

Environmental management strategy for MSP

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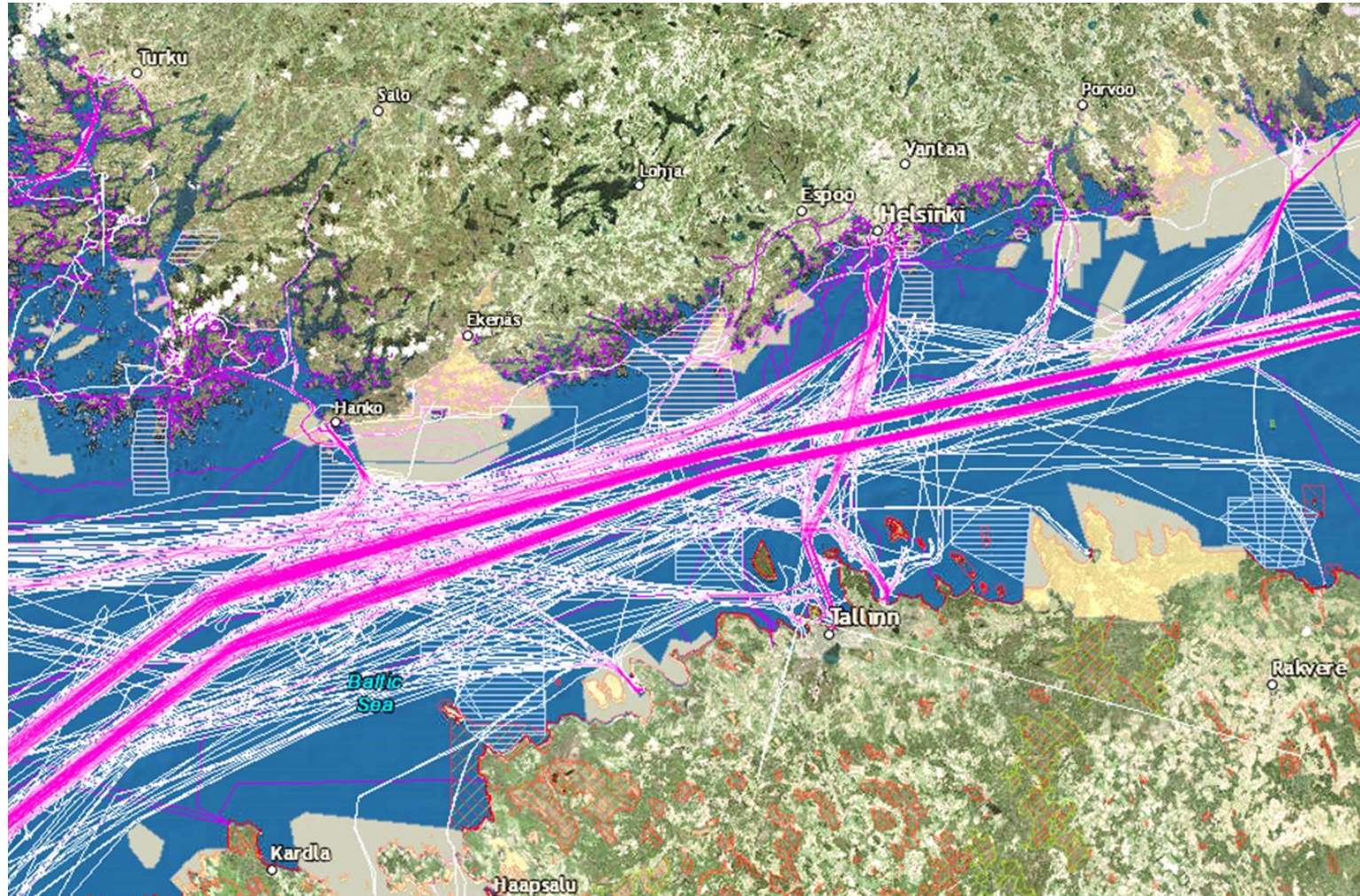
PLAN4BLUE

**MARITIME SPATIAL PLANNING FOR
SUSTAINABLE BLUE ECONOMIES**



The Gulf of Finland

Sensitive environment and intensive multi-use of marine space



Objective

The “**Environmental management strategy for MSP**” is providing general guidance to planners, decision makers and stakeholders for improving the effectiveness of national and transboundary maritime planning activities to achieve the MSP related environmental and socio-economic policy objectives



Strategic Priority 1: Abide to legislation and regulatory requirements

- It is stated (Cormier et al. 2019) that the “Policymaking processes are dependent on vertical governance approaches which produce a hierarchy in the development of global, ecoregion, and regional goals to guide the development of national and local objectives and to allocate responsibility for their delivery”
- Potential planning options have to abide to legislation and regulatory requirements for the planning area provided that there are regional, national or international agreements, which enable and/or enforce the environmental management measures to be performed



Strategic Priority 2: Provide knowledge to promote adaptive and sustainable Maritime Spatial Planning

- **Strategic objective** for data and information management is to produce knowledge products and information tools to facilitate knowledge and understanding of economic potential, the natural functioning of ecosystems, human impact on the marine environment with aim to promote the sustainable MSP activities.
- **This objective is achieved based on analysis of the comprehensive data sets** on marine substrates, habitats and ecosystem functions as well as social/economic data on maritime human activities.
- **As a result, the data is transformed into useful knowledge products and information tools** that are easily available, and effectively disseminated where required.

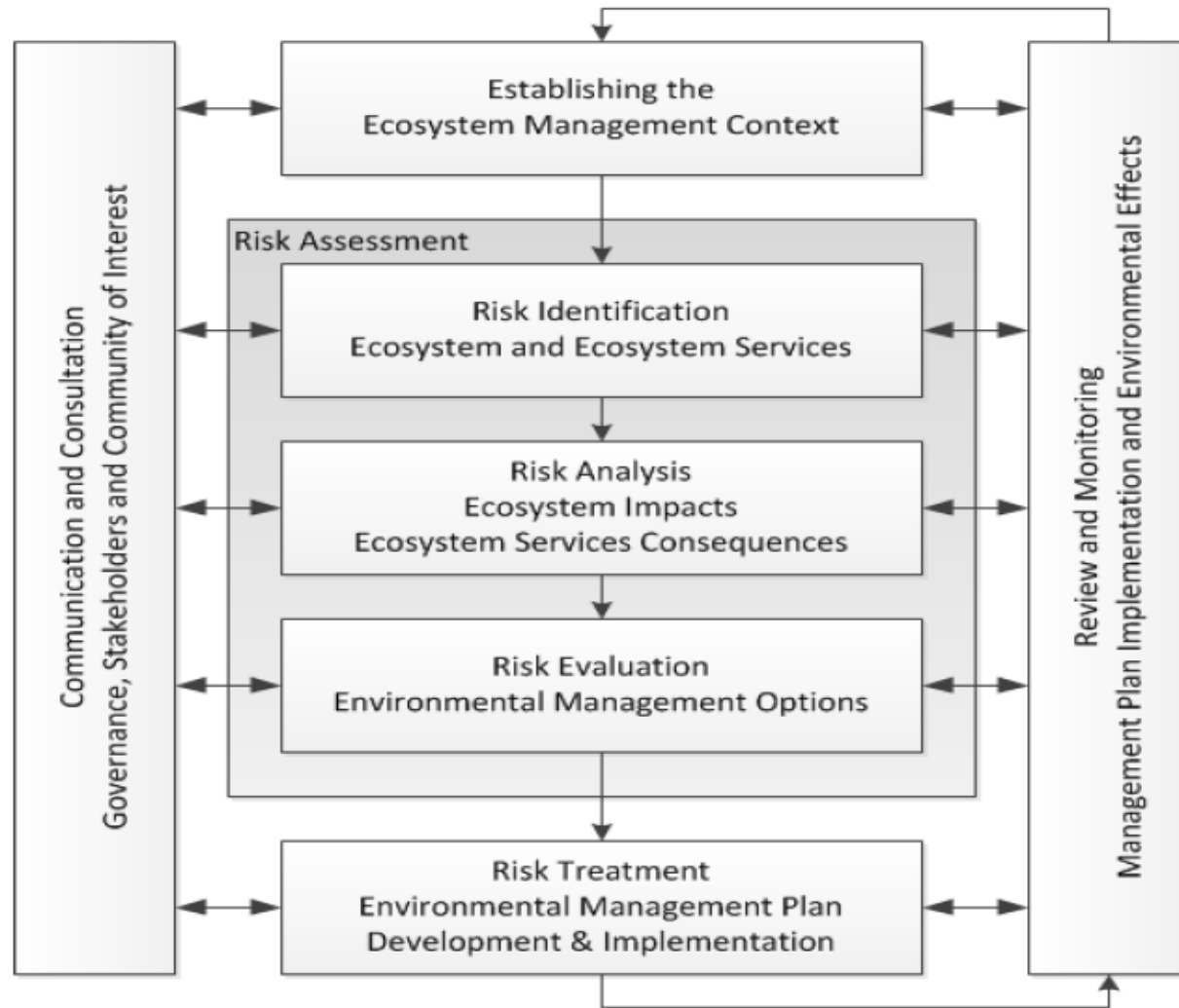


Strategic Priority 3: Implement the ecosystem risk management framework for Maritime Spatial Planning

- The aim of managing the ecosystem risks in the MSP context is to reduce the uncertainties of achieving environmental, social and economic objectives
- At that, the **spatial and temporal allocations of a marine spatial plan once implemented** should reduce the uncertainties of achieving development and conservation objectives



Ecosystem risk management framework adapted from ISO 31000:2009 risk management standard (Cormier et al. 2013)



Adapted: ISO 31000:2009

Risk assessment - ISO 31000 (ISO 2018)

Risk assessment is a process that is made up of three separate processes: risk identification, risk analysis, and risk evaluation.

Risk identification is a process that is used to find, recognize, and describe the risks that could affect the achievement of objectives.

Risk analysis is a process that is used to understand the nature, sources, and causes of the risks that we have identified and to estimate the level of risk. It is also used to study impacts and consequences and to examine the controls that exist.

Risk evaluation is a process that is used to compare risk analysis results with risk criteria in order to determine whether or not a specified level of risk is acceptable or tolerable.



Ecosystem risk management framework

Within an ecosystem context

- **Risk identification** is used to identify the ecosystem vulnerabilities in relation to pressures generated from activities of the drivers operating within the boundaries of the ecosystem.
- **Risk analysis** is used to characterize the likelihood and magnitude of the ecosystem and socio-economic impacts, with additional consideration to existing regulations and policies used to manage the risks along the pathways of the causes and their effects.
- **Risk evaluation** is used to ascertain the severities of the risks to determine if status quo is acceptable or if there is need for additional or enhanced management measures”



Risk treatment

- Referring to ISO 31000 (ISO 2018) the “Risk treatment is a risk modification process. It involves selecting and implementing one or more treatment options. Once a treatment has been implemented, it becomes a control or it modifies existing controls”

Within an ecosystem context risk treatment process:

- can eliminate the risks by controlling a driver’s access to the management area
- can change the likelihood of the events by controlling the activities of the drivers operating in the management area or
- can change the magnitude or extent of the impacts, consequences or repercussions by mitigating the effects of the event, if it occurs



Review and monitoring

- **The planners and stakeholders are expected to review the MSP risk management framework and the related risk management processes focusing specifically on**
 - **risk management policy and plans**
 - **the risks, risk criteria, risk treatments, risk management controls, and**
 - **residual risks (risks left over after implementation of a risk treatment options)**



Communication and consultation

- Referring to ISO 31000 2018 (ISO 2018) communication and consultation is a dialogue between an organization and its stakeholders. This dialogue is both continual and iterative. It is a two-way process that involves both sharing and receiving information about the management of risk. However, this is not joint decision making
- Once communication and consultation is finished, decisions are made and directions are set by the organization, not by stakeholders
- Discussions could be about risks, their nature, form, likelihood, and significance, as well as whether or not risks are acceptable or should be treated, and what treatment options should be considered



Strategic Priority 4: Promote risk management to achieve and maintain good environmental status (MDFD)

- **The risk management to achieve and maintain good environmental status is based on the implementation of operational controls that actually reduces the uncertainties of achieving objectives**
- **It is the programme of measures that reduces the uncertainties of achieving and maintaining good environmental status**



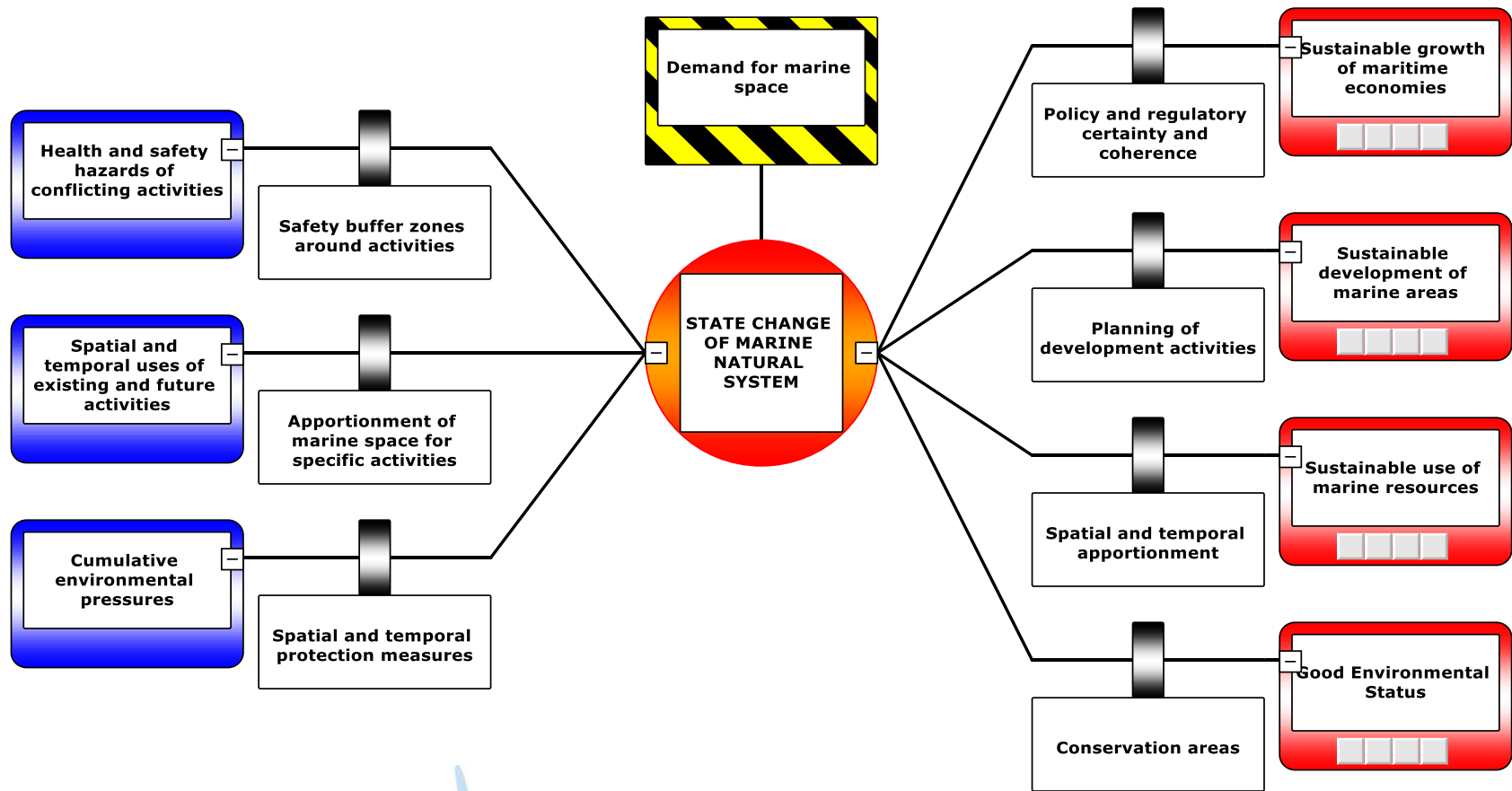
Strategic Priority 5: Facilitate adherence with unifying framework for marine environmental management

Valuable problem-structuring framework (Elliott et al., 2017) - DAPSI(W)R(M) (pronounced dap-see-worm) in which

- Drivers of basic human needs require Activities which lead to Pressures.
- The Pressures are the mechanisms of State change on the natural system which then leads to Impacts (on human Welfare).
- Those then require Responses (as Measures)
- This recognises that the Pressures are the mechanisms of change, that it is human Activities that cause Pressures not the Drivers themselves, and that Impacts are on human Welfare
- It is axiomatic that while we assess, measure and monitor the Pressures, State changes and Impacts (on Welfare), we act on and manage the Drivers and Activities to prevent deleterious effects



Bowtie diagrammatic representation of the Maritime Spatial Planning related prevention and mitigation management measures to achieve the environmental, economic and social sustainability objectives (modified from Cormier et al. 2015)



Strategic Priority 6: Enhance common understanding and language for evaluating ecosystem risk management measures in MSP

- Without standardized processes and harmonized vocabulary, the various approaches and processes used in integrated oceans management and MSP continue to propagate a broad range of definitions, concepts and understandings that are most often implied, not explicitly defined and therefore provoke misunderstandings between planners from different countries and/or sectors as well as between planners and stakeholders
- It is suggested that the use of international standards available under ISO, can avoid the need to develop a framework and debate definitions while the updated in 2018, **ISO 31000 provides definitions, performance criteria and a common overarching process for identifying, analysing, evaluating and managing risks within a policy context initiatives**

(Cormier and Kannen, 2019)

Strategic Priority 7: Establish horizontal integration of stakeholders across levels of governance

Referring to predefined typology of stakeholders (Newton and Elliott 2016), it is suggested (Cormier et al. 2019)

- To establish horizontal integration of stakeholders, linked to the DAPSI(W)R(M) framework, that is composed of Regulators, Extractors, Inputters, Affectees, Influencers and Beneficiaries, and
- To incorporate all stakeholders in the framework designed to ensure that sector activities and their pressures are managed effectively to reach the broader policy goals and objectives
- Both the Affectees and Beneficiaries are key consultees on the development of mitigation and recovery controls led by the Regulators who manage the impacts



Strategic Priority 8: Assure the quality of the Maritime Spatial Plan

The 10-tenets of adaptive environmental management and sustainability (Barnard and Elliott 2015) provide for comprehensive quality considerations for the maritime spatial plan (Cormier et al. 2015). Environmental management measures should be:

- 1) Environmentally / ecologically sustainable,
- 2) Technologically feasible,
- 3) Economically viable,
- 4) Socially desirable/tolerable,
- 5) Legally permissible,
- 6) Administratively achievable,
- 7) Politically expedient,
- 8) Ethically defensible,
- 9) Culturally inclusive, and
- 10) Effectively communicable.

The environmental management Quality Objectives are addressed by the MSP process in consultation with competent authorities, industry stakeholders and communities of interest with aim to ensure the adequate integration of the ecological and socio-economic objectives and legislative requirements



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Thank you!

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