



Presentation of the Baltadapt Project Results

Swedish Meteorological and Hydrological Institute

German Federal Ministry for the Environment
with subcontractor Ecologic Institute



www.baltadapt.eu



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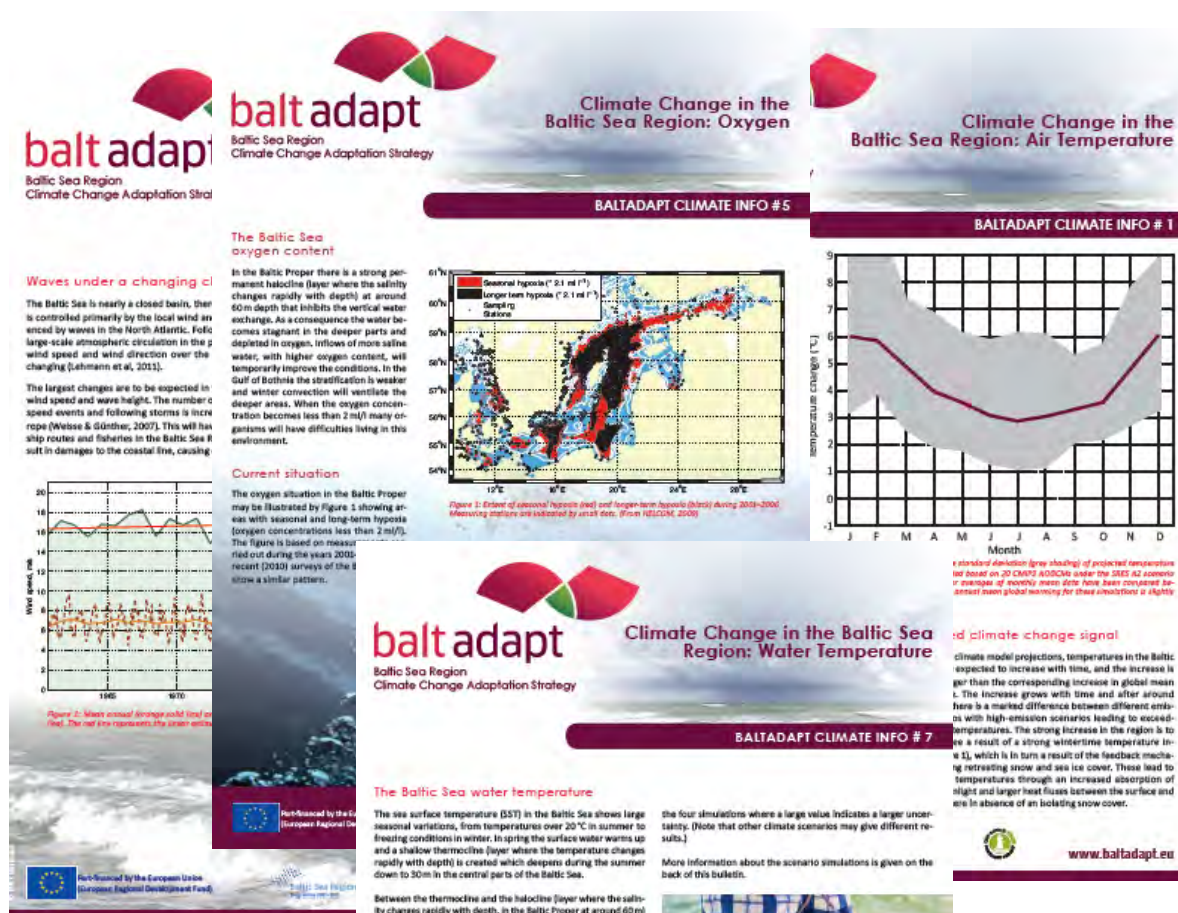
- ❑ Overview of the Baltadapt project results
- ❑ Introduction:
 - ❑ Current and projected climate changes in the BSR and impacts of and vulnerability
 - ❑ Policy Framework
 - ❑ Baltadapt Consultation Process
- ❑ Baltadapt Strategy and Action Plan
 - ❑ Approach and elements
 - ❑ Overarching aims and visions of the Strategy
 - ❑ Strategic Goals
 - ❑ Recommended Actions
- ❑ Outlook

Baltadapt Climate Info - The Baltic Sea in a future climate

(WP: Develop a knowledgebase)

- #1 Air temperature
- #2 Precipitation
- #3 Wind
- #4 Sea level
- #5 Oxygen content
- #6 Salinity
- #7 Water temperature
- #8 Biodiversity and habitats
- #9 Biological production
- #10 Wind-generated waves
- #11 River discharge
- #12 Nutrient loads
- #13 Eutrophication
- #14 Sea ice

Available at www.baltadapt.eu





Gap-fit Analysis

Baltadapt Project Results: **Baltadapt Reports (1)**



www.baltadapt.eu



Impact Assessment Reports

Baltadapt Report #3

Climate Change Impacts on Marine Biodiversity and Habitats in the Baltic Sea – and Possible Human Adaptations

Authors: Karsten Dahl¹ (Ed.), Alf B. Josefson¹, Cordula Göke¹, Jesper Philip Aagaard Christensen¹, Jørgen L.S. Hansen¹, Stig Markager¹, Michael Bo Rasmussen¹, Karsten Dromph¹, Tian Tian², Zenwen Wan², Inga Krämer³, Markku Viitasalo⁴, Kirsi Kostamo⁴, Karin Borenäs⁵, Jørgen Bendtsen⁶, Gunta Sprunge⁷, Erik Bonsdorff⁸

- ¹ Aarhus University, Department of Bioscience, Denmark
- ² Danish Meteorological Institute, Denmark
- ³ Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Germany
- ⁴ Finnish Environment Institute (SYKE), Finland
- ⁵ Swedish Meteorological and Hydrological Institute (SMHI), Sweden
- ⁶ VitusLab, Denmark
- ⁷ University of Latvia, Latvia
- ⁸ Abo Akademi University, Finland

Baltadapt Report #5

Climate Change Impacts on Infrastructure in the Baltic Sea Region

Authors: Inga Krämer¹, Karin Borenäs², Achim Daschkei³, Christian Filies⁴, Inga Haller⁴, Holger Janßen¹, Svenja Karstens¹, Laila Küle⁵, Jānis Lapinskis⁵ & Riku Varjopuro⁶

- ¹ Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Germany
- ² Swedish Meteorological and Hydrological Institute (SMHI), Sweden
- ³ Federal Environment Agency (UBA), Germany
- ⁴ EUCS The Coastal Union Germany, Germany
- ⁵ University of Latvia, Latvia
- ⁶ Finnish Environment Institute (SYKE), Finland

Baltadapt Project Results: Baltadapt Reports (2)

Baltadapt Report #4

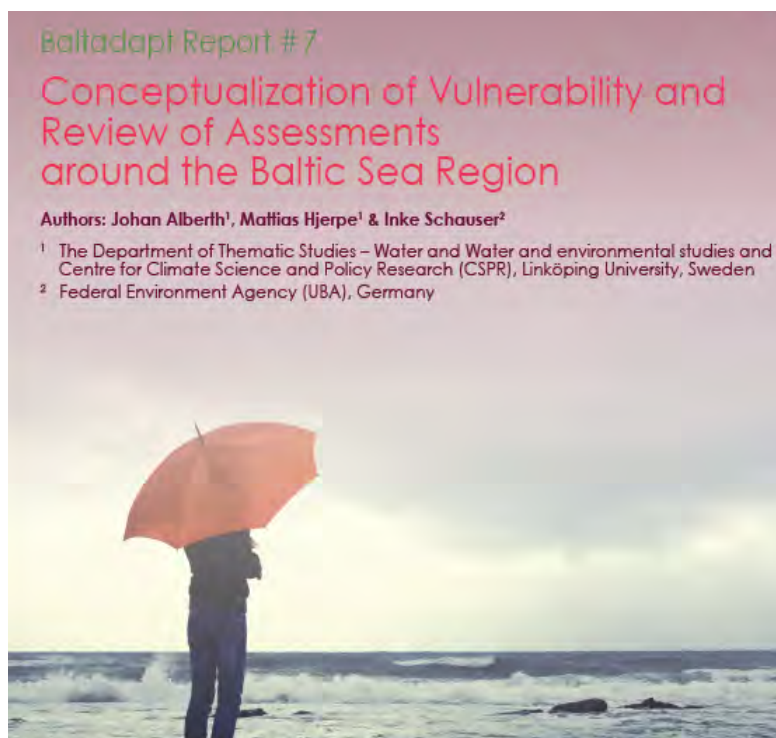
Climate Change Impacts on the Baltic Sea Fish Stocks and Fisheries

Review with a Focus on Central Baltic Herring, Sprat and Cod

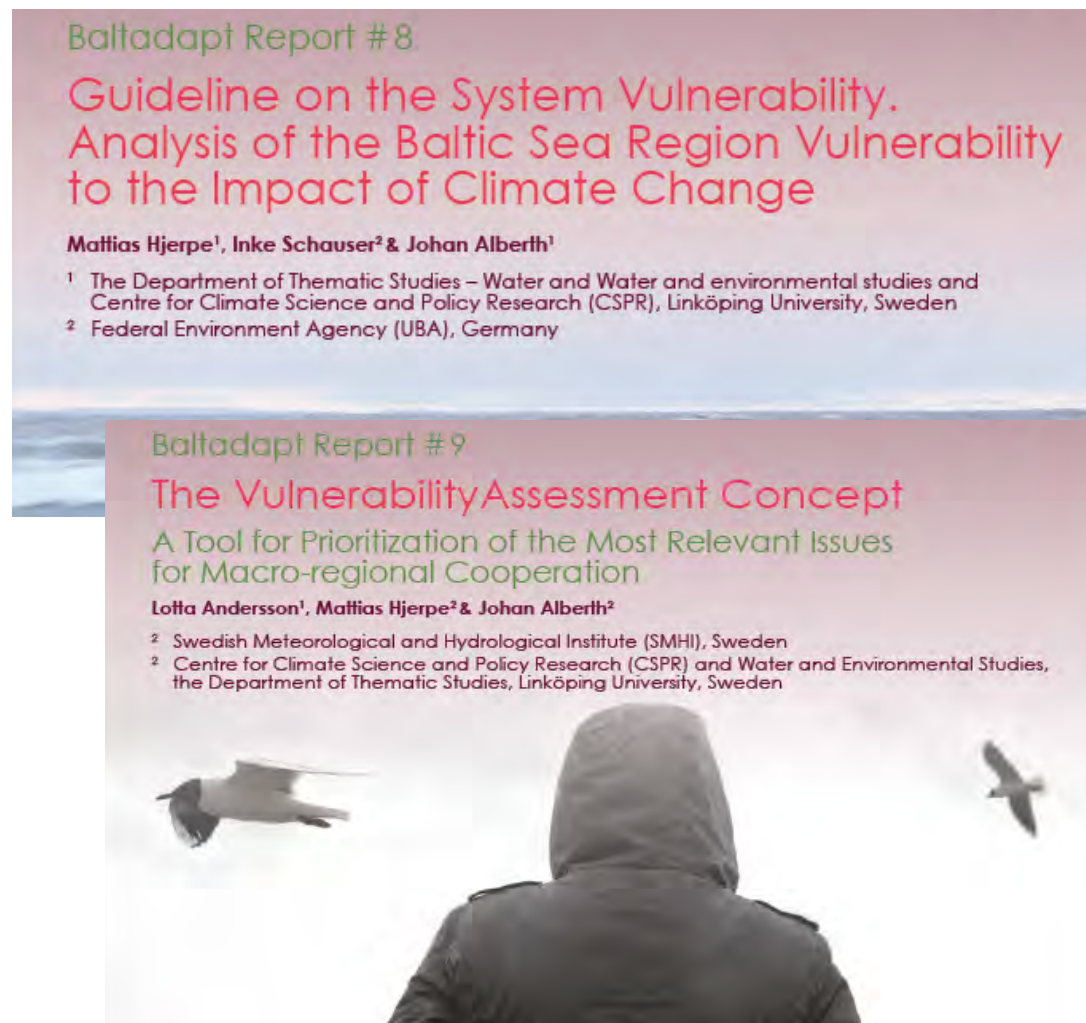
Authors: Heikki Pelttonen, Riku Varjopuro & Markku Viitasalo¹
¹ Finnish Environment Institute (SYKE), Finland



Vulnerability Assessment

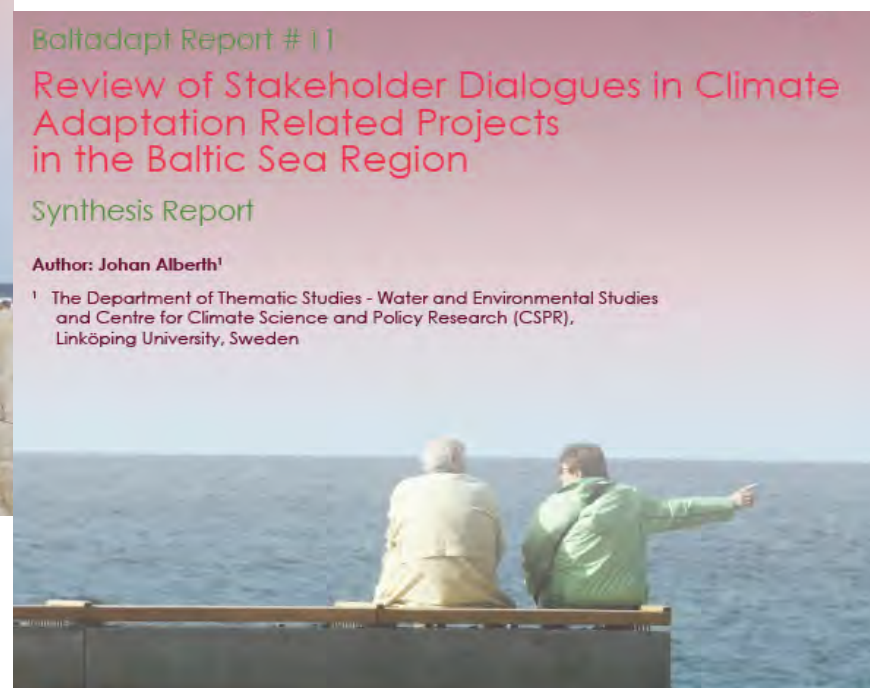
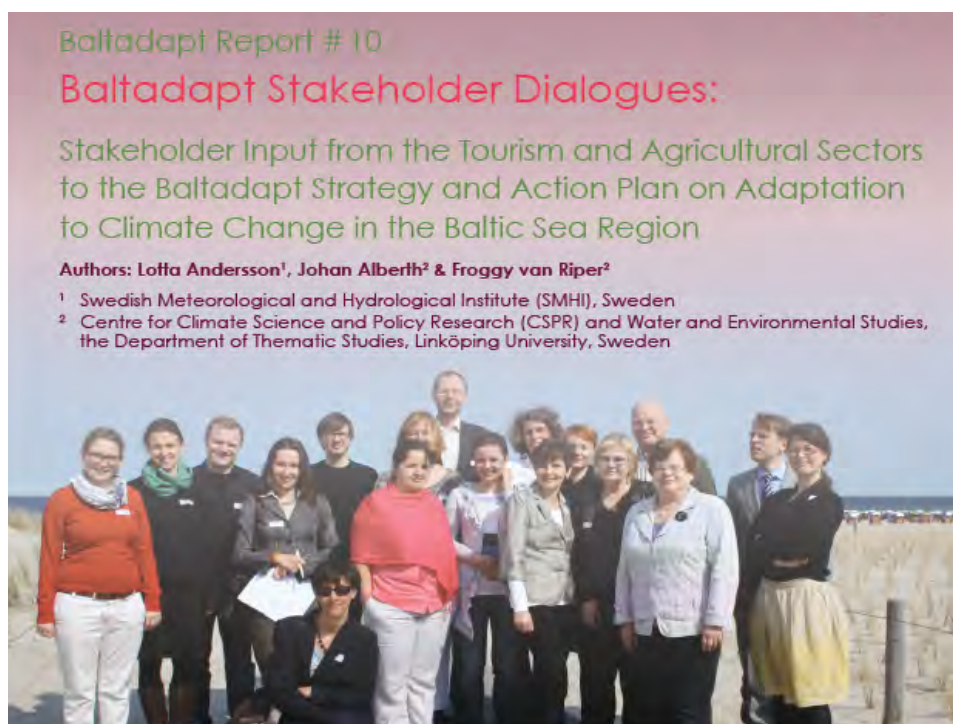


Baltadapt Project Results: Baltadapt Reports (3)



Stakeholder Dialogue

Baltadapt Project Results: Baltadapt Reports (4)



Why a BSR Strategy and Action Plan?

“Connected region with informed actors on all levels responding to climate change in a way that ensures prosperity, competitiveness, as well as clean water, and rich and healthy wildlife”



- Sharing of the Sea and its River Basin - adaptation or lack of adaptation might have consequences crossing national boundaries
- Solidarity - ensure that most exposed and vulnerable regions/sectors / environments/individuals increase their adaptive capacity
- Coordinate actions within sectors integrated through EU policies and the single market
- Need for a “Common BSR voice” in international contexts to ensure that the specific vulnerability of the Baltic Sea and its river basin to climate change is acknowledged in EU and international policies

High certainty ▲

Sea level rise (first in south, eventually in the whole region)

Annual air
temperature

Warmer summers



More heat waves

More events with extreme precipitation

More severe dry spells, especially in the southern areas

Long time
horizon

More storms, high waves
(uncertain)



- Specific eco-region
 - Limited water exchange, high projected warming
- High vulnerability ecosystems
 - Food supply, fishery, agriculture, coastal infrastructure, tourism
- Interlinked with other changes
 - Demographic, environmental, economic
- CC in other parts of the world
 - world trade, security





Introduction:
Policy Framework

- Facilitate implementation and serve as a role model for the EU Strategy with regard to macro-regional cooperation.
 - The eight actions in the EU Strategy addressed from a BSR macro-regional perspective
- Mainstreaming of climate adaptation in the Action Plan of the European Union Strategy for the Baltic Sea Region (EUSBSR)
- Cooperation with regard to national strategies.
 - pooled resources to identify priority sectors, major vulnerabilities and impacts and to create common databases
 - inclusion in national strategies of issues where CC or adaptation in one state has consequences in other BSR states or for the Baltic Sea.

the Strategy and Action Plan: **Consultation Process**

- Stakeholder dialogues
 - Farming & Tourism
 - Climate knowledge in the eastern Baltic Sea Region
- Policy Fora
- Consultation rounds



Farming



Tourism

WHAT?

BALTADAPT STRATEGY for adaptation to climate change in the Baltic Sea Region

A proposal preparing the ground for political
endorsement throughout the Baltic Sea Region

HOW?

BALTADAPT ACTION PLAN

Recommended actions and
proposed guidelines for climate change
adaptation in the Baltic Sea Region

The Strategy: Elements of the Strategy

- Current and projected Climate Change
- Impacts of and vulnerability to Climate Change
- The strategy:
 - 11 goals
 - Four specific areas
 - Marine biodiversity, Food supply: fishery and agriculture, Coastal infrastructure, Coastal tourism
 - Research and transfer of good practices, promotion of innovations, science-policy dialogues, disaster risk reduction
- Coordinators and implementers of the strategy



the Strategy and Action Plan

Elements of the Action Plan

Transnational cooperation

- The focus of macro-regional cooperation should be on the exchange of knowledge and experiences.
- Joint actions and adaptation measures should focus on joint problems and risks.
- New institutional processes and better use of existing institutions is needed.
- The work and results of different transnational and inter-governmental organisation active in adaptation should be better interlinked concerning adaptation.
- National focal points of adaptation could be identified in all BSR countries.
- A transnational working group on CC adaptation or different working groups/platforms discussing CC adaptation in relation to different horizontal issues could be established.
- Non-EU countries have to be involved in BSR projects; the focus should be on cooperation with Russia and with other countries in the Baltic Sea catchment area such as Norway, Belarus, Slovakia, Czech Republic, Ukraine, and Belarus. They should be promoted whenever thematically relevant.
- Funding programmes should make adjustments considering enhancement of cooperation with non-EU countries. Guidelines on the implementation of the BSR adaptation strategy and on how to develop NAS are needed and could be developed jointly.
- Macro-regional research cooperation has to be facilitated to bridge the gaps between national and macro-regional research foci.

RECOMMENDED ACTIONS

GOOD PRACTICE

Connecting climate knowledge for Europe - JPI climate

The JPI climate is a long-term initiative that aims to empower European decision makers to take appropriate action on climate change. It thus intends to contribute to a highly coordinated knowledge development by improving the scientific expertise on climate change risks and adaptation options, as well as providing climate knowledge and connecting it with decision-making on safety and major investments in climate vulnerable sectors in Europe.

www.jpi-climate.eu

INFO

Existing NAS

Denmark, Finland, Germany and Lithuania have developed and adopted NAS, all with a focus on specific sectors. At the same time, integration and mainstreaming adaptation within existing national programmes are central to these NAS. Action Plans support the implementation of the NAS in Denmark, Finland and Germany. Two of them mention cross-border initiatives (DE, DK).

BSR countries in the process of developing NAS:

Estonia, Latvia and Poland

the Strategy and Action Plan: **Examples of Added Value**

- Solidarity through actions that aim to reduce vulnerability and improve adaptive capacity where most needed, also including cross-border disaster management
- Address issues that only can be efficiently handled through cooperation involving all states in the region and ensure macro-regional funding for projects that focus on cross-border issues
- Building of common data bases/decision support systems and transfer of “good practices” and experiences related to national and local strategies, as well as promotion of innovations.





BUILDING AND SHARING KNOWLEDGE ON CC ADAPTION



Awareness: Goal and Visions for 2020

the Strategy:



1. Raised awareness concerning the need for action at all governance levels



Awareness of CC and its potential impacts on society and the environment, as well as awareness of ways to adapt permeates macro-regional agreements, education and training collaborations, as well as cooperation between authorities, researches and the business sector

the Strategy:

Knowledge base: Goal and Vision for 2020



2. Shared macro-regional knowledge base



A Baltic subsection of the European Platform Climate-ADAPT includes common CC open source databases on exposure, impacts, vulnerabilities and adaptation measures, including handling of risks and uncertainties, estimates of costs and benefits and communication of "good practices"

the Strategy:

Knowledge gaps: Goal and Vision for 2020



3. Research cooperation in order to identify and address knowledge gaps



BSR states and stakeholders have influenced Horizon 2020 programming and researchers have initiated and participated in Horizon 2020 research projects and other programmes that have addressed issues of high relevance for climate adaptation in the BSR

the Strategy:

Model Macro-Region: Goal and Vision for 2020



11. The BSR as a model region for macro-regional cooperation on CC adaptation



Building on the experience from implementation of the Baltadapt Strategy, similar strategies are developed for other parts of EU



Increase knowledge base

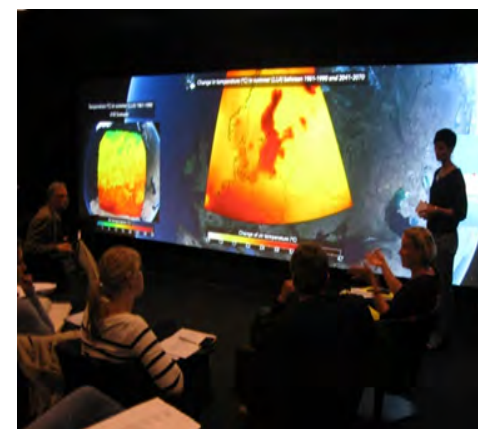
- Research needs on climate change impacts and vulnerabilities
- Impact assessments for sectors
- Promotion of multi- and interdisciplinary
- Economic assessments of costs and benefits of climate adaptation
- Social context of adaptation responses

the Action Plan: **Recommended Actions**

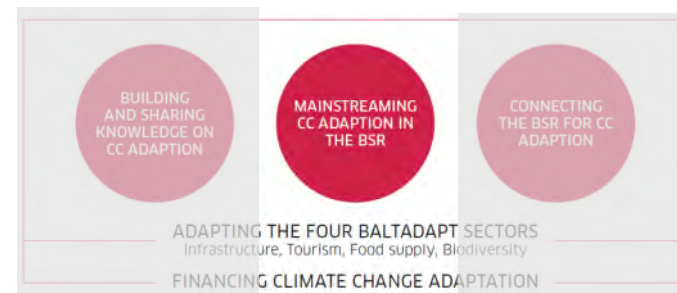


Provide and exchange information

- Use ClimateAdapt platform
- Integrate the Baltic Window
- Use other platforms (e.g. Geodome)



MAINSTREAMING CC ADAPTION IN THE BSR



Mainstreaming: Goal and Vision for 2020

6. Review and mainstream policies in the light of CC adaptation



All BSR relevant policies are (based on research outcomes) integrated (mainstreamed) with climate adaptation in a manner that reflects the specific environmental and socio-economic conditions of the BSR within all relevant EUSBR Action Plan Priority Areas (PA)



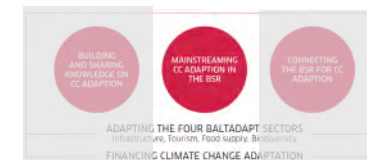
Revision of EU Directives and macro-regional agreements (e.g. HELCOM) for management of nutrients, species habitats and the EU fishery policy has been carried out in a way that make sense for the BSR with consideration to the specific conditions of the Baltic Sea

the Action Plan:
Recommended Actions



- Identify key instruments for integrating adaptation
- Include adaptation requirements in relevant legal provisions or establish new instruments
- Integration in other policy processes
- Mainstreaming of the private sector (e.g. Insurance)

the Action Plan: **Recommended Actions**



- Use of already existing instruments/networks at national level

COUNTRY	TEMPORARY COORDINATION OF NAS AND ACTION PLANS	INSTITUTIONAL COORDINATION BODIES	OTHER STRATEGIES ADDRESSING ADAPTATION
Germany	Inter-ministerial working group	<ul style="list-style-type: none"> • Inter-ministerial working group (WG adaptation) • KomPass • Climate Service Center (affiliated with the Helmholtz Community of German Research Centers) 	<ul style="list-style-type: none"> • Sustainability strategy • National strategy on biological diversity • Strategy on agrobiodiversity (planned) • On regional level: several sectoral adaptation strategies, e.g. for agriculture in Saxonia
Denmark	Preliminary inter-ministerial working group	Coordination Forum for CC Adaptation	
Finland	Series of seminars during the development of the NAS for different ministries	Finish Coordination Group for Adaptation to CC	<ul style="list-style-type: none"> • Forestry strategy • Foresight report

CONNECTING THE BSR FOR CC ADAPTION



the Strategy: Platforms for Dialogues: Goal and Vision for 2020



4. Facilitated science-policy-business dialogues at and between all governance levels through the provision of web-based as well as “real life” meeting places



Authority and business decision makers have access to interactive visualisation-based tools for climate adaptation. These are part of a well-developed and frequently used combination of web-based and real-life meeting places for researchers, authorities and the business sector to be used for horizontal and vertical dialogues and decision making.

Disaster risk management: Goal and Vision for 2020



5. Cooperation on disaster risk management to cope with increased risks due to CC



Access to operational warning systems in the region for climate induced disasters (impacting e.g., infrastructure, agriculture, health) available through common BSR systems or through cooperation between national warning system services in the region

Macro-regionally established insurance systems for economic losses during extreme events based on solidarity and risk reduction concepts

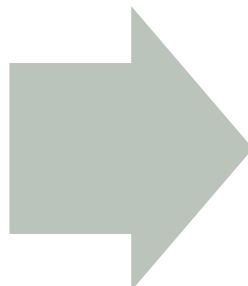
A network including all BSR states cooperation on risk reduction awareness raising, disaster response and recovery

the Strategy:

Involve Non-EU members: Goal and Vision for 2020



7.BSR cooperation
with non-EU
member states
where it has been
defined to be of
mutual benefit.

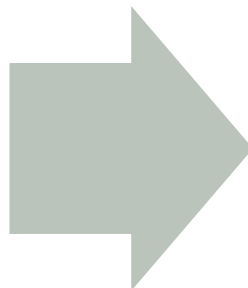


The involvement of non
EU BSR states (Russia,
Belarus, Norway) in
implementation of the
strategy has made it
possible to fulfil the
goals in the whole BSR:

The Strategy:

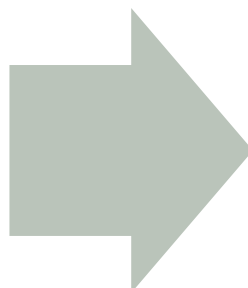
National Strategies and Action Plans: Goals and Visions for 2020

8. Cooperation
between states on the
development of
national strategies and
action plans



National CC adaptation
strategies are available in
all BSR states. Exchange of
information on the Baltic
sub-section of Climate-
ADAPT and other
established forms of
cooperation are used in the
preparation and updating of
national climate adaptation
strategies and action plans.

9. Macro-regional
cooperation within
business sectors



BSR cooperation on
adaptation to
obstacles and to
implementation of
business opportunities
(e.g. in the agriculture,
tourism, fisheries,
energy and
infrastructure sectors)

the Action Plan:
Recommended Actions

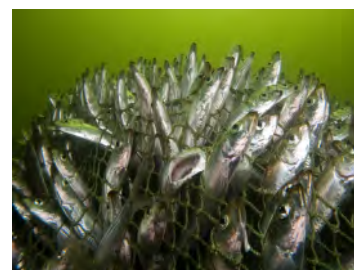


- Increase trans-national cooperation
- Support and facilitate cross-sectoral cooperation
- Increase participation on national/local level (stakeholder platforms/ coordination council on national level)
- Improvement of Science-Policy cooperation (e.g. ECRA - European Climate Research Alliance)



ADAPTING THE FOUR BALTADAPT SECTORS

Infrastructure, Tourism, Food supply, Biodiversity





- Ensure that climate impacts on **marine biodiversity and habitats**, whenever possible, are limited by **CC mainstreaming of environmental agreements and directives**.
- Ensure **prosperity and competitiveness** of **fishery and agriculture** sectors, while ensuring that the EUSBR objective “**Save the Sea**”, with emphasis on its sub-objectives “Clear water” and “Rich and Healthy Wildlife”, are fulfilled and acknowledging the value of **green infrastructure** in climate adaptation.
- Ensure that **coastal infrastructure** (including e.g. coastal protection, maritime traffic, ports and touristic infrastructure) sustains **prosperity, competitiveness and connectivity**, with acknowledgments of the value of **green infrastructure** in climate adaptation.
- Ensure prosperity and competitiveness of sustainable **coastal tourism**, with acknowledgement of the need to consider both **economic** and **environmental** concerns in order to ensure sustainability.

Recommended Actions

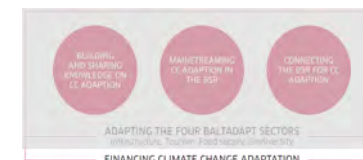


Example of measures	Practice example	Sectors				Aim of adaptation
		Infrastructure	Biodiversity	Agriculture and Fisheries	Tourism	
Intensification of river bank/coastal protection		x			x	Flood prevention
Development of new concepts for increased coastal resilience: coastal realignment, non-technical options, new techniques, vegetation and stabilisation of dunes, combination of hard and soft measures		x	x		x	Increased resilience for flooding



FINANCING CLIMATE CHANGE ADAPTATION

The Strategy: Financing: Goal and Vision for 2020



10. Macro-regional cooperation in order to ensure solidarity and funding of adaptation measures



Access is available to estimates of costs and benefits related to CC adaptation in different sectors in the Baltic section of Climate ADAPT



Access is available to financing in the BSR that enables prioritization of actions on adaptation to the most exposed and vulnerable parts of the region, as well as to the most vulnerable sectors and individuals.

Recommended Actions



- Actions to the stakeholders with regard to area- / sector-specific financing
- Mainstreaming adaptation in programming
 - ✓ INTERREG V BSR
 - ✓ Horizon 2020
 - ✓ BONUS
 - ✓ Cohesion Fund:
 - ✓ EU LIFE+

