



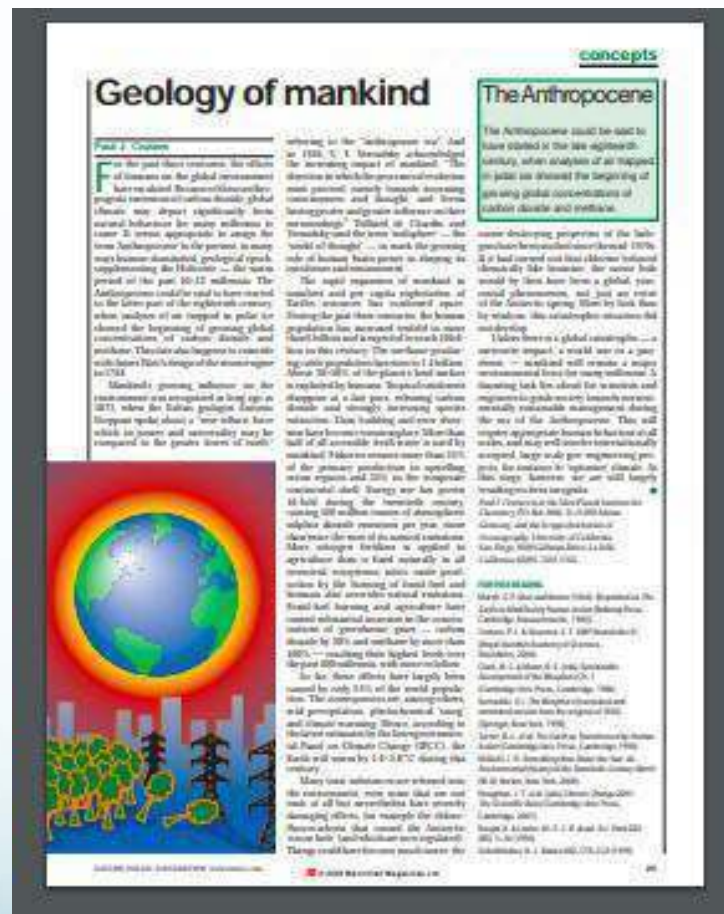
Ocean governance: Law of the Sea, CDB and UNFCCC

Leandra R. Goncalves
Instituto Oceanográfico
USP

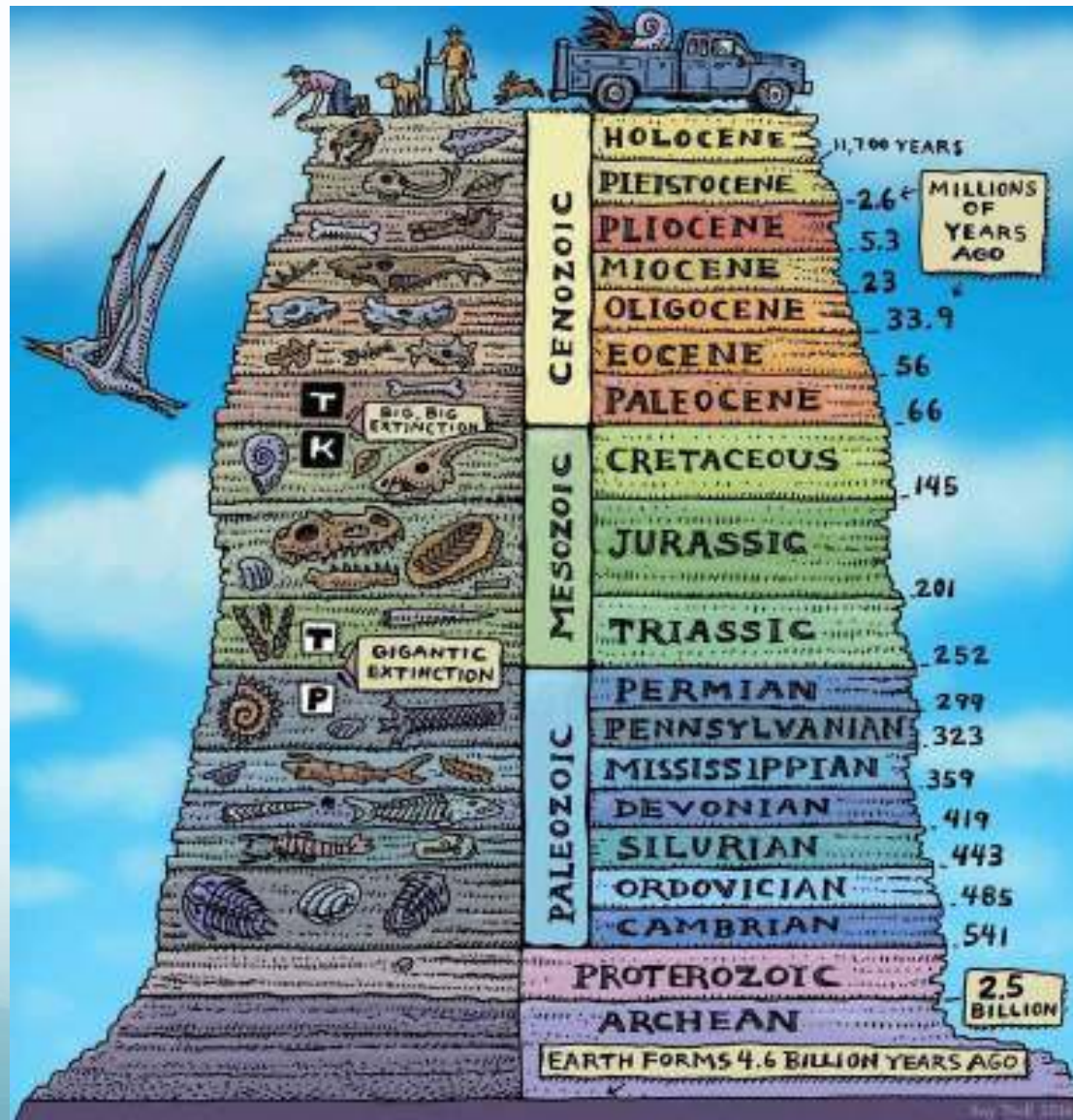
Are we living in the Anthropocene?

- Holocene: period of environmental stability since the last glaciation - completed approximately 11,000 years ago - until the third quarter of the twentieth century, during which mankind developed.
- Anthropocene: new and current geological epoch in which this stability is being progressively lost due to the action of humanity, which has become the main vector of changes in the planetary system.

Geology of mankind



Are we living in the Anthropocene?



THE NEXT GOLDEN STATE: A 16-PAGE SPECIAL REPORT ON AUSTRALIA

The Economist

ISSN 0950-0804 (Hbk) 0950-0804 (Pbk)

www.economist.com

Obama, Bibi and peace

Huntman blows his horn

A soft landing for China

The costly war on cancer

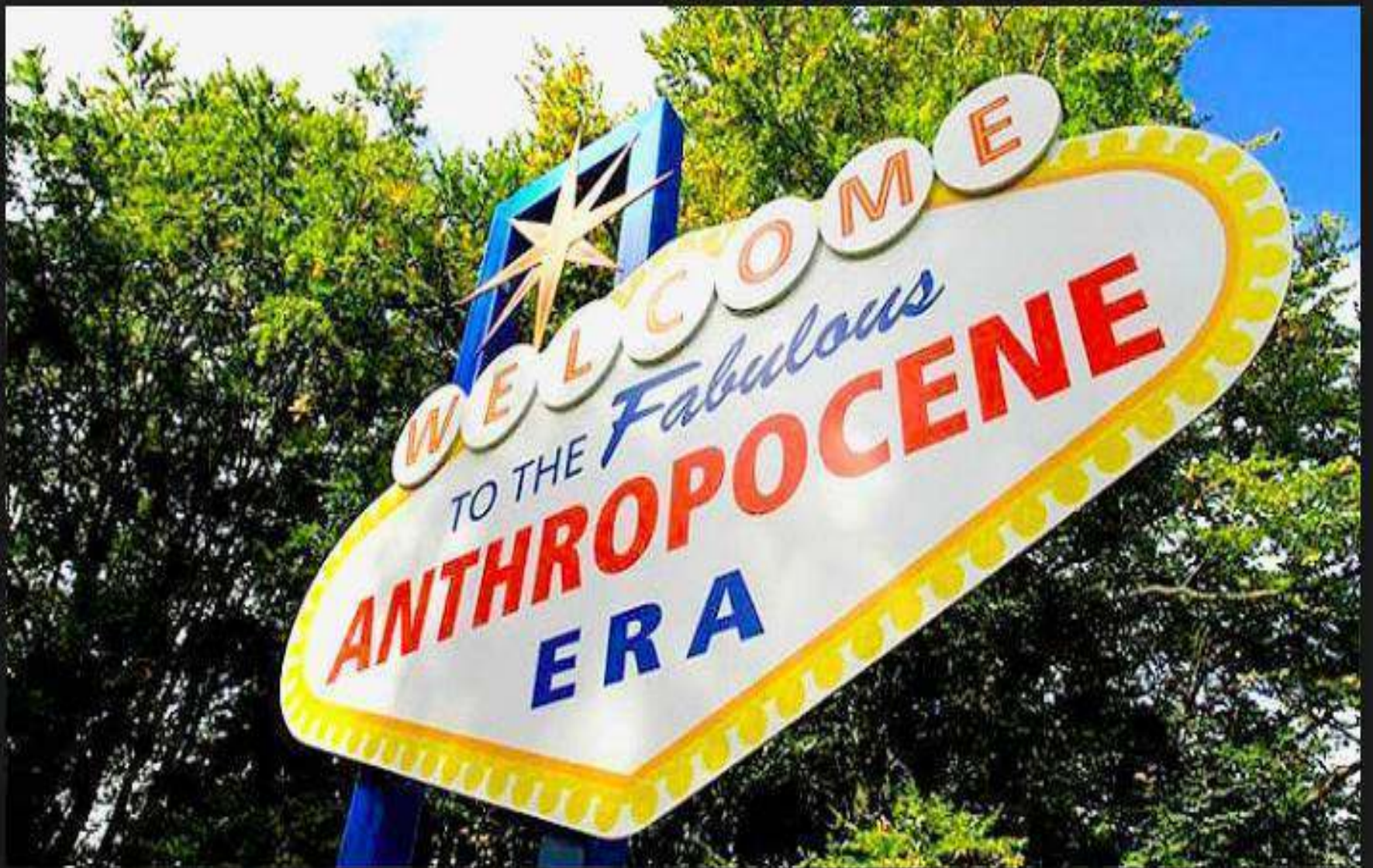
How the brain drain reduces poverty

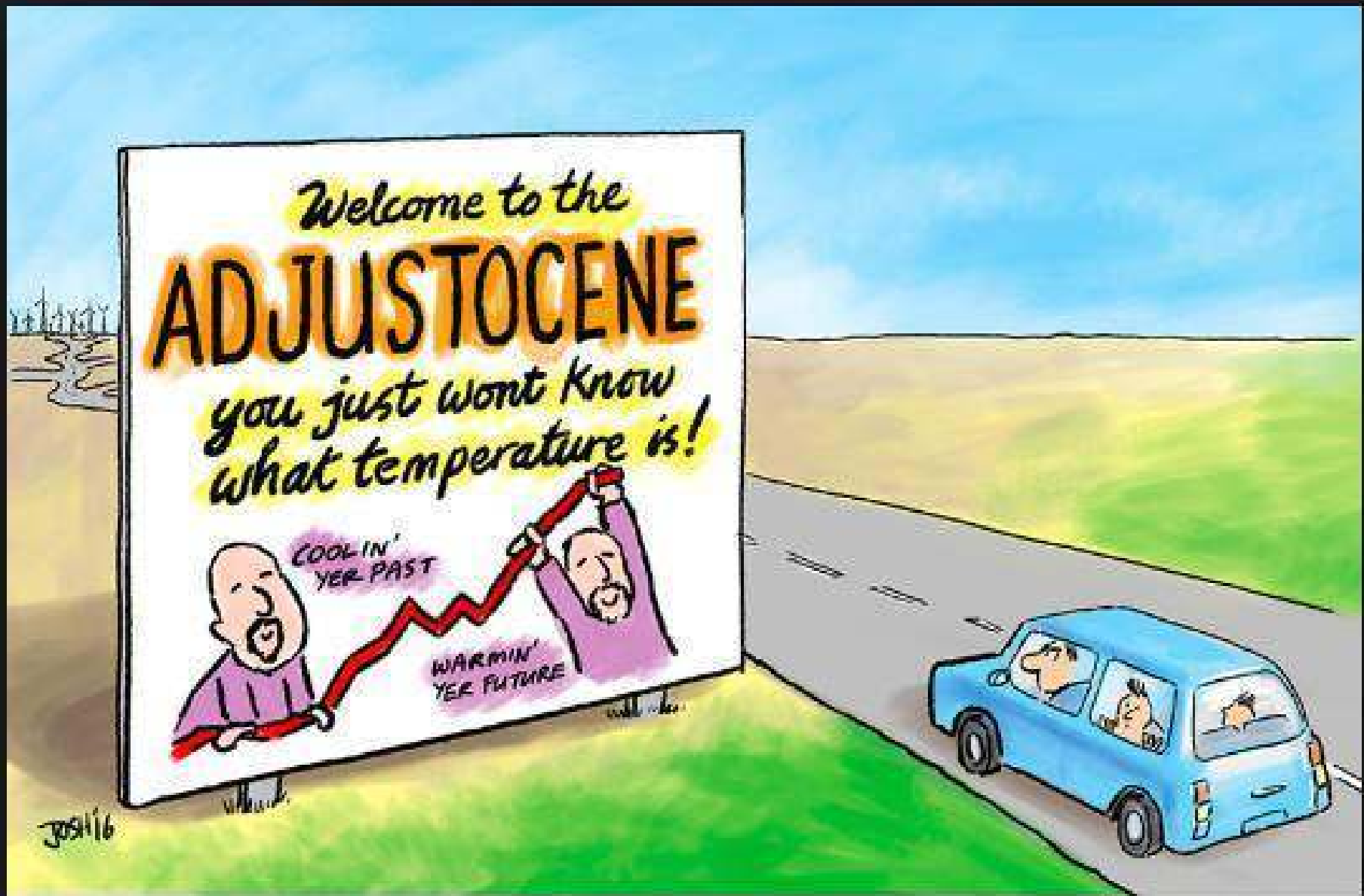
Welcome to the Anthropocene



Geology's new age

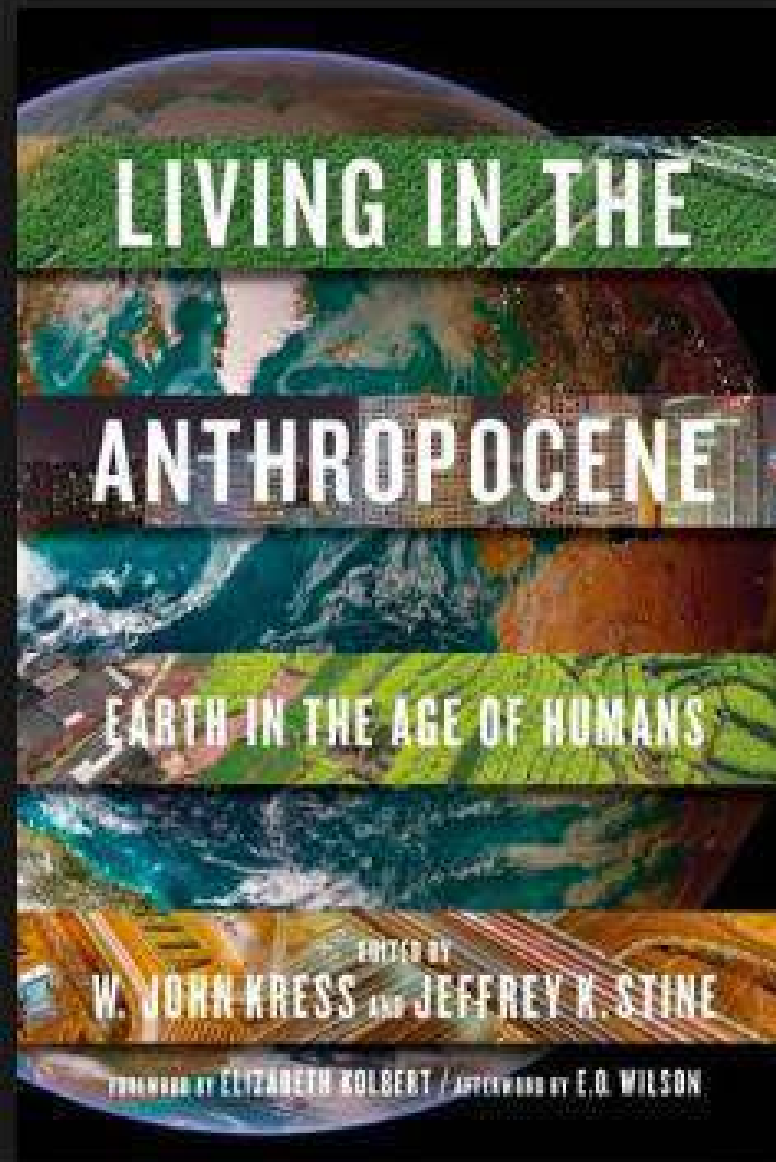


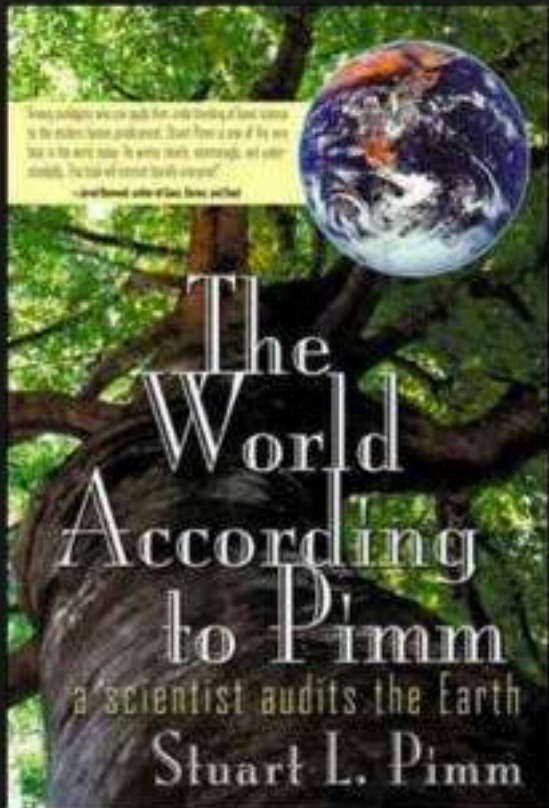




A dense thicket of green ferns fills the upper two-thirds of the frame. The ferns have a feathery, pinnate structure. In the lower center, the top of a small animal's head, possibly a rabbit or a similar creature, is visible, peeking out from behind the foliage. The background is a solid, muted teal color.

LOVE IN THE ANTHROPOCENE





“I hate the term Anthropocene. It is a term that has no meaning. It ofuscates the simple statement that human actions now change planetary process” Stuart L. Pimm

Source: Thomas Michael Lewinsohn lecture

THE ANTHROPOCENE REVIEW

VOLUME 1 | ISSUE 1 |

www.sagepub.com | ISSN: 2053-0196



REPORTS

Anthropocene Sea Level Change: A History of Recent Trends Observed in the U.S. East, Gulf, and West Coast Regions

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Coastal Systems in the *Anthropocene*

Authors

[Authors and affiliations](#)

Lynn Donelson Wright , J. P. M. Syvitski, C. Reid Nichols

Chapter

First Online: 16 June 2018

76



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REVIEW ARTICLE **Provisionally accepted** The full-text will be published soon.  [Notify me](#)

Front. Mar. Sci. | doi: 10.3389/fmars.2018.00293

A framework for understanding marine cosmopolitanism in the Anthropocene

 **John A. Darling^{1*}** and  **James T. Carlton^{2,3}**

¹National Exposure Research Laboratory, Office of Research and Development, United States Environmental Protection Agency, United States

²Maritime Studies Program, Williams Mystic, United States

³Williams College, United States

OCEAN GOVERNANCE IN THE ANTHROPOCENE



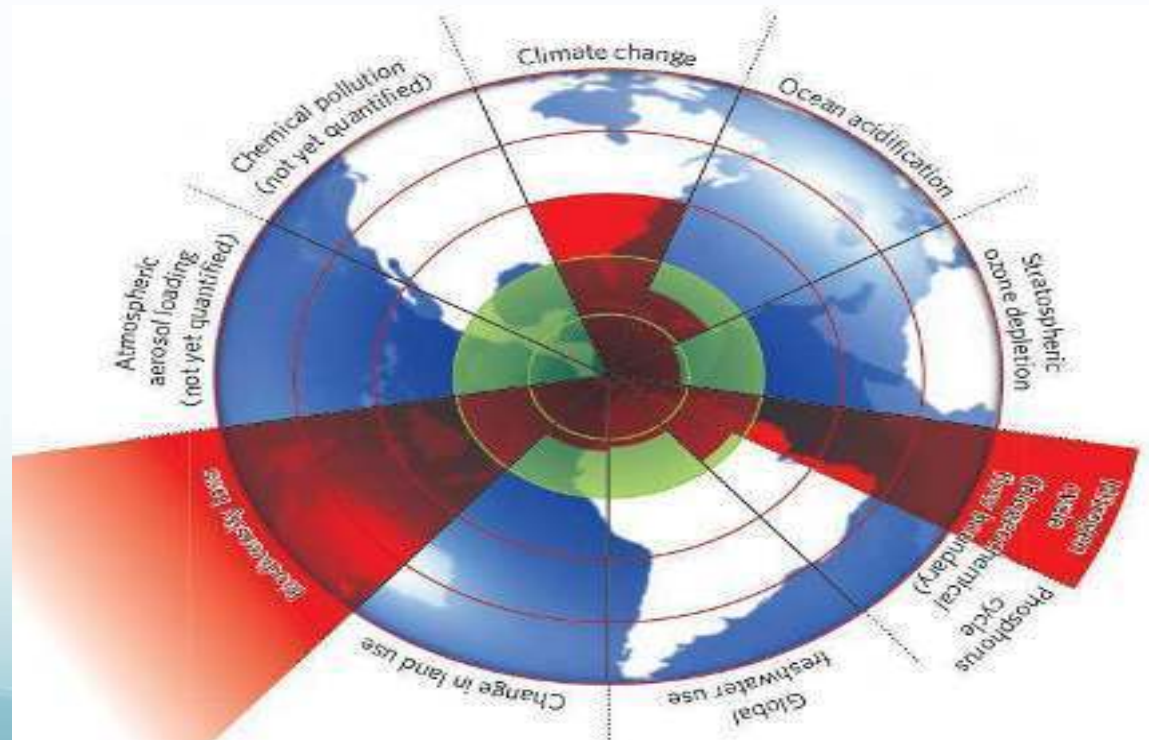
The ocean was once thought to be a bottomless resource, to be divided and used by nations and their people. Now we know better. **Ruben Zondervan, Leopoldo Cavaleri Gerhardinger, Isabel Torres de Noronha, Mark Joseph Spalding and Oran R Young** explore how to govern and protect our planet's marine environment.

Zondervan et al, 2013. Global Change. Issue 81.
October 2013

FEATURE

A safe operating space for humanity

Identifying and quantifying planetary boundaries that must not be transgressed could help prevent human activities from causing unacceptable environmental change, argue Johan Rockstrom and colleagues.





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Impacts of Biodiversity Loss on Ocean Ecosystem Services

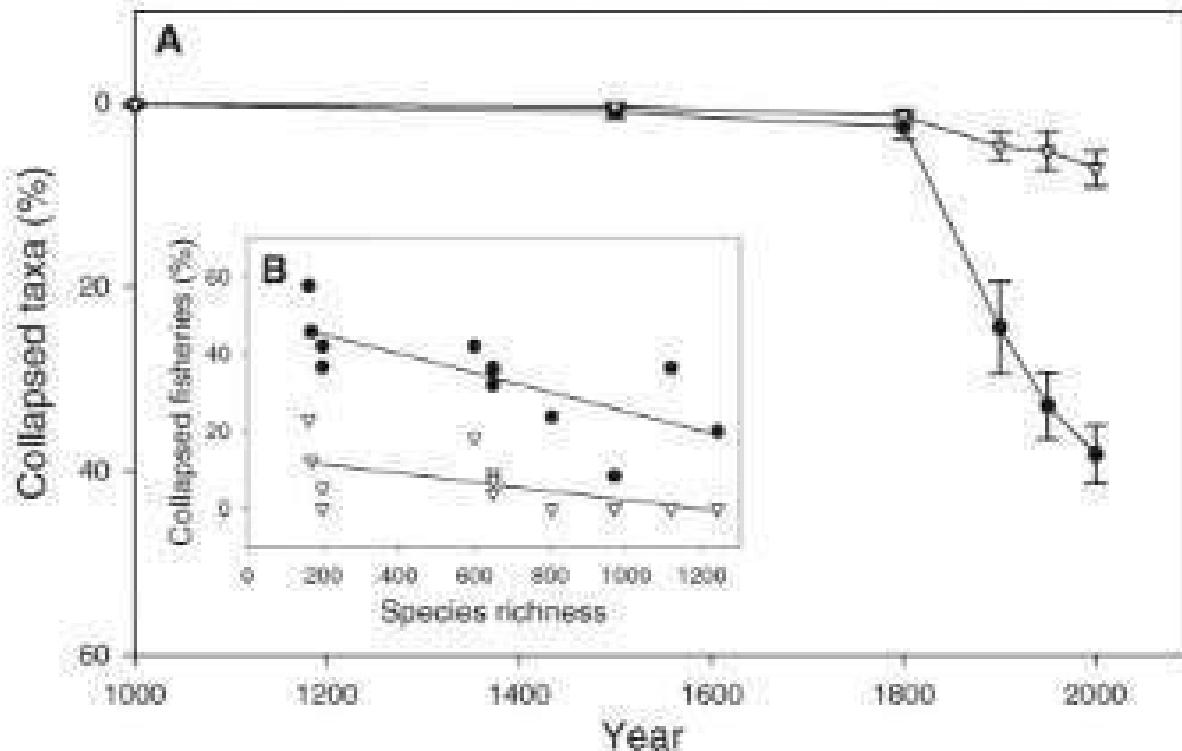
Boris Worm^{1,*}, Edward B. Barbier², Nicola Beaumont³, J. Emmett Duffy⁴, Carl Folke^{5,6}, Benjamin S. Halpern⁷, Jeremy B. C. J...

+ See all authors and affiliations

Science 03 Nov 2006:

Vol. 314, Issue 5800, pp. 787-790

DOI: 10.1126/science.1132294





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Marine defaunation: Animal loss in the global ocean

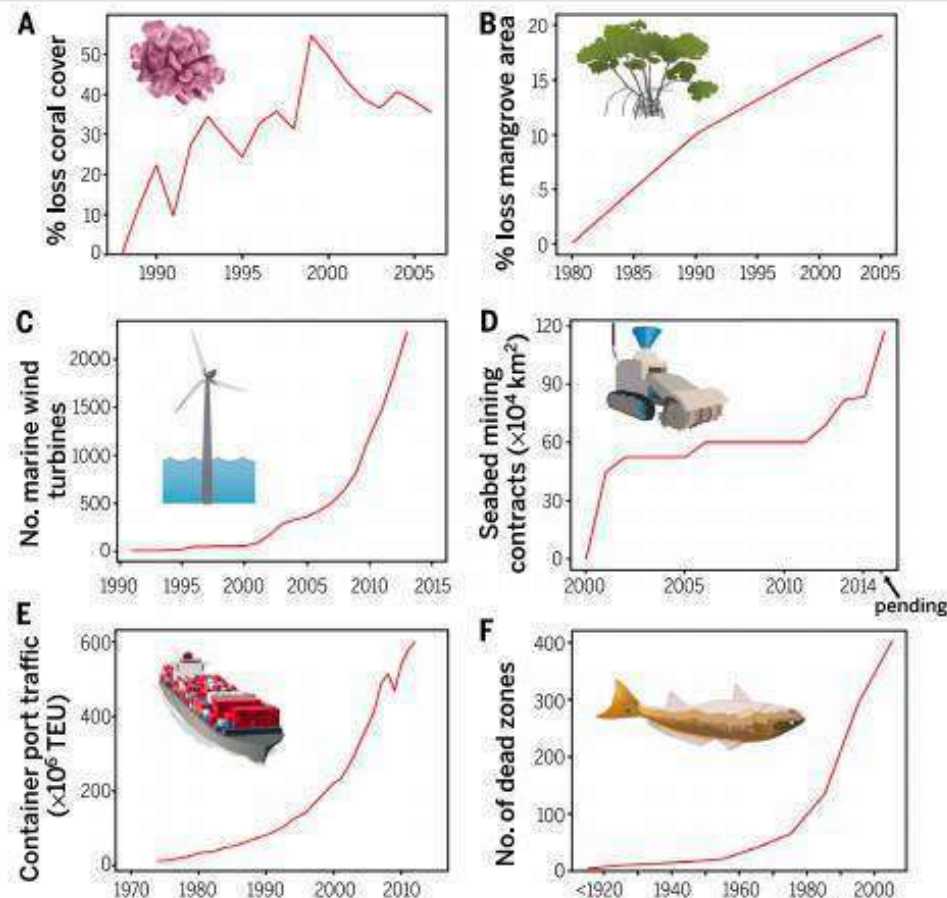
Douglas J. McCauley^{1,*}, Malin L. Pinsky², Stephen R. Palumbi³, James A. Estes⁴, Francis H. Joyce¹, Robert R. Warner¹

+ See all authors and affiliations

Science 16 Jan 2015:

Vol. 347, Issue 6219, 1255641

DOI: 10.1126/science.1255641



Why global governance of the oceans?

- The global perspective of environmental protection involves mechanisms that are not in the sphere of nations.
- Oceans issues transcend national boundaries and comprise a situation in which stakeholders and different groups interact.



Why global governance of the oceans?




Global Maritime Traffic Flow



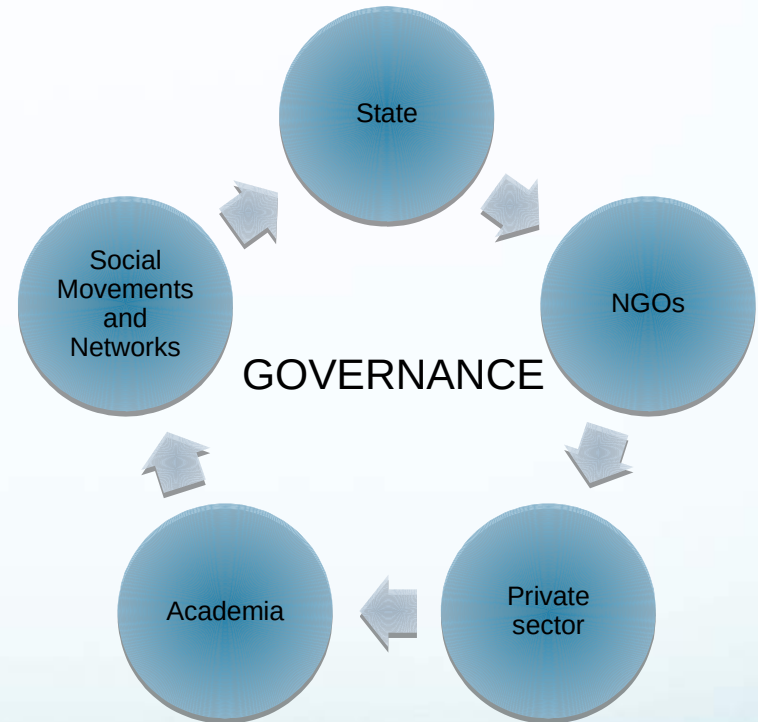
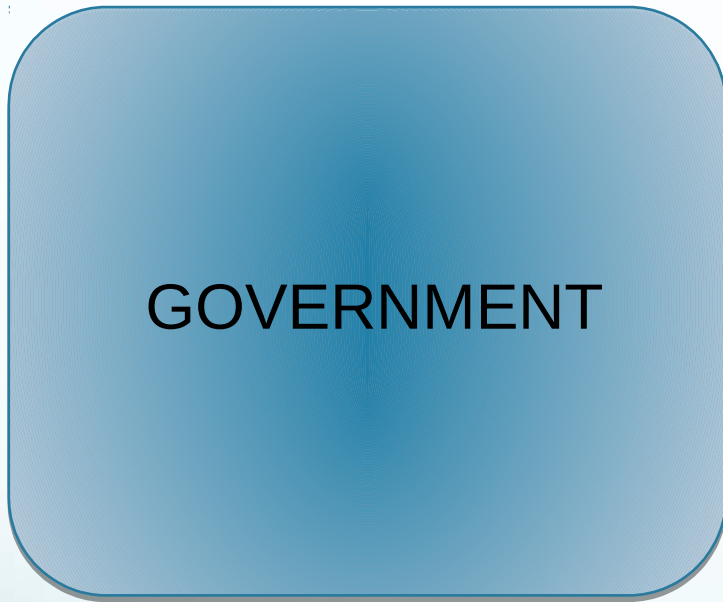
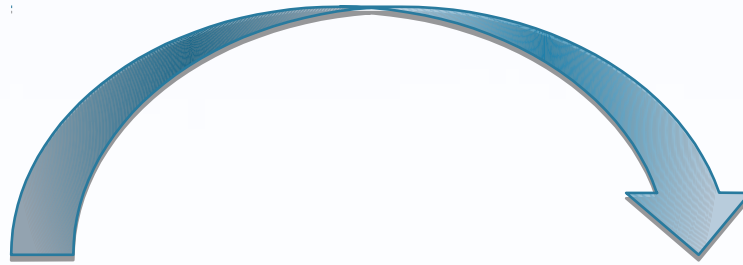
Why global governance of the oceans?



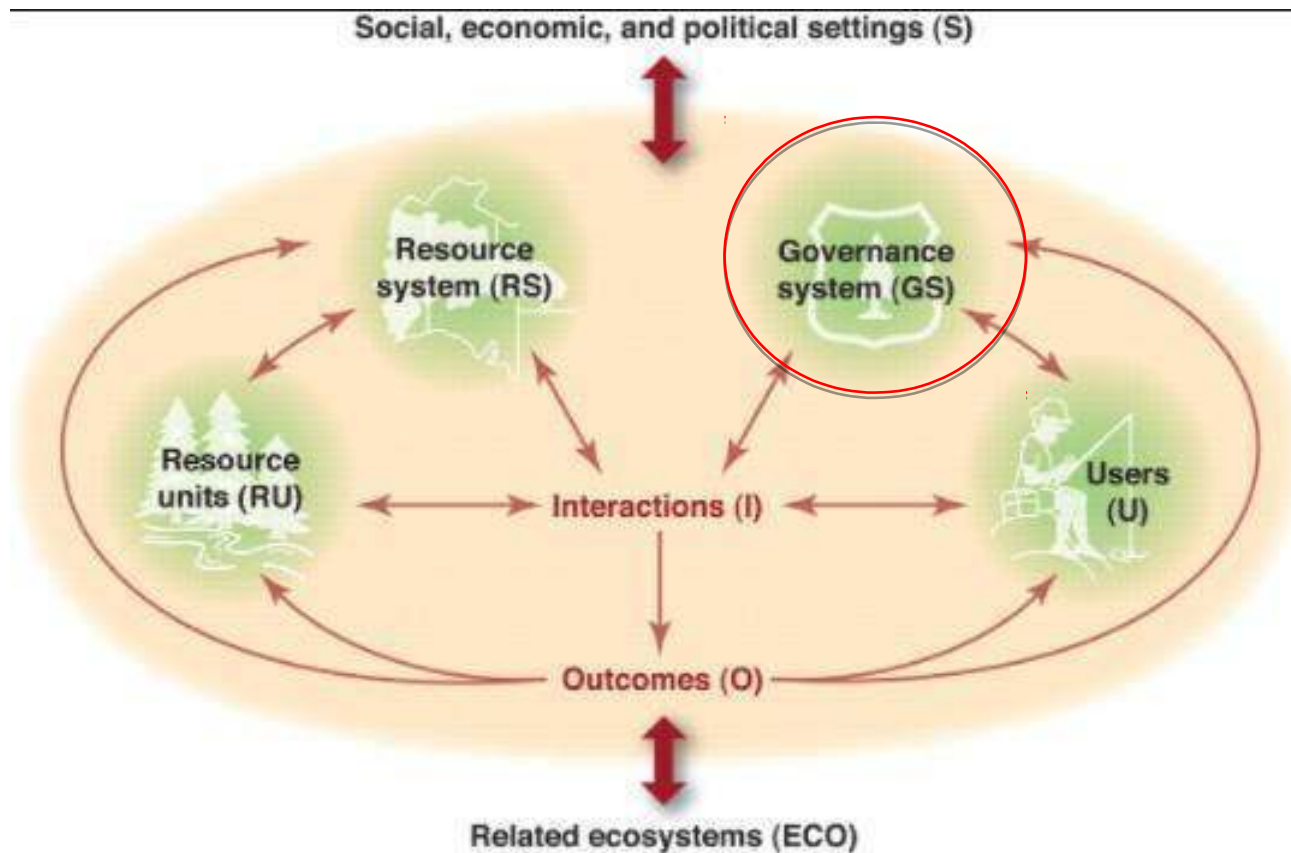
GOVERNANCE?



**RULES, NORMS,
INSTITUTIONS
(FORMAL OR
INFORMAL),
INSTITUTIONAL
ARRANGEMENTS**



Rules, norms, policies are institutional arrangements that structure the interaction between politics, economy and society, capable of promoting the conservation of natural resources of common use



International Ocean Related Agreements - Examples

- International Maritime Organizations
- Oceans (UNCLOS)
- Biological diversity (CBD)
- Access to genetic resources (Nagoya Protocol)
- Global Climate Change (UNFCCC, Kyoto Protocol and Paris Agreement)
- RFMOS
- International Seabed Authority

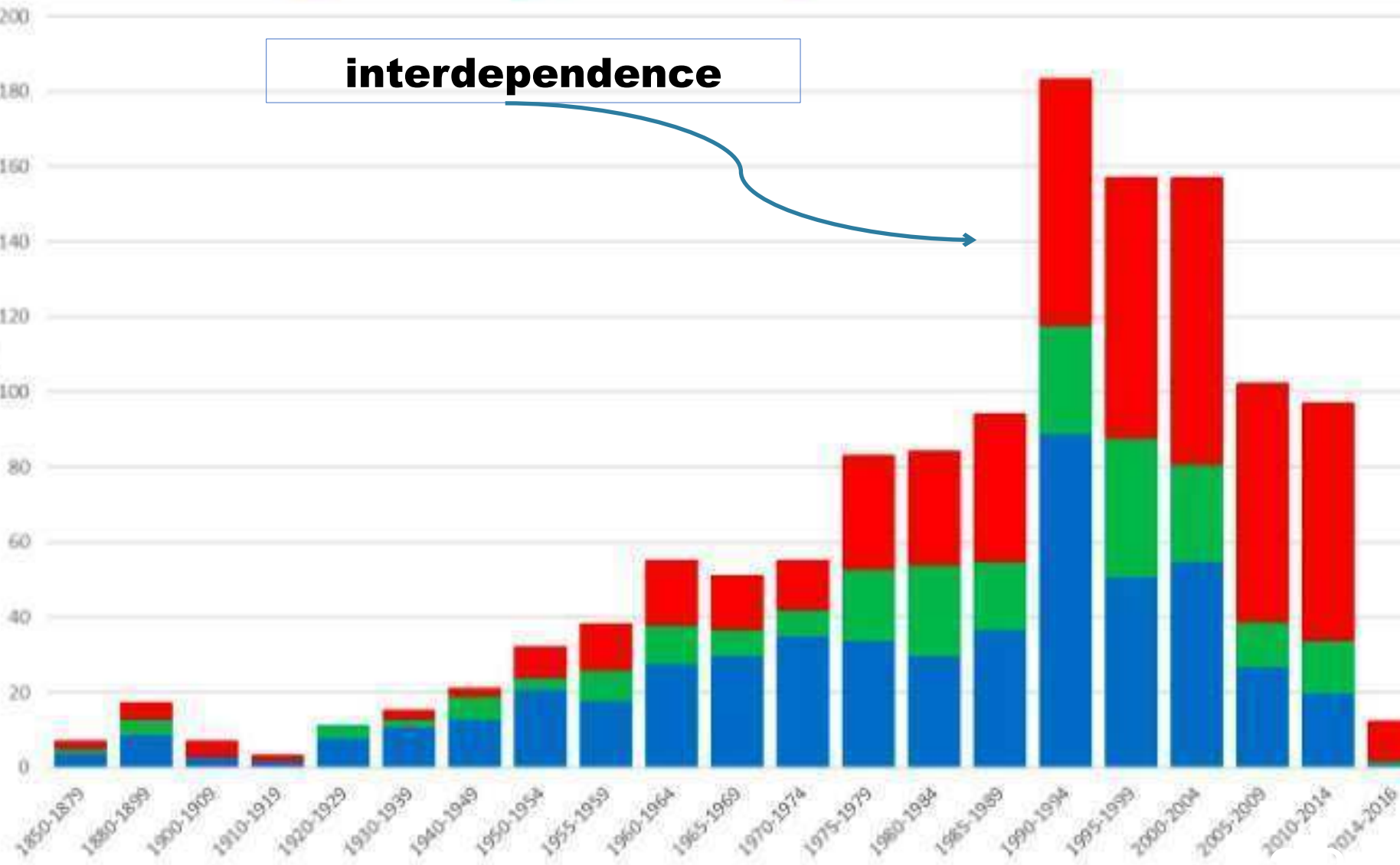


Multilateral Environmental Agreements, 1850-2016

■ Treaties ■ Protocols ■ Amendments

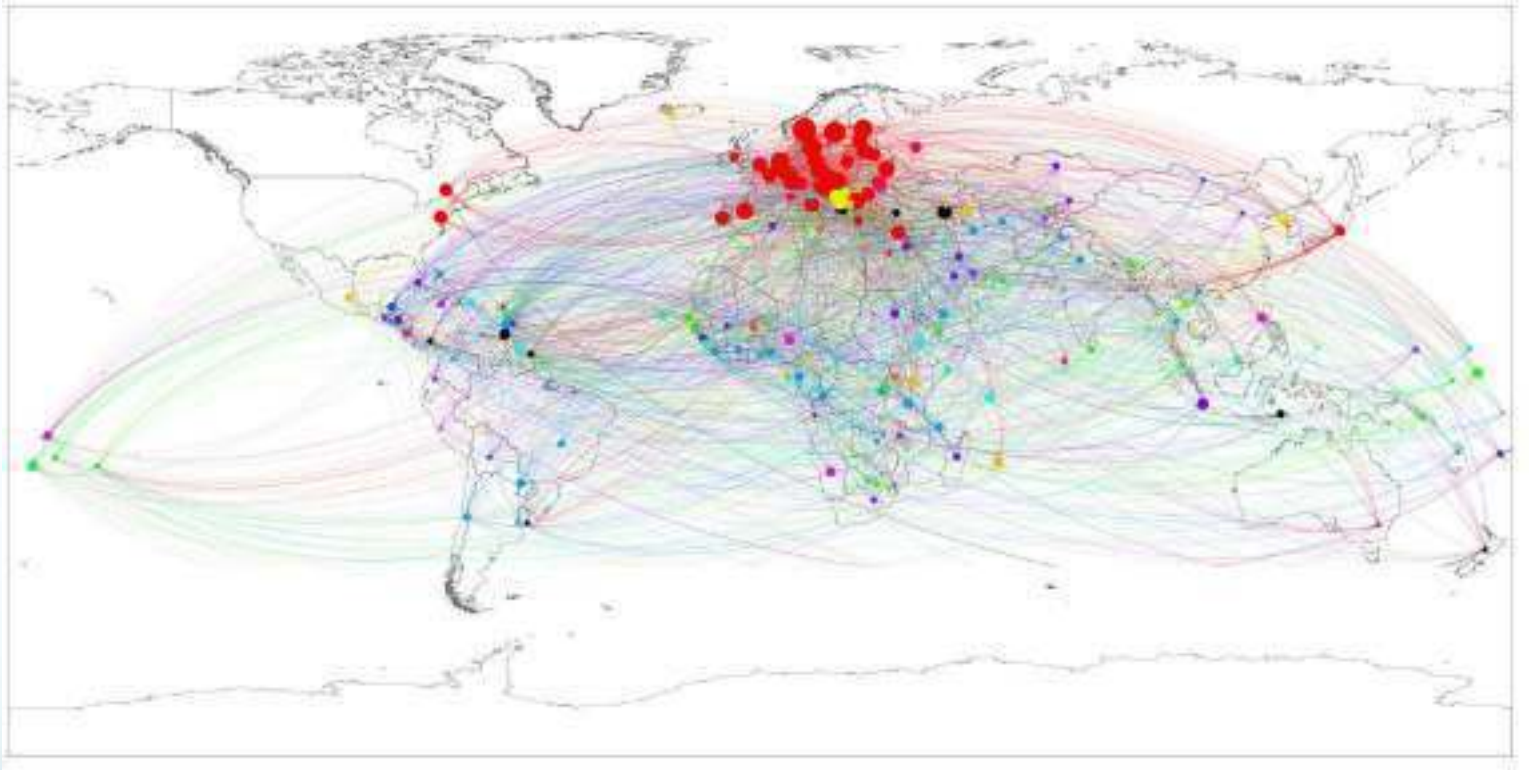
Number of Agreements

interdependence



Source: Mitchell, Ronald B. 2017. International Environmental Agreements Database Project (Version 2017.1), Eugene, OR: University of Oregon. <http://iea.uoregon.edu/> Accessed May 8, 2017

Network of Env. International Treaty for Ratification Strategy Analysis



Map of the communities of countries following similar strategies (Boulet et al., 2013 in preparation)

OCEAN GOVERNANCE ALPHABET SOUP

UNCLOS

UNGA

PART XI

UNFSA

IMO

ISA

FAO

RFMOs

LC/LP

IWC

UNESCO

IOC

WHC

CITES

UNEP

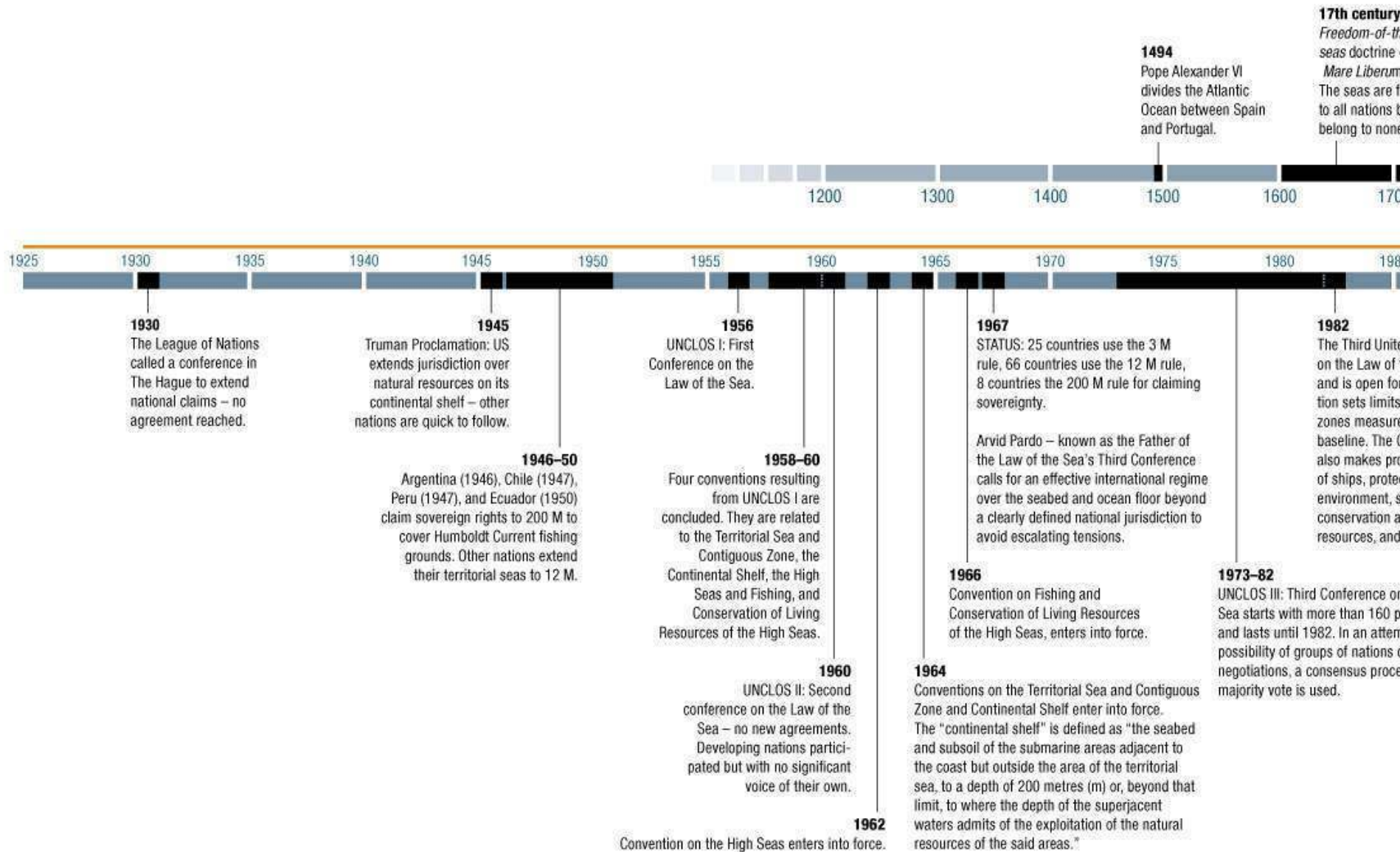
RSCs

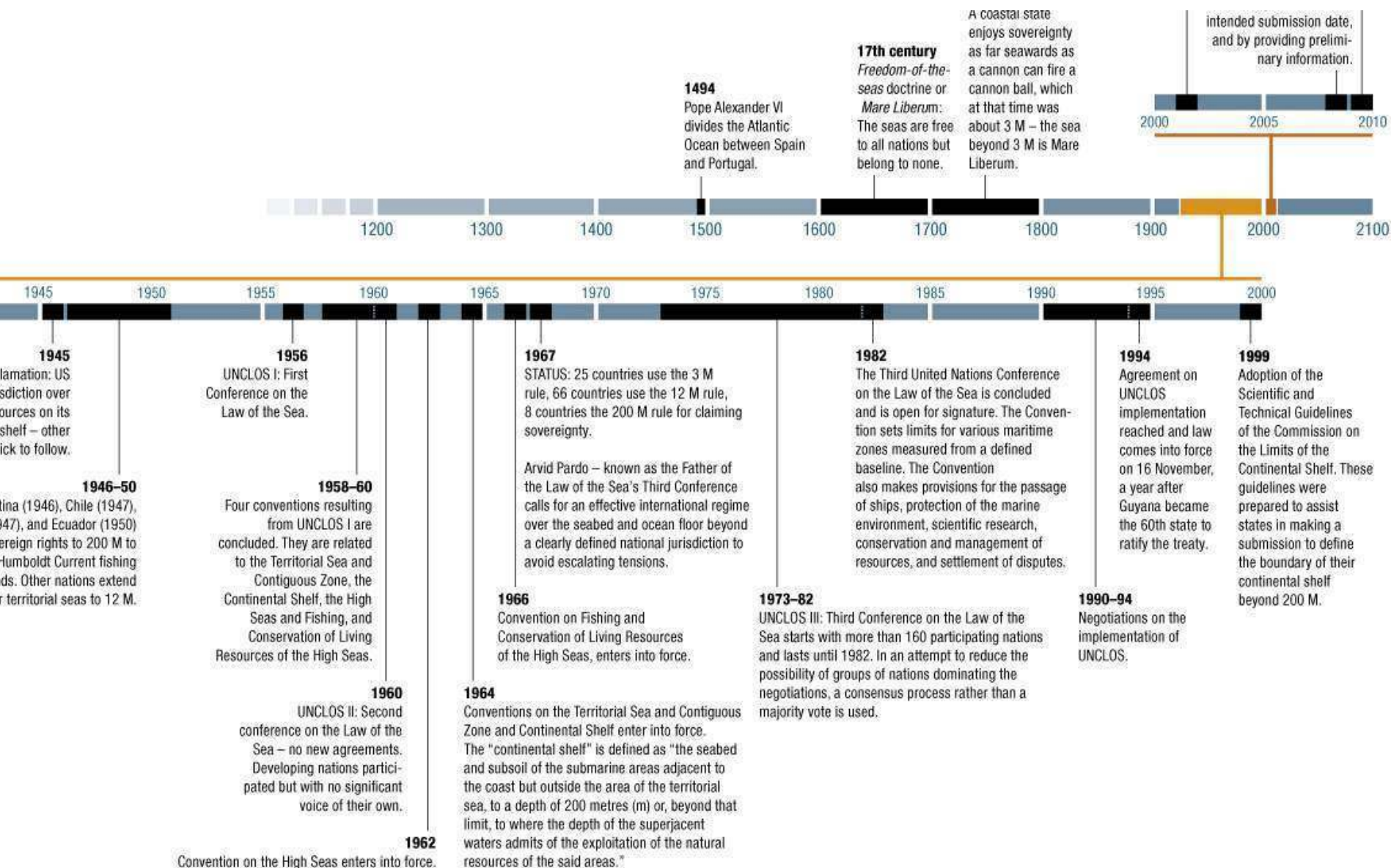
CMS

CBD

Conservation
& Cientific
Research

Resource
Extraction
& Usage





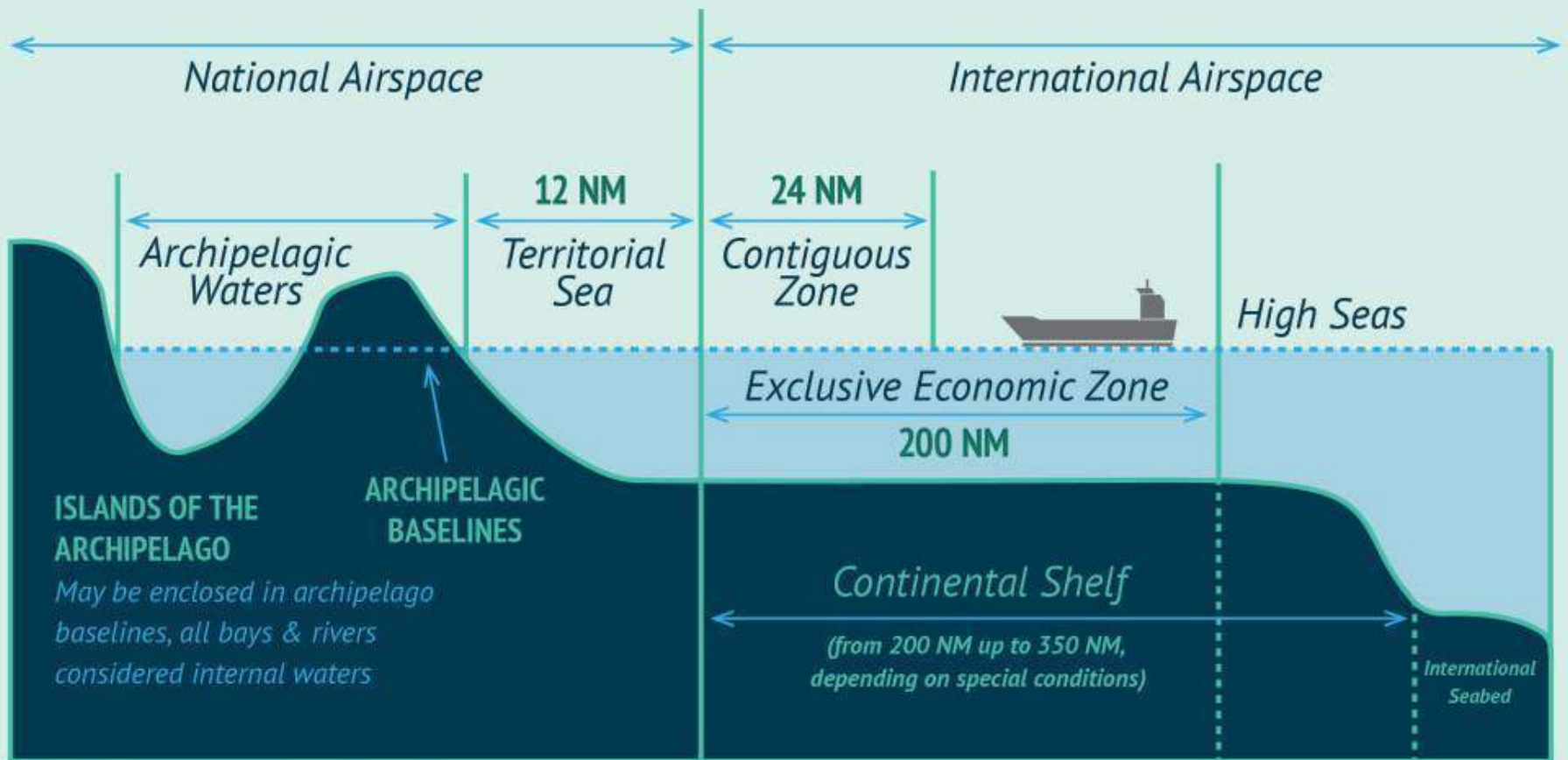
UNCLOS

- Third United Nations Conference on the Law of the Sea, 1973-1982
- "The Convention", CONVENTION or "Constitution of the Sea", in force in 1994
- Regulates borders, trade, environment, research, etc ...
- Disputes: AIFM, TIDM and CLPC
- International Context



UNCLOS

UNCLOS Maritime and Airspace Zones

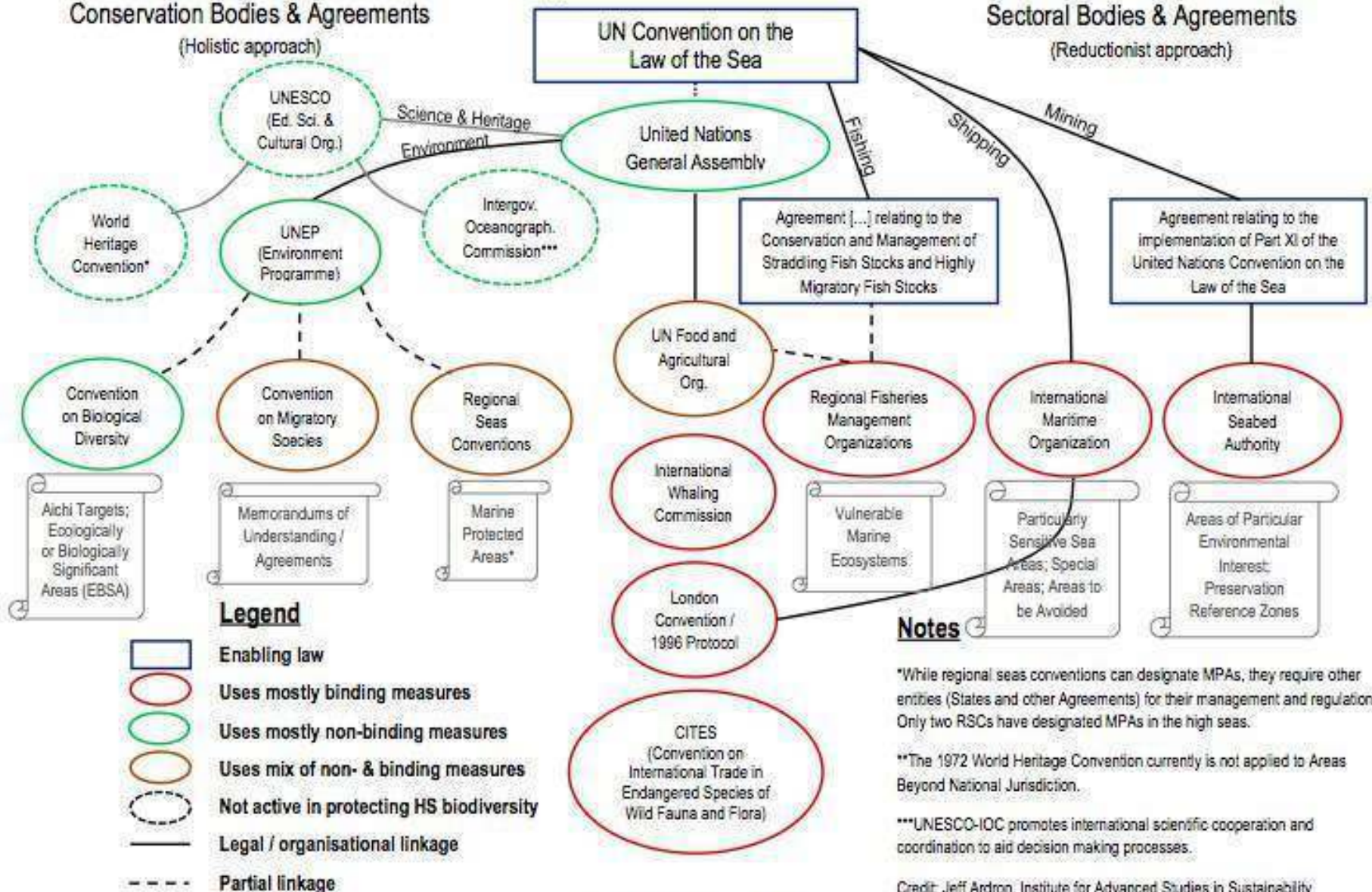


Source: Batongbacal and Baviera (2013).

High Seas Governance

Conservation Bodies & Agreements (Holistic approach)

Sectoral Bodies & Agreements (Reductionist approach)



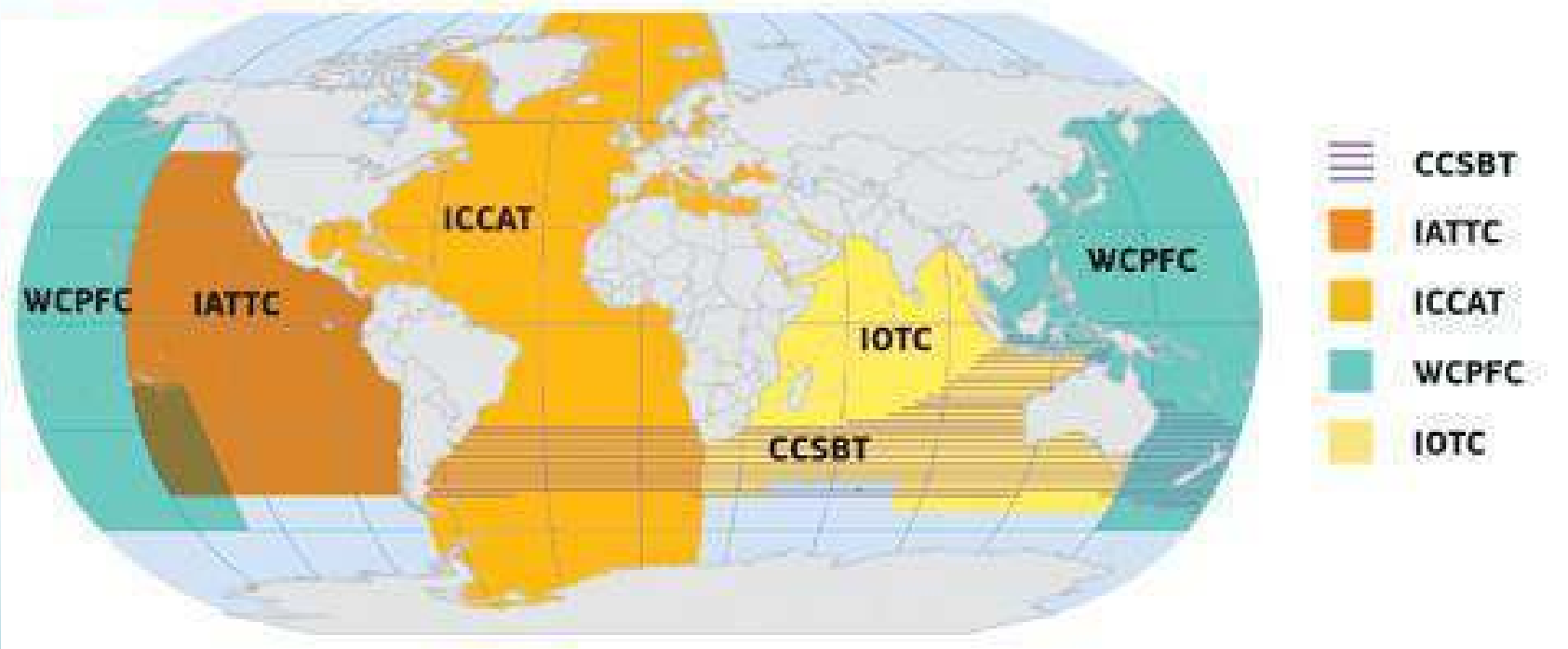
Customary International Law

Regional Fisheries Management Organizations

RFMOs are international organisations formed by countries with fishing interests in an area. Some of them manage all the fish stocks found in a specific area, while others focus on particular highly-migratory species, notably tuna, throughout vast geographical areas.

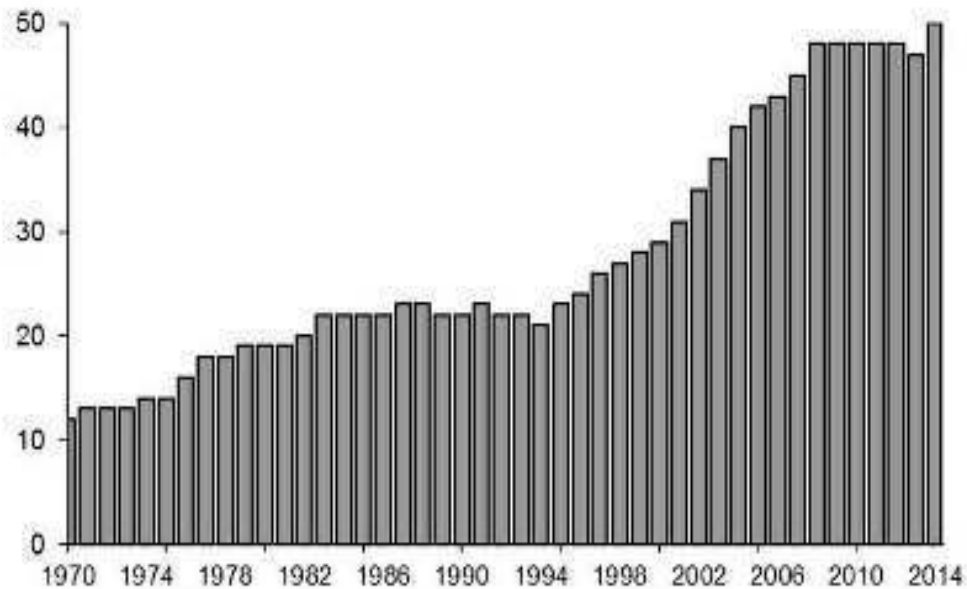
Tuna RFMOs

RFMOs for highly migratory fish stocks
(tuna and associated species)



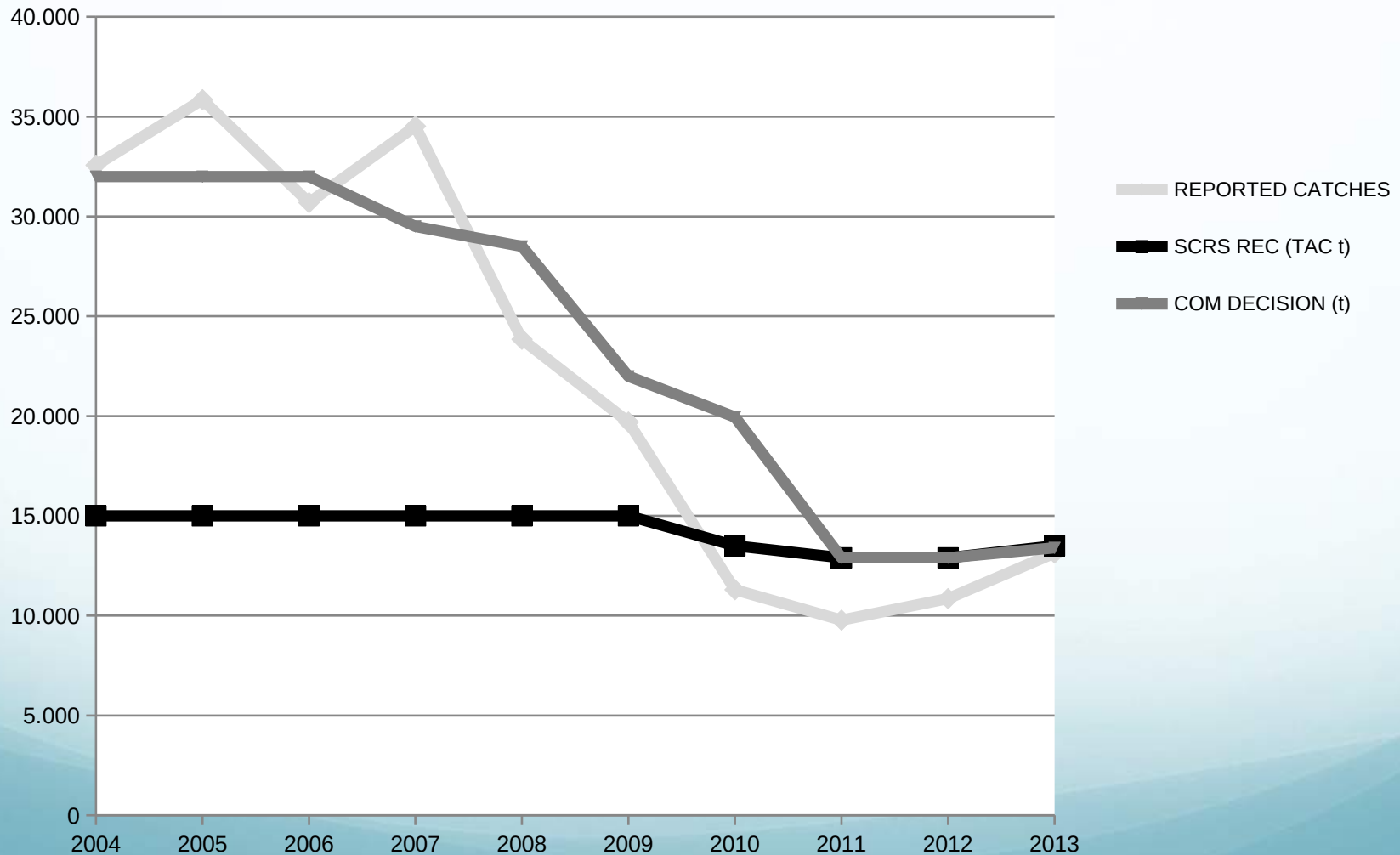


ICCAT

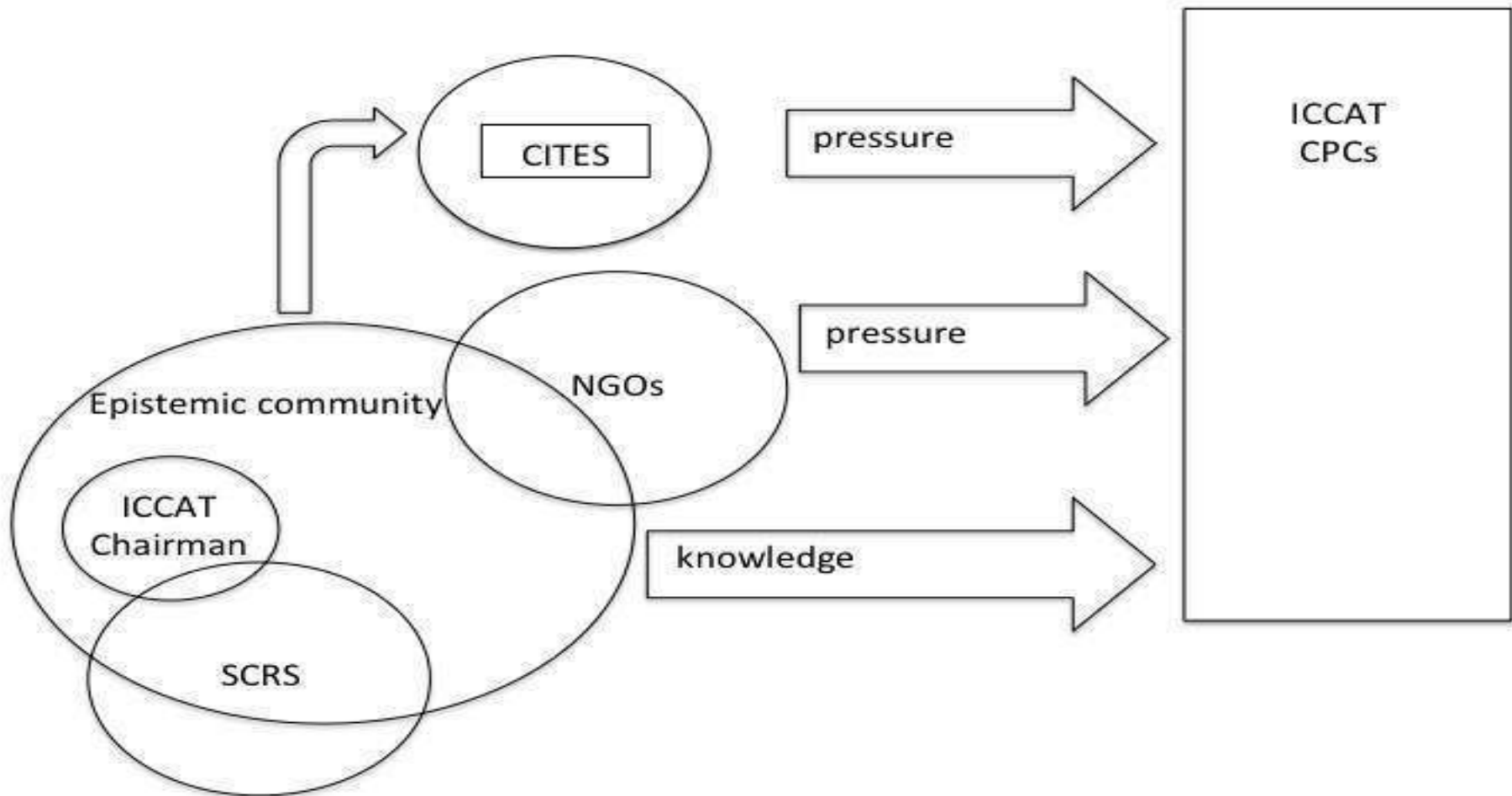


- Most fisheries countries
- ENGOs
- Fisheries industries
- Scientific Communities (SCRS)

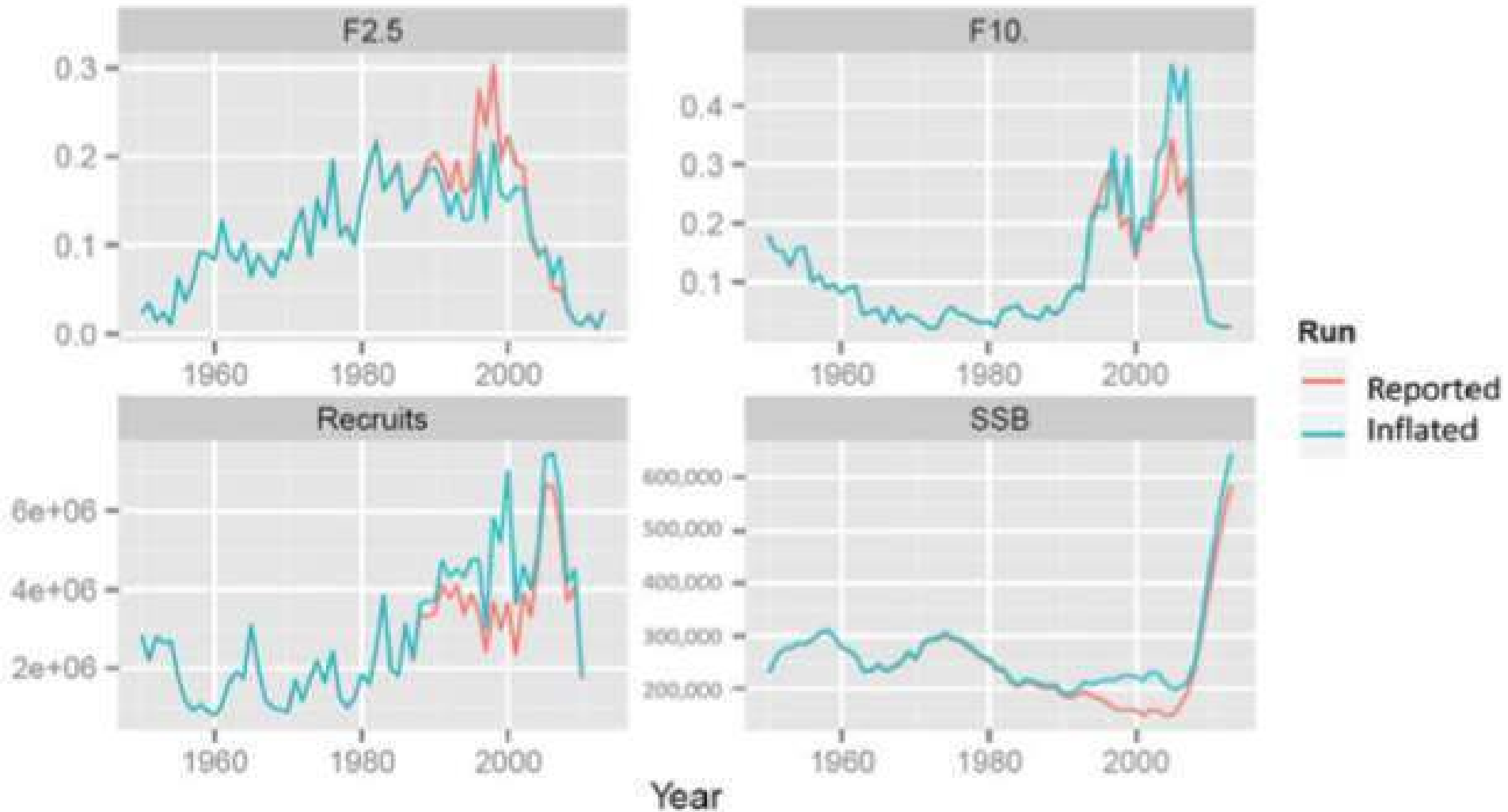
ICCAT – 2004 - 2013



ICCAT



Blue Fin Tuna Recovery



Regional Seas Program/Convention



More than 143 countries have joined 18 Regional Seas Conventions and Action Plans for the sustainable management and use of the marine and coastal environment. In most cases, the Action Plan is underpinned by a strong legal framework in the form of a regional Convention and associated Protocols on specific problems.

Regional Seas Program/Convention



Goal 12

Sustainable
Consumption and
Production



Goal 13

Climate Action



Goal 14

Life Below Water

The Action Plan is based on the region's particular environmental concerns and challenges as well as its socio-economic and political situation.

Convention of Biological Diversity - history

UNEP → Ad Hoc Working Group of Experts on Biological Diversity (1988) to explore the need for an international convention on biological diversity.

Ad Hoc Working Group of Technical and Legal Experts to prepare an international legal instrument for the conservation and sustainable use of biological diversity

the Intergovernmental Negotiating Committee.



"the need to share costs and benefits between developed and developing countries" as well as "ways and means to support innovation by local people".

EBSAS

The EBSAs are special areas in the ocean that serve important purposes, in one way or another, to support the healthy functioning of oceans and the many services that it provides.

Uniqueness or Rarity

Special importance for life history stages of species

Importance for threatened, endangered or declining species and/or habitats

Vulnerability, Fragility, Sensitivity, or Slow recovery

Biological Productivity

Biological Diversity

Naturalness

EBSAS

Ecologically or Biologically Significant Areas

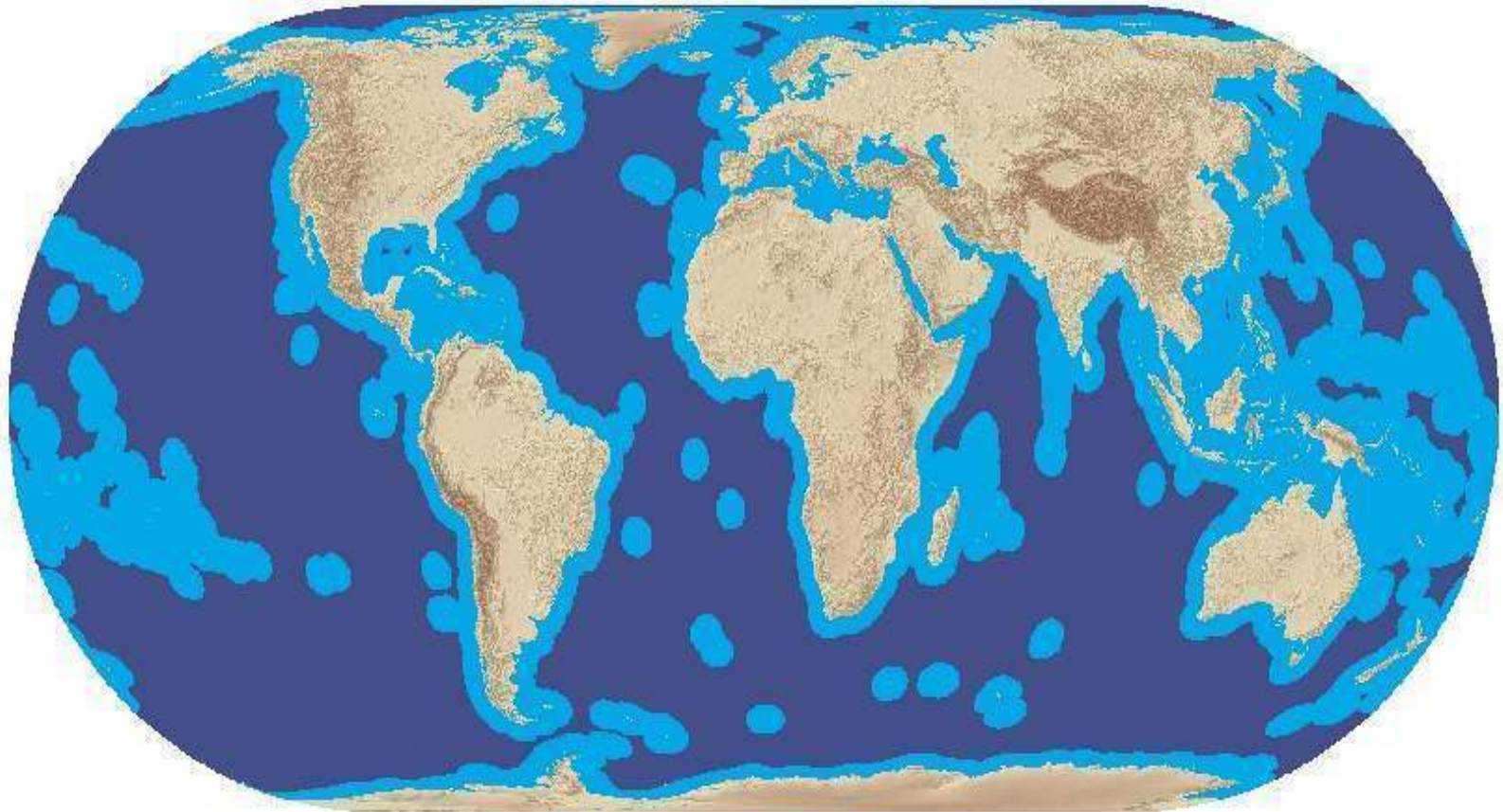


EBSAS

Ecologically or Biologically Significant Areas





WORLD OCEANS



71%
of Earth is covered
by ocean

64%
of the ocean is
considered the
high seas /
international waters

45%
of the Earth's
surface is covered
by the high seas

 Jurisdictional waters
 High seas

Source:
National Geographic
<http://theterramarproject.org>

Biodiversity Beyond National Jurisdiction - BBNJ

UNGA → Ad Hoc
Working Group on
biodiversity
beyond national
jurisdiction.

10 years of debate
and negotiation

the
Intergovernmental
Negotiating
Committee - 2017.

BBNJ?

BBNJ

marine genetic resources,
including questions on the
sharing of benefits

Capacity
building

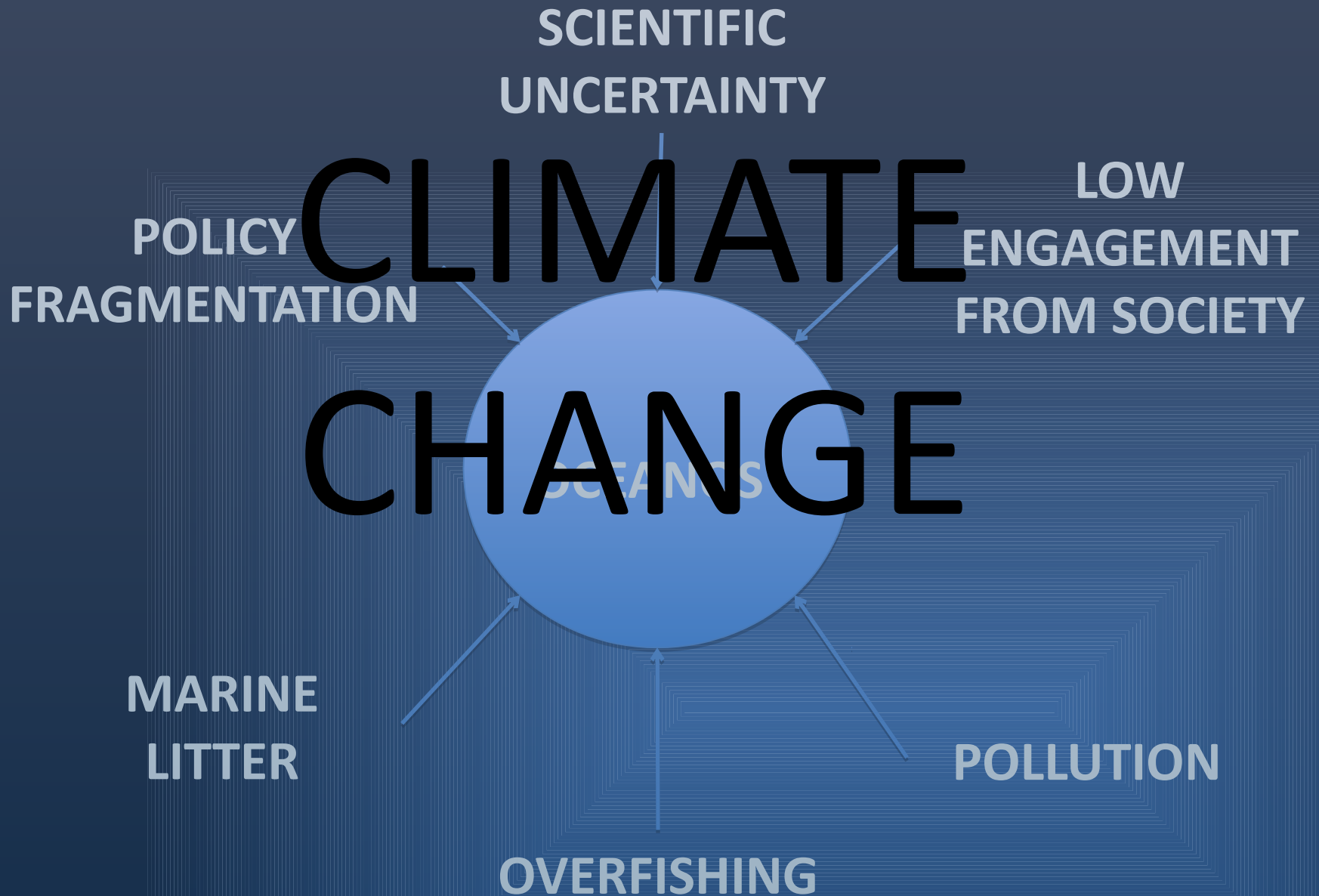
BBNJ –
2011
packag
e

area-based
management tools,
including marine
protected areas;

EI
A

Politics ...

Marine Conservation	Pro-regulation Europe Chile Australia New Zealand	Pro-Regulation under RFMOs Norway New Zealand Japan
Economic	Pro-MGRs Brazil Mexico Costa Rica CARICOM	Opposition – minimum regulation Japan USA Russia “run for your lives”



UNFCCC









UNFCCC

1992 - the United Nations Framework Convention on Climate Change



1997 - Kyoto Protocol legally binds developed country Parties to emission reduction targets



There are now 197 Parties to the Convention and 192 Parties to the Kyoto Protocol





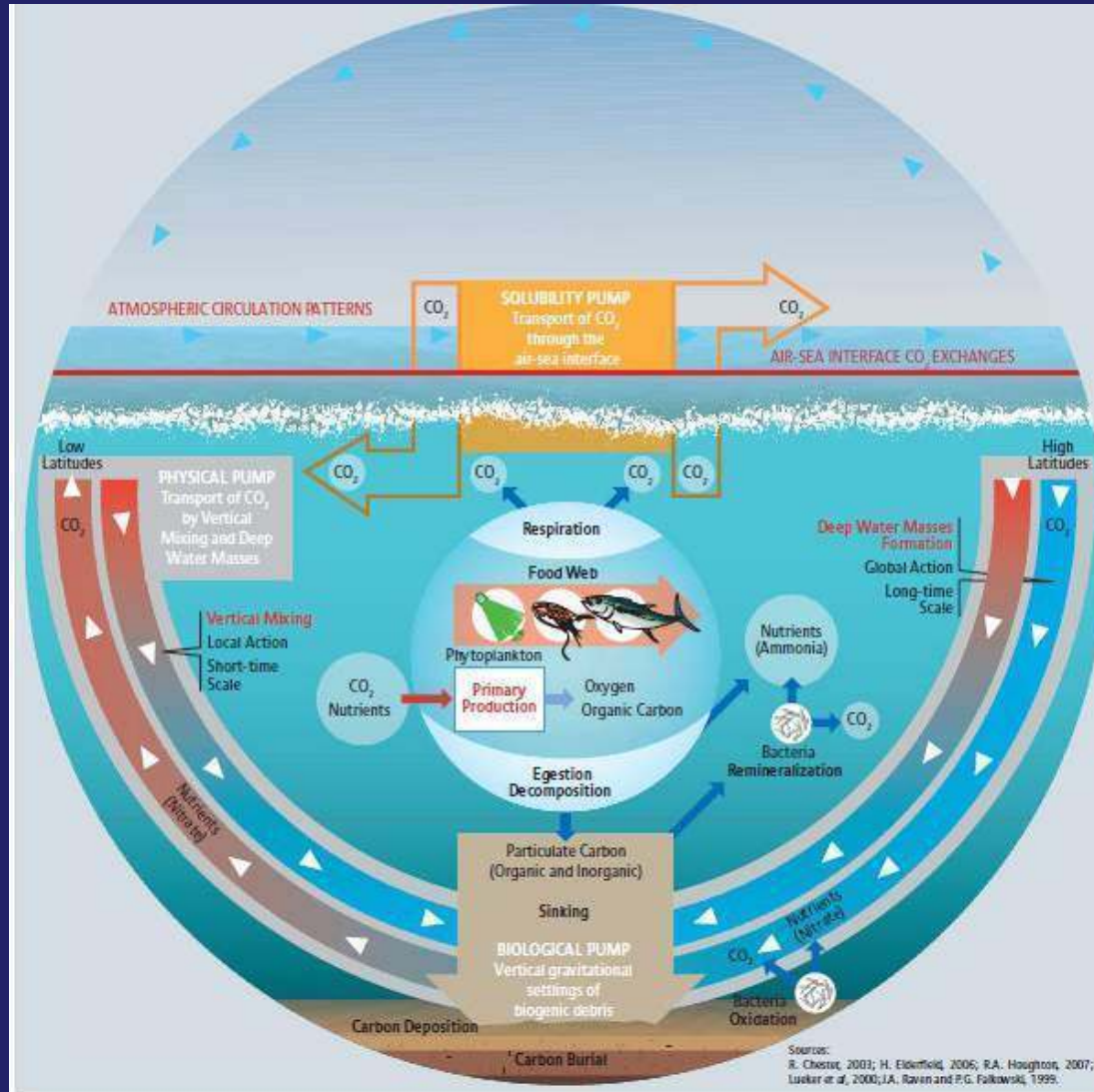








OCEANS – GOOD GUY AND VICTIM





WHERE IS THE PROBLEM?

**OCEAN ACIDIFICATION
CORAL BLEACHING
SEA LEVEL RISE**

UNFCCC - 1992

*(d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of **sinks and reservoirs** of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems;*

2015 Paris Agreement

the latest step in the evolution of the UN climate change and charts a new course in the global effort to combat climate change.

A blue oval with a thin dark blue border, centered on the slide. It contains the text "No mention to ocean as carbon sink" in bold black font.

**No mention to ocean as
carbon sink**









Global governance of the oceans - characteristics

- Fragmented
- Complex (actors, factors and processes)
- Built by patchwork of norms and currently many soft laws
- Different interests and power relations between states



Challenges

- Rules in the decision-making process: the absolute majorities
- Accountability and legitimacy
- Equity and justice



Challenges

- Impoverishment of the coastal population
- Loss of biological diversity
- Overfishing (2/3 biomass decline since 1880)
- Altered food chains
- Bioinvasion

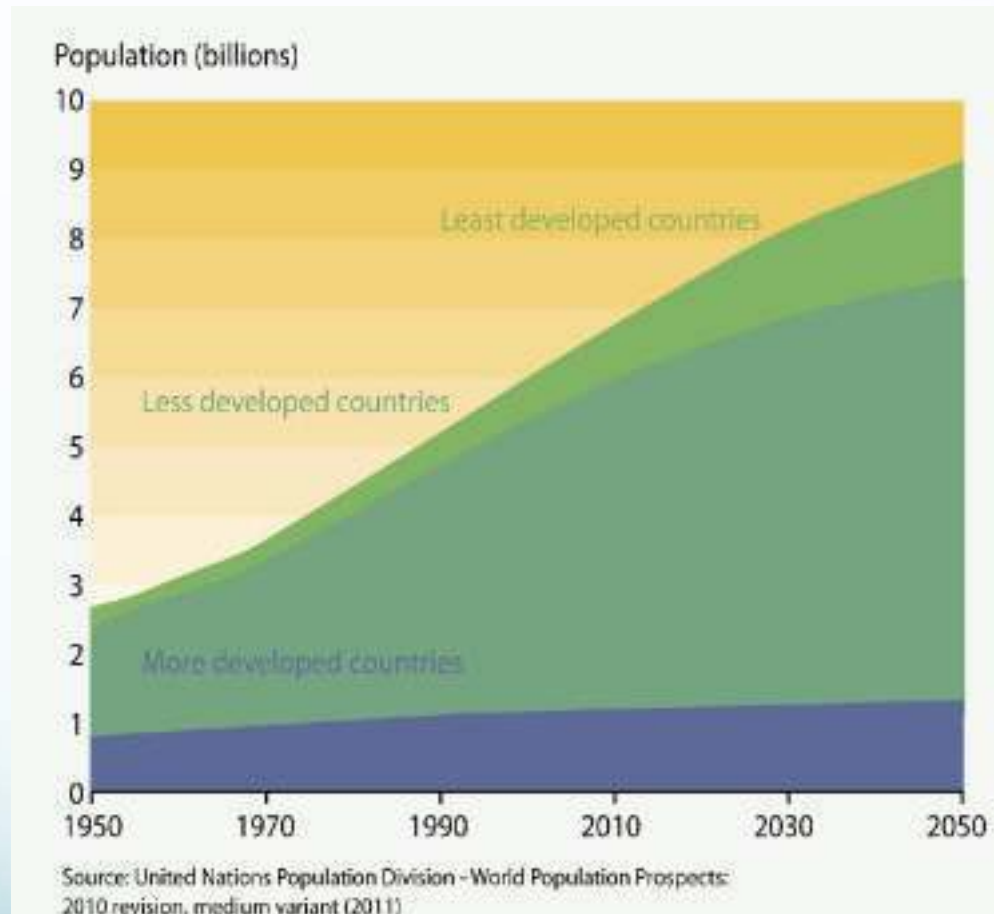


Challenges

- Activities: navigation, exploration and pollution
- Poorly regulated exploitation of biological and mineral marine resources
- Lack of enforcement and compliance
- Inadequate environmental remediation processes



Challenges



For the future . . .

- Controlling Anthropogenic action → Anthropocene
- Coordination of coastal countries with the international community
- Manage the connections within natural and social systems – socio-ecological complex systems



Premises

- Leaders (state or individuals) are important in all multilateral negotiations (eg, hegemonic stability)
- The concepts are political constructs, resulting from power relations (military, economic and technological)
- The interdependence (or common destiny of humanity) is a fact, but it does not constrain the behavior of States
- Society must be engaged
- Science must be taken into account in all levels



2030 UN Agenda

Sustainable Development Goals

- Sustainable development (SDG 14)
- Eradication of poverty (SDG 1)
- Food security (SDG 2)
- Modern energy (SDG 7)
- Ecosystems and biodiversity (SDG 15).

SDGs



EFFECTIVE GOVERNANCE?

- (i) the resources and use of the resources by humans can be monitored, and the information can be verified and understood at relatively low cost
- (ii) rates of change in resources, resource-user populations, technology, and economic and social conditions are moderate
- (iii) communities maintain frequent face-to-face communications and dense social networks sometimes called social capital that increase the potential for trust, allow people to express emotion inducing rule compliance
- (iv) outsiders can be excluded at relatively low cost from using the resource (new entrants add to the harvesting pressure and typically lack compliance)
- (v) users - support effective monitoring and rule enforcement

Future . . .

- Governance mechanisms considering vulnerability, resilience, adaptation, robustness, and adaptive capacity or social learning.
- A governing system must be adaptive

**First come,
first served**



Share responsibilities,
values, costs and risks
and give equitable
access to and allocation
of the ocean's services

Science ∩ Diplomacy: Merging of Terms

- Science for Diplomacy
(Science Diplomacy)
 - International engagement through science to develop, sustain, or enhance relationships between countries
- Science in Diplomacy
 - Global issues with science basis and the scientific/technical aspects of formal diplomatic processes
- Diplomacy for Science
 - Formal diplomatic means to achieve scientific goals

GEO

Global Environmental Outlook



United Nations
Environment Programme



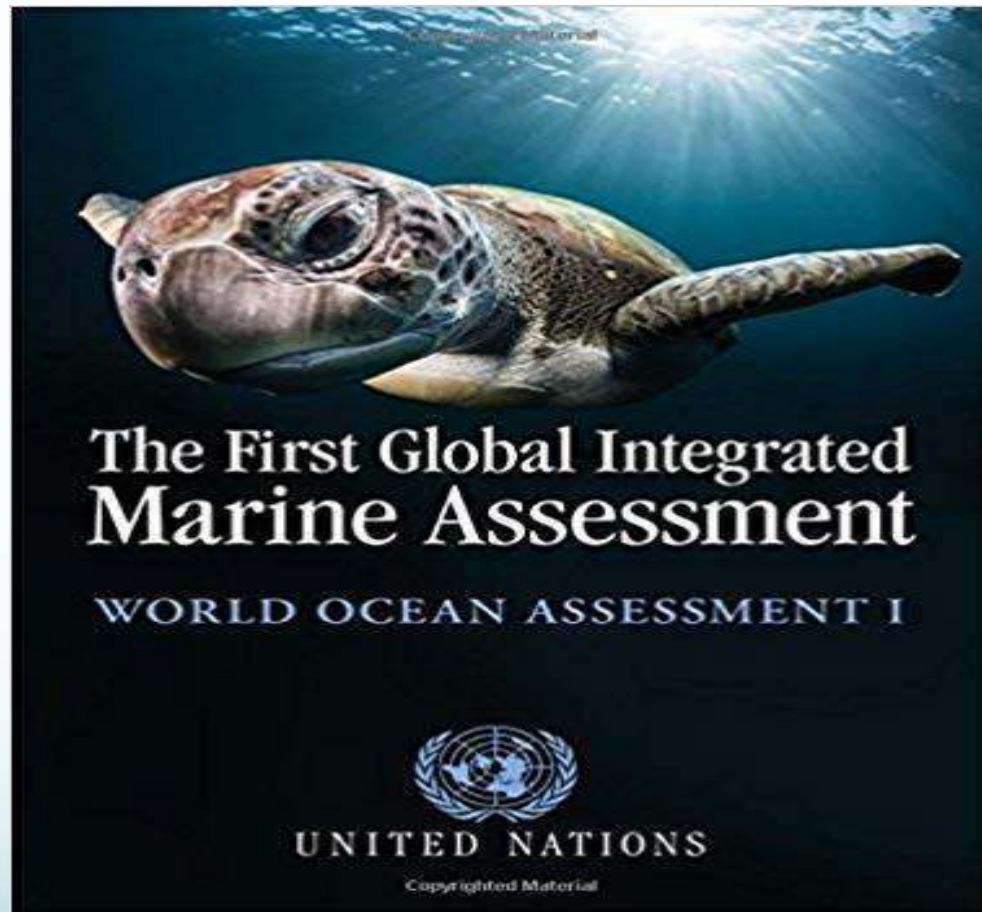
HEALTHY
PLANET
HEALTHY
PEOPLE

IPBES



Science and Policy
for People and Nature

World Ocean Assessment



IPCC



Occupy spaces to promote science and policy interface



The future is where we want to be
... and we should fight for that

