













Sargassum Influx Update for

ENTREPRENEURS AND SMES

Many types of seaweed are used worldwide in various applications, including food for humans and animals, biomass for fuel, cosmetics, agriculture, as well as extraction of various chemicals with medicinal and/or industrial uses.

A distinct type of floating seaweed has recently emerged as a hazard in the Tropical Atlantic. Since 2011, Caribbean and West African coastlines have been subject to unprecedented, massive, episodic inundations of floating sargassum seaweed. There is significant interest in 'turning the table' on sargassum by converting that which is currently a hazard into a benefit. There is great potential for commoditisation of sargassum through similar uses as exist for other types of seaweed (see FAO-CERMES brief). Effective exploitation of the sargassum reaching our shores would have the significant co-benefit of reducing or eliminating the negative impacts of the influxes.

This guidance brief is for innovators, entrepreneurs, and small and medium sized businesses interested in or having started a business initiative that makes use of sargassum as a resource or raw material. This brief is based on the 2021 update to the UNEP-CEP white paper on Sargassum influxes to the Caribbean region.

Background information on sargassum - such as what it is, the species that are involved, and where is generally comes from – is effectively covered in other publications such as these briefs:

FAO-CERMES

IWECO SGP

IOCARIBE-SOMEE

GCFI Sargassum Fact Sheet

Things to Consider in using Sargassum as a Resource or Raw Material

Bear in mind that the availability of sargassum stranded on or near the shoreline will be highly variable and difficult to predict, and plan accordingly. Information resources on forecasting are provided below.

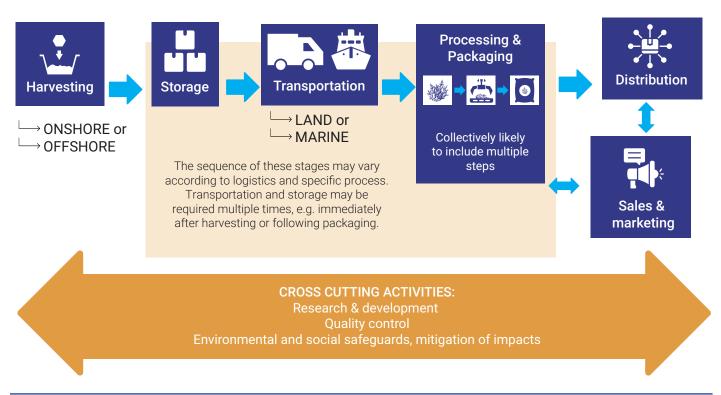


Map out in full the process from raw material to end product: ownership, rights and access; harvesting; storage (if needed); transportation; processing (which may have multiple stages); packaging; distribution; sales and marketing.

- Each step requires resources and planning, involves costs and adds value
- Consider your setting distances, access, logistics and costs are likely to vary significantly across territories and may be especially complex and/or costly in small islands.

 Some end uses or processes have particular requirements for the raw material. Some require fresh sargassum while others require dry, and some end uses may achieve a better yield with only certain types of sargassum. Sargassum harvested from the beach may be mixed with sand. Salt content may vary and may affect suitability for some applications. See <u>FAO-CERMES Uses Guide</u>. The sargassum reaching our shores may be unsafe for some consumption and contact applications common with other types of seaweed because of toxins/contaminants such as heavy metals.

Sargassum value chain schematic



Be aware that harvesting sargassum as a raw material in some circumstances can result in negative impacts and plan accordingly. Floating sargassum itself is not harmful. In fact, it is beneficial at sea, providing habitat for many marine species. It is the mass stranding of sargassum on coastlines where it decays that has significant negative impacts. Harvesting sargassum offshore that would not otherwise beach is tantamount to removing valuable habitat. Harvesting directly from the shoreline can be damaging to the beach ecosystem depending on the method and equipment used.

Consider and if possible quantify the co-benefits: using greater quantities of sargassum will have more significant positive impact by reducing negative effects of influxes.

Familiarise yourself with the legal environment in the country(ies)/ territory(ies) in which you are operating. You will need to comply with laws, regulations, and policies related to: physical development, natural resource extraction and ownership, environmental protection,

public health and safety, labour and employment, business registration and copyright, and sector-specific guidance based on area of interest. Carefully consider legality and compliance as well as environmental and social impacts at each stage in the production process as you have mapped it out, e.g. legal rights to harvest sargassum and/or access the harvest site, land use and environmental regulations for your storage/production site, e.g. does storage or processing involve strong odours that will affect neighbours, potential contamination of water resources, appropriate disposal of any waste products from processing.

Where possible, support and provide input to the development of practical standards and protocols for sargassum harvesting, production and marketing of end products. Where and when they exist, comply with them. Standards and protocols protect your consumers/end users and your business. Advocate for a harmonised regulatory framework to facilitate exports within the Caribbean.

Be Prepared for Opportunities by building your Capacity, Knowledge Base, Networks

Look out for funding opportunities through Blue or Green initiatives such <u>Compete Caribbean's Blue Economy</u> <u>Innovation Challenge</u>, <u>The Caribbean Challenge Initiative</u>, <u>Blue Invest: A Facility for Caribbean SIDS</u>, and initiatives through the <u>UNDP Accelerator Lab for Barbados and the Eastern Caribbean</u>.

Seek out general resources for Entrepreneurs and SMEs that provide support, resources, and access, including helping you develop essential business skills such as proposal writing:

- PROWESS powering MSME proposals | Caribbean Development Bank (caribank.org)
- SME Toolkit Caribbean (republicsmetoolkit.com)
- Caribbean Business Academy
- Talent and Innovation Competition of the Americas
- Entrepreneurship Program for Innovation in the Caribbean (infodev.org)
- Youth Entrepreneurship Programme in Latin America and the Caribbean
- Branson Centre of the Caribbean

Do what you can to make yourself known and accessible. This way, you are more likely more likely to learn about opportunities that may available, and to be included in stakeholder engagement processes for policy development and projects related to sargassum. Consider:

- Maintaining a LinkedIn or Facebook page, website, other social media, or online platform with current contact information that you check regularly,
- Using online resources to actively seek out relevant sargassum projects and make contact with project personnel seeking inclusion as a stakeholder/ contact. Start with the <u>Sargassum Hub</u> or the 2021 UNEP Sargassum White Paper.
- Employing digital technologies to streamline business processes,
- Joining or engaging with regional and local CSO/ NGO working on sargassum initiatives, e.g.
 Caribbean Alliance for Sustainable Tourism (CAST), Caribbean Natural Resources Institute (CANARI),

- Caribbean Network of Fisherfolk Organisations (CNFO), Gulf and Caribbean Fisheries Institute (GCFI), Marine Conservation without borders.
- Joining relevant associations for SMEs / Entrepreneurs, e.g. Small Business Associations in your country, <u>TEN Habitat</u>
- Forming an association if no suitable existing one exists, e.g. association of green/blue entrepreneurs/ innovators,
- Actively participating in public consultation processes such as for Blue Economy development, other policy development or national initiatives that are relevant to your business.

Identifying and understanding your stakeholders is critical to developing partnerships and resolving conflicts should they rise. It will help with networking as well. You can access a regional sargassum stakeholder map here. You could adapt the map structure to develop a stakeholder map for your business.

Incorporating Available Forecasting into Planning Business Operations

Sargassum forecasting tools provide the best available predictions of sargassum outlook based on input data and models. These could be useful for planning harvesting, and/or estimating quantities and budgets. Think of sargassum forecasts as similar to weather forecasts. Forecasters are providing information based on models and probability estimates – the forecast is not a guarantee. Find a sargassum forecast for your location:

- Region-wide: SaWS
- Region-wide: <u>NOAA AOML Experimental SIR</u>
- Region-wide: <u>SAMTool</u>
- Region-wide: <u>SATsum</u>
- Eastern Caribbean: <u>UWI-CERMES</u>
- French Caribbean: MeteoFrance

Other tools and information sources

- UNEP-CEP web-page on sargassum
- UNEP-CEP SPAW RAC Sargassum online forum
- SargNet Listserve: join here
- Sargassum hub
- <u>UWI-CERMES website</u>
- Sargassum Podcast



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