


The Sargasso Sea Commission: navigating into uncharted waters

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Executive Secretary, Sargasso Sea Commission

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Casablanca
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(LC/SG 46 & LP/SG 17)



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Today's Presentation: Navigating into uncharted waters



Where is the Sargasso Sea ? Why is it important ?

The Sargasso Sea Commission – Origin and Mandate

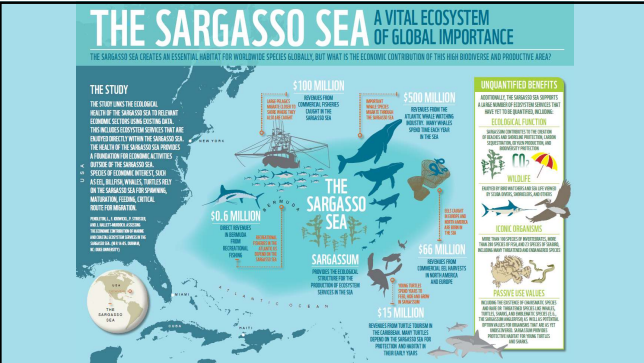
The new GEF Financed Work Programme



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THE SARGASSO SEA A VITAL ECOSYSTEM OF GLOBAL IMPORTANCE

THE SARGASSO SEA CREATES AN ESSENTIAL HABITAT FOR WORLDWIDE SPECIES GLOBALLY, BUT WHAT IS THE ECONOMIC CONTRIBUTION OF THIS HIGH BIODIVERSE AND PRODUCTIVE AREA?



THE STUDY
THE STUDY LINKS THE ECONOMIC HEALTH OF THE SARGASSO SEA TO THE BIODIVERSITY OF THE SEA. THE STUDY FINDS THAT THE SARGASSO SEA PROVIDES A CRITICAL ECOSYSTEM SERVICE TO THE WORLD'S ECONOMY. IT IS A SOURCE OF FOOD AND FIBRE FOR MILLIONS OF PEOPLE AND IS CRUCIAL TO THE BIODIVERSITY OF THE SEA.

\$100 MILLION
ANNUAL REVENUE FROM COMMERCIAL FISHERIES SUPPORTED BY THE SARGASSO SEA

\$500 MILLION
ANNUAL REVENUE FROM TOURISM SUPPORTED BY THE SARGASSO SEA

\$15 MILLION
ANNUAL REVENUE FROM TOURISM SUPPORTED BY THE SARGASSO SEA

\$66 MILLION
ANNUAL REVENUE FROM TOURISM SUPPORTED BY THE SARGASSO SEA

UNQUANTIFIED BENEFITS
ADDITIONAL TO THE SARGASSO SEA'S SUPPORT FOR A RANGE OF ECOSYSTEM SERVICES THAT ARE NOT QUANTIFIABLE, INCLUDING:

- ECOLOGICAL FUNCTION**
- BIODIVERSITY**
- GENETIC RESOURCES**
- PASSIVE ECOSYSTEM SERVICES**

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Governance of the Sargasso Sea

GOVERNANCE GAPS

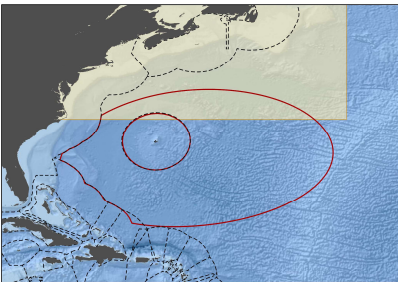
- Seabed minerals governed by International Seabed Authority (ISA)
- Vessel movement / discharges International Maritime Organization (IMO)
- BUT NO RELEVANT REGIONAL ORGANIZATIONS**



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Governance of the Sargasso Sea

- International Maritime Organization (IMO)**
Maritime transport and vessel source pollution - global competence
- International Seabed Authority (ISA)**
Exploration for and exploitation of seabed minerals in ABNJ - global competence
- International Convention for the Conservation of Atlantic Tuna (ICCAT)**
Regulation of fishing for tuna and tuna-like species - all of the Atlantic
- North-west Atlantic Fisheries Organization (NAFO)**
Regulation of high seas and deep sea fishing activity - above 35°N
- Sargasso Sea Commission area of collaboration**
Some of the high seas area of the North Atlantic Gyre - i.e. excluding EEZs of countries



----- EEZ Boundary
▭ Sargasso Sea Geographical Area of Collaboration
▭ NAFO Convention Area

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"Encountered weed ...in some places so thick that it actually held back the ships..."

Columbus 20th September 1492



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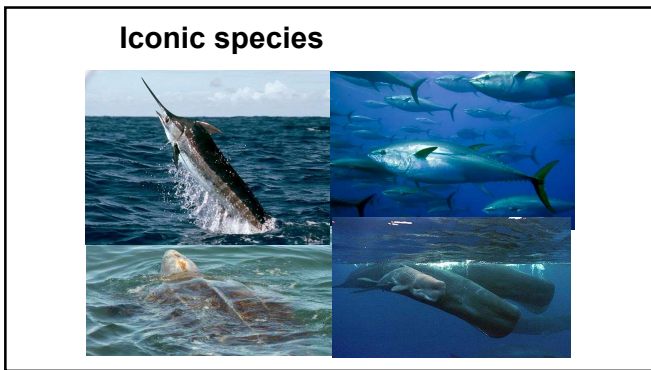
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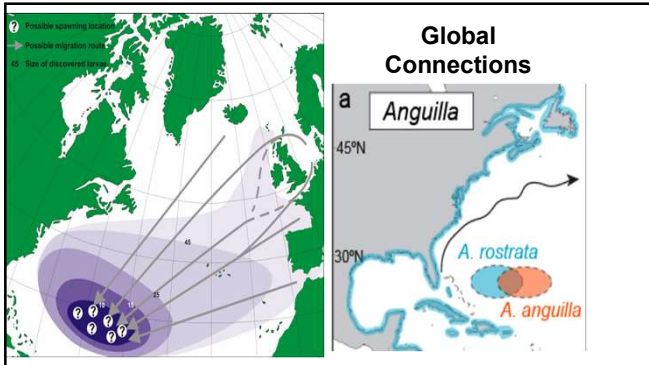
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Human Impacts

- Climate change
- Ocean Acidification
- Plastics
- Impacts on Sargassum from
 - Heavy traffic
 - Pollution, spills, discharges,
 - Exotic species
- Growing Fishing activity
- Deep Sea Mining
- Underwater cables ?

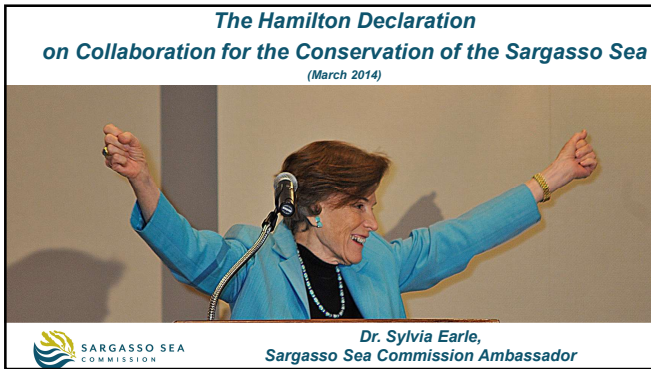
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Aims of the Sargasso Sea project from 2010

(Led by the **Government of Bermuda**)
 To build a network of international partners to:

- Achieve **international recognition** of the global importance of the Sargasso Sea
- Work with existing international and sectoral organisations to achieve better protection for the Sargasso Sea **in accordance with the Law of the Sea Convention**
- Use this experience as an indication of what is possible and not possible under current regime for ABNJ

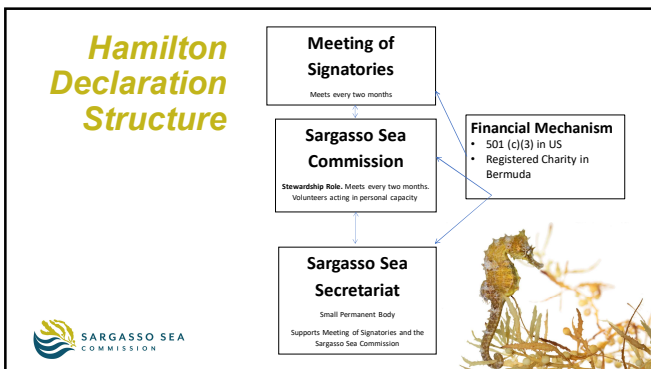
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Agreed Work Programme

1. International Recognition of the Ecological Importance of the Sargasso Sea
2. Fisheries and Fisheries Habitat Conservation
3. Impacts from International Shipping
4. Impacts to the Seafloor and Seabed
5. Conservation of Migratory Species
6. Defining Role in Data and Information Management

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2022 GEF Financed Project

Strengthening the stewardship of an economically and biologically significant high seas area – the Sargasso Sea


*Inception Workshop
Per Zoom 15 December 2020*





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Key Components

- > 4 year project for US \$3million
- > Child Project under FAO Common Ocean Program
- > UNDP Implementing /UNESCO IOC Executing agency



1. An Ecosystem Diagnostic Analysis (EDA) for the Sargasso Sea
Baseline for monitoring adaptive management/stewardship
2. A road-map and budget for the adoption of an Ecosystem Based Approach to governance and conservation
3. Strategic Action Programme defining the management or stewardship measures
4. Knowledge Management, Monitoring and Evaluation



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First GEF Financed High Seas Ecosystem Diagnostic

IMPLEMENTING PARTNERS

- NASA COVERAGE Project
Sargasso Sea is PILOT site for remote sensing and "Big Data" processing
- Duke University Marine Geospatial Ecology Laboratory
Developing Portal for human impacts access to ecosystem data for assessment and governance
- Imperial College Centre for Environmental Policy
DIPSIR
- Bermuda Institute of Ocean Science
State of the art Oceanography of the Sargasso Sea
World's longest time series of ocean monitoring

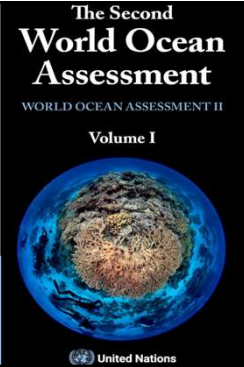


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World Ocean Assessments 2016 and 2021

The only named ecosystem in the United Nations Global Reporting and Assessment of the State of the Marine Environment

Chapter 7Q
Sargasso Sea



United Nations

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SARGASSO SEA COMMISSION

NLA INTERNATIONAL
BLUE ECONOMY SOLUTIONS

IUCN Government Offices of Sweden
Ministry of the Environment

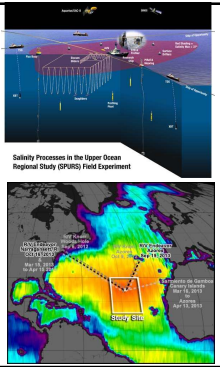
SARGASSO SEA COMMISSION
Governance of High Seas Ecosystems and Big Data
10th Report | 2022-2023



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NASA COVERAGE project

- In-kind partnership project to develop initial satellite map product for Sargasso Sea
- 2017 Approved by Committee on Earth Observation Satellites (CEOS)
- Future phases other data providers on tagged animals, fishing and shipping information



The diagram shows a 3D visualization of satellite orbits over the Sargasso Sea region, with a corresponding 2D map below showing the study area and satellite coverage paths.

Sargasso Sea Commission

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Maritime Traffic in the Sargasso Sea
An Analysis of International Shipping Activities and their Potential Environmental Impacts
Julian Roberts



The Sargasso Sea Alliance
A strategic assessment of the risks posed by shipping to the Sargasso Sea and evidence of impacts

BERMUDA'S CRUISE SHIP INDUSTRY:
An Update on Visiting Ships' Physical and Environmental Specifications

June 2016
Prepared for the Sargasso Sea Commission
by Samia Sarkis' and Emma Blackmore'

SARGASSO SEA COMMISSION

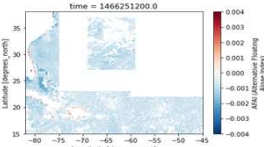
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Deliverable 1 Progress

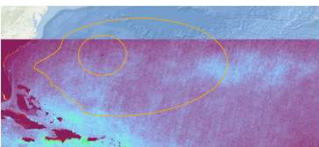
Sargassum Remote Sensing

Existing Indices

- Maximum Chlorophyll Index (MCI) or Alternative Floating Algae Index (AFAI)
- Gaps in time and/or spatial coverage

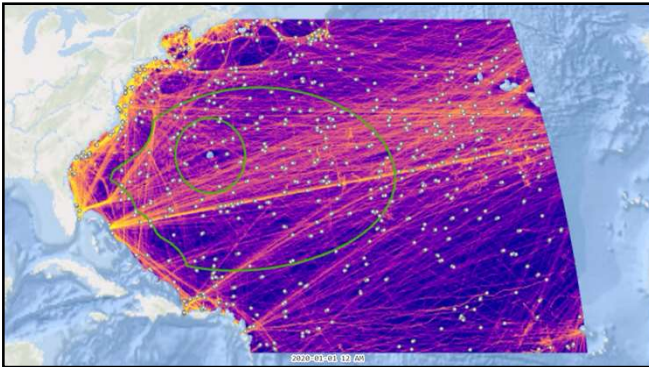


time = 1466251200.0
Latitude (degrees_north)
Longitude (degrees_east)
Alternative Floating Algae Index (AFAI)
MODIS
NASA COVERAGE / NOAA Ocean Watch



Maximum Chlorophyll Index (MCI) - 2019 sum
Sentinel 3A/3B OLCI
NOAA Ocean Watch

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Going forward...
Going boldly where no project has gone before...

- Piloting use of Big Data and AI for Ocean Governance
- First High Seas Ecosystem Diagnostic Analysis financed by Global Environment Facility (GEF)
- First Strategic Action Programme for a High Seas Ecosystem
- With Accompanying Conservation measures
- Hope to be the first to propose a High Sea PSSA to IMO – look forward to collaboration with IMO colleagues

JP Rouje



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Thank you for your attention

With thanks to Fae Sapsford for technical help

Humpback in Sargassum
Andrew Stevenson

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