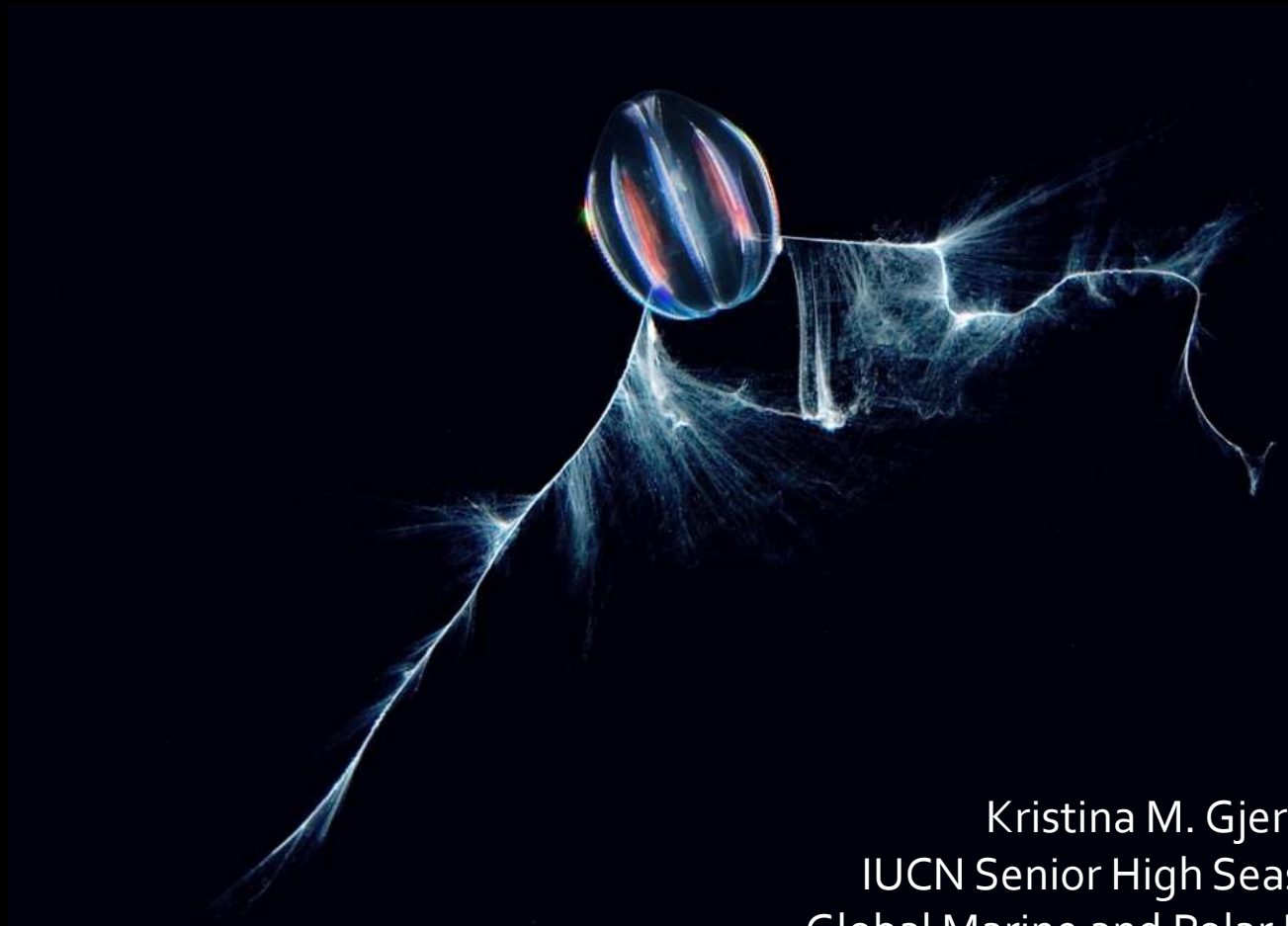
Environmental Impact Assessments



How can EIAs/SEAs improve ocean governance in ABNJ and how could they be incorporated under a new legally binding instrument?

Kristina M. Gjerde
IUCN Senior High Seas Advisor
Global Marine and Polar Programme
Sargasso Sea Side event 28 March 2016

Photo courtesy John Weller

What can an agreement add?

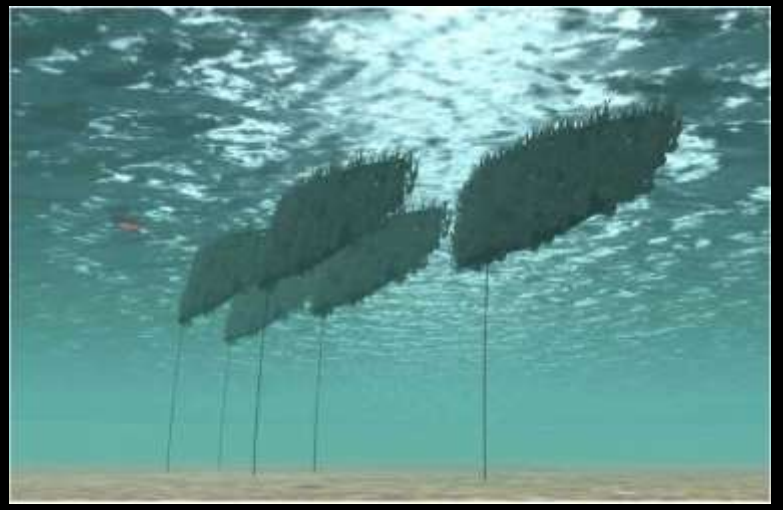
- Reaffirm existing obligations
- Renew focus & impetus
- Set out a clear & uniform process
- Provide for cumulative assessment and/or Strategic Environmental Assessment
- Technical support & capacity building to assist developing States
- Global review, decision-making process and accountability

text based on Glen Wright

New and Emerging Activities

FADs

Ocean based Seaweed Carriers



Seaweed Energy Solutions AS

Ocean Aquaculture

Bryce Groark

Powdered chalk

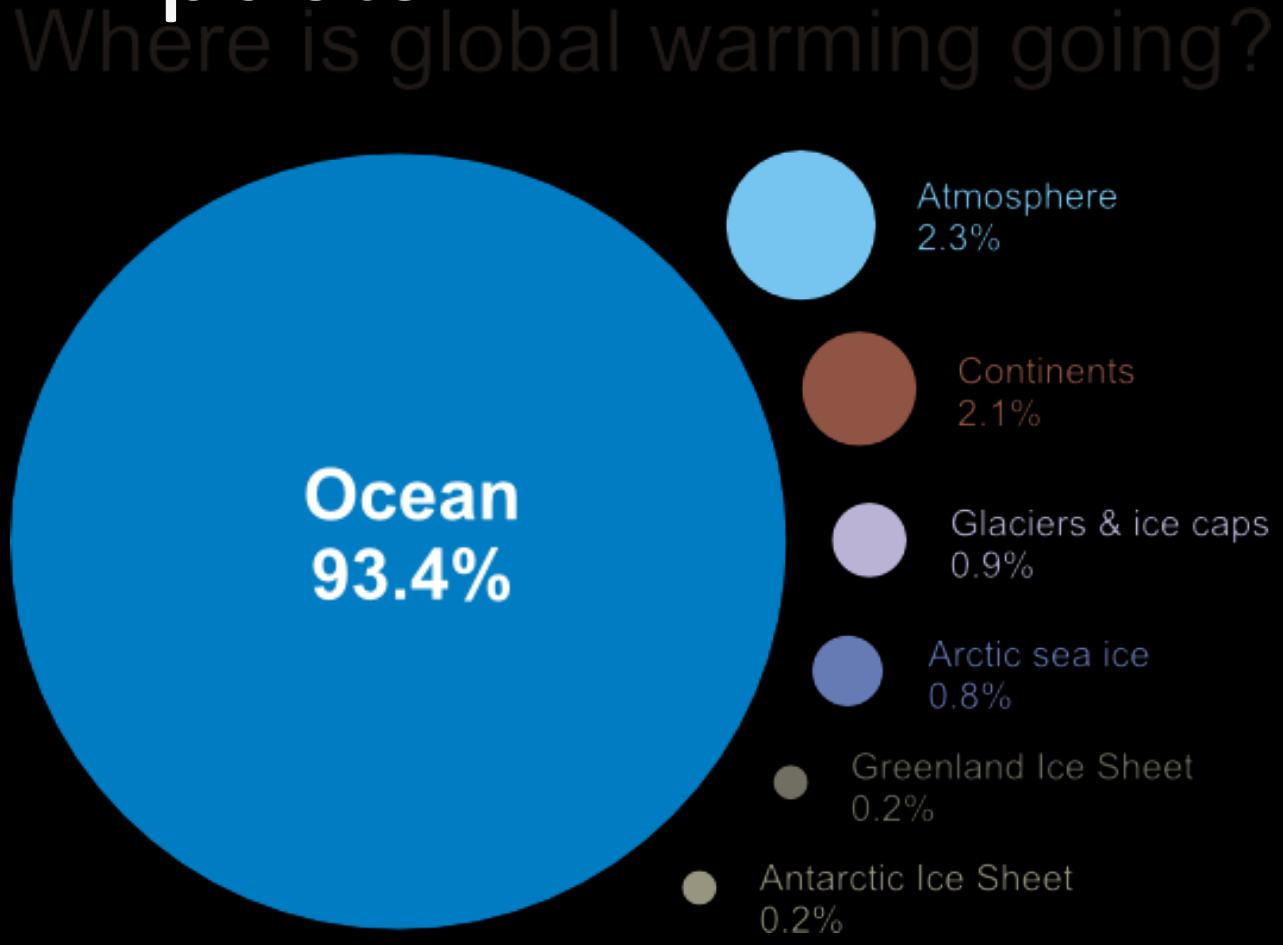
Ocean Fertization

Slide courtesy Duncan Currie

Even rocket launches!

Zenit lifts off with communications satellite. (Credit: Sea Launch)

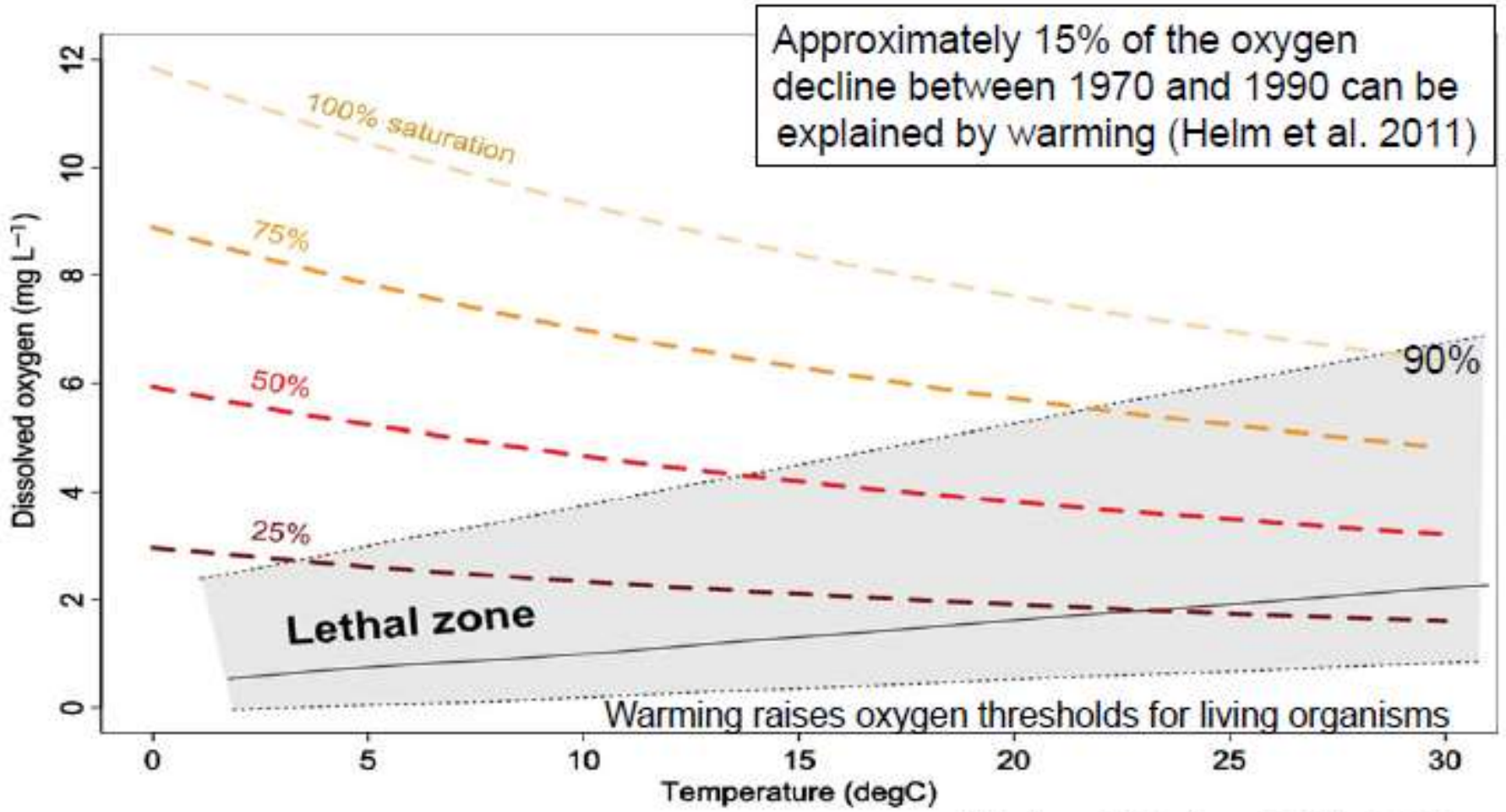
Concern is rising about climate change impacts



- Warmer
- More acidic
- Less oxygenated

Levin & Lebris, The deep ocean under climate change, SCIENCE, December 2015

A warming ocean holds less oxygen

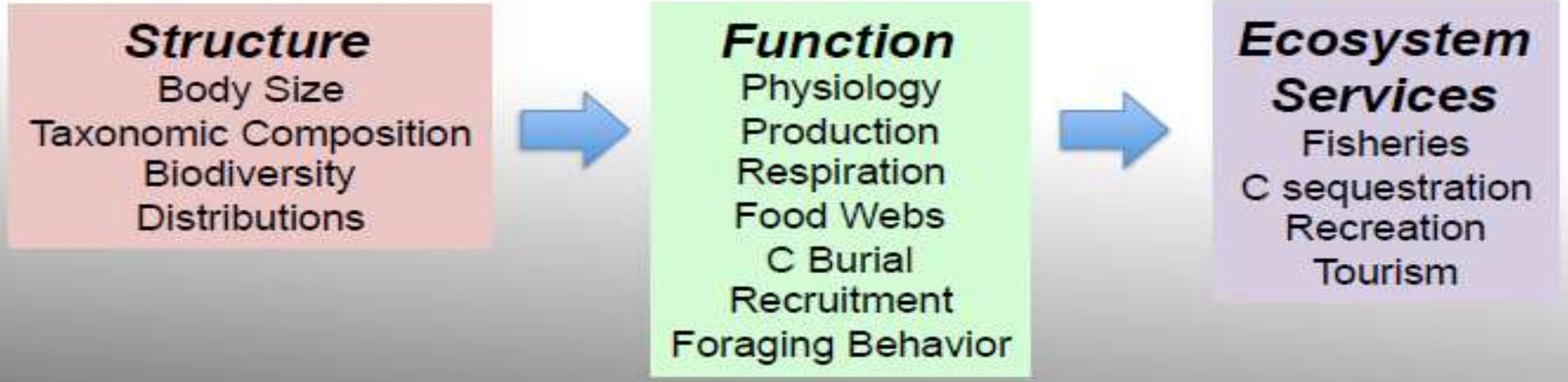


Altieri and Gedan 2015 *GCB*
(data from Vaquer Sunyer and Duarte 2011)

Slide credit Lisa Levin, Scripps Institution of Oceanography

Oxygen is essential to most life

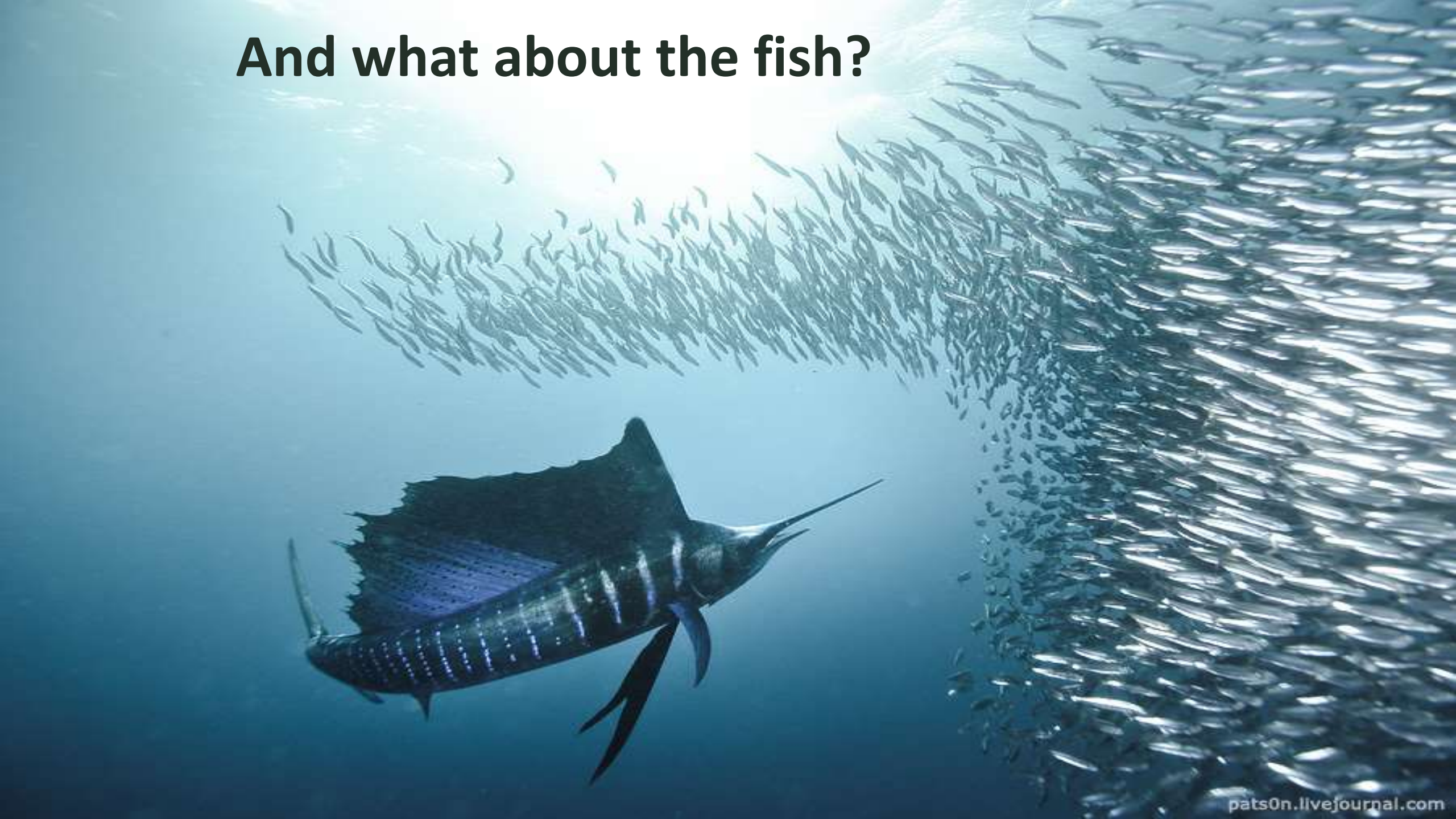
Deoxygenation affects nearly all biogeochemical and biological processes in the ocean



AND…. thermal & CO_2 tolerances

Slide credit Lisa Levin, Scripps Institution of Oceanography

And what about the fish?



Impacts of Fisheries on Open-Ocean Ecosystems

G. Ortuño Crespo, D. C. Dunn & P. N. Halpin (*in prep*)

Policy Brief available

Impacts of fisheries on open-ocean ecosystems

Species-level impacts on open-ocean ecosystems: Direct effects

- **Much higher levels of overfishing and overfished stocks in ABNJ**
- **Bycatch threatens non-target species**
  - Documented declines in >80% Pacific loggerhead and >95% decline in leatherback turtles (2000, 2003)
  - All 22 species of albatross & 19 of 21 oceanic elasmobranchs are listed as at least Near Threatened by the IUCN with bycatch cited as the main threat.
- **Discards can alter foraging behavior and trophic relationships (2007)**
- **Increased variability in biomass of exploited species (2012)**
- **Increased extinction risk**
  - 36% of migratory or potentially migratory chondrichthyan fishes threatened with extinction (2014)
  - 99% declines for species like the Oceanic whitetip shark in parts of their range. (2004)

Species-level impacts on open-ocean ecosystems: Indirect effects

- **Contraction in species' ranges leads to change in community structure (2011)**
  - 9 of the 13 species of tuna and billfish assessed exhibited reduced range with reduced abundances.
- **Decreases in body size can affect trophic relationships, decrease reproductive potential and increase recovery time (2005+)**
- **Loss of genetic diversity can increase extinction risk, increase recovery time and decrease adaptability to changing climates**

Community-level impacts on open-ocean ecosystems: Trophic cascades

- **Removal of top predators leads to mesopredator release and changes in community structure**
  - Preliminary assessment in 2002; real evidence came only in 2013
- **There are also non-consumptive effects including** changes in prey behavior, growth or development
  - E.g., foraging relationship between seabirds and tuna in tropical regions, where decreases in density or abundance of tuna may lead to decreases in foraging success for associated seabirds.

Ecosystem-level impacts on open-ocean ecosystems:

- **Reductions in biodiversity (species richness and density) reduces ecosystem resilience… (2005/2006)**
- **… and can lead to regime shifts in open-ocean communities**
  - Evidence from pelagic areas in large enclosed seas (2007).

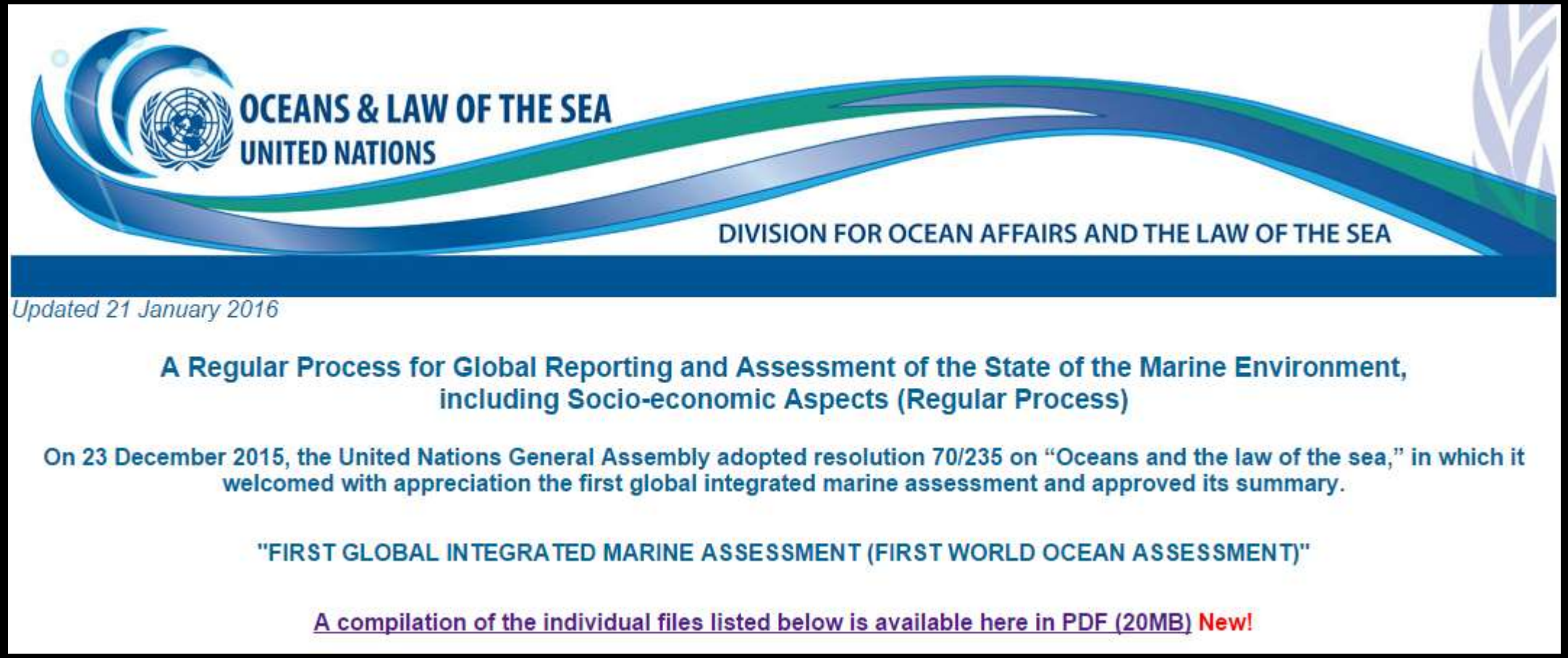
Other Considerations:

- **Interactions between climate change and fisheries impacts (2010 review)**
- **Abandoned, lost or discarded fishing gear (ALDFG)**

G. Ortuño Crespo, D. C. Dunn & P. N. Halpin (*in prep*)

Policy Brief available

"The greatest threat to the ocean comes from a failure to deal quickly with the manifold problems that have been described above."



http://www.un.org/depts/los/global_reporting/WOA_RegProcess.htm

What is EIA?

- *“a process of evaluating the likely environmental impacts, including cumulative impacts, of a proposed project or development”*

CBD (1992), art. 14

Slide credit Glen Wright, IDDRI

Strategic Environmental Assessment

- “the evaluation of the likely environmental…effects, of plans and programmes, and to the extent appropriate, policies and legislation”

- **Kiev Protocol to the ESPOO Convention**, Preamble, Art 2

Also for new technologies!

Relevant legal agreements for elements for EIAs/SEAs

- UNCLOS
- Convention on Biological Diversity
- London Convention and Protocol
- International Seabed Authority Mining Code
- UNGA Resolutions on Deep Sea Bottom Fishing
- Antarctic Protocol on Environmental Protection
- UN Fish Stocks Agreement
- CBD Guidelines on EIAs and SEAs
- Espoo Convention on Transboundary Impact Assessments
- Kiev Protocol on Strategic Environmental Assessments

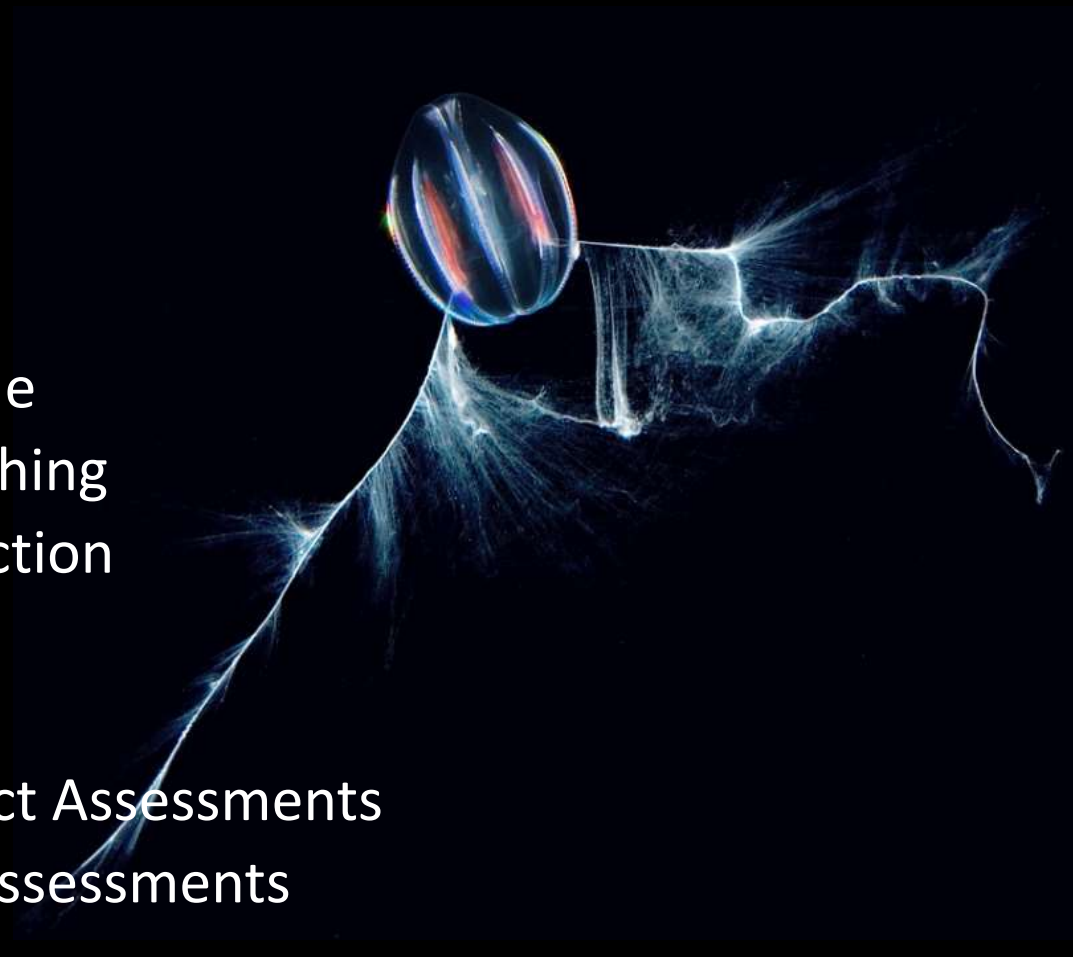


Photo courtesy John Weller

SDG 14.2

By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

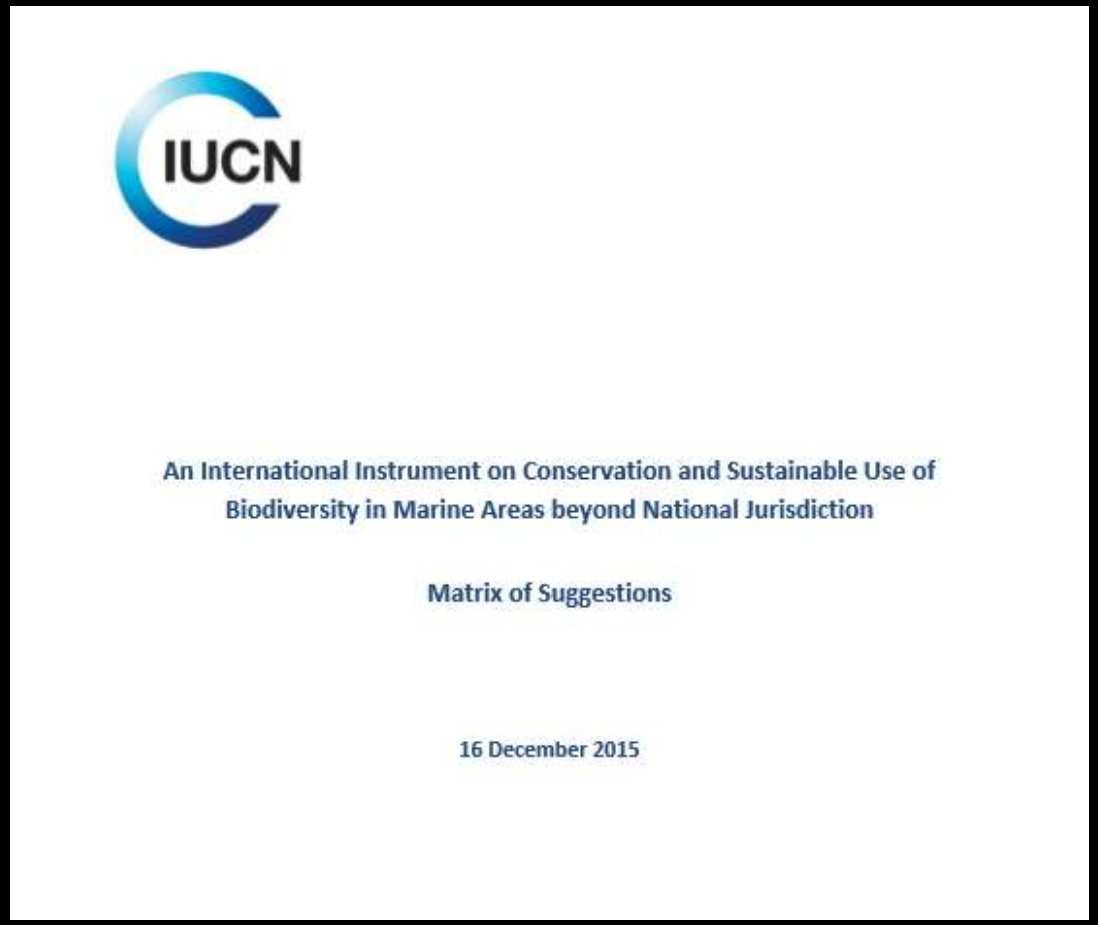
Activities with Potential for Significant Impacts on Biodiversity in ABNJ

With EIA procedures

- Seabed mining
- Deep sea fishing
- Dumping of wastes + marine geoengineering research
- Anything more than minor or transitory in Antarctic Treaty Area

Without EIA procedures

- Shipping, e.g. ballast water discharge
- Pelagic fishing and gear types (eg FADs)
- Open ocean aquaculture
- Climate change mitigation activities (other than marine geoengineering research)
- Ocean energy operations
- Offshore hydrocarbon production
- Marine scientific research
- Bio-prospecting
- Seaweed production
- Harvest of natural products
- Laying of submarine cables and pipelines
- Deep sea tourism
- Other potential activities???



http://cmsdata.iucn.org/downloads/iucn_bbnj_matrix_december_2015

Part 3: Environmental Impact Assessment and Strategic Environmental Assessment

EIA and SEA: Questions

- What activities trigger EIAs/SEAs?
- Who will carry out the assessment?
- Who will make the final decision?
- What will be the effect of final decisions?

Credit: Lydia Slobodian

Photo courtesy John Weller

What activities/programmes/plans trigger EIAs/SEAs?

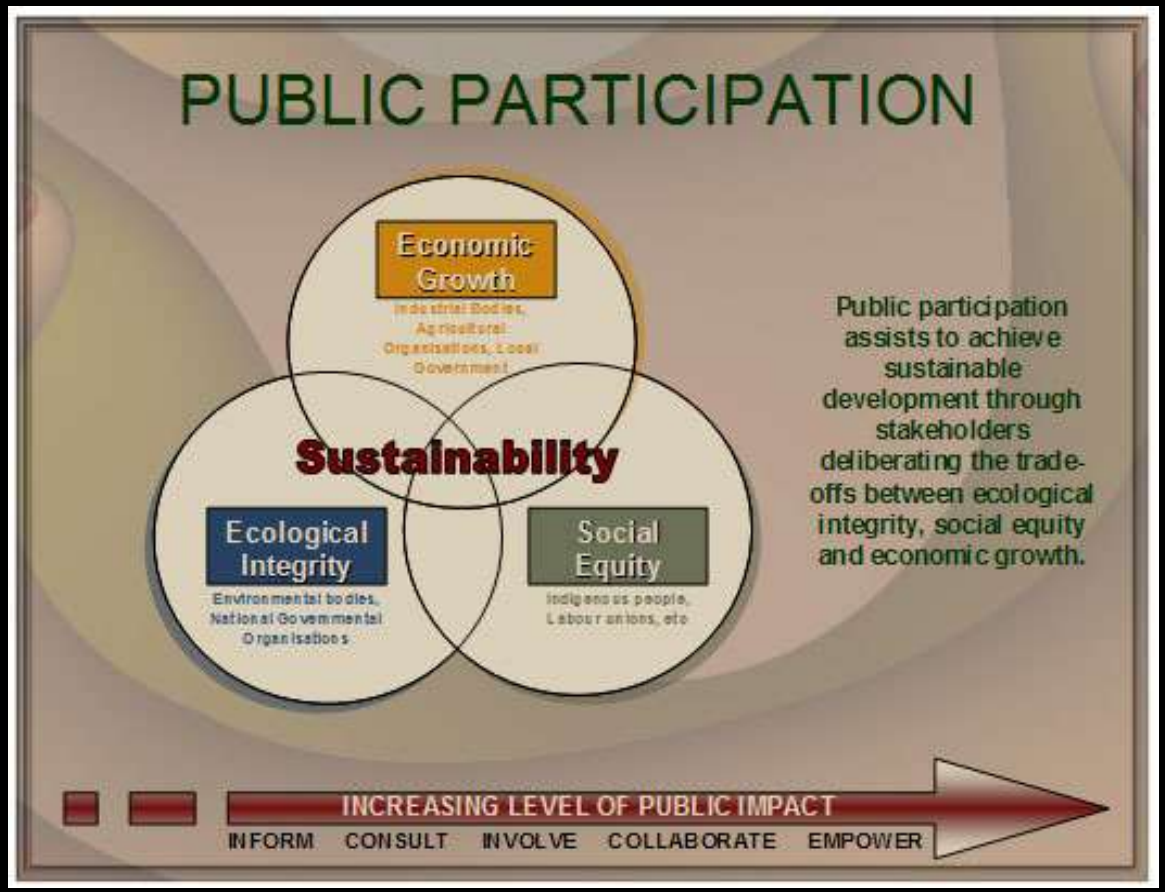
- **Threshold:** All activities, plans and programmes are subject to EIA/SEA when they are likely to cause
  - Significant adverse effects
  - Substantial pollution or significant and harmful changes
  - More than a minor or transitory effect
- **List of Activities**: Specify activities/plans/programmes that always trigger EIA/SEA
- **List of Places**: Specify areas that always trigger special requirements for EIA/SEA, eg EBSAs, VMEs, MPAs

Credit: Lydia Slobodian

EIA and SEA: Actors involved

- Who will carry out assessment?
  - **Suggestion 1:** Proponent of activity
  - **Suggestion 2:** States Parties
  - **Suggestion 3:** Not specified in agreement

- Who gets consulted?

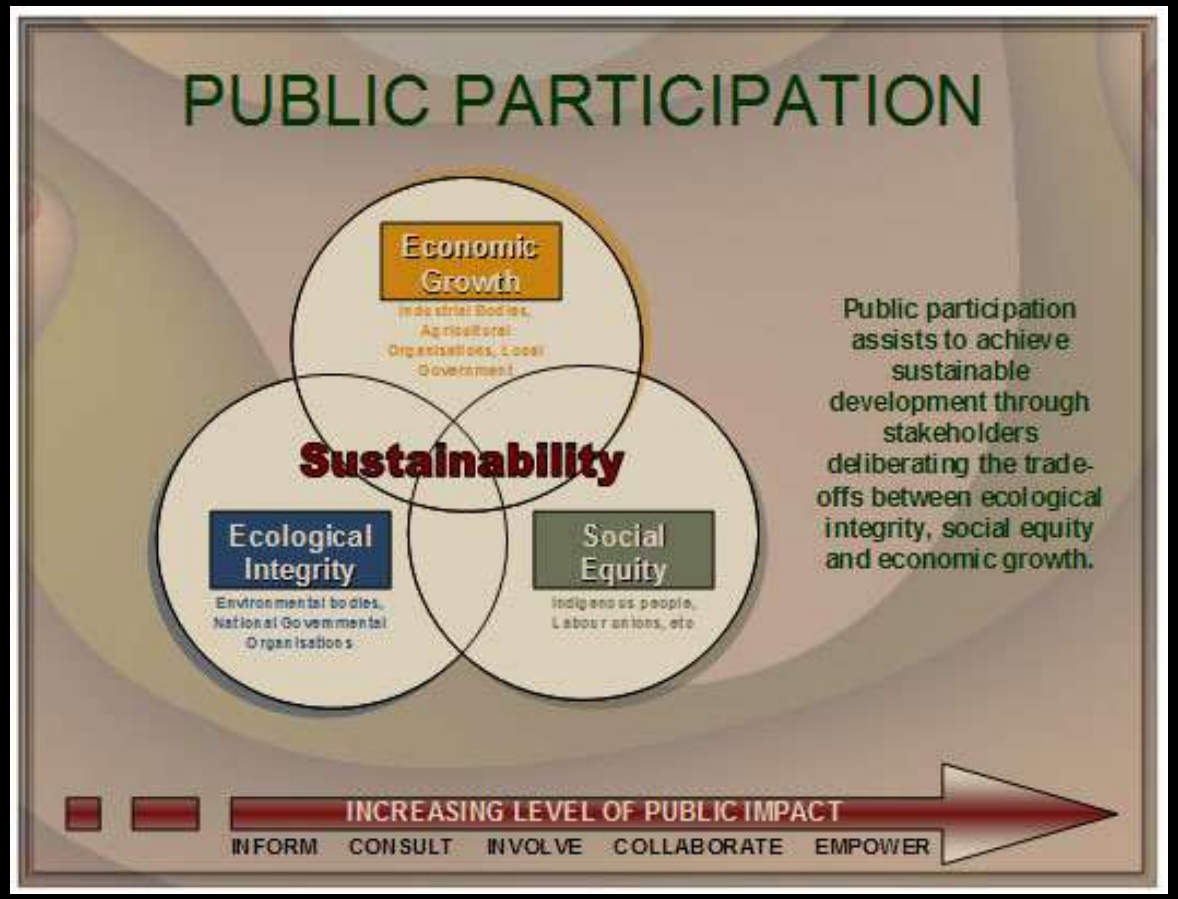


Credit: Lydia Slobodian

Who are the *stakeholders*?

Everyone!

- All States
- Adjacent States
- Members of the public
- Inter-governmental organisations
- Other international and regional bodies
- NGOs
- Industry
- Research institutions…



Slide credit Glen Wright, IDDRI

EIA and SEA: Actors involved

- Who will make final decision on proposed activity?
  - **Suggestion 1**: State under whose jurisdiction/control activity/plan/programme proposed
  - **Suggestion 2:** Regional or international organization (existing or set up by the agreement)

  ➢Decision subject to review at request of State/stakeholder

Credit: Lydia Slobodian

EIA and SEA: Effect of final decision

- What will be the effect of the final decision?
  - **Suggestion 1:** Activity proceeds under control of State
  - **Sugesttion 2:** Activity does not proceed
  - **Suggestion 3:** Conditions placed on proposed activity

Credit: Lydia Slobodian

Photo courtesy David Freestone

- Best practice standard could require a process that is
  - Biodiversity inclusive
  - Transparent
  - Subject to international scrutiny
  - Incorporates precaution
  - Takes account stakeholders, future generations, cumulative impacts
  - With ability to
    - impose conditions to mitigate adverse impacts on the marine environment or
    - disallow the activity where there is the potential for substantial harm

Interplay with Principles

- Protection and restoration of the health, productivity and resilience of oceans and marine ecosystems, and maintenance of their biodiversity, in areas beyond national jurisdiction.
- The sustainable and equitable use of marine life for the benefit of present and future generations.
- Ongoing co-operation between and among States to achieve the purposes of the Agreement.
- Use of the best available scientific information.
- Stewardship of the global marine environment for present and future generations.
- The precautionary principle.
- Ecosystem based management.
- Good environmental governance, including access to information, public participation and access to review procedures.
- The polluter pays principle
- Respect for the law of the sea

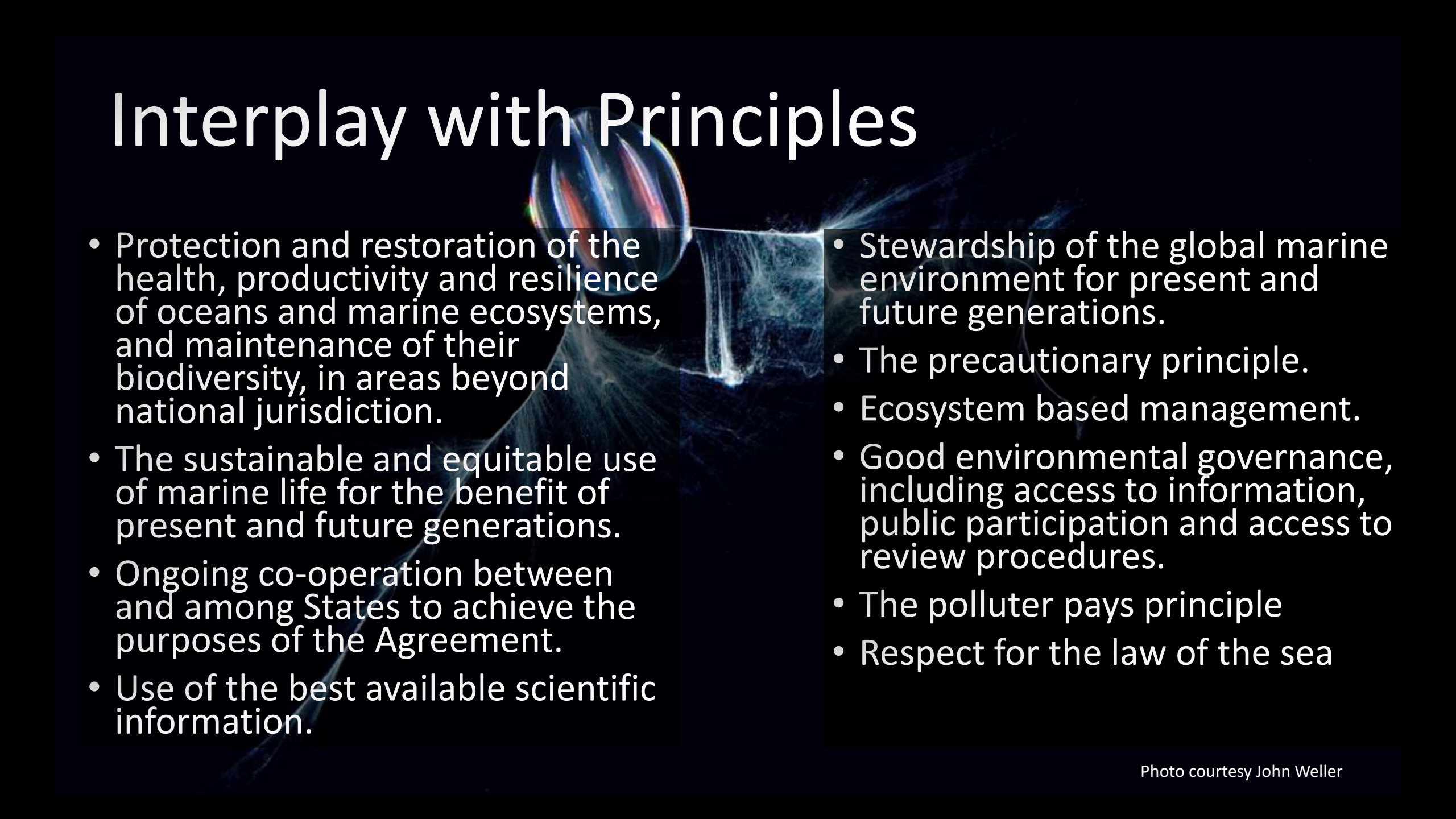


Photo courtesy John Weller

What can an agreement add?

- Reaffirm obligation; renew focus & impetus
- Set out a clear & uniform process
- Cover activities outside sectoral regimes
- Best practice standards for inside sectoral regimes
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- Technical support & capacity building to assist developing States
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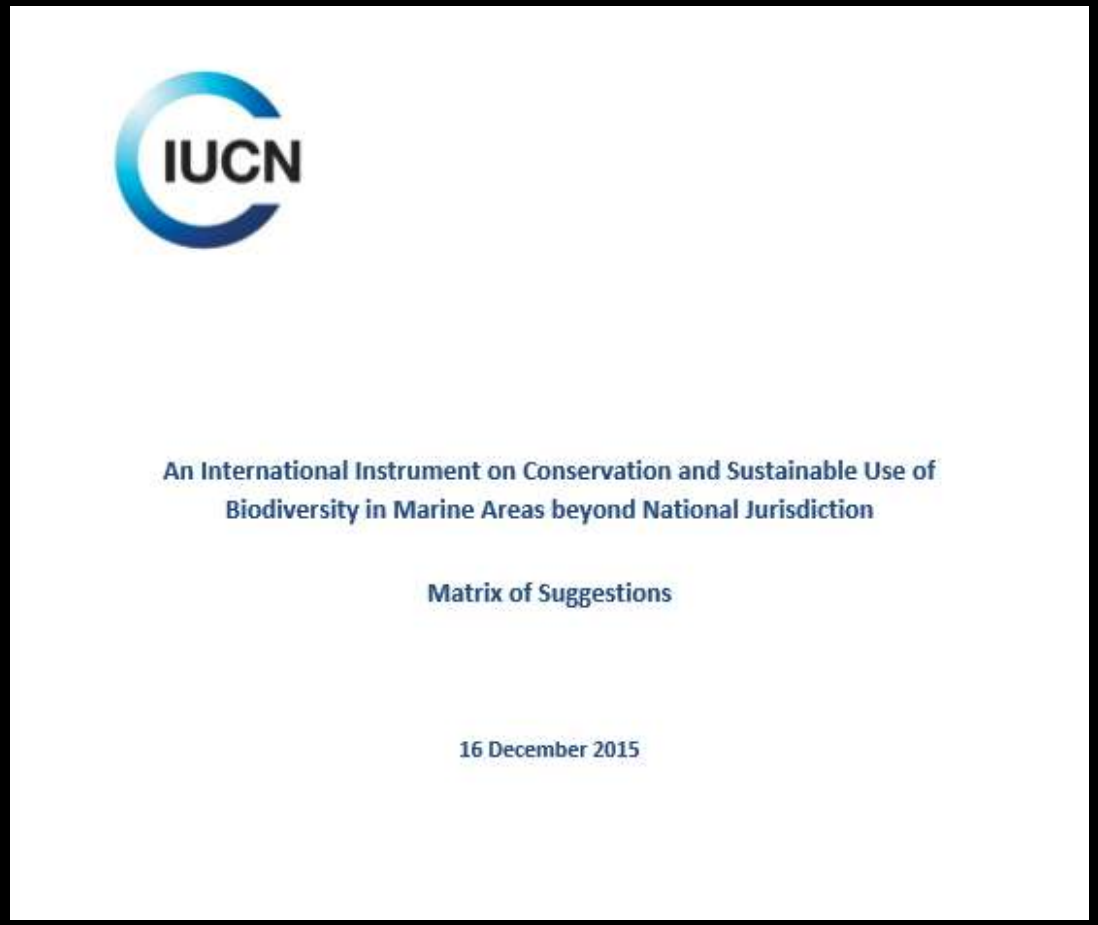

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Thank you for your attention!