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Inspire Policy Making with Territorial Evidence

UPTAKE ARTICLE

ESPON Peer Learning Workshop: Climate change adaptation strategies in the Baltic Sea Region

Virtual

5 May 9:00-12:30 (CEST)

Objective



The ESPON-TNO programme organised a virtual Peer Learning Workshop (PLW) with ESPON researchers and academic and Baltic Sea stakeholders on the 5th of May. The current progression of climate change makes the preparation of climate adaptation plans and implementation of adaptation measures increasingly urgent and necessary at all levels.

The process of drawing up such plans and the process of implementing actions is a common challenge for the Baltic Sea Region cooperation framework.

In the framework of the recent EU Adaptation Strategy and the EUSBSR (The European Union Strategy for the Baltic Sea Region) Action Plan as a reference for monitoring development processes in the region, the workshop aimed to develop a discussion with stakeholders from the Baltic macro-region and ESPON-related researchers to discuss strategies for dealing with climate change.

Starting with the evidence gathered by ESPON, the PLW delivered an overview of the main trends influencing spatial development and the regional dimension of the future of the climate.

In particular, participants were asked to share their experiences and discuss the role that planning should play in addressing climate change issues at different levels.

The overall idea of this comparison is to link ESPON results, knowledge, and monitoring tools – including a special reference to the ESPON project BT2050 - Spatial Scenarios for the Baltic Sea Region as well as the Macro-region Monitoring tool especially devoted to Baltic Sea – with the contributions that national, regional, and local stakeholders and experts from different backgrounds can bring to the understanding of climate change challenges and opportunities.

The motivation is to show and discuss how ESPON knowledge can contribute to the development of adaptation strategies at macro-regional, national, and regional levels and how stakeholders can make (better) use of trans-European knowledge and case studies.

The reflection has been oriented to the ways of mainstreaming climate change in sector policies as well as to the new VASAB (Visions And Strategies Around The Baltic Sea) Long-Term Perspective (LTP) for the Territorial Development which will be adopted this year.

Out of the 88 registrations, an average of 45 participants from 18 member states attended the event. The largest proportions of attendees were from Germany, Latvia, Spain, Poland, and Sweden. The people registered belonged to three groups: policymakers (mainly national and regional) (48%), academics (29,5%), or professionals and civic society (22%). Overall, the event has proven to be successful with a high level of satisfaction.

Summary

The event began with welcome words by **Dr. Wiktor Szydarowski** (ESPON EGTC Director) focusing on the long-standing role of the ESPON programme in Baltic cooperation and confirming ESPON's commitment to support VASAB and all other organisations in integrating the EU Green Deal, the EU Strategy on Adaptation to climate change, and the Long-Term Perspective to improve coherence between policies and actions.

The introduction set the scene and was moderated by **Jens Kurnol** (BBSR and ECP for Germany). It included two keynote presentations. **Prof. Markus Maier** (Chair of Baltic Earth Science Steering Group [BESSG]) gave a clear picture of the Baltic Sea in relation to climate change dynamics on the basis of the huge research carried out by Baltic Earth in the last decade. The presentation was based on a factsheet produced by the HELCOM and Baltic Earth joint Expert Network on Climate Change (EN CLIME) and sought to raise awareness of present

and future implications of climate change¹ among policymakers. Some of the selected parameters were extensively analysed to show the current situation. For example, concerning air temperature on land, the data shows a systematic increase in temperature which is statistically significant over the past decades. This increase is larger than the global average and slightly larger than previous estimations, implying that the phenomenon is accelerating. The same is true for water surface temperature. Scenarios for the Baltic Sea project a sea surface temperature increase ranging from 1.1°C to 3.2°C by the end of this century, compared to 1976-2005. Regarding salinity, which affects the dynamics of ocean currents and ecosystem function, there is a gradual decrease from the entrance area (Kattegat) to the northernmost closed basin (the Bothnian Bay). Inflows from the North Sea sporadically renew the deep water with saline, oxygen rich water. No statistically significant trends in salinity have been found, and future projections are uncertain.

Another very important parameter is oxygen, which is linked to the level of warming and nutrient loads that come mainly from agricultural activities and untreated sewage water, resulting in oxygen consumption. Since the 1960s, this load is very high. However, the situation has improved since the 1980s. Actions taken at the basin level, imply that the implementation of the Baltic Sea Action Plan will probably significantly improve deep water oxygen conditions, irrespective of the climate projection.

Two other elements are central. On one hand, the effect of rising global sea levels will induce the relative Baltic sea level increase, which is counteracted by land uplift in the northern areas. On the other hand, the ice cover situation will further decrease with a lowering of the maximum sea ice extent.

The task of defining the policy framework was entrusted to **Dr. Daniel Meltzian** (German Federal Ministry of Housing, Urban Development and Building, chair the VASAB CSPD/BSR), which focused on the *New VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region* (LTP).

The situation in the Baltic Sea with respect to climate change prompts us to urgently consider a macro-regional adaptation strategy. There is a solid basis for cooperation that has seen the development of various instruments over the years. VASAB, which designs visions and strategies around the Baltic Sea and aims to enhance collaboration among ministries responsible for spatial planning, represents one of these cooperation formats in the region. After recalling VASAB's 30 years of activity, the LTP revision process was highlighted, which continues to build on the four original metaphors: the pearls, i.e. the cities and urban settlements; the strings, i.e. the infrastructure networks; the patches i.e. the ecosystem and surrounding areas; and the system meaning the spatial planning in function.

Even if the LTP is a vision and it is not a concrete political strategy in itself, it nevertheless points out to possible future actions and is structured along these four elements (pearls, strings, etc.). Climate issues are addressed in all four of these. Regarding climate change related to spatial development, the LTP presents four reflections of interest as presented in the introductory part of the LTP. Firstly, a healthy Baltic Sea is central for the future of the Baltic Sea region. Secondly, the Baltic Sea region still has, in comparison to other parts of Europe, a high level of natural intact ecosystem and biodiversity to build upon. Thirdly, there is a huge potential in the Baltic Sea region for renewable energy production. Finally, green connectivity in the Baltic Sea Region is a critical aspect due to the distances and the sea that lies in between.

The first session was moderated by **Volker Schmidt-Seiwert** (BBSR and ECP for Germany) and included two extensive presentations illustrating ESPON's contribution to Territorial development in the Baltic region.

The first presentation was by **Efrain Larrea** (MCRIT, Senior researcher) project leader of MRS:ESPON the European and *Macro-regional Territorial Monitoring Tool*. The MRS:ESPON tool aims at providing a practical and operational online platform to continuously observe the territorial development trends and patterns taking place in Europe and its macro-regions. The idea was to offer a monitoring system for the four macro-regions that exist in Europe – the Baltic Sea Region, the Danube Region, the Adriatic Ionian Region, and the Alpine Region – and a common European module. All of these modules were tailor-made and are linked to the European module as well as automatically to the ESPON database and through web services to other data providers (such as Eurostat, National Statistical Offices, Worldbank, OECD, ILO, and UNCTAD). The process of creation involved many exchanges with relevant stakeholders of each macro-region and with the coordinators of single priority areas such as VASAB. The aim was to identify the real needs in monitoring territorial trends and structures over time and also to benchmark each macro-region in the wider European context. The tool allows policy-makers to monitor the macro-regional strategy objectives by looking at the targets that each

1 Climate Change in the Baltic Sea. 2021 Fact Sheet. Baltic Sea Environment Proceedings n°180. HELCOM/Baltic Earth 2021.

strategy is defining as well as at the activities of the macro-regional strategies and contributions to the changes that occur in the region.

Gustav Norlen (Senior research fellow, Nordregio) illustrated the roots and results of *ESPON BT 2050 Territorial Scenarios for the Baltic Sea Region*. The aim of this Targeted Analysis project was to develop territorial scenarios for the Baltic Sea region in order to increase evidence on the territorial dimension as well as contribute to EU MS policy making and cooperation between BSR (Baltic Sea Region) countries on territorial development. The territorial scenarios are aimed at providing a basis for political discussions as they are capable of showing synergies and trade-offs between spatial goals and priorities spelt out in other strategic documents. BT2050 was initiated by VASAB to support their work with the LTP of the region together with other EUSBSR relevant stakeholders. The project provided, in addition to an overview of the development of the region based on recent data, three scenarios: the first one is a baseline scenario for the BSR for the years 2030 and 2050, and the others are two alternative territorial scenarios for the BSR 2050. Both consider the Green Deal as mainstreamed in development policy. The first alternative is Well-being in a Circular Economy: a RE-mind for a good life. In this scenario, the Baltic Sea Region has developed into a sharing and circular economy region in 2050, where citizens have consciously decided to change the existing linear economic model in favour of a better quality of life. A new focus on productive activities (manufacturing, re-industrialisation, and technology) has built upon repairing and sharing culture, while agricultural practices have become less intensive, relying on organic agricultural production. The focus of this path is not on economic growth in the future and its territorial implications will show a more decentralised pattern.

The second scenario is called Growing Into Green Tech Giants: Ecological Footprint Clear Up. The Baltic Sea region is a giant in green technology: environmental change is mainly achieved through technological developments in the stream of the fourth industrial revolution which has led to the reduction in the ecological footprint and high-end innovation. The race for more growth has not necessarily led to a decrease in consumption, such as is the case in the other scenario, but to a greener and guilt-free type of consumption. From a territorial point of view, the picture is more like the present one with a concentration in metropolitan and urban hubs and a persistent centrality of transport nodes.

The second session was moderated by **Wolfgang Pichler** (Swedish Agency for Economical and Regional Growth and ECP for Sweden) and dealt with "Mainstreaming climate adaptation". Two contributions to this topic came from the EUSBSR, discussing the climate adaptation approach of the EU Strategy for the Baltic Sea Region.

The first presentation by **Valdur Lahtvee** (expert in the Council of the Baltic Sea States, past coordinator of Horizontal Action Climate in EUSBSR) described the Council's role within the macro-regional strategy as well as strategic planning activities developed by different networks. The way in which climate change is considered has evolved in recent years, but both mitigation and adaptation issues have always been present in policy priorities. It is interesting to note that according to the University of Notre Dame's Global Adaptation Index, the adaptive capacity of the countries in the region sees a sort of gap between the North-West and the South-East countries. However, this capacity has increased in all of these countries since 1995. Of course, if we look at the global average, the entire region is certainly more adaptive and resilient, since it is economically more developed so has the possibility to protect the population from the negative aspects of climate change. In the renewed EUSBSR Action Plan, the climate change aspects are mainstreamed as essential elements into all 14 policy areas. Integrating these elements into the policy areas ensures that they are properly considered. It also allows the policy areas to tailor-make the implementation of climate change adaptation and mitigation, as well as cooperation with neighbouring non-EU countries, in ways that are the most efficient for each policy areas.

The Horizontal action Climate, under the first EUSBSR Action Plan, supported capacity building of the national and local authorities to mitigate and adapt to climate change. While initially the major focus was on the national authorities and the development of the national strategies for climate adaptation in those countries that did not have them, later on the major focus was turned to the building the capacity of the local authorities and the other stakeholders rather than authorities.

In the same policy stream, it is possible to insert the project CASCADE, a EUSBSR Flagship project under the Secure Policy Area about which **Heidi Tuhkanen**, (Senior researcher at Stockholm Environment Institute Tallinn Centre (SEI Tallinn)) will develop a contribution on *Integrating climate change adaptation and disaster risk reduction in the Baltic Sea Region*. The extreme events will increase in frequency and severity in the Baltic Sea Region so as a society we need to prepare for those. The adaptation focus area encompasses several unrelated dimensions such as emergency preparedness and disaster risk reduction management related to the climate. It also encompasses the need to mainstream climate change adaptation into all planning and development

processes to strengthen resilience and infrastructure. In the ability to adapt to climate change, there are not only gaps between countries but also considerable differences between cities in the region. The general aim of the CASCADE project was to develop a macroregional approach for climate change related risks tailorable to the needs and challenges of cities; to increase the cross-sectoral practical knowledge of climate change effects and how to manage them; and to create a framework for better coordination between local, national, macro-regional, EU and international levels in climate change urban risk management. It is necessary to consider not only the immediate impacts of natural hazards, but also the entire complex of their cascading effects on society, the environment, health and also infrastructure.

Because of these cascading impacts, risks are increasingly seen as a security threat because of the impact they have on people's lives and property and on the critical infrastructure that ensures the functioning of our society.

The final session which was devoted to climate change issues in the VASAB LTP was moderated by **Alda Nikodemusa**, (VASAB Secretariat) with an introduction by **Elina Veidemane** (VASAB Secretariat). The session gave the floor to stakeholders responsible at different levels of policy elaboration and strategy implementation to reflect on the evidence presented, with the aim of addressing and reflecting on how the spatial dimension is taken into account or should be taken into account regarding climate adaptation policies.

The first panelist was **Edvarts Daniels Emersons** (Latvian Ministry of Economics, EUSBSR Policy area Coordinator Energy) who discussed what aspects of climate change are related to the energy policy area of the EUSBSR and the way to addressing them as well as, in the framework of VASAB perspective, the problem of building an efficient green energy transmission system.

The second speaker was **Sebastian Ebert**, (German Environmental Protection Agency, Competence Centre on Climate Impacts and Adaptation) who give some insights into the current focus of German adaptation strategy with particular reference to the preconditions for the implementation. In general, the role of spatial planning in contributing to adaptation and mitigation of climate change is stressed and an invitation to exploit that potential in mainstreaming the related issues more explicitly in VASAB's new vision.

Finally **Matti Lipsanen** (Tampere Region, Finland) illustrated the experience of the Tampere region in developing an advanced climate-neutral programme considering the 2030 horizon, coupled with a specific road map for Tampere city (road map for the carbon free Tampere 2030) as an integrated strategy for climate change policy, bringing together mitigation and adaptation activities. In addition, for all the Baltic sea regions the best way to increase their resilience to climate change is to rely on long-lasting cooperation framework at a macro-regional level.

Luuk Boelens (Ghent University and ECP Belgium) closed the event by highlighting some key elements of the discussion.

Main Discussion

A general question emerged from the discussion on how spatial planning can address key challenges in the BSR regarding climate change and what are the opportunities and challenges for concrete actions in a macro-regional context.

The first element under analysis was the VASAB vision as a general policy strategy regarding its ability to adequately address climate challenges. In preparing the draft LTP, many reports and studies, such as ESPON BT 2050, were taken into account and one of the main recommendations for climate change adaptation is the need for cooperation.

1. The VASAB vision discussion started from four standpoints:
2. A healthy Baltic Sea constitutes a central asset around which the region prospers;
3. The diversity of places, nature, and people of the region coexisting in harmony and stimulating each other makes the Baltic Sea a buoyant and fresh region;
4. Pursuing a high quality of life is possible through a change of mindset towards sustainability in all aspects of life greater macro-regional cohesion, integration, solidarity and cooperation, and a wiser use of technology for the common good of places and people;
5. Adequate policies help in coping with challenges.

Long-term risks to the Baltic Sea Region resulting from climate change are related to three areas of impact: the biodiversity of ecosystems, the complex of coastal infrastructure, and economic activities.

The ways to face with these risks are inserted in the policy proposals of the four metaphors of the LTP: the pearls, the string, the patches, and the system.

The pearls (urban and rural settlements) must be carbon neutral and should become drivers and hubs of the green & digital transition, building on climate change adaptation & mitigation approaches and strategies as well as on Smart Specialisation Strategies, adopting circular economy approaches. The areas of action refer to the digitalisation of public services of general interest and the optimisation of city operations.

For the strings (virtual and physical connections between people and places), the transition towards digitalisation and sustainability must rely on a multimodal shift from private to collective transport modes and green innovation and enhancement for maritime transport and harbour services, as well as on a new decentralised energy network and renewable production while balancing territorial interests and activities.

For the patches (unique areas of the Baltic Sea Region supporting quality and dynamism of life) the aim is the sustainable management of natural and cultural resources on land/sea/underground by means of more environmentally-friendly agriculture and sustainable fisheries and aquaculture as well as the implementation of an idea of Baltic Sea as a planned network of “green” and “blue” places, belts, and corridors.

Regarding the question of how spatial planning can contribute to adaptation and mitigation of climate change, three directions have been identified: one is that spatial planning helps increase integrated and sectoral adaptation capacities. It supports risk prevention and disaster risk management mainly by securing land or facilitating multifunctional land use and, most likely, by promoting nature-based solutions. Concrete examples for that are fresh air corridors or storage areas for heavy rainfalls management but also conventional dykes.

The second direction is that spatial planning has an important coordinating function for adaptation to climate risks. For instance, it involves participatory approaches, governance mechanisms and procedures. Spatial planning integrating multi-disciplinary expertise is very useful considering that climate adaptation and resilient development consist of a lot of class cutting issues which should be coordinated properly.

Moreover, spatial planning can create positive images of the future, despite global warming and its risks, and highlight opportunities, such as a new quality of life.

The existence of a consolidated framework of macro-regional cooperation constitutes an element of great potential to best address the issues posed by climate change.

Conclusion

Increasing consistency is perhaps a complex issue, especially in a period of uncertainty such as climate change. The present moment seems to accelerate the green transition, particularly concerning energy.

The new LTP proposal was formulated in December last year, but now in the light of developments in recent months, it seems increasingly necessary to accelerate our energy transition and perhaps also to accelerate our self-sufficiency. All this could have a major impact on the LTP and on the timing of its finalisation.

Secondly, with reference to the European Union’s Green Deal strategy, which concerns climate mitigation but also the interaction with climate adaptation, it is important that the LTP is consistent with this framework and with the 2050 greenhouse gas emission target.

It should be clear in the vision of the LTP that economic growth should be decoupled from resource use and it should also be clear that in this process no people or places are left behind. This point should be the focus of concern because, with reference to the Baltic region, there are many places and situations that have varying capabilities to walk the path of transition.

In such a rich framework of cooperation as the Baltic Sea macro-region, it should be emphasised that cooperation is not only horizontal between regions, but also vertical (between the macro-regional, national, and local levels) and that both dimensions need to be strengthened between levels and in the interactions between regions. There is still work to be done, not only in horizontal cooperation but also in vertical cooperation, especially since local governments are the most important actors when implementing climate adaptation strategies, while the macro-regional and EU level takes the lead with regard to climate mitigation.



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