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Freshwater management in the Scheldt basin and consequences for the discharges in the Zeeschelde

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MINISTERIE VAN DE VLAAMSE GEMEENSCHAP



THE FLEMISH REGION

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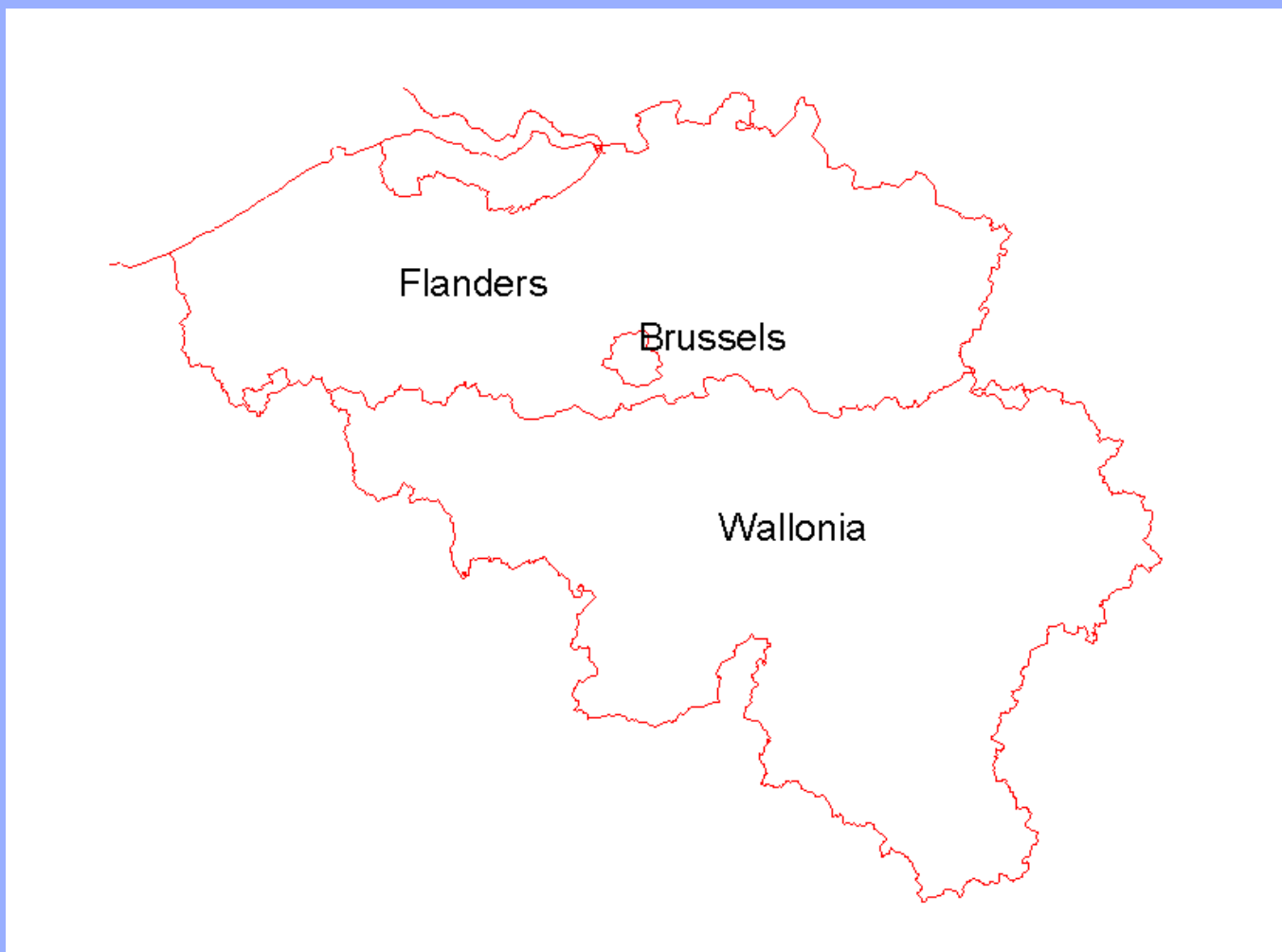
The whole world is like the human body with its various members. Pain in one member is felt in the whole body.





THE FLEMISH REGION

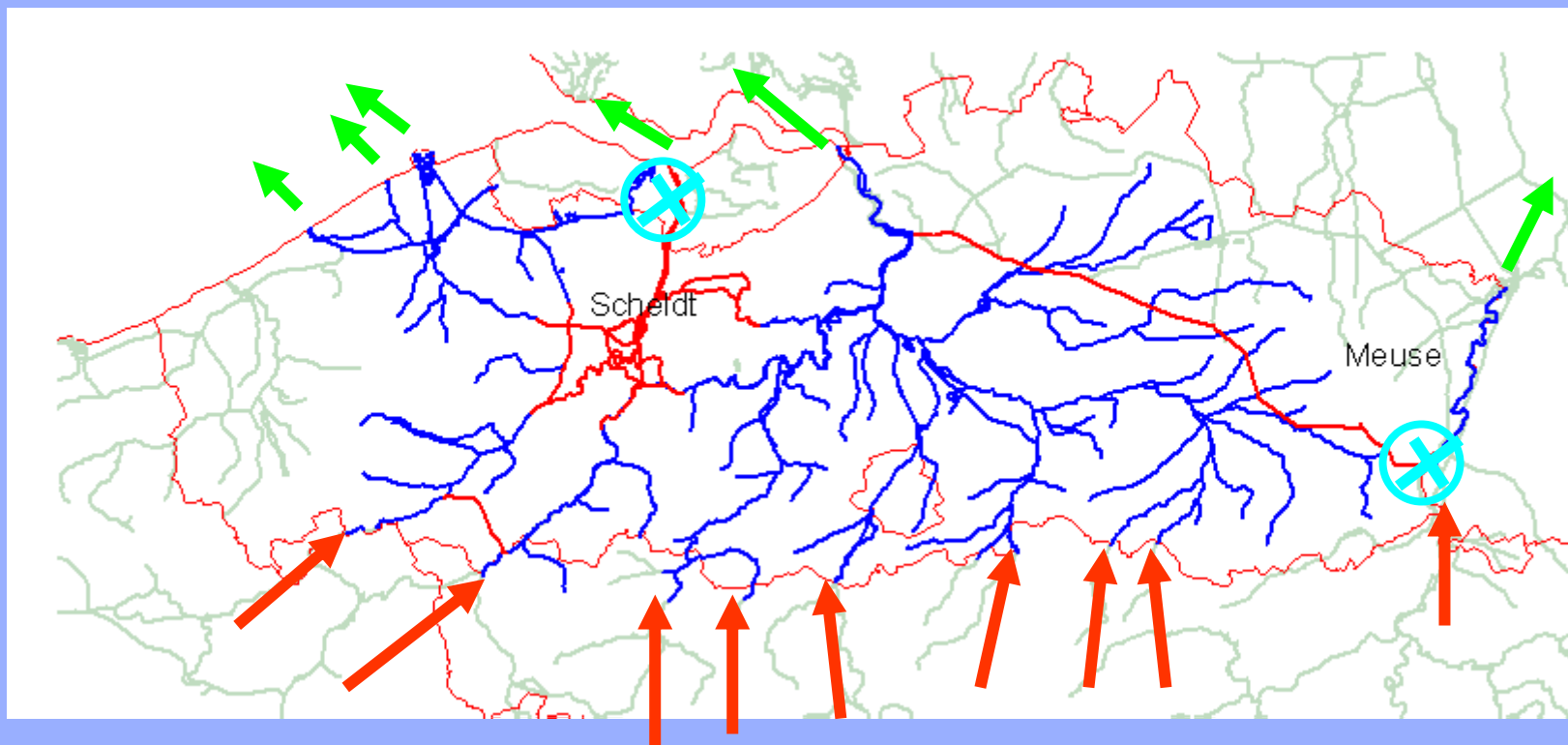
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THE MAIN FLEMISH CATCHMENTS

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FRESHWATER MANAGEMENT

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LOW FLOW STRATEGY:

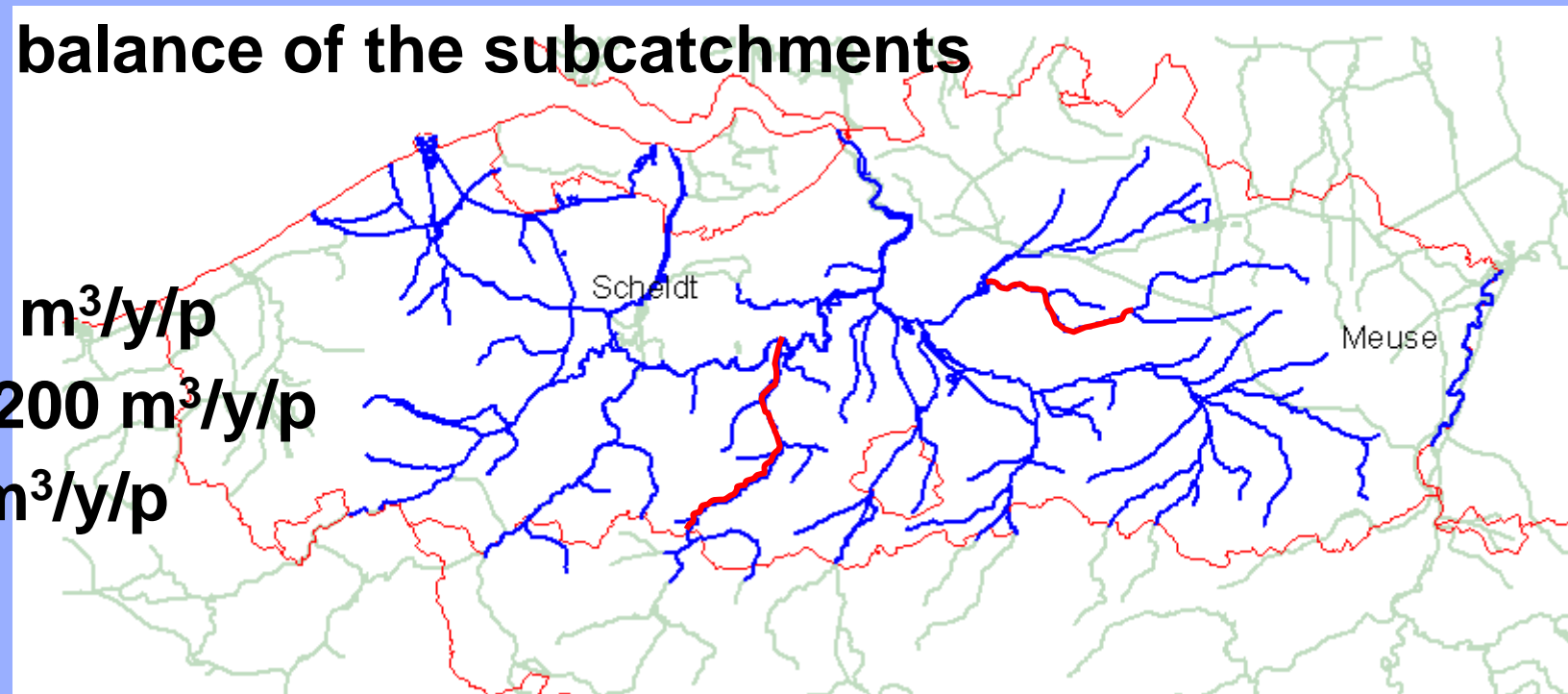
The choice of an effective set of measures (permanent and operational) for dry periods in order to use the available amount of water as efficiently as possible



QUANTITATIVE ASPECTS

- Statistical analysis of low flows and water levels
- Water balance of the subcatchments

Flanders: 540 m³/y/p
Grote Nete: 1200 m³/y/p
Dender: 680 m³/y/p



Bron: Soresma

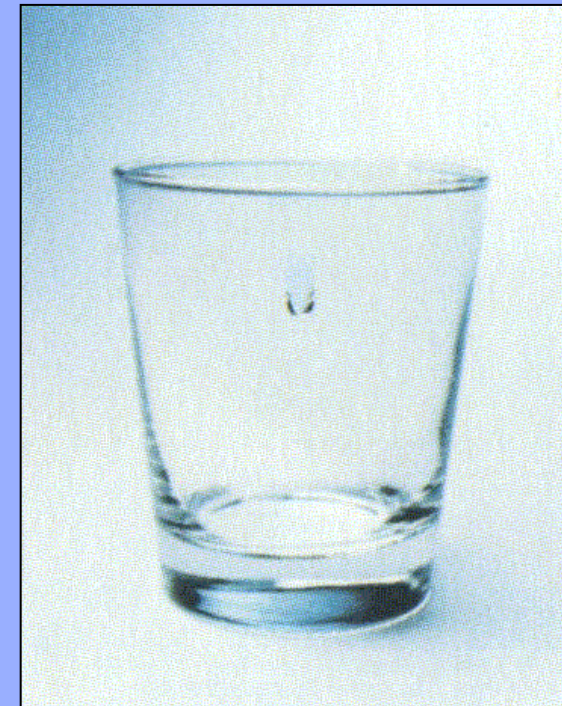
DEMANDS (USERS AND CONSUMERS)

- Navigation
- Salt intrusion
- Water intakes
- Treaties and protocols
- ...



DEMANDS (USERS AND CONSUMERS)

- minimum discharge or water level
- necessary intakes for production
- consequences in case of shortage (as a function of time)
- possibility to use other resources (temporary)
- ...





INVENTORY

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POSSIBLE MEASURES

	Bevaarbare waterlopen	Onbevaarbare waterlopen	Industrie - VEV	Industrie - Electrabel	Industrie - drinkwater-productie	Landbouw	Natuur - land	Natuur - water	Visserij	Watersport	Frankrijk, Wallonië, Nederland
communicatie	x	x	x	x	x	x	x	x	x	x	x
lozingen beperken			x								x
monitoring	x	x									
onderhoud	x	x				x					x
onderzoek					x						
opvang water	x	x	x	x	x	x	x	x	x		
rationeel watergebruik			x	x	x	x					
remediërende maatregelen									x		
scheepvaart	x										
waterbeheersing	x										x
watercaptaties		x	x	x	x	x	x	x	x		

Bron: Resource Analysis

Opinion of the different water users





METHODOLOGY

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Necessary efforts



Effects of measure

Possibilities of common use

Translation of shortage into costs

Communication





METHODOLOGY

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TECHNICAL BACKGROUND

- Direct effects of measures
- Indirect effects
- Long term consequences



INTERACTION

- Acceptance of measures by users
- Possibilities of common use
- Necessary efforts
- (in)direct users
- Communication



COSTS

- Translation of shortage into cost
- Indirect costs

Legal context
History

Priorities???



TECHNICAL BACKGROUND

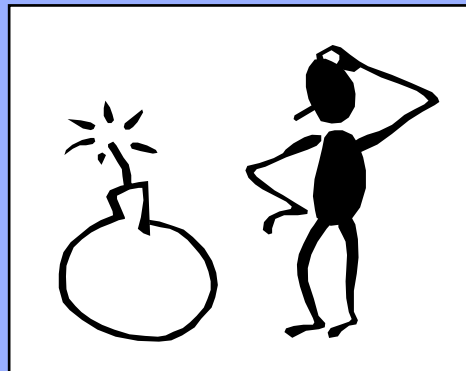
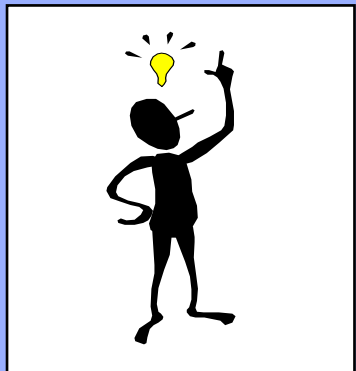
Statistical analysis
Frequency - duration curves
Simplified models

INTERACTION

- Interviews with users and consumers
- Workshop
- Communication strategy

COSTS

- Costs - benefits
- Multi-criteria



Legal context
History

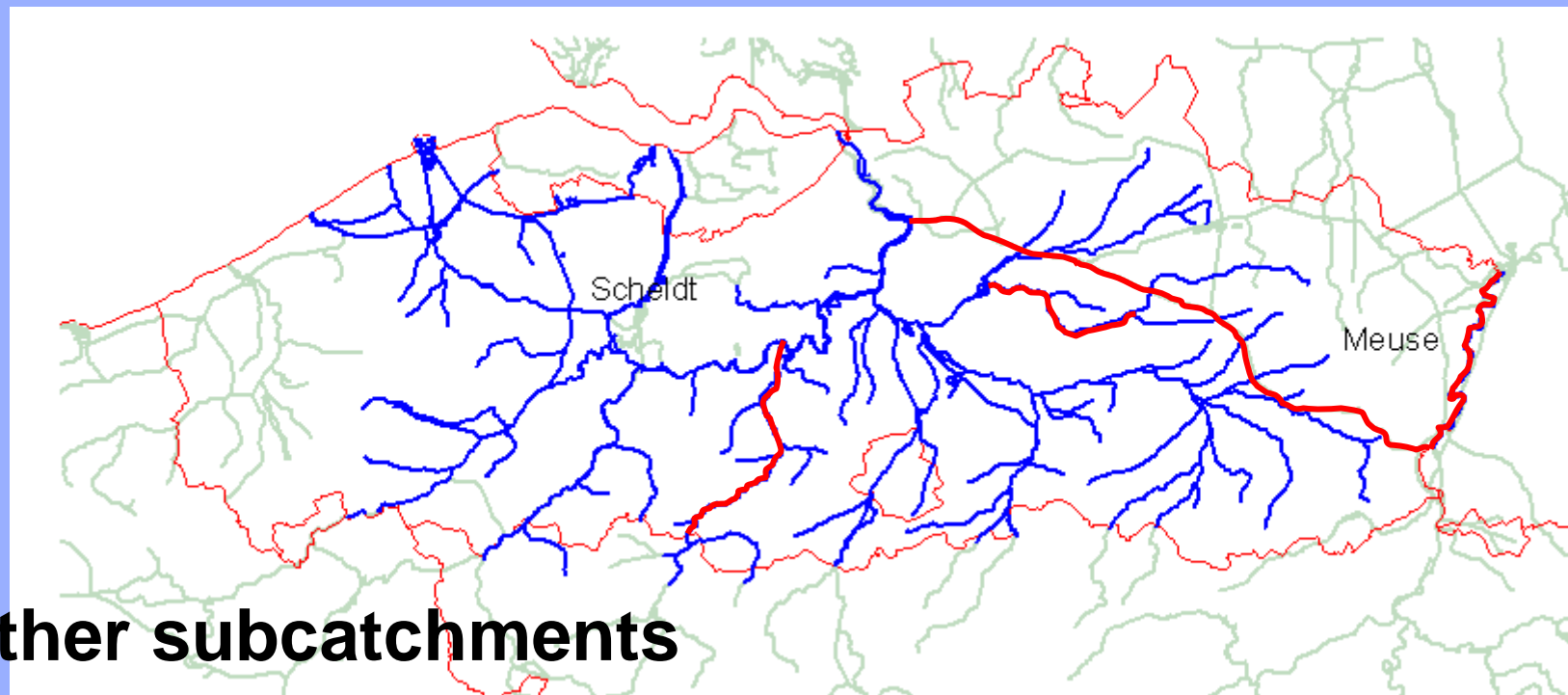




THEORY => PRACTICE

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- Meuse
- Dender
- Grote Nete
- Inventory other subcatchments





FRESHWATER MANAGEMENT

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We may utilise the gifts of nature just as we choose but in her books the debits are always equal to the credits.

