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Gulf of Bothnia in a Change
SmartSea
Vaasa, Finland
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Marine Protected Area Management in Finland

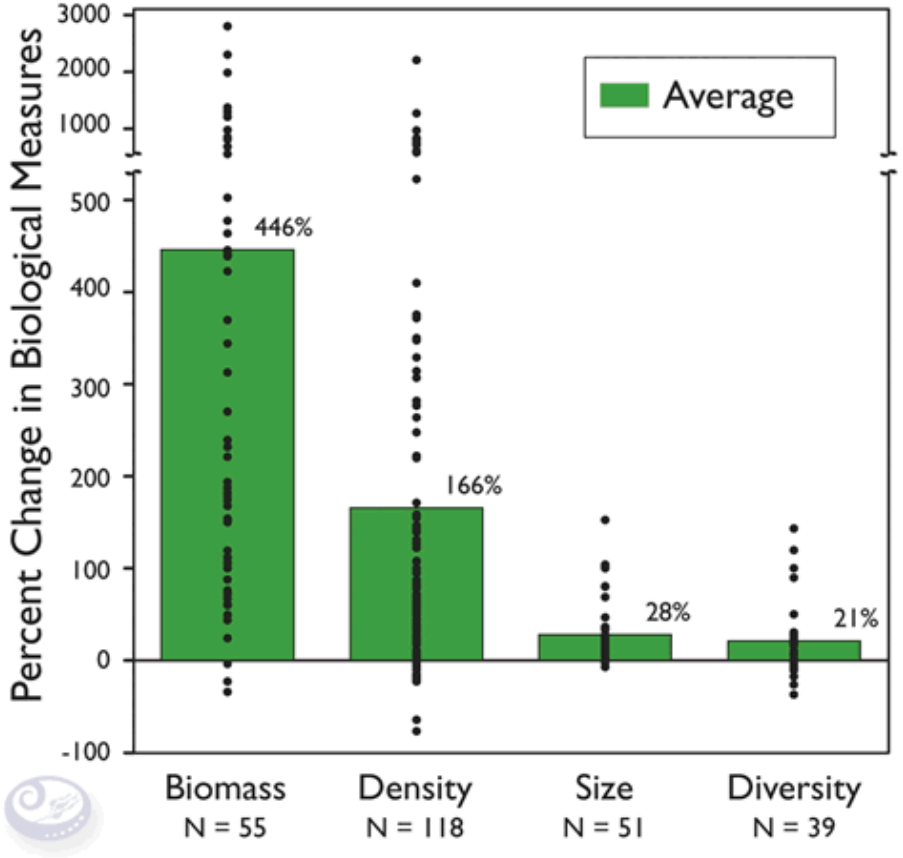
Regulations, law and the ecosystems

SmartSea

SYKE

The Importance of MPAs

- Protection of species, habitats and sites
- Increases in biodiversity, species richness, abundance
- Protecting livelihoods and strengthening economies
- Affects marine life outside the area too



Average changes (green bars) in fishes, invertebrates, and seaweeds within marine reserves around the world. Although changes varied among reserves (black dots), most reserves had positive changes. *Data: Lester et al. in revision*

MPAs in the Gulf of Bothnia

- 343 MPAs
- ~4000 km²
- HELCOM MPAs, Natura 2000, private reserves, national parks, seal sanctuaries*
- *overlapping

MPA issues

- MPAs often face strong opposition especially from businesses of resource exploitation
- A relatively large amount of data and information is needed for a well performing, efficient MPA
- Mismanagement and paper parks are common

What about Finland/GoB?

- Large amount of MPAs, fairly good coverage
  - International target of 10% protection
- Research on MPAs is minimal
- Mismanagement and paper parks?

Regulations and prohibitions

- Finnish MPAs are implemented by laws
  - Luonnonsuojelulaki, Vesilaki, Maa- ja rakennuslaki
- Some have management plans etc.
  - Hoidon ja käytön suunnitelma, Järjestyssäännöt
  - (The scientific census is that site-specific management plans are vital MPAs)
  - Only a small number of Finnish MPAs have management plans, and their sufficiency is questionable
- Different laws regulate different human activities

Conservation within Finnish MPAs

- What is allowed, regulated and prohibited in FMPAs?
  - Specifically Natura 2000 sites
- What is the goal of the protection?
- What threatens the underwater ecosystems of the MPAs?
- What is the connection between the management (i.e. regulations) and the goals of the protection?
- **Are Finnish MPAs protecting what they aim to protect?**

Underwater habitats

- Habitats that the Natura 2000 sites are based on
  - In Finland these are inlets and bays, sandbanks, reefs, lagoons and estuaries
  - Defined by their structure, geology, biota etc.

BIOTOPE INFORMATION SHEET

BIOTOPE INFORMATION SHEET

English name: **Coastal lagoons**	Code in HELCOM HUB: **1150**
Characteristic species: *Charales,* Cyperaceae, *Phragmites australis, Potamogeton* spp., *Ruppia spp., Zannichellia palustris*	
Past and Current Threats (Habitat directive article 17): Eutrophication (H01.05), Contaminant pollution (H03), Construction (dredging J02.02.02), Fishing (F02)	Future Threats (Habitat directive article 17): Eutrophication (H01.05), Contaminant pollution (H03), Oil spills (oil spills in the sea H03.01), Construction (dredging J02.02.02), Fishing (F02)

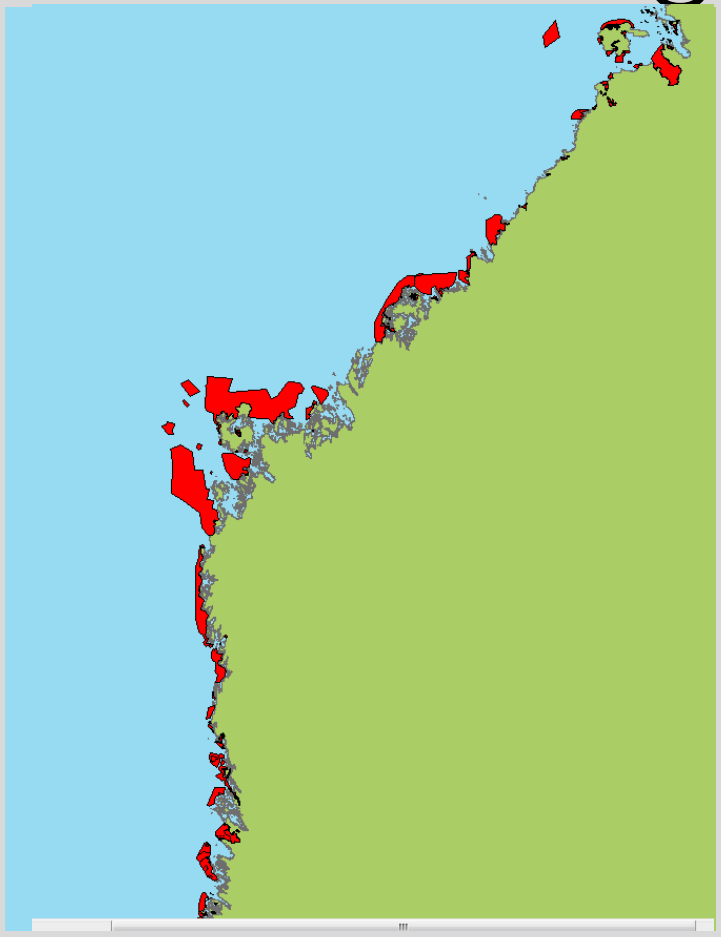
What is prohibited in the MPAs?

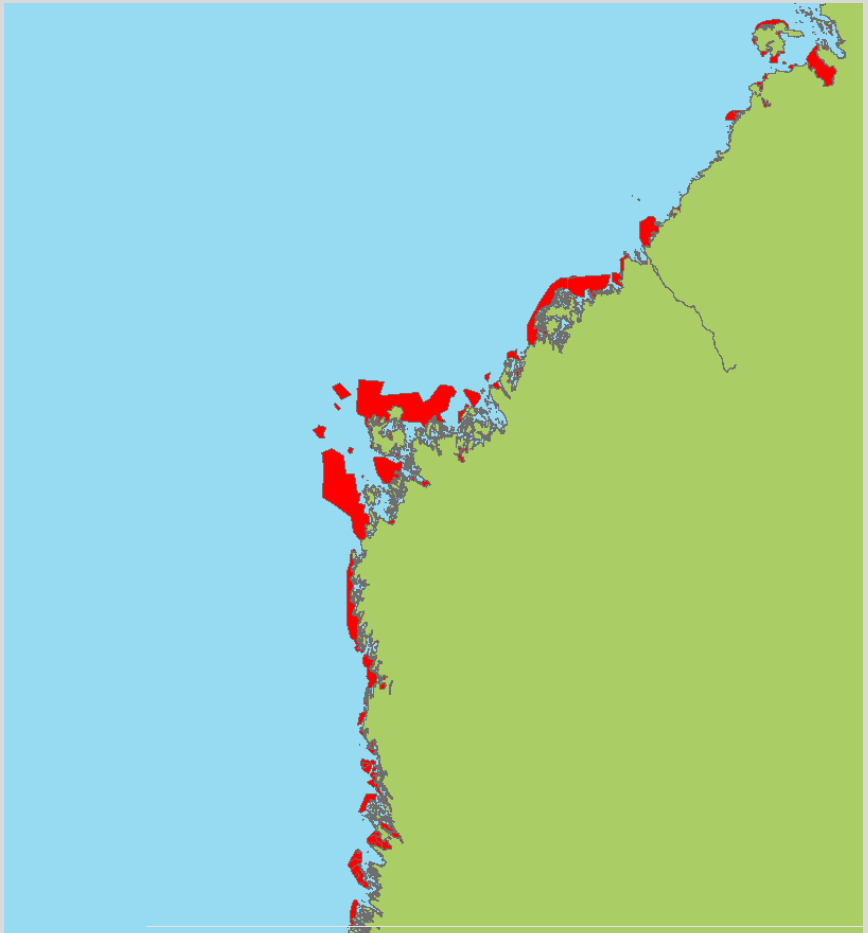
- 0 = allowed
- 1 = regulated
- 2 = prohibited

- (there is no info regarding many of these)

	LSL	MRL	VL
Anchoring	1	0	0
Aquaculture	0	0	0
Ashore	1	0	0
Boating	1	0	0
Building/construction	2	1	1
Disturbance	2	1	1
Dredging	1	0	1
Dumping	0	1	1
Extraction of material	2	0	1
Fishing, commercial	1	0	0
Fishing, leisure (angling)	1	0	0
Fishing, leisure (net)	1	0	0
Hunting (seals)	2	0	0
Input of contaminant pollution	0	0	0
Input of heat	0	0	0
Input of nutrients	0	0	0
Input of sound	0	0	0
Littering	0	0	0
Shipping/water traffic	1	0	1
Tourism/recreation	0	0	0

Connecting the dots… or not?





Percentage of MPAs with a relevant threat allowed by law

- Dredging 2%
- Dumping 41%
- Extraction of materials 1%
- Fishing 9%
- Input of contaminant pollution 63%
- Input of nutrients 64%
- Shipping and water traffic 4%
- Tourism and recreation 100%

Are Finnish MPAs mismanaged or paper parks?

- There are obvious gaps in the planning and management of the Finnish MPA network
- The lack of ecosystem-based management is a main issue
- In order to have an MPA network that helps in maintaining the underwater flora and fauna, these shortcomings need to be addressed
- We now have much more knowledge of the underwater nature than before, allowing for better planned MPAs