

An international Exchange of Experience

**Economic Analysis according to the WFD:
Status of Implementation**

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**„Economic Importance of
Water Uses – Illustration of
the Artois-Picardie Basin“**



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Economic Importance of Water Uses

Illustration of the Artois-Picardie Basin

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Introduction

- **Overall context**

- ⇒ Implementation of the Water Framework Directive
- ⇒ Characterisation of the river basin
- ⇒ 2004 requirements

- **Undertaking the characterisation in the Artois-Picardie basin**

- ⇒ Parallel activities pressures/impacts, economics, baseline
- ⇒ Working group of representative from key organisations

Key elements of the assignment 1/3

- **Objectives**

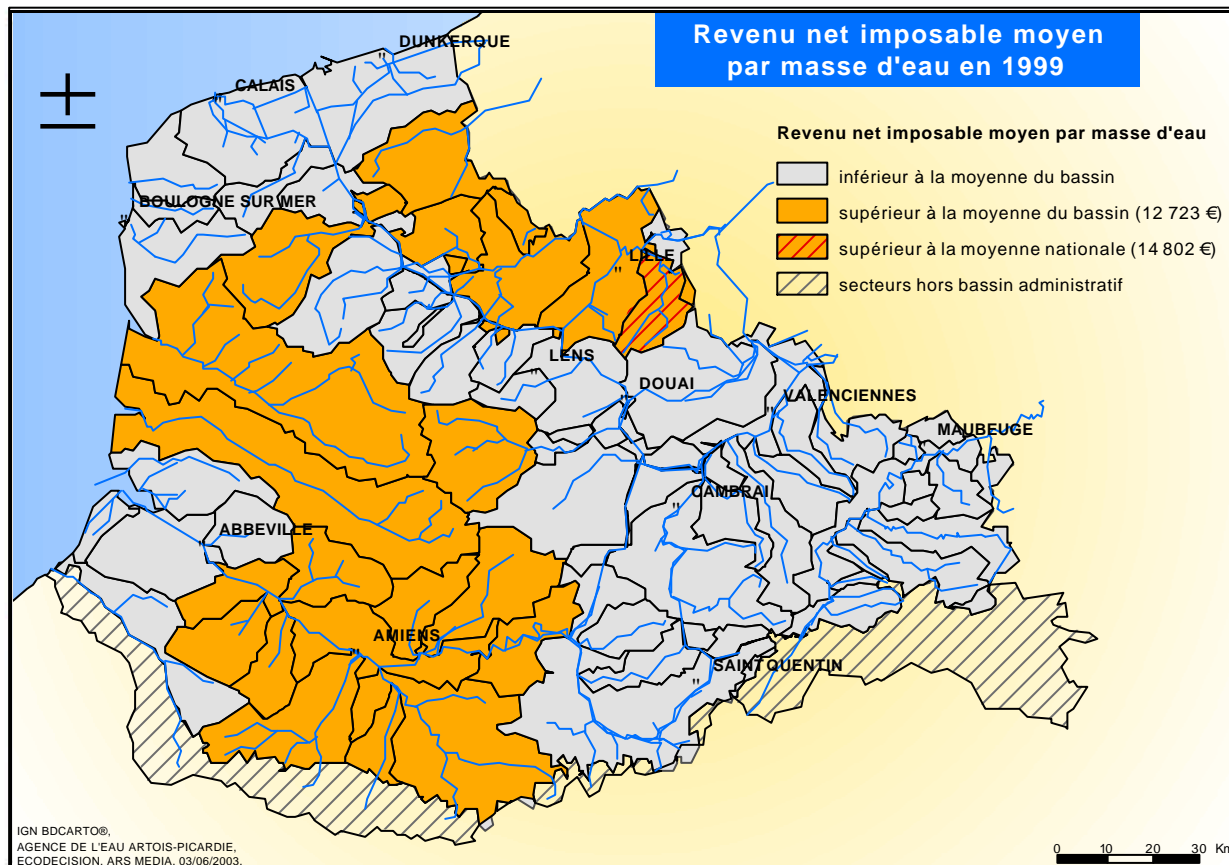
- => Developing socio-economic indicators on key sectors and actors imposing pressures on the water environment
- => Comparing socio-economic importance of actors and their relative importance in pressures on water
- => Bringing economic references as input to further economic assessment and payment capacity of future programs

- **Main dates**

- => Start april 2003
- => End october 2003

Population and water services (1/3)

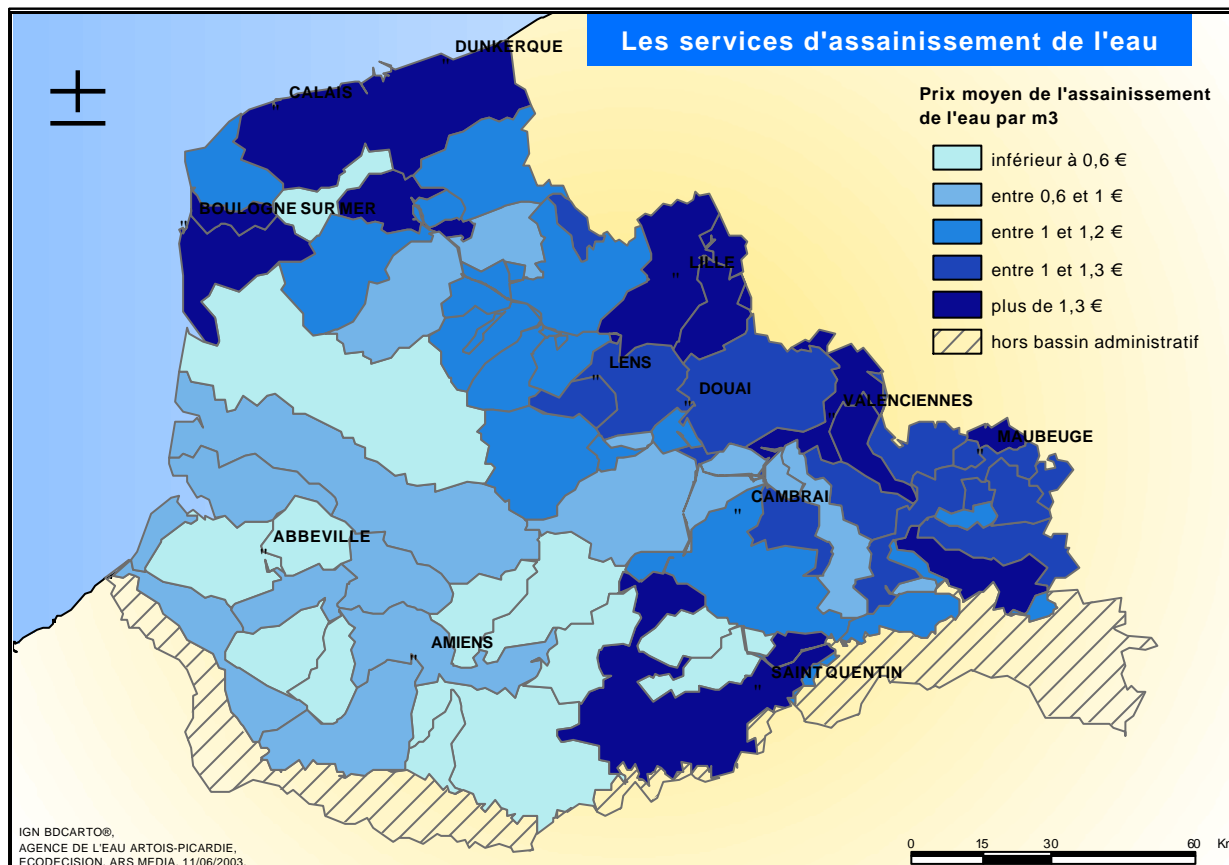
Strong variability in population density and income



Urban areas :
20 % of total surface
76 % of population

Population and water services (2/3)

Strong variability in water service prices



Some communities have no collective sewage service.

Mean water price in 2000 for 120 m³/year and full service : 2,99 €/m³

• 1,13 €/m³ for drinking water delivery

• 1,23 €/m³ for sewage service

• 0,63 €/m³ for taxes and VAT

Water and tourism (1/3)

Seaside tourism is highly dependant on micro-biological water quality.



Seaside tourism in French part of Scheldt basin :

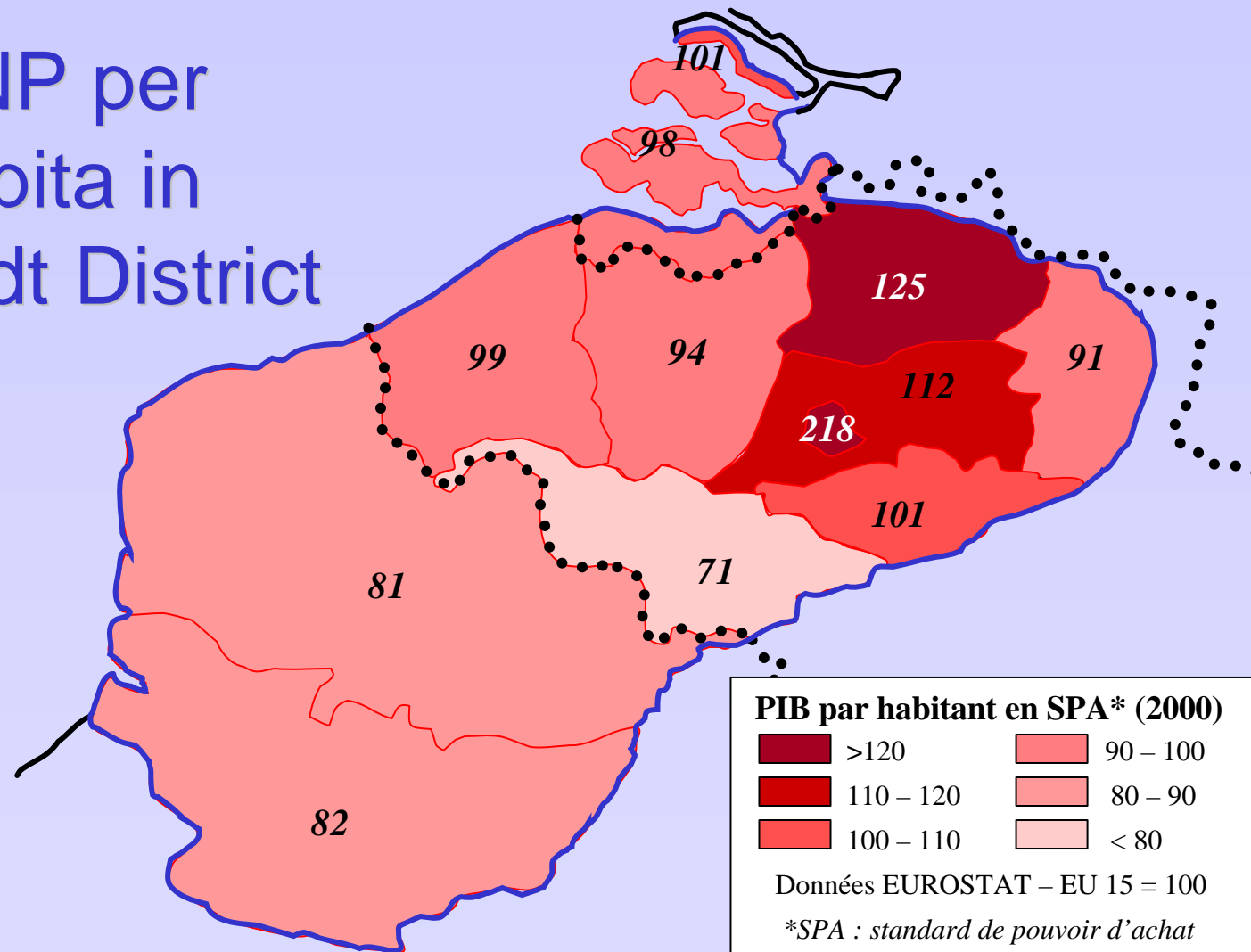
19 millions €/year

23 000 jobs

Bad micro-biological water quality may reduce tourism turnover by 30% to 50%.

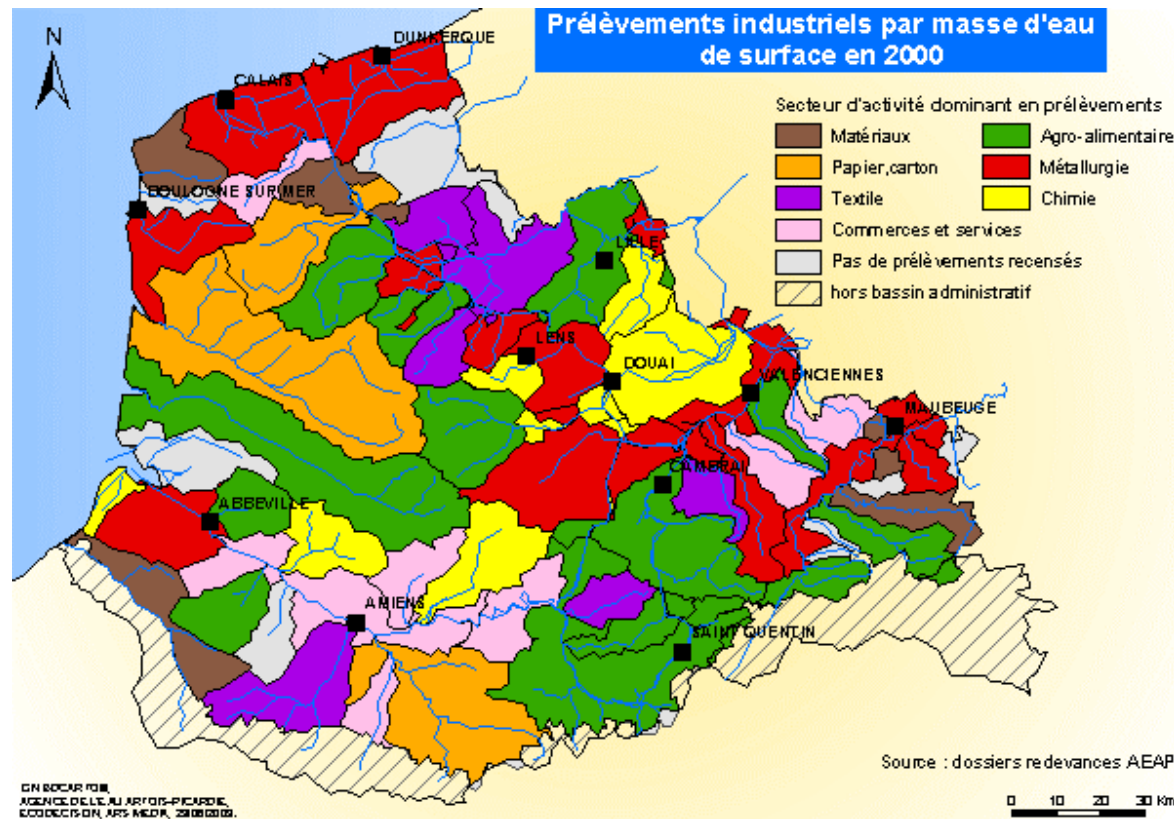


GNP per capita in Scheldt District



Industrial sectors and pressures (1/3)

Spatial analysis of main industrial sectors causing abstraction



This analysis is possible :

- for private water abstraction in surface water and/or groundwater;

- for direct discharges to surface water for specific pollution parameters

Industrial sectors and pressures (2/3)

Sector	Employment				Water consumption (m ³ /year)		
	Overall	Companies			Private abstraction	Drinking water	Total
		Abstractors	Water buyers	Others			
Food	34 928	15 136	12 241	15 635	93 059 913	7 305 123	100 365 036
Chemicals	34 827	8 480	9 426	22 880	42 365 088	14 426 779	56 791 867
Materials	19 878	13 680	12 216	5 987	15 731 235	135 020	15 866 255
Metal	120 039	41 328	41 699	64 805	56 885 180	19 265 119	76 150 299
Paper	29 480	5 312	2 089	23 833	28 463 490	148 011	28 611 501
Textile	35 292	7 734	3 714	26 879	9 334 686	1 506 080	10 840 766
Total industry	274 444	41 328	81 385	160 019	245 839 592	42 786 132	288 625 724

Industrial sectors and pressures (3/3)

Focus on industrial sectors strongly linked to water use and pressures

- => Because of specific water quality requirements:
e.g. brewery, mineral water
- => Because of specific significant impacts linked to passed activities: coal mines
- => Because of integration with other sectors with significant impacts : transformation of green vegetables and potatoes, contracting with farmers using irrigation

Main difficulties (1/3)

Data availability

- *Unavailable detailed datas replaced by proxies (e.g. impact of water quality on littoral tourism) or by case study illustration (e.g. impact of water quality on property/estate values)*
- *Available data may fit very partially WFD needs, e.g. for river water tourism: expenses of regional tourists only, while bulk of tourists are foreigners*
- *Available data recent (2000 or later) or old/not regularly updated*

Main difficulties (2/3)

Spatial scale of existing information

- *Technical information and data on industrial jobs are often available at very disaggregated scale (municipalities), social data at a detailed scale (districts) => aggregation and extrapolation are reliable even at detailed hydrogeological scales (water bodies)*
- *Economic information is mainly available at aggregated/large scale (regions or country) => aggregation and extrapolation may have poor confidence for relevant hydro-geological scales (e.g. river basin)*

Main difficulties (3/3)

Accessing existing information

- *Available databases: technical information on water uses and pressures*
- *Data obtained through (sometimes long) contacts with specialised experts and organisation, e.g. transport and tourism on waterways*
- *Data have a price, e.g. data on revenues of companies, detailed results of national population, industry and agriculture census*
- *Data available but after long time period because of specific processings, e.g. specific processing of national census on agriculture*

Key issues for Scheldt basin

What is of interest and could be shared?

- *Agreeing on common reporting integrating (a) quantitative indicators and (b) qualitative description of key economico-water issues*
- *Generalising the analysis of industrial issues (disaggregation on NACE coding linked to pressures)*
- *Developping a common understanding (e.g. definition of specific indicators) and approach (longer-term objective) to assessing revenue and water bills*
- *Agreeing on scales at which information can be computed (analysis) and presented (information/consultation – what is foreseen?)*