



# The Economic Benefits of Marine Protected Areas

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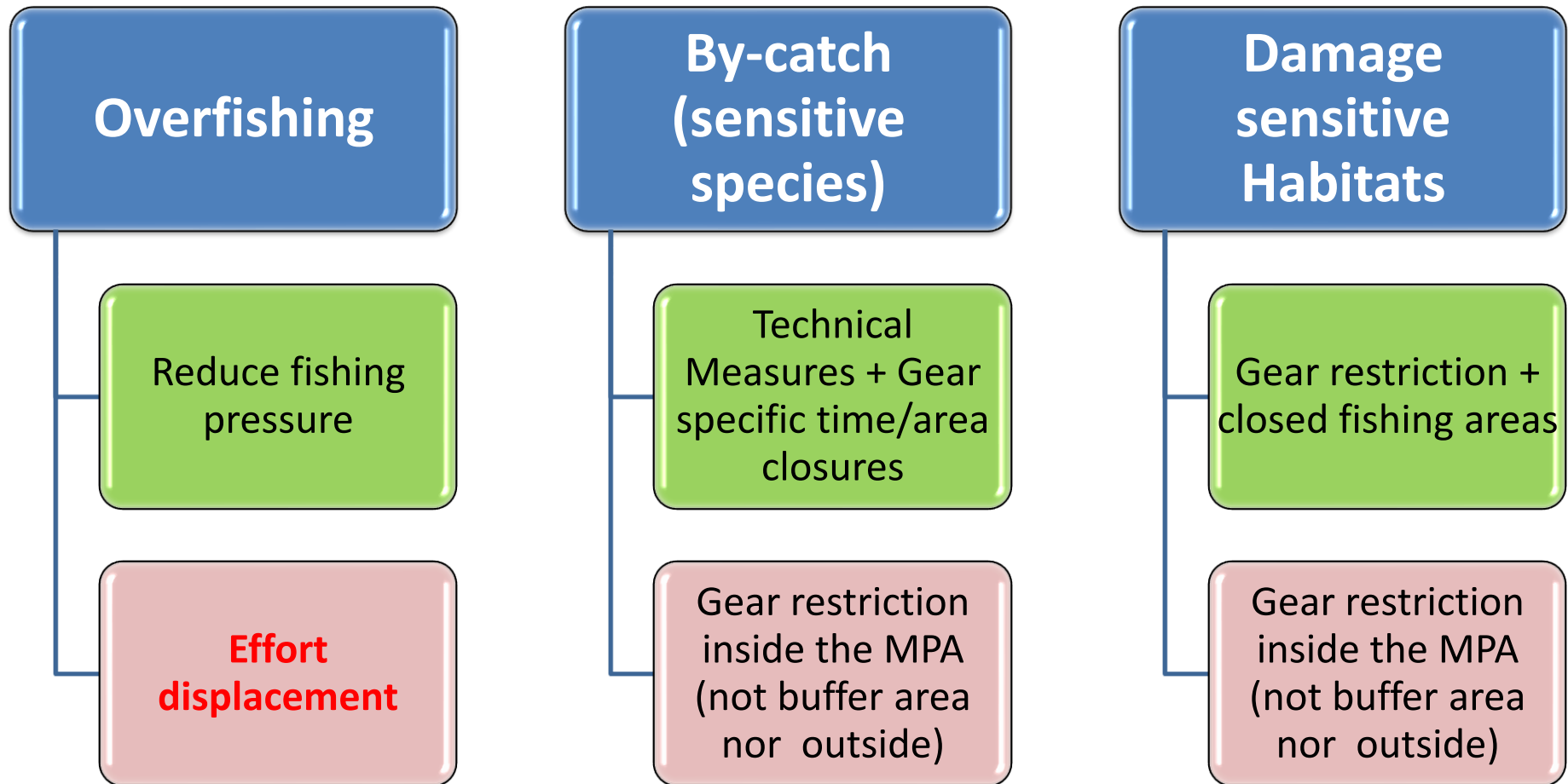
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# MPAs are a TOOL, not an objective

- MPAs (totally/partially) **restrict human activity** for a conservation purpose, typically to protect natural resources
- Effective conservation requires **rational decision-making** to achieve ecological, economic, social and employment benefits and contribute to the availability of food supplies in the long-term
- In order for MPAs to be successful, their existence has to be justified and **not simply established to reach a quota**: Must be knowledge-based, cost/benefit analyses, well monitored and enforced
  - ✓ 10.8% of European waters covered with MPAs (in 2017)
  - ✓ 727 MPAs covering about 29% of European territorial waters
- **Fishery management is conservation in practice** (CFP & UNCLOS)
  - ✓ Technical and conservation measures, multiannual plans, catch limits, stock recovery areas, area closures

# Problems-Solutions for marine ecosystem conservation



 = Fisheries management  
 = MPA management

# Are existing MPAs effective?

- Large open ocean MPAs get lots of **catchy headlines** and fame for the conservation organizations and politicians. Their effect on biodiversity restoration is low or nil. **RFMOs** are better suited to regulate migratory fish species
- Numerous **paper parks**: *“A large proportion of MPAs in the EU are considered to lack effective management” (Milieu et al, 2016)* creating a dangerous illusion of protection
- Many European MPAs have only recently been designated and many are still **without management plans** (study, page 105)
- MPAs can only be effective in an **effective fishery management context**

# When could MPAs be effective?

- In **absence of effective fisheries management** – heavily overfished areas
- Protection of essential **habitats and VMEs**: seagrass meadows, kelp forests, coral reefs, nursing areas
- Management of **sedentary species**. The size of the reserves must be tuned to the adult and larval resident species
- When **understood and accepted** by those dependent on the area
- The above can be included **within a fisheries management plan**




# Challenges

- **ENVIRONMENTAL**: MPAs are **ineffective** against IUU fishing, threats from climate change, sea-level rise, warming-up, acidification, pollution from land or plastics. They are **not dynamic** (not easily moved as species move) and hence not useful for adaptive management.
- Without **effort reduction**, MPAs only have a minor impact on the overall fishery resources and may displace effort on even more vulnerable resources
- **SOCIAL**: **increased competition** for space inside and outside MPAs, adding to the conflicts between sectors, loss of livelihoods, increased risks at sea (longer distances to fish grounds); unfair for fishermen not permitted to fish in the MPA),
- **ECONOMIC**: **increased costs** due to displacement (no-take MPAs do not reduce effort, only move it elsewhere), loss of fishing grounds, markets, jobs & fishing opportunities, reconversion & decommissioning of boats. Increased management cost.

# Economic benefits of MPAs

Evidence gap on the distribution of benefits and their relative scale compared to costs remain poorly understood (page 107)

Table 16. Data gaps – European fishery sector

|                        | Evidence available on benefits to the sector   | Evidence available on comparison of costs and benefits (full CBAs)  | Evidence available on sustainability measures in place  | Evidence available on management of conflicts | Evidence available on participation processes | Evidence available on governance features |
|------------------------|--|---|---|---|---|---|
| No-take MPAs and zones | Scarce evidence available  | No evidence available   | No evidence available   | Scarce evidence available                     | Scarce evidence available                     | Scarce evidence available                 |
| Multi-use MPAs         | No evidence available  | No evidence available   | No evidence available   | Scarce evidence available                     | Scarce evidence available                     | Scarce evidence available                 |
| SPMs                   | No evidence available  | No evidence available   | No evidence available   | Scarce evidence available                     | Scarce evidence available                     | Scarce evidence available                 |
|                        |  Solid evidence available |  No evidence available |  Scarce evidence available |   |   |   |

# Economic benefits of MPAs

- Study is dominated by literature on the economic benefits to **maritime tourism** and **artisanal fisheries** (particularly in the Mediterranean Sea).
- No evidence could be found to show economic benefits generated to “other” blue economy sectors in Europe such as fisheries (page 1)
- Previous research (ICF GHK et al, 2012) indicated that, for the Natura 2000 network (terrestrial and marine) **every €1billion of expenditure supports almost 30,000 jobs, with 60% of these on activities directly related to site management** (e.g. designation, management, conservation actions, monitoring and research)



# Economic benefits of MPAs

- *Theoretical* economic benefits: few comprehensive ex-ante or ex-post cost benefit analysis
  - Most successful story No-take MPA Columbretes Islands (Spain): after a 8-15 year protection period generated a net gain >10% of local lobster fishery catch (in weight).

**Is this the best we can do?**

# Economic benefits of MPAs



EU Maritime & Fish  @EU\_MARE · 30 Aug 2017

Since 2003, **biomass** of **herring** in the #IrishSea increased by 368%. Status of European fish stocks, 26/09 #EUFishEcon [fishstocks.onetec.eu/index.html](http://fishstocks.onetec.eu/index.html)



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# Take Home Message

- The **global myth** of MPAs as the panacea to every ocean problem is misguided
- Both biodiversity and food security will generally be better served by **expanding effective fisheries management**, not by establishing more no-take areas
- **Effective and adaptive fisheries management** bring higher yields to fishers & communities (STECF annual economic report)
- If **30%** of all ocean ecosystems (coastal and offshore) were **strictly closed** under MPAs (as recommended by IUCN)
  - In **rich countries**, food shortage will need to be compensated by livestock (requiring deforestation) or from poorly managed fisheries (in the developing world)
  - In densely populated coastal areas of **poor countries**, people's livelihoods will be threatened generating social and political instability



Thank you

MPAs must **NOT** simply  
be established to reach  
a quota

