

Presentation of The Ministry of Environment,
National Beautification
At the Regional Webinar on the Collection and Valorization of
Sargassum Seaweed
Hosted by The Caribbean Sargassum Cooperation Programme
(SARG'COOP)
Held On Wednesday 7th April,2022.

Background:

As has been well documented elsewhere Barbados and its Caribbean neighbors have been inundated with the influx of what is commonly referred to as Sargassum Sea Weed in the recent past. In the case of Barbados, Sargassum events started in 2011 and have seen some years of severe influxes, completely dominating seascapes, suppressing economic and leisure activities tied to Barbados' oceans. Barbados has a total coastline of 97km, of which 66% (64km) is impacted during seasonal Sargassum seaweed (Sargassum) events. Sargassum seasonal influxes are seen in an eight (8) month period between March and October. This influx has precipitated the need for the development of a comprehensive Sargassum Seaweed Management Plan and attendant strategy.

It must be stated at the outset that as early as 2018 Barbados has been utilizing an integrated approach of combining mechanical means of collection with those of human harvesting based on a multi-agency collaboration. The agencies involved included the Barbados Defense Force (BDF), the National Conservation Commission (NCC), the Ministry of Transport and Works (MTW), the former Ministry of Maritime Affairs and the Blue Economy and the Ministry of Environment and National Beautification. This collaboration continues with varying degrees of success given the nature of the Sargassum phenomenon, the availability of resources and the availability of manpower that these agencies can lend to the exercise.

This multi- agency approach has demonstrated that any efforts to clean Sargassum should be positioned under the umbrella of a national Sargassum Management Plan. The plan therefore focuses on increasing:

The capacity of Local Agencies to respond to the Sargassum crisis in an efficient, dynamic and comprehensive manner. We recognized that without a plan, efforts can be ad-hoc and prone to be ineffective.

- *Resource Allocation if not addressed and optimized can result in the lack of cohesion leading to inefficiency, frustration and miscommunication.*

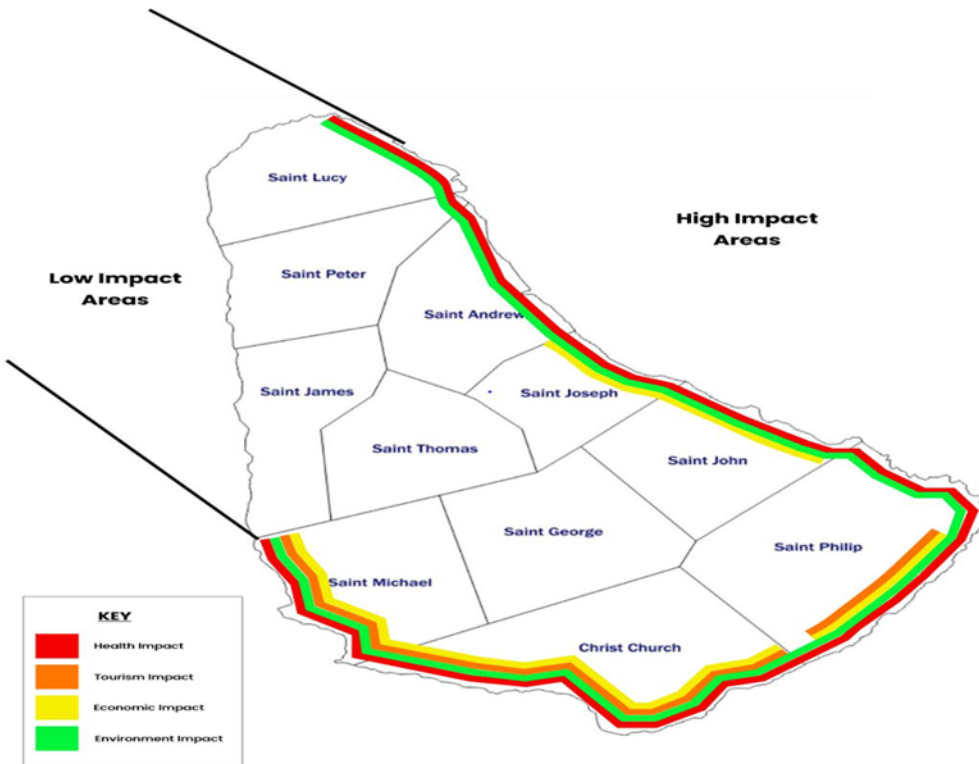
Hence, the importance of a national management strategy for Sargassum cannot be over emphasized. Sargassum is part of the new reality for Barbados and the region, as such we seek to learn; to adapt; whilst mitigating negative impacts and exploiting valorization opportunities. That will only be possible on a national scale with a well-developed plan.

It is against this background that Barbados shares its practical experiences and challenges which persist in the collection and value added proposition for Sargassum. In addition, we believe that the transition from viewing Sargassum as a predominant threat into a viable resource is very much needed and look forward to the sharing of ideas and experiences of our fellow Caribbean Small Island Developing States (SIDS).

Characterization and Prioritization of Beaches and Bays

The sustainable management of Sargassum influxes required the development of a better understanding of the geographic origin, causes, spatial and temporal patterns, management options, as well as the economic potential of Sargassum.

Map showing the type of impact experienced in the High Impact Areas of Sargassum events



The Barbadian experience has shown that Sargassum landings vary in volume, from small pieces scattered across the beach which can be quickly cleaned by hand, to thousands of tons covering large swaths of coastline. It has been observed that tidal removal of Sargassum on some beaches occurs rapidly after deposition while in some bays the Sargassum sits for extended periods even beyond six (6) months. In the latter case, human intervention would be necessary for Sargassum removal. Hence identification of beaches where Sargassum is quickly moved naturally is important for the efficient coordination of clean-up efforts. To determine the appropriate action to take and to best allocate limited resources

beaches must be prioritized. Ostensibly, a two meter “swath” of eight - inch thick Sargassum on a remote, (i.e. seldom frequented) beach might not require cleaning and in a fishing bay it might have no negative impact on the fishery. However, “in front” of popular swimming beaches/hotels it would be an issue for beach users and tourism related activities. It was accepted and recognized that a consultative process inclusive of consultation with experts and stakeholders was required to create a characterization matrix for the beaches and bays on the affected coastlines to help determine the required level of response for each specific beach with various inundation levels. The type of response from level 1 (minor), 2 (moderate), 3 (severe) to level 4 (extreme/national crisis) assessed and based on the particulars of the location and volume of Sargassum is then coordinated. The following characteristics have been included in the physical description of beaches for the relevant type of response:

Ecological factors: density of turtle nesting sites in a particular locale, nearshore ecosystems (e.g. shallow reefs, seagrass beds);

Physiological factors: accessibility to machinery, frequency of use for swimming, presence of sensitive proximity of tourist accommodations, proximity of residents including sensitive institutions (such as elderly care homes, day-cares, schools, clinics) and commercial use (fishery/aquaculture/algae farming).

During the year 2020 the quantity of Sargassum cleaned from the respective beach sites amounted to sum Six Hundred and Sixty-Six Thousand Six hundred and Twenty Pounds (666,620 LBS), equating Three Hundred and Two Metric Tonnes (302.3MT). In the subsequent year 2021 that volume increased considerably to Three Million Six Hundred and Sixty-Four Thousand Eight Hundred and Forty-Five Pounds (3,664,845.0 lbs.) or the equivalent of One Thousand Six Hundred and Sixty-Two Metric Tonnes (1,662.1 MT) was retrieved. The data also substantiates that the heaviest influxes of Sargassum Seaweed occurred during the second and third quarters of the year. That being the period March to August 2021.

Empirical evidence substantiates that beaches along the Eastern Coast have experienced the greatest impacts. These locales however presented challenges of physical accessibility and transportation of both human resources and equipment due to difficult terrain. Additionally, these beaches provide habitat for nesting Leatherback turtles.