

Coastal Genesis 2.0

Knowledge for the coast

Rijkswaterstaat maintains the coast by means of annual sand nourishment operations. Climate change and land subsidence mean that the long-term vision for the coastal policy requires re-assessment. To keep the Netherlands safe in the future as well, we must now consider how we can continue to maintain our coast with a sustainable approach to sand nourishment.

Choices from the Delta Programme

The Sand Decision in the Delta Programme sets out a number of principal choices for the long-term coastal policy:

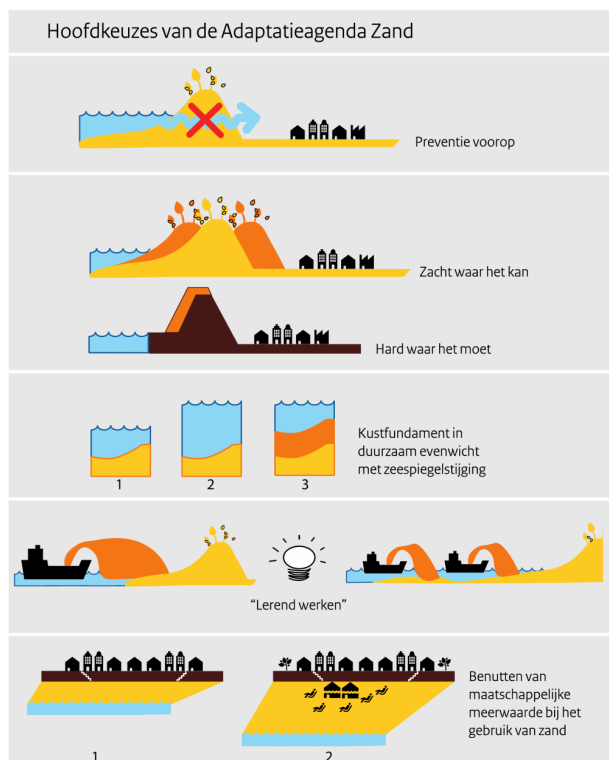
- 1 A sustainable equilibrium must be maintained between the coastal foundation and sea-level rise.
- 2 Pilot programmes must be conducted to generate knowledge about the best approach to sustainable coastal maintenance.

Coastal Genesis Objective

The objective for the Coastal Genesis 2.0 programme is: *'To generate knowledge so that well-founded decisions can be made from 2020 onwards about the policy and management of the Dutch sandy coastal system.'*

Research

To this end, we will be engaging in research between 2015 and 2019 to determine how much sand will be needed in the long term, where and when the sand is needed, and how we can deposit the sand on the coast.



HOW MUCH?

How much sand is needed to attain a structural and sustainable balance?

WHERE?

Which area do we have to maintain to achieve this?

What coastal functions are involved and how will they develop?

WHEN and HOW

When does the required amount of sand change?

Is it possible and desirable to conduct pilot projects with large sand nourishment quantities?

Sub-projects and research lines

Coastal Genesis 2.0 includes six sub-projects, each of which comprise a number of research lines:

Long-term coastal development

- Maintaining the surface area and protecting the coast
- Improvements to our understanding of how tidal basins interact with the sandy coast by means of model development
- Definition and validation of the boundaries of the coastal foundation
- Additional monitoring for the purposes of validating the boundaries of the coastal foundation and model development for coast/basin interaction
- Sea-level rise and land subsidence
- Additional learning from pilot programmes and preparations for a Wadden Sea ebb-tidal delta pilot project



Sand extraction

- Optimal shaping of sand borrow areas and identification of borrow locations for long-term coast development
- Effectiveness of sand extraction

Ecology

- Consequences of changes in sand quantities for the ecology of the seabed

Spatial planning and economy

- Opportunities and possibilities to generate added value for a socially attractive and safe coast
- Development of adaptable concepts
- Multifunctional flood defences
- Demand for extra sand for other user functions

Learning in practice

- Monitoring and comparison of existing and new implementation projects.
- Learning from sandy reinforcement projects such as the Hondsbossche and Pettemer Sea Defences and the Sand Motor

Data management

- Establishing and managing the knowledge base

Collaboration and financing

The Ministry of Infrastructure and the Environment is the principal. Coastal Genesis 2.0 is also part of the National Knowledge and Innovation Programme, Water and Climate. The research lines for long-term coastal maintenance are financed by the Ministry of Infrastructure and the Environment. The other research lines will be financed by partners including government authorities, the corporate sector and research institutions.

Do you want to participate?

Are you engaged in research looking at the fields above? Join us. By working together, we can operate efficiently and contribute to the joint development of knowledge for a safe and attractive coast.

More information and contact

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Ministerie van Infrastructuur en Milieu

NKWK

Nationaal Kennis- en
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Water en Klimaat

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