

Department of Fisheries

Guidelines for Removal and Disposal of Sargassum seaweed.

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Guidelines on Removal of Sargassum from East Coast Beaches

1.1 OBJECTIVE:

The safe and efficient removal and disposal of Sargassum from affected beaches with minimal effects on the coastal habitats.

1.2 PROBLEM:

The influx of Sargassum washed up on beaches on the eastern sea coast has become a problem for beach front owners and communities. The removal of sargassum on east coast is absolutely necessary, as accumulation will affect the tourism and fishing industries.

1.3 CONTEXT:

Sargassum is abundant in the ocean. It is easy to recognize by its many leafy appendages, branches, and round, berry-like structures that make up the organism. These "berries" are actually gas-filled structures, called pneumatocysts, which are filled mostly with oxygen. Pneumatocysts add buoyancy to the plant structure and allow it to float on the surface.

In the Caribbean the species *Sargassum natans* (common gulfweed) and *Sargassum fluitans* (broad-toothed gulfweed) are washed ashore. These species are mainly indigenous to the Caribbean and North Atlantic region. These species are unique among the other species found internationally because they are free-floating for their entire life cycle and move with the ocean currents.

Sargassum deposit becomes an issue when there is a high density of influx along the coast. This influx impedes the operations of vessels (fishing and others) which impacts tourism establishments and fishing communities. The deposited Sargassum decomposes, and releases hydrogen sulfide (emits rotten egg scent). This gas is colorless and there is no need to be significantly alarmed as the gas can only be detrimental to one's health in high concentrations.

2.0 REMOVAL:

The purpose of this guideline is to outline actions that are to be taken by contractors in the removal and disposal of sargassum, with minimal effects on beach integrity. Due to the topography of the island different managerial strategies have to be utilized in dealing with the issue.

The following actions to be taken in the removal of sargassum include:

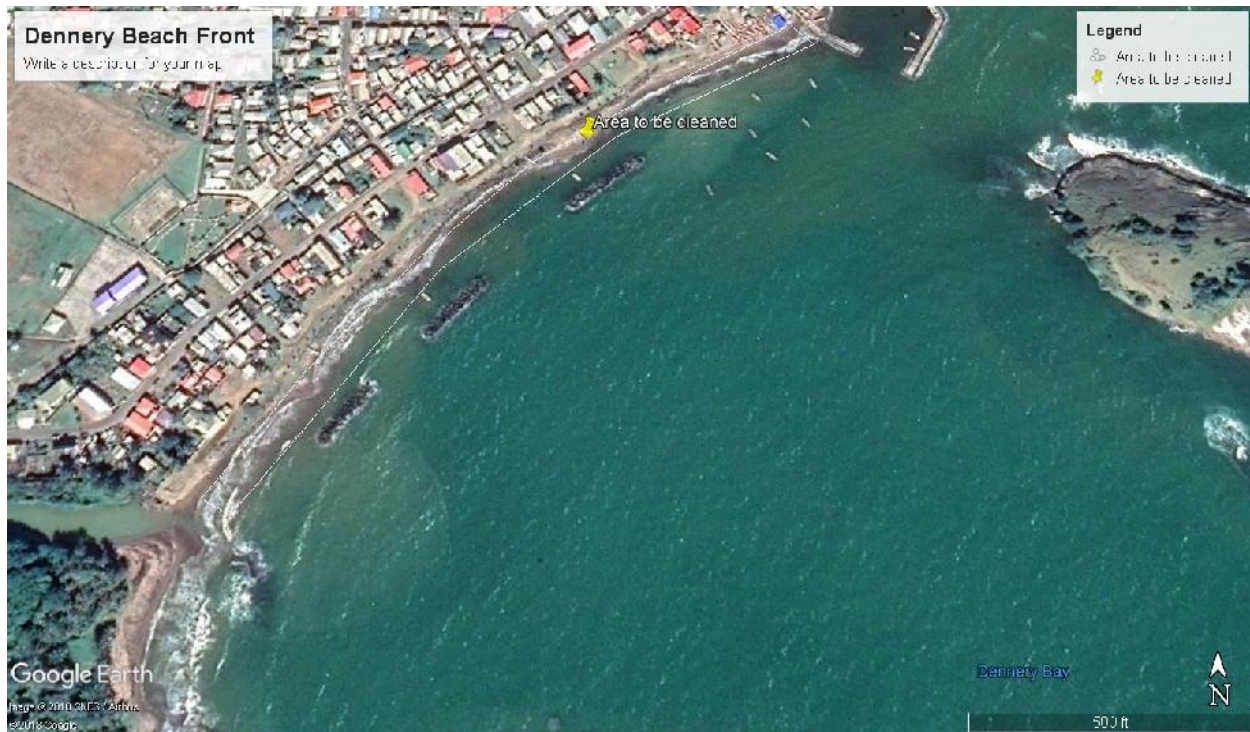


Fig1. Beach front cleaning exercise at Dennerly.

Dennerly:

- Removal of sargassum commences from the drain near the southern end of fisheries facility to the river mouth.
- Excavators are to be situated on the beach behind the sea wall and boom used to load trucks in stipulated loading areas.
- Trucks are not to be loaded fully with sargassum. Space must be left in hopper for movement of sargassum during transport.
- Hoppers of trucks must be covered during transportation of sargassum to deposal site.
- Removal of sargassum should be from and to agreed areas only, and equipment use the same route on and off the beach as guided.
- Areas around loading regions should be wet to prevent buildup of dust in the area.
- Disposal of sargassum from this area will be done at Praslin A. If Praslin is at full capacity, dumping will be done at alternative site.
- Before and after pictures will be taken for site and work assessments.



Fig2. Illustration mapping area used for dumping of sargassum at Praslin Beach

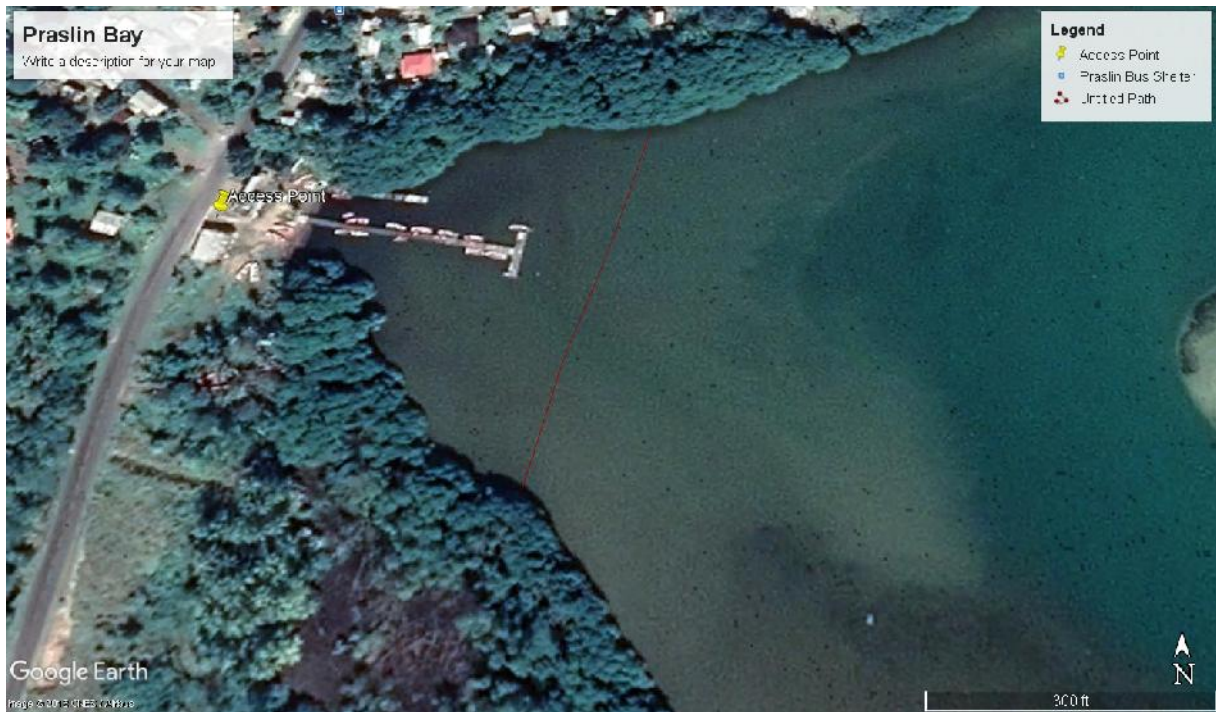


Fig3. Praslin Bay access point

Praslin A and B:

- Areas of dumping on Praslin beach will occur where indicated
- Dumping pits are to be 8 to 10 feet in depth and pits should not be dug less than 2 feet away from tree line of beach.
- Dumping pits should not extend pass the coconut trees located on the river bed
- When pit is fully occupied, surplus sargassum is to be transported to alternative site for disposal.
- Trees are to be removed until dumping has completed then replanted when sargassum is covered
- The same route onto and off the beach should be used.
- Before and after pictures will be taken for site and work assessments.



Fig3. Access points to the Micoud Bay.

Micoud:

- Excavators will be situated of the beach and boom used to load trucks in stipulated loading areas as covered in contract.
- Trucks are not to be loaded fully with sargassum. Space must be left in hopper for movement of sargassum during transport.
- Hoppers of trucks must be covered during transportation of sargassum to deposal site.
- Removal of sargassum should be from and to agreed area only, and equipment use the same route onto and off the beach as guided.
- Areas around loading regions should be wet to prevent buildup of dust in the area.

- Disposal of sargassum from this area will be done at Praslin A. If Praslin is at full capacity, dumping will be done at alternative site.
- Before and after pictures will be taken for site and work assessments.

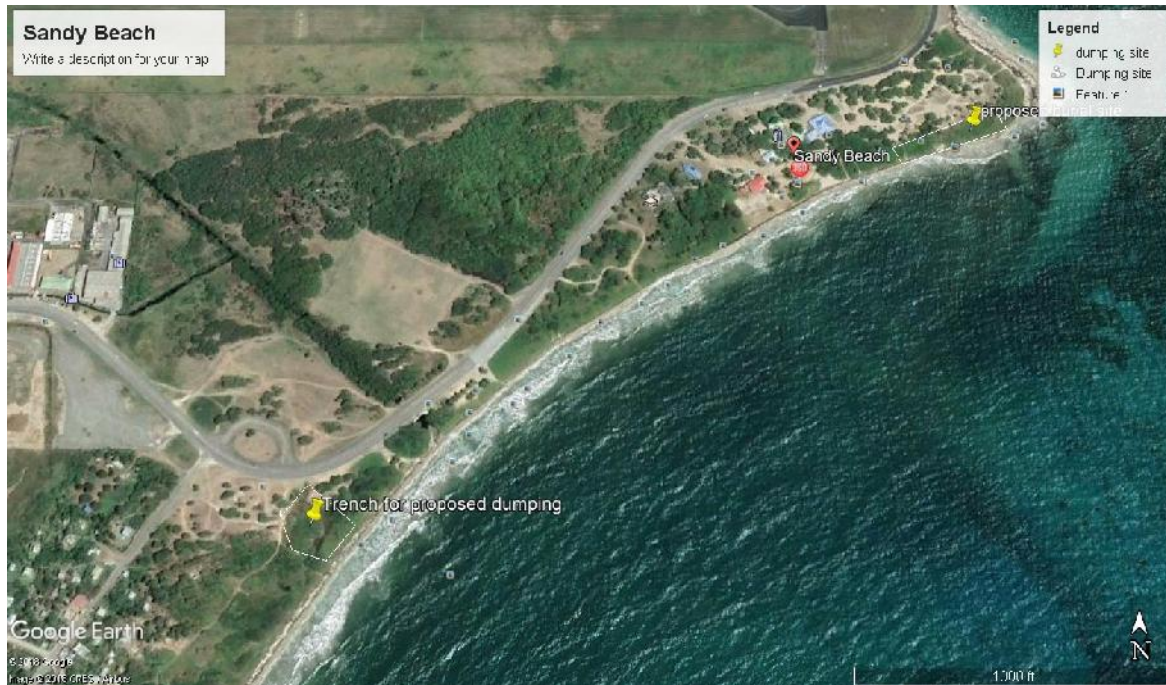


Fig4. Indications of proposed areas of dumping at sandy beach

Sandy Beach:

- Excavators will be situated behind sand dunes and boom used to load trucks in stipulated loading areas as covered in contract.
- Trucks are not to be loaded fully with sargassum. Space must be left in hopper for movement of sargassum during transport.
- Hoppers of trucks must be covered during transportation of sargassum to deposal site.
- Removal of sargassum should be from and to agreed area only, and equipment use the same route on and off the beach as guided.
- Wet route used on the beach to reduce on dust which may affect motorist and beach goers.
- Dumping will only be done in stipulated areas assigned for dumping.
- Before and after pictures will be taken for site and work assessments.

2.1 Special Considerations:

Special considerations are to be taken in the removal of sargassum on selected sites. Praslin A and Vieux Fort are example of sites which these considerations are to be observed.

- The site being cleaned is located near habitats used by turtles, coastal birds and lizards for nesting.
- Leave 0.5 foot layer of sargassum on beach to mitigate beach erosion and removal of sand.
- Avoid the use of track or belt skid equipment. Wheeled equipment is recommended.
- Work in the inter-tidal (swoosh) zone should be done at low tide to mitigate beach erosion.
- Removal of sargassum should be from and to agreed areas only, and equipment use the same route on to and off the beach to minimize environmental disturbance.
- Do not exceed the water table mark when dumping.
- Turtles harmed, injured or observed should be reported to the Department of Fisheries immediately.

2.2 SAFETY AND ENVIRONMENTAL CONSIDERATIONS:

- All workers on the beach should be provided with breathing apparatus in the removal of sargassum deposits due to high concentrations of Hydrogen Sulfide gas.
- Wet the access points at the beach to minimize dust and spillage that will be present on the trucking of the sargassum to dumping sites.
- Redepositing seaweed in upper beach/ tidal zones to be reintegrated in the beach template.
- Look outs will be present during sargassum removal for turtle nest and trapped or injured turtles.
- Removal of sargassum should be from and to agreed areas only, and equipment should use the same route on to and off the beach to prevent destroying beach vegetation or nests.