



MSP and Climate Change – from theory to practice in the Baltic Sea region

EXPERIENCES FROM NATIONAL MSP - SWEDEN

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Points of departure

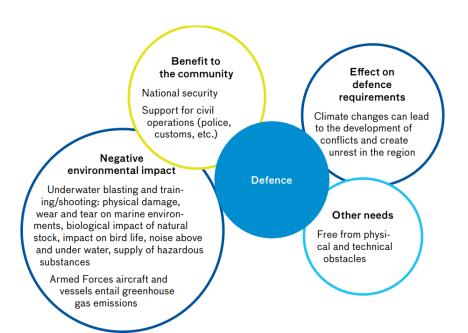
- Climate change will impact the seas and the opportunity for human kind to use the sea as a resource in many different ways, which is something that the MSP must relate to.
- The planning needs to be based on the best up-to-date knowledge and regularly incorporate new knowledge on climate change.
- MSP can contribute to more healthy marine ecosystems and their various services and provide significant benefits in terms of mitigation of and adaptation to climate change.

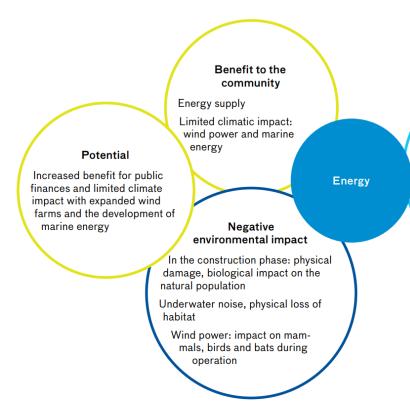
Current status report 2014



Initial analysis

 Analysis of climate change impact and contributions to mitigation or adaptation for each maritime sector and interest





Other needs

Wind power: good wind speeds, shallow marine areas, proximity to the coast

Sea-wave power: good wave conditions, proximity to the coast

Nuclear power: access to cooling water

Current status report 2014

Conclusions from the early analysis

- Climate change is a crosscutting issue
- Focus should be on
 - Offshore wind (mitigation)
 - Biodiversity (adaptaion and resilience)
 - Sand extraction (adaptation and resilience)
- Other sectors (eg. fisheries, shipping) are affected by climate change, but it is difficult to predict the spatial concequences making it difficult to translate them into specific planning solutions



Swedish plan proposals

















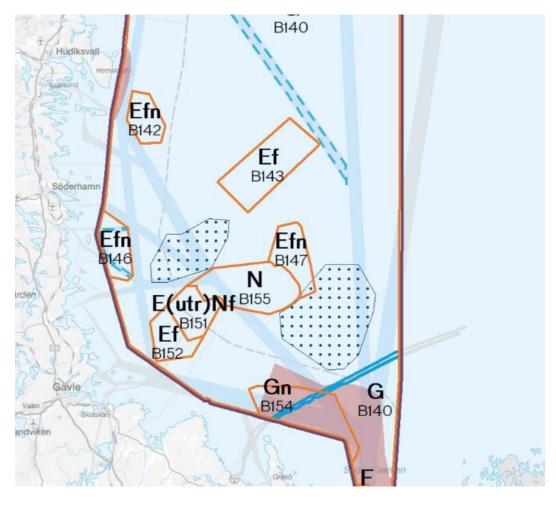




Electricity transfer



Gulf of Bothnia



Offshore wind (plan proposals)

- Ambition:
 - 50 TWh (annually)
- Result:
 - 15 areas
 - 23-31 TWH (annually)
 - 6-8 GW
- Conflicts with nature conservation and defence interests





Ö242 **N** Ö245 E(utr)fn

Biodiversity (plan proposals)

• Ambition:

Protect and improve biodiversity to to strengthen resilience

Result:

45 areas designated for nature

38 areas identified as areas with high nature values (incl. climate refugia)

Nature given explicit priority over offshore wind in some cases



N = Nature n = areas for particular consideration

Gn G

Sand extraction

(plan proposals)

- Ambition:
 Prepare for future sand extraction
- Result:
 - 5 areas (more defined delimitation to be decided in municipality planning or in project phase)



Sand extraction



Climate refugia

- "an area important for the preservation of certain species over time despite the climate change"
- 7 areas in the Baltic Sea:

herring (1)

blue mussel (5)

herring, blue mussel, bladder wrack (fucus vesiculosus) (1)



Concluding remarks

- Strong biodiversity is crucial for resilience so applying an ecosystem approach in MSP is beneficial from a climate adaption and resilience perspective
- More research is needed for the climate refugia concept (eg. no analysis is made for the Skagerrak/Kattegatt)
- Renewable energy brings climate benefits, but the extent of the benefits depends on the national situation and the time perspective



BALTIC 4th MSP



Delivering MSP Interactions and Capacities Across All Levels













