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Introduction

The Water Framework Directive divides the European rivers in river basin districts. Flanders is involved in 2 river basin districts : the Scheldt and The Meuse. The groundwater and the large surface water systems must be taken up in a river basin management plan (RMBP).

The characteristics of the river Scheldt and his basin district:

- Scheldt = 36500 km² → part in Flanders = 11.991 km²
- Population: 5.627.000 people (93% of the population of Flanders)
- Industry : some very important areas such as : around Courtrai, Ghent, Antwerp Harbours of Ghent and Antwerp
- Agriculture : a lot of intensive agriculture /horticulture in West Flanders



Overview of the 10 sub basins in the district of the River Scheldt

How does it work?

Different criteria :

Firstly : water bodies are split up into different categories:

- Ground water → 6 groundwater systems depending on the depth of the water layers
- Surface water →
 - Natural (NWB)
 - Heavily modified (HMWB)
 - Artificial (AWB)



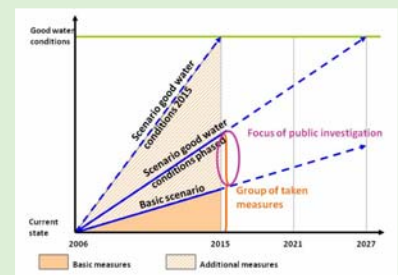
Secondly :

- ⇒ Checking if the water bodies obtain the good water status
- ⇒ Analyzing quality and ranking them
- ⇒ Influence of sectors on the quality

Will good water conditions be obtained?

Analyzes show that with basic measures the good water conditions won't be obtained in 2015 → Additional measures (8 groups)

Before choosing a measure a cost/benefit and a cost-effectivity study is done



Overview of three different scenarios

Finally : The follow-up is done by analyzing the water at different points in the water district

Results

- Monitoring networks in Flanders makes it possible to evaluate the effect of measures e.g. Manure Decree, ... on the quality of surface water (since 1999) and ground water since 2004.

- Results of the quality of the surface water

Evolution of the percentage of measuring points that were above 50 mg NO₃⁻ /l

Winter year	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
% above 50 mg NO ₃ ⁻ /l	59	50	41	33	45	41	42	42	37
# points measured	254	254	268	749	779	788	784	782	786

Evolution of the percentage exceedings in some sub basins

Winter year	99-00	03-04	05-06	07-08
Channels of Ghent	73	50	42	26
Lower Scheldt	58	34	36	23
Leie	90	20	80	69
Upper Scheldt	70	58	40	31

- Results of the quality of the groundwater

Evolution of the percentage of measuring points in the fall that were above the limit of 50 mg NO₃⁻ /l

	# points above the limit	% above the limit
2004	616	35.6
2005	756	37.7
2006	762	37.4
2007	776	38.2

- The tables show that the quality of the groundwater is improving in time but the quality of the groundwater stays status quo