

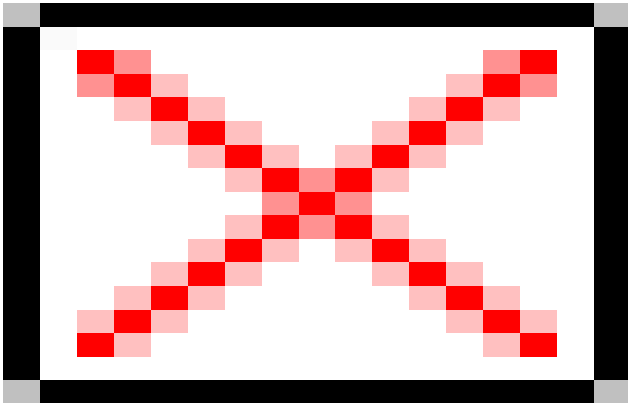
IMDC
Flood forecasting

Location:

Belgium

Client:

Flemish Environmental Agency, division Operational Water management



Project Contact Information

For more information about this project, contact:

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Flood warning and decision support system for the IJzer and Demer basin

The Ministry of the Flemish Community engaged IMDC to establish Flood Forecasting System for the IJzer Basin in Flanders. This project is after OBM Demer and Dender and Dijle the fourth detailed operational flood forecasting system for unnavigable watercourses in Flanders

The IJzer basin is a 1000 km² river basin, of which the largest part is situated in Flanders. The basin has suffered from some large floods in the past due to excessive rainfall. The main purpose of Operational Basin Model for the Dijle is to provide real time tools to prevent (harmful) flooding by controlling the water infrastructure and alert the responsible authorities when flooding is to be expected.

Furthermore, the existing flood forecasting system for the Demer basin was updated with new and more detailed models.

The project consists of:

- Configuring very efficient forecasting models based on detailed 1D hydrodynamical models
- Delivering and installing the necessary hardware
- Enhancing and extending the existent website.

The main characteristics of the flood forecasting system are:

To generate its flood forecasts, hydrological and very detailed 1D hydrodynamical models are being used. These models deliver forecasts with an interval of 15 minutes. All available infrastructure (gates, weirs, etc) are incorporated in the models, allowing automatic rules to be overruled by measurements and allowing operators to change the operation of infrastructure within the models.

Based on digital terrain models, flood maps are being generated for the forecasts.

A constant evaluation of the observed and forecasted variables is done. When thresholds are exceeded, several procedures are started to generate automatic warnings to operators and other public servants. Selected forecast results (including flooding maps) are being sent in real time to a website (www.overstromingsvoorspeller.be)

The project is conducted by IMDC together with its partner SORESMA and with various subcontractors for telemetry, hardware, software and radar information.

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