balt adapt

Macro-regional Climate Adaptation Strategy for the Baltic Sea Region

linked of the EUBSR Action plan and facilitating implementation of the EU Climate Adaptation Strategy, National and Local Strategies and Action Plans

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CBSS-BALTIC 21 LIGHTHOUSE PROJECT

www.baltadapt.eu

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Why?

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

- Shared river basin and sea basins
- Solidarity – cooperation to ensure most exposed and vulnerable regions/sectors /environments/individuals increase their adaptive capacity
- Coordinating actions witan sectors integrated through EU policies and the single market
- “Common voice”

(1) Health and social issues (2) Farming, forestry (3) Biodiversity, ecosystems, water (4) Coastal zones, marine areas (5) Production systems, physical infrastructures

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How?

- Policy forum
  - Berlin (April 2012), Stockholm (December 2012), **Tallinn (May 2013)**
  - Involve desicion-makers and other macro-regional, national and local actors to prepare for political endorsement
  - Stakeholder workshops
- EU (DG Clima, DG Reggio) – The European Commission adopted an EU strategy on adaptation on 16 April 2013.

Final Conference in Riga 2-4th September 2013

Farming (Norrköping)

Tourism Warnemuende)

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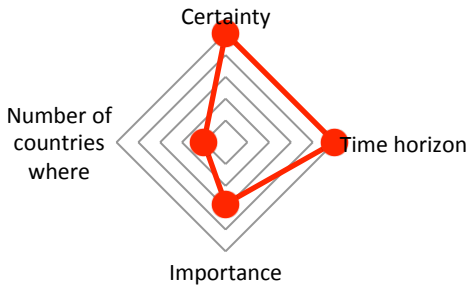
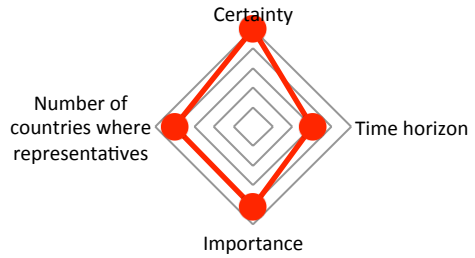
Prioritization of issues

- High PROBABILITY that a change will occur
- Short TIME HORIZION until change is significant
- High MACRO-REGIONAL interest in issue
- High RISK without or PROBABLIITY with adaptation

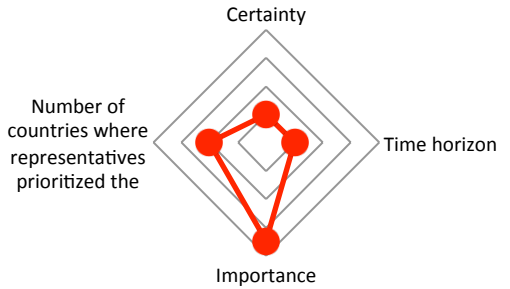
HIGHER ANNUAL AIR TEMPEERATURE: Potential: Prolonged coastal tourism



Challange: RISING SEA LEVEL More flooding of coastal areas



Challange: MORE STORMS damage to coastal infrastructures l, e.g., in ports



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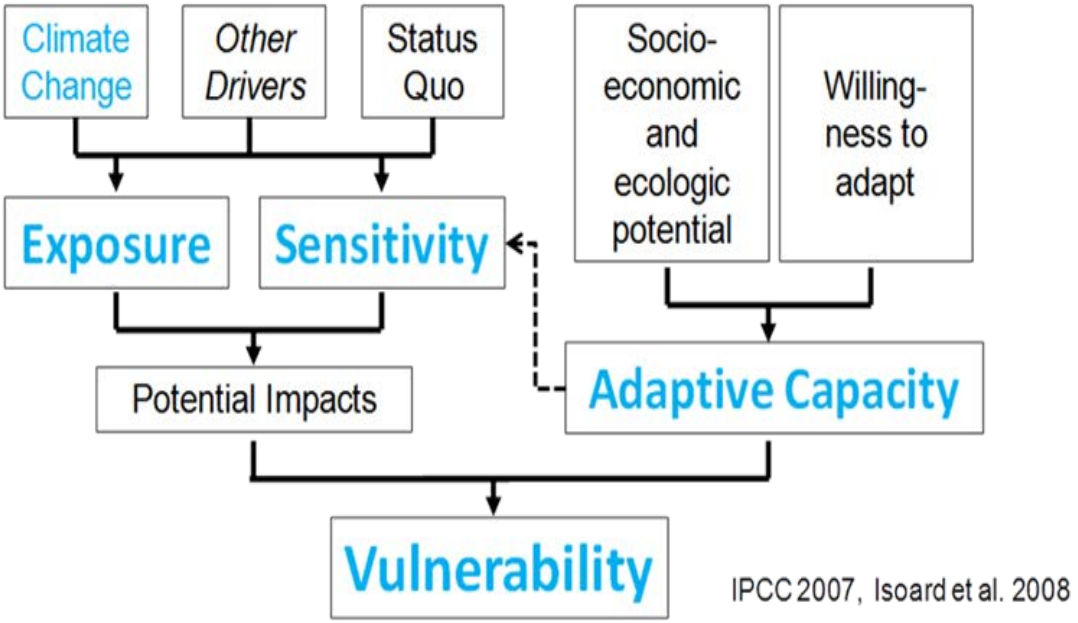
Vulnerabilty to Climate Change



"*Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity*" **IPCC 2007**

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Dealing with vulnerability - Challenges that need to be overcome

- Adequate scope and goals
  - Available assessments mainly based on a “risk hazard approach”, (exposure and sensitivity). NEED FOR: Increased focus on assessments of adaptive capacity, based on an iterative process with stakeholders on all levels
- Reflect on the context
  - Uneven impact and capacity to adapt across the BSR and between individuals. regions and between individuals. NEED FOR: Solidarity by actions that aim to reduce vulnerability where it is most needed.
- Include socio-economic stress and change
  - Multiple stressors. NEED FOR: win-wins between various environmental and socio-economic goals, within and between sectors. Avoidance of unexpected negative impacts of climate adaptation.

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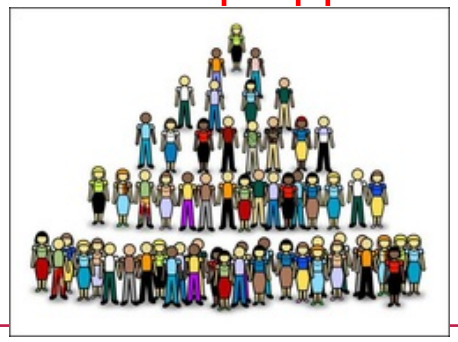
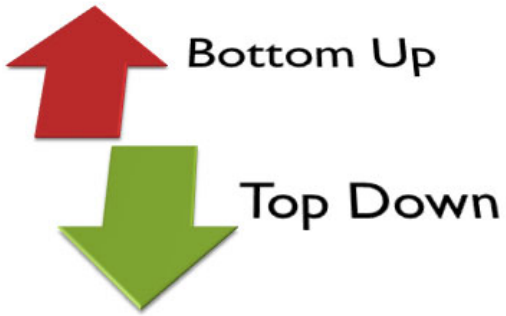
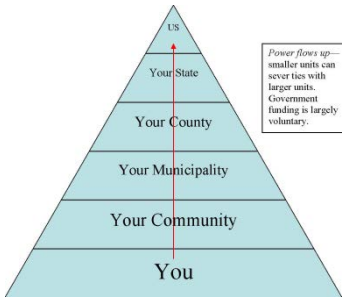
Dealing with vulnerability - Challenges that need to be overcome

- Connection to the decision-making process
  - NEED FOR: Relate vulnerability assessments to political and administrative decisions – create forums that enable integration of polices and knowledge across sectors and administrative levels.
- Merge top-down and bottom-up approaches
  - Estimates of national or macro-regional adaptive capacity not necessarily mirrors preparedness for action. NEED FOR: Combination of top-down approaches (calculation of BSR wide indexes) and bottom-up approaches (stressing local drivers and barriers).







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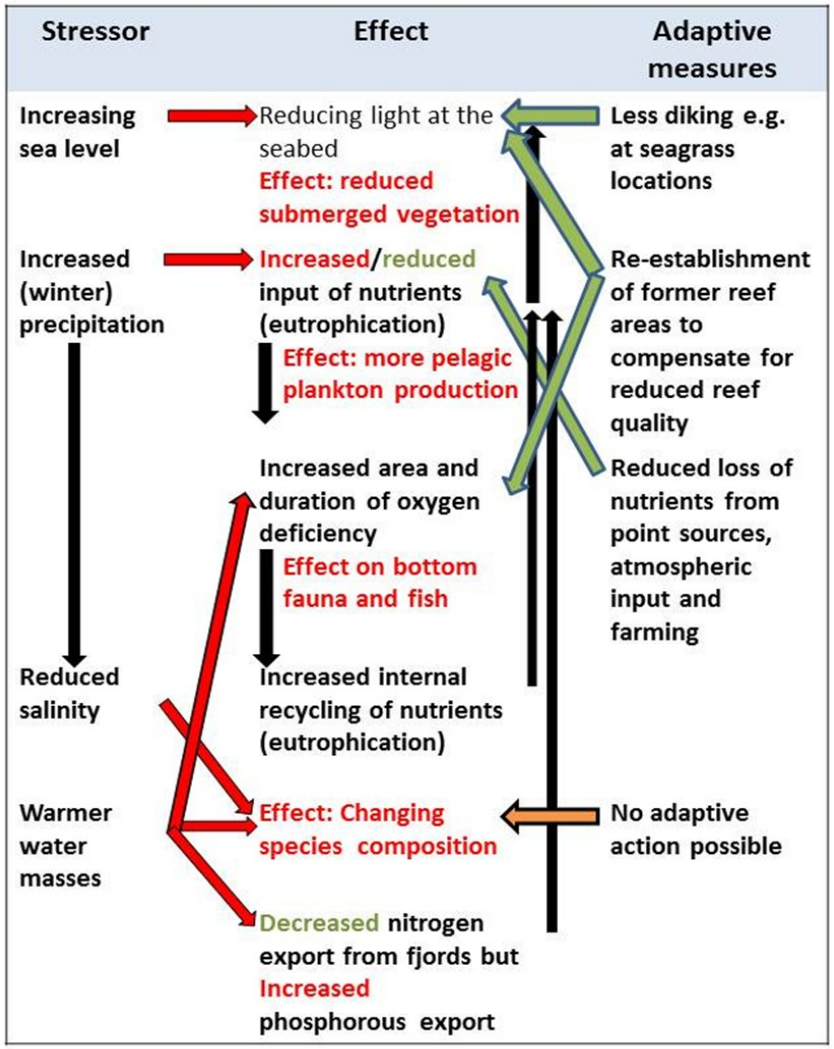
Marine biodiveristy and habitats



Rising sea levels*** (0-100)
Warmer water*** (0-50)
Lower salinity** (10-100)
Less ice*** (10-50)
More anoxic bottoms* (10-50)
Higher nutrient loads from land due to:
Higher air temperatures*** (0-120)
More extreme precipitation/ flooding** (10-100)
Increased river discharge** (10-100), mainly in north, winter).
Higher loads due to increased river discharge** (10-100) (winter, northern parts)

ACTIONS MAINLY IN THE BASIN

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Agriculture

Possibilites:

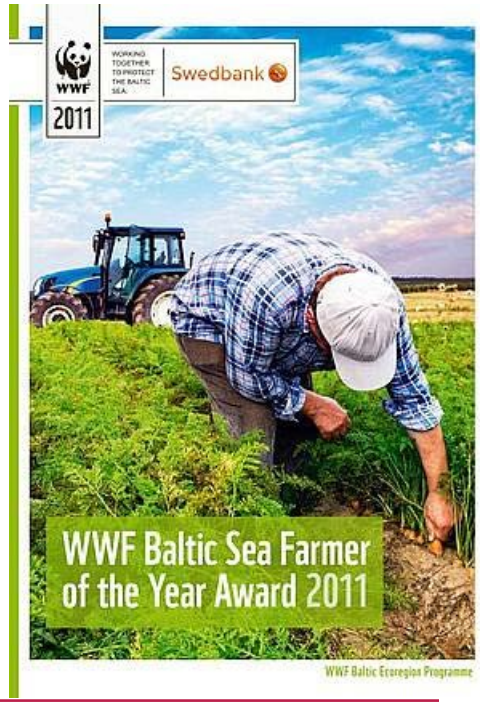
Higher crop yields New crops - larger crop variety. Longer vegetation periods. Longer periods for pasture grazing.

Challenges:

Introduction of new animal and plant pests and spread of weeds. High soil mineralization and heavy rains cause increased leaching of nutrients. Ventilation problems in big pig farms. More problems with flooding.

SUGGESTED ACTIONS (STAKEHOLDER WORKSHOP)

Cross-border system including learning about new diseases and pests as well as methods to mitigate the impact of these on crop yield (2) Macro- regional insurance system for economic losses during extreme events, based on a solidarity and risk reduction concept



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Fish and fish stock

- Limited possibilities for re-colonization from other marine areas and limited possibilities to “escape” climate change by shifting distribution ranges northwards
- Lower salinity and warmer water - fewer species, more freshwater species at expense of the marine
- **SUGGESTED ACTION:** identification of “adaptation tipping point approach” (warning signs) the EU Common Fisheries Policy (CFP) regulation when existing management strategies not will meet agreed objectives to help fisheries management to take into account possible climate change impacts.

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Coastal infrastructures

Examples of possibilities:

- Less demand for heating
  - Less sea ice will decrease stress/damage to constructions facilitates and reduce sailing distances and shipping times for maritime transports

Examples of challenges:

- Damage to buildings due to increased growth of fungus and mould
- Damage to coastal protection structures due to flooding caused by sea level rise
- Loss of coastal territory and built up structures due to landslides/soil erosion
- Damage to buildings/infrastructure due to rise of groundwater levels
- Increased need for refrigeration in ports and cooling of buildings and public traffic systems
- Increased need to safeguard summer water supply
- Dune movement due to damage to vegetation in dry periods
- Health issues related to heat and extreme weather events, intensified UV radiation, increased exposition of allergen- and air-pollutants and hygiene problems of food and water supply

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Coastal infrastructure

- Coastal protection, maritime traffic, ports and touristic infrastructure.
- Medical infrastructure – reduce and acting on impacts of heat and extreme weather events, UV radiation, allergen- and air-pollutants and hygiene problems of food and water supply. Aging population
- **SUGGESTED ACTION:** 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

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Coastal Tourism

Comparatively more suitable temperatures, prolonged season but challenges from beach erosion, increase of eutrophication and biodiversity loss, impact on freshwater resources, health.

“Microenterprises”, with a short planning horizon

SUGGESTED ACTIONS: (1) Integration with the tourism sector and the transport and the energy sectors, which are the two sectors which the tourism draws the most resources from.

(2) Forecast, Risk assessment and information sharing systems: Financial risk assessments, monitoring systems for coastal algae, bacteria, or jellyfish proliferation .

(3) Training and preparing rescue services for increased occurrence of forest fires and floods,

(4) Marketing of sustainable tourism to ensure that the potentially increasing visitor load in the BSR, not will increase the environmental impacts proportionally.

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After Baltadapt – Coordination

EUBSR Horizontal Action ”Sustainable Development and Bioeconomy” (CBSS, Nordic Council of Ministers). Indicator: BSR Climate adaptation strategy agreed on by all nations.

1. Agree on the most important focus and initiate policy-science and multilevel governance dialogues related to climate adaptation issues of common concerns in the Baltic Sea Region, with specific consideration to issues with cross-border implications.
2. Promote actions based on recommendations emanating from these dialogues or other relevant initiatives.

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After Baltadapt - Implementers?

Build on existing cooperation and ”match making”

Makro-regional transnational cooperation, e.g.:

- **CBSS** (the Council of the Baltic Sea States), **HELCOM** - Baltic Sea Action Plan (BSAP), **VASAB** (Visions and Strategies around the Baltic Sea). Physical planning.

Local-regional cooperation. e.g.,

- **Union of the Baltic Cities** .

Include enterprises, private sector, e.g.:

- **Baltic Development Forum** (“triple helix”)
- NGO:s t.ex:
- **Baltic Sea NGO:network**, sector organizations
- Research/education, e.g.;
- Baltic Sea University Program (**BUP**)

Important to include Russia in cooperation “when of mutual benefit”

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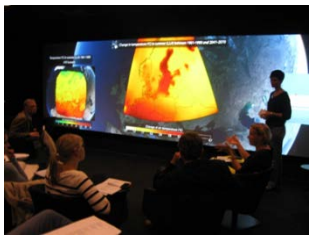
What could it be?

- Awareness rising
  - Common media campaigns, films, etc
- Shared macro-regional databases
  - Baltic Window (Climate-ADAPT), facilitate integrated analyses, “win-wins”
- Research cooperation
  - Find new paradigms, knowledge exchange, economic assessments – with a global perspective
  - Policy-research-private sector dialogues
  - visualisations, tool-boxes, meeting places (dialogues)
  - Right timing, right combination of information, interactive process



“Estimates of future costs and benefits indicate that each euro spent on flood protection could save six euros in damage costs. Floods killed more than 2,500 people, affected more than 5.5 million and caused direct economic losses of more than €90 billion over the period 1980-2011. The minimum cost of not adapting to climate change is estimated at €100 billion a year in 2020 and €250 billion in 2050 for the whole EU”

Integrated analyses ”win-wins”

- Avoid unintended negative impacts related to environmental or societal goals. Increase interests to work with climate adaptation by linking to other issues:
  - E.g., find synergies between reduced eutrophication, rural and urban mitigation of floods with consideration to a changing climate
  - Where in the landscape are measures acceptable from different stakeholders perspectives?

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Visualisations and tool-boxes

- Needed to grasp complex issues
- Guidelines for how interactive visualisation can facilitate dialogues aiming to reach win-win decisions
- Need of pilots/demonstrations to develop guidelines
  - Recommendations on how to work step by step to reach integrated goals
  - On local, as well as on macro-regional level

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”Mainstreaming”

- “Climate proof”, “integrate” climate adaptation
  - Within sectors – policy areas
- Climate proof common policies with focus on the Baltic Sea
  - Farming, water, biodiversity, fishing, energy
- Common issues, learn from each other
  - E.g. national adaptation strategies
- Possibility to impact EU-climate adaptation related policies by having a ”common BSR voice”
  - Climate adaptation needed also in our region!

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Innovations

- What adaptations are possible with present scientific, technological, and institutional and other limitations?
- Innovations: Authorises need to send signals both to enterprises and developers within the scientific community:
  - "Early warning systems" – inked to vulnerability
  - Economic valuation of the value of innovations:
    - E.g., adapted crops, techniques to avoid salt water intrusions
  - Monitoring, observations, communication systems, ways to increase understandings of need for adaptation:
    - Climate parameters, and impacts on e.g., ecosystems, health

"*The strategy puts strong emphasis on adaptation options that are low-cost, good for the economy as well as the climate and which make sense for a variety of reasons. It will promote sustainable growth, stimulate climate-resilient investment and create new jobs, particularly in sectors such as construction, water management, insurance, agricultural technologies and ecosystem management*"

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Ett datum för din kalender: 5 juni

Nationellt kunskapscentrum för klimatanpassning och Regeringskansliet bjuder in till:

En spännande dag om innovativa lösningar för samhällets anpassning till ett förändrat klimat

Innovationsdialog för klimatanpassning med tema bebyggd miljö

Odenplan 7A Stockholm

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