Story timeline 2011 - 2021

2011
- Initial shock
- Scrambling for answers

2015
- Sharing lessons learning to cope
- Improving the science
- Acknowledging multi-sectoral impacts

2018
- Developing Forecasts
- Seeking opportunities

2021
- Main streaming

Significant sargassum influx events
The initial shock

- 2011 first mass influxes into the Caribbean
- Lack of knowledge led to fear, misinformation and mistakes
- Lack of prior relevant policy (no one to take responsibility)
- Lack of funding a huge constraint
- Major uncertainty delayed planning response
Dispelling myths: What is it?

• Unique free-floating non-toxic brown seaweed with air bladders for flotation

• Comprises 2 species (several morphotypes) that cling together

• Unlike the 100s of attached sargassum species, these 2 are only found in the Atlantic Ocean

• Propagate asexually and capable of fast growth (can double biomass in 11 days)
Scrambling for answers

Dispelling myths: What is it?

- Can form large floating mats or long windrows of weed
- Travels with ocean currents and wind
- Can accumulate over huge areas of open ocean (Sargasso Sea)
- Biomass varies over space and time (seasonal and annual)
Sargassum is good!

Open Ocean:
• Increases ocean productivity
• Supports ocean food webs
• High biodiversity, endemic species
• Nursery for endangered sea turtles
• Spawning substrate

Onshore:
• Forage for shore birds
• Fertilizes shore plants
• Binds sand and builds dunes
Scrambling for answers

Where has it come from?

- Sargassum well known in the Sargasso Sea
- Also know seasonally in the Gulf of Mexico

- Back-tracking from landing sites using ocean current models
- Processed satellite imagery

A new source in the tropical Atlantic
The story unfolds

- Suddenly appears in the Eastern Caribbean

2011

2011

2011
Influxes increase

- After a reprieve in 2013
- Sargassum influx affects extend to Greater Antilles by 2014

Mounting challenges for fisheries and tourism
By 2015 mass influxes reach right across the Caribbean to Central and South America.
Caribbean-bound tourists cancel holidays due to foul-smelling seaweed.

Seaweed blankets the beach in Cancun, Mexico. The huge influx of sargassum has hit most of the Caribbean this year and prompted cancellations from tourists.

Photograph: Israel Leal/AP

The word gets out.
The problems get worse

Socio-economic disaster
- Disruption of livelihoods
- Impacts to human health
- Damage to property

2015

Stained paintwork

Tarnished fittings

http://observers.france24.com/
http://theoceancleaner.org/sargassum-problem/
http://www.outremersbeyou.com/sargassie-photos-instagram/

Neema Ramlogan

Trinidad & Tobago Guardian Online
Not just a Caribbean problem

- Also affecting West Africa from Senegal to Nigeria
Sharing lessons

Coordinating Responses

- Regional symposia
- Regional communication network
- Partnering among regional institutions
  - UWI, USM, USF, French IRD
  - GCFI, CRFM, UNEP-CEP, ACS-CSC, FAO
  - CTO, CAST, CHTA
- Key messages
- Looking for funding
Learning to cope

Fact Sheets
- Acknowledging the problem
- Causes and consequences
- First lessons on how to cope
Influxes continue to increase

Caribbean & Central Atlantic

Mean coverage (km²)

20 mil mt

Adapted from: Wang et al. 2019

The great Atlantic Sargassum belt

Science 05 Jul 2019  Mengqiu Wang¹, Chuanmin Hu¹, Brian B. Barnes¹, Gary Mitchum¹,

July 2018

Improving the science

• Focus on understanding the drivers
• Developing forecasts to predict sargassum influxes

Currents and climate

Sargasso Sea

GOM

AFRICA

SOUTH AMERICA

Urbanisation

Agriculture

Mining

African dust

Logging

Nutrients
Seeking opportunities

- Focus on innovation
- Developing commercially viable products

- Seeking uses for large biomass

[Image: Collection barge]

http://www.algeanova.com
http://fusionfarming.com/applications/biogas/

Opportunities for valorisation of Sargassum in the Dutch Caribbean

Sargassum Uses Guide: A resource for Caribbean researchers, entrepreneurs and policy makers
Main streaming

Governance framework

- Integration with emerging blue economies
- Drafting national management plans
- Developing regional policy
  - CARICOM Heads of Gov 2015
  - UN General Assembly Resolution 2015
  - UNEP-CEP White paper 2018 (2021)
  - Caribbean Programme for Sargassum 2019
Thank you