

**PartiSEApate - sectorial workshop report (provisional)**

**“Climate Change Adaptations and Maritime Spatial Planning  
in the Baltic Sea”**

Organiser: Region Skåne  
in Skanör, Falsterbo Peninsula, Sweden  
13-14 May 2013

**Authors of the report**

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**Goals of the workshop** were to introduce to the MSP (Maritime Spatial Planning) principles and Baltic vision of the use of marine space as well as to discuss with stakeholders group about MSP and Climate Change Adaptation (CCA) from the Baltic perspective;

**The main discussion issues:**

- Role of EU institutions in MSP at different levels;
- Climate change effects in the Baltic Sea Region;
- Implications of climate change on ecosystems in the Baltic Sea;
- Sharing of best practices on integrated coastal zone management (ICZM) and MSP in a context of adaptation to climate change in coastal areas;
- How planning (MSP, ICZP) should take account to CCA;
- Considerations on a pan-Baltic strategy on climate change adaptations.

**Participants**

In total 25 persons participated in the workshop.

Country	Institutions
From BSR:	
Denmark	None
Estonia	None
Finland	None
Germany	Leibniz Institute for Baltic Sea Research, IOW, Warnemünde Federal Maritime and Hydrographic Agency
Latvia	Ministry of the Environmental Protection and Regional Development; Baltic Environmental Forum
Lithuania	None
Norway	Institute of Marine Research, Bergen
Poland	The Maritime Institute in Gdańsk
Russia	None
Sweden	Swedish Meteorological and Hydrological Institute; Region Skåne, World Maritime University, Swedish Agency for marine and Water Management, The Municipalities of Vellinge, Trelleborg, Ystad; SWECO; WSP;

Outside BSR:	
	DG Mare;
	Project team ( <i>Fresh Thoughts Consulting, Austria</i> ) contracted by DG ENV.

## 1. Very brief information on what was presented at the workshop

The workshop was organised in six sessions to address the main discussion issues (see above). Each session had at least one introductory presentation which was followed by discussion and reflection in smaller groups, generating key messages, giving feedback or feedback and questions to the speakers.

## 2. The role of the EU institutions in MSP at local, regional, national and transnational level.

After the introductory presentation on the Current State of Maritime Spatial Planning in the EU, MSP Directive, Blue Growth Strategy (*by Koen Van den Bossche, DG MARE, European Commission*) the participants discussed on different roles and actions needed to be taken by EU institutions. The following proposals were suggested:

### *Answers from the participants:*

1. Provide guidelines for practical implementation of MSP including the fishery and climate change aspects;
2. Stimulate action on MS level by providing funding for projects and different initiatives in particular at local or regional level;
3. Integrate the issues in LIFE+-projects, educational projects
4. Establish obligations for data exchange, based on EMODNET and EEA involvement;
5. On the one hand member states say that they don't want EU to tell them what to do in MSP – on the other hand, very little actually happens. There is a need for EU to drive and push so that MSP and ICZM are carried through in reality.
6. Provide a structure, a strategic framework for processes on the different levels, especially the transnational cooperation.
7. Bring together technical experts and policymakers, facilitate exchange between EU member states/regions.
8. Adapt EU policies to the needs of climate change adaptations, i.e. CFP (Common Fishery Policy) management strategies identification (warning signs when existing management strategies not will meet agreed objectives to take into account possible climate change impacts).

## 2. Climate change effects in the Baltic Sea regions and relevance for MSP

The session started with the presentation (*by Sten Bergström, Swedish Meteorological and Hydrological Institute*) on main trends of the indicators characterizing climate change phenomena and highlighting potential consequences if the trends are not considered in spatial planning. The participants were asked to discuss on the following aspect:

## **2.1. How should spatial planning in urban areas take into account the anticipated sea level rise, both today and in a long-term perspective (100 years and beyond)?**

### *Answers from the participants:*

1. Take account to socioeconomic, demographic changes, changes in tourism patterns etc. integrated with climate change effects. New modeling approach which integrates long-term changes in natural conditions as well as socioeconomic drivers needs to be promoted.
2. Integrate spatial planning with other analytic and decision-making tools;
3. Elaborate and include adequate new planning instruments, which take account of climate change impacts.
4. Develop and adapt in a way that is flexible and adaptable for future changes (50/100/200 year perspective); Most urban areas plan for the 2100 perspective – a preparedness for sea level rise after that period should be developed.
5. The need of a “plan B” or even more options for adapting infrastructures, flexible infrastructures, retreat strategies etc. The building standards could be also reviewed and adopted to potential impacts of climate change.
6. Communication and exchange of knowledge to prevent unexpected negative impacts of climate adaptation.
7. More efforts on communicating climate change adaption needs (climate researchers – planners – policymakers - people); Strength of visualization!
8. There is a need for an increase of environmental awareness as conflicts between stakeholders may become stronger, thus strategies for managing this process also needs to be prepared and implemented.
9. Increase the land-sea thinking perspective; Sea level rise coincidence with higher water pressure by precipitation (more intense rainfall) – water from both sides!
10. Integrate wider stakeholder representation in spatial planning, i.e. insurance companies, risk managers. They do have another perspective towards impacts on material values. However, the planning of the coastal areas should have a multifunctional perspective (not just buildings!) and not a limited perspective on short-term economic values;
11. Use sea level rise maps to prioritize coastal/urban protection.
12. Contribute to adaptive capacity: The willingness to mobilize the resources required to adapt, socio-economic factors.
13. See and coastal planning as a procedure and not as a fixed plan

## **2.2. What other climate change impacts/responses are of relevance for spatial planning in marine and coastal areas in the Baltic Sea Region?**

### *Answers from the participants:*

1. Oxygen and salinity decrease in sea water, an increase of eutrophication and acidification in some parts of the BS
2. Heavy rainfalls
3. Loss of biodiversity due to temperature change
4. Coastal erosion and need for protection and related sediment management
5. Coastal adaption (greening structures etc.)
6. Need for areas for sand & gravel extraction

7. Adaptions of fishery management strategies due to change in fish stocks and species composition
8. Change of human behavior i.e. recreation/tourism patterns.
9. Adaptation of aquaculture strategies
10. Invasive species

### **3. Implications of climate change on ecosystems in the Baltic Sea and relevance for MSP**

Two presentations from research organizations gave an overview on potential implications of the Baltic Sea ecosystem due to climate change (by *Holger Janßen, Leibniz Institute for Baltic Sea Research, IOW, Warnemünde*) as well as demonstrated a case study in change of the fish stocks and its distributions due to change of physical parameters in the Baltic Sea (*Geir Ottersen, Institute of Marine Research, Bergen*). The participants elaborated their positions towards scales of planning and relevance of data for planning.

#### **3.1. Spatial planning and climate change operate at very distinct spatial and temporal scales. How might the relatively small scale of spatial planning be harmonized with the large scale of climate change?**

##### *Answers from the participants:*

1. Re-assess and evaluate regularly.
2. Flexible approach to planning
3. A broad approach in spatial planning, including adaptation, preservation of status quo but also preparation for losses, integrating both the strategic and development/uses perspective.
4. Linkage of impact assessment to spatial planning
5. Institutional structures needed to serve the spatial planning, providing a broader perspective;
6. Legislation for spatial planning should be adjusted to the needs of a higher degree of flexibility, when facing climate change issues, i.e. “adaptive licensing”.
7. Long-term horizon can be difficult to handle in spatial planning, thus there is a need for “translation”. Collaboration between researchers and planners, resulting in maps in a common language;

#### **3.2. What data on climate change and its impacts are essential for planning? In their absence, how should planning deal with uncertainty concerning future climate and its impacts?**

##### *Answers from the participants:*

1. Planners need spatial information in form of maps (e.g. area to be covered by sea water according to different scenarios), thus overlaying climate change related information with traditional land-use spatial information the conflict areas would be identified.
2. Lack of sufficient amount and good quality data on CC at local level is a key challenge, therefore additional efforts to modeling and down-scaling the global and regional trends need to be supported. As local authorities are missing adequate capacities for research and modeling, the data and modeling should be organized at national or EU level.

3. When presenting the impacts of climate change planners and politicians need not only data which reflects negative impacts, but also data which facilitates positive view, that climate change can also bring benefits. Thus adaptation means not only costs but also potential gains.
4. Lack of data can be dealt with in the planning only if you regard MSP as a process that can adjust to new conditions and information.

#### **4. Sharing of best practices on integrated coastal management (ICM) and MSP in a context of adaptation to climate change in coastal areas**

The section was introduced by Thomas Dworak and Maria Berglund from Fresh Thoughts Consulting, contracted by DG Environment for a project on the specific issue.

##### ***The participants mentioned the following cases:***

1. Sand motor for the whole the Dutch coast; High costs of the project however, it provides protection against erosion, value for birds and costal ecosystems as well created new recreational space;
2. Beach nourishment; It works, with value for tourism/recreation, but the costs are high and there are environmental impacts from sand extraction. The projects often lack a holistic view (land – coastal – sea, sector specific etc.) but with right design may they result in win-win with a multi-objective approach.
3. Latvia will soon start a new large scale project to develop national adaptation strategy including planning, data and research as well as awareness rising activities.
4. New standard for buildings (BREEAM) have been discussed and adopted to promote sustainable building and planning.
5. Poland: Coastal zone mapping project (EUROSITE): Exchange, enhance and promote expertise in the management of sites for nature
6. Denmark, Kalundborg: Protection of energy plants, housing, roads through dikes.

##### ***Main barriers for implementation of cases and projects mentioned by the participants:***

1. Lack of strategic approach
2. Shared responsibilities, conflicts between level of governance
3. Lack of competences (local planners)
4. Lack of knowledge, uncertainties: e.g., the impacts of removing sand
5. Lack of institutional capacity.
6. Lack of governance
7. Absence of the relevant legislation with requirements on the enforcing the climate change impact integration in spatial planning.
8. Communications gaps (local)
9. Bureaucratic long during processes for permits
10. High cost – no financing mechanism, or insufficient resources; Conflict of cost responsibility.
11. Low political interest/will.
12. Low public support

## 5. Considerations on a pan-Baltic strategy on climate change adaptations

The draft Pan-Baltic Strategy towards Climate Change Adaptation was presented by *Lotta Andersson, The Swedish Meteorological and Hydrological Institute*. The Strategy as well as Action plan have been elaborated within the Baltic Sea Regions project – BaltAdapt.

The participants were asked to identify the ways of importance of the pan-Baltic collaboration be useful for climate change adaptation of coastal and maritime spatial planning:

### *Answers from the participants:*

1. Different levels of collaboration: i.e. academic level (sharing research results), practical level (sharing good practical examples, spatial planning instruments), policy level (sharing policy options)
2. Fundamental: It should include a communication strategy
3. Holistic and wider geographic approach for sharing losses and benefits facing climate change & adaptations strategies
4. Elaborate common financing/funding mechanisms, including priorities, focus issues;
5. Pan-Baltic solidarity on climate change adaptations strategy: ensure most exposed and vulnerable regions/sectors/environments increase their adaptive capacity
6. Thematic approach for pan-Baltic collaboration: Getting people in the same situation together;
7. Annual project or scientific conferences – both for dissemination of knowledge and for keeping the pressure on policymakers
8. Great value to exchange data, especially Russia, e.g. on land-sea flows, concentrations of nutrients, output of wastewater (to help trace changes in trends)
9. A pan-Baltic strategy on climate change adaptations should integrate with the Baltic Sea Action Plan.
10. A combined top down (pan-Baltic calculations) and bottom up (local drivers/barriers) approach should be promoted.
11. It should emphasize the multifunctional use of coastal zones
12. Ensure that the whole region have: (a) funded coastal protection measures (b) implementation of spatial planning instruments (c) willingness to establish multifunctional use of coastal zones, (d) environmental awareness (e) risk communication and other relevant information (f) availability to flexible and innovative approaches through the creation of new knowledge and transfer of best policy options

## 6. The greatest challenges for local-level authorities relative to adaption to climate change.

The case study on local planning facing climate change impacts in the Falsterbo Peninsula was presented by *Hans Folkesson Director for physical planning, Vellinge Municipality*.

### *Few recommendations for the planning at local level were proposed:*

1. To establish a holistic, multifunctional, broader geographical perspective in spatial planning and not only stick to local protection of beaches and constructions, but also take account to Natura 2000 needs etc.

2. To establish an adaptable and flexible strategy for spatial coastal planning with a longer perspective even than 2100.

## 7. Overall conclusions/key findings

The workshop came up with a wide range of issues, questions and suggestions concerning the needs and possible approaches in the context of climate change adaptations and maritime spatial planning in the Baltic Sea. These considerations will now be further analysed and discussed by the PartiSEApate project partners. On the basis of this analysis and in the light of other project experiences, important conclusions and key findings will be elaborated. They will then contribute to recommendations on future development of MSPs around the BSR

However, some important conclusions were rather clear. Generally it could be stated that there is a rather limited group of players which are engaged in these questions today: Climate change and MSP researchers and people from public administrations on all levels. There are also consultants getting involved in the area.

The picture is clear: We are at the very beginning both concerning climate change adaptations and maritime spatial planning in the Baltic Sea. There is a lack of strategic approach, of (coordinated) responsibilities, of governance, of competence among local planners, of institutional capacity, of relevant requirements on the integration of climate change impact in spatial planning, of financing mechanisms, of political and public interest – the list could be made rather long.

It was obvious for the participants at the workshop that there is a need of *awareness rising* in the field of CCA and MSP/ICZP, as well as to formulate the importance of marine spatial planning for stakeholders, to make their roles clear and to elaborate their perspective. This includes the challenge to develop appropriate *communication and information* strategies, tailored for the different focal group of players. *Visualisation of data* can be a useful tool to be used in a communication strategy. *Easily interpreted information* in the form of accurate maps is generally regarded as an important tool in this context, as well as a structure for dialogue and support on different levels between climate change (adaptation) researchers, planners, policymakers and stakeholders in general and for the Baltic Sea specifically. Long-term horizon issues and scientific analysis can be difficult to handle for the spatial planner, thus there is a need for “translation” and the development of a common “language” between researchers and planners. The planners on local level would also need support from a central level when modelling and down-scaling the global and regional trends and also to choose the most relevant climate change models planners might take into account

It is of great importance that such a communication strategy makes clear “what is in it” for the key drivers & key implementers! It should show the win-wins between various environmental and socio-economic goals, within and between sectors. It is obvious that this will be an area for further development in the course of the project work, not at least since it is a main issue for collaboration on a pan-Baltic level.

The need of pan-Baltic cooperation came up many times and was regarded as crucial, getting people in the same situation together in a structured and systematic way. However, it was also underlined that there should be different levels of collaboration: practical level and policy level. Sometimes there also is the need for a focused, thematic approach.

Another main output was the conclusion that the planning process must be of an *adaptive* and *flexible* nature and thus be able to take account of the uncertainty of climate change prognoses, of demographic, socio-economic as well as the environmental changes. A frequent evaluation and reassessment of plans would be required. As a consequence legislation related spatial planning should be reconsidered in the light of the needs of a higher degree of flexibility, when facing climate change issues, i.e. “adaptive licensing”. Also the integration of climate change impact in relevant legislation was an important issue.

It was also stated that it would probably not be sufficient with a fixed plan A and an eventual plan B, but even further options would be required to be prepared to *plan for the unexpected*. There is of course even no solution that works for all locations. An important perception in this context was the need to secure that the specific perspectives and roles of different players dealing with, or impacted by coastal/marine climate change adaptations in the Baltic Sea area are involved and continuously can give input to an adaptive planning. It was underlined that EU should consider making the CCA (MSP) issue permeate all relevant EU policy areas.

Closely linked to this requirement of an adaptive and flexible approach, as well as of a *multiplayer perspective* is the need to integrate a *multifunctional perspective* in the planning process. Traditionally and still today coastal planning is focused on sea level rises impacts on housing and “hard” infrastructures, safeguarding these values, an important but nevertheless rather narrow perspective: margins to sea level for new developments etc. CCA actions according to the conclusions of the workshop in Skanör, should integrate objectives related to the need also to maintain and even strengthen the basis for ecosystem services, for fisheries, for recreation and tourism, for energy production, for aquaculture and other maritime uses and services. This includes an innovative approach that makes sense: When we are going to make huge investments to mitigate the impacts of CC, we should aim at gaining parallel, multiple wins. For example, protective coastal constructions might in the same time result in recruitment for threatened species, touristic attractions, recreational areas and research projects. On the other hand should the consequences of planned CCA measures undergo an impact assessment, excluding the risk of making things worse.

According to the considerations at the workshop, the multiplayer perspective and the multifunctional perspective should be complemented by a holistic physical (geographical) perspective: Different types of coastal zones/sea areas would require different CCA strategies. Especially there is a point in looking at a wider picture and scale when analyzing where to accept “losses” (where would the socioeconomic and ecological cost be the lowest?) and similar questions.

A clearly expressed wish among the participants was learning more about cases and experiences concerning both marine/coastal planning for CCA and specific actions and measures being tested. The discussion and considerations showed that there actually not are many known cases, except those related to physical planning of housings facing sea level



rises. EU:s web-based European Climate Adaptation Platform (Climate-Adapt) was mentioned as e very useful tool in this regard. It needs however more input of “cases”.

The workshop participants came frequently back to the need of coordination and guidelines at European level for MSP and ICZM related to CC and CCA. A structure and a strategic framework for processes on the different levels, especially the transnational cooperation was regarded as necessary. Thus the current initiative of the Commission (Framework Directive) was welcomed, as well as the ongoing activities concerning guidelines.

Many of the participants expressed that the workshop had provided both useful information and new important contacts for their own ongoing work in the field of the workshop issues. In this regard the WS contributed to a strengthened network for CCA in the context of MSP, ICZM and MLG (multilevel governance) and to a broader basis for upcoming processes and partnerships. In the same time there was a clear consensus that a pan-Baltic strategy on MSP in the context of climate change adaptations should integrate with the Baltic Sea Action Plan and other strategic approaches.

## **8. Conclusions based on the workshop questionnaire**

[To be completed]