

River Basin Environment Analysis for the Implementation of the Flemish River Basin Management Plans - River Basin of the Upper Scheldt



Financed by: AMINAL, WATER division

Client: AMINAL, WATER division

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Budget: € 65 740 (part 1) + € 98 480 (part 2)

Location: Belgium, Flanders -River basin Upper Scheldt

Partners: Econnection

Assignment:

Evaluation of methodology and effective application as a practical deployment of the river environment analysis. Inventory of component parts of river environment analysis. Integrated water management plans for Basin Upper Scheldt and Subbasin river Zwalm.

Scope of Services:

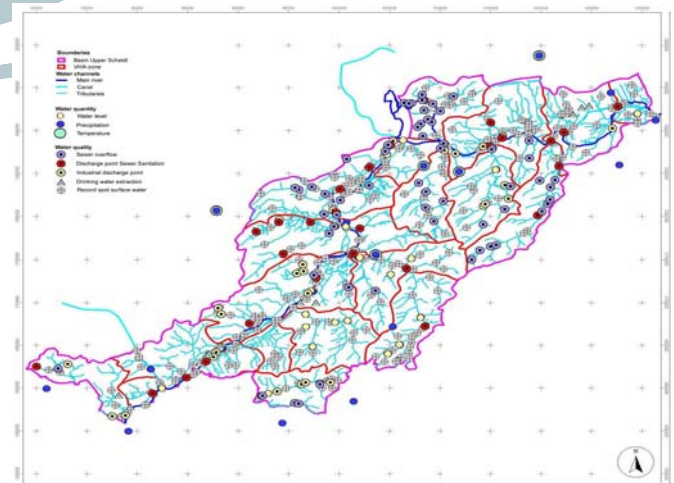
Design and development of Flemish river basin management plans in the framework of the inauguration of the European Directive Water.

Component parts of the plans are identified as:

- Hydrology/hydraulics
- River valleys
- Infiltration areas and Seepage zones
- Nature Quality
- Eco Districts
- Water balance
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- Integrated water management
- River Environment Analysis
- River basin management plan

Technical Description:

The first stage of the study evaluates, appends and corrects the existing methodology to deploy the river environment analysis, both from a scientific/technical and practical point of view. This methodology for the completion of the environment analysis inventory should be oriented towards a common Flemish river basin management plan lay out. An explicit application, both on basin and subbasin level, of the developed methodology in stage 2 of the study will check the practical workability of the prescribed methodology. Indeed, the study checks the projection of the environment analysis inventory on two levels: the Upper Scheldt basin and the subbasin of the river Zwalm. By that, the resulting river management plans are adapted for both basin levels.



GIS-map - Field monitoring network river basin Upper Scheldt

In part 1 of this study, following topics are studied:

- Tracing out of the river basin
- General location of the study area
- Topography
- Eco Districts
- Nature Quality



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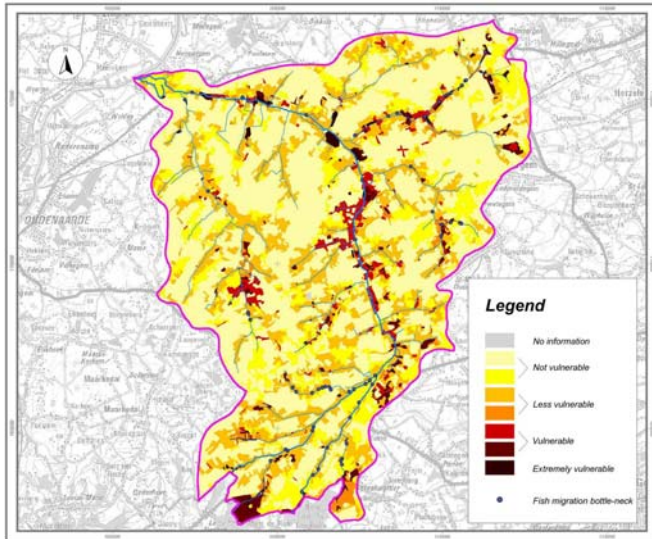
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0017_ENG_PIF - Page 1 of 2

For part 2, following items are described:

- Hydrology & Hydraulics of the surface water
- General Water System Description
- River Valleys, Infiltration zones and Seepage areas
- Water Balances of the system
- Climate characterisation
- (Numerical) Modelling of the basin

general (technically correct) inventory of all topics of the river environment analysis, every personal impression or approach can be retrieved from the GIS-system. By that, a proper development of the integrated river basin management can be assured.



Environmental vulnerability in Zwalm basin

For each topic, a detailed inventory of all relevant input finds the technical and practical fill-in of the river environment analysis. All relevant study aspects are interactively reflected on and oriented towards the perspective river basin management plans (nested in the framework of the European Directive Water). In order to visualise all relevant topics of the environmental analysis, a flexible GIS-structure is set up. By combining respective layers for all relevant inputs, the GIS-system offers a flexible and handsome tool to the river basin manager. Based on the



Nature quality - Bottle-neck withering