

Strategic Management of Marine Ecosystems in Partnership with the Industry

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Fourth National Climate Conference
Local Adaptation Actions with Mitigation Co-Benefits
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Maritime industry

- 50 000 merchant vessels deliver 90% of international trade;
- Offshore energy sources supply 30% of oil and natural gas;
- More than one million km of submarine cables carry 98% of international communications;
- Roughly 1,3 million vessels work the world's fisheries, providing the first source of protein for 2,6 billion people.



Oceans are also

- More than 200,000 species still unknown;
- Absorb 30% of carbon dioxide produced by humans, limiting climate change;
- Ecosystem goods and services
- More than 40% of the world's oceans are considered “heavily affected” by human activities.

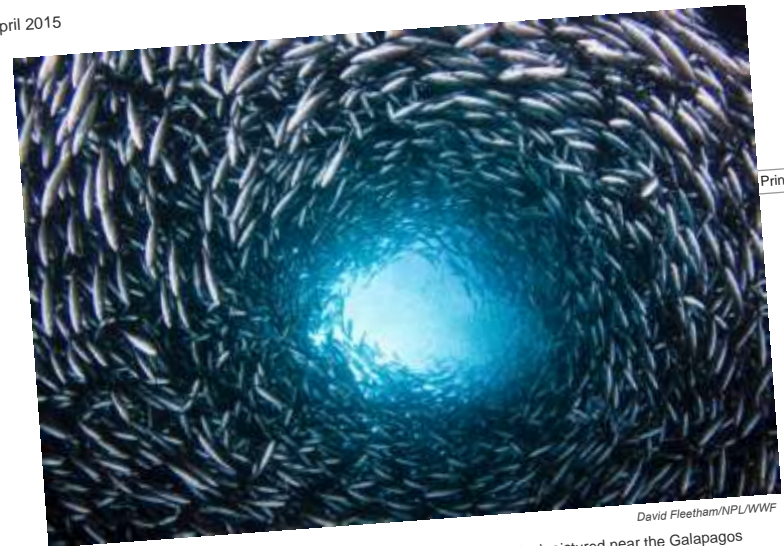
NATURE | NEWS: Q&A

Oceans are 'worth US\$24 trillion'

Marine scientist Ove Hoegh-Guldberg explains the rationale behind pricing the ocean.

Daniel Cressey

23 April 2015



The ocean's riches: a school of brown-striped snapper (*Xenocys jessiae*), pictured near the Galapagos Islands.

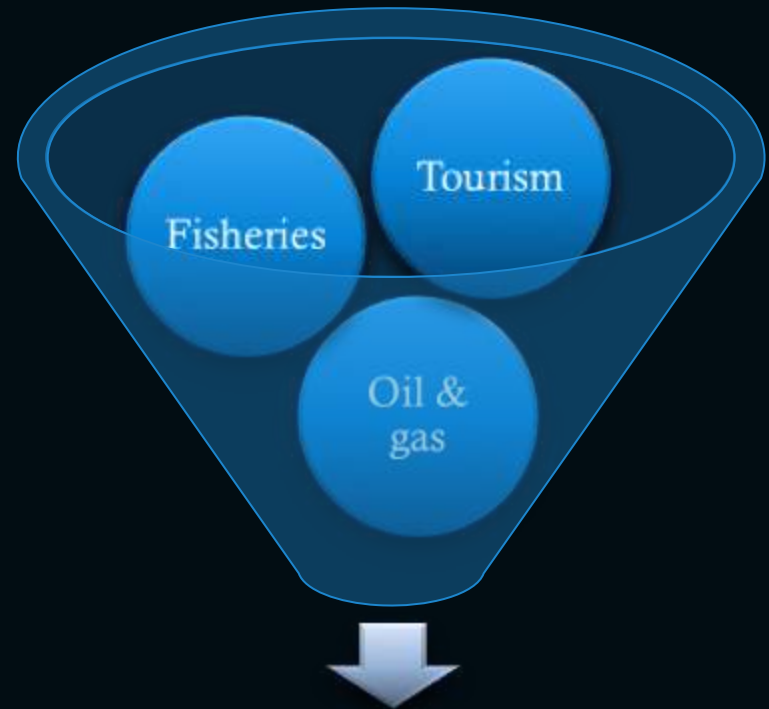
Ove Hoegh-Guldberg is one of Australia's leading marine scientists and director of the University of Queensland's Global Change Institute in St Lucia. He is also the lead author of *Reviving the Ocean Economy*, a report published on 23 April by the conservation group WWF, which attempts to estimate the value of the ocean and proposes steps for its safeguarding.

Ocean conservation

- Trying to reduce the threats to ocean ecosystem and protect its biodiversity.



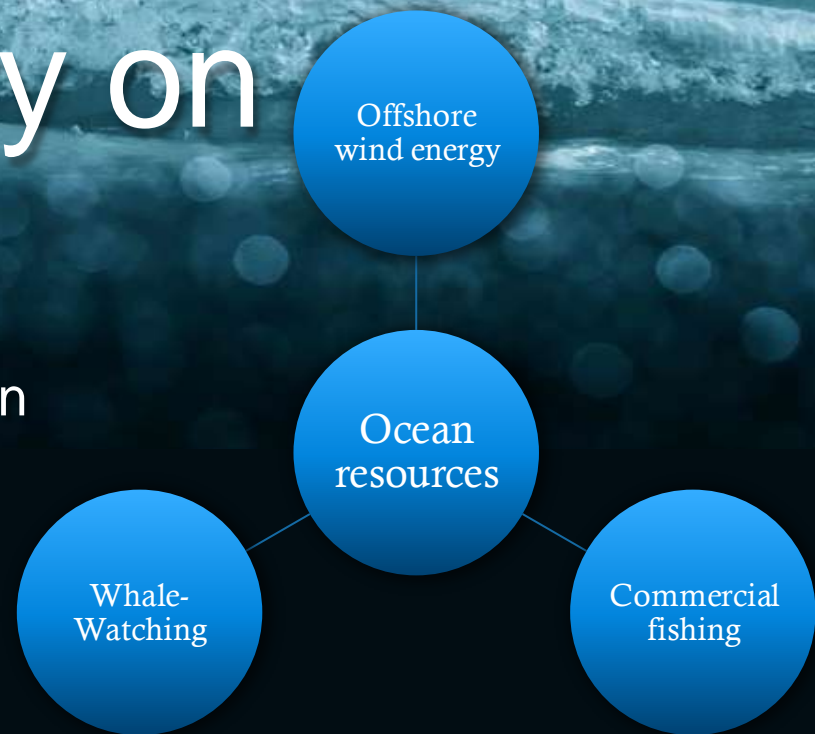
Where I'm from



St. Lawrence ecosystem

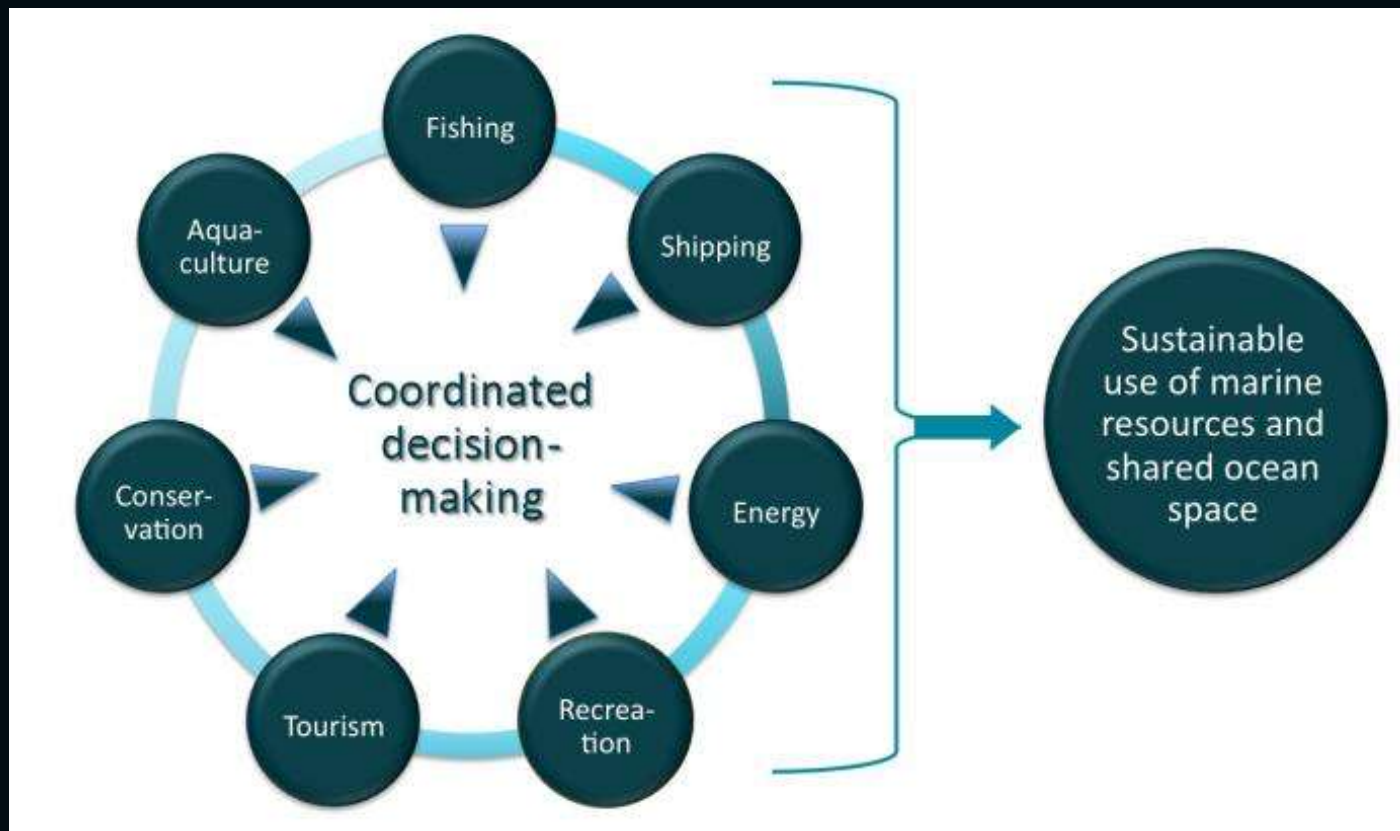
Getting industry on board

- Potential benefits of ocean conservation for industry can be substantial
- Marine spatial planning: the Massachusetts example
- Prevents more than US \$1 million in losses to the fishery and whale-watching sectors
- Generating \$10 million in extra value to the energy sector



How to achieve this?

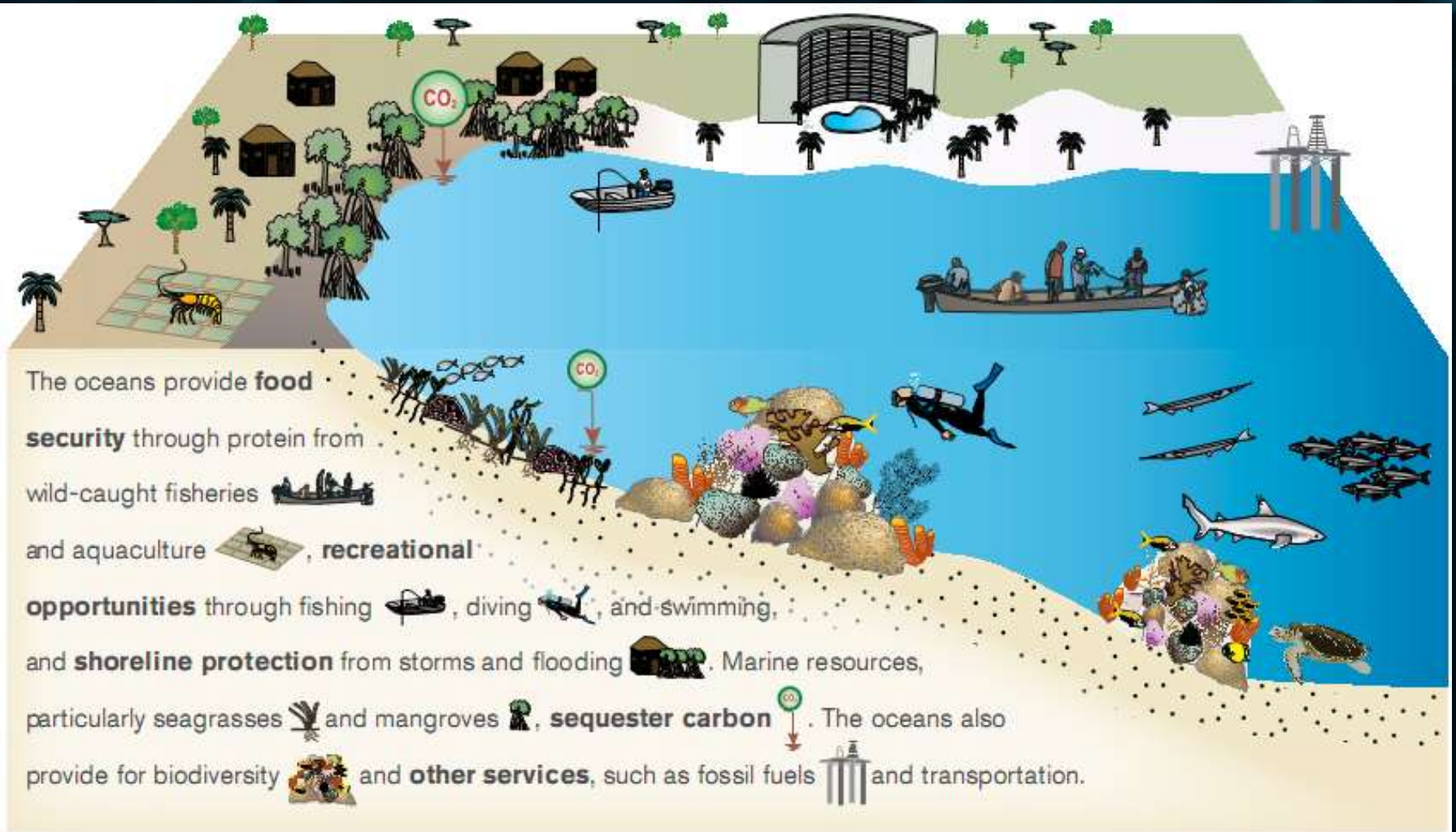
An integrated approach to ecosystem management



1. Speaking the same language

- No industry can grow indefinitely in a degraded environment, and no healthy environment can be maintained without the commitment of a responsible business community.
- Approaching the industry with ecological arguments is a mistake
- Ocean planning benefits the industry and its sustainability
 - Cost-benefit analysis
 - Maximising short-term benefits is unsustainable

The economic value of healthy ecosystems



The economic value of healthy ecosystems



ECOSYSTEM SERVICES	Coastal									Marine		
	Estuaries and marshes	Mangroves	Lagoon and salt ponds	Intertidal	Kelp	Rock and shell reefs	Seagrass	Coral reefs	Inner shelf	Outer shelves edges (ripples)	Seamounts & mid-ocean ridges	Deep sea and coral gyres
Biodiversity	X	X	X	X	X	X	X	X	X	X	X	X
Provisioning services												
Food	X	X	X	X	X	X	X	X		X	X	X
Fibre, timber, fuel	X	X	X						X	X		X
Medicines, other resources	X	X	X		X			X	X			
Regulating services												
Biological regulation	X	X	X	X		X		X				
Freshwater storage and retention	X		X									
Hydrological balance	X		X									
Atmospheric and climate regulation	X	X	X	X		X	X	X	X	X		X
Human disease control	X	X	X	X		X	X	X				
Waste processing	X	X	X				X	X				
Flood/storm protection	X	X	X	X	X	X	X	X				
Erosion control	X	X	X				X	X				
Cultural services												
Cultural and amenity	X	X	X	X	X	X	X	X	X			
Recreational	X	X	X	X	X			X				
Aesthetics	X		X	X				X				
Education and research	X	X	X	X	X	X	X	X	X	X	X	X
Supporting services												
Biochemical	X	X			X			X				
Nutrient cycling and fertility	X	X	X	X	X	X		X	X	X	X	X

Whale-watching: profit vs sustainability



2. Don't battle with businesses

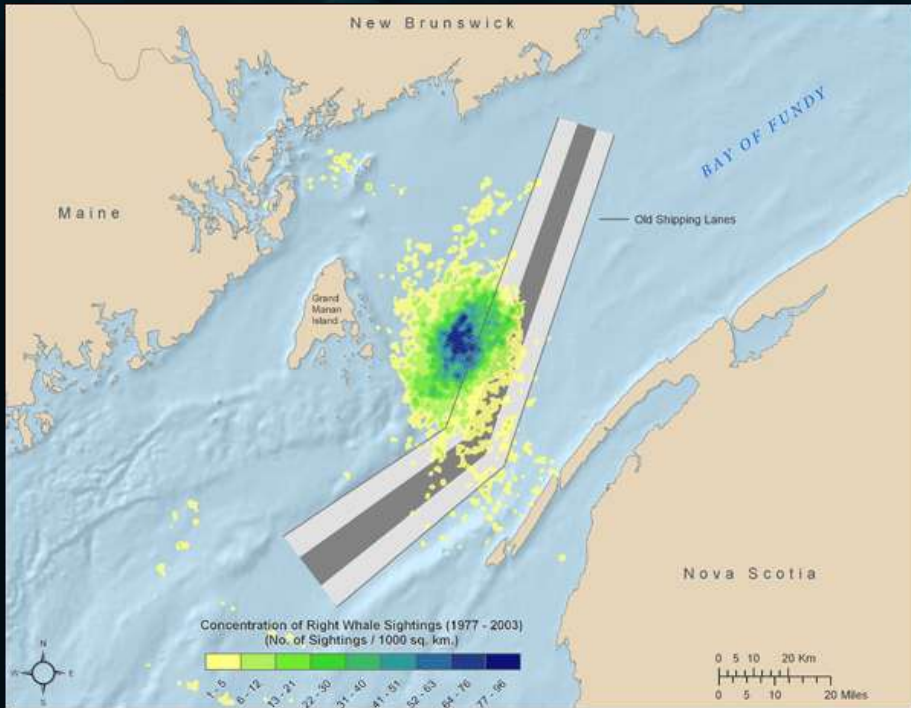
- Learn about the industries you want to engage & develop understanding of their main issues;
- Provide industries with background information;
- Make sure every interest is represented:
 - NGOs, governments, scientists, first nations, conservationists, and businesses
 - Try to see each other's perspective and language
- Give businesses public credits for the conservation efforts & compromises they make.

The background of the slide is a photograph of ocean waves. The top portion shows the white, foamy crests of waves breaking, while the lower portion is a deep, dark blue-green color, suggesting the water's depth. The overall tone is serene and natural.

2. Don't battle with businesses

- Mistakes to avoid:
 - Consulting with business as an afterthought
 - Battling with businesses. You must first assume that businesses will want to minimize their impact and protect their image.
 - Not planning enough time to change commercial situations to allow for a different use of marine space (it takes years, not months)

Bay of Fundy: Right whales and ships

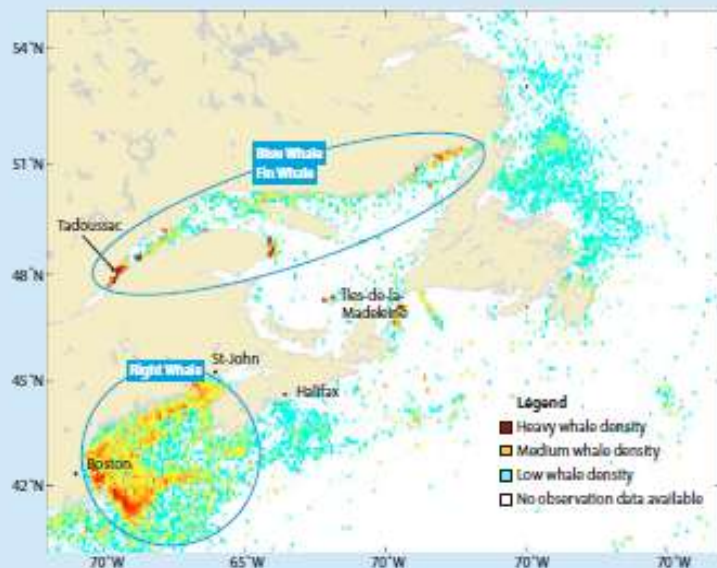


Concentration of Right Whale Sightings and Old Bay of Fundy Shipping Lanes.
Notice the overlap in the outbound lane.



Whales of the Northwest Atlantic

Your Vigilance Makes all the Difference!



Overview of areas of 13 species of cetaceans that frequent the Northwest Atlantic between April and October.

Not suitable for navigation. For navigation purposes, please use the maps provided by the Canadian Hydrographic Service.



Blue Whale (p. 38)

Endangered



Fin Whale (p. 40)

Special concern



Right Whale (p. 42)

Endangered

In all, 13 species of cetaceans frequent the waters of the Northwest Atlantic, of which 3 are particularly vulnerable to collisions due to their status as species at risk and their behaviors.

For more information on collisions between whales and ships, please refer to the guide entitled *A Manner's Guide to Whales in the Northwest Atlantic*.

All collisions with cetaceans must be reported to the appropriate marine mammal emergency network:

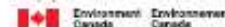
Québec: 1 877 722-5346

Newfoundland and Labrador: 1 888 895-3003

**Nova Scotia, New Brunswick,
and Prince Edward Island: 1 866 567-6277**



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Canadian Fisheries
Research Network



Réseau canadien de
recherche sur la pêche



Why reducing seabed impacts?





3. Engage the industry in designing ocean planning processes

- Develop common ground around the need and opportunity to improve the relevant data and science;
- Create a process to identify data needs
- Build a cooperative process for stakeholders to gather and share data and support independent science;
- Involve business in the earliest stages of the process.

- International, cross-sectoral industry leadership alliance on "Corporate Ocean Responsibility"
- Environmental certification program;
 - Voluntary, transparent and inclusive initiative that addresses key environmental issues;
 - 11 performance indicators. industries with background information;



Meet the industry in its own element



“If the fishers are having a coffee, you drink coffee with them!”

Education



*“We protect what we love and
we love what we know”*



Thank you

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