

Low and efficient land consumption using ICZM- DE

1. Policy Objective & Theme

- **ADAPTATION TO RISK:** Integrating coherent strategies covering the risk-dimension (prevention to response) into planning and investment
- **SUSTAINABLE USE OF RESOURCES:** Sound use of resources and promotion of less resource intensive processes/products
- **SUSTAINABLE ECONOMIC GROWTH:** Balancing economic, social, cultural development whilst enhancing environment

2. Key Approaches

- Integration
- Participation
- Knowledge-based

3. Experiences that can be exchanged

Land consumption is a topic for many densely populated or highly developed countries and is often addressed within their national sustainability strategies. Coastal functions like transport (harbours), recreation (tourism) or energy production (wind energy) are often drivers for intensified land consumption. Knowledge-based and integrated planning processes (ICZM) with clear participation rules have been proven to achieve both sustainable economic growth and low and efficient land consumption.

4. Overview of the case

Between 2007 and 2009, the value of ICZM-based planning or development processes has been tested in four case studies (coastal protection, harbour, wind turbine repowering and tourism) along the German coast (North Sea and Baltic Sea).

5. Context and Objectives

a) Context

In the context of the EU ICZM Recommendation (2002/413/EC), the German National ICZM Strategy (2006) and the German National Sustainability Strategy (2002), the German Federal Government aims for a reduced land consumption of 30 ha/day in 2020 (cf. 2008: 113 ha/day). In large areas of the German coastal zone, settlement areas are expanding and manifold uses compete for space as a limited resource (e.g. harbour expansion, recreational uses, coastal protection/climate change adaptation). Land consumption and splinter development have impacts not only on the environment (e.g. soil sealing, loss of natural land, traffic generation, increased energy consumption) but also on the economy and social interests (increased costs for infrastructure and energy, flood damage, weakening of intra-urban areas). Four different test sites were chosen to test the use of ICZM for low and efficient land consumption:

- Land consumption as a follow-up of coastal protection measures in East Frisia (North Sea)
- Land consumption and repowering of wind turbines in the region of Dithmarschen (North Sea)
- Land consumption and harbour expansion in the city of Hamburg (North Sea)
- Land consumption by tourism and recreational uses on the island of Usedom (Baltic Sea)

Within three rural case studies (1, 2, 4) strong conflicts among economic interests and anthropogenic uses and nature conservation (world nature heritage, Habitat's Directive, SPA) occurred, while the urban case study (3) was characterized by

conflicts between economic and social interests (harbour expansion vs living areas).

b) Objectives

The overall objective was to test the value of ICZM as a supplemental instrument in the field of sustainable spatial planning processes. Objectives were a) stocktaking and analysis (spatial development, environmental impacts, planning purposes), b) description and evaluation of possible development paths and c) development of recommendations with transferability to other German coastal regions (local and regional level) on the one hand and to stakeholders of the national ICZM process on the other.

6. Implementation of the ICZM Approach (i.e. management, tools, resources)

a) Project Management

The work has been carried out by the Leibniz Institute of Ecological and Regional Development in Dresden and the Leibniz Institute for Baltic Sea Research Warnemünde and other partners in closer co-operation with national, regional and local authorities.

b) ICZM tools

Different tools were used and developed during the project. As a technical solution, spatial information (GIS) on environmental parameters (e.g. soil types, habitats, flood prone areas) and land consumption trends were provided (e.g. SEMENTA tool) to support the municipalities in developing sustainable management solutions. On the policy level, a generalised ICZM approach was developed and used in all four case studies. Stakeholder workshops were conducted to prepare spatial plans (case studies 1 and 2). A spatial plan was adopted in case study 1. Furthermore, policy and legislative recommendations for the realisation of ICZM approaches with a focus on land consumption were given (e.g. land consolidation acts as legal and financial frameworks for ICZM).

Participation and exchange of information on different levels were required. ICZM as a process and an instrument should be used to integrate the different economic, social and conservation interests in four case studies along the German coasts. In the run-up to formal planning and approval processes development options, potential conflicts and possible solutions should be depicted to achieve both a sustainable use of resources (land) and sustainable economic growth. The results are documented in reports and publications.

7. Cost and resources

The German Federal Environmental Agency (UBA) provided funding of about €200,000 within the project 'Implementation of the National ICZM strategy: Strategies, Instruments and Measures for a spare, sustainable and efficient use of the resource Space in coastal areas' (ICZM & Space) between 2007 and 2009.

8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)

The objectives were largely achieved. In two of four case studies (3, 4) the ICZM process could not be finished within the funding period due to complex conflicts (4) or changes at the political level (3).

9. Success and Fail factors

The availability of excellent spatial data for a wide range of social, economic and ecological parameters and the possibility (personnel, equipment) to interpret this data at an early stage before the formal planning process was one of the main reasons for the success of the ICZM process in the case studies 1 and 2. However, it became clear that small and rural municipalities (e.g. with a typical size of 10,000 inhabitants) usually do not have either personnel or equipment to analyse GIS data. Existing

attempts on a European (INSPIRE) or national level are helpful to access existing data but many coastal municipalities in Germany are not able to process this data. In this case, project funding helped to bridge this gap.

Participation as well as transparency were core elements of the ICZM procedure which had to be used within the four case studies. However, in two of the case studies, superior knowledge by a legitimised person or institution (time limited) turned out to be essential for achieving the sustainable solutions. In case study 3, changes in the governing coalition due to elections led to changes in the governmental strategies for the Hamburg port expansion and, therefore, the ICZM approach could not be tested within the predefined timescale (2 years).

10. Unforeseen outcomes

None.

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13. Sources

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