Status of the Baltic Sea Marine Protected Areas network

Hanna Paulomäki
Helsinki Commission
Bremen Ministerial Declaration 2003

- A Baltic specific regional approach
- The aim to protect habitats, flora and fauna specific to the Baltic Sea
- HELCOM-OSPAR Joint Work Programme
  - Commitment to the ecosystem approach
  - Commitment to develop a network of MPAs that is *well-managed* and *ecologically coherent*
Baltic Sea Action Plan 2007

Biodiversity and nature conservation

- New Baltic Sea Protected Areas
- Ecological coherence by 2010
- Mapping of habitat-forming species
- Marine Spatial Planning
- Fisheries related measures
The BSPA network 1994-2010

<table>
<thead>
<tr>
<th>Designated BSPAs</th>
<th>Rec 15/5</th>
<th>1994</th>
<th>2004</th>
<th>2008</th>
<th>2009</th>
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<td><strong>Baltic Sea</strong></td>
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<td>89</td>
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<td>159</td>
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</table>

<table>
<thead>
<tr>
<th>Total area of BSPAs (km²)</th>
<th>Marine fraction (km²)</th>
<th>Protected marine area (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>27,020</td>
<td>16,022</td>
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<tr>
<td>2008</td>
<td>27,405</td>
<td>22,569</td>
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<tr>
<td>2009</td>
<td>34,009</td>
<td>29,058</td>
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<td>2010</td>
<td>48,784</td>
<td>42,823</td>
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</table>
## BSPA and N2000 networks

<table>
<thead>
<tr>
<th></th>
<th>Marine N2000 (km²)</th>
<th>Intersect</th>
<th>Total coverage over 12% of the Baltic Sea marine area</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>N2000 - BSPA</td>
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<tr>
<td></td>
<td>(km²)</td>
<td>(%)</td>
<td></td>
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<tr>
<td>Denmark</td>
<td>7,950</td>
<td>2,637</td>
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<td>6,532</td>
<td>2,777</td>
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<td>Germany</td>
<td>6,208</td>
<td>4,550</td>
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<tr>
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<td>560</td>
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<td>691</td>
<td>362</td>
<td>52.3</td>
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<td>7,205</td>
<td>1,146</td>
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<tr>
<td>Sweden</td>
<td>6,744</td>
<td>3,351</td>
<td>49.7</td>
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<tr>
<td>Baltic Sea</td>
<td>44,203</td>
<td>36,536</td>
<td>82.7</td>
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</tbody>
</table>

→ **Total coverage over 12% of the Baltic Sea marine area**

[Map by HELCOM]
Selection criteria for a BSPA

- Biological values (regional importance): 76
- Marine values: 74
- Ecologically significant habitats: 72
- Important migration route and resting area for species: 66
- Terrestrial values: 65
- Important breeding area for species: 59
- Representative area: 55
- Important feeding area for species: 55
- Area with high natural biodiversity: 53
- Geological values: 48
- Threatened/declining species: 47
- Important reproduction area for species: 47
- Rarity of species/habitats: 45
- Biological values (global importance): 45
- Threatened/declining habitats: 34
- Sensitivity of species/habitats: 29
- Keystone species: 22
- A significant decline in number, extent or quality of species: 16
- A significant decline in extent or quality of habitats: 13

Number of BSPAs
Management of the BSPAs

- Guidelines for Management of BSPAs updated and adopted in 2005
- BSEP 105, Planning and management of Baltic Sea Protected Areas: guidelines and tools (available on HELCOM web-site)
Protection of species and biotopes

- **Phoca vitulina**: 15
- **Phoca hispida**: 8
- **Phocoena phocoena**: 14
- **Halichoerus grypus**: 31
- **Sterna albifrons**: 32
- **Mergus serrator**: 21
- **Tadorna tadorna**: 14
- **Gavia immer**: 0
- **Gavia stellata**: 11
- **Gavia arctica**: 23
- **Gadus morhua**: 2
- **Saimo salar**: 15
- **Alosa fallax**: 8
- **Lampetra fluviatilis**: 15
- **Anguilla anguilla**: 2
- **Zostera noltii**: 0
- **Fucus serratus**: 1
- **Furcellaria lumbricalis**: 3
- **Fucus vesiculosus**: 3
- **Zostera marina**: 1

* C. canescens (1), C. horrida (1), C. tomentosa (1), C. braunii (0), C. baltica (3), C. aspera (1), C. connivens (1)
Threats

- Wind farms
- Power generation
- Marine litter
- Underwater pipelines and cables
- Coastal defense measures
- Aeronautics
- Aquaculture/Mariculture
- Dredging
- Dumping
- Hunting
- Leisure fishing
- Commercial fishing
- Tourism and recreation
- Construction of summer houses
- Marine construction/operation
- Human disturbance
- Erosion
- Oil/gas extraction
- Mineral/rock extraction
- Sand/gravel extraction
- Pollution from agriculture
- Pollution from industry
- Pollution from shipping
- General pollution
- Eutrophication
- Oil spills

Number of Entries

- Existing Threat
- Potential Threat in the future
- Partly a threat
- A Threat in the Past that is still effecting
- 97% of the MPAs are located in areas with unacceptable eutrophication status
- 61% of the sites bad/poor
Status map of hazardous substances, CHASE and MPAs

- 20% bad/poor status of hazardous substances concentrations
- 73% moderate
Representativity/replication: Benthic marine landscapes

<table>
<thead>
<tr>
<th>Representation: number of landscape types</th>
<th>not represented (0%)</th>
<th>inadequate (&lt;20%)</th>
<th>questionable (20-60%)</th>
<th>normal (&gt;60%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSPA</td>
<td>3</td>
<td>45</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>SCI</td>
<td>1</td>
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<td>SPA</td>
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<td>42</td>
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<tr>
<td>BSPA/N2000</td>
<td>1</td>
<td>37</td>
<td>19</td>
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</tr>
</tbody>
</table>
Connectivity: Benthic marine landscapes

Aggregation of 413 landscape patches from 23 BSPAs into 19 clusters at a theoretical dispersal distance of 25km.
Ecological coherence analyses, conclusions

• Only 16% of the total marine BSPA area is located outside the territorial waters
• 52% of the marine Natura 2000 area has not yet been designated as BSPA
• Most of the sites lack management plans and measures
• Protection of threatened and/or declining species is poor
• Coherence criteria for Representativity, Replication, Adequacy or Connectivity were not met
Solution: systematic site selection?
Looking into the future
Regional coordination

- The Moscow Ministerial Declaration 2010 provides HELCOM with a strong political basis for its work during the upcoming few years
- Further development of indicators and targets (especially biodiversity and hazardous substances)
- Assessment of the threat status of species and biotopes: updating and creating Red Lists
- Joint HELCOM-VASAB Working Group to finalise a set of broad-scale transboundary MSP principles
Looking into the future
Towards an ecologically coherent network of MPAs

MM 2010 also agreed

• to secure the establishment of a network of BSPAs that fulfils the criteria of ecological coherence
• to include more off-shore areas also in the Exclusive Economic Zone to the MPA network
• to develop and apply by 2015, management plans and/or measures for already existing BSPAs
• to further assess the environmentally negative impacts of fishing activities including unsustainable fishing practices and to consider the exclusion of the use of certain techniques in marine protected areas
Thank you!

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