Can adaptation facilitate knowledge transfer in the tourism sector?

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Laila Kūle, University of Latvia
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Reports on climate change impacts on coastal tourism in the BSR: shorter and longer versions

COASTLINE 2013-21

Sectoral Impact Assessments for the Baltic Sea Region
Climate Change Impacts on Biodiversity, Fisheries, Coastal Infrastructure and Tourism

Editors: O. Krarup Leth, K. Dahl, H. Peltonen, I. Krämer & L. Käle

The Coastal Union Germany
Die Küsten Union Deutschland

Baltadap Report #6
Climate Change Impacts on Coastal Tourism in the Baltic Sea Region

Authors: Lotta Edel*, Inga Stiller*, Ilona Vajspu*, Johan Albärt**
1. University of Latvia, Latvia
2. University of the Arts, Finland
3. Finnish Environment Institute – SYKE, Finland
4. The Department of Thematic Studies – Water and Environmental Studies and Centre for Climate Science and Policy Research (CSPR), Linköping University, Sweden

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• Review based on existing scientific publications, research reports and new knowledge obtained as part of the Baltadapt project
• Tourism impact assessment has been prepared after Climate Change Impacts on Infrastructure in the Baltic Sea Region and most of the other reports have been finalized.
• Research findings on climate change impacts on tourist comfort and behaviour, tourism flows, destinations and activities are reviewed for the BSR with focus on coastal and cold-climate-dependent tourism (except mountain areas).
Outline of an impact assessment

1 Introduction
   1.1 Scope of the coastal tourism review
   1.2 Relevance of climate change impacts and adaptation to tourism
   1.3 Socio-economic trends of tourism
   1.4 Tourism system in the BSR

2 Environmental Consequences of Climate Change Relevant for Tourism in the BSR

3 Consequences of Climate Change on Coastal Tourism
   3.1 Climatic impacts on tourist comfort and behaviour
   3.2 Climatic impacts on tourist flows
   3.3 Climatic impacts on tourism destinations
   3.4 Climatic impacts on tourism activities

4 Adaptation measures

5 Knowledge and research gaps

6 Summary and Conclusions

Appendix 1 – Tourist arrivals and overnight stays in the BSR countries in 2011

Appendix 2 - Latvian case study

References

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Simplified tourism system in the BSR

- **Demand – origin and characteristics of traveller**
  - Tourists / recreants from the BSR
  - Foreign tourists (from/ outside Europe)
  - Volumes of travelling (flows N-S)
  - Time of travel (season)
  - Length of stay
  - Decision making factors (culture, weather, accessibility, utilities, costs)

- **Communication, branding, marketing of the BSR image (including climate, season and weather)**

- **Transport to the BSR**
  - Sea-based transport/ accommodation
    - Cruise ships, Ferries, Yachts
  - Air and land-based transport

- **Supply – traveller destination**
  - BSR, national, sub-regional tourism associations and government offices
  - Local businesses and communities / Tour operators / Travel agents and guides
  - Natural attractions (wildlife/ beaches/ bathing waters/ fishing/ forests/ open landscapes)
  - Infrastructure and services (indoor / outdoor)
  - Built-up areas (accommodations, attractions, urban and cultural landscapes)

- **Tourist experience**
  - Perception; expectations; past experience; thermal comfort, physical, physiological and psychological adaptation; weather (temperature, precipitation, wind, humidity, sun); extreme weather events; length of daytime; type of outdoor activities; services, costs, safety, host community attitude, hospitality
BSR specifics – demand side

• **Image and marketing** (perception, preferences and expectations) of the BSR climate with relevance to climate and weather conditions (seasonality and weather variability)

• Knowledge on **ideal thermal comfort** for the region and for specific activities – beach tourism, but also water-dependent and outdoor activities

• Domestic and foreign tourists (from the region and long-haul tourists)
• Tourists and local population (recreation) – often use the same venues and infrastructure

• Considers **future trends of tourists’ characteristics** – elderly (short, urban trips), individualization, better access of information, low-cost, increased flexibility, lower loyalty, experience economy (identity), sustainability, health, wellness. Mainly based on ECORYS (2009) Study on the Competitiveness of the EU tourism industry
Modelled conditions for summer (beach) tourism in Europe for 1961 – 1990 and 2071 – 2100

EEA, 2010; Source: Ciscar et al., 2009; Amelung & Moreno, 2009

Simulated conditions for summer tourism in Europe for 1961–1990 (left) and 2071–2100 (right) according to a high-emissions scenario (IPCC SRES A2)

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<tr>
<th>Tourism comfort index (TCI)</th>
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<tr>
<td>Unfavourable (TCI: 0–40)</td>
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<td>Acceptable (TCI: 40–60)</td>
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<td>Good (TCI: 60–70)</td>
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<td>Very good (TCI: 70–80)</td>
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<td>Excellent (TCI: 80–100)</td>
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BSR specifics – supply side

- Water-based (marine and coastal)
- Winter-based (snow and ice dependent)
- Nature and outdoor tourism/recreational activities (campsites and cool weather destinations)
- Beach and wellness (summer resort) tourism
- Changes to the supply due to seasonality and weather variability
- Polarized spatial pattern of tourism infrastructure and activities

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Tourism intensity, nights spent in hotels, campsites and other collective tourist accommodation, by NUTS 2 regions, 2010 (per 1 000 inhabitants)
Share of **non-resident** nights spent in hotels, campsites and other collective accommodation establishments, by NUTS 2 regions, 2010
Share of nights spent in campsites, by NUTS 2 regions, 2010
Polarized spatial pattern of tourism infrastructure and activities

Cruise activity at ports
Different adaptive capacities and experiences in the past

- Tourism adaptive capacities with relation to climate change vary in different parts of the BSR.

- Most vulnerable will be low income regions and less populated areas, coastal areas and those that depend on wildlife and snow and ice-dependent tourism.

Red mark areas of regression and blue for transgression since the onset of the Littorina Transgression 7700 years BP. (Harff & Meyer 2011)
Some of barriers to adaptation

- Fragmentation of the sector, SME and micro companies limit innovation (lack of skilled staff), disincentives for innovation, as well as knowledge sharing across the sector, except few large companies (e.g. cruise sector), that have limited spill-over effects.

- Inter-linkages with other sectors; difficulties to access to funding.

- Need for updated and comprehensive data both for tourism and recreation and climate. Weak tourism research and research-policy-industry links.

- Mostly reactive than proactive actions; and short-term priorities dominates over a long-term view in tourism industry.
Unexploited opportunities through the adaptation

• Creative re-branding of the region and venues

• Natural / institutional seasonality and climate variability

• Knowledge transfer of existing experience in innovation and longstanding traditions in tourism

• New tourism product development

• New tourism and recreation activities

• Strengthening of tourism industry (private sector) links with communities/ governments / the BSR region with emphasis on research and policies
Future challenges

- How to increase confidence that climate is changing and impacts are relevant for tourism.
- Comprehension that future tourism is dependent from a number of drivers, climate change but also from social, economical and technological changes which interactions are poorly understood.
- How to overcome uncertainty, a need for monitoring and evaluation of impacts and adaptation measures relevant for tourism industry.
- Motivation from the tourism destinations and industry and to avoid climate change risks or take up opportunities/innovations through adaptation actions.
- How research activities on climate change and tourism can be coordinated and supported.
Thank you!

Laila Kūle
E-mail: laila.kule@lu.lv
University of Latvia

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