
Summary Report of the CLIMAR-workshop “De kust op maat van het klimaat” Ostend 4 December, 2008

The Workshop “De kust op maat van het klimaat” was organized within the CLIMAR-project and the INTERREG IVB IMCORE project. This workshop was a national workshop initiated by the CLIMAR partners. CLIMAR stands for "Evaluation of climate change impacts and adaptation responses for marine activities" and is a Belgium project funded by the research program "Science for sustainable development" of the Belgian Federal Science Policy (BELSPO). The objective of this project is the elaboration of an evaluation framework for adaptation scenarios/measures as a response to climate induced ecological, social and economical impacts, and this for the Belgian part of the North Sea.

The workshop created an interactive discussion with the various coastal sectors on options for alternative coastal protection in the context of climate change. There were representatives from almost all sectors along the Belgian coast: local authorities, tourism, nature and environment, dredging industry, economy and ports, fisheries, hotel and catering industry, science, spatial planning of municipalities, water and polders.

The central question of the workshop was “How can we adapt to the increasing risk of flooding due to climate change?”. In the first session, the participants were divided into groups according to their sector. Each group was asked to propose three innovative adaptation measures to protect their sector against flooding. In a following session, the groups were re-organized in a way that all sectors in each group were represented. The three innovative adaptation measures proposed by each group in the first session were presented to the mixed groups of the second session. The latter tested the integration of proposed innovative adaptation measures in the other sectors: “How does the proposed adaptation measure influence other sectors?” and “How can we improve the proposed adaptation measure?”. The measures proposed in this workshop are used as a first input in the project and will be further developed.

Proposed adaptation measures:

Managed retreat: The aim is to connect the hinterland with the sea by the removal of hard coastal defence structures. This policy allows a low-lying area to become flooded in a controlled way. Managed retreat has a positive effect on the biodiversity, given that managed retreat can increase the biodiversity due to creation of new coastal habitats. Moreover, the polders will heighten in a natural way by the sedimentation process during and after the coastal flooding. Disadvantages encountered in the second session: the feasibility of the system in Flanders has been questioned (lack of suitable land due to dispersed habitation), cultural-historical objections to the excavation and raise of the polders and more salinization of agricultural land.

Sand embankment into the sea: This idea may take various forms such as the creation of one or more islands before the coastline, the raising of the existing sand banks, extending the coastline by sand nourishment. These proposals were generally well received in the second session. There are many recognized benefits such as protection of the hinterland, the possibility for aquaculture or recreation (diving), the biological surplus value that can be created, the possibility of introducing new technologies (absorbing wave energy to produce green energy).

Closing the North Sea: A proposal for building two dams: one between Friesland and Great Britain and another one between France and Great Britain. The southern North Sea will be completely closed and drained. This proposal was not well received in the second session. It would have catastrophic consequences and is considered as “building against nature” instead of “building with nature”.

Dike in dune: This proposal implies that an elevated dike will be constructed and then covered with sand. In front of this dike a large beach will be constructed. In the second session the participants saw many benefits of this proposal, primarily for nature development. But it was not certain whether the tourists would like to lose their view at the sea. This problem can be solved by constructing the buildings in a way that the ground floor is filled with concrete and can serve as a dike.

Emergency plan: A rapid evacuation of the ground floor should be possible (within 15 minutes) and encouraging pile dwellings in flood areas. The problem is that all the shops and parking space should be on the first floor.

Main conclusions:

- Combination of different measures is regarded as the most effective.
 - Inland solutions seem difficult along our coast because of a shortage of space.
 - Many possibilities for win-win situations with energy extraction, recreation, aquaculture,...
 - Cost-benefit analysis is an important tool in evaluating adaptation measures and should be applied
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