Adaptation to Climate Change in Spatial Planning along the German Coast

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Overview

1. Introduction

2. Impacts of Climate Change

- a) Inundation due to sea-level rise
- b) Floodings
- c) Coastal erosion
- d) Impacts on groundwater
- e) Biological impacts
- f) Socio-economic impacts

3. Recommendations for action

- a) Protection
- b) Managed retreat

4. Role of spatial planning

Federal Level, Länder (Lower Saxony, S-H, M-V)

5. Conclusions



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Ostsee wird drei bis fünf Grad wärmer Baltic basin likely to achieve 3°C to 5°C warming this century (Sächsische Zeitung, 7. März 2007)





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3. Recommendations for action a) Protection b) Managed retreat



4. Role of Spatial Planning

- Federal Level
- Lower Saxony
- Schleswig-Holstein
- Mecklenburg-Vorpommern

Federal Level

Section 2 para 2 Nr. 6 Spatial Planning Act (Federal)

 (...)

(Environment, climate protection) The space (territory) is to restore in its importance for the functioning of the soil, water, animals and plants and the climate, including the interactions to develop, maintain or, if necessary, feasible and appropriate.(...)

The spatial requirements of climate change should be taken into account, both through measures to tackle climate change, as well as those of adaptation to climate change. These are the spatial conditions for the development of renewable energies, for a thrifty use of energy and for the protection and the development of natural sinks for greenhouse-gas substances and inputs for the storage of these substances.

(...)





Lower Saxony

Spatial Planning Act of Lower Saxony (2007)

Section 2

Principles of spatial planning

In addition to the principles of land-use planning in accordance with Section 2 of the Spatial Planning Act (Federal), the following additional Principles of spatial planning :

Nr. 1:

To protect the Earth's atmosphere and the climate the possibilities for spatial planning should be referred to long-term prevention to curb the greenhouse effect and the associated consequences for humans and nature.

Lower Saxony

 Regulation on the National Spatial Structure Programm of Lower Saxony - Part II - From 21 January 2008

Plannings and measures to develop the spatial structure of the Land (Federal State) should contribute to sustainable growth and competitiveness. (...)

This should take into account (...)

- The effects on the climate and the possibilities for curbing the greenhouse should be used. (...)

(1.4) Integrated development of the coastline, islands and the sea (12) Against the background of expected climate change, the research, development and exploitation of alternative coastal protection strategies should to be taken into account.

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Schleswig-Holstein

- No direct legal basis.
- Draft Spatial Development Plan Land Schleswig-Holstein 2009
 The strategy to protect the coastline is currently lay down in the
 "Master-Plan Coastal Protection: Integrated Coastal Zone
 Management Protection in Schleswig-Holstein (GPK) of December
 2001. It needs to concern the complex and sometimes divergent
 interests in coastal areas. This is achieved through integrated coastal
 protection management. It constitutes a development of the current
 planning process, by
 - coastal protection as spatial planning task area;
 - integration other demands on the coastal area early and duly in the development targets for integrated coastal protection;
 - public participation on the general planning process and
 - strengthened to take into account the climate change and the uncertainties in its forecasting.

Schleswig-Holstein

The future sea level rise - in the GPK 50 centimetres by the year 2100 will be taken into account - the sea attacks in Schleswig-Holstein coasts steadily will increase. At the same time, more and more values in the flood coastal lowlands (see Figure 15) will be produced. This leads to risk increases, where appropriate spatial planning measures should be dealt with such as restrictions to the settlement development,.

Mecklenburg-Vorpommern

Section 2 Nr. 4

(...) The balance of nature and climate budget should not be adversely changed. Already damage occurred, as far as possible, to eliminate them. (...)

- Land Spatial Structure Plan (LEP 2005)
- (3) In the Regional Structure Plans more reserved function areas for coastal and flood protection along coasts and rivers on the basis of sectoral planning and technical data (see 5.3 (2)) should be established. Legally or by decree Coastal protection and flood-prone areas should be set as priority areas "Coastal and flood protection".

Mecklenburg-Vorpommern

- Land Spatial Structure Plan (LEP 2005)
- (4) The natural flood plains should be preserved, in them building is reduced to a minimum. For dyked flood protection areas it should be examined to determine whether their function as a natural flood retention areas can be restored.
- (5) At Germany's Baltic Sea coast and on surface waters settlement areas are particularly secure from storm surges and floods by way of policies and structures of coastal and flood protection can be.
- (6) Where coastal protection measures with regard to security in the context of settlement areas are not necessary, the natural coastal dynamics as far as possible be allowed. Areas with ecological potential for the development of Salt grasslands should be suspended if possible, the natural flood regime.

5. Conclusions

- Multi-agency and multi-sectoral harmonisation
- Spatial planning and ICZM methodologies very similar
- Good information basis
- Familiar with modern methods of knowledge organisation
- Proven methods of participation and conflict management
- Harmonisation of development with nature protection
- Long term scenarios
- More flexibility in spatial planning (to meet ICZM needs)
- Overcoming traditional planning (adm.) borders
- Strengthening Public Participation
- Improve vertical cooperation and build up local ICZM capacity
- Better utilization/consideration of existing instruments
- Cross-sectoral Agency at regional level should take the lead

Thank You very much!

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