

# FLEMISCH COAST – VLAAMSE BAAIEN DEVELOPMENT PLAN 2050

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## Introduction

The Flemish Coast is situated in Belgium between the French and the Dutch border and has a length of 67 km. In the course of the past century, the Flemish Coast has passed through a number of evolutions that have defined its present character. The natural sea barrier, consisting of sandy belts of beaches and dunes has in many locations been covered over by the construction of dykes and/or breakwaters, without taking into account the dynamic nature of those sandy zones. In many areas, the beach in front of the seawall eroded and the safety level is only about once in 100 year stormevent.

However the required safety level is 1 in 1000 year. To reach this level the Flemish Authority is working on a double track policy: an integrated masterplan for coastal safety for the short term and integrated long term vision up to 2050 for the coastal area.

## Masterplan Coastal Safety

For the short term the Flemish Authority approved a masterplan Coastal Safety that brings the minimum safety level up to once in 1000 year. The total cost of the plan amounts 300 million euro. The implementation of the plan will last until 2015-2016 and will need about 11 million m<sup>3</sup> of sand. See reference.

## Vlaamse Baaïen Development plan 2050

By the long term development plan a lot of parameters remain unclear and therefore uncertain. How drastic will be the rise of the sea level? How will the economic development play out,...? Yet, these uncertainties need not to be impediments to develop a flexible vision up to 2050. The plan has to fulfil five important criteria: safety: the minimum safety level of once in 1000 year should be guaranteed at all time; natural: more space for nature development should become available; attractive: the coastal zone should become a more attractive area for inhabitants and tourists; sustainable: in the plan special attention should be payed to solutions for marine renewable energy and developing: providing space for economic development in the coastal harbours.

The vision currently developed for the Flemish Coast is built up around a series of possible projects under the following concepts: Coastal Zone Management, Developing Seaports and Islands.



Figure 1 – Zeebrugge area

An important part of the plan is the Port of Zeebrugge. The future expansion of the Port of Zeebrugge goes together with the development of natural and recreational facilities in the adjacent coastal zones of Knokke-Heist and Blankenberge. The beach front can be widened. There is sufficient area for the introduction of marinas, bird sanctuaries and new tourist facilities in the lee of the breakwaters of Zeebrugge II. In the direction of the Westerschelde a protected navigation corridor can be created for the so-called inland estuary traffic.

Under the concept islands, several projects are studied. By raising the existing sandbanks wave conditions in the area between the banks and the coast can be improved thus facilitating coastal protection.

Figure 2 shows a belt of raised banks in front of the coastline giving protection against NW-storms.

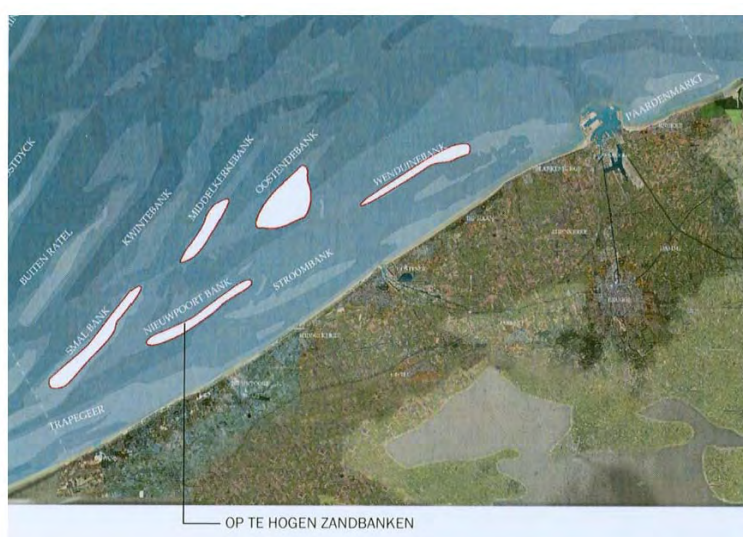


Figure 2 - Belt of raised banks in front of the Coastline

In the long term this banks can be developed to real islands used as test facility for renewable wave and tidal energy, as port of refuge, as station for offshore services or port of transhipment.

## CONCLUSION

In the long term the Flemish coastal landscape will provide a safe and sustainable environment that can be adapted to changing needs as required. The development of an integrated plan represents the core of the vision: the transformation of the current squeezed coastal region into a broad, natural area that consists of beaches, dunes, sandbanks and islands where the elements of safety, the natural state, attractiveness, sustainability and economic evolution are bound up with common ties and social interests.

## References

- Mertens et al (2008), An integrated Masterplan for Flanders future coastal safety.
- THV Vlaamse Baaien(2009), Vlaamse Baaien 2100 - Safe, Natural, Attractive, Sustainable, Developing.