

Panel 24 Information and communication

The Seascheldt Department decided on an open communication approach, in an attempt to create a broad social platform for this ambitious project. This method calls for diverse communication channels: a brochure, columns in the local newspaper, newsletters, information meetings, an exhibition, a website, ...

Colofon

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gecontroleerd overstroomingsgebied
Kruibeke-Bazel-Rupelmonde

E exhibit

Come and see how
we give room to the
river !



1. Flanders and the Scheldt: a turbulent history



Panel 1 - 2 February '53

In Flanders flooding caused a lot of misery in the past. In 1953, several villages were virtually completely flooded.

Everybody stepped into the breach to seal the hole. Mats, woven from willow twigs, were used for this purpose. Between low and high tide, boats pushed the willow mats into the breach. Each layer was covered with bricks. This process was repeated until the tide had turned.



Panel 3 - 4 January '76

In 1976, Ruisbroek and surroundings were flooded. All the inhabitants were evacuated out of fear for epidemics. Several dikes gave way. Even the people of Antwerp got their feet wet.

The confrontation of King Baudoin with the flooded town Ruisbroek is legendary. The angry inhabitants blamed the king that 'there was 30 billion spent on airplanes and nothing on dike reinforcements.'

To prevent similar disasters in the future, the King ordered the development of a large-scale plan against floods: the Sigmoplan.

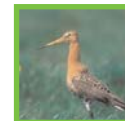


Panel 20 Unique ecological significance in Europe

The valuable Alderbrook woods will be extended in the valley. They make up a typical FCA vegetation. The more peaceful reedlands make up the ideal breeding ground for quite a few exceptional species of birds, such as the common tern. The future will bring flocks of cross-land birds to the Special Protection Areas provided in the FCA KBR, making an important contribution to the execution of the European Habitat-and Birdguidelines. Cooperation with the local farmers makes up an essential part in the development of this natural scenery. The maintenance of the meadows and Bird habitats is in their hands.

Panel 22 Recreational possibilities in an accessible FCA

In the center of one of the most densely populated areas of Belgium, a nature reserve originates that will withdraw itself from the constant human regulation. The ideal environment for a relaxing hike!



Panel 21 Recreational possibilities in an accessible FCA

The FCA KBR will display a variegated scenery, which will be largely accessible for visitors. Other areas will preserve their natural tranquility by means of the natural inaccessibility of mud flats or swamps. The major part of the existent roads will be adopted by the FCA. New cycling and hiking trails will be included, according to the possibilities. Visitors can roam freely across the high Donk of Bazel and the higher lands round the Creek of Rupelmonde, off trail areas included. As one wanders to the lower areas, the accessibility gradually decreases.

Panel 23 Open air education

The FCA KBR unites a whole range of topics (safety, ecological development, recreation), not only interesting for schools and youth groups, but also possibly adventurous. Education is always more fun when there are actual things to do and to see.

A study packet for the primary school was developed to allow schools to get to know the FCA. The local schools were involved in the construction of the educational material. The content matches the final attainment levels for geography and physics.

4. The FCA KBR: a masterly example of integrated water management.



Panel 17 What is integrated water management

The construction of the FCA KBR fits into the principles of 'integrated water management': safety is the first priority, but there are added values involved.

Ecological added value: the FCA KBR will be arranged as an area for ecological development.

Recreational added value: the FCA KBR offers numerous recreational possibilities for hikers, cyclists, ...

Economical added value: the FCA will be a one-of-a-kind tourist attractor. The area will surely bestow extra business on the local merchants.

Panel 18 Partial mud flats and salt marsh area

The polder of Kruikebe and the Western part of the polder of Bazel will be subject to the daily tidal movement. This contrasts with the other areas of the FCA, which will only flood once or twice a year.

Twice a day, at high tide, the Scheldt water flows into the area through the inlet sluice gates.

The daily tidal movements create the ideal circumstances for the development of rare mud flat and marsh areas.

At low tide, the water flows back to the river through outlet sluice gates.

Panel 19 Unique ecological significance in Europe

Due to age-long reclamation, mud flat and marsh areas are close to extinction in Europe. These extraordinary vegetational forms are of great importance for several species. They supply areas for breeding and feeding.

Rushes will make up the main vegetation in the lower parts of the mud flat and marsh areas, as well as along the creeks.

In higher areas and in the rear of the polder, reed and willow will become the principle plant life.

The higher parts of the FCA are gradually more influenced by fresh water and grazing.

These dynamics result in a variegated scenery with great ecological diversity: meadows, swamps, Alderbrook woods, mud flats, marsh areas,...



2. The Sigmaplan: more safety in the Seascheldt Basin.



Panel 5 - 6 The Sigmaplan, what for?

February 18 1977, the council of ministers decided on the execution of the Sigmaplan. Main goal is the protection of the Seascheldt Basin against stormtides with an average recurring period of 10 000 years. The Sigmaplan protects about 45 600 ha potentially floodable land.

We need protection against floodings! Because of age-long reclamation, the river was deprived of her natural flood-area. In consequence the power of the current has increased forcefully, along with the risk of devastating floods.

Changes in climatological circumstances also cause a higher flood risk. The number of storm tides has increased in the last few years, as did the average water level at high tide.

Panel 7 Keystones of the Sigmaplan

Keystone 1: the construction of additional dike reinforcements and elevations.

Keystone 2: the layout of flood control areas (FCA). The starting point of FCA's is the 'Room for Water' principle. In extreme circumstances they allow the river to recover part of her natural territory

Keystone 3: the construction of the storm surge barrier in Oosterweel. In 1985 the government decided to postpone this project indefinitely because of the high cost and low benefits.

Panel 8 The Sigmaplan, updated.

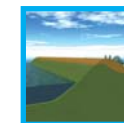
During the last 25 years the climatological circumstances have changed drastically, as have the insights on water management. As a consequence, the Sigmaplan needed to be updated. The concept 'Room for water' presents the basic principle of the revision.

A new cross-border keystone was taken into consideration in the updated Sigmaplan: the realisation of the Overscheldt, a connection between the Easter- and Westerscheldt to divert flood waves from the North Sea and prevent them from going inland.

The storm surge barrier was also reassessed.

In July 2005 the final report decided on the construction of further dike reinforcements and elevations and the lay-out of additional flood control areas.

These keystones combine flood defence with sustainable land use and other beneficial factors, such as ecological development.



3. The FCA KBR: Safety above all

Panel 9 - 11 An FCA in action

An FCA is enclosed by 2 different dike constructions: a long river dike, which is consciously lowered, and a high ring dike, which protects the inhabitants of the hinterland.

When a normal high tide occurs, the river water does not run over the river dike, subsequently the FCA remains dry.

However, when a tidal wave pushes the river water to a dangerous level, part of the water will flow across the river dike into the FCA. The higher ring dike ensures the safety of the hinterland.

When the tide is out, the water flows back into the river by way of the outlet constructions. An FCA floods an average of 1 or 2 times a year.

At storm tide, a vast part of the polder fills up. Areas situated high up the polder may remain dry, depending on the gravity of the tidal wave.



Panel 10 FCA's in Flanders

Several FCA's were built in Flanders, as part of the original Sigmaplan. The Flood Control Area of Kruikebe – Bazel – Rupelmonde is the 13th and with its 600 hectares by far the largest of all.

Another important FCA in this region was built in Tielrode, a formerly independent municipality of Temse: 'The Tielrodebroek'.

Panel 12 The central role of the FCA KBR in the Sigmaplan of '76

The FCA KBR actively endorses the safety of about 1,5 million people, who consider the Scheldt area as their daily operational and residential environment.

Over the last decades the work executed as part of the Sigmaplan heightened the protection of the inhabitants to water levels with average recurring periods of 70 years. Once the FCA is operative, the level of protection will increase to once in 350 years.

Their large surface and low land level make the polders of Kruikebe, Bazel and Rupelmonde very suitable for water storage.

Panel 13 Solutions for the local drainage problems

The Sea Scheldt Department wants to combine the construction of the FCA with the solution of drainage problems. The Hydraulic Laboratory conducted a great deal of research to guarantee the implementation of adequate measures.

At the moment, the biggest bottlenecks consist of the undersized culverts in the barbieek and the extremely rapid drainage of rainwater by blacktopped surfaces.

Panel 15 The construction of the FCA KBR

The construction phase of the FCA starts with the excavation of the ring dike base.

After the excavation, the ring dike is erected with imported sand.

Once the construction is finished, the dike will be covered with rich polder soil. Afterwards it will be sown.

Panel 16 The construction of the FCA KBR

After the flooding of the FCA, the Scheldt water flows back to the river through outlet sluice gates.

Once the FCA is up and running, it will provide a tremendous contribution to the protection of the Seaschedt Basin against floods.

Panel 14 The construction of the FCA KBR

A thorough preparation phase precedes the actual construction of the FCA. To cause the town center of Kruikebe as least inconvenience as possible, all possible precautions were taken for traffic redirection and noise reduction.

The construction of the ring dike requires massive amounts of sand. To ensure a constant work progress, the preparation phase was used to build several sand stocks.

The sand for the stocks came from the excavation of the Deurganckdok and was transported on the Scheldt. The spoil is perfectly suitable for the construction of the ring dike.

In accordance with the 'Work with work' principle, the digged-up soil from Ketenissepolder was also reused in the construction of the ring dike.

