km west of the western Africa coastline). Of note, however, a substantial aggregation developed near the mouth of the Orinoco River around the middle of the month. By the end of the month, these *Sargassum* patches had transited northward along the east coast of Trinidad and Tobago, with portions entering the southern Caribbean Sea [CS].

Essentially no *Sargassum* was observed in the Gulf of Mexico [GoM], with the measured quantity being lower than any other December in the modern Great Atlantic *Sargassum* Belt [GASB] era (since 2011). Approximately 120,000 metric tons were recorded in the CS, largely due to the late-month aggregations mentioned above. This quantity is roughly the 50th percentile for the GASB era.

Looking ahead: Rapid *Sargassum* growth has historically been observed in the first few months of the year, and we expect this trend to continue into 2024. The *Sargassum* aggregations in the interior central Atlantic will continue to expand and migrate westward with prevailing currents. These will begin to reach the Lesser Antilles in 1-2 months. The noted *Sargassum* near Trinidad and Tobago will move north and west into the CS, with potential localized impacts on coastal areas. As such, we will closely monitor and track *Sargassum* throughout the central Atlantic, and will provide more summary updates in late January. Meanwhile, daily updates through near real-time imagery can be found under the *Sargassum* Watch System (SaWS, https://optics.marine.usf.edu/projects/saws.html).