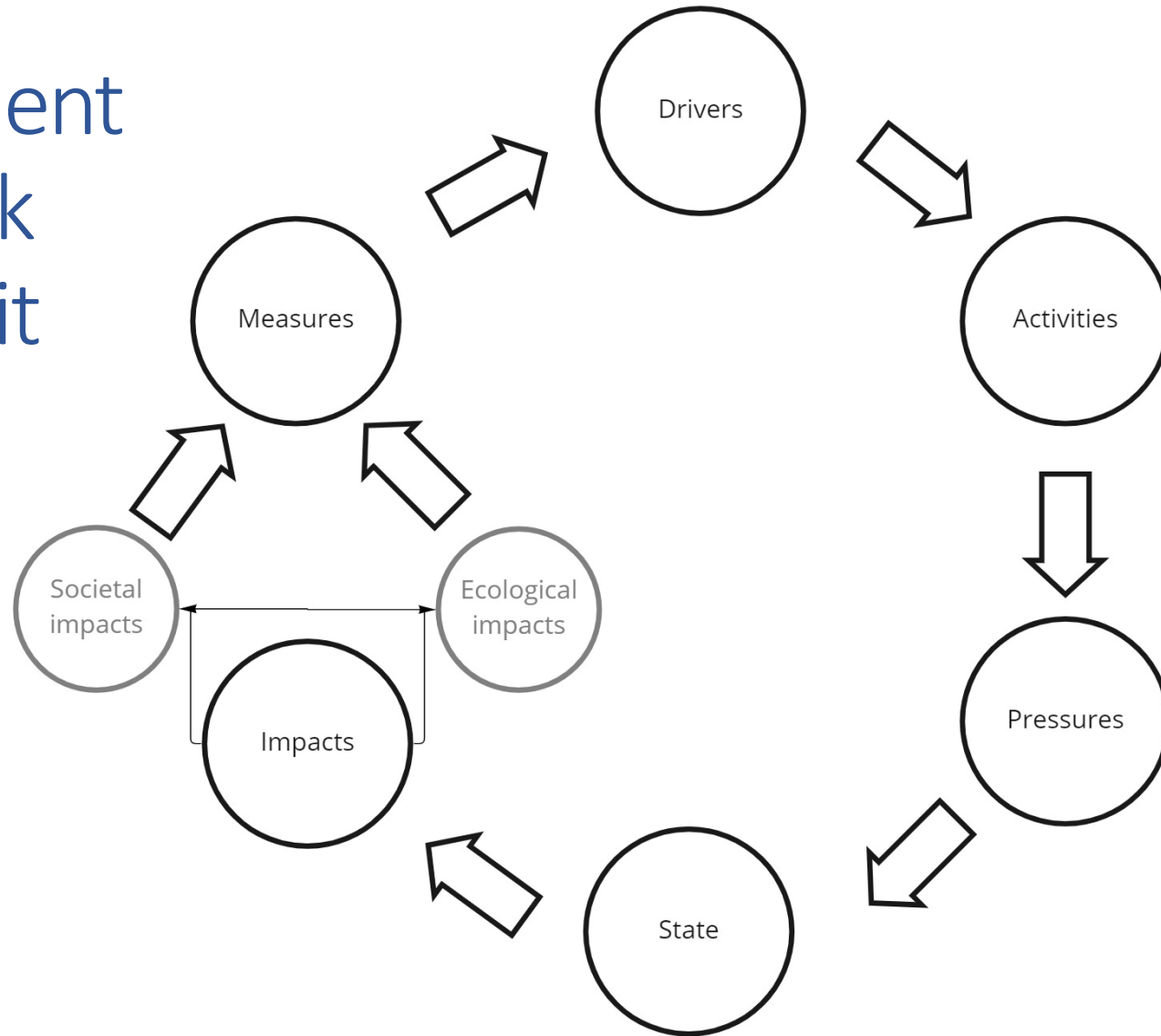


HELCOM approach to biodiversity protection

Why do we need protection?

- Human activities exert pressures on the environment.
- Anthropogenic pressures affect the environment causing a change in ecosystem state, i.e. an impact.
- A change in the state of any ecosystem component has cascading effects within the ecosystem, impacting other ecosystem components and how the ecosystem functions.
- A subsequent change in the state of the environment has socio-economic effects.

HELCOM management framework and what it means



HUMAN ACTIVITIES

PHYSICAL RESTRUCTURING	Land claim
	Canalisation, other watercourse modifications
	Coastal defence, flood protection
	Offshore structures
EXTRACTION OF NON-LIVING RESOURCES	Restructuring of seabed morphology
	Extraction of minerals
PRODUCTION OF ENERGY	Extraction of oil and gas
	Renewable energy generation and infrastructure
	Non-renewable energy production
EXTRACTION OF LIVING RESOURCES	Transmission of electricity and communications
	Fish and shellfish harvesting
	Fish and shellfish processing
	Marine plant harvesting
CULTIVATION OF LIVING RESOURCES	Hunting and collecting for other purposes
	Aquaculture – marine
	Agriculture
TRANSPORT	Forestry
	Transport infrastructure
	Transport – shipping
URBAN & INDUSTRIAL	Transport – land
	Urban uses
	Industrial uses
TOURISM & LEISURE	Waste treatment and disposal
	Tourism and leisure infrastructure
SECURITY & DEFENCE	Tourism and leisure activities
	Military operations
EDUCATION & RESEARCH	Research, survey and educational activities

PRESSURES

SUBSTANCES	Input of nutrients
	Input of organic matter
	Input of hazardous substances
	Input of litter
ENERGY	Input of sound
	Input of other forms of energy
BIOLOGICAL	Input or spread of non-indigenous species
	Input of genetically modified species, translocation of native species
	Input of microbial pathogens
	Disturbance of species
PHYSICAL	Extraction of species or mortality/injury to species
	Physical disturbance to seabed
	Physical loss of seabed
	Changes to hydrological conditions

The issue of scale

- The ecosystem, its species, habitats and functions don't recognise our anthropogenic borders.
- ...and neither do most of the pressures our action exert on it.



Action needs to be taken at a relevant scale for it to be effective!



Why should RSC's get involved in protection?

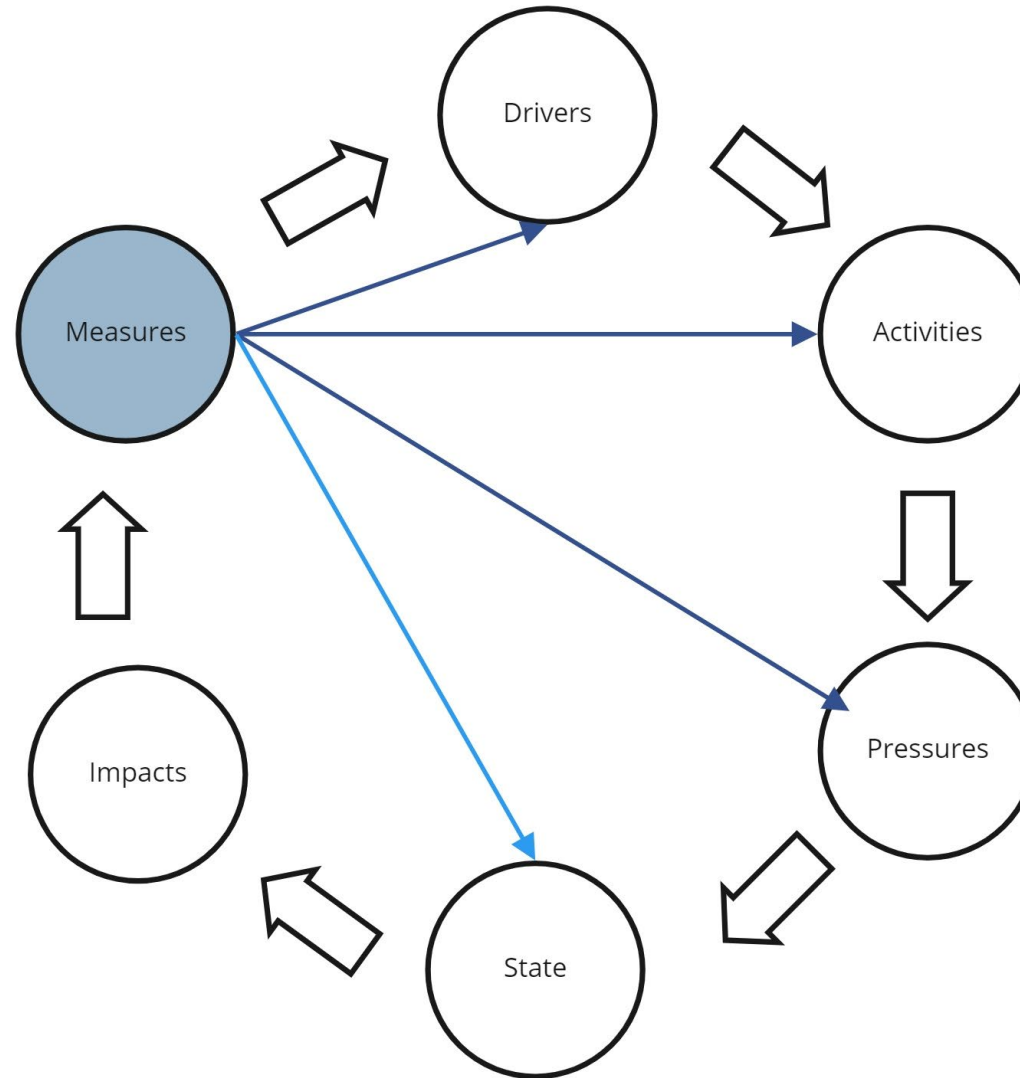


How do we address it?

- To improve the state of ecosystem components, **human activities need to be managed** so that their impact is within the tolerance of the ecosystem.
- Anthropogenic **pressures can be both direct and indirect.**
- Direct anthropogenic pressures are suitable for in-situ or localised management while indirect pressures need alternative forms of management.
- When pressures are removed **the ecosystem, given time, recovers to find a new dynamic equilibrium.**



Measures




miro




2021 Baltic Sea Action Plan: Structure & goals






Vision

 a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable economic and social activities.

Goal

 Baltic Sea **ecosystem** is healthy and resilient

Goals

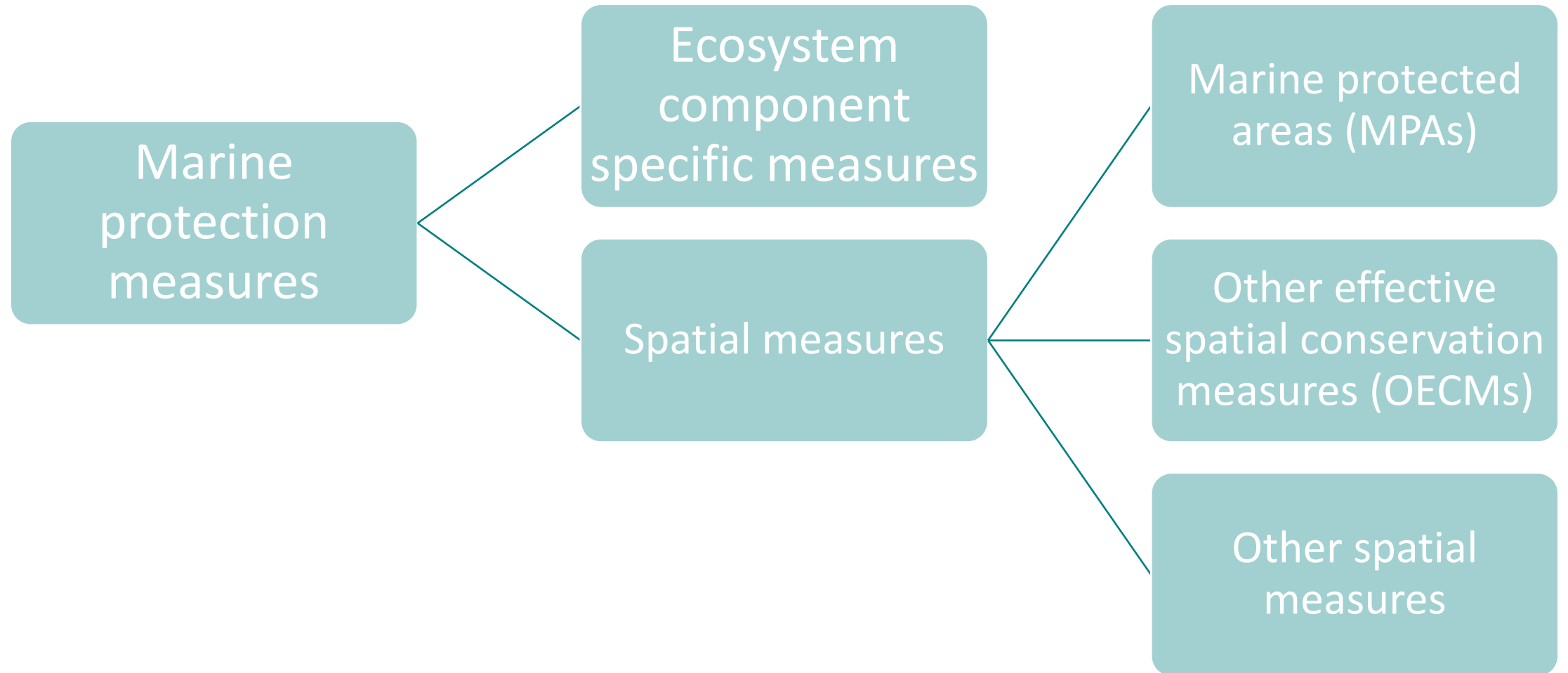
-  Baltic Sea unaffected by **hazardous substances and litter**
-  Environmentally sustainable **sea-based activities**
-  Baltic Sea unaffected by **eutrophication**

Horizontal topics

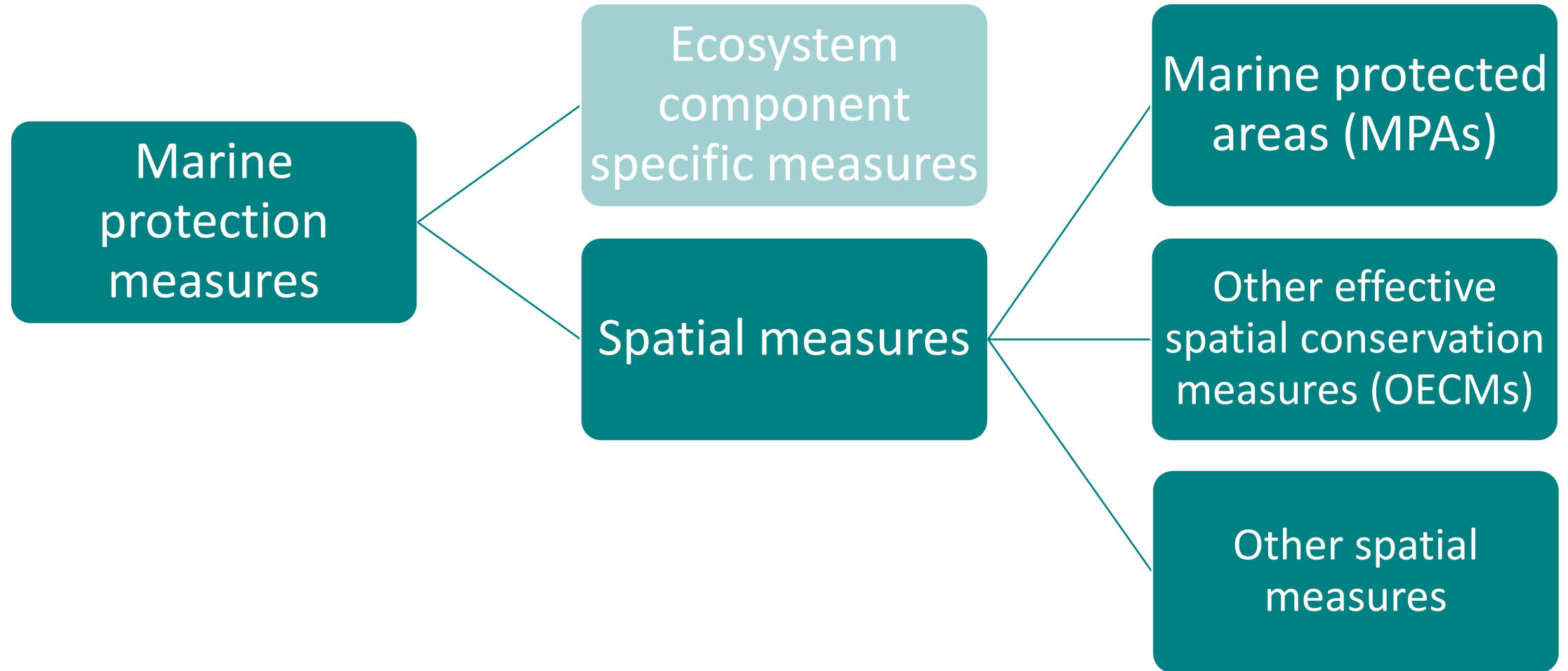
Climate change; monitoring; maritime spatial planning; economic and social analysis; financing; hot spots; knowledge exchange and awareness raising



Protection measures



Protection measures

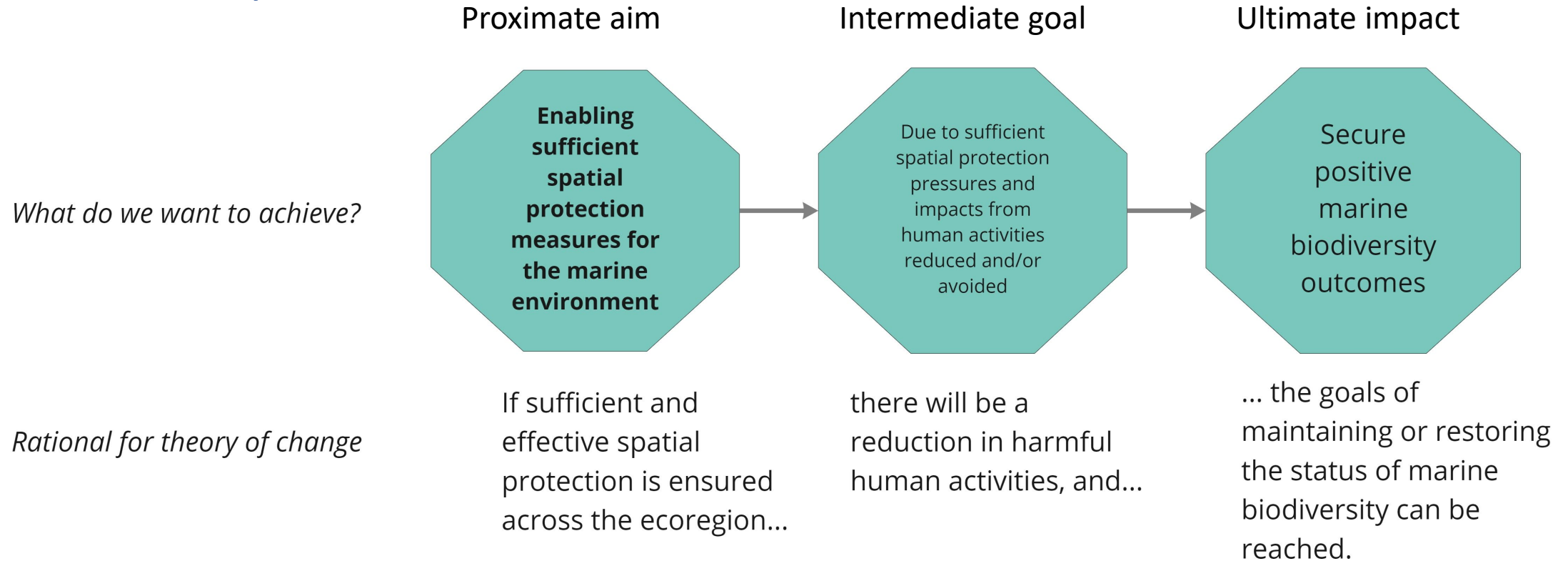


Protection measures

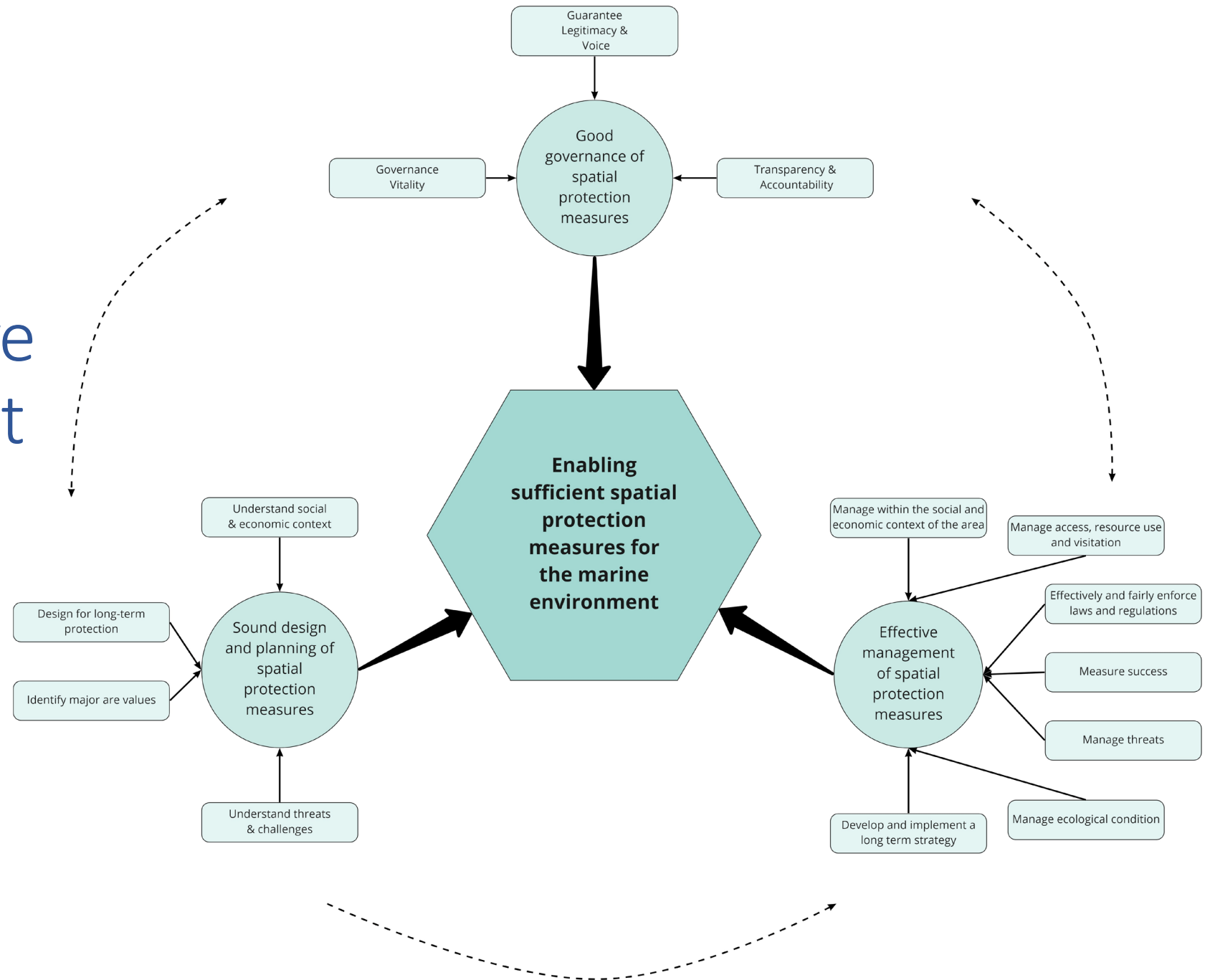
- When properly implemented, passive and active habitat and species restoration **measures significantly speed up the recovery and long term maintenance of ecosystem function.**
- **Protection and restoration measures are mutually supportive**, synergistic and, in many cases, a combination of the two are a pre-requisite to securing the objectives for each type of measure individually.
- The aim of protection and restoration is to **enable the processes of the ecosystem and its components to develop naturally**, not to strive to maintain an artificial, prescriptive, equilibrium.
- Implementation of measures require resources. Resources are limited. **To maximise positive ecosystem outcomes implementation of measures needs to be both ecologically effective and resource efficient.**
- The full potential efficiency and effectiveness of measures can be secured only if **measures are implemented in a strategic way i.e. at the ecologically appropriate scale, based on sound knowledge and with the support of, and within, the appropriate societal and governance context.**
- Reaching positive ecosystem outcomes draws on holistic **consideration of socioeconomic aspects**, including the distribution of human activities and the resulting pressures, possible conflicts of interest, as well as resource limitations.
- **A strategic approach to planning, governing and managing protection and restoration measures**, implemented at a scale which is ecologically relevant, is prerequisite to ensuring optimising benefits of measures for the benefit of the ecosystem and the return investment on both current and future resource use.



Aim of protection (i.e. what are we trying to achieve)



Conceptual framework for protection (i.e what do we have to address to get there)



Individual MPAs vs. an MPA network

- MPAs are management units, and each needs to be managed in a way that fits the specific area.

BUT

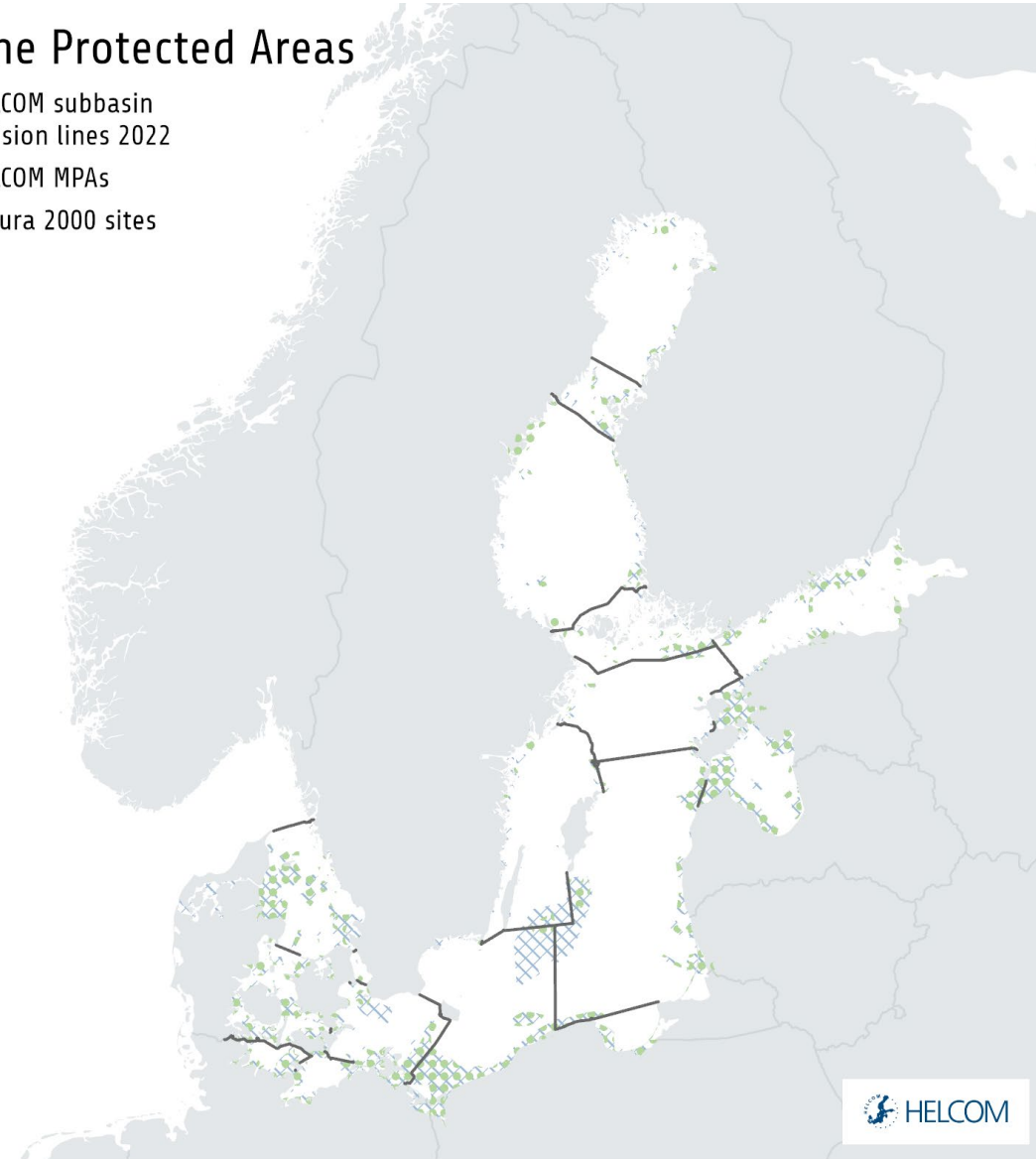
- In order to achieve their individual conservation objectives management and measures in only one area may not be enough.



- The benefit to the ecosystem of a cohesive and coherent set of measures, e.g. a network of mutually supportive MPAs, is significantly greater than the contribution of individual measures.
- The network approach looks at protection from the perspective of the ecosystem as a whole, increasing:
 - the possibility to secure ecological benefits.
 - the return investment.

Marine Protected Areas

- HELCOM subbasin division lines 2022
- HELCOM MPAs
- ▣ Natura 2000 sites



Current status of the Baltic Sea MPA network

- Baltic Sea MPA network covers approximately 16.5% of the Baltic Sea.
- Included in this are 178 HELCOM MPAs, amounting to about 13.2% of the Baltic Sea.
- Significant increase in spatial coverage is expected in the future and the overall level of ambition is high across the region.



What's on the horizon?

- Both the use of spatial conservation measures such as MPAs and restoration measures have **significant potential beyond the current implementation.**
- Countries around the Baltic Sea have committed to:
 - **expanding the spatial coverage to 30%**, i.e. approx. doubling the amount of protected area, in the next 7 years. **Of this 1/3 should be strictly protected.**
 - **improving MPA management.**
 - **improving the effectiveness and coherence of the MPA network.**
- In order to effectively manage human activities and limit impact on the ecosystem, sufficient data and knowledge is needed to support the decision making processes. Availability of biological, ecological, societal and economic data differs across any given area, but, where possible, species, biotope and habitat information from data-rich areas can be transposed to other areas with similar environmental conditions with acceptable confidence using modelling.
- Governance, designation and management challenges need to be addressed simultaneously and in a comprehensive manner. This, is combined with an ecosystem approach where biodiversity aspects (including ecosystem services) and pressures are considered at ecologically relevant scales, provides the best opportunity for positive impact.
- Protection and restoration activities represent long-term measures and to ensure they are sufficient both now and, in the future, strategic planning and implementation needs to account for changes in the environment, first and foremost: climate change.



MPAs and MSP

- **MPAs: Islands of hope in a sea of despair? MSP to the rescue! Or?**
- MSP can lead to positive or negative effects, depending on how and where space is allocated for different uses.
- Positive biodiversity outcomes=long term sustainability.
- It is essential that how different human activities affect the both the local and broader ecosystem are included in the planning process in order to ensure long term sustainability.
- When applied optimally, MSP can make a difference for Baltic Sea ecosystems and society by guiding or directing different types of human uses spatially in a way that maximizes the possibility for a positive biodiversity outcomes, e.g. planning efforts can enhance protection, such as facilitating a Baltic Sea network of marine protected areas and improve marine ecosystem services by securing space for different sea uses in a way that will protect and improve long-lasting ecosystem function and provisioning of key ecosystem services.



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Thank you for your attention!

