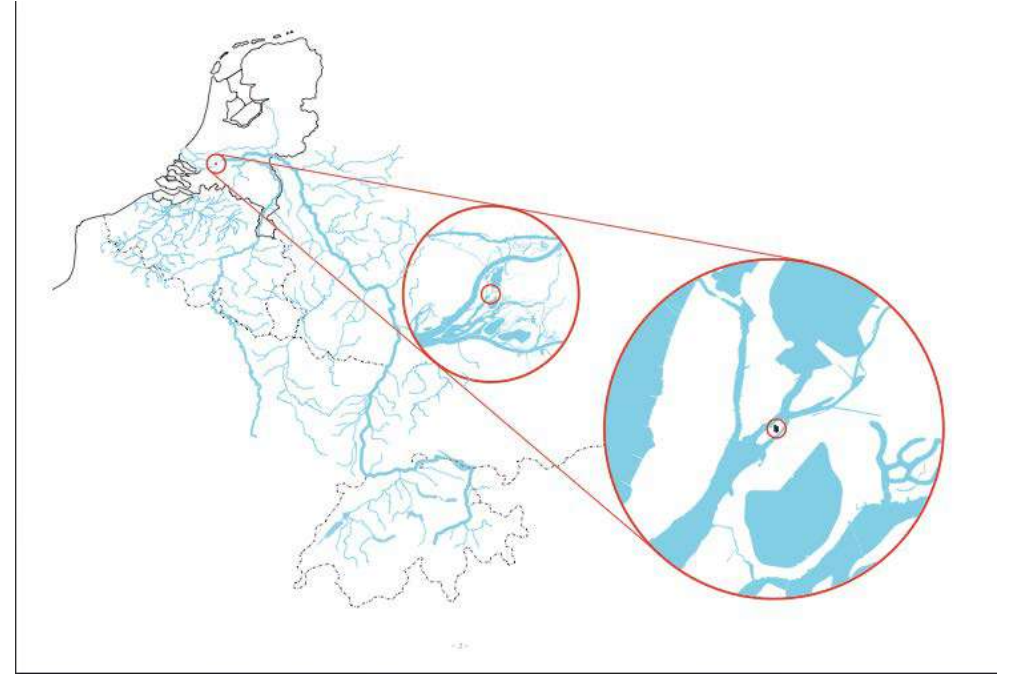




Learn about the past
to
understand the present
and
be prepared for the future



- Biesbosch- Delta of rivers Rhine and Meuse
- Biesbosch Museum reflects on past, present and future of the Biesbosch
- Two provinces Zuid Holland and Brabant

National Park The Biesbosch: Man-made nature

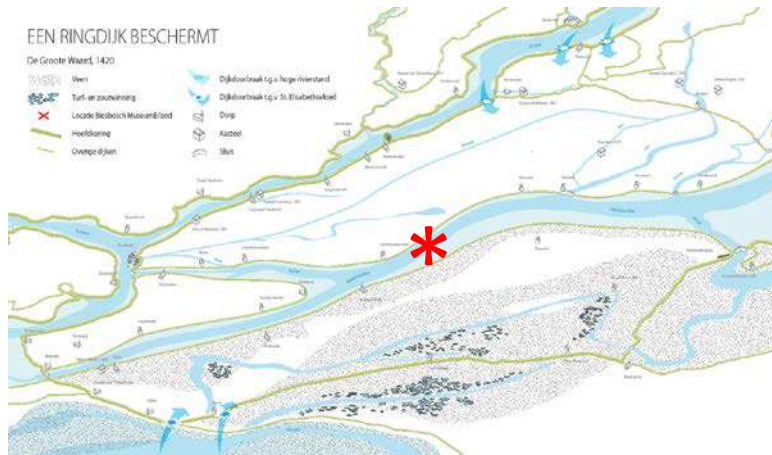


A total of 9000 hectares:

- Rivers and creaks (4000 ha)
- Marshy woodland (2100 ha)
- Rough reedlands (1700 ha)
- Grasslands (1100)
- 300 species of plants (41 rare)
- 232 species of birds (128 breeding)
- 42 species of fish
- 26 species of mammals (beaver population of app. 260)



Biesbosch MuseumEiland-Past



- Impoldered from 1203 to 1222; one large ring dike;
- One dikegrave in control;
- Detoriation of dikes because of bad maintenance and gaining of peat and salt nearby the dikes caused St Elisabeths Flood.

Situation before 1421 Groote of Zuidhollandse Waard- 42.500 ha



Situation after flood



Painting in museum of flood

- About 2.000 victims in 1421; in 1422,1423,1424 several more floods transformed the productive agricultural polder into a gigantic inland sea.

Biesbosch MuseumEiland-Past



Biesbosch: fresh water tidal area(-never been brackish or salt!!!)
From 1421 till 1970: Tidal difference two meters.

Flood 1953 → Delta works: The closure of the Haringvliet estuary as part of the Delta Works in 1970 virtually blocked the ebb and flow of the tides.

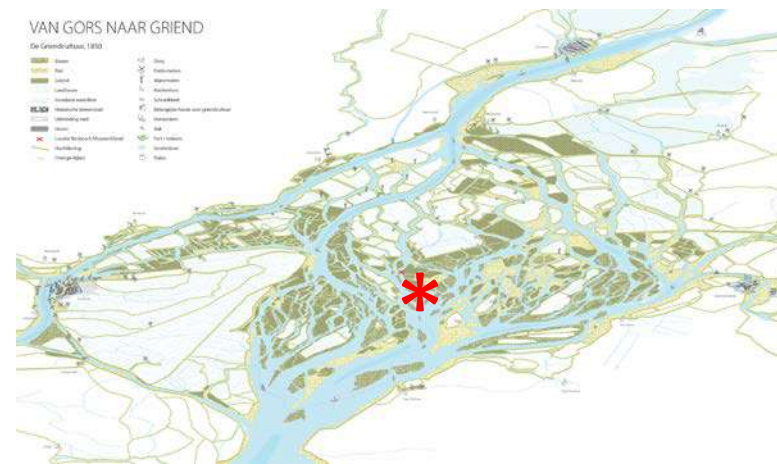
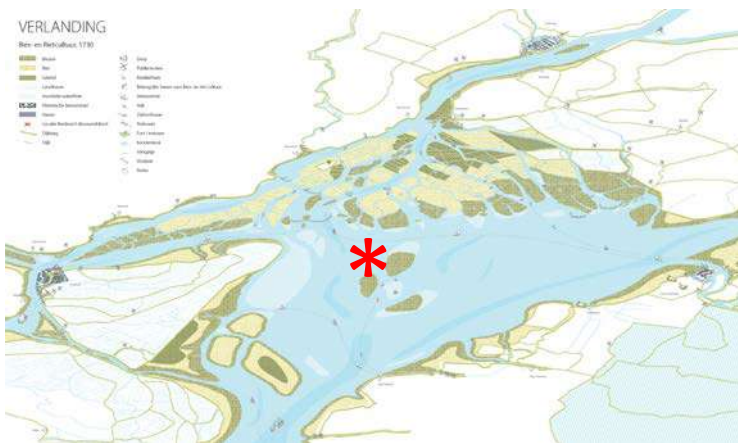
After 1970 tidal difference in Brabant part of Biesbosch 20-30 cm; in South Holland part of Biesbosch 60-80 cm.



Haringvliet dam

Biesbosch MuseumEiland-Past

Development of the Biesbosch



Land gaining territory back on water because of tidal difference of 2 meters.
Sequence in vegetation from rushes to reed to osier or willow.



Biesbosch Museum Eiland-Past



Watermanagement function Biesbosch:

The Biesbosch has always been a water-retention area; dikes were not allowed to be higher than 2.64 meter by law from 1805 until 1870.

The Bergse Maas and Nieuwe Merwede were dug manually in the 19th century in order to regulate the discharge of river water and prevent flooding of towns and villages.

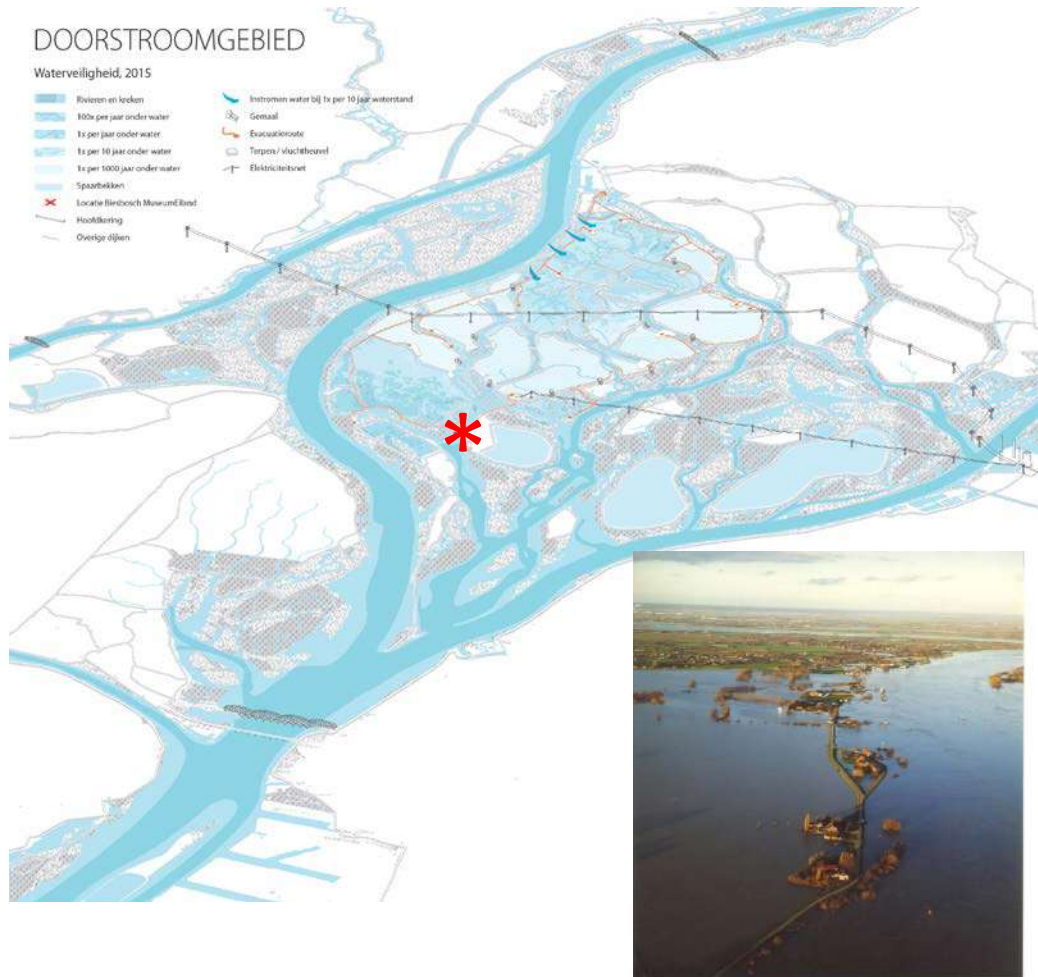
Roots of waterworking companies Van Oord and Boskalis are in the Biesbosch.



Van Oord 
Marine ingenuity


Boskalis

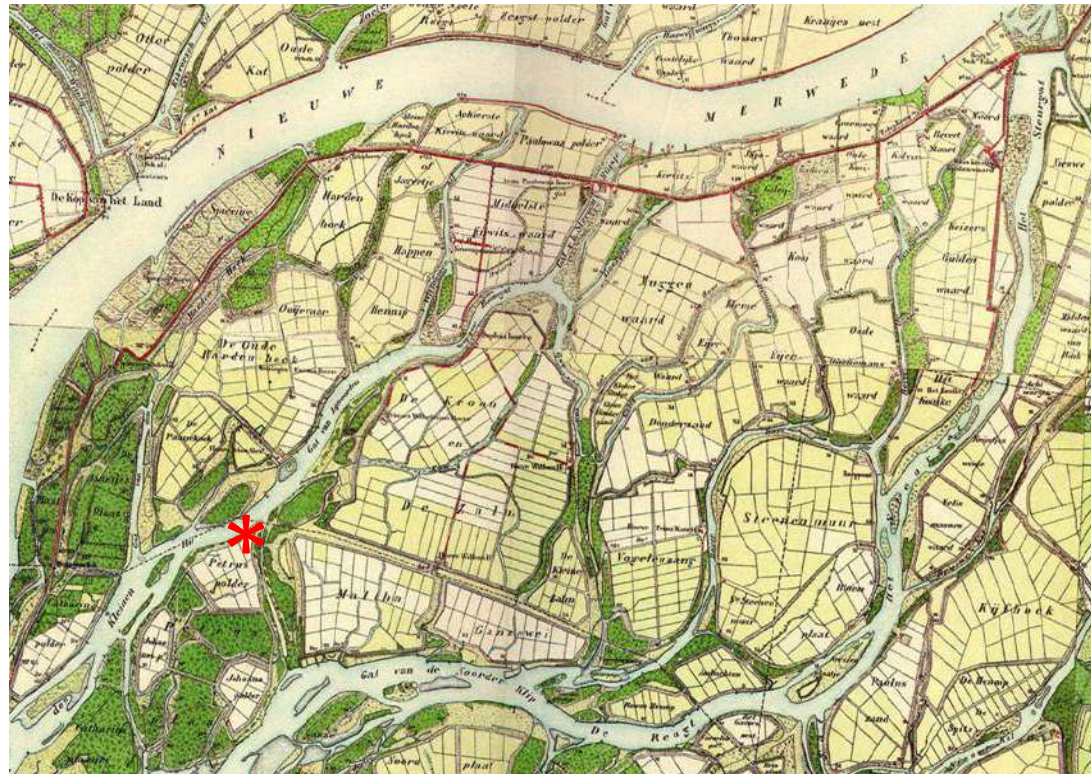
Biesbosch MuseumEiland-Present



- Near floods in 1993 and 1995 have led to several government measures f.i. 'Ruimte voor de Rivier'; opportunities for nature, economic activity and recreation were included.
- A lot of measures were taken in the Biesbosch- area with low density of population.



Biesbosch MuseumEiland-Present



The depoldering project (started in 2010 and finalized in 2015) reduces water levels by 60 centimetres at the opening of the flood channel at the city of Werkendam and by 30 centimetres at the city of Gorinchem, about 8 kilometres upstream. The open connections bring the depoldered Noordwaard once more under the influence of the tides.

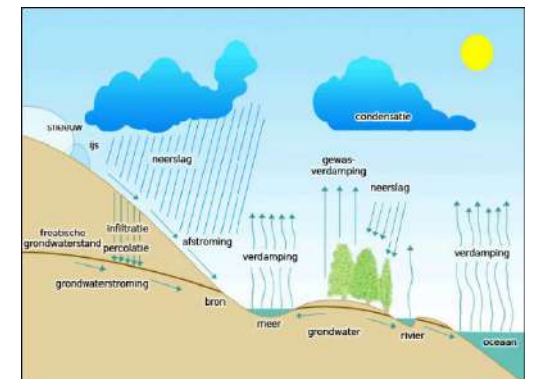
Biesbosch Museum Eiland-Present



Water Bassins

Three large waterbassins supply the city of Rotterdam with drinking water. One is situated close to the museum. You can walk uphill to get an overview of this bassin called 'the Petrusplaat'.

Inside the museum you can learn about the process of waterwinning and the watercycle.





Biesbosch MuseumEiland-Present



The permanent exhibition offers an overview of the history of the Biesbosch from the Elisabeth Flood of 1421 to its current status as a recreational area. The residents, economy, crafts and nature are displayed in multimedia spaces that stimulate all senses.



Biesbosch Experience

The 'Biesbosch Experience' is a scale model of the Biesbosch, with polders, dikes and streams, explaining the watermanagement and importance of the area when waterlevels are high. The water changes from low to high and back. The course of water can be altered by operating various kinds of locks.



Museum visitors are invited to combine their visit with a 1 ¼ hour boattrip or a visit to the outdoor museum De Pannekoek.



Biesbosch MuseumEiland-Present



Sustainability & Energy of building

Both the new wing and existing volume are designed to minimize energy consumption. The glass front is fitted with heat-resistant glass that eliminates the need for blinds.

The earthworks and the green roof serve as additional insulation and a heat buffer. The museum is heated by a biomass stove and cooled by water from the river; both systems use the same piping.

Sanitary wastewater is purified through a willow filter. Willows absorb the wastewater and the substances it contains, among them nitrogen and phosphate. These substances act as nutrients and help the willow to grow.



Biesbosch MuseumEiland-Future



- Climate change will lead to higher sea and river waterlevels. The Biesbosch is situated inbetween sea and rivers.
- Haringvlietdam is partly opened in 2018. Return of sturgeon/salmon ???



Biesbosch MuseumEiland- Partnerships

Cooperation with waterrelated partners

- Week van Ons Water (“The week of our water”)

Together with the national government and 9 other waterrelated museums in the Netherlands we yearly take part in this initiative since 2014:

During a week in spring the main theme is water quality/drinking water; in autumn the focus is on water safety/watermanagement.

- UNESCO- Global Network of Watermuseums.

- Visitors Centres Drimmelen and Dordrecht in Biesbosch for educational programming.

- Taking part in NLDelta- Biesbosch- awarded as of one of four most precious and valuable Nature Parks in Netherlands.



Welcome in the Biesbosch !!!