

Factsheet Business Case Houtrib Dike

About Houtrib Dike

A pilot project was conducted between 2014 and 2018 to study a sandy reinforcement for the Houtrib Dike. The aim was to develop knowledge about the application of sandy reinforcements for dikes in lakes with mild wave conditions. The thinking was that this would open the way to cost reductions in the design and construction of flood defenses. In order to investigate the development of vegetation in different conditions, a number of areas were set out in the trial section that included a range of combinations of vegetation and soil type. One of the main objectives of the pilot study was to apply the results in both ongoing and upcoming HWBP (High Water Protection Programme) projects.

Business case approach

What type of business case was used to compare BwN to alternative solutions, and what role did it play in realizing funding for the project?

Two types of tools were used in order to identify the investment for the Business case of the Houtrib Dike. First, a cost-benefit analysis is used. Next, a multi-criteria analysis is applied during a later stage to add the effect of natural benefits. The use of the cost-benefit analysis and the multi-criteria analysis in the business case resulted in the most effective design with sand nourishment and supported choices to be made during the project.

Reason for investors to select BwN approach

The BwN approach was selected because it was the best solution for this case. Another reason for the investors to fund the project is that the BWN-solution was proved to be cost-effective for the shallower part of the lake where the required sandy volumes are limited.

Coping with uncertainty in the business case

Dealing with the uncertainties in natural dynamics with respect to the business case were included into the tasks of the project. It was included in the contract. Though uncertainties were not taken into account in detail in this project.

Barriers and opportunities in BC approach

Clear appointments are necessary to arrange the required financing. This should also include information regarding risks within the project and appointments regarding the delivery. Clear appointment with the contractors must be made regarding cost which are not made and how to deal with this situation or in the case that extra costs that are required for a successful project.

Finance

Who funded the project and how was the financing arranged?

The Houtrib Dike was funded by Rijkswaterstaat who made use of the HWBP that contributed 100 % of the total investment cost. The main goal of the project is to reduce flood risk and contribute to the

HWBP obligation for dike strengthening. The project is financed by making use of a grant, with the condition that project goals are achieved. The financing is arranged by three different sources including public, domestic and government.

What are the motives to invest in BwN?

The most crucial factor to convince the funders was cost-effectiveness. This is defined as the most important factor because the budget should always be taken into account. The other relevant factors are ranked from high to low starting with cost-effectiveness and followed by an innovative approach, other benefits such as nature and at last improvement of knowledge.

Barriers in financing BwN

Money from the HWBP was matched with an investment of Ecoshape. So, in this project none of the anticipated funding and or financing resources that was anticipated on was missing.

Enablers in financing BwN

In order to deal with factors that reduce funding opportunities, the communication with the stakeholders was valuable. So, news about the project is spread during the project to keep them connected and informed.

Procurement, how is it arranged and does it affect the BwN approach?

A contract was set between RWS and Ecoshape. This included both construction and operation. The funders were involved by the selection of the type of procurement and type of contract. The selected contract form had an effect on the design of the BwN approach because the dimensions were limited by the available budget. However, this was the only option possible.