

Application of coastal protection measures for local beach protection - LT

1. Policy Objective & Theme

- ADAPTATION TO RISK: Preventing and managing natural hazards and technological (human-made) hazards

2. Key Approaches

- Technical

3. Experiences that can be exchanged

This case study suggests exchange of experience as to how restricted measures could improve the management of a single beach of high local importance.

4. Overview of the case

The case is related to a comparatively local problem – the degradation of the beach in the largest Lithuanian sea resort, Palanga. After the reconstruction of the pier and several severe storms, the Palanga beach in close vicinity to the pier was critically diminished, which was politically sensitive, even at the national level, as the Palanga pier is a kind of national landmark. To mitigate this development several alternative measures were proposed. Construction of a defensive groyne was decided upon after the assessment of possible scenarios and placement locations.

5. Context and Objectives

a) Context

Palanga is the most important recreation area in the continental part of the Lithuanian coast. Large dunes and beaches were formed here after an impermeable pier (the Old Palanga Bridge) was built there in 1892. However, it became partially permeable in the second half of the 20th century. In 1997, a new bridge 470 meters long (Palanga Bridge) was constructed. The new Palanga Bridge is founded on piles and hence is completely permeable. During the following years because of the severe storms the beach has decreased several times in width, which was of high concern for both local and central authorities.

b) Objectives

To mitigate the coastal erosion in the close vicinity of Palanga pier.

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

a) Management

The pilot study and the construction of the protective groyne were managed by the Klaipeda county administration.

b) ICZM tools

A permit for the construction issued by the Klaipeda Governor's Administration only after the obligatory public hearings and environmental impact assessment. However, due to the local effect of the protective groyne no effect on the neighbouring protected areas was expected. The construction was within the limits of the Palanga city and the area designated for recreational use.

7. Cost and resources

Construction of the projective groyne together with preparatory measures was paid from the ERDF part of the Lithuanian budget.

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

The construction of the protective groyne was effective locally for the beach in the close vicinity of the pier.

9. Success and Fail factors

Generally, the main factor that contributed to the success of this case was the careful planning and sediment transport modelling study performed before the construction.

10. Unforeseen outcomes

So far no unforeseen outcomes have been observed.

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13. Sources

- Internal materials from the Coastal Research & Planning Institute, Klaipėda University.
- Zemlys P., Fröhle P., Gulbinskas S., Davulienė L. 2007. Near-shore evolution model for Palanga area: feasibility study of beach erosion management. Geologija, No. 57. 45-54.