
Malta Declaration on Global Ocean Protection
@JaneLubchenco
Oregon State University
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Yesterday's ocean: full of life

Photo credit: Enric Sala, Pristine Seas, National Geographic Society

… especially big fish …

Photo credit: Enric Sala, Pristine Seas, National Geographic Society

… and top predators

Photo credit: Enric Sala, Pristine Seas, National Geographic Society

Today: Ocean Ecosystems are

- **depleted – especially of big fish & top predators,**
- **they are disrupted,**
- **and less resilient.**


Life in harmony, into the future
COP10/MOP5 AICHI-NAGOYA, JAPAN 2010


SUSTAINABLE
DEVELOPMENT
GOALS


11

10% by 2020


14
LIFE BELOW
WATER

Scientific conclusions from thousands of studies around the world

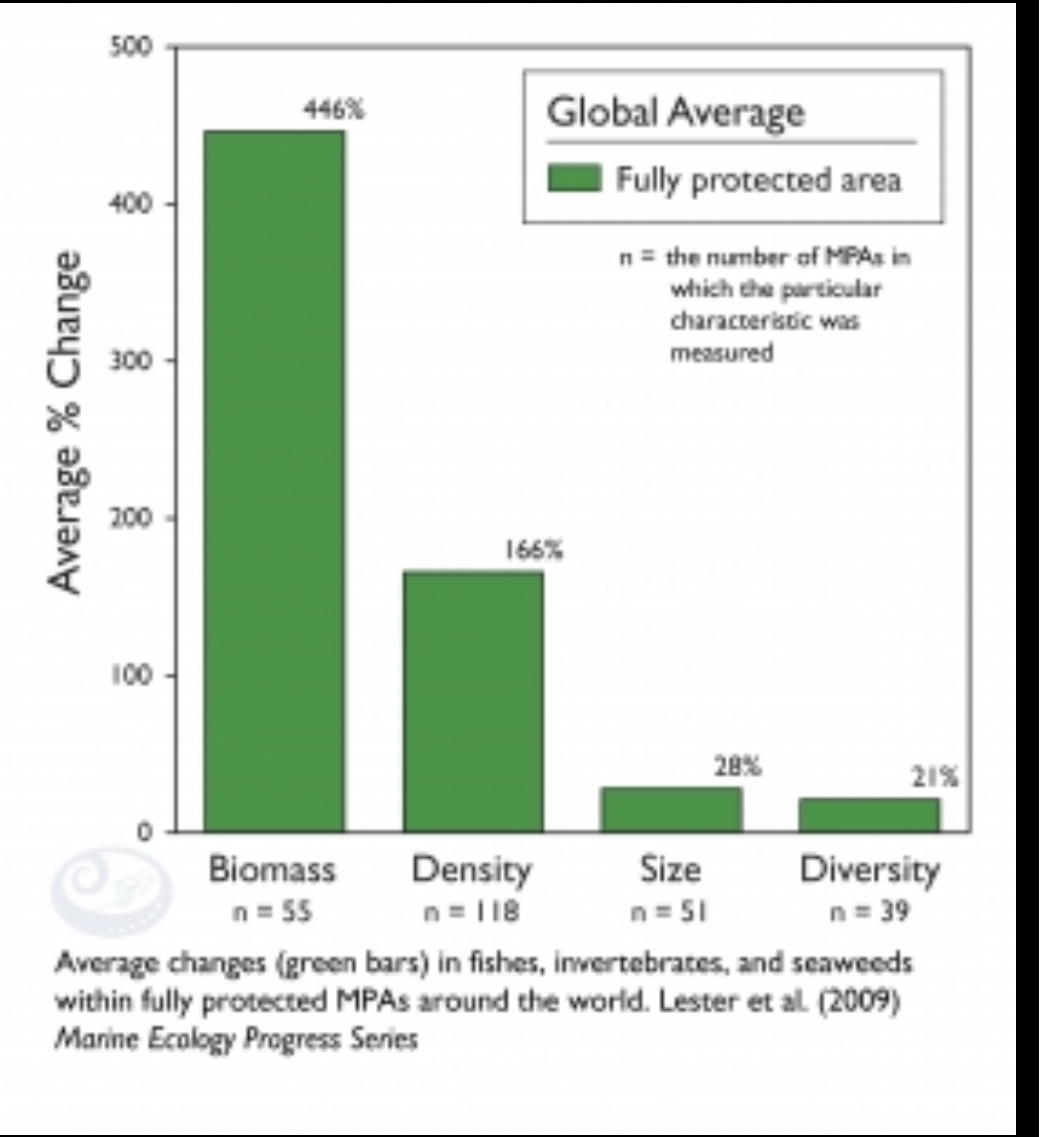
Conclusion #1

Marine reserves

Protect biodiversity

Species are larger, more abundant, more diverse inside reserve

Science



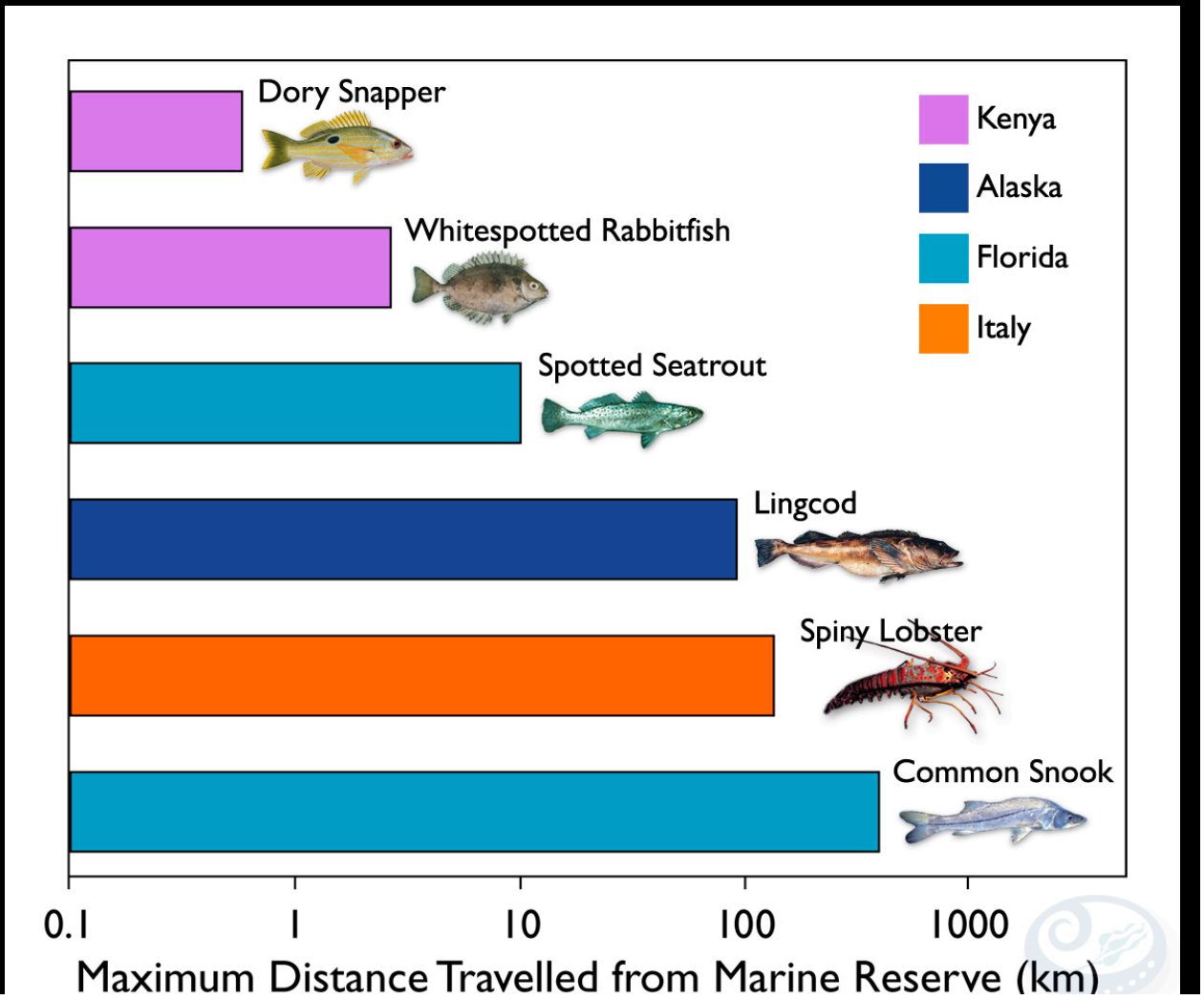
Average changes (green bars) in fishes, invertebrates, and seaweeds within fully protected MPAs around the world. Lester et al. (2009) *Marine Ecology Progress Series*

Conclusion #2

Science

Marine Reserves

Provide spill over to adjacent areas

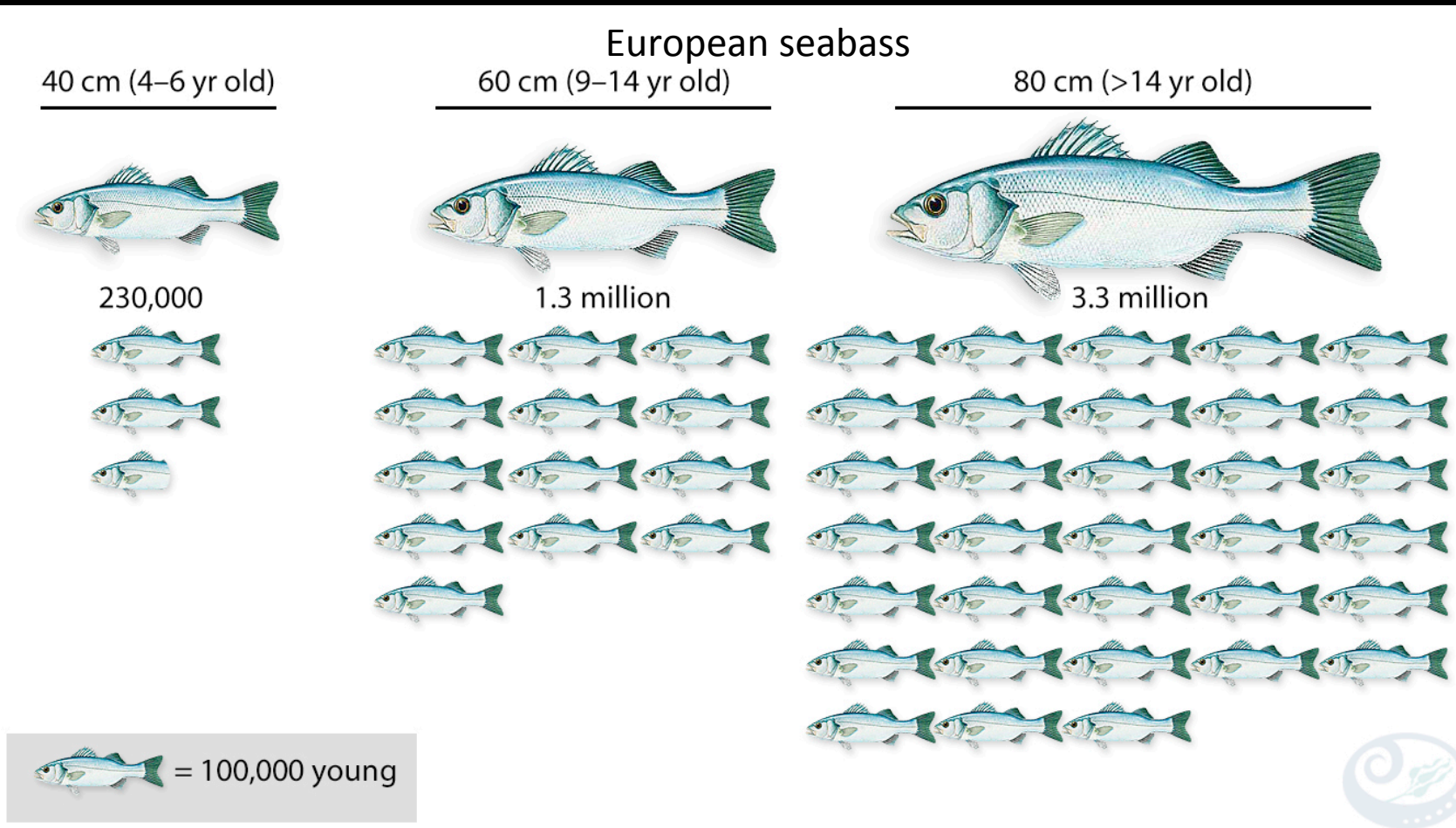


Conclusion #3

Marine Reserves

Science

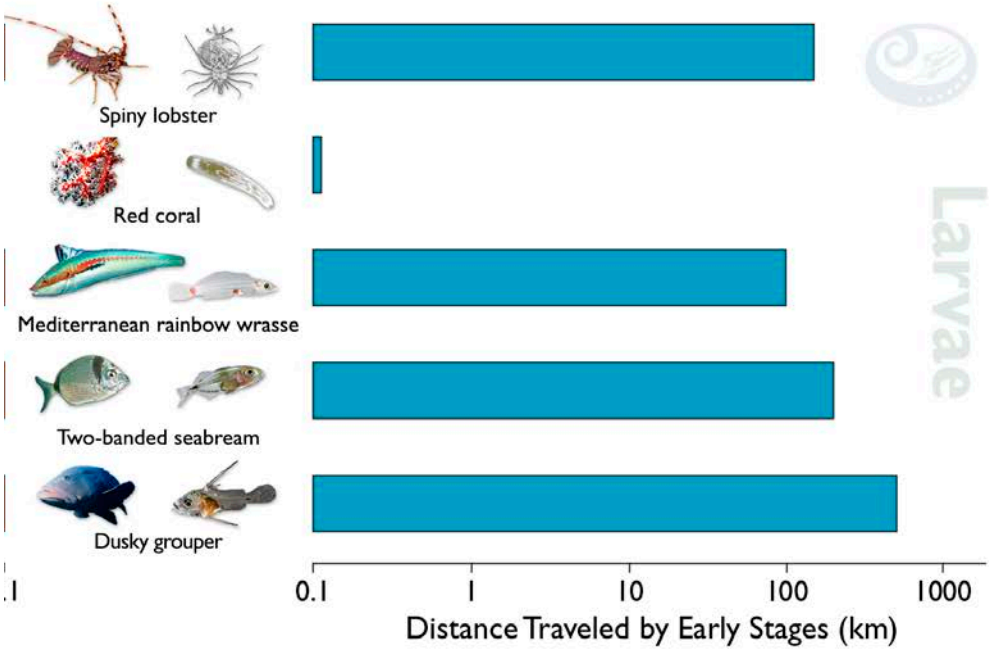
Protect big fish (Big fish make lots more young)



Conclusion #4
Marine Reserves

Science

Export larvae to Surrounding areas

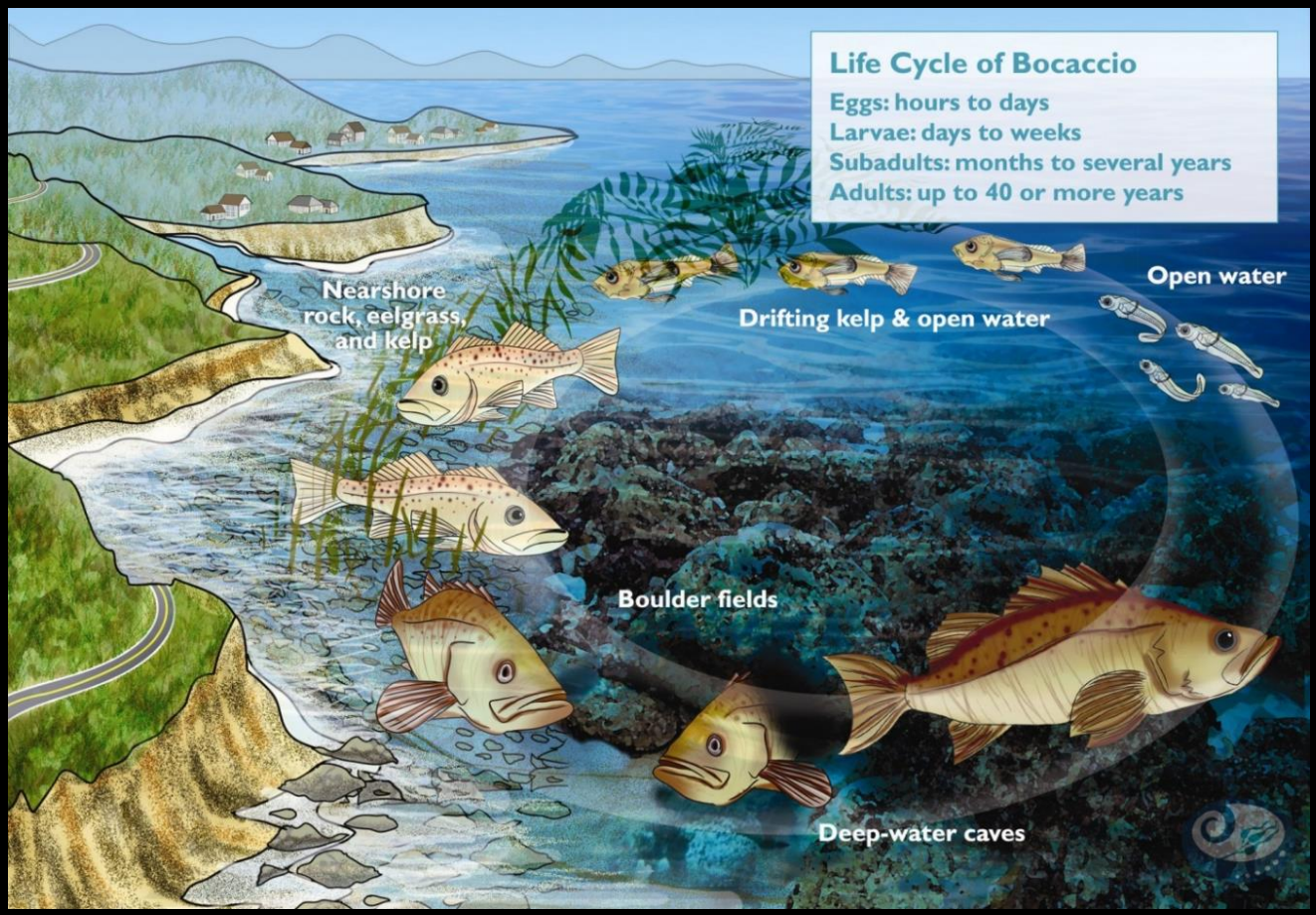


The estimated distance at which eggs and larvae of marine animals that live in the Mediterranean can be exported. Larval photos (top to bottom): Jose Iglesias, Eric Tambutté, Manuel Muntoni, Manuel Muntoni, Emília Cuhna (IPMA–EPPO). *See refs at www.piscoweb.org/science-marine-reserves-project*

Conclusion #5 Science

Large Marine Reserves

Protect multiple habitats = critical for full life cycle.

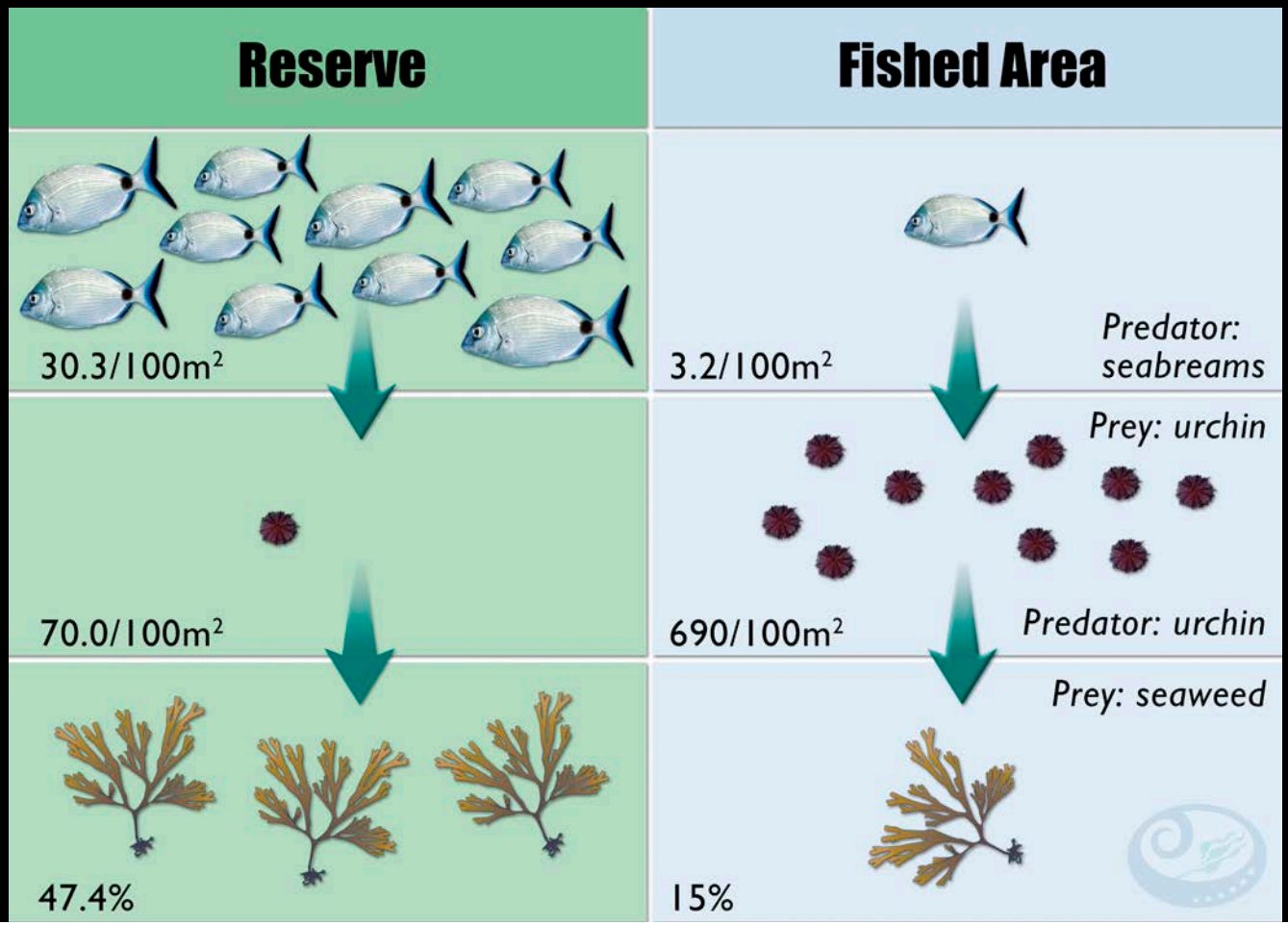


Conclusion #6

Marine Reserves

Restore Ecological Balance

Science



Conclusion #7
Marine Reserves

Science

Buffer against mistakes & uncertainty

Photo credit: Enric Sala, Pristine Seas, National Geographic Society

Conclusion #8

Marine Reserves

Enhance resistance and resilience

Science

‘Marine Reserves are Climate Reserves’

Photo credit: Enric Sala, Pristine Seas, National Geographic Society

Marine Reserves

Science

Protect biodiversity

Provide spill over

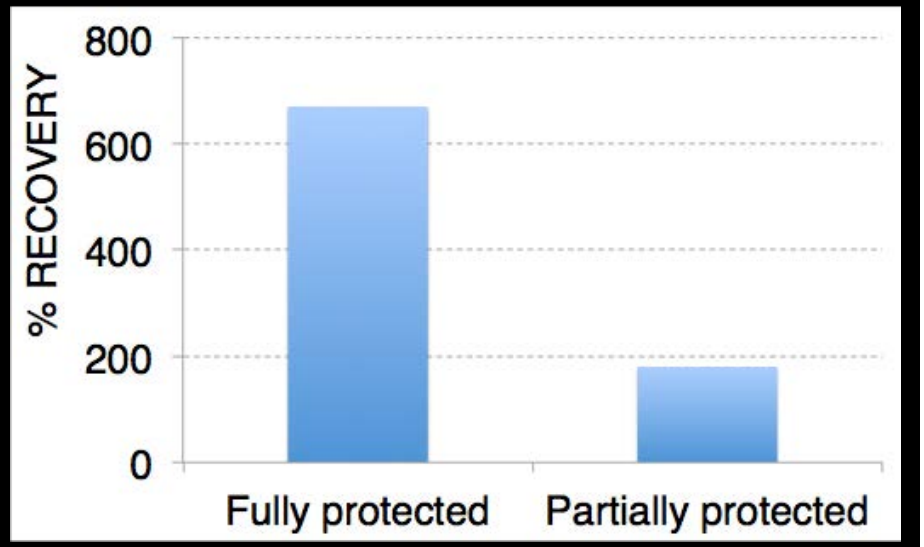
Protect big fish

Export larvae

Protect multiple habitats

Restore Ecological Balance

Buffer against mistakes & uncertainty



Sala and Giakoumi 2017
ICES J of Marine Sciences

Keys to achieving conservation benefits

- Highly to fully protected
- Locally supported
- Large size
- Funded
- Permanent
- Enforced

It's time to use this knowledge to achieve the Aichi and SDG conservation goals

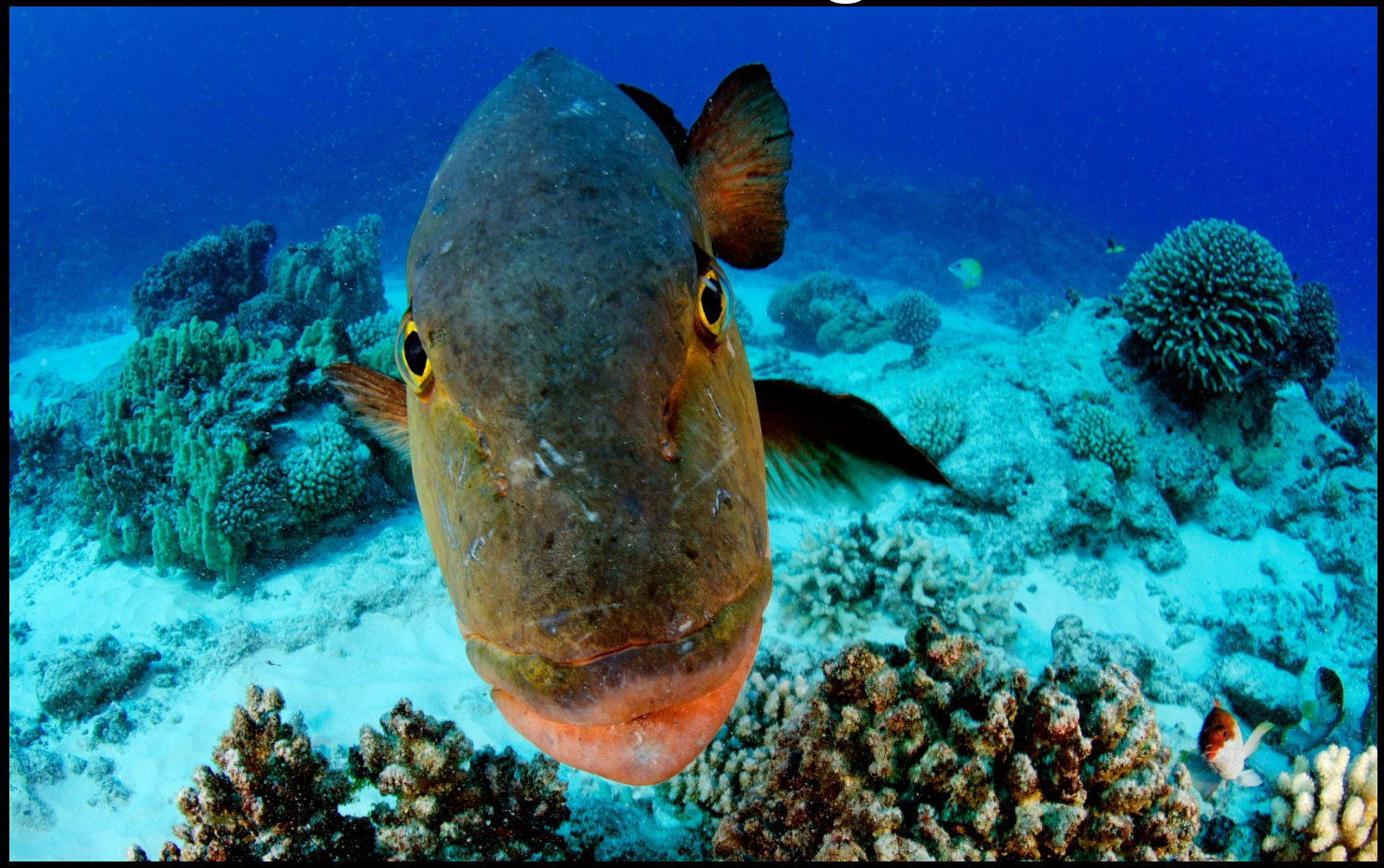


Photo credit: Enric Sala, Pristine Seas, National Geographic Society

Economics of MPAs

U. Rashid Sumaila
Fisheries Economics Research Unit
Institute for the Oceans & Fisheries/UBC Policy School
r.sumaila@oceans.ubc.ca
@DrRashidSumaila

Economic benefits of MPA

- The **insurance value** of MPAs alone is enough to justify their creation;
- **Recreational value**: a shark or whale is more valuable alive than dead!
- The medium & long term **fisheries benefits** of MPAs far outweigh the short-term investment cost;
- Protects **option values** for future generations;
- **Equity values**: can support a fairer distribution of benefits between groups (high seas MPAs).

Closing remarks

- Strategies for MPA implementation:
  - Large remote MPAs versus smaller coastal MPAs;
  - Leadership as a necessary condition for success;
  - Convert harmful subsidies to good ones…
- New challenge: “de-MPAing” the ocean:
  - Australia;
  - USA.