

BEST PRACTICES FOR CARIBBEAN FISHERS COPING WITH SARGASSUM



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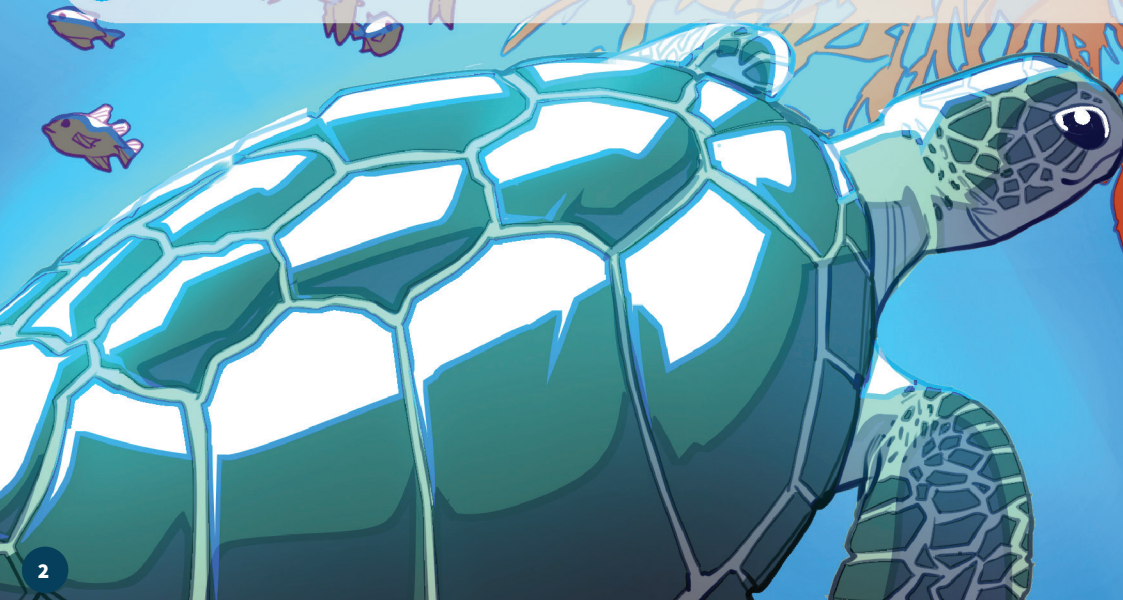
HI MY
NAME IS *GASMO*,
THE SARGASSUM FISH,
AND I'M HERE TO SHARE
EVERYTHING I'VE
LEARNT FROM
FISHERFOLK.



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WHAT IS SARGASSUM?

- 1 SARGASSUM IS A BROWN SEAWEED.
- 2 SEVERAL SARGASSUM TYPES FLOAT TOGETHER.
- 3 THESE TYPES ARE NEVER ATTACHED TO THE SEAFLOOR.
- 4 THEY LIVE THEIR WHOLE LIFE AS FREE-FLOATING WEED.
- 5 THEY CAN FORM LARGE FLOATING MATS OR LONG WINDROWS OF WEED.
- 6 THEY HAVE FLOATING BERRIES TO KEEP THEM AT THE SURFACE.





SARGASSUM AT SEA IS GOOD FOR THE OCEAN!

- 1 SUPPORTS OCEAN FOOD WEBS.**
- 2 PROVIDES A HOME FOR MANY SPECIES.**
- 3 NURSERY FOR ENDANGERED SEA TURTLES.**
- 4 SPAWNING GROUND FOR FLYINGFISH AND OTHER SPECIES.**
- 5 INCREASES OCEAN PRODUCTIVITY FOR BETTER FISHING.**

AMERICA

WHERE IS IT COMING FROM?



- There is a new source area right across the equator, and it looks like it's here to stay.
- Sargassum grows faster with more nutrients (pollution) and warmer water (climate change).
- Sargassum is carried to the Caribbean by ocean currents and wind.
- The influxes, like hurricanes, are hard to predict.

SOUTH
AMERICA



AFRICA



NEW SOURCE AREA FOR
SARGASSUM



CHALLENGES

CHALLENGES AT LANDING SITES

SARGASSUM...

1

TRAPS BOATS
AT MOORINGS

2

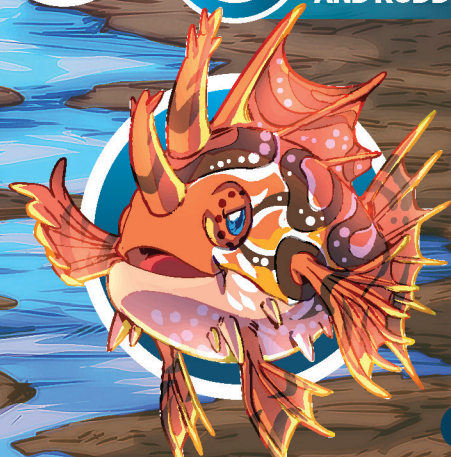
IMPEDES
NAVIGATION

4

FOULS
PROPELLERS
AND RUDDERS

3

HINDERS ACCESS
TO BOATS AND
JETTIES



CHALLENGES AT SEA

GENERAL CHALLENGES:

- 1 **BLOCKED WATER INTAKES**
- 2 **FOULED PROPELLORS**
- 3 **BOATS STUCK IN FLOATING SARGASSUM MATS**
- 4 **SKIN IRRITATION WHEN HAULING GEAR**

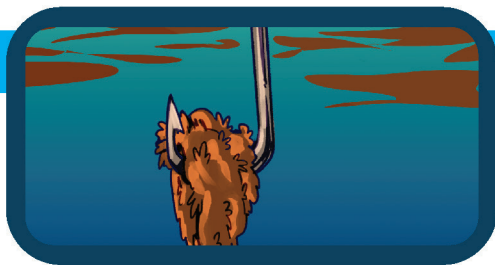


POT FISHERS

- 1 Hauling pots with sargassum on rope
- 2 Sargassum blocks entrance funnels

PELAGIC FISHERS

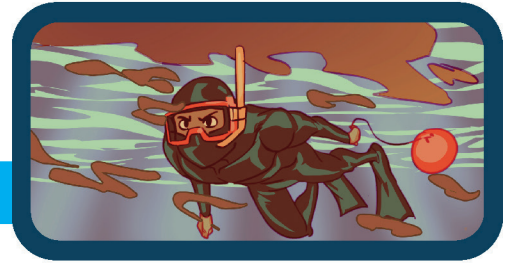
- 1 Sargassum tangles in gillnets
- 2 Sargassum catches on lines, fish lures and hooks





SPEAR FISHERS

- 1 Poor visibility
- 2 Sargassum berries getting into divers' ears
- 3 Skin irritation



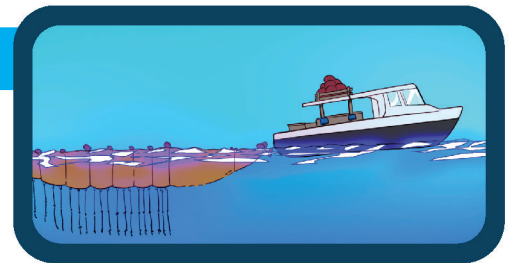
SEINE FISHERS

- 1 Sargassum weighing down seine net



LONGLINE FISHERS

- 1 Difficulty hauling longlines
- 2 Buoys weighed down by sargassum and disappear beneath sea surface
- 3 Breaking of lines





SMART PRACTICES AT LANDING SITES

- 1 Conduct community clean-ups (manual clean-up: using rakes and wheel barrows; fishing nets).
- 2 Assist each other to launch boats or access moored boats.
- 3 Seek government assistance when sargassum influx is severe.





SMARTFISHING
Gear

SMART FISHING

COASTAL FISHING WITH SARGASSUM

PREVENTION IS BETTER THAN THE CURE!



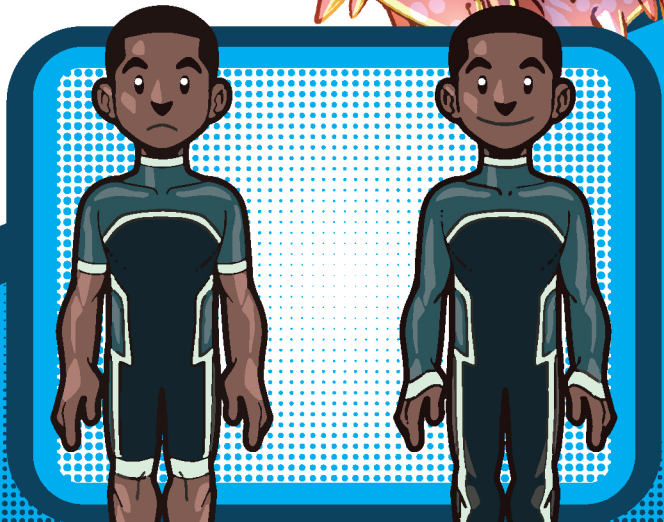
WHEN SPEARFISHING

Wear diving gear with minimal skin exposure, to prevent skin irritation.



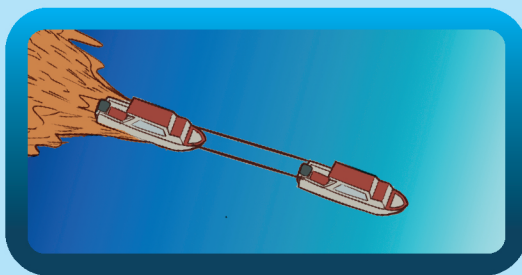
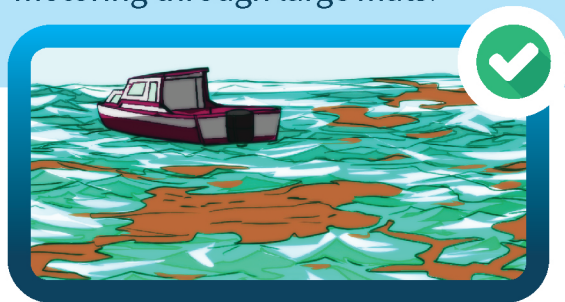
WEAR A DU-RAG, BUFF SCARF OR DIVING HOOD TO AVOID GETTING SARGASSUM BERRIES IN YOUR EARS.

If skin comes into contact with sargassum remember to apply vinegar to the affected area!



HAVE YOU ENCOUNTERED SARGASSUM AT SEA? HERE'S WHAT TO DO:

If sargassum is unavoidable, look for lighter patches to go through and AVOID motoring through large mats.



In cases where boats really get stuck in sargassum, call another fisher for help to get towed out of the sargassum.

When sargassum gets wrapped around the propeller, put the boat in reverse.



**STUCK IN THE
SARGASSUM MAT?**
Here's what to do:

Switch off the engine and allow the vessel to drift out of the sargassum.

BE PATIENT!



**DON'T FORGET
TO RADIO TO
COLLEAGUES
WHICH AREAS
TO AVOID!**



HAVE YOU ENCOUNTERED SARGASSUM AT SEA? HERE'S WHAT TO DO:

Sargassum often becomes tangled in lines and on hooks while trolling. You could avoid this by using:

- Wire lines/cable and lead sinkers to carry the line below the surface floating sargassum.
- Vertical lines / jigs to fish below the sargassum.



You could improve fishing efficiency around sargassum by using:

‘Surface poppers’ to mimic feeding frenzies.

‘Bonito straps’ with multiple hooks.

REEL
OF WIRE



LEAD
SINKERS



VERTICAL JIGS

Vertical Jigs work well for species below the surface. Thin or weighted jigs sink quickly, allowing the fisher to set and retrieve it quickly. Pink and blue colours attract a variety of species including tunas and dolphinfish.

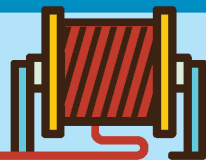
SURFACE POPPERS

Surface poppers are best used for surface fishing. They imitate a fleeing baitfish by creating serious commotion action on the surface through splashing, popping, and jolting action with a swift rod pull. Blue colour works well for different species including amber fish and barracuda.



BONITO STRAP

Bonito strap uses 5 to 6 artificial squid lures trolled in clear areas in between the sargassum lines or mats.



DON'T COME HOME EMPTY HANDED! YOU CAN MAKE THE MOST OF SARGASSUM:



1

Fishing along the calmer and thinner sides of sargassum mats yields greater catches of large pelagics including dolphinfish, wahoo (kingfish) and barracuda and smaller fish including turpits.

2


Take advantage of new species (e.g. almaco jacks aka amberfish).



3

Fishing around smaller patches yields good catches of amberfish and dolphinfish.





SMARTFISHING
Technology



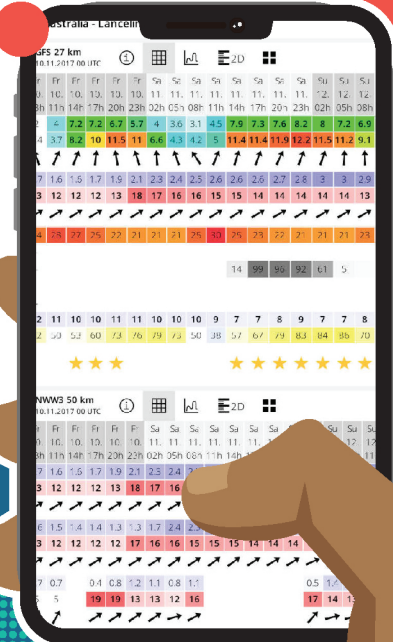
WINDGURU

Today's weather apps that monitor ocean temperature, wind speed and swell heights can give a better idea of fishing areas likely to yield greater catches.

How about using free weather forecasting apps such as Windguru for information on wind, waves and tides to fish smarter!

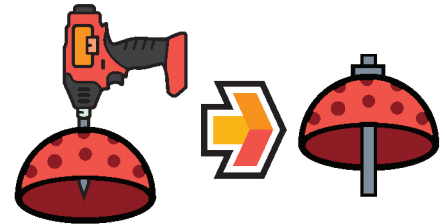
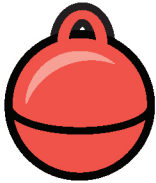
Light winds (9 to 11 knots) and small swells (0.9 – 1.2 m) usually cause lines of sargassum to form larger mats.

Greater catches of dolphinfish and turpits around areas of sargassum occur with warmer summer water temperatures (e.g. 81-83°F / 27.2-28.3°C).



D.I.Y. STRAINER TUTORIAL

**LOW COST, VERY EFFECTIVE, EASY TO MAKE,
INTAKE STRAINER FOR INBOARD ENGINE**



STEP
01

USE A MARKER PEN TO
DRAW A HORIZONTAL LINE,
AS STRAIGHT AS POSSIBLE
ACROSS THE MIDDLE OF
THE BUOY.

STEP
02

CUT THE BUOY IN HALF
USING A HACKSAW AND DRILL
NUMEROUS HOLES SMALLER
THAN THE SIZE OF THE
SARGASSUM BERRIES
TO CREATE A STRAINER

STEP
03

DRILL 1 LARGE HOLE
THROUGH THE STRAINER
FOR THE THREADED ROD
TO BE INSERTED. INSERT
THREADING ROD TO ENSURE
A SNUG FIT.

NB: STRAINER DOES NOT HINDER WATER FLOW AND CAN BE REMOVED AND CLEANED WHEN NECESSARY

BOAT MODIFICATIONS CAN RANGE FROM SIMPLE “DO IT YOURSELF” SOLUTIONS TO MORE ADVANCED STORE BOUGHT TECHNOLOGICAL INNOVATIONS, TO BETTER COPE WITH SARGASSUM.



DRILL A HOLE BY THE INTAKE, INSERT THREADED ROD, USE SEALANT, SLIDE ON STRAINER OVER THE INTAKE AND FASTEN USING LOCK NUTS AND WASHERS.



MATERIAL LIST

- 1 BUOY
- 2 HACKSAW OR ANGLE GRINDER
- 3 1 FT OF ½” STAINLESS THREADED ROD
- 4 2 LOCK NUTS
- 5 2 WASHERS
- 6 MARKER PEN
- 7 DRILL
- 8 SEALANT

RY. CAVITATION MAY OCCUR AT HIGH SPEED CAUSING OVERHEATING.

EXTERNAL STRAINER

COMMERCIALLY PRODUCED BRONZE HULL STRAINERS ARE VERY EFFECTIVE FOR PROTECTING INBOARD ENGINES.

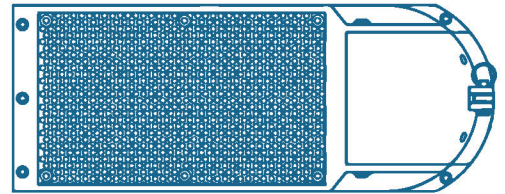
For installation over the vessel's intake to capture the berries, which may block the intake and cause overheating.

ADVANTAGES OF THE STRAINER:

- 1** THERE IS NO NEED TO REMOVE THE ENTIRE STRAINER TO CLEAN SINCE THE SCREEN IS REMOVABLE.
- 2** CAPTURES ALL SARGASSUM BERRIES.
- 3** STREAMLINED DESIGN AVOIDS POSSIBLE CAVITATION AT SPEED.

DISADVANTAGES OF THE STRAINER:

- 1** RELATIVELY EXPENSIVE.



FOOD FOR THOUGHT

- Could hulls be modified to deflect sargassum away from the propellers?
- Should propeller guards be considered?
- Should fishers maximize earnings by looking for additional revenue from harvesting and using sargassum?





Food and Agriculture Organization
of the United Nations



Speede R.S, S. Cox, H.A. Oxenford. 2019. Best Practices for Caribbean Fishers
Coping with Sargassum. Centre for Resource Management and Environmental
Studies. The University of West Indies, Cave Hill, Barbados. 23pp.



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