

# Ecosystem valuation informing national and regional marine policies in the Baltic Sea region

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Valuing Marine Ecosystem Services -

Taking into account the value of ecosystem benefits in the Blue Economy

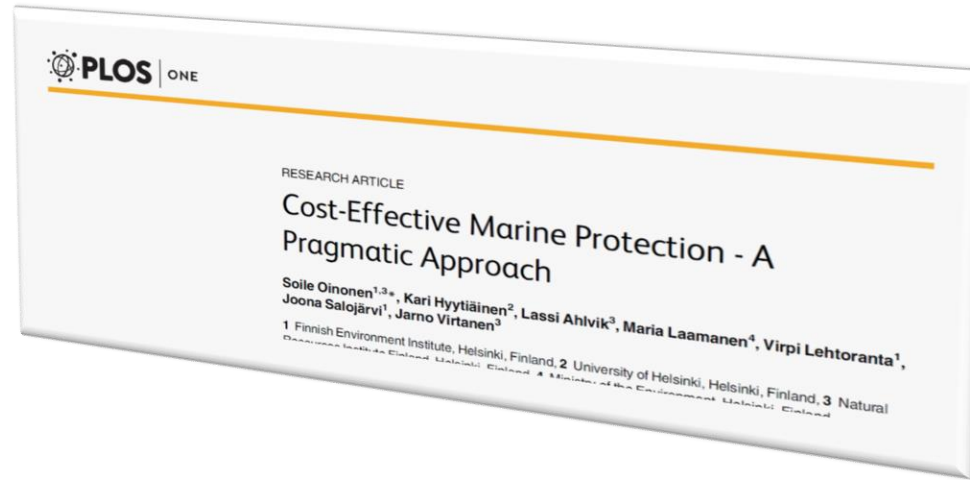
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European Parliament Brussels



# Background & Experience

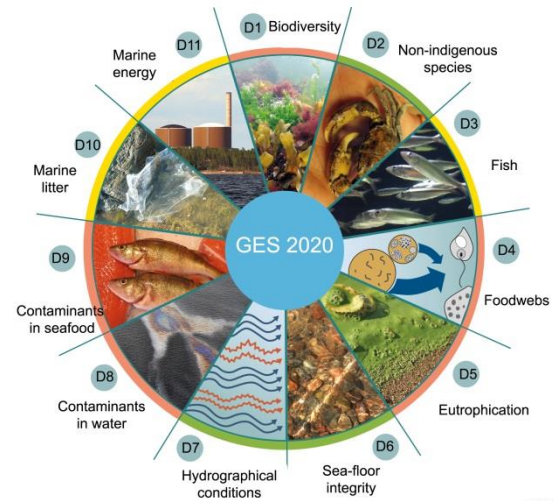
- ✓ Adj. Prof. Environmental and Resource Economics, University of Helsinki
- ✓ Co-chair: EU Marine Strategy Framework Directive Working Group on Programme of Measures, Economic and Social Analysis (WG POMESA)
- ✓ Chair: HELCOM Expert Network on Economic and Social Analysis
- ✓ Vice-Chair: HELCOM Platform on Sufficiency of Measures (HELCOM SOM Platform)



# What initiated valuation studies?

The Marine Strategy Framework Directive calls for economic analyses to:

- assess the cost and benefits of measures to achieve Good Environmental Status (GES)
- estimate the forgone benefits if GES is not achieved
- analyse the social and economic impact of the use of marine waters



Source: Meren pärskäys 2015/SYKE



# Costs of Degradation | Finland's Marine Strategy 2012

- Economic benefits forgone if GES is not reached
- Contingent Valuation study (Ahtiainen *et al.*, 2014)
- The economic benefits lost due to eutrophication:  
€200 million per year
- Costs of degradation estimate in Finland's Marine Strategy in 2012



# Costs of Degradation | Finland's Marine Strategy 2018

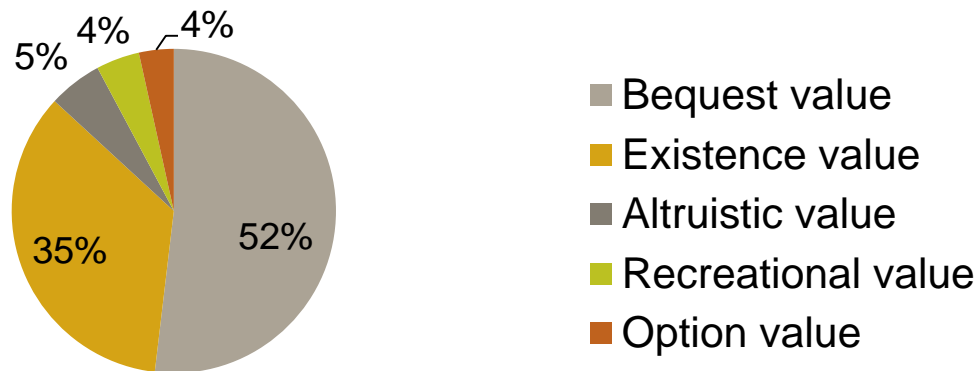
- Fit for purpose Contingent Valuation study (Nieminen *et al.*, 2019)
- The study covered all 11 GES descriptors
- Failure to achieve GES costs €432–509 million annually
- Costs of degradation estimate in the review of Finland's Marine Strategy in 2018



# Why use public funds for marine protection?

Additional question in the Contingent Valuation study (Nieminen et al. 2019)

***“What is the most important reason for you to be willing to pay for achieving the good status of the Finnish marine waters?”***



**Bequest value = “I want to ensure a healthy Baltic Sea for the future generations”**

**Existence value = “The existence of a healthy ecosystem is important for me”**

**Altruistic value = “I want to ensure that other people in my generation can use the Baltic Sea for recreation”**

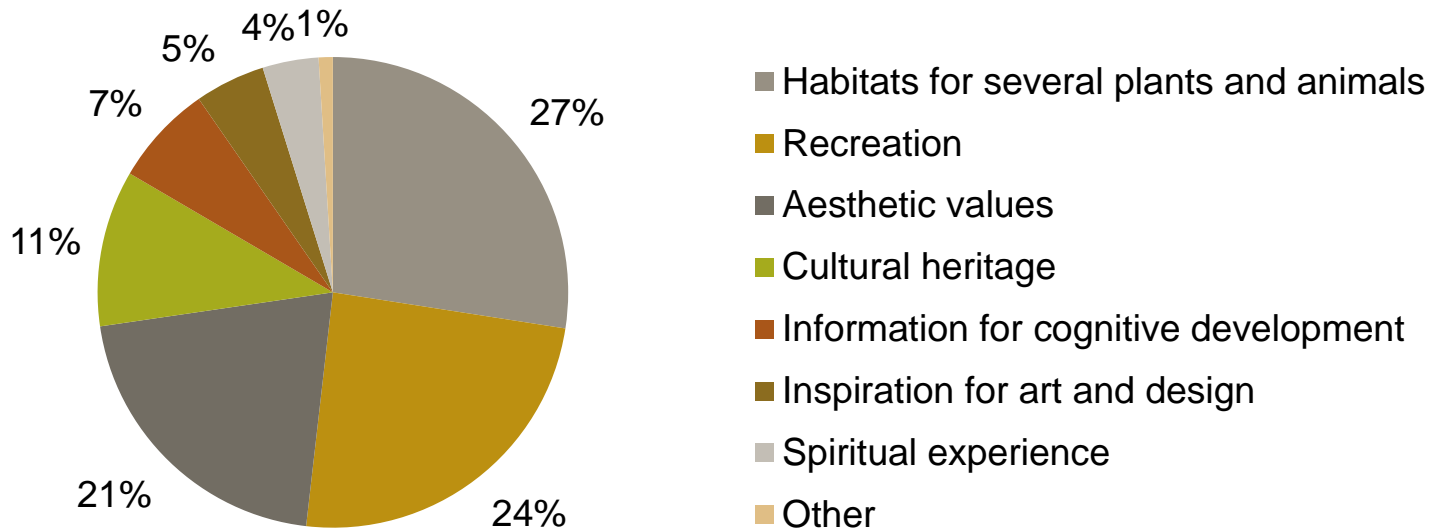
**Recreational value = “I use the Baltic Sea for recreation”**

**Option value = “I want to ensure that I will have the opportunity to use the Baltic Sea for recreation in the future”**

# Importance of cultural ecosystem services

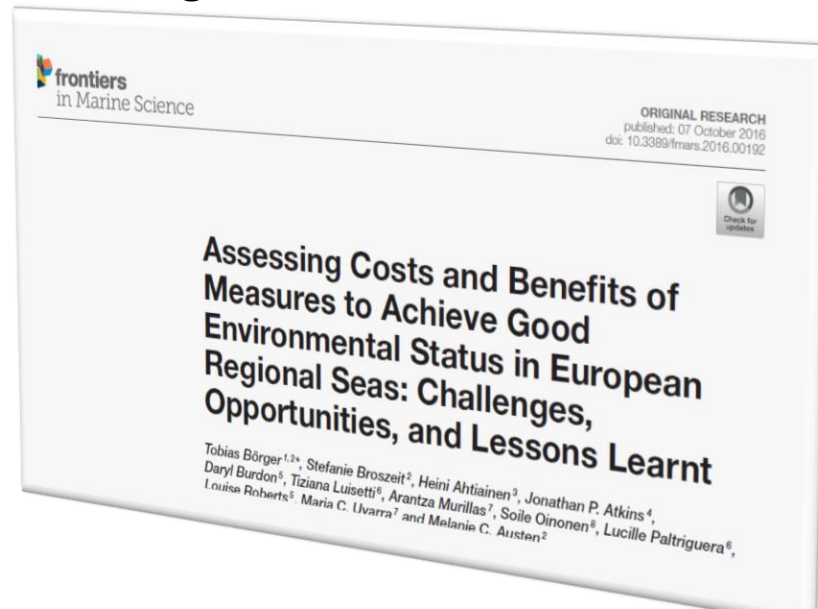
Additional question in the Contingent Valuation study (Nieminen et al. 2019)

“How important are the following matters for you on the Finnish coast or at the Finnish marine waters?”



# Costs and benefits | Finland's Marine Strategy | Programme of Measures 2016

- Benefit transfer from existing valuation studies
- Cost-efficiency analysis
- Benefits are 2-6 times higher than the costs





# Economic and social analyses

in the Baltic Sea region –  
 HELCOM Thematic assessment 2011–2016



Baltic Marine Environment  
 Protection Commission



Supplementary report to the HELCOM 'State of the Baltic Sea' report (PRE-PUBLICATION)

Economic and social analyses



HELCOM Thematic assessment 2011–2016

From eutrophication



€3.8-4 billion

Marine & coastal recreation\*\*



€1-2.2 billion

Fish stock & habitat degradation



€1.8-2.7 billion

**Potential revenue benefits per year**  
 when good environmental status is achieved for the Baltic Sea

\*\* Travel cost method  
 Source: State of the Baltic Sea report, Second HELCOM Holistic Assessment

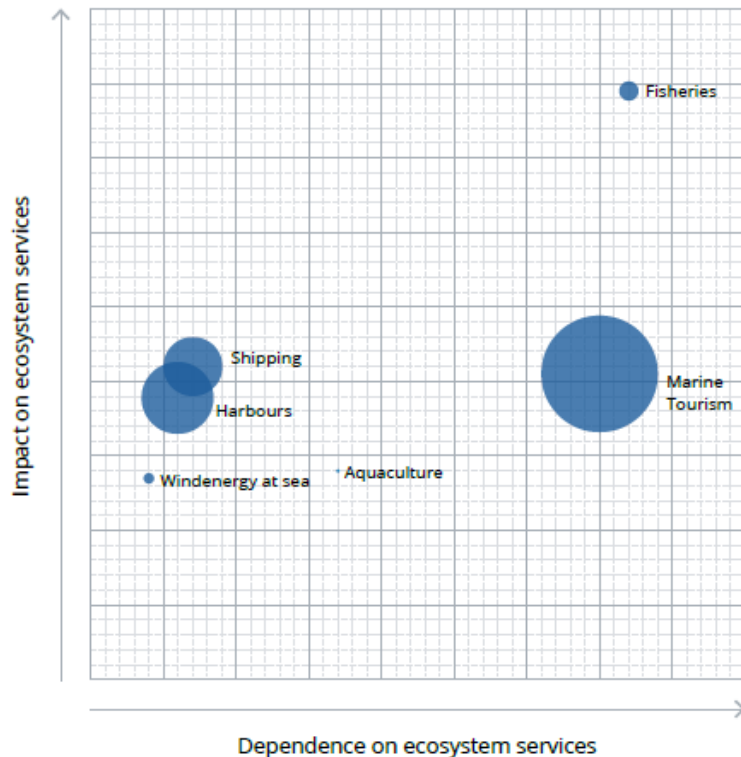
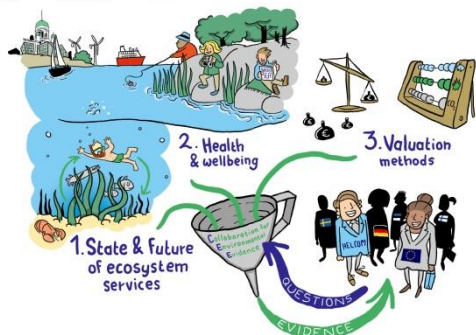


Figure 7 The bubble sizes represent the value added by each activity.



**BONUS ROSEMARIE**

Blue health and wealth from the Baltic Sea –  
a participatory systematic review for smart decisions



# Systematic Reviews Marine Ecosystem Accounting Update of the HELCOM Baltic Sea Action Plan

## ACTION

ACTIONS TO EVALUATE AND IDENTIFY EFFECTIVE MEASURES TO  
REACH GES IN THE BALTIC SEA MARINE REGION (ACTION)



Co-funded by the  
European Union



MAIA is a Horizon 2020 project aimed at promoting and developing the System of Environmental Economic Accounting in the EU and associated countries. MAIA is coordinated by Wageningen University and Research, and has 18 partners in 10 countries. The project will be implemented from 1 November 2018 to 31 October 2022.

# Thank you!

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Photo:Riku Lumiaro