What Is Sargassum?
A genus of seaweed that originates from the Sargasso Sea in the North Atlantic Ocean. It is a pelagic, brown macroalgae that should not be confused with red algae that is used in making seamoss drinks (Irish Moss). In recent years, there has been an increase in the amount of Sargassum seaweed that is found on our Caribbean beaches and this has become quite problematic.

1. Endangerment of Local Organisms
As seaweed is washed ashore, it gradually mixes with the beach sand forming a more compact beach front. However, with the bloom, there has been an increase in the mounds of beached seaweed. This has proven to be problematic for the Caribbean’s nesting sea turtles as they find it difficult to maneuver around the seaweed. They sometimes become entangled in the vines and die. If they are able to nest however, most hatchlings don’t make it to the sea since they are trapped and this leads to a decline in the future adult population. The inconvenience caused by the presence of the seaweed also alters the turtle nesting patterns causing many endemic and endangered species to migrate.

2. Deoxygenation
When the Sargassum mats multiply, they become layered and the Sargassum on top deprives the bottom seaweed of sunlight. This leads to a decrease in photosynthesis and therefore a decrease in the amount of oxygen produced. Plants also use oxygen for respiration at night and an increase in seaweed numbers within a specific area leads to lower oxygen concentrations since the oxygen is now used by the marine organisms AND the seaweed. Also, the decomposition process carried out by bacteria on the dead Sargassum uses up a substantial amount of oxygen thus decreasing available oxygen. The diminishing of oceanic oxygen levels affect the marine organisms and could lead to death of Sargassum inhabitants.

3. Release of H2S
Hydrogen disulphide is a very toxic and colorless gas. It is harmless in small amounts. It is produced when seaweed decomposes and, in small amounts, produces a tolerable amount of a pungent gas. With the bloom, there is an increase in the amount of beached seaweed on the Caribbean beaches and as a result, an increase in the concentration of H2S, which is quite harmful to the human body. An increase in H2S concentration triggers asthmatic symptoms and causes other illnesses. The gas emitted from decomposing Sargassum at sea also erodes metal and as a result, damages ships.

4. Beach Pile up
The most obvious implication of Sargassum blooms is the massive piles of seaweed found on the beaches. This pile up is a deterrence to tourists as it is a nuisance and very unsightly. This leads to tourists visiting areas other than the Caribbean which may affect the GDP of various tourism dependent islands.

SOLUTIONS

- The use of heavy machinery to clear up large mounds of seaweed however, this can loosen sand particles.
- The removal of seaweed over coral reefs prevents extensive coral damage.
- Manual cleanups and raking are more effective means to clean the beaches. Also, by sifting through the weeds, hidden animals such as turtles can be found and rescued.

References:

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