



United Nations
Educational, Scientific and
Cultural Organization

Organisation
des Nations Unies
pour l'éducation
la science et la culture

Organización
de las Naciones Unidas
para la Educación
la Ciencia y la Cultura

Организация
Объединенных Наций по
вопросам образования
науки и культуры

• Intergovernmental
Oceanographic
Commission

• Commission
océanographique
intergouvernementale

• Comisión
Oceanográfica
Intergubernamental

• Межправительственная
океанографическая
комиссия

Relevance of the Ocean for Human Societies (and vice versa?)

Dr. Wendy Watson-Wright

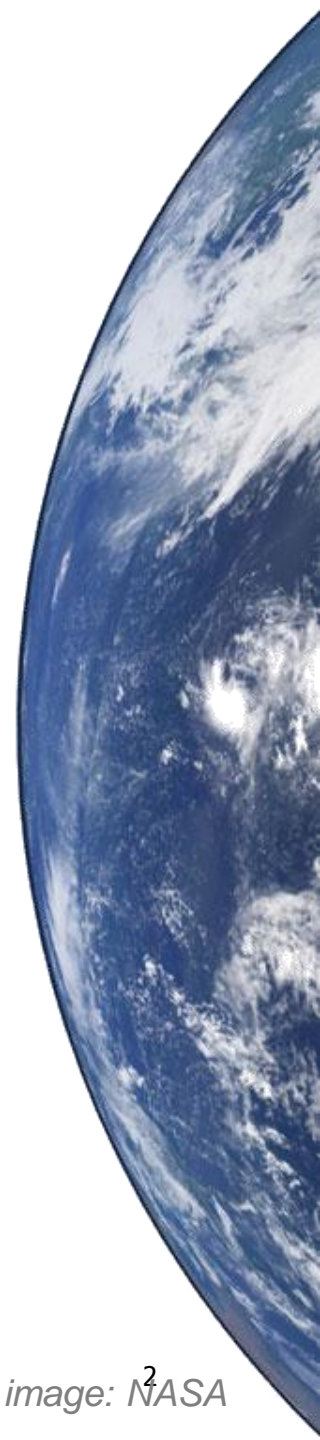
Executive Secretary

*Intergovernmental Oceanographic Commission of
UNESCO*



Outline

- Setting the stage
- Economic and non-economic relevance of the Ocean for human societies
- Human impacts on the world's Ocean
- Final remarks: sustainable management of our global commons





Even if you never have a chance to see or touch the ocean, the ocean touches you with every breath you take, every drop of water you drink, every bite you consume. Everyone, everywhere is inextricably connected to and utterly dependent upon the existence of the sea.

Sylvia Earle

IOC-UNESCO



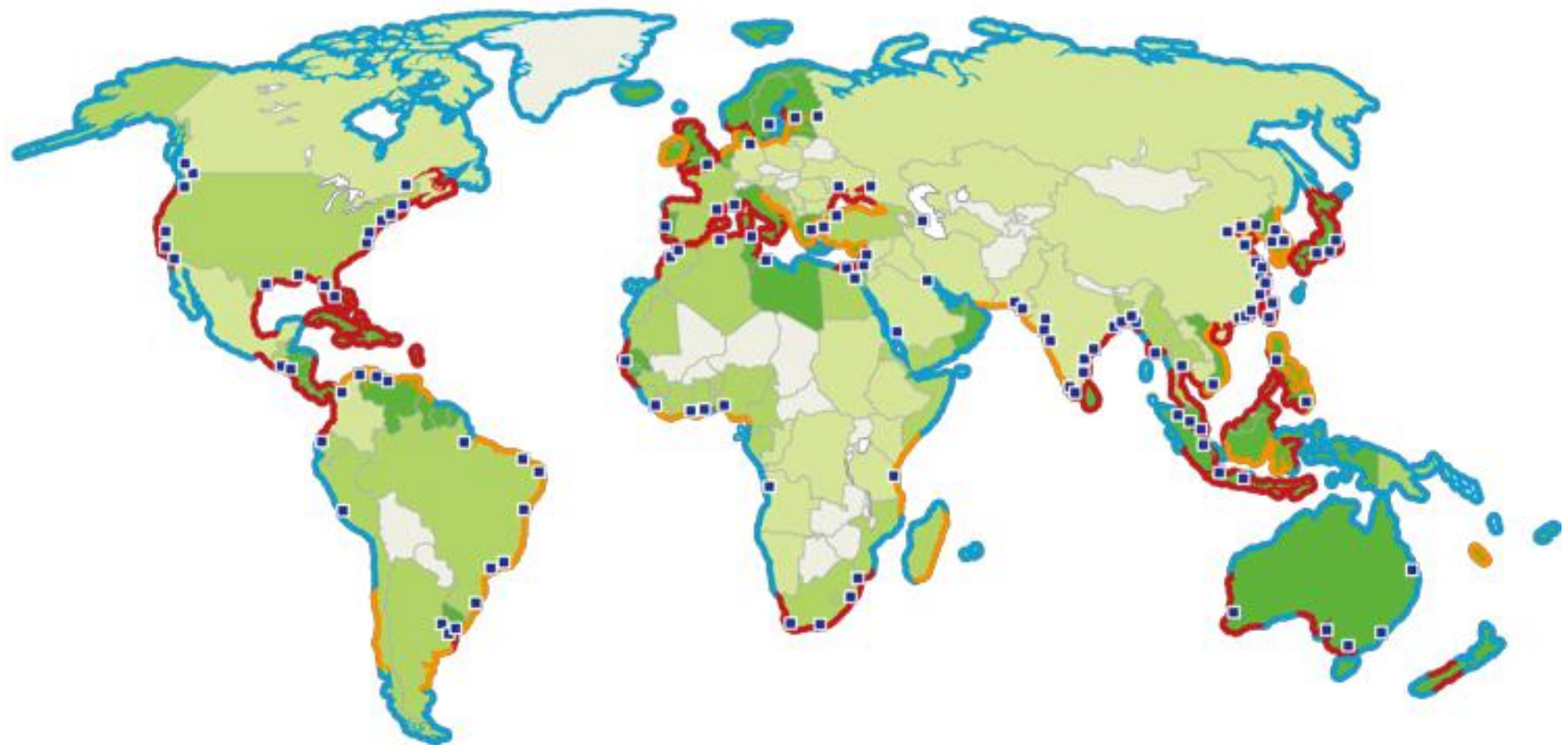
**United Nations Educational,
Scientific and Cultural Organization**
*only body in UN system having "E" for Education and
"S" for Science*

Intergovernmental Oceanographic Commission
only UN body with mandate in ocean science in global ocean

One planet, one ocean



Coastal population and shoreline degradation



Population living within 100 km
of the coast

- None
- Less than 30%
- 30 to 70%
- More than 70%

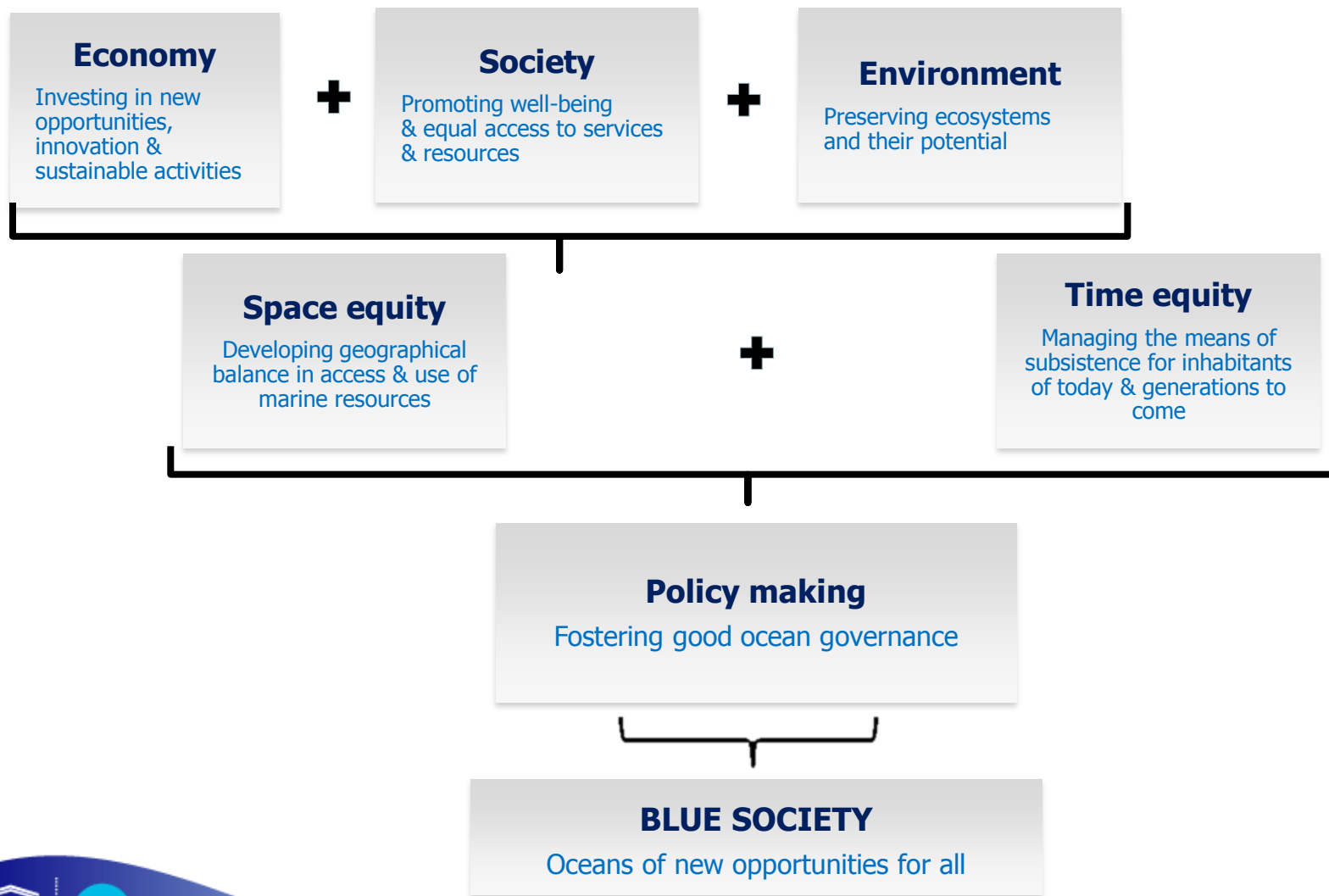
Selected coastal cities of mo.
than one million people

Shoreline

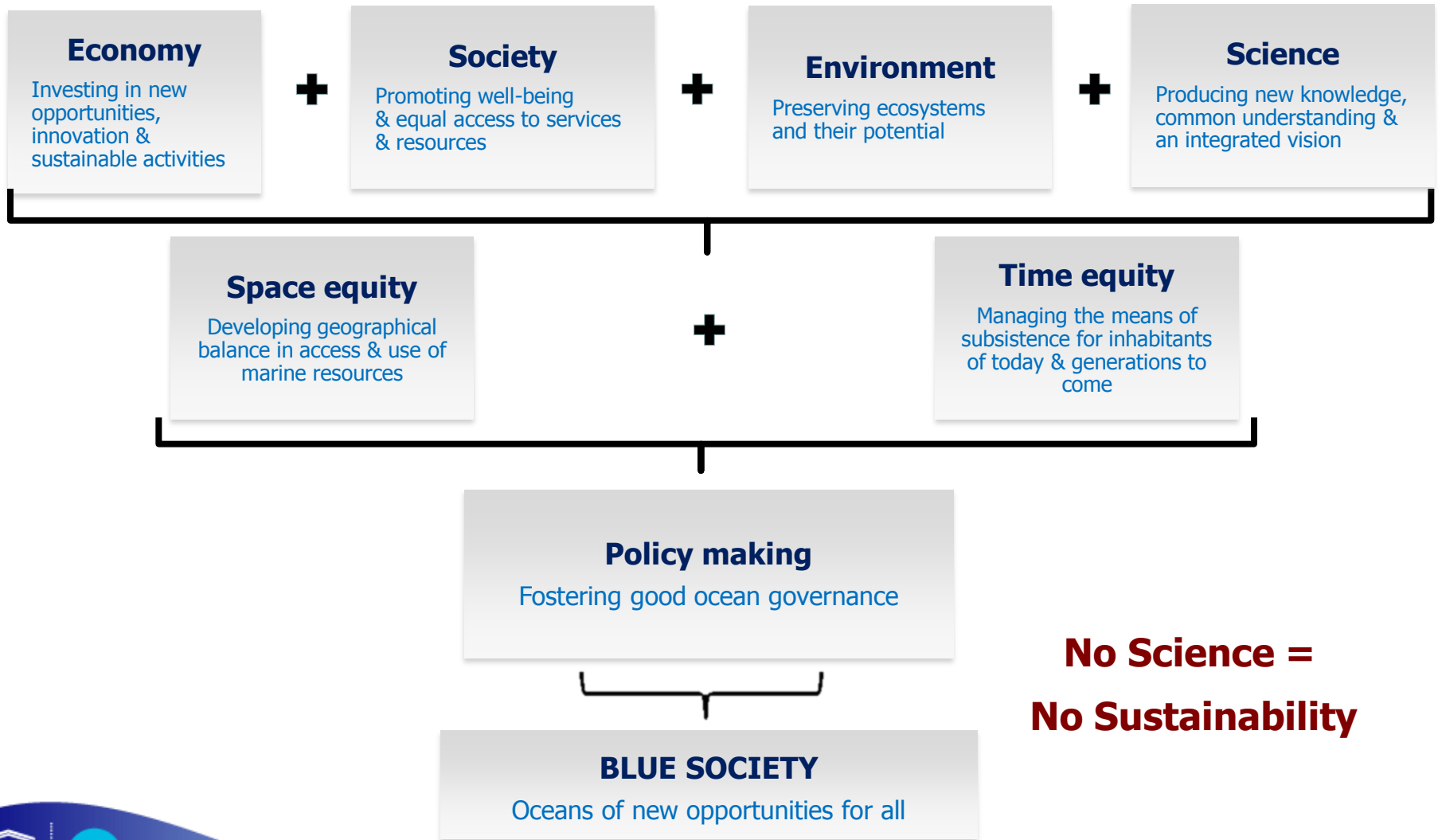
- Most altered
- Altered
- Least altered

Source: Adapted from UNEP
2002b, based on Burke and others
2001, Harrison and Pearce 2001

Science for sustainability

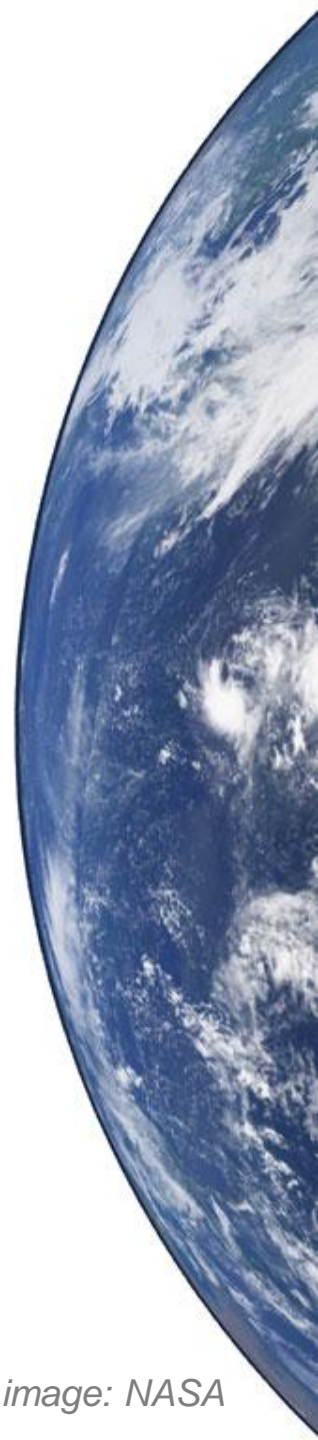


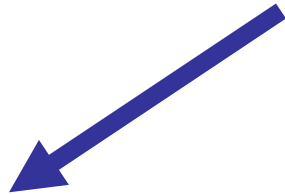
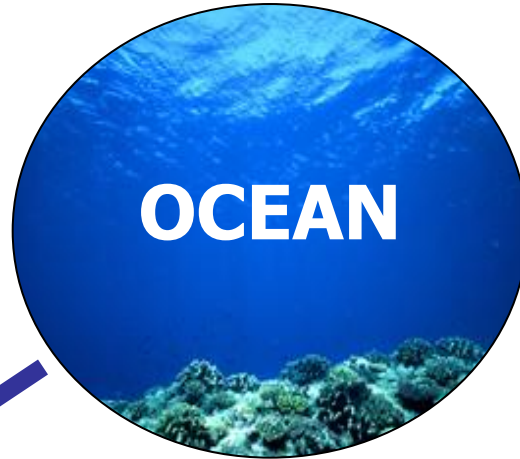
Science for sustainability

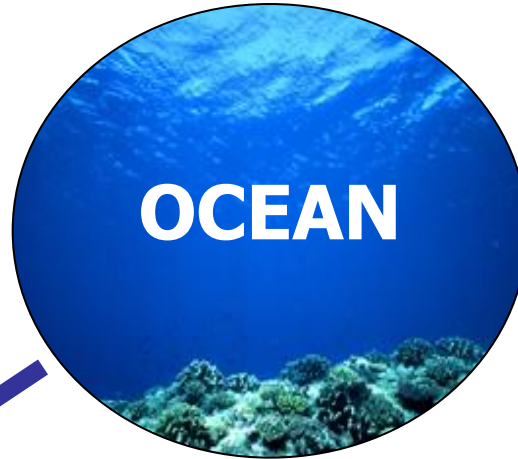


Outline

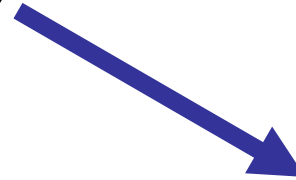
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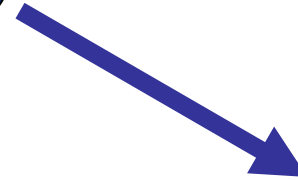




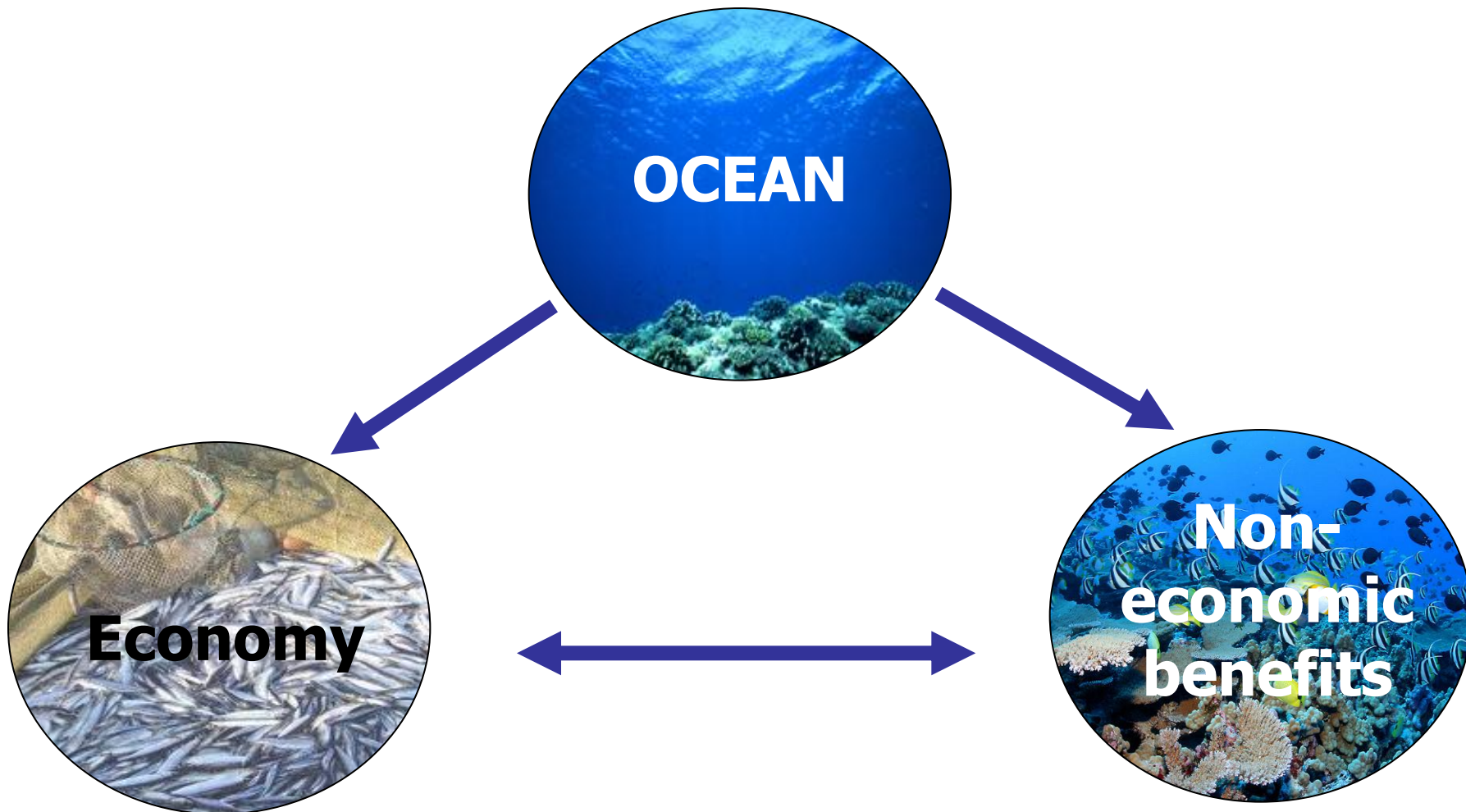


- Shipping and transport
- Fisheries and aquaculture
- Travel and tourism
- Ports, infrastructure, maritime transport
- Energy...





- Biological services
- Regulating services
- Sink for waste and nutrient disposal
- Cultural and aesthetic services...



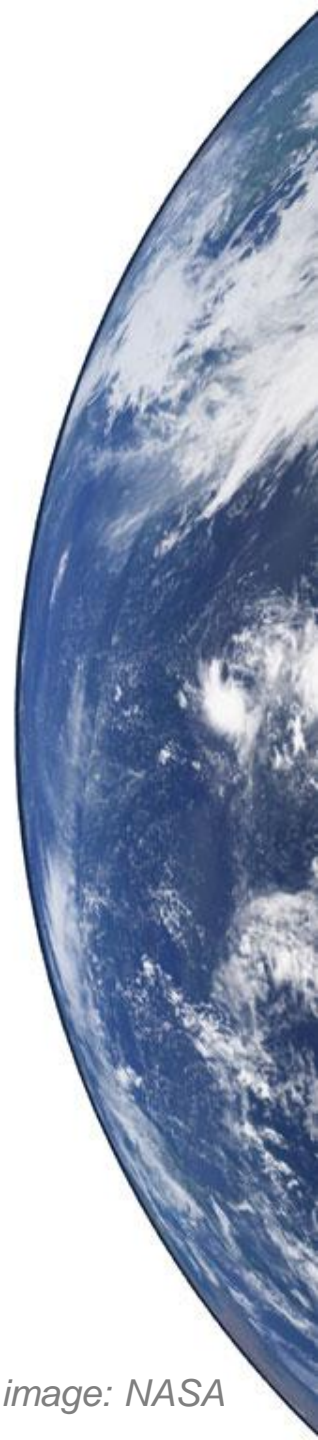
Ecosystem services

HABITATS ECOSYSTEMS	Organic matter input/chemo- synthetic primary production	GOODS and SERVICES							
	Nutrient cycling	Resil- ience	Habitat	Food, minerals, oil, gas	Micro organ- isms	Climate regulation	Bio- remediation	Educational, scientific, spiritual	
Continental shelves	■	■	■	■	■	■	■	■	
Continental slopes	■	■	■	■	■	■	■	■	
Abyssal plains	■	■	■	■	■	■	■	■	
Submarine canyons	■	■	■	■	■	■	■	■	
Deep-sea trenches	■	■	■	■	■	■	■	■	
Seamounts	■	■	■	■	■	■	■	■	
Carbonate mounds	■	■	■	■	■	■	■	■	
Hydrothermal vents	■	■	■	■	■	■	■	■	
Cold seeps	■	■	■	■	■	■	■	■	
Mud volcanoes	■	■	■	■	■	■	■	■	
Cold-water corals	■	■	■	■	■	■	■	■	
Deep-sea sponge fields	■	■	■	■	■	■	■	■	
Whale falls	■	■	■	■	■	■	■	■	

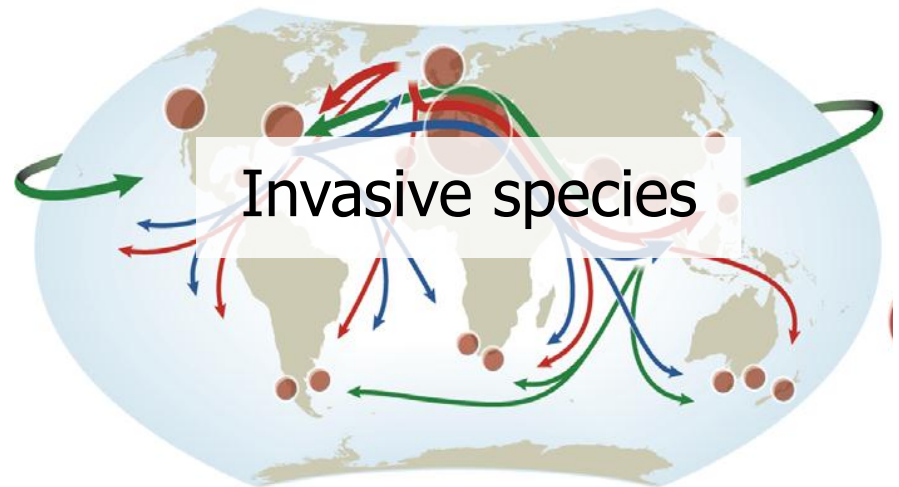
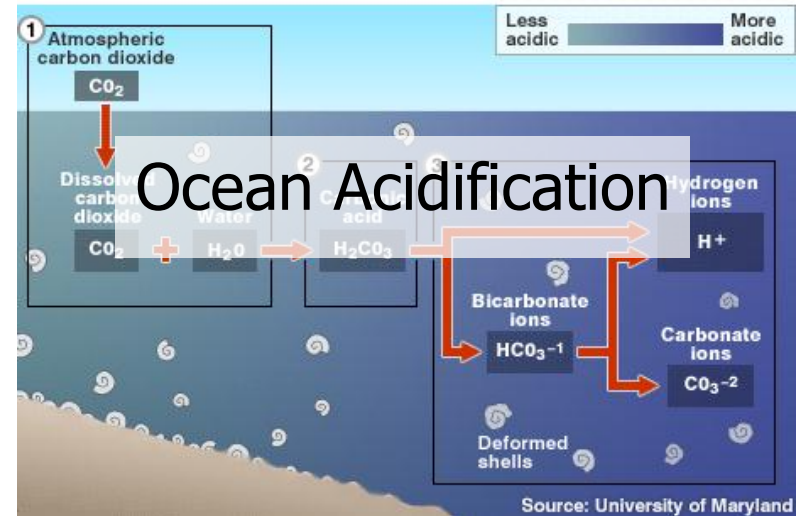
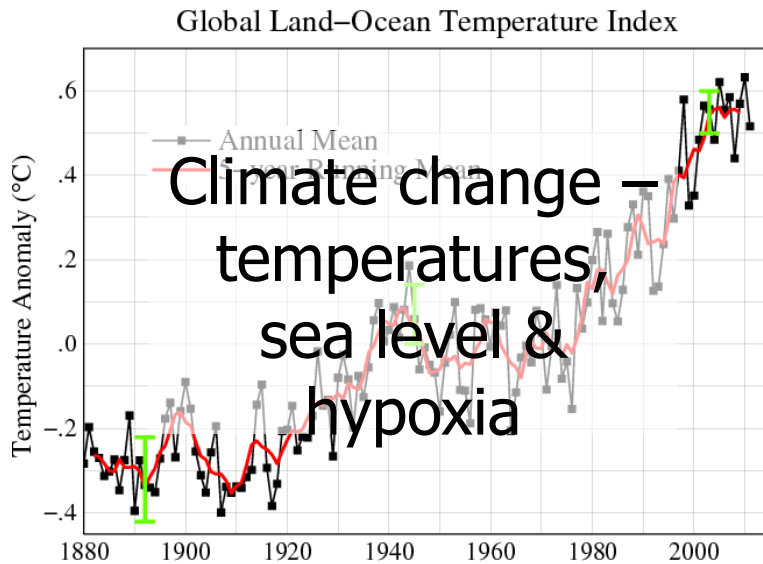
Key: State of knowledge ■ good knowledge ■ some knowledge ■ little knowledge ■ no knowledge

Outline

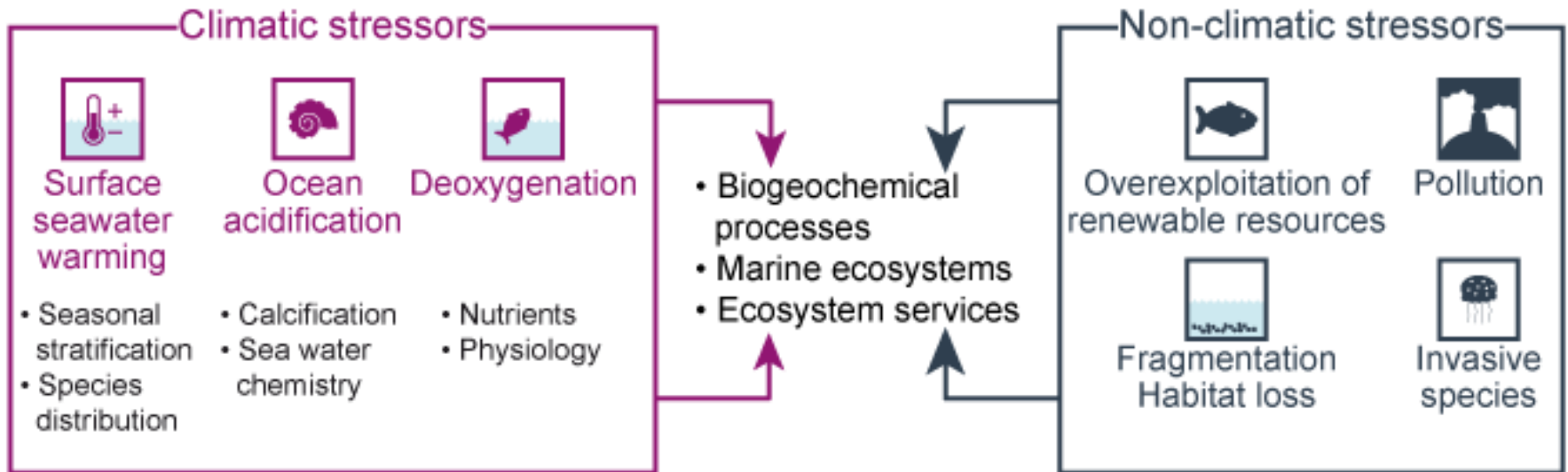
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Single stressors



Multiple stressors

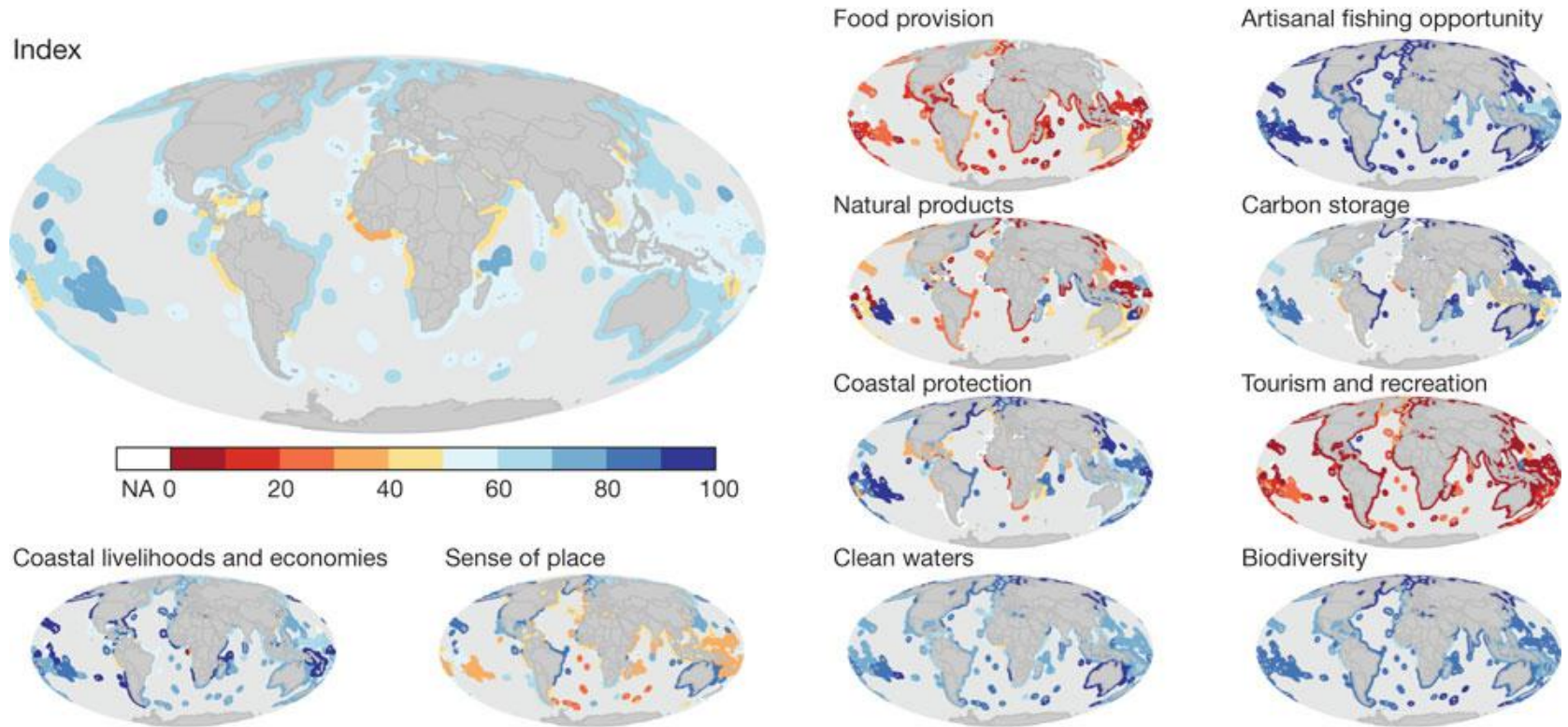


Possible effects of combining different stressors:

Amplification

Compensation

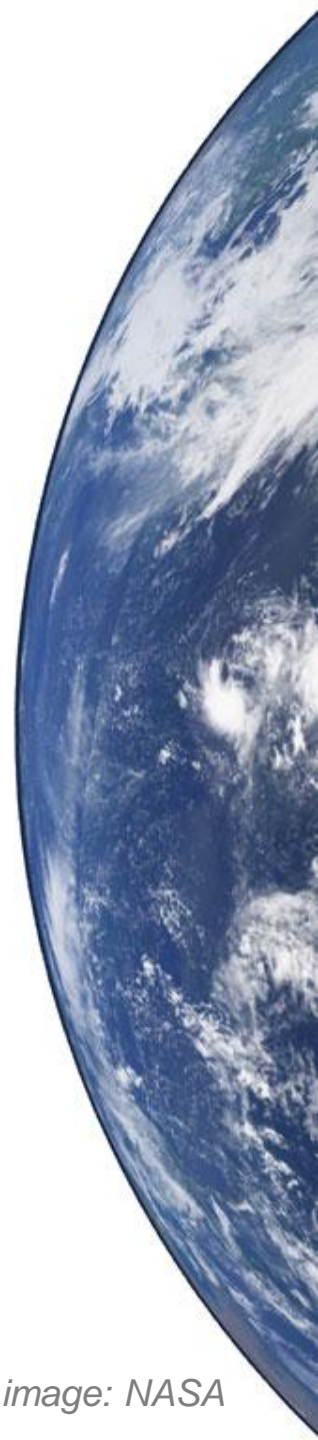
Index to assess the health and benefits of the global ocean



BS Halpern *et al. Nature* **488** (2012) doi:10.1038/nature11397

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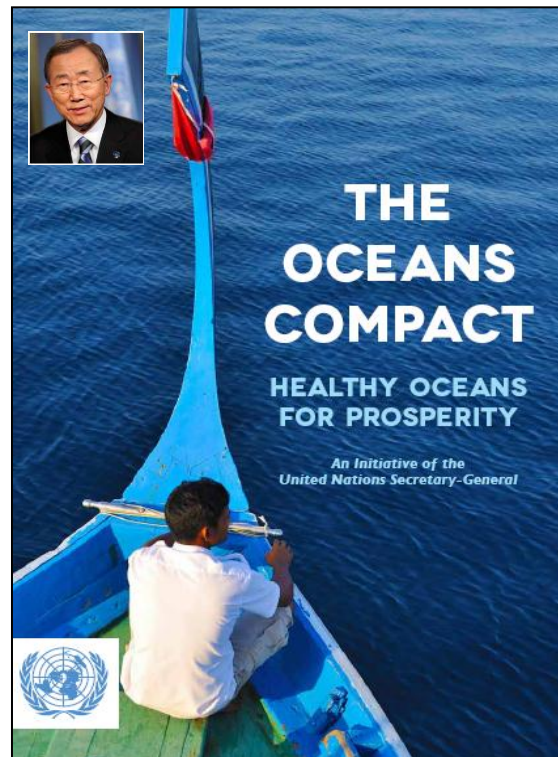


Increasing momentum for Sustainable management of the World's Ocean

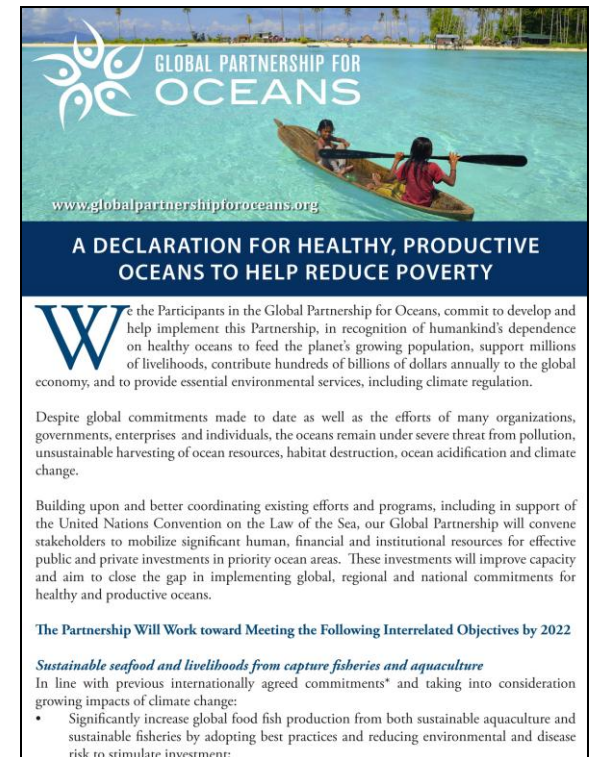
Rio+20



The Oceans Compact



Global Partnership for Oceans



Moving forward: Sustainable management of the world's Ocean

WE NEED

- to highlight the importance of the Ocean sciences for human activities and progress
- to increase education, to create awareness of the role of humankind as a modifying agent of the global ecology
- to provide tools and mechanisms

WE ARE

- global citizens, and must face the challenge to balance individual and global interests in order to protect the World's Ocean



Protecting our ocean...together



One planet, one ocean

<http://ioc.unesco.org>

Thank you/Obrigada!

