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# **Baltic Sea Region Climate Change Adaptation Strategy**

**Project type: EU INTERREG IV B project**

**Period: 36 months (September 2010 - September 2013)**

**Kick-off meeting: 10 - 12 January 2011**

**UNECE**

**4<sup>th</sup> Workshop on Water and Adaptation to Climate Change in Transboundary Basins**

**25-26 June, 2013, Geneva, Switzerland**

**Ole Krarup Leth  
Danish Meteorological Institute**



[www.baltadapt.eu](http://www.baltadapt.eu)



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(European Regional Development Fund)



## Climate change adaptation in the Baltic Sea Region:

- Background – Why BALTADAPT?
- Partners
- Project goals
- Developing the strategy
- The knowledge base
- Impact assessment
- Stakeholder involvement
- Policy (decision) maker involvements

# Background – Why BALTADAPT?

## EU's strategy for the Baltic Sea...


- Elaborated by the European Commission
- Launched in 2009
- Four focus areas (pillars):
  - 1) Environmentally sustainable development
  - 2) Increase economical/industrial competitiveness
  - 3) Improve infrastructure
  - 4) Security
- Focus area 1), priority area 5 (of 15): „Adaptation to climate change“
- Priority area 5 is implemented via the action plan: „To establish a regional adaptation strategy for the Baltic Sea Region“ → **BALTADAPT**







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## Baltadapt partnership

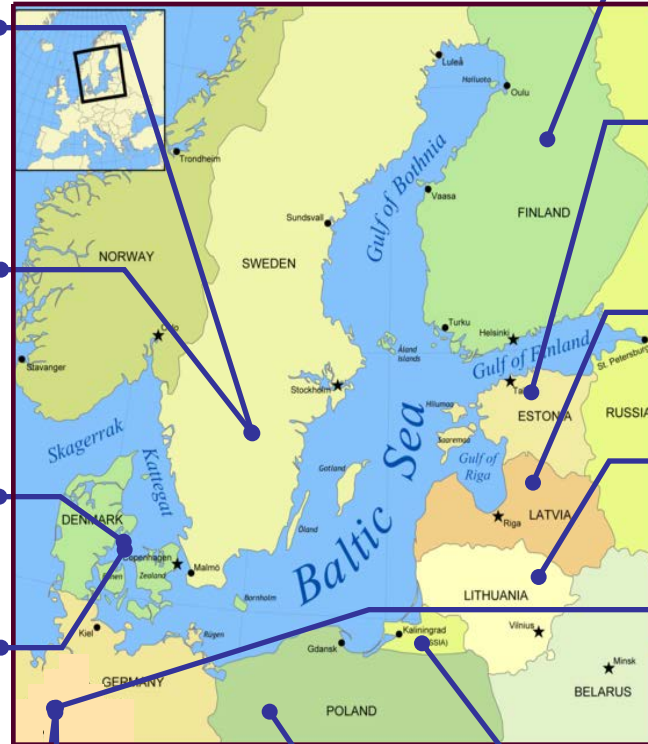
 The Secretariat of the Council of the Baltic Sea States (CBSS)/Baltic 21


 Swedish Meteorological and Hydrological Institute (SMHI)


 Danish Meteorological Institute (DMI; LP)

 National Environmental Research Institute, Aarhus, University (NERI)


 Federal Environment Agency (UBA)





 Finnish Environment Institute (SYKE)

 University of Tartu, Estonian Marine Institute (EMI)

 University of Latvia (LU)

 Baltic Environmental Forum (BEF), Lithuania

 Leibniz Institute for Baltic Sea Research Warnemünde (IOW)

 Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

Associated partner:  
Shirshov Institute of Oceanology, Russia.  
Polish Climate Coalition, Poland.





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## Mission



**Baltadapt's mission is to prepare  
and adapt the Baltic Sea Region to  
ongoing climate change.**



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# Project goals and expected results

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## Overall objective:

- Come up with sustainable solutions for climate change adaptation in the Baltic Sea Region

## Objectives:

- Develop a **climate change adaptation strategy** for the Baltic Sea region
- Develop an **action plan** (for decision makers) for the Baltic Sea region

## Some expected results:

- Improve knowledge sharing between scientists and politicians
- Collect existing knowledge on climate change adaptation, and identify and fill in gaps in this knowledge
- Climate change impact assessment and vulnerability assessment of the Baltic Sea region



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## Developing the strategy

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### The “background material” for developing the strategy

- Developing a **Scientific Knowledge Base**
  - Baltadapt Climate Info; Gap-fit-analysis; “Baltic Window” (in to “Climate Adapt”)
- Developing climate change **Impact Assessments** for the sectors (focus areas)
- Developing **Vulnerability Assessment** on sectors
  - The assessments are reviews of existing knowledge on climate change and related issues, not an evaluation of climate change itself.
- Transnational and regional **Stakeholder Workshops**
- **Policy forums**

### The four sectors covered in Baltadapt:

- Fish stocks and Fisheries in a changing climate
  - Tourism in a changing climate
  - Infrastructure (coastal) in a changing climate
  - Biodiversity in a changing climate
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# The knowledge base - what does models and data tells us

The Baltic Sea and its coastline face challenges due to climate change...

By year 2100:

Winter: 3-5°C increase in temperature  
20-40% more precipitation

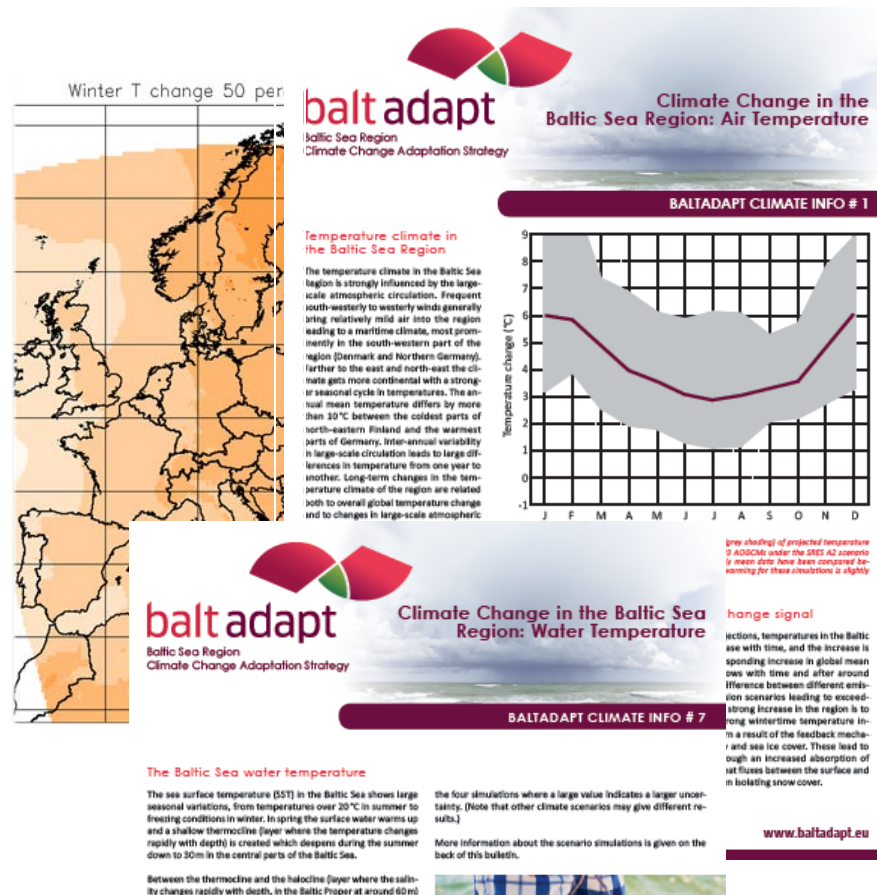
Summer: 2-4°C increase in temperature  
5% less to 25% more precipitation

Sea level rise (global and local): 10-120 cm

Decrease in sea ice extent and shortening of ice season

Decline in water quality, increase in hypoxic areas (even with present-day nutrient loads)

➔ Baltadapt Climate Info (#1-#14);  
Impact Assessment Report;  
Vulnerability Assessment Report:  
Go to [www.baltadapt.eu](http://www.baltadapt.eu) ←





## Impact assessment – Impact of climate change. Topic here Coastal Infrastructure

Infrastructure, areas treated: 1) Coastal protection, 2) Maritime traffic & ports, 3) Coastal tourism infrastructure

### Direct impacts of climate change:

- Sea level rise
- Storm surges, extreme weather events
- Temperature (ice conditions)

### Indirect impacts of climate change:

- Flooding/erosion
- Increased growth of fungus and mold
- Rise of ground water levels

### Consequences:

- Damages to buildings and infrastructure (eg, harbours and installations)
- Damages to existing coastal protection constructions
- Changes in dredging requirements

### Adaptation:

- More coastal protection, new techniques, new concepts (coastal buffer zones, beach nourishment)
- Development of protection schemes/flood control (planting vegetation, channeling of water)



**Stakeholder workshops – Present and examine the impacts of climate change on the sectors.**

- **Five stakeholder workshops** (Gdańsk, Poland, Oct 2011; Klaipeda, Lithuania, Oct 2011; Riga, Latvia; Oct 2011; Warnemünde, Germany, May 2012; Norrköping, Sweden, May 2012).

## Purpose:

**Developing a trans-national, Baltic Sea region wide adaptation strategy. But ....**

- Regions have differences
- Involvement of local/regional authorities is crucial
- No one-size-fits all solutions
- Differences in societal conditions should be taken into account
- Need to make sure that the strategy is relevant for those active in the sectors

**Some general remarks/input from the stakeholders attending the workshops ...**

Common points emphasised by stakeholders:

- More accurate scientific climate forecasts (**reduce the “error-bars”** ...).
- Need for **improved data** on topics such as effects of increased rainfall and sea level rise on the sectors
- Need for education and **better public awareness-rising** regarding climate change
- Need for **cooperation across borders – transfer of knowledge** on climate change adaptation within sectors and across sectors.





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# Policy (decision) maker involvement

**Policy forums – Link cooperation on adaptation to existing processes at national, EU, global levels.**

- **1<sup>st</sup> Policy forum**, 24 April 2012 in Berlin, Germany.
- **2<sup>nd</sup> Policy forum**, 10-11 December 2012 in Stockholm, Sweden.
- **3<sup>rd</sup> Policy forum**, 29-30 May 2013 in Tallinn, Estonia.

## Purpose:

- **Involving decision makers** and other macro-regional, national and local actors
- **Identify** and make use of **existing political networks** relevant for climate change adaptation
- Receive **guidance from the political level** on developing the adaptation strategy
- Identify and **discuss expected adaptation challenges** owing to climate change



## Some of the points being discussed:

- **Which challenges does a Baltic-wide climate change adaptation strategy have to address ?**
- **How do we ensure high political commitment** (both local and transnational levels) for Baltic-wide climate change adaptation strategy ?
- **How can one ensure transnational cooperation** on climate change adaptation in a more efficient way ?

# Thank you!

Baltadapt Final Conference  
**Adaptation to Climate Change in the Baltic  
Sea Region**

Riga, Latvia | 3–4 September 2013

<http://conference.baltadapt.eu>