



Freshwater tides





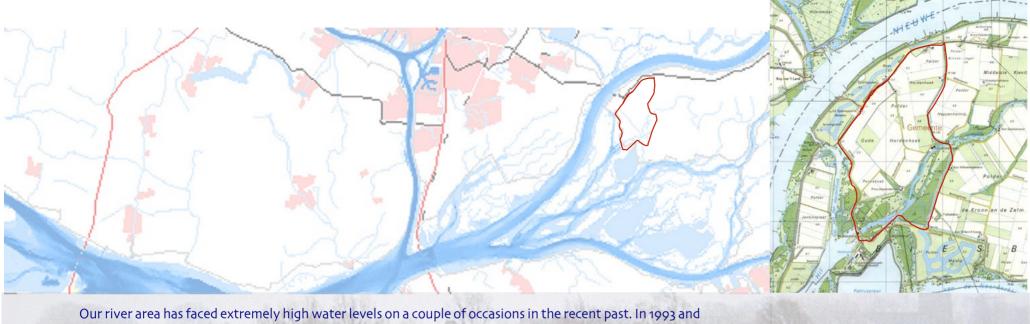
The floods of 1953 led to the closing of the Haringvliet in 1970. The closing caused the difference between high and low tides to be reduced from approximately 2 metres to barely 40 cm, making a unique freshwater tidal area disappear.



Recently there have been experimentations with the partial reopening of the locks of the Haringvliet.

The locks are opened slightly, but this so-called 'crack policy' will barely influence the tides in the Biesbosch.

In the future, the locks are supposed to be shaped into a flood barrier. This will have a larger influence on the tides and biodiversity in the Biesbosch, but is, at the same time, a drastic and expensive action.



Nature development

Our river area has faced extremely high water levels on a couple of occasions in the recent past. In 1993 and specifically during the Don-Bosco flooding in 1995 people even feared a breach in the dykes. Eventually the dykes did not break, but the occurrences were cause to search for solutions that would better protect The Netherlands from high water levels.

The Deltaplan Grote Rivieren made sure that the dykes were quickly improved, but more measures need to be taken to keep The Netherlands safe.

The climate is changing, which means we need to take into account wetter winters and more melt- and rainwater reaching our rivers from the hinterland.

The goal –Ruimte voor de Rivier- forms a turning point in the way The Netherlands has been dealing with water for centuries. Instead of further heightening and strengthening the dykes, we are now looking at solutions to give water more space.

Since the early 90s the Dienst Landelijk Gebied and Staatsbosbeheer have had concrete plans to design the Noordwaard, south-west of Werkendam and part of the National Landscape of Biesbosch, into a wet polder with open connections to the rivers Nieuwe Merwede and the Amer.

This aim for wet natural areas appears to go hand in hand with the necessity for water storage. The Noordwaard is classified as the leading project within the Ruimte voor de Rivier policy.



## LABYRINTH

The story of progressive insights and action versus reaction sways like a labyrinth through our hydraulic history and has led to a maze of canals, weirs, pumping stations, dykes, and quays. The labyrinth is therefore a very appropriate metaphor.

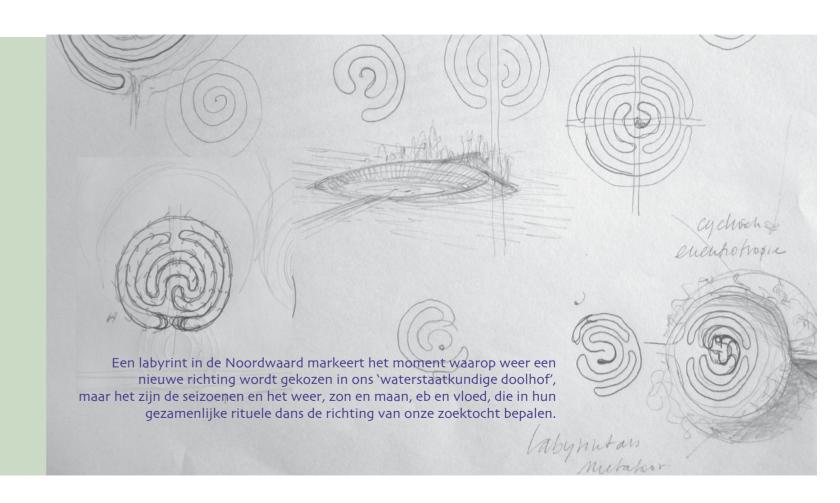


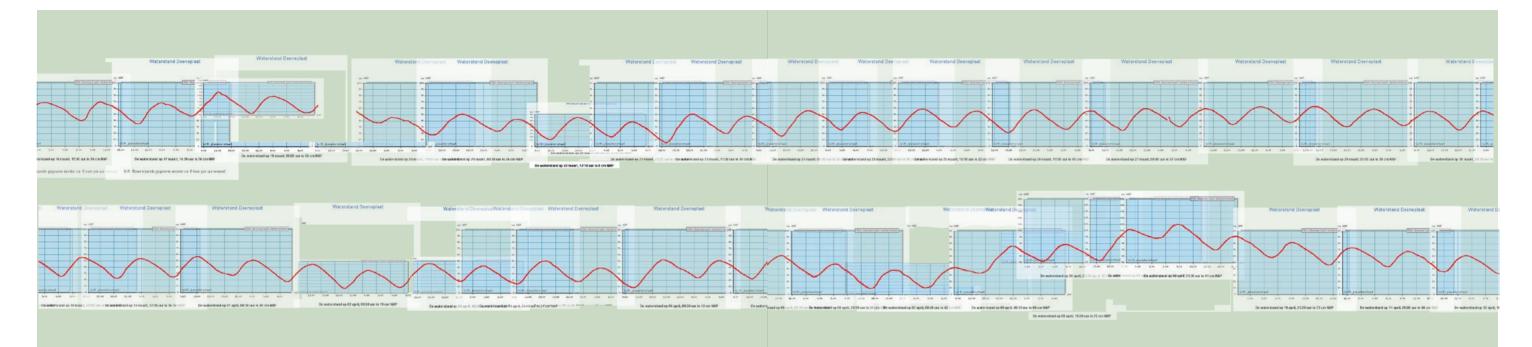
An archetypical labyrinth entwines two contrasting world images; On the one had is a slow meandering path, inescapable, like a ritual dance,

The contra mould of the labyrinth offers choices, but also creates the chance of walking into a dead end.



MAZE

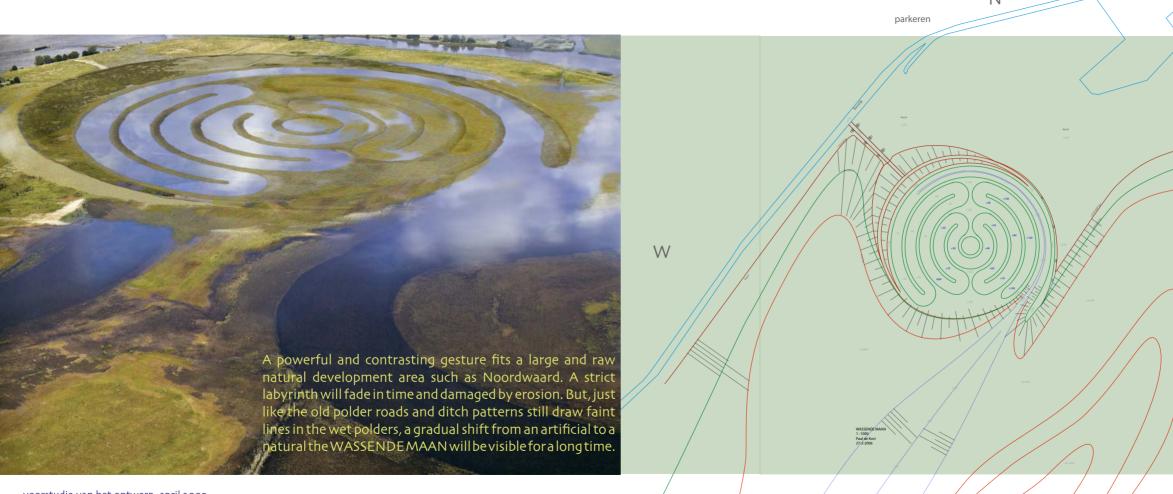




TIDAL WAVE

This graph shows the tidal dynamics in the Biesbosch between 16 March and 16 April 2005 (designing period). The average tidal wave is between +25 and +65 NAP, but the graph shows a peak up to +110 NAP during a strong northwestern wind on 8 April and up to +85 NAP on 18 March. A couple of times the water levels reduce to +5 NAP during low tides, such as on 23 March and 2 April.

(SOURCE: www.actuele waterdata /rijkswaterstaat.nl)



The water is free to flow in and out of the labyrinth in low- or high tide.

The visitor gets to roam on the windings of the maze (quays +1.30 NAP, length 1,2 km).

Because the watercourse of the labyrinth slowly rises from -1.00 NAP to +1.00 NAP, the water will flow towards the central winding with today's tidal regime. During average tides the water will shuffle throughout the labyrinth during low- and high tides.

During extreme high tides, the water will keep filling the labyrinth. During extreme low tides the water will pull back and a much larger part of the labyrinth will be dry.

The subtle dynamics in today's tides will show us an interesting landscape in a gradual shift from wet to dry.



21 november 2008 +135 NAP



22 november 2008 +150 NAP



24 december 2010 +25 NAP

photography door Agnes van Noorloos



14 oktober 2009 +22 NAP



24 november 2009 +101 NAP



15 augustus 2010 +38 NAP

photography door Agnes van Noorloos





