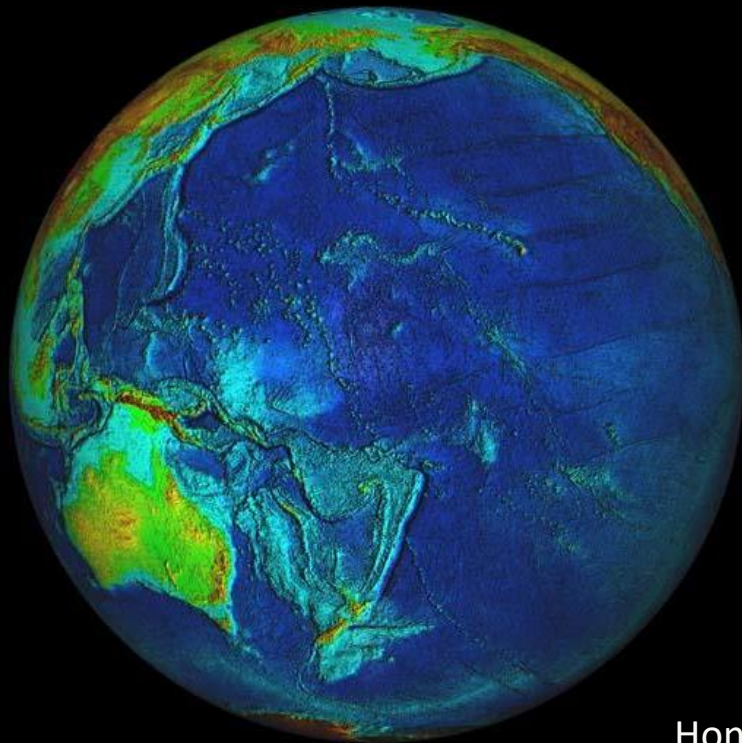
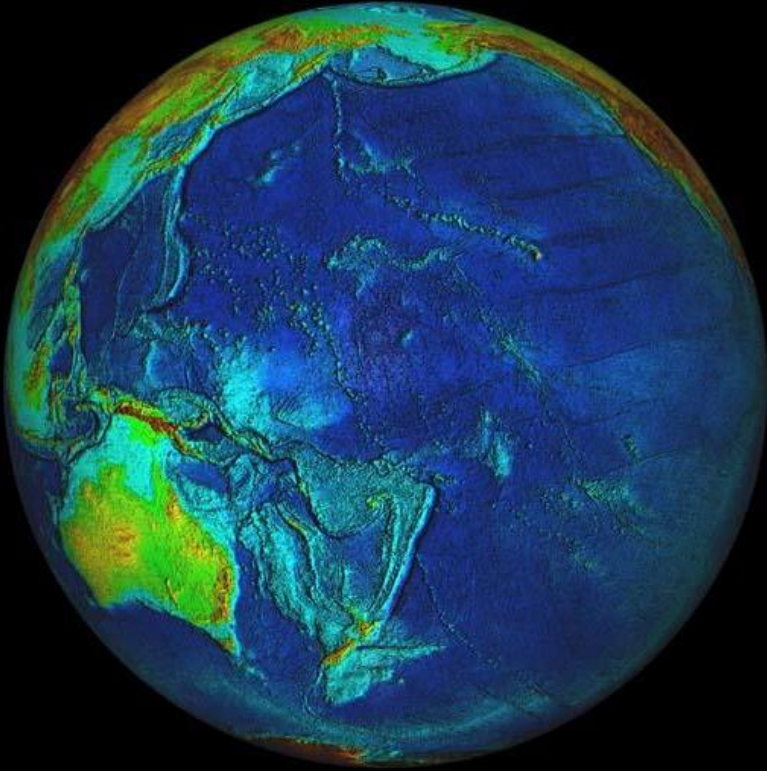


Towards a new instrument for marine biodiversity beyond national jurisdiction: A perspective on current BBNJ negotiations



Kristina M. Gjerde
Senior High Seas Advisor, IUCN
Global Marine and Polar Programme
Adjunct Professor, Middlebury Institute of
International Studies at Monterey, California
Honorary Fellow, University of Edinburgh School of Geosciences

Overview



- Challenges to marine biodiversity
- Challenges to UNCLOS
- Opportunities for progress
- Opportunities for the European Union?

The Living Infinite?



Photo credit: John B. Weller

CO₂ Emissions 2006

Rising CO₂ has created a deadly trio of stressors



GLOBAL WARMING



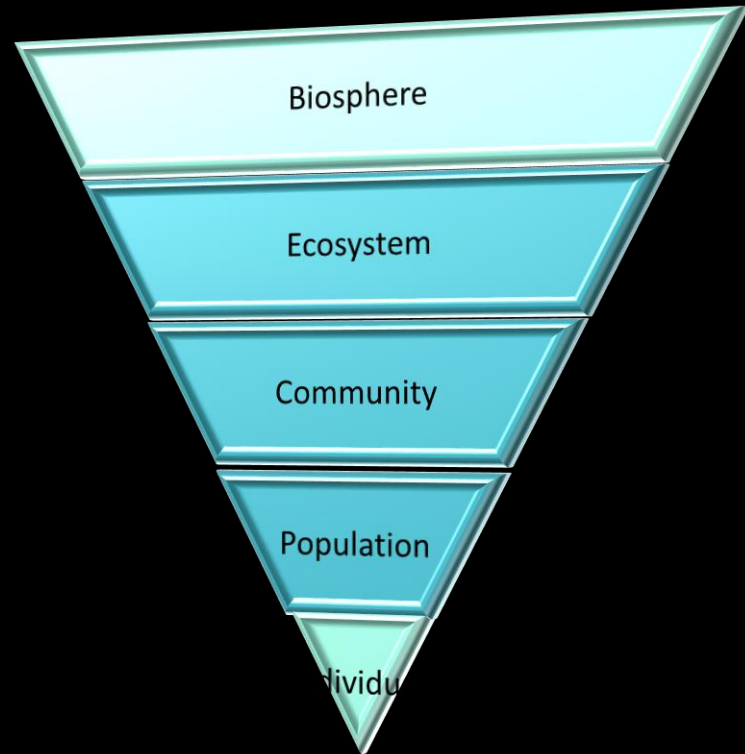
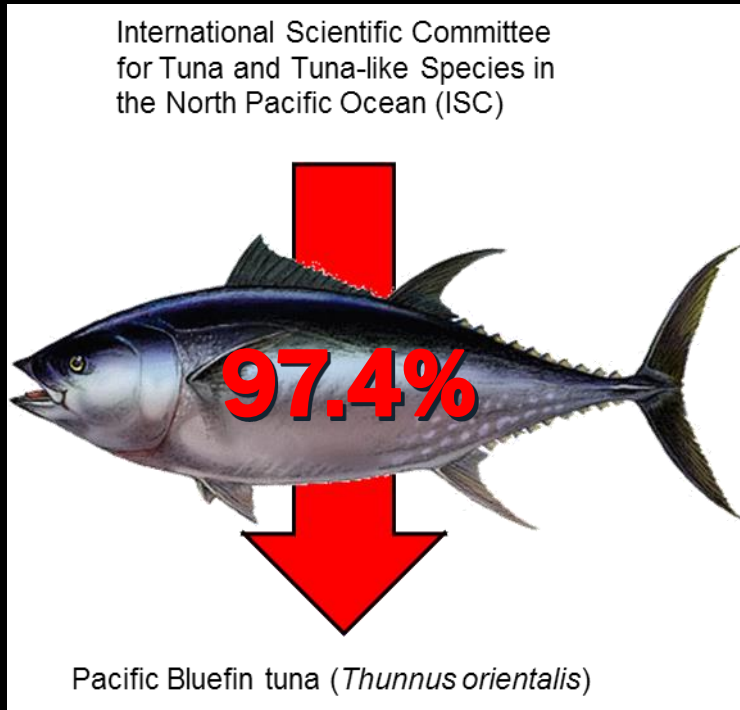
DECLINING OXYGEN LEVELS
OCEAN DEOXYGENATION



OCEAN ACIDIFICATION

Slide courtesy Lisa A. Levin, PhD.
Center for Marine Biodiversity & Conservation,
Scripps Institution of Oceanography, La Jolla, CA

Reductions in biodiversity (species richness and density) reduces ecosystem resilience...

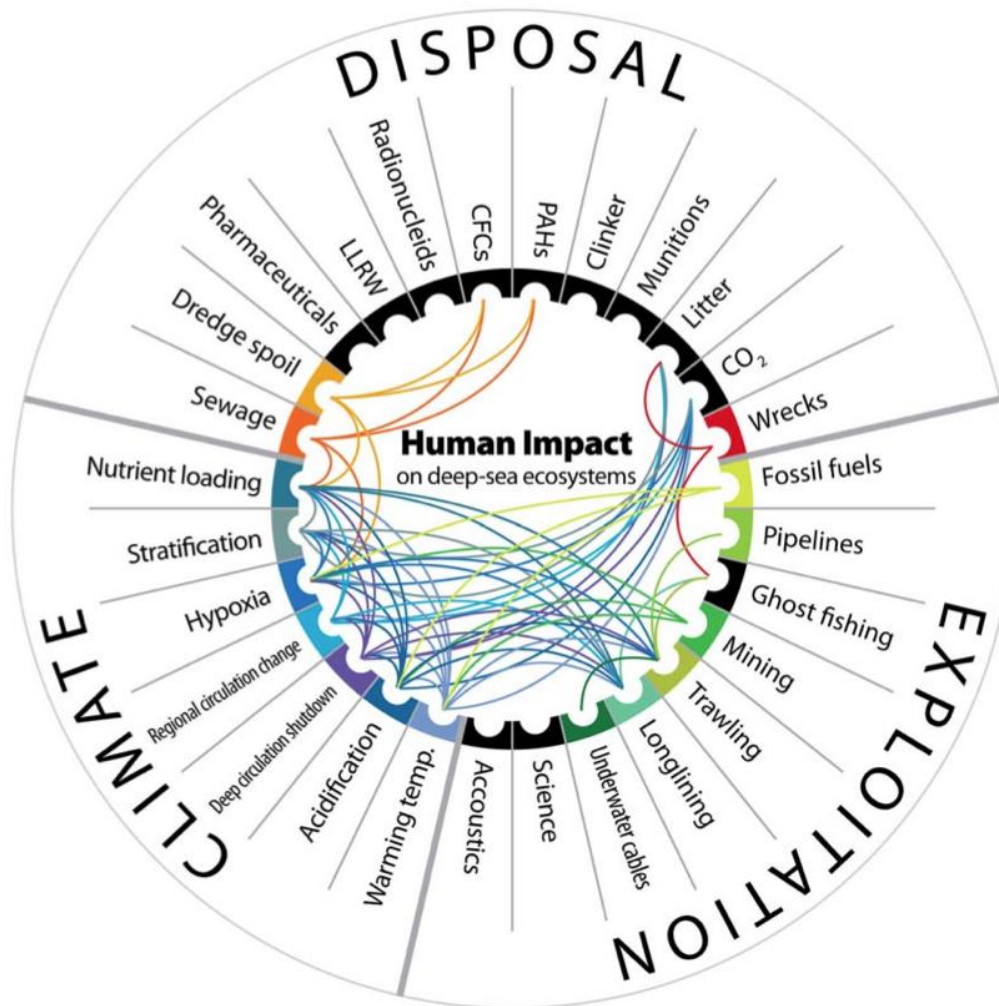


Greatest ocean impacts over time

1900-50s
Disposal

1950-2000s
Exploitation

2000s + future
Climate Change



The lines link impacts that, when found together, have a **synergistic effect** on habitats or faunal communities.

Ramirez-Llodra et al. 2011

Is the
UNCLOS
regime
for ABNJ
fit for the
coming
storm?





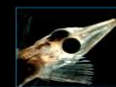
ARCTIC GREBE
A grebe is a waterfowl that lives in the Arctic and sub-Arctic regions. It is a highly specialized bird that is adapted to life in cold water.



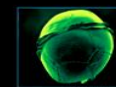
DEEP-SEA FISH
A deep-sea fish is a fish that lives in the deep ocean. It is a highly specialized fish that is adapted to life in the dark, cold, and high-pressure environment of the deep sea.



JELLYFISH
A jellyfish is a soft-bodied invertebrate that lives in the ocean. It is a highly specialized animal that is adapted to life in the water.



SEA OTTER
A sea otter is a marine mammal that lives in the North Pacific Ocean. It is a highly specialized animal that is adapted to life in the water.



HYDROZOAN
A hydrozoan is a small, simple animal that lives in the ocean. It is a highly specialized animal that is adapted to life in the water.

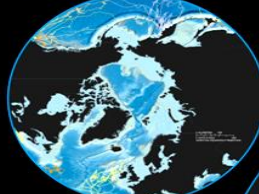


SEA SPIDER
A sea spider is a small, eight-legged arachnid that lives in the ocean. It is a highly specialized animal that is adapted to life in the water.



SEA SLUG
A sea slug is a soft-bodied invertebrate that lives in the ocean. It is a highly specialized animal that is adapted to life in the water.

Discovery and Fascination
Life systems have demonstrated an incredible range of diversity and complexity. From the smallest microorganism to the largest animal, life has adapted to every environment on Earth. The Census of Marine Life is a global effort to discover and document the diversity of life in the ocean.



Challenges to UNCLOS

For millennia, the world has remained hidden, inaccessible to the rest of the world. Only a few brave souls have ventured into the deep, and even then, they have only scratched the surface. The Census of Marine Life is a global effort to discover and document the diversity of life in the ocean. It is a highly specialized animal that is adapted to life in the water.

Ocean Habitats
The ocean can be divided into several major habitats, each with its own unique characteristics and biodiversity. These habitats include the continental shelf, continental slope, continental rise, deep-sea hydrothermal vents, and the open ocean.

- CONTINENTAL SHELF**: The shallow part of the ocean floor that extends from the coast to the continental shelf edge.
- CONTINENTAL SLOPE**: The steeply sloping part of the ocean floor that extends from the continental shelf edge to the continental rise.
- CONTINENTAL RISE**: The gently sloping part of the ocean floor that extends from the continental slope to the deep-sea floor.
- DEEP-SEA HYDROTHERMAL VENTS**: Hot, mineral-rich springs that erupt from the seafloor, often forming tall chimneys.
- OPEN OCEAN**: The vast, deep part of the ocean that extends from the continental shelf edge to the abyssal plain.
- HYDROGRAPHIC RIDGES**: Long, narrow ridges that run along the seafloor, often forming part of the mid-ocean ridge system.
- VENTS AND SEEPS**: Small, mineral-rich springs that erupt from the seafloor, often forming small chimneys.
- SEAMOUNTS**: Isolated, conical hills that rise from the seafloor, often forming part of the mid-ocean ridge system.
- ABYSSAL PLAINS**: The flat, deep part of the ocean floor that extends from the continental rise to the abyssal plain.
- SEA MOUNTS**: Isolated, conical hills that rise from the seafloor, often forming part of the mid-ocean ridge system.



Polar Regions
The polar regions of the ocean are characterized by extreme cold and low biodiversity. However, they are home to a variety of unique and specialized organisms that have adapted to life in these harsh environments.

www.coml.org
The Census of Marine Life is a global effort to discover and document the diversity of life in the ocean. It is a highly specialized animal that is adapted to life in the water.

PACIFIC BLUEFIN TUNA
The Pacific bluefin tuna is a highly migratory species that lives in the North Pacific Ocean. It is a highly specialized animal that is adapted to life in the water.

PACIFIC SEA TURTLES
The Pacific sea turtle is a highly migratory species that lives in the North Pacific Ocean. It is a highly specialized animal that is adapted to life in the water.

PACIFIC GRASSES
The Pacific grasses are a highly specialized group of plants that live in the deep-sea hydrothermal vents. They are adapted to life in the dark, cold, and high-pressure environment of the deep sea.

PACIFIC CHANGES
The Pacific changes are a highly specialized group of organisms that live in the deep-sea hydrothermal vents. They are adapted to life in the dark, cold, and high-pressure environment of the deep sea.

PACIFIC HYDROTHERMAL VENTS
The Pacific hydrothermal vents are a highly specialized group of organisms that live in the deep-sea hydrothermal vents. They are adapted to life in the dark, cold, and high-pressure environment of the deep sea.

ATLANTIC BLUEFIN TUNA
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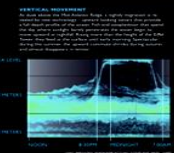
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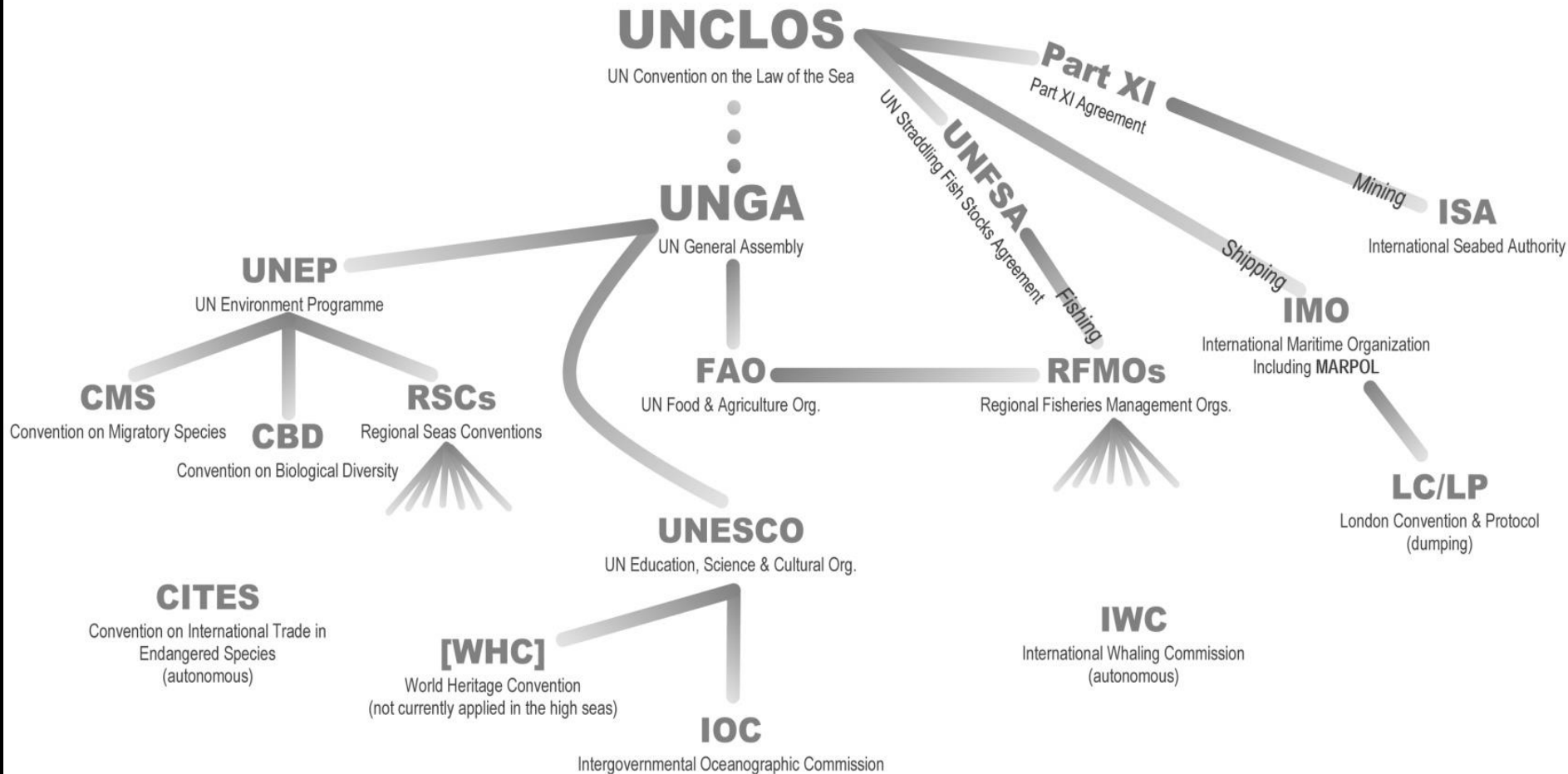
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SOUTHERN OCEAN
The Southern Ocean is a highly specialized region of the ocean that is home to a variety of unique and specialized organisms. It is a highly specialized animal that is adapted to life in the water.

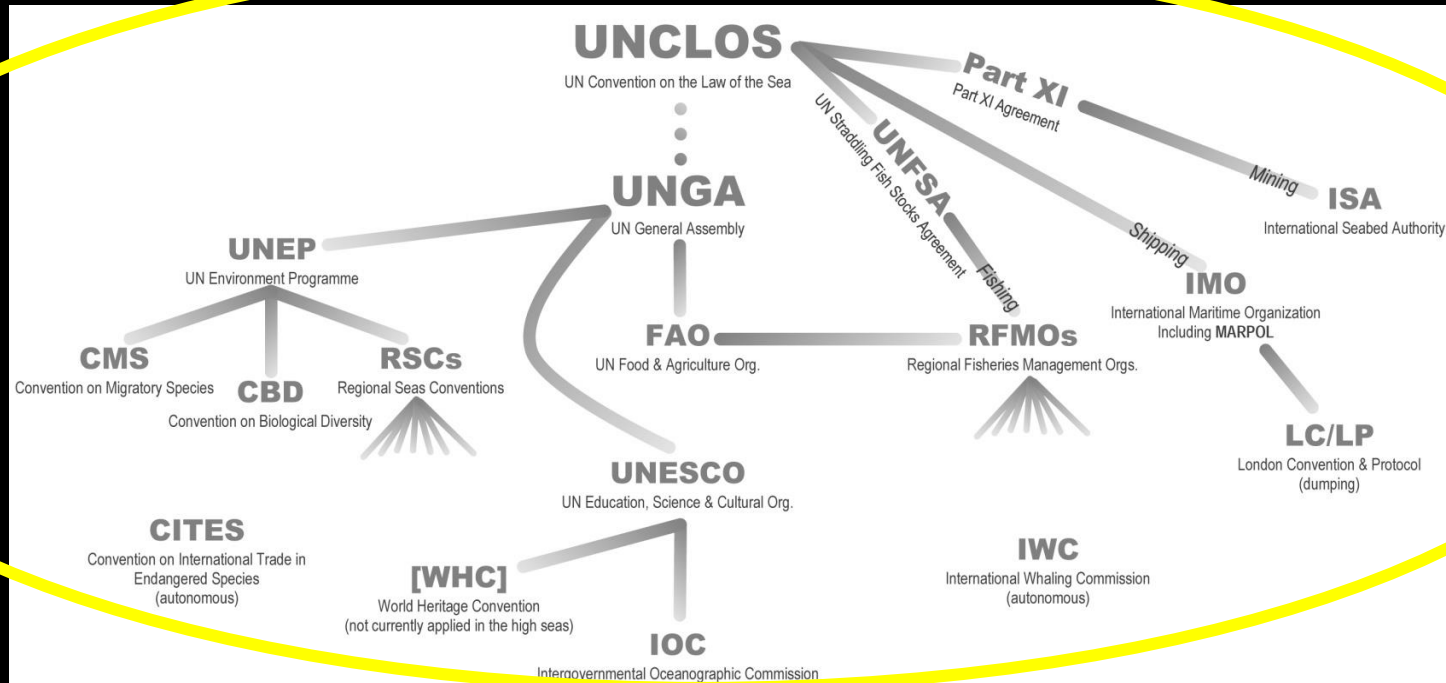
INDIAN OCEAN WHITES
The Indian Ocean whites are a highly specialized group of organisms that live in the deep-sea hydrothermal vents. They are adapted to life in the dark, cold, and high-pressure environment of the deep sea.





Enabling conditions for effective interplay: 1) non-hierarchical organizations; 2) a common purpose; and 3) shared principles

(Mahon et al, 2015)

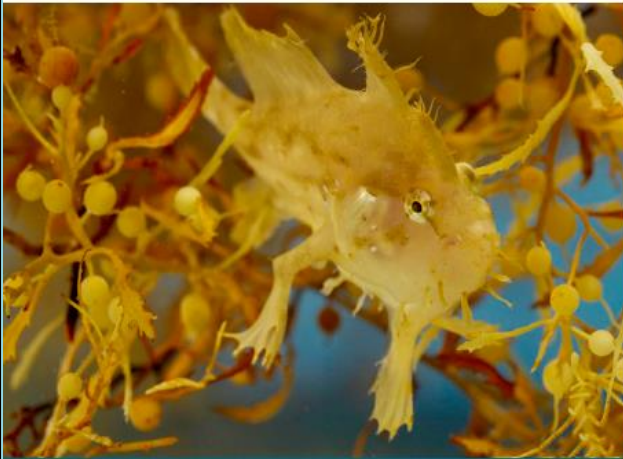


“Resistance to Precaution”

Lessons from the Sargasso Sea

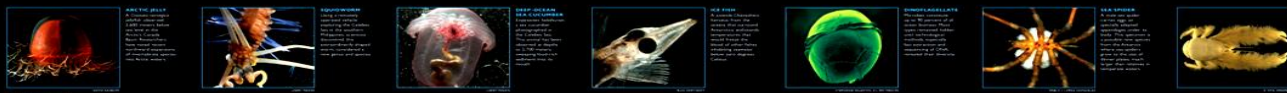
Challenges to the conservation and sustainable use
of marine biodiversity beyond national jurisdiction

David Freestone and Kristina Gjerde



“While the Sargasso Sea Project has succeeded in gaining wide-spread recognition for the Sargasso Sea’s significance, the primary legally binding protective measure secured after six years of extensive work has been a closure of several seamounts to deep sea bottom fishing by the North-west Atlantic Fisheries Organization (NAFO). What we have learned is that the lack of common principles, common criteria and common evidentiary standards for conservation measures has hindered broader efforts for comprehensive management.”

Freestone and Gjerde, 2016



ARCTIC BEET
A large, colorful, and highly visible organism, the Arctic beetle is found in the Arctic region. It is a member of the family Tenebrionidae and is known for its ability to survive in extreme cold.

SEA SPIDER **& ANCESTRAL**
The sea spider is a large, eight-legged arachnid that lives in the open ocean. It is a member of the family Pelagicidae and is known for its ability to float in the water column.

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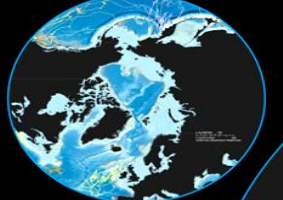
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Discovery and Fascination
Life systems have been discovered in the deep ocean, and the discovery of new species is continuing to expand our knowledge of the diversity of life on Earth. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans.



Opportunities for Progress

For millennia, the world has remained a mystery. The oceans are the last of the great unknowns. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans.

Ocean Habitats
The ocean can be divided into several major habitats, each with its own unique characteristics and biodiversity. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans.

- COASTAL SEA**: The shallow waters near the shore, characterized by high biodiversity and productivity.
- CONTINENTAL SHELF**: The submerged, flat part of the continent, extending from the coast to the continental shelf edge.
- CONTINENTAL SLOPE**: The steeply sloping part of the continental shelf, extending from the shelf edge to the continental rise.
- CONTINENTAL RISE**: The gently sloping part of the continental shelf, extending from the continental slope to the continental rise.
- OPEN OCEAN**: The deep, open waters of the ocean, extending from the continental rise to the abyssal plain.
- DEEP OCEAN RIDGES**: The underwater mountain ranges, characterized by high biodiversity and productivity.
- VENTS AND SEEPS**: The hydrothermal vents and seeps, characterized by high biodiversity and productivity.
- SEAMOUNTS**: The underwater mountains, characterized by high biodiversity and productivity.
- ABYSSAL PLAINS**: The deep, flat bottom of the ocean, characterized by low biodiversity and productivity.
- THE OCEANS**: The vast, open waters of the ocean, extending from the continental rise to the abyssal plain.



Polar Regions
The polar regions are the most extreme and least explored parts of the world's oceans. The Census of Marine Life is a global effort to discover and document the diversity of life in the world's oceans.

www.coml.org
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PACIFIC BLUEFIN TUNA
The Pacific bluefin tuna is a large, fast-swimming fish that lives in the open ocean. It is a member of the family Scombridae and is known for its ability to migrate across the Pacific Ocean.

PACIFIC SEA TURTLES
The Pacific sea turtles are a group of marine reptiles that live in the open ocean. They are known for their long migrations and their ability to survive in the open ocean.

PACIFIC GRASSES
The Pacific grasses are a group of marine plants that live in the shallow waters of the Pacific Ocean. They are known for their ability to grow in deep water and their role in the marine ecosystem.

PACIFIC CHANGES
The Pacific changes are a group of marine organisms that live in the shallow waters of the Pacific Ocean. They are known for their ability to survive in deep water and their role in the marine ecosystem.

PACIFIC SHIMMERS
The Pacific shimmers are a group of marine organisms that live in the shallow waters of the Pacific Ocean. They are known for their ability to survive in deep water and their role in the marine ecosystem.

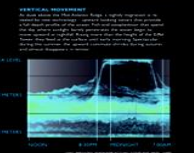
PACIFIC BLOOMING
The Pacific blooming are a group of marine organisms that live in the shallow waters of the Pacific Ocean. They are known for their ability to survive in deep water and their role in the marine ecosystem.

ATLANTIC SEA TURTLES
The Atlantic sea turtles are a group of marine reptiles that live in the open ocean. They are known for their long migrations and their ability to survive in the open ocean.

ATLANTIC SEAMOUNTS
The Atlantic seamounts are a group of underwater mountains that live in the open ocean. They are known for their high biodiversity and productivity.

SOUTHERN OCEAN
The Southern Ocean is the southernmost of the world's oceans, extending from the Antarctic Peninsula to the Indian and Pacific Oceans. It is known for its high biodiversity and productivity.

INDIAN OCEAN WHITES
The Indian Ocean whites are a group of marine organisms that live in the shallow waters of the Indian Ocean. They are known for their ability to survive in deep water and their role in the marine ecosystem.



2004: “Ad-Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond national jurisdiction”

2011: Agreement on Package Deal

Area-Based Management

Environmental impact assessment

Capacity building and tech transfer

Marine genetic resources

2015: Agreement to develop legally binding instrument under UNCLOS



What's next: UNGA Resolution A/69/292, June 2015

- 2-Year Preparatory Committee
- Substantive recommendations
- Package deal
- Not undermine
- Not affect legal status



Sidney Kemble, the Netherlands, with Gina Guillén-Grillo, Costa Rica



Chair Edén Charles, Trinidad and Tobago



Matthías Pálsson, Iceland

Role for a new implementing agreement



- **Common purpose**
- **Common operating principles**
- **Conservation tools**
- **Promote compliance**
- **Address equitable concerns**
- **Build scientific basis**

Obstacles ahead?



“The time has come to acknowledge that national interests are best served by acting in the global interest.”

Ban Ki-moon, UN Secretary General,
Paris, France, December 12, 2015



An underwater photograph looking up towards the surface. Bright sunlight filters through the water, creating a starburst effect and illuminating the ripples on the surface. The water is a deep blue color. In the lower right quadrant, there is a dark silhouette of a fish swimming.

Not the End?

Kristina.gjerde@eip.com.pl