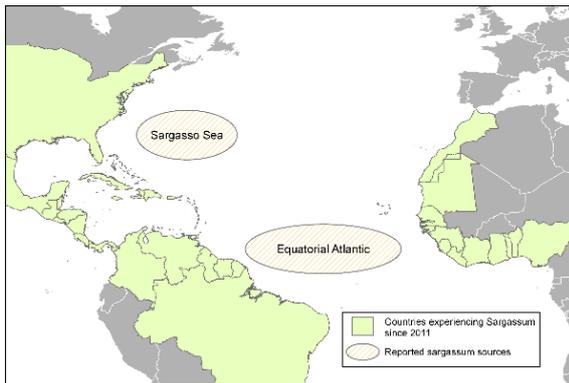


## **SARTRAC: Teleconnected SARGassum risks across the Atlantic: building capacity for TRansformational Adaptation in the Caribbean and West Africa**

**Overview:** SARTRAC is a 3 year, ESRC GCRF-funded, £1 million programme of applied research that runs from Nov. 2019 to Oct. 2022. SARTRAC focusses on identifying the opportunities for transformational adaptation that can be generated through the management and re-use of sargassum seaweed increasingly found across the tropical Atlantic. Since 2011, there have been major beaching events of sargassum, whereby huge sargassum seaweed mats wash up on beaches across the Tropical Atlantic, affecting North, South and Central America, the Caribbean and West Africa, see Figure 1.



**Figure 1. Sargassum affected areas**

The beached sargassum has damaging effects on human health, beach access, fishing, tourism and nearshore marine communities. The influxes of sargassum mats are unpredictable, with their landings varying seasonally, annually and spatially across the Tropical Atlantic. Living with these influxes is potentially the 'new normal' to which affected countries must adapt. What can be done to help those affected? We want to see what opportunities exist to use sargassum seaweed to create opportunities for the most vulnerable affected communities.

The SARTRAC project will analyse the drivers of sargassum in the Tropical Atlantic, will determine the impacts and adaptation options in Jamaica and will develop enhanced early warning systems and long-term forecasts specifically targeted at vulnerable coastal communities. SARTRAC will explore the transferability of methods to Ghana and consider how to create equitable benefits from sargassum use across the Tropical Atlantic Basin.

**Aims:** SARTRAC has two distinct aims:

- (1) To identify opportunities for transformational adaptation that can be generated through the management and use of sargassum seaweed.**
- (2) To build capacity both within and outside of the consortium to support use of the seaweed by vulnerable coastal communities.**

**Methods:** Drivers of sargassum influxes will be examined using ocean and atmospheric data and models. Monitoring will involve remote sensing and ground truthing. Identifying adaptation options will occur through biochemical analysis of the seaweed and participatory research with communities affected. Governance issues will be explored through analysis of legal and policy frameworks, as well as through direct data collection with affected communities in Jamaica and Ghana and with sargassum policy makers. The research will be stakeholder-driven and will generate co-produced outputs.

**Outcomes:** This project will: identify sustainable and equitable uses of sargassum; strengthen the sargassum research capacity in Jamaica and Ghana; shape sargassum policy choices in Jamaica and Ghana, and internationally; produce SARTRAC tools for adaptation to sargassum events to improve the livelihoods of vulnerable coastal communities in the Caribbean and West Africa; and generate sargassum risk management strategies for partner country governments to enhance the resilience of vulnerable communities to sargassum.

**Structure:** The project comprises 4 Work Packages (WP), with 2 cross cutting themes (Fig. 2)

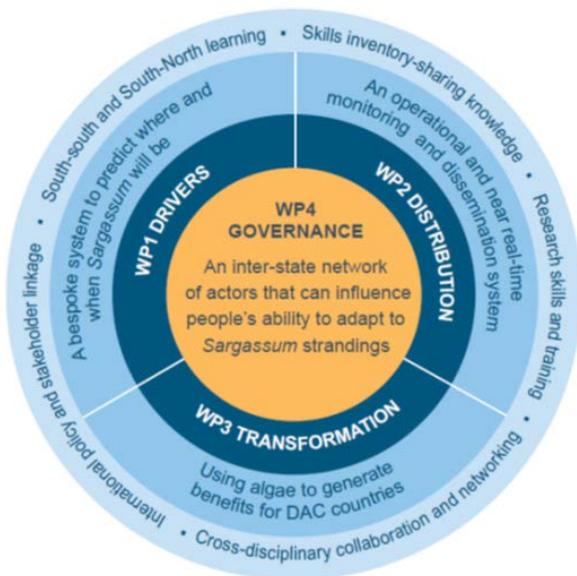


Figure 1. Workpackage Structure

**WP1: Drivers of events.** Aim: to co-develop with stakeholders a bespoke long-range prediction system. Contact: Prof Bob Marsh, University of Southampton (r.marsh@soton.ac.uk)

**WP2: Monitoring and dissemination.** Aim: to co-develop with stakeholders a transferable and scalable near real time monitoring and dissemination system for Jamaica with application to Ghana. Contact: Prof Jadu Dash, University of Southampton (j.dash@soton.ac.uk)

**WP3: Transformational adaptation.**

Aim: to identify the bio-chemical characteristics of the seaweed to identify appropriate alternative uses, and to find the barriers to uptake by vulnerable communities. Contact: Prof Mona Webber, University of West Indies (mona.webber@uwimona.edu.jm)

**WP4: Policy and governance.** Aim: to explore the implications of framing sargassum as a beneficial resource or a hazard, and to identify opportunities and constraints for use of sargassum. Contact: Prof Jack Corbett, University of Southampton (j.corbett@soton.ac.uk)

**Cross-cutting: Stakeholder engagement.** Aim: to identify and engage appropriate stakeholders across the SARTRAC programme. Contact: Dr Janice Cumberbatch, University of the West Indies (janice.cumberbatch@cavehill.uwi.edu)

**Cross-cutting: Equitable resilience.** Aim: to ensure that all work packages are focussed on delivering outputs that are aimed at the most vulnerable communities to sargassum beaching events. Contact: Prof Emma Tompkins (e.l.tompkins@soton.ac.uk)

**Contacts:** SARTRAC Principal Investigator: Prof. Emma Tompkins, School of Geography and Environment, University of Southampton. Follow us on Twitter @SARTRAC1. Website: <https://generic.wordpress.soton.ac.uk/sartrac/> For more information, please contact Lucy Graves: [l.graves@soton.ac.uk](mailto:l.graves@soton.ac.uk)