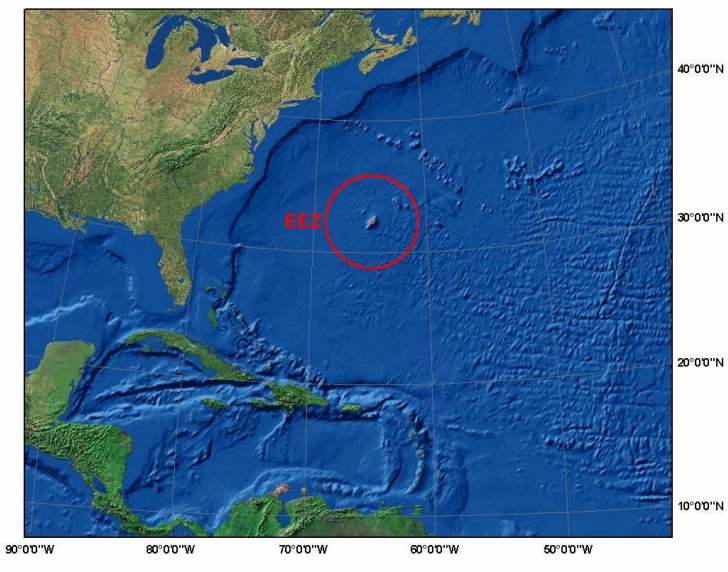
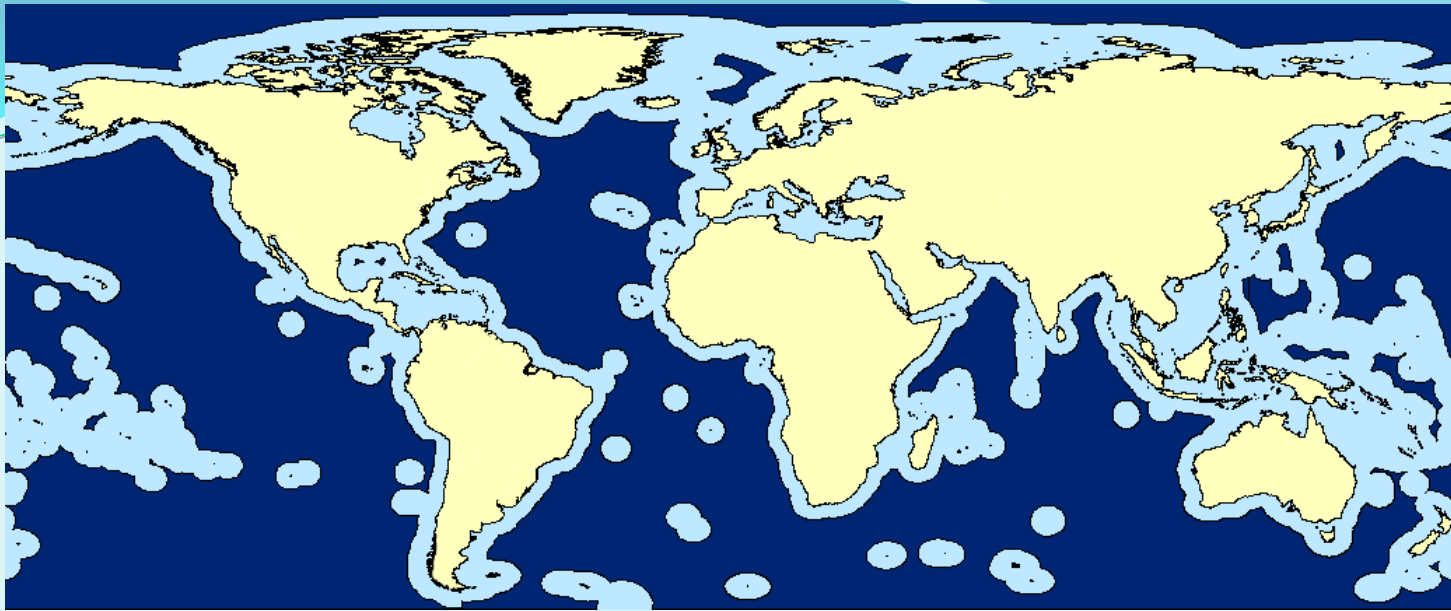




The Sargasso Sea Project

Dr. David Freestone
Executive Secretary
Sargasso Sea Commission



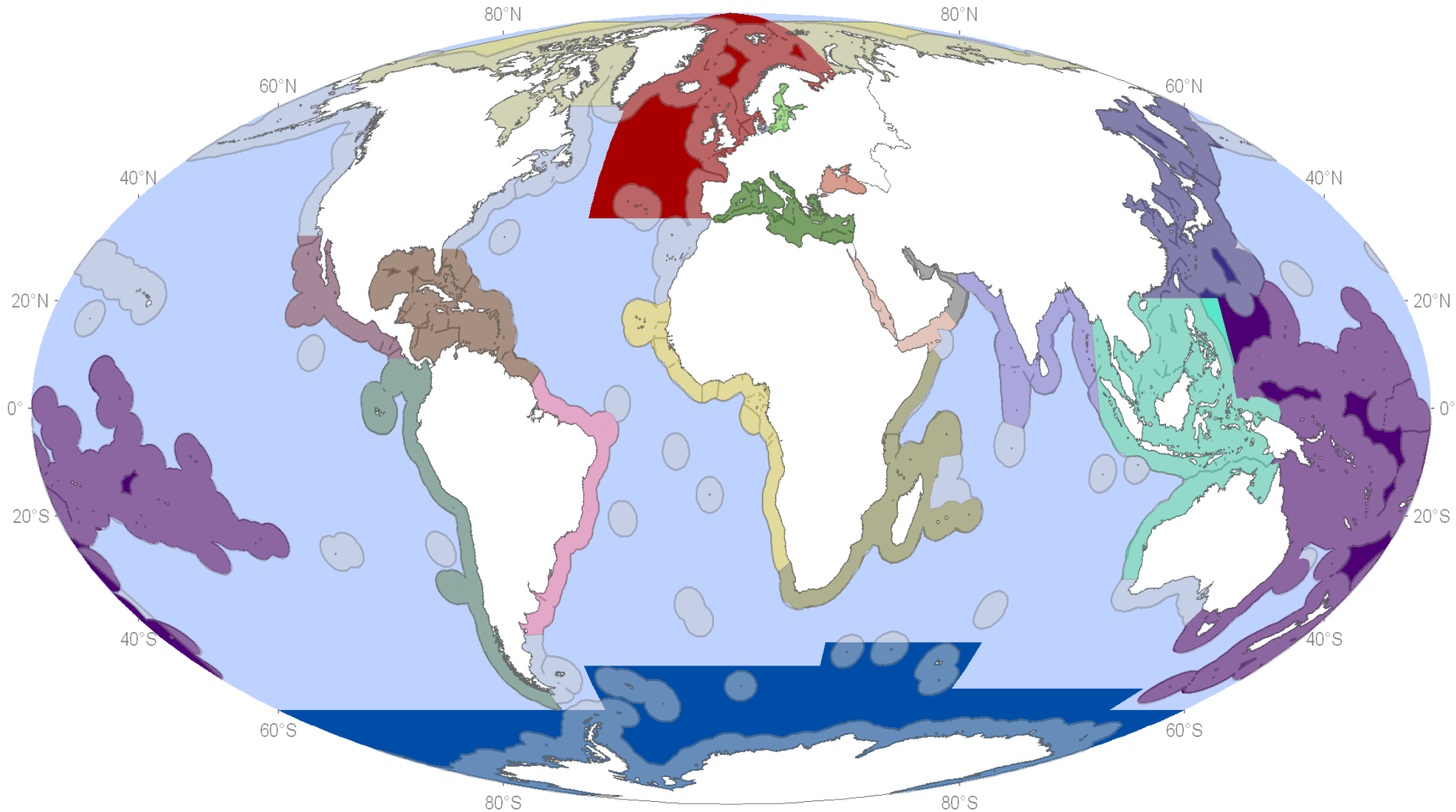
Bermuda EEZ = 464,940 sq
km or 179,514 sq. miles

Sargasso Sea = ~5 179 976 sq
km or 2 million sq. miles

Sargassum based ecosystem



Gaps in Regional Seas Programs



Aims of the Sargasso Sea Project

Led by the Government of Bermuda 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 a model for achieving protective status for Areas beyond National Jurisdiction

Achievements to date

Summary Science Case, 2011

Edited by Professors Dan
Laffoley and Howard Roe

74 collaborators from over 10
countries and 11 science
institutions

Completed and approved by
UK and Bermuda
Governments



Bermuda Declares Marine Mammal Sanctuary September 2012

- 174,000 square miles
- Sister Sanctuary Agreement with US NOAA for Stellwagen Bank



GOVERNMENT OF BERMUDA

MEMORANDUM OF UNDERSTANDING

BETWEEN THE

UNITED STATES OF AMERICA
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
OFFICE OF NATIONAL MARINE SANCTUARIES

AND THE
GOVERNMENT OF BERMUDA
MINISTRY OF ENVIRONMENT, PLANNING AND
INFRASTRUCTURE STRATEGY

TO COLLABORATE ON INTERNATIONAL PROTECTION,
CONSERVATION AND MANAGEMENT
OF THE HUMPBACK WHALE

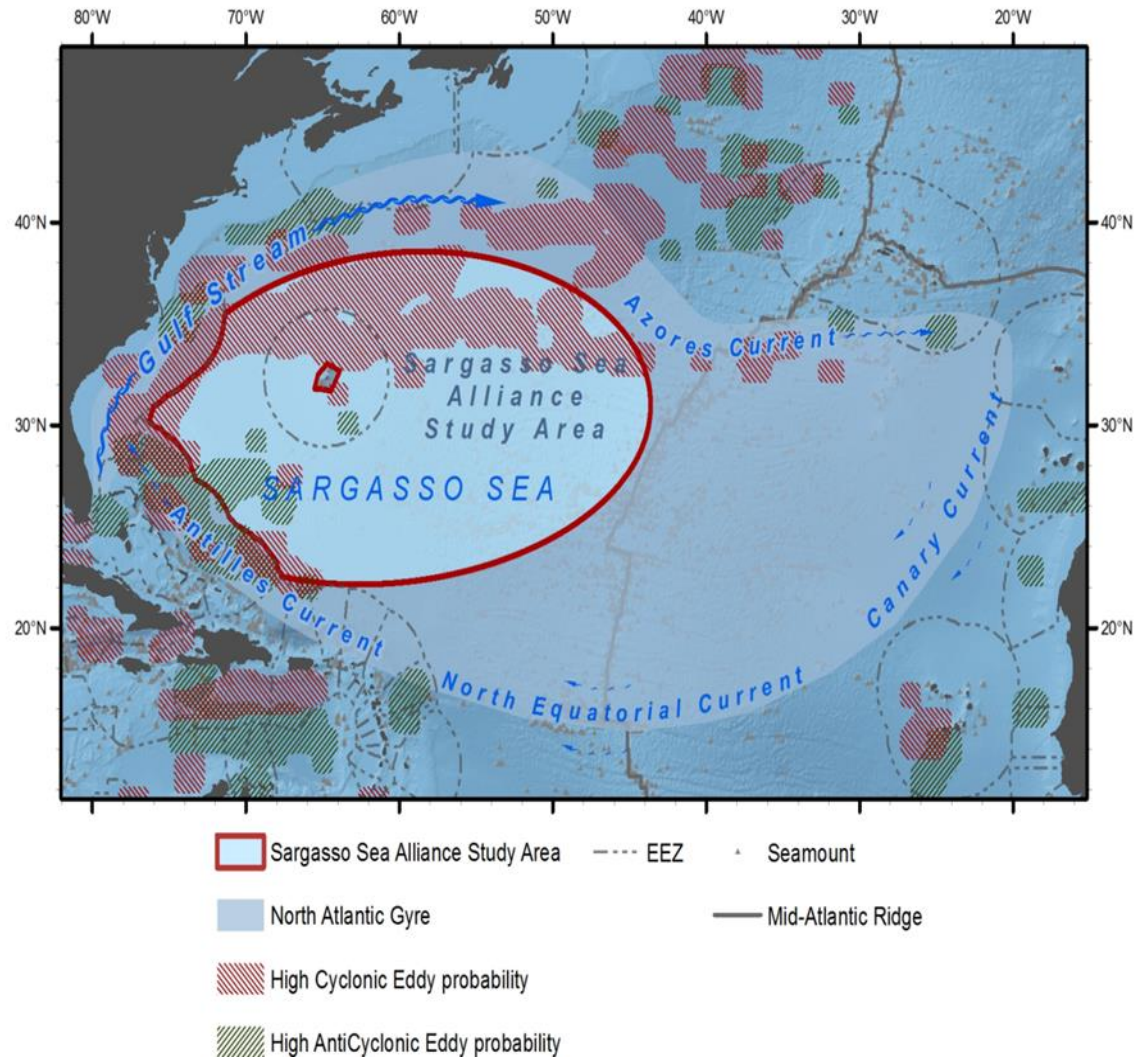
NOS Agreement Code: MOA-2012-058/8588

Convention on Biological Diversity

EBSA Process

October 2012

- Feb 2012 in Recife “described” at regional workshop (March 2012)
- reviewed by CBD SBSTA (April 2012)
- CBD COP submitted Sargasso Sea EBSA to CBD repository



UN General Assembly Annual Composite Resolution on Oceans and Law of the Sea 2012 AND 2013

Noted the efforts of the Sargasso Sea Alliance – led by the Government of Bermuda – to raise awareness of the ecological significance of the Sargasso Sea;

Proposed:

2012 by UK, US and South Africa

2013 by UK, US and Bahamas



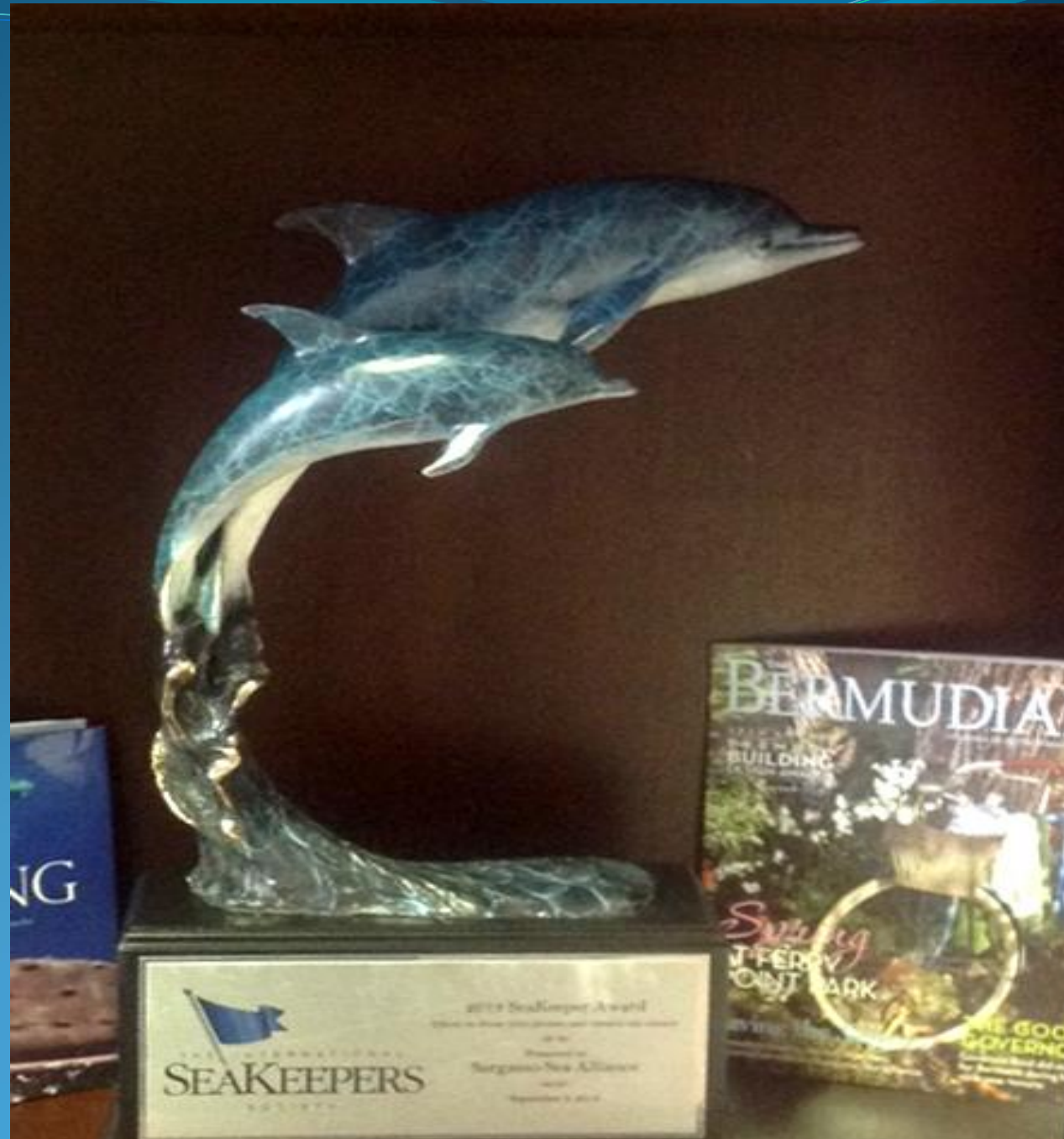
World Ocean Assessment

United Nations Global Reporting and
Assessment of the State of the Marine
Environment

Sargasso Sea will be
only named ecosystem

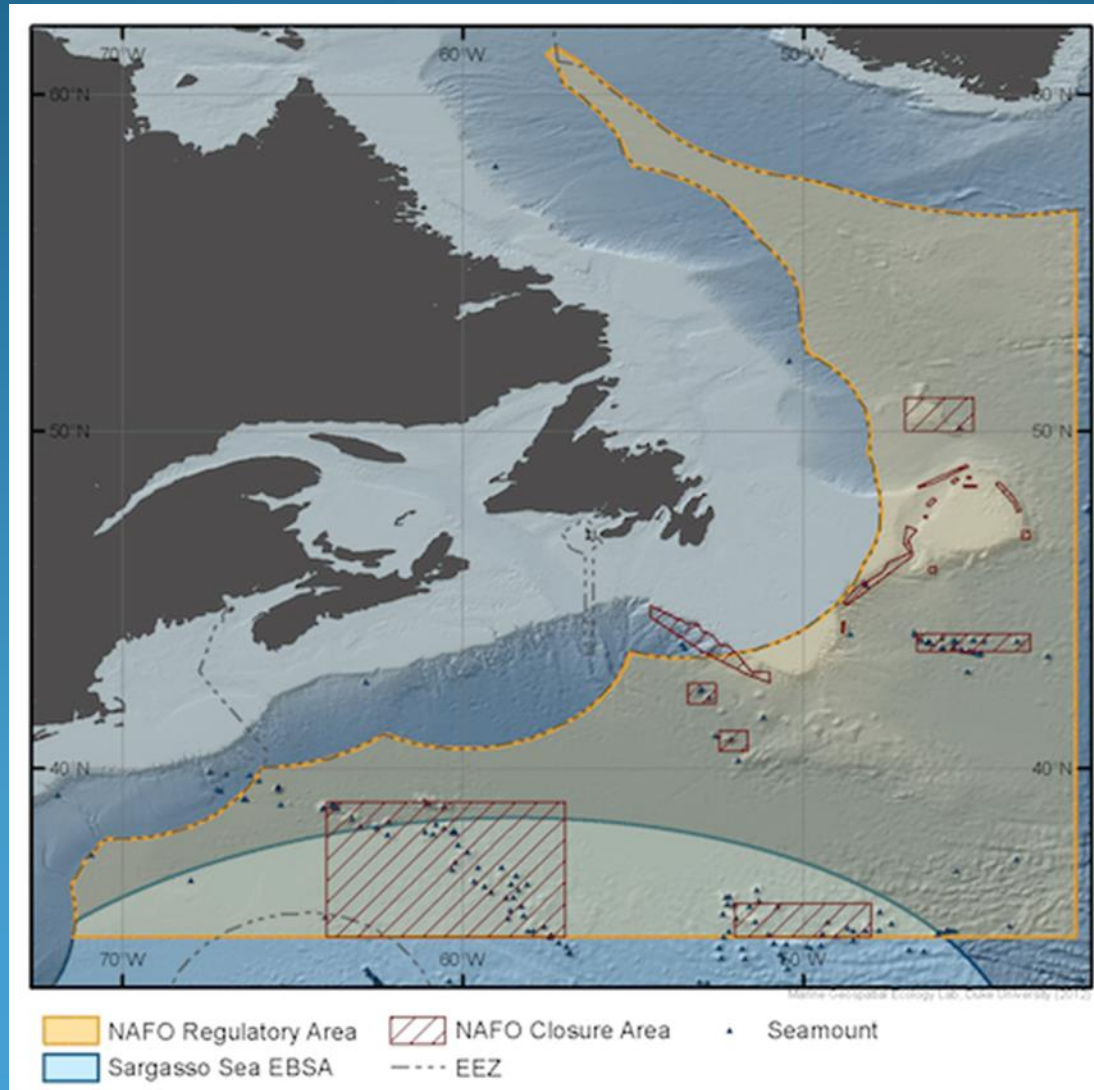


International Seakeepers Award September 2013



North-west Atlantic Fisheries Organization

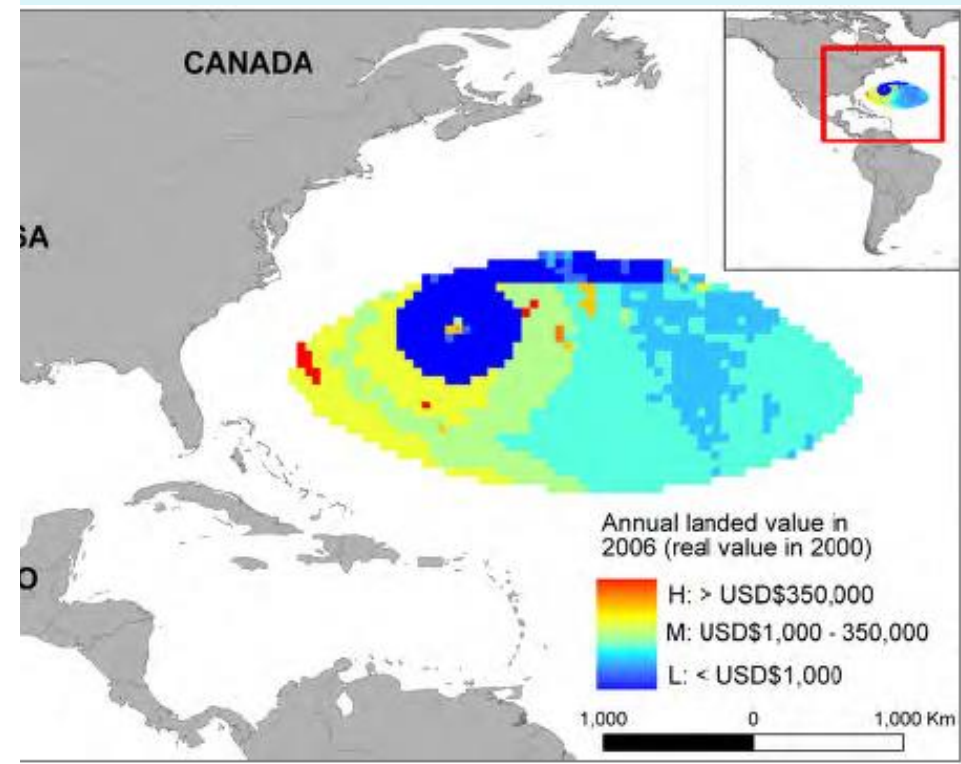
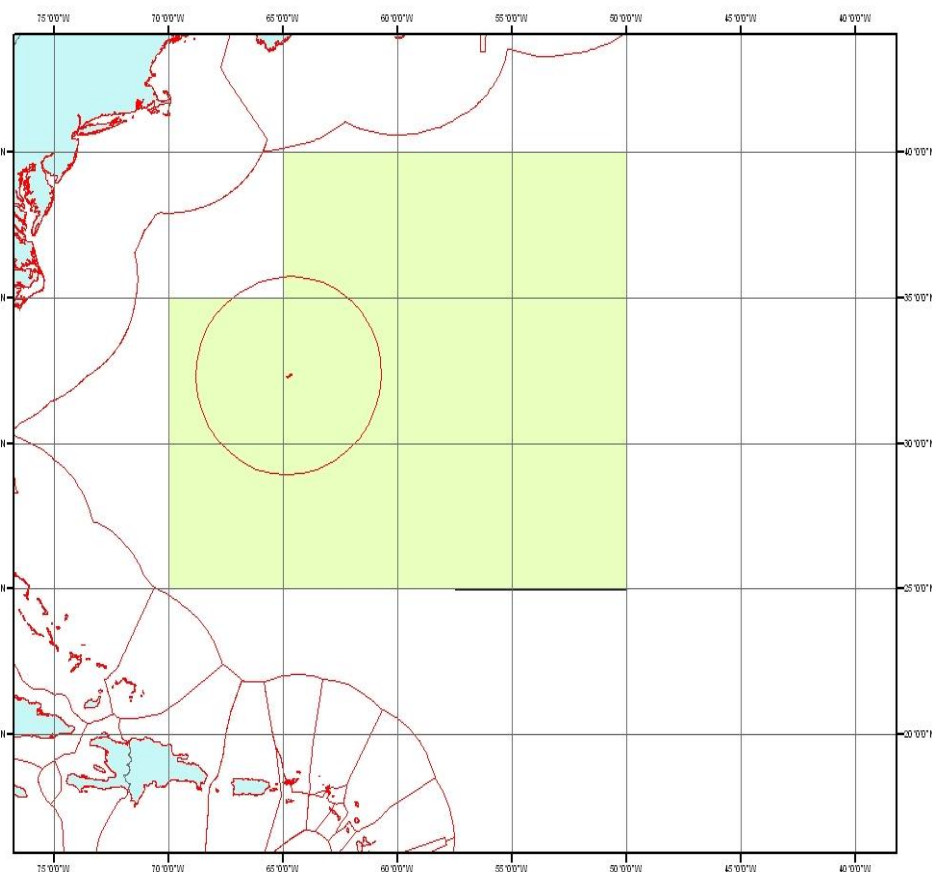
Sargasso Sea measures under discussion



North-west Atlantic Fisheries Organization, September 2012

- The Fisheries Commission requested its Scientific Council
- “to comment and advise on whether the Sargasso Sea provides forage area or habitat for living marine resources that could be impacted by different types of fishing; and on whether there is a need for any management measure including a closure to protect this ecosystem.”

International Commission for Conservation of Atlantic Tunas - ICCAT



ICCAT RESOLUTION 12-12

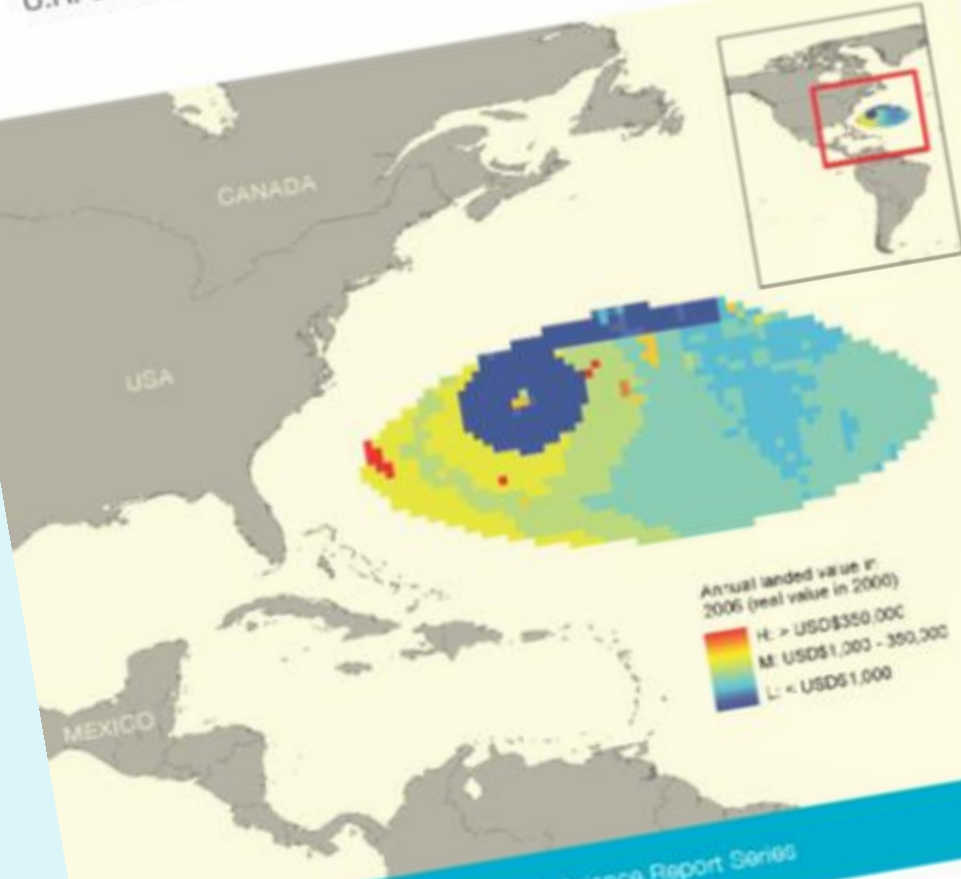
on the Sargasso Sea

THE INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS RESOLVES THAT:

1. The SCRS will examine the available data and information concerning the Sargasso Sea and its ecological importance to tuna and tuna-like species and ecologically associated species.
2. The SCRS will provide an update on the progress of this work in 2014 and report back to the Commission with its findings in 2015.

Values from the Resources of the Sargasso Sea

U.R. Sumaila, V. Vats and W. Swartz



Number 17 Sargasso Sea Alliance Science Report Series



SCRS/2013/132

INVENTORY AND ECOLOGY OF FISH SPECIES OF INTEREST TO ICCAT IN THE SARGASSO SEA

Brian E. Luckhurst*

SUMMARY

This paper provides information on the biology and ecology of a total of 11 different fish species whose distributions include the Sargasso Sea. These species are divided into four groups that correspond with ICCAT species groupings: Group 1 - Principal tuna species including yellowfin tuna, albacore tuna, bigeye tuna, bluefin tuna and skipjack tuna. Group 2 - Swordfish and billfishes including blue marlin, white marlin and sailfin. Group 3 - Small tunas including wahoo, blackfin tuna, Atlantic black skipjack tuna (Little Tunny) and dolphinfish. Group 4 - Sharks including zorrofin mako, blue porbeagle, bigeye thresher and hector shark. For each species, information and data is provided on distribution, fishery landings, migration and movement patterns, reproduction, age and growth, food and feeding habits and ecology in relation to oceanographic parameters, primarily water temperature. The importance of Sargassum as essential fish habitat is discussed and is linked to the feeding habits of tunas and other pelagic predators. Flyingfishes are an important prey species in the diet of tunas and billfishes and as they are largely dependent on Sargassum mats as spawning habitat, the Sargasso Sea plays a fundamental role in the trophic

Fish species of interest to ICCAT in the Sargasso Sea Phase 2 - Analysis of ICCAT catch time series, 1992-2011

Dr Brian Luckhurst
Report to the Sargasso Sea Alliance
November 1, 2013

The ICCAT CATDIS database provides estimates of nominal catches for the nine major tuna and tuna-like species managed by ICCAT. The data are stratified in time (quarter) and space (5x5 degree squares) and all landings catch data are reported on this spatial scale. Data extractions were made namely, Yellowfin tun and Swordfish using the mo not made for the three are by-catch species an total of 11 reporting squ of Bermuda's EEZ. Data quares over the 20 ye species by combin orted landings (199: em Atlantic bluefi summary. For r s then calcul d in a separate

Report to the Sargasso Sea Alliance - Fish species of interest to ICCAT in the Sargasso Sea Phase 2 - Detailed analysis of ICCAT catch data (1992-2011).

The ICCAT CATDIS database provides estimates of nominal catches for the nine major tuna and tuna-like species managed by ICCAT. The data are stratified in time (trimester) and space (5x5 degree squares) and all longliner catch data are reported on this spatial scale. Data extractions were made for each of the six principal commercial species targeted by ICCAT, namely, Yellowfin tuna, Albacore tuna, Bigeye tuna, Bluefin tuna, Skipjack tuna and Swordfish using the most recent 20 year period of data, i.e. 1992-2011. Within the Sargasso Sea Study Area, there are a total of eleven reporting squares which are exclusively in international waters with the exception of Bermuda's EEZ (see Annex 1). Data extractions were made by country and by trimester (quarter) from the 11 ICCAT reporting squares over the above 20 year period for each species. The annual catch data for each species were summarized by country, trimester and by reporting squares. For each species, the total catch by country and the corresponding proportion of the annual catch taken from the SSA Area was then calculated and expressed as a percentage with a minimum of 10% of the annual SSA Area catch was further broken down by trimester and by area (reporting squares). The ICCAT reporting entry NEI (Not Elsewhere Included) is problematic in that these catches are not associated with a specific country but many different fishing entities. As a result, only the proportion of the total SSA Area catch attributed to NEI is given. The results of these analyses are presented by species in five separate Excel files which comprise the main portion of this report. The following are brief summaries of the main findings and trends by species:

Yellowfin tuna

Catches of yellowfin in the SSA Area have been highly variable over the 20 year period of the analysis ranging from 90.82 metric tons (mt) in 1993 (Bermuda contributing almost 64% of the total) to almost 1,097 mt in 1999 (over 50% contributed by NEI). However, in most years Japan has been a major contributor to the catch with up to 74% of the annual total. The Chinese Taipei has made a consistent and significant contribution to the total catch between 20-40% of the catch while St. Vincent and the Grenadines has contributed between 10-20% and is generally up to 84%. Bermuda has contributed 15-25% of the total catch. The

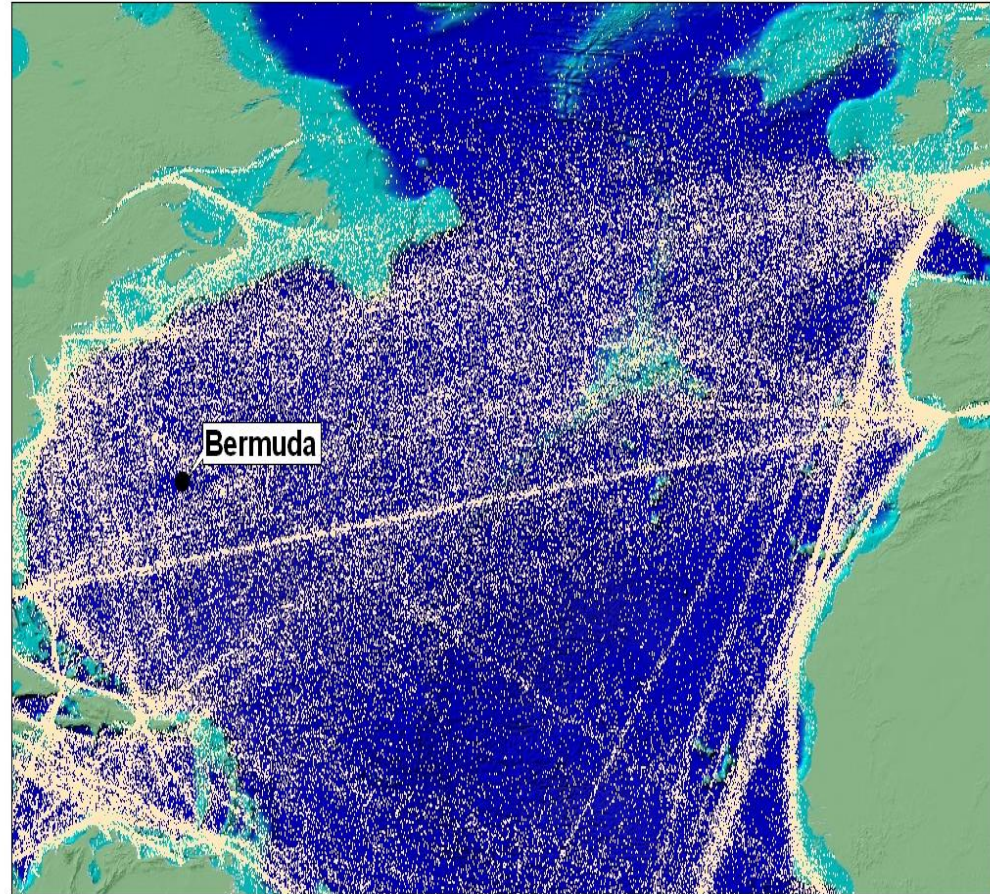
Bermuda delegation at International Commission for the Conservation of Atlantic Tunas 2013

Importance of Sargasso Sea being reviewed



International Maritime Organisation

- UK discussing Protective Measures
- Possibilities are:
 - MARPOL Special Area
 - Routeing
 - Reporting
 - Ballast Water
 - Sewage



Maritime Traffic in the Sargasso

An Analysis of International Shipping Activities
and their Potential Environmental Impacts

Julian Roberts



Number 1 Sargasso Sea Alliance Science Report Series



Sargasso Sea shipping risk assessment: addressing the threat from invasive species and nutrient inputs

A II

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



Prior, J S H (2013) Sargasso Sea
the threat from invasive species
Sargasso Sea Alliance, Washing

March 2014

SSA Science Report Series

The Pelagic Oceanic Assemblages of the Sargasso Sea Around Bermuda
Marin V. Angel

Where is the Sargasso Sea?
A Report Submitted to the Sargasso Sea Alliance

Jeff Ardron, Pia Halpin, Jason Roberts, Jesse Cleary, Russell Moffitt, Ben Donnelly

European Eel Briefing Note for Sargasso Sea Alliance

Matthew Gollock

The Importance of the Sargasso Sea and the Offshore Waters of the Bermudian Exclusive Economic Zone to Bermudian and its People

Jessie Haber

Oceanography of the Sargasso Sea: Overview of Scientific Studies

M.W. Lomas, N.R. Bates, K.N. Buck, and A.H. Knip

Notes on "Microbial productivity of the Sargasso Sea and how it compares to elsewhere" and "The role of the Sargasso Sea in carbon sequestration – better than carbon neutral?"

M.W. Lomas, N.R. Bates, K.N. Buck, and A.H. Knip

The Sargasso Sea Substratum: The Spawning and Larval Development of Both Freshwater and Marine Eels

Michael J. Miller and Reinhard Hanel

The Geology of the Sargasso Sea Alliance Study Area

Potential Non-Living Marine Resources and an Overview of the Current Territorial Claims and Coastal States Interests

Lindsay Pearson and Rosemary Edwards

Maritime Traffic in the Sargasso Sea

An Analysis of International Shipping Activities and their Potential Environmental Impacts

Julian Roberts

Summary of Sea Education Association Long-term Sargasso Sea Surface Net Data

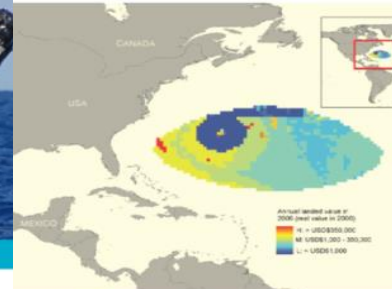
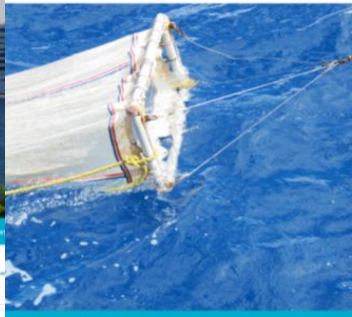
Amy N.S. Studa

Humpback Whale Research Project, Bermuda

Andrew Stevenson

Values from the Resources of the Sargasso Sea

U.R. Sumalla, V. Vats and W. Swartz



Scholarly Literature

STANFORD ENVIRONMENTAL LAW REVIEW 2014

Place-based Dynamic Management of Large-Scale Ocean Places: Papahānaumokuākea and the Sargasso Sea

David Freestone,^{*} Ole Varmer,^A Meredith Bennett,^B T. 'Aulani Wilhelm,^C Theodore M. Beuttler,^D Jeff Ardron,^E Sara Maxwell,^F and Kate Killerlain Morrison^G

I. INTRODUCTION

- A. Two Important Marine Ecosystem Regimes
 - 1. Introduction to the establishment of Papahānaumokuākea Marine National Monument including its dynamic nature and importance to our natural and cultural heritage
 - 2. Introduction to the Sargasso Sea and the Sargasso Sea Alliance, including the Sea's biological importance, and dynamic nature

II. MANAGEMENT FRAMEWORKS AND CHALLENGES

- A. Papahānaumokuākea Marine National Monument
 - 1. Definition of Papahānaumokuākea
 - 2. Frameworks and challenges in the management by federal and state

^{*} Executive Director, Sargasso Sea Alliance; Visiting Scholar, Law School, Washington, D.C.

^A Attorney-Advisor, International Section Office of General Counsel, U.S. Department of the Interior, Washington, D.C.

^B Center for Ocean Solutions, Stanford Woods Institute for the Environment, Stanford University.

^C Superintendent, NOAA Office of National Marine Sanctuaries, National Monument; Sloan Fellow, Graduate School of Business, Stanford University.

^D Attorney-Advisor, Office of General Counsel, Oceans and Coast, U.S. Department of the Interior, Washington, D.C.

^E Senior Fellow, Institute for Advanced Sustainability Studies, Potsdam Institute for Climate Change Research, Potsdam, Germany.

^F Postdoctoral Scholar, Hopkins Marine Station, Stanford University.

^G Deputy Executive Director, Sargasso Sea Alliance, Washington, D.C.

Can existing institutions protect biodiversity in areas beyond national jurisdiction? Experiences from two on-going processes

David Freestone^a, David Johnson^b, Jeff Ardron^{c,*}, Kate Killerlain Morrison^a, Sebastian Unger^{c.1}

^a Sargasso Sea Alliance, Suite 300, 1630 Connecticut Avenue, NW, Washington, DC 20009, USA
^b Seascope Consultants Ltd., Belbins Valley, Belbins, Romsey, Hampshire SO51 0PE, United Kingdom
^c Institute for Advanced Sustainability Studies e.V., Berliner Strasse 130, 14467 Potsdam, Germany

ARTICLE INFO

ABSTRACT

United Nations discussions on the governance of marine areas beyond national jurisdiction have been questioned, but not yet reached a decision, on whether existing institutions are sufficient to meet global commitments to protect marine biodiversity. This article considers two very different efforts to protect marine biodiversity: the Sargasso Sea Alliance and the High Seas Convention for

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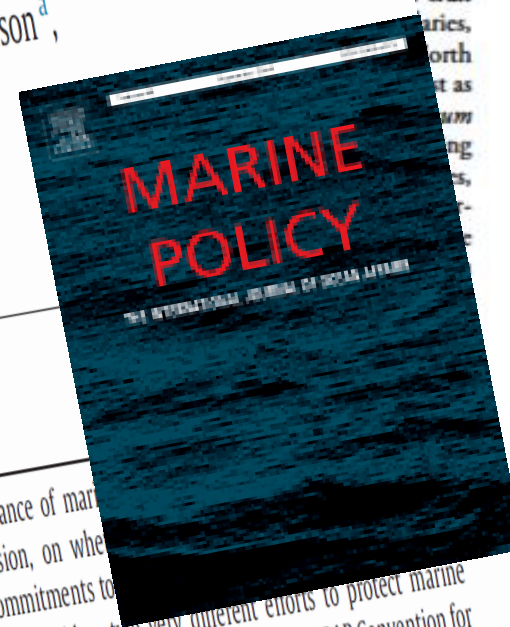
The International Journal of
Marine and Coastal Law 27 (2012) 647-655

INTERNATIONAL JOURNAL OF
MARINE
AND COASTAL
LAW
vol.27, no.6

Current Legal Developments The Sargasso Sea

The Sargasso Sea Alliance: Seeking to Protect the Sargasso Sea

The Sargasso Sea Alliance was formed in 2009 by the Government of Bermuda, the United Kingdom, the United States, and the European Union.

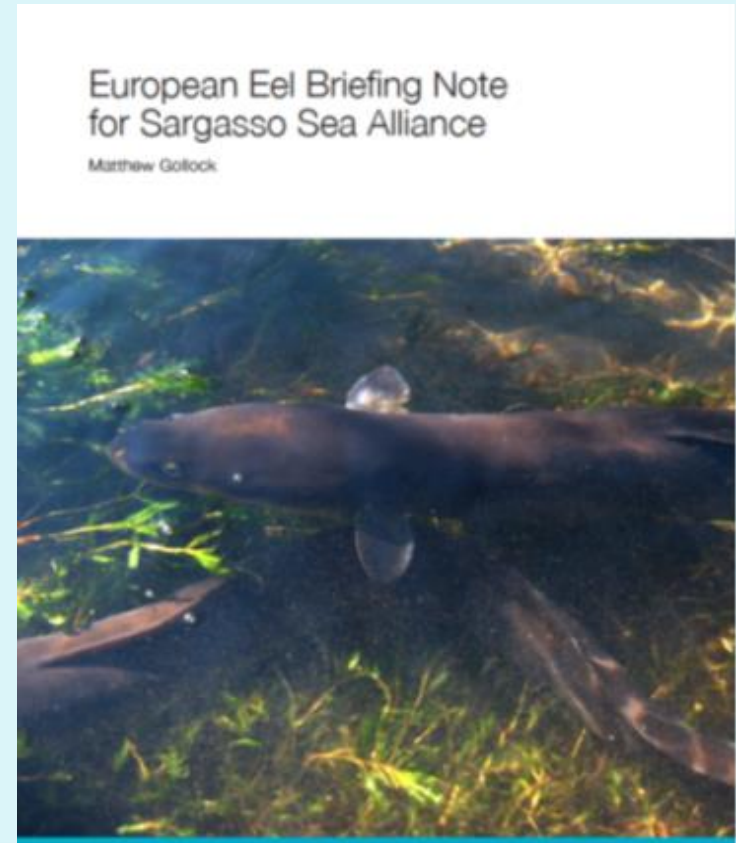


New Initiatives



Convention on Migratory Species

- Submission for listing of *Anguilla anguilla* prepared (London Zoo Soc)
- Monaco proposed Listing under Appendix II
- Science Council (July 2014)
- CoP Nov 2014- Quito
- Exploring conservation actions and spatial measures



Inter - American Convention for the
Protection and Conservation of Sea Turtles

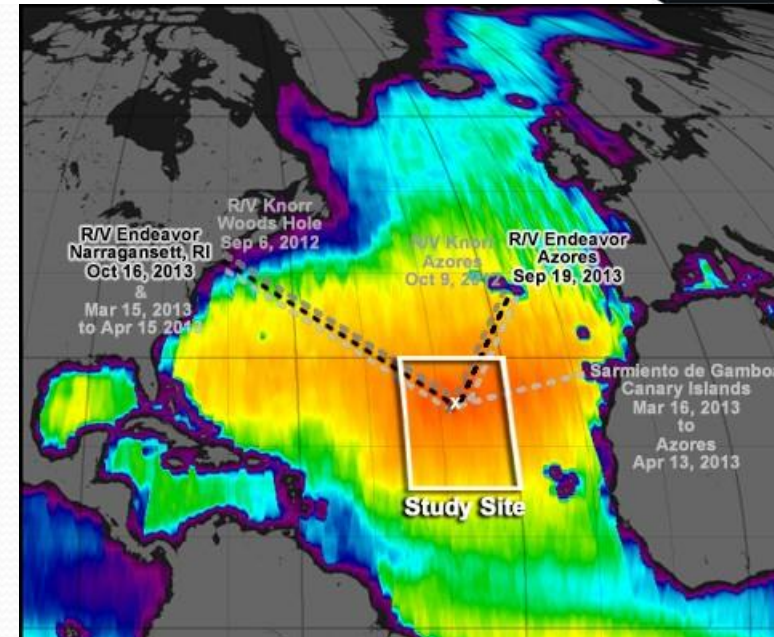
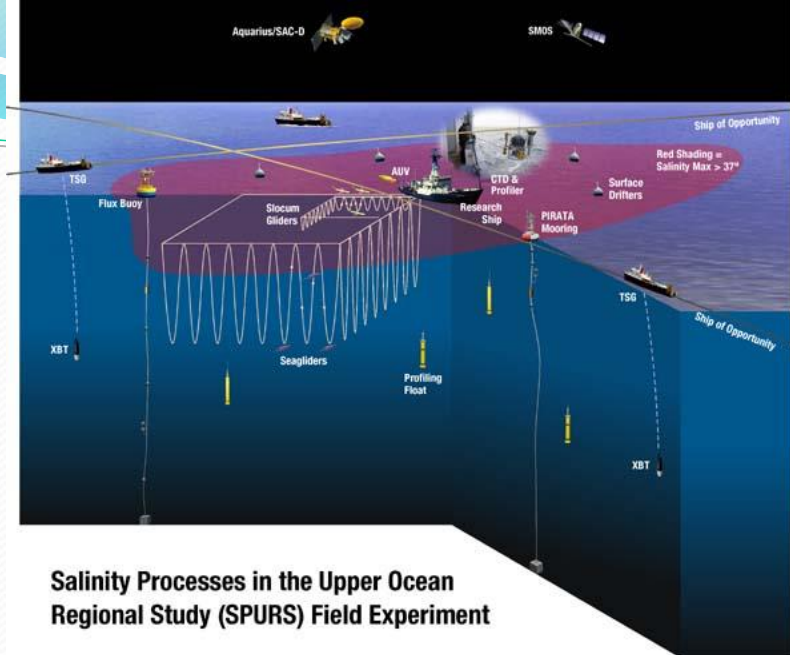


Collaborating on a joint
paper :
Importance of *Sargassum*
and the Sargasso Sea for
Atlantic Sea Turtles



NASA mapping partnership

- In-kind partnership to develop initial satellite map product for Sargasso Sea
- Uses three years of oceanographic data
- Future phases to include other data providers on fishing and shipping information



The Hamilton Declaration



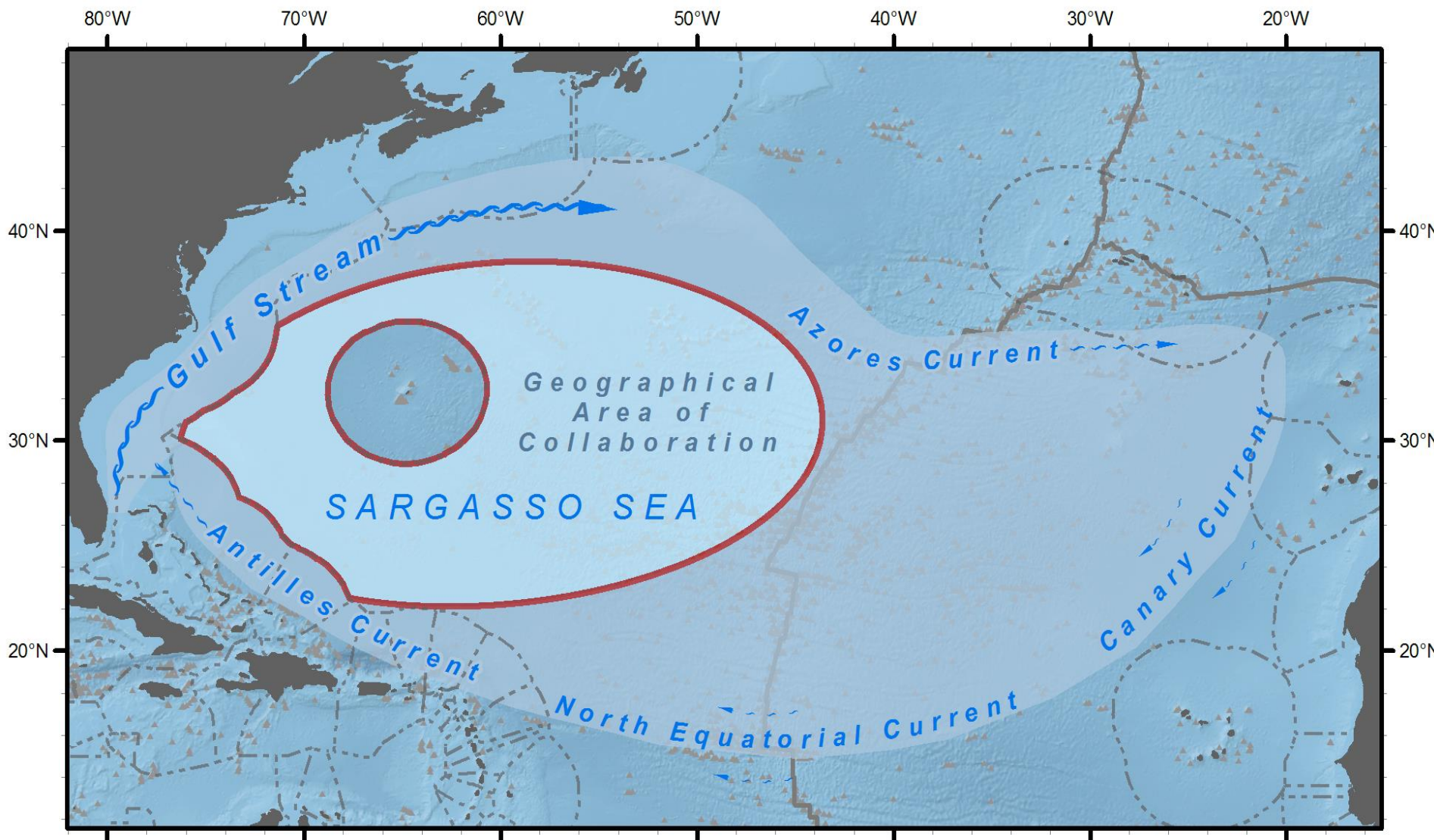
Dr. Sylvia Earle,
Co-Chair, Sargasso Sea Alliance Steering Committee






Key Points

- Declaration is **Non-binding** political statement (not a treaty)/
- Voluntary **Collaborative Arrangement** among Signatory Governments
- The **Sargasso Sea Commission** established in Bermuda – a **Stewardship body** responsible for keeping the health and keep its health, productivity and resilience under continual review
- Assisted by a small **Secretariat**
- Focuses on **high seas** portion of Sargasso Sea

Hamilton Meeting Participants





-  Sargasso Sea Geographical Area of Collaboration
-  Seamount
-  North Atlantic Gyre
-  Mid-Atlantic Ridge
-  EEZ

Hamilton Meeting Participants

bold denotes Signatory

Governments

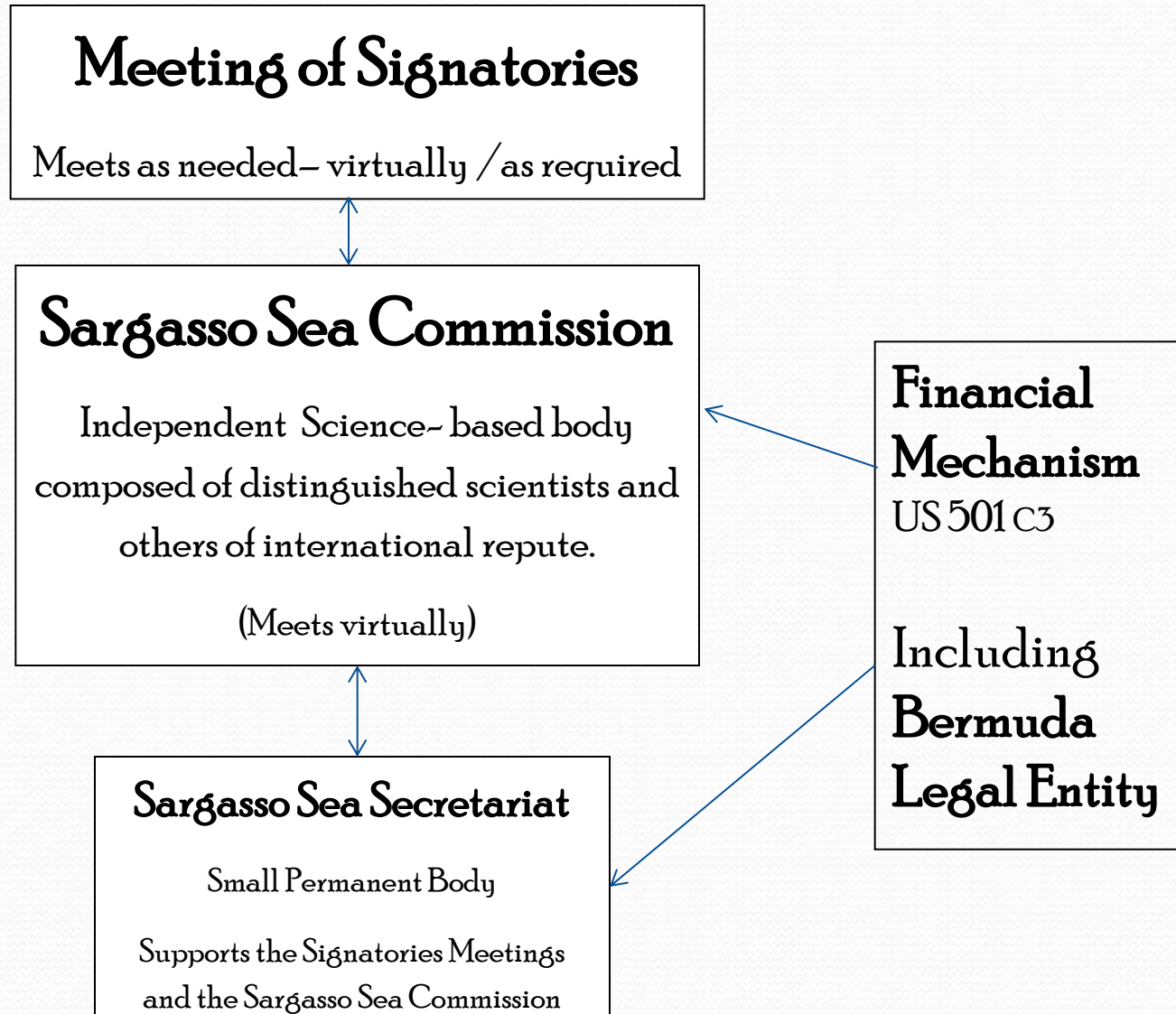
- **Azores**
- Bahamas
- **Bermuda**
- British Virgin Islands
- Netherlands
- **Monaco**
- Sweden
- South Africa
- Turks and Caicos Islands
- **United Kingdom**
- **United States**

- *Dominican Republic and Trinidad and Tobago unable to attend but supportive*

Observer Organizations

- ISA- International Seabed Authority Secretariat
- OSPAR (former Executive Secretary)
- Convention on Migratory Species Secretariat
- IUCN
- Inter-American Convention for the Conservation of Atlantic Sea Turtles

Hamilton Declaration: Framework



Meeting of Signatories

- Pursue collaboration and cooperation in furtherance of the common vision of this Declaration;
- Provide advice and guidance for the Commission in its role of promoting the conservation of the Sargasso Sea;
- Take forward proposals for protection measures to appropriate international bodies

Collaborating Partners

- Regional and international organizations; other bodies and entities
- Who want to contribute to conservation in accordance with Declaration
- Signatories will discuss appropriate membership

The Sargasso Sea Commission

Role of the Sargasso Sea Commission

- **Exercise a stewardship role for the Sargasso Sea** and keep its health, productivity and resilience under continual review; and
- Develop a work programme and action plans for the conservation of the Sargasso Sea ecosystem

Setting Up the Commission

Members

- Five Commissioners –unpaid
- Nominations in from Governments – consultation in process
- Appointment by Bermuda **August 2014**

Institution

- To be a Bermudian Legal Entity
- SSA Secretariat to serve as Commission Secretariat



SARGASSO SEA
COMMISSION



Dr Billy
Causey



Professor
Howard Roe



Professor
Ricardo Santos



Professor Dire
Tladi



Dr Tammy
Trott

Conclusions

- A new Paradigm for High Sea Stewardship:
 - Not an International Organization
 - But supported by Governments
 - With a wide range of Other Partners
 - International Organizations
 - Academics;
- Does not have Management Powers
 - But with strong voice for those who do

For more information
www.sargassoalliance.org

Thanks.