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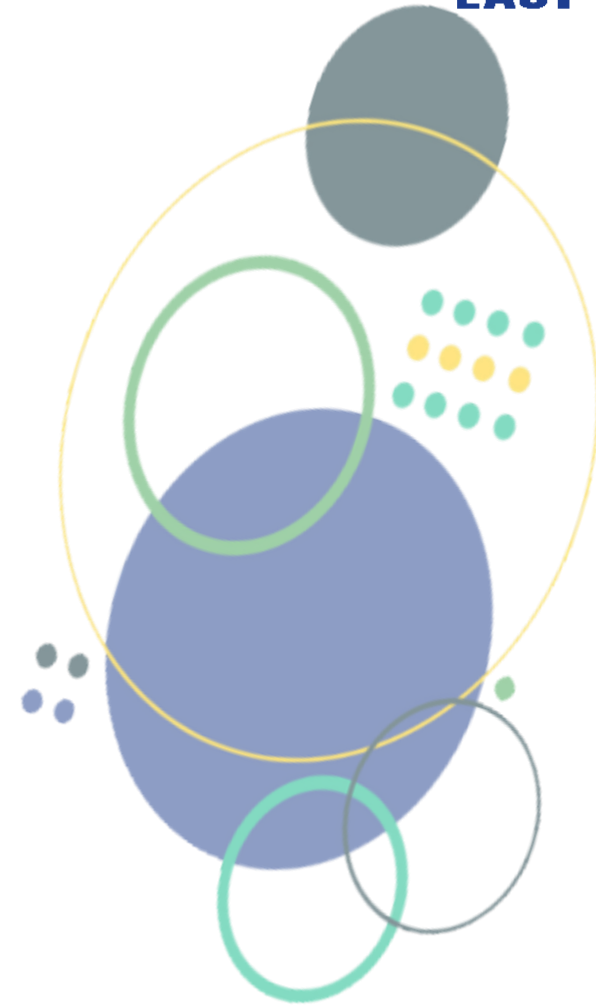
Regional Assembly Study visits

Douai, France

2 July 2026

Artois Picardie Water Agency

Adopta (association for the development of
alternative rainwater management techniques)



Implementing partners:



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History of water agencies in France

Implementing partners:



Water Agencies in France

60 years of history!



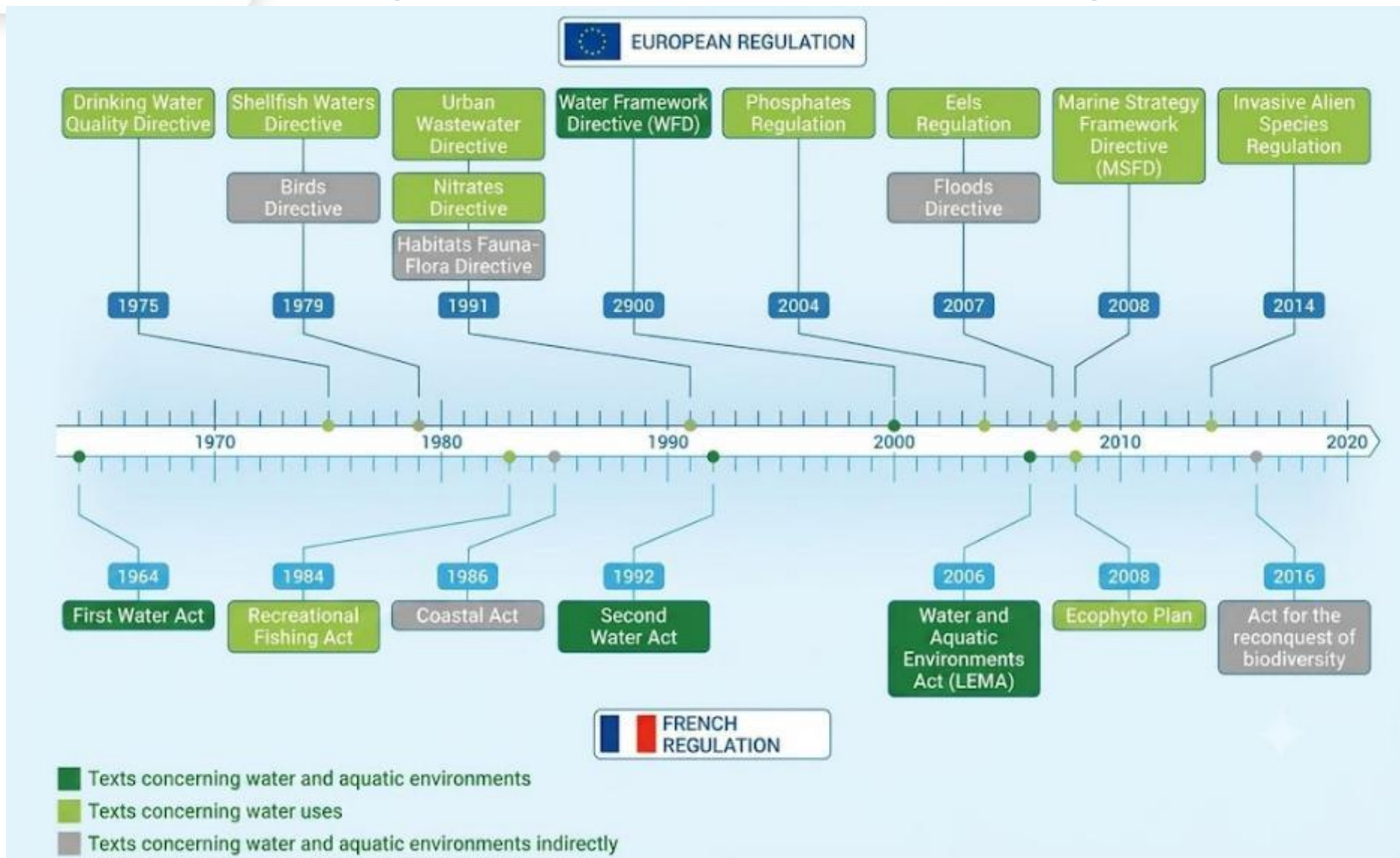
**12^e Programme
d'intervention**

2025-2030

Ensemble, préservons l'eau
pour l'avenir durable de nos territoires



A legislative process that began in 1964



Water Act 1964

- **This law is founded on three major principles:**
 - **uniqueness of the resource** (relations between surface waters and groundwaters, between **quantitative** and qualitative aspects, between upstream and downstream)
 - **interdependence and solidarity among users** (creation of river basin organisations);
 - **recognition of the economic value of water** (anticipation of the polluter-pays principle).
- **Treatment of issues at the catchment basin level**, closer to hydrographical realities (different from the administrative administration of the territory).

Water Act 1964

- A new area for action: the river basin
- New actors: basin committees and basin agencies
- A new State organisation
- The guidelines for water resource management, defined within basin constituencies, will lead to the development of actions aimed at improving satisfaction for water users and a reduction in industrial and domestic pollution (active policy concerning purification equipment.)

The six river basin agencies

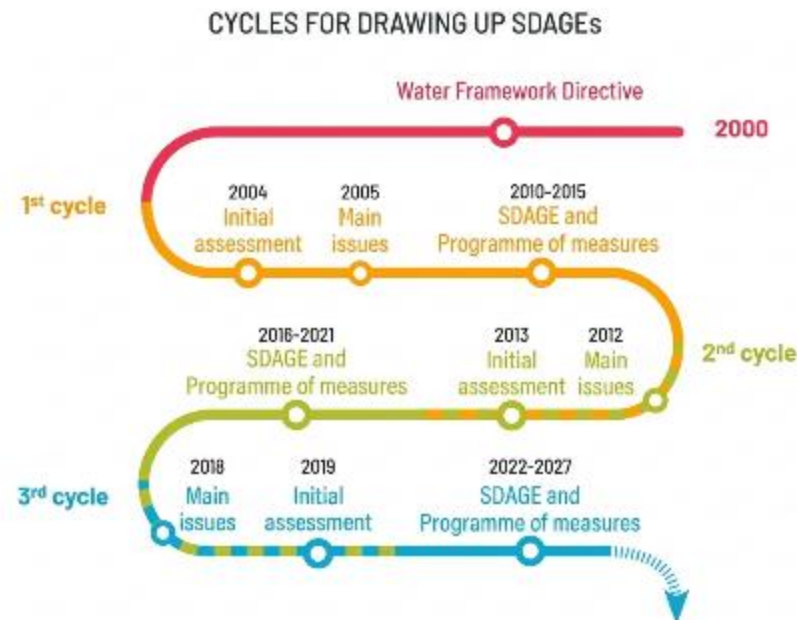


Water Act 1992

Art. 1st: "Water is part of the common heritage of the Nation"

- It prescribes adding a 'balanced and sustainable management' to 'integrated management' (1964 Act):
 - respectful of natural environments and the future
 - decentralised and concerted
 - compatible with hydraulic development needs
- It establishes new planning tools to reinforce the effectiveness of the 'water police':
 - the S.D.A.G.E., long-term regulatory scheme
 - the S.A.G.E.s, localised development schemes
- The competent State services in the field of water are organised around the Basin Coordinating Prefect and the Regional Directorates for the Environment.

The European context: Water Framework Directive



An obligation to achieve results

The WFD has several objectives:

- the prevention of the deterioration of resources and environments;
- the good status of bodies of water, unless a justified derogation applies;
- the reduction of pollution caused by substances;
- compliance with standards in protected areas.

E.g.: Natura 2000, areas vulnerable to pollution from agricultural nitrates, catchment areas for drinking water supply, etc.



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Overview of the Artois-picardie river basin

Implementing partners:



The Artois-Picardy catchment area

Overview and summary of the key issues

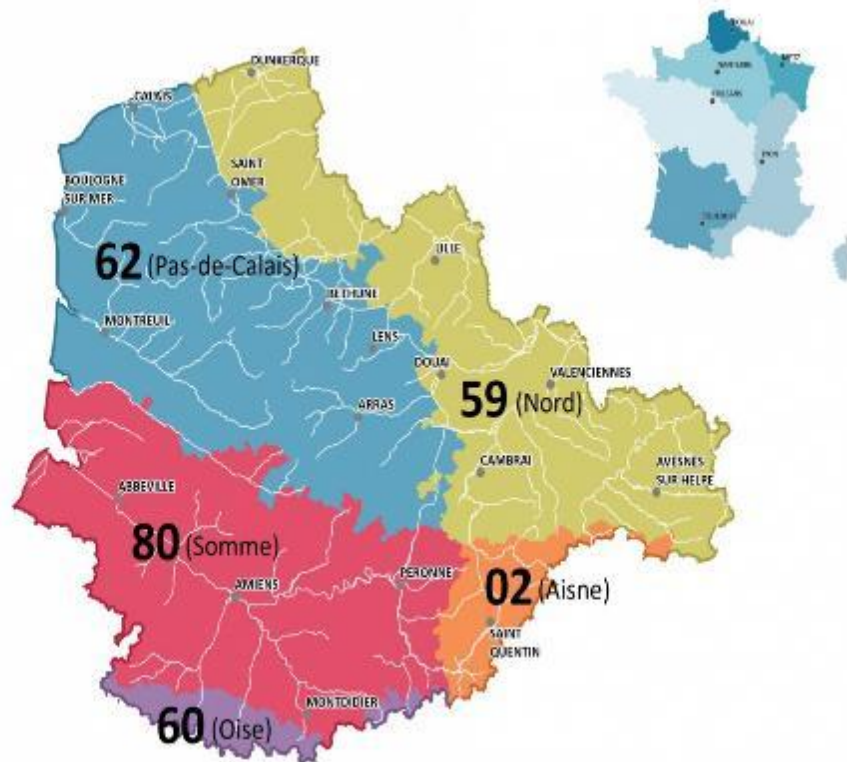


2025-2030
**12^e Programme
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Ensemble, préservons l'eau
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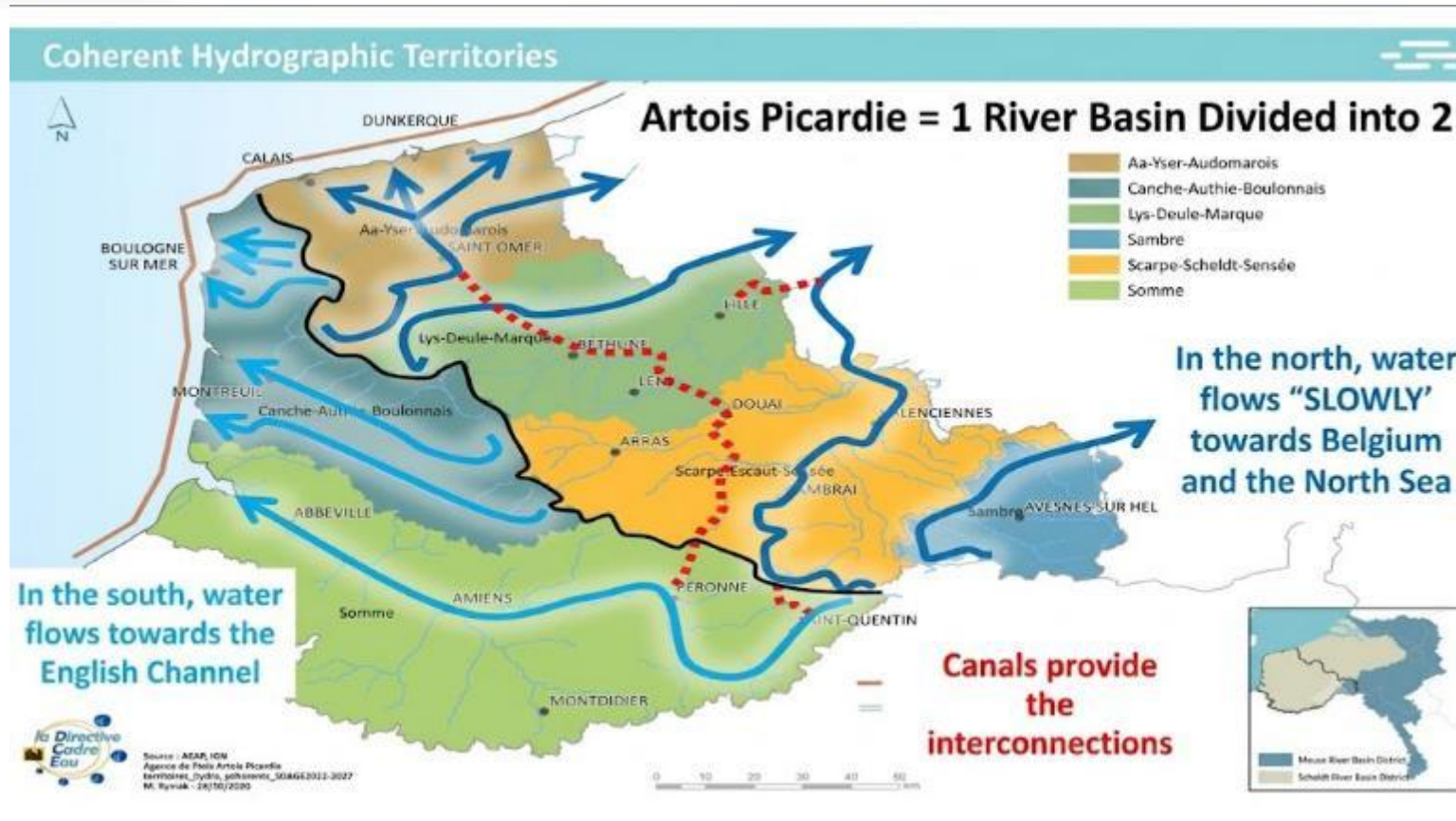


The Artois-Picardy basin



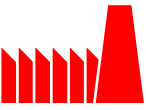
- Area of 20,000 km²
- 4.8 million inhabitants (twice the average density in France), three-quarters of whom live in urban areas
- 12 per cent of the land in the catchment area is built-up (9.3 per cent on average in France)
- An economy characterised by industrial and agricultural activities

The Artois-Picardy catchment



- 8,000 km of watercourses
- Low flow = low dilution and high susceptibility to pollution
- Watercourses heavily modified by human activity
- Significant interactions between groundwater and rivers

The link between pressures and impacts

Human impact		Physico-chemistry (Oxygen, Temperature, Phosphorus, Nitrogen, ...)	Biology (Diatoms, Invertebrates, Fish, Macrophytes)	Substances (Pesticides, PAHs, Metals, Fluoranthene, Solvents, ...)	Quantitative (Sampling, Refill, ...)
	Atmosphere				
	Sanitation Domestic				
	Economic Economic				
	Agricultural Agricultural				
	Morphology watercourses				
	Navigation				
	Sampling				

Ecological status of surface waters

Categories of water bodies:

- Water body: Standing water (Lake/Reservoir)
- ★ Harbour water body
- Masse Water cours body:
- Natural
- Artificial water body
- Heavily modified water body
- Watercourse / River water body

Ecological status:

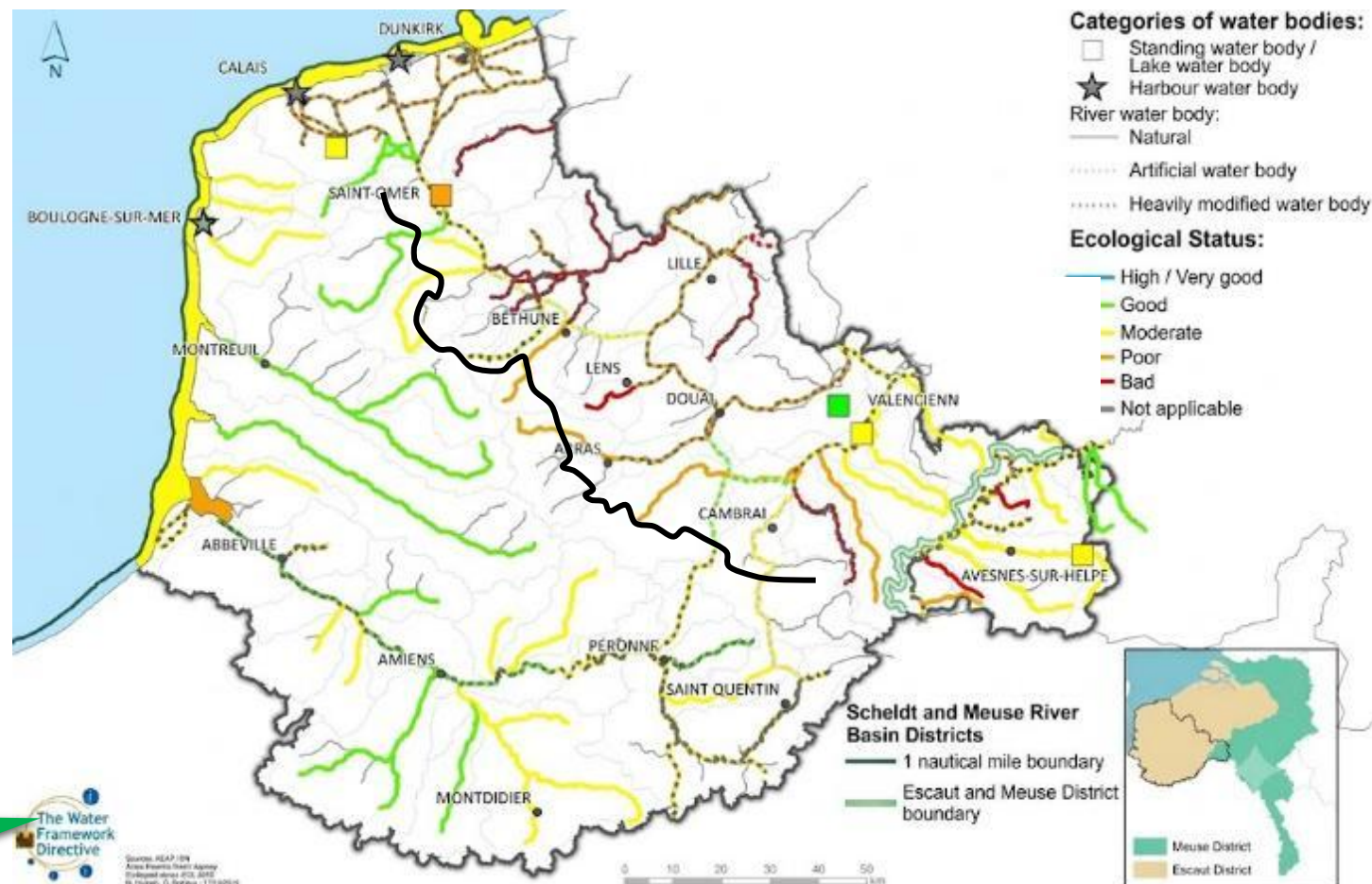
- Very good
- Good
- Moderate
- Poor
- Bad
- Not relevant / Not applicable

Categories of water bodies:

- Standing water body / Lake water body
- ★ Harbour water body
- River water body:
- Natural
- Artificial water body
- Heavily modified water body

Ecological Status:

- High / Very good
- Good
- Moderate
- Poor
- Bad
- Not applicable

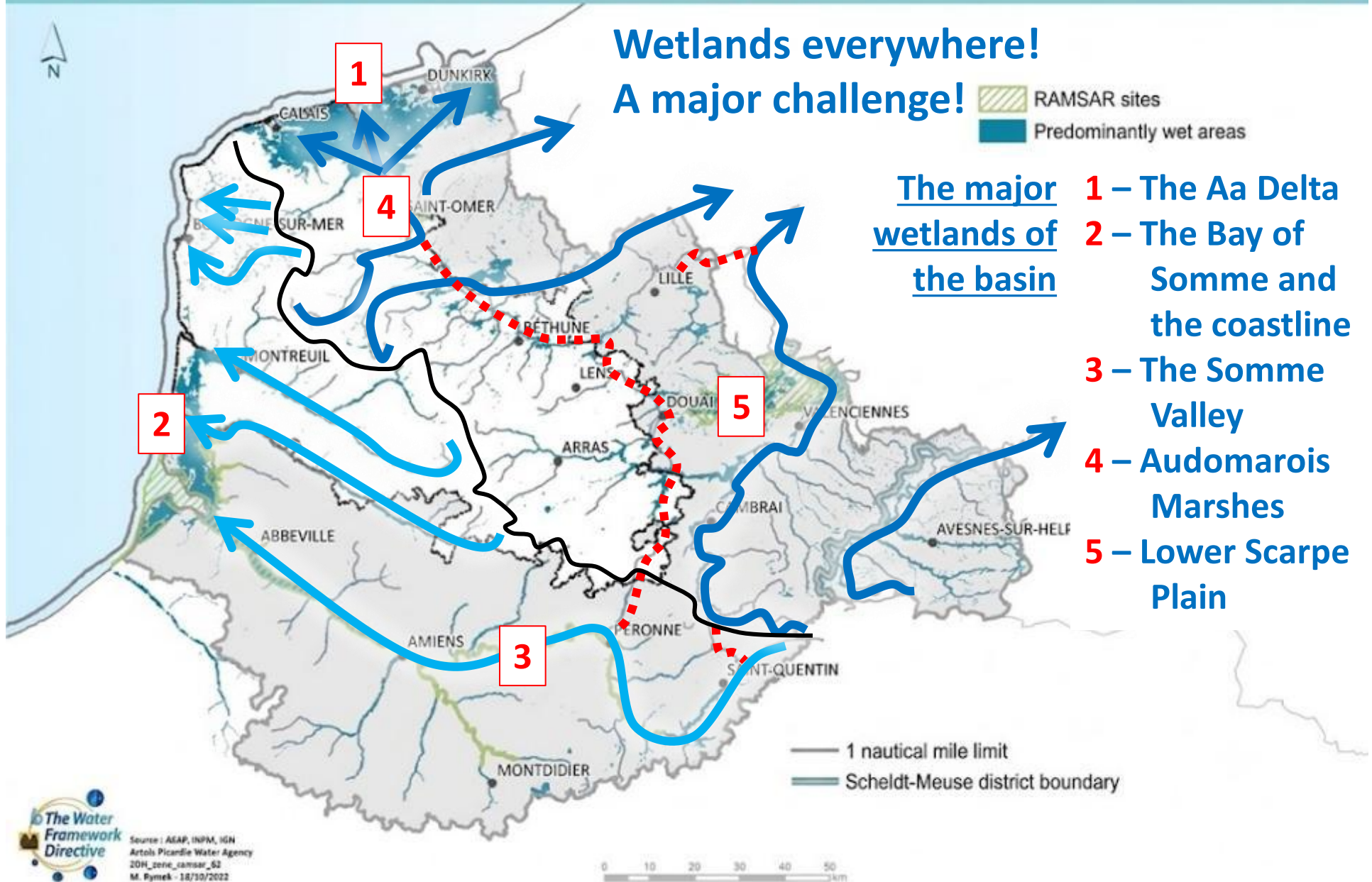


22% in good condition in 2019



Source: REAP 10N
Agence Régionale de l'Eau
Elaboré d'après REAP 10N
M. Hupert, D. Bédouin - 11/01/2014

PREDOMINANTLY WETLANDS AND RAMSAR SITES



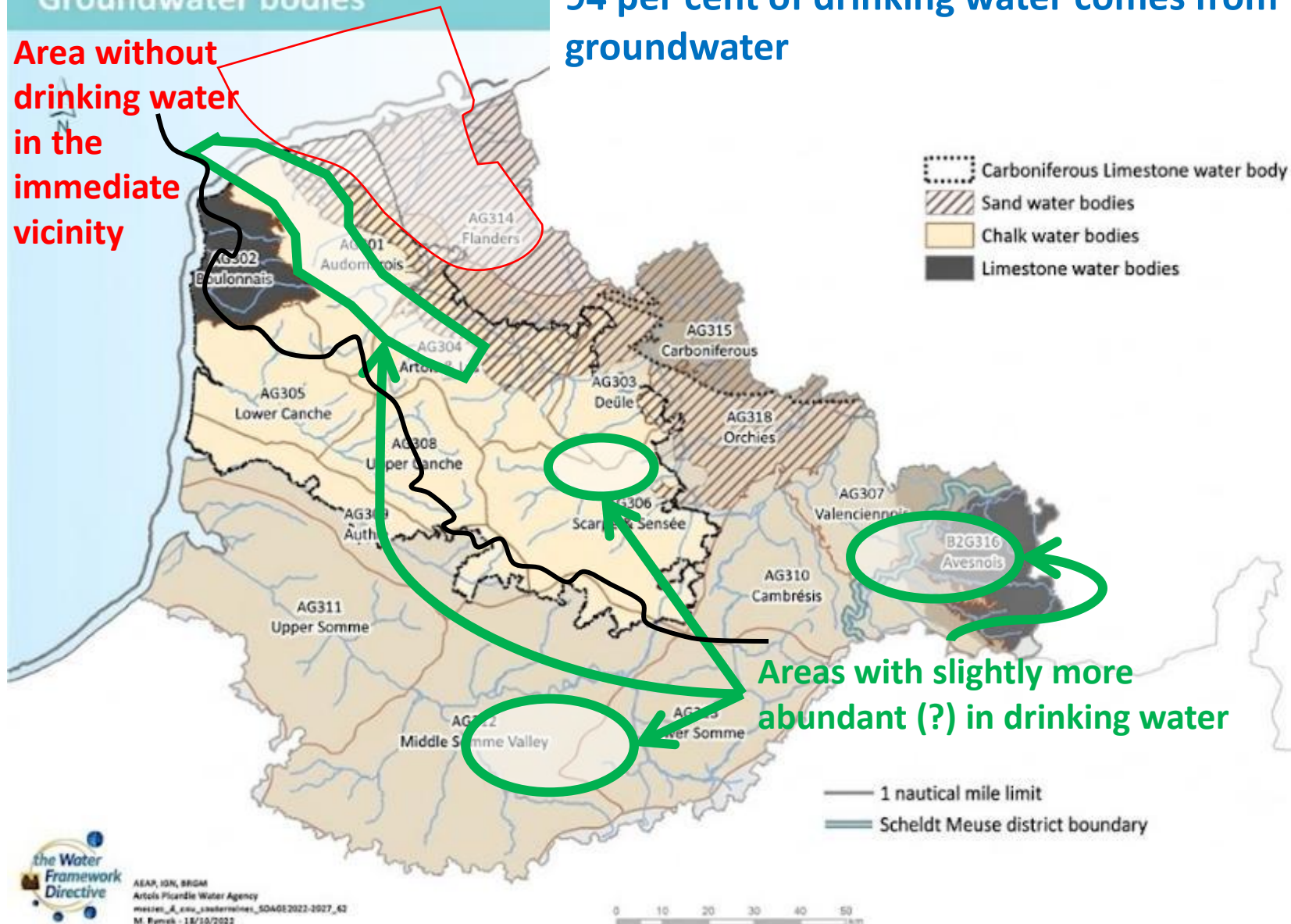
Water abstraction

- 94 per cent of the drinking water supply comes from groundwater, but 76 per cent of groundwater is in poor chemical condition
- Importance of recharge (rainfall)
- **523 million m³ s abstracted annually** on average between 2018 and 2023:
 - 59% for drinking water
 - 11% for irrigation (a significant increase over the last 10 years)
 - 30% for other economic activities

Groundwater bodies

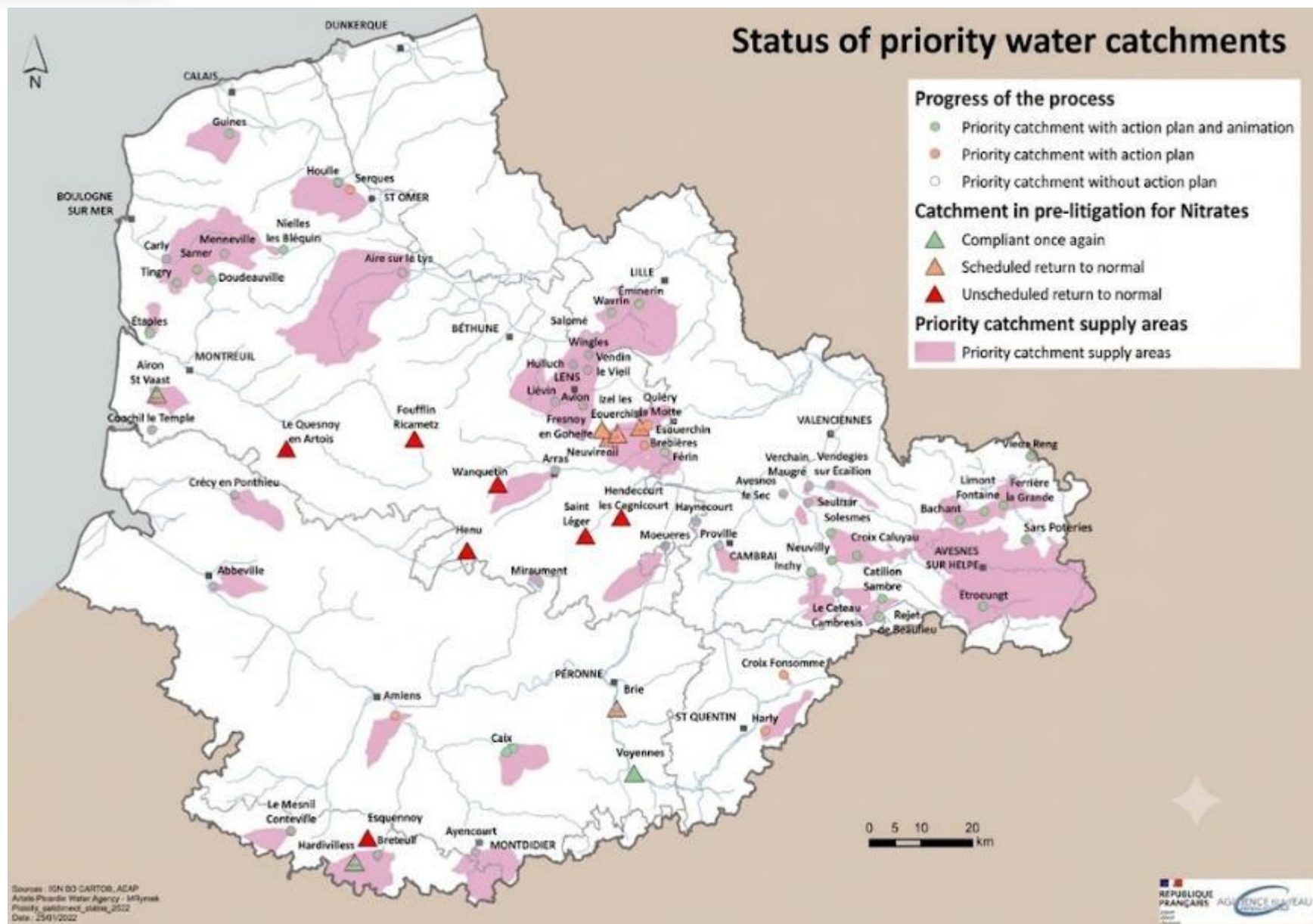
94 per cent of drinking water comes from groundwater

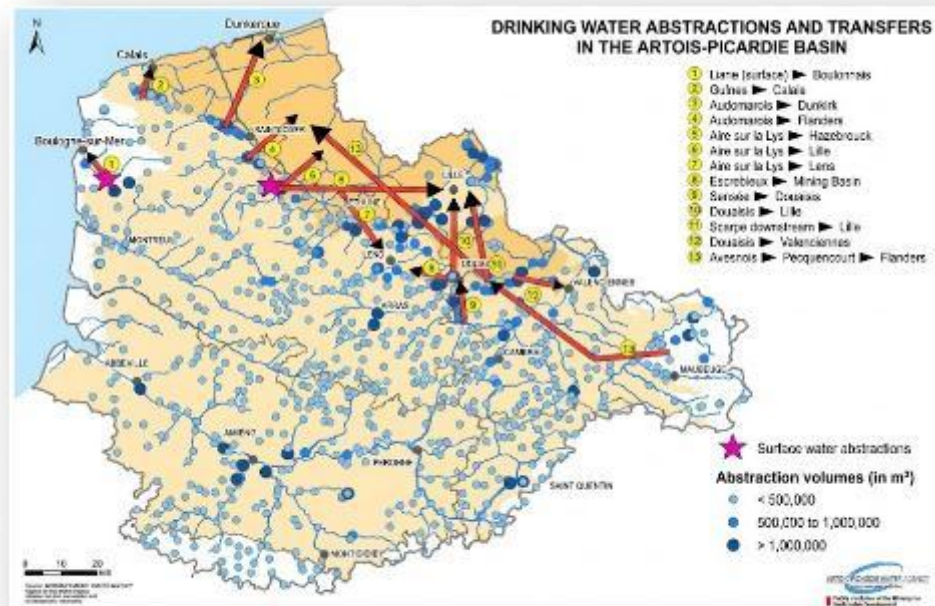
Area without drinking water in the immediate vicinity



Areas with slightly more abundant (?) in drinking water

Priority water abstraction points





Challenges exacerbated by climate change



Water is the primary indicator of climate change

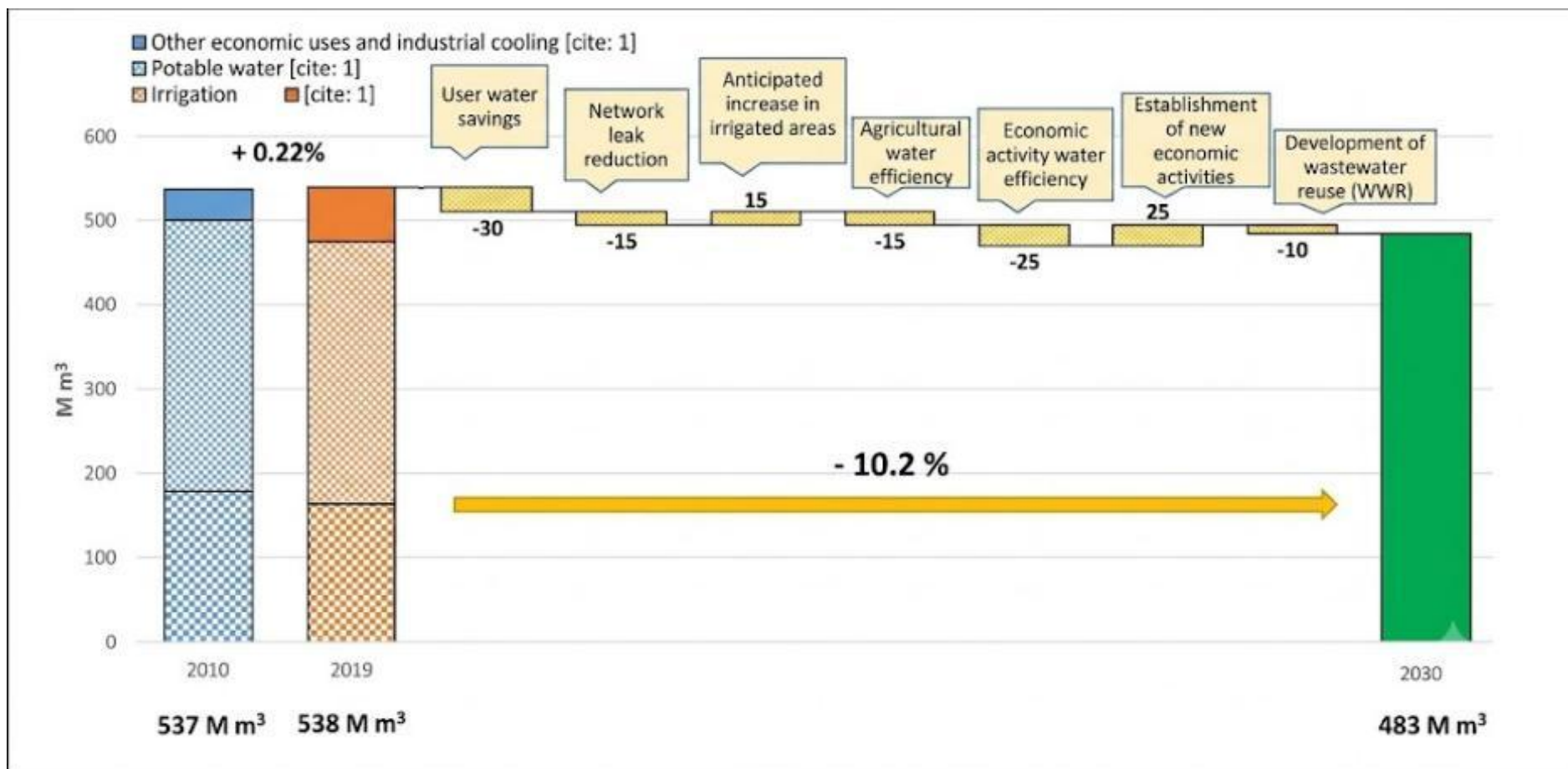


The August 2022
drought



November 2023
floods

2030 Low-Carbon Pathway





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The role of a Water Agency

Implementing partners:



The role of a water agency

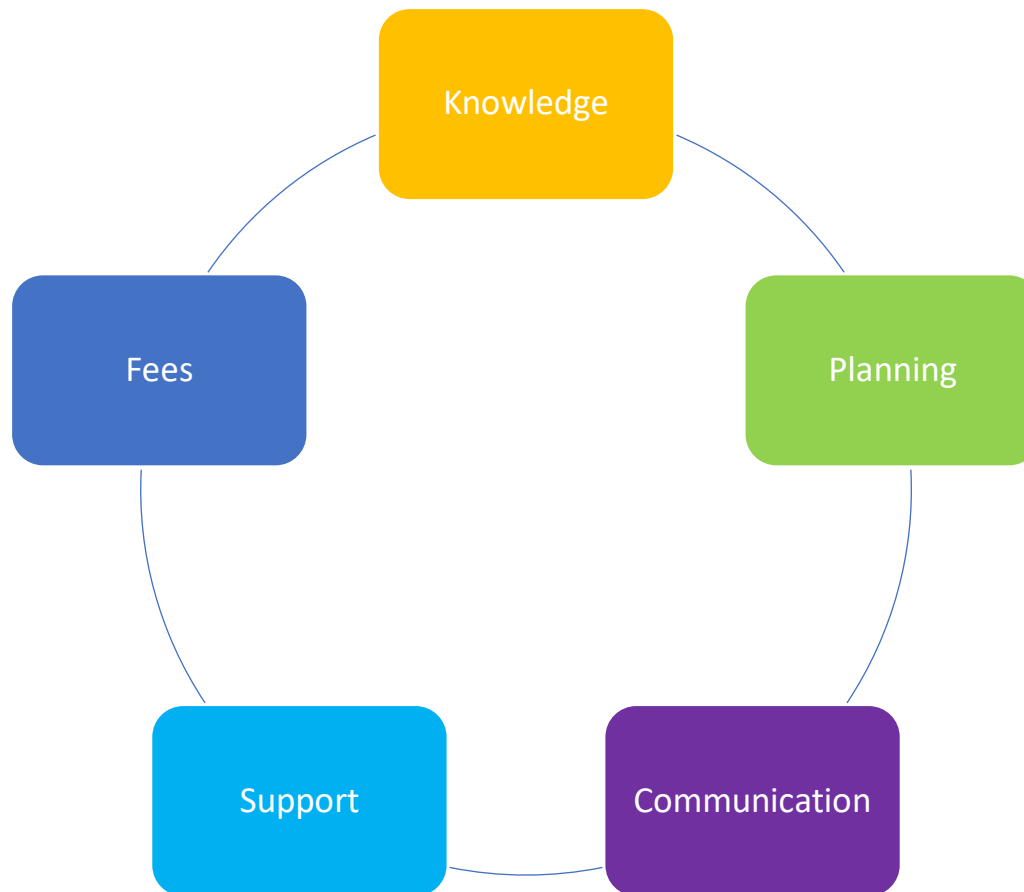


2025-2030
**12^e Programme
d'intervention**

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The 5 key tasks



Board of Directors

- The **general conditions governing the organisation** and operation of the institution
 - General programmes of activity, in particular **multi-annual action programmes**
 - The **budget** and amending decisions
 - **Fee** rates
 - The **financial statement** and the allocation of surplus
 - The **conclusion of contracts** and agreements exceeding an amount set by the institution
 - The **general conditions for the allocation of grants** and financial assistance to public and private bodies
-
- **Comprises elected representatives, service users and representatives of the State** who share and promote the agency's policy and activities within the region = **35 directors**

Composition of the Board of Directors

35 members – 6-year term

- 1 chair
- 11 members from the parliamentary and local authority group
- 5 members from the non-economic users' group
- Plus 1 qualified person
- 5 members from the economic users' group
- 11 members from the State and public enterprises panel
- 1 staff representative + 1 alternate

Every 3 years:

→ **Two vice-chairs:** the parliamentary and local authority panel AND the economic and non-economic user panel

Gender parity by representative group

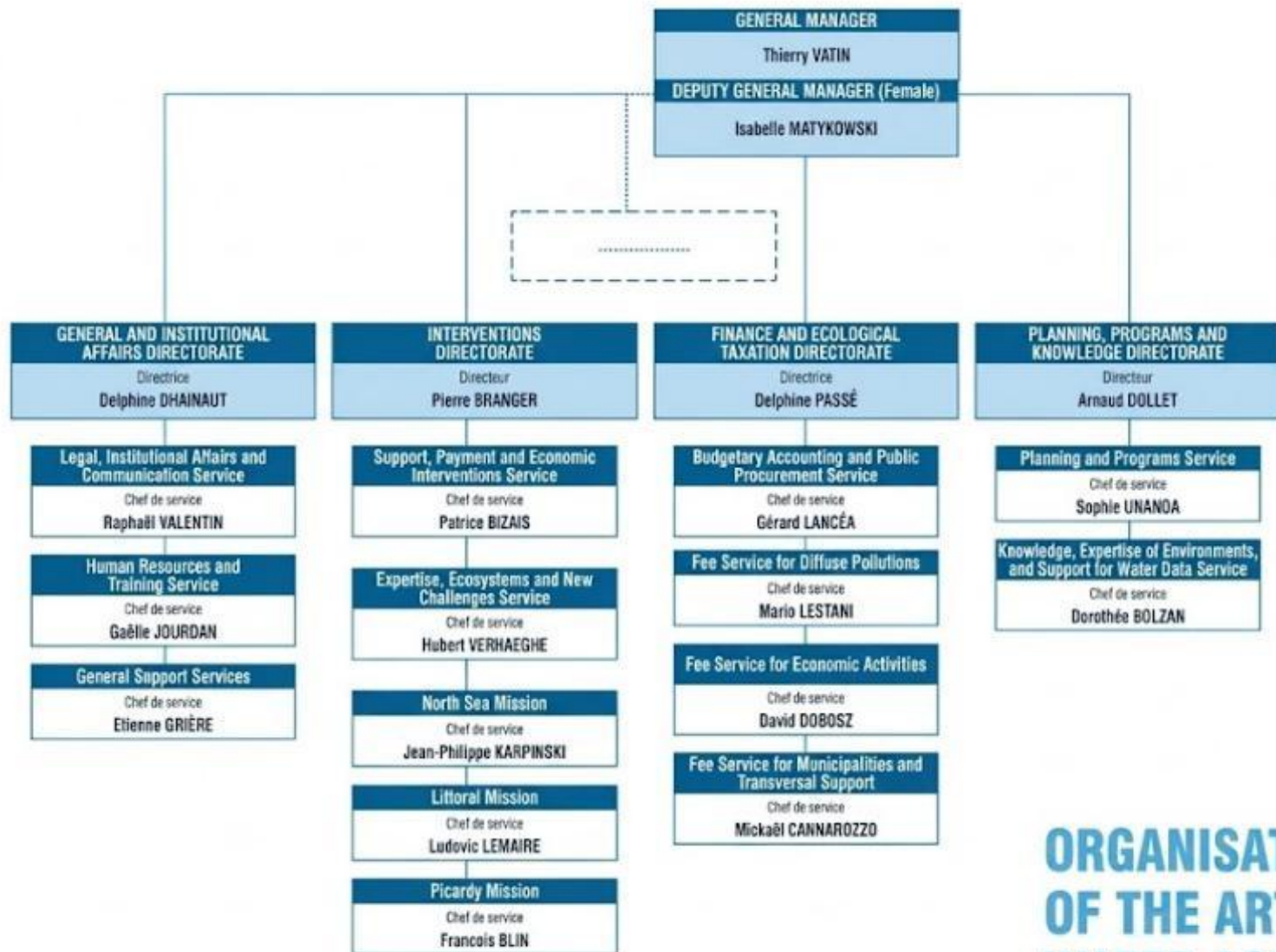
Composition of the Board of Directors

Ex officio members:

- Chairman of the CB
 - Chief Executive of the Water Agency
 - Budget Controller at the AEAP
 - Government Commissioner to the AEAP
 - Accounting Officer at the AEAP
- + invitation to the alternate staff representative of the AEAP

STANDING COMMITTEES SET UP BY THE BOARD OF DIRECTORS

- Standing Committee on Interventions
- Standing Programme Committee



Accounting Agency
Accounting Agent Stéphane LIARD
Information Systems and Digital Uses Directorate (DSIUN)
Site Manager - Douai Patrick DIERYCKX

ORGANISATIONAL CHART OF THE ARTOIS-PICARDIE WATER AGENCY



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The river basin committee

Implementing partners:



The river basin committee



**12^e Programme
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2025-2030

Ensemble, préservons l'eau
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Basin Committee: 'Water Parliament'

- **Planning every six years in the water sector** (assessment of the current situation, SDAGE, public consultation)



- **Initiator of the agency's strategy and actions** (guidelines, climate change adaptation plan, etc.)
- **Consultative body on water-related matters within the catchment area** (Minister, prefects, programme of measures)
- **Management body** (SAGE, PGRI, PAMM, EPTB, vulnerable areas, sensitive areas, international conventions)

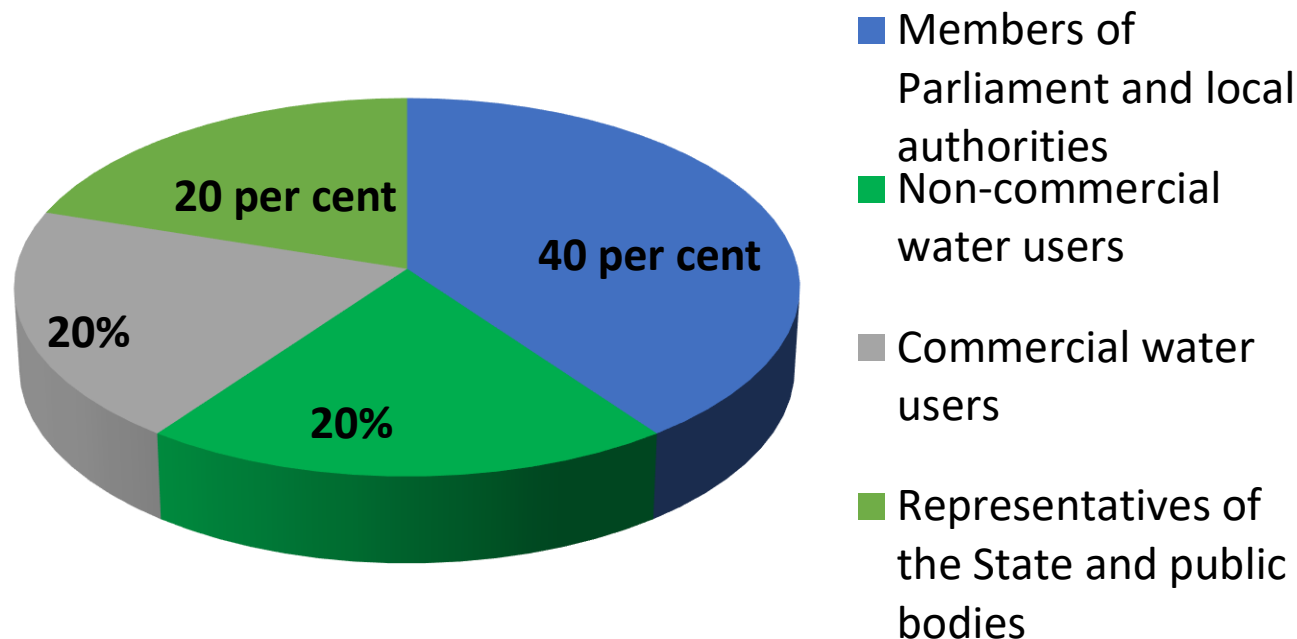
EPTB: Public Territorial Basin Authority

PGRI: Flood Risk Management Plan

PAMM: Marine Environment Action Plan

River basin committee: 'Water Parliament'

Composition of the 80 members – 6-year term



- **Chair:** a panel comprising parliamentarians and local authorities OR a qualified individual
- **1^{er} and 2^{ème} vice-presidents:** economic and non-economic stakeholders + a 3^{ème} (local authorities) if the chair is from the PQ
- **ARTOIS PICARDIE:** one representative from the Youth Parliament

Gender parity by group of representatives

Standing Committees

- Standing Committee on the Natural Environment and Planning
- Standing Committee on Water and Agriculture
- Floods Committee
- Board of Directors

→ Elected by and from among the members of the CB

→ Balance of representation across the various groups in the chairmanships and vice-chairmanships



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Monitoring water resources

Implementing partners:



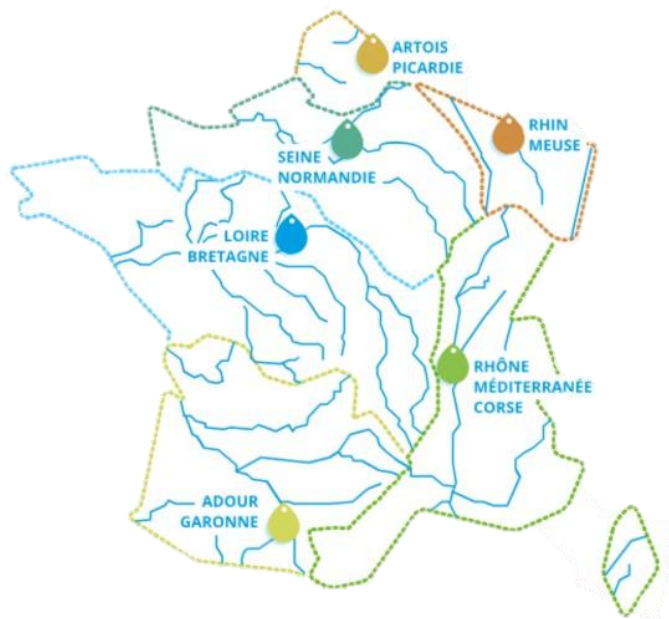
Environmental monitoring, knowledge and data on water



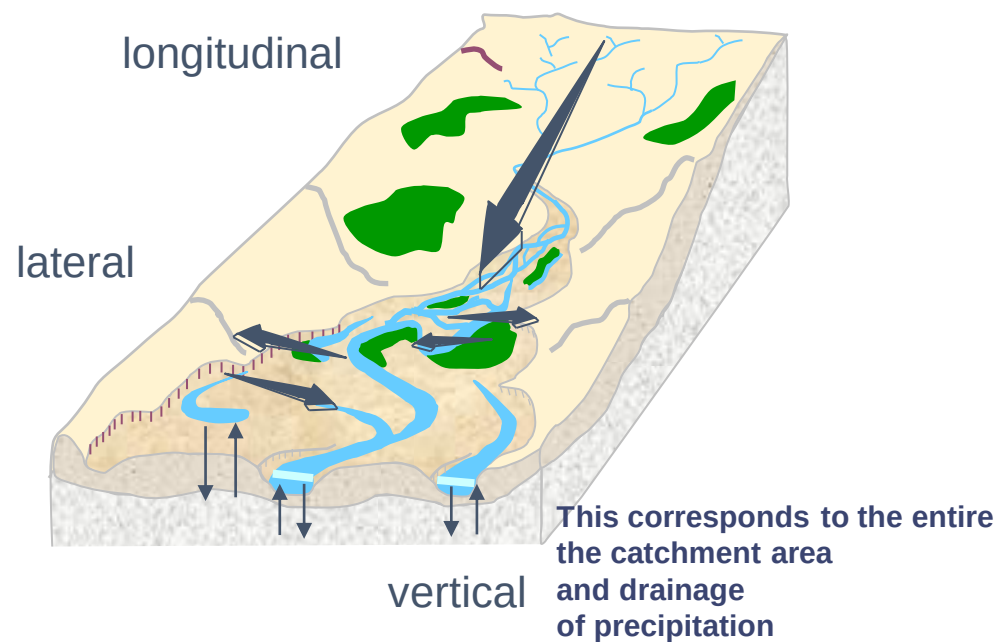
Dorothee BOLZAN
Head of the Environmental Knowledge, Expertise and Data Support Department
Artois-Picardie Water Agency
d.bolzan@eau-artois-picardie.fr

Water Agencies

- The 1964 Framework Water Act: Establishment of the six French Water Agencies



The catchment area is the water management area



The Water Agencies



- A shared objective:

GOOD WATER STATUS

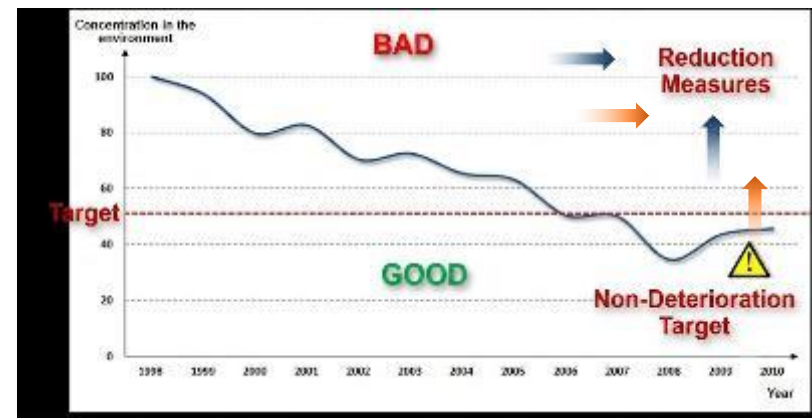
- 4 key priorities:



Water Agencies

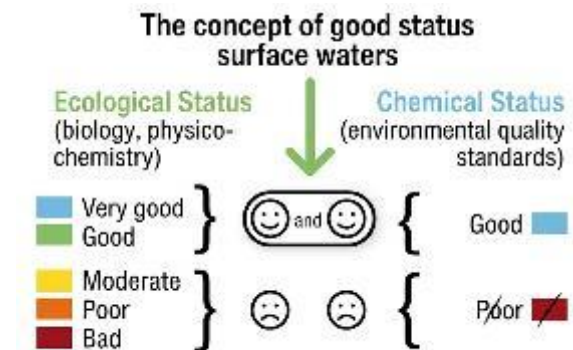
- Knowledge of aquatic environments: an essential tool for public water policy

- Purpose of the assessment: to guide **decision-making** on the actions to be taken and to report on **the effectiveness of management policies**
 - ✓ Setting targets
 - ✓ Define actions
 - ✓ Monitor the effects of the measures



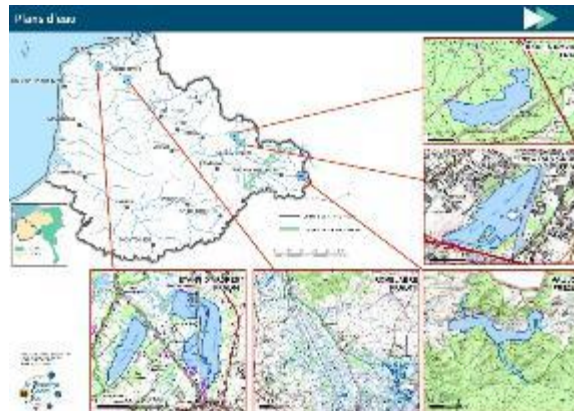
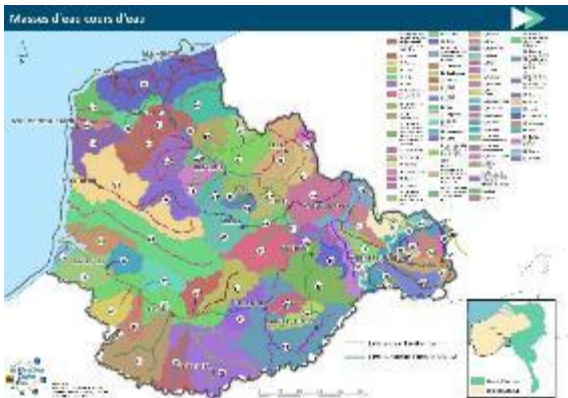
- The European Water Framework Directive (WFD):

The objective of achieving good water status



What is 'Good Water Status'?

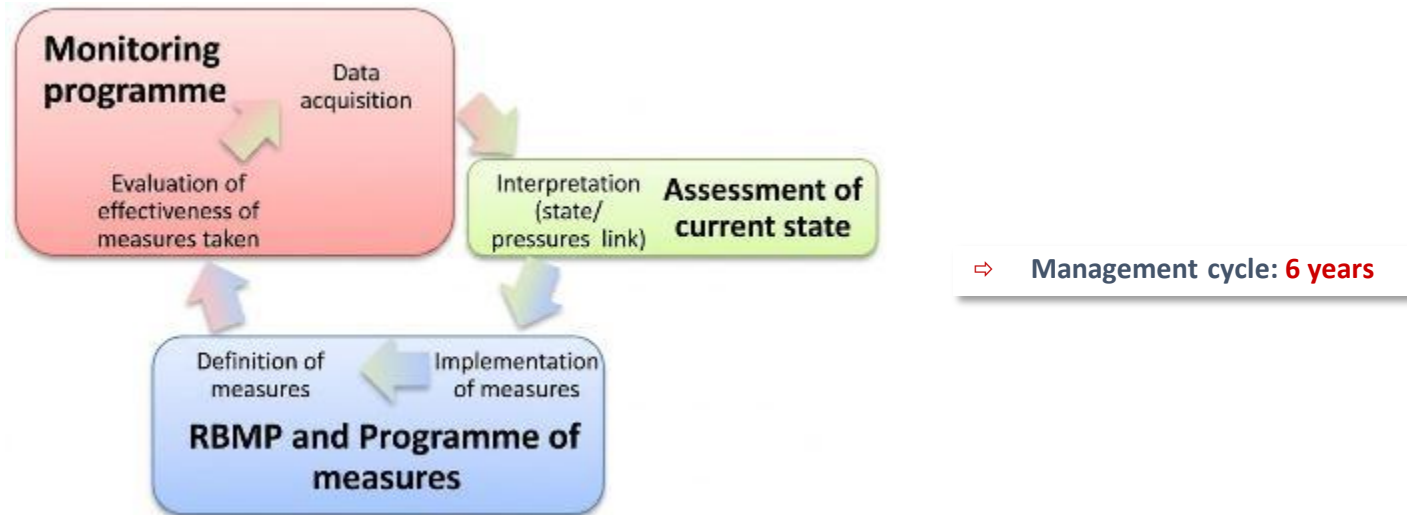
- **Water?**
 - **Surface water:** natural rivers, canals, bodies of water
 - **Groundwater**
 - **Transitional waters:** estuaries, harbours
 - **Coastal waters**



Regulatory monitoring

The Water Framework Directive

- A process shaped by the production and use of knowledge



- Incorporated into French law:
 - Surveillance and Evaluation Decrees

Regulatory Oversight

The supervision programme

- Governance as set out in the regulatory texts

- ⇒ Standardised Methods
- ⇒ Multiple stakeholders
- ⇒ Subcontracting to accredited laboratories



Regulatory Oversight

Monitoring networks

- Definition of a **monitoring programme** that meets the requirements of the WFD



Comprehensive and regular assessment

Monitoring the status of each body of water



Monitoring control network



Operational monitoring network

Monitoring of water bodies at 'risk of failing to achieve good status'

Monitoring the factors responsible for downgrading



Regulatory Oversight

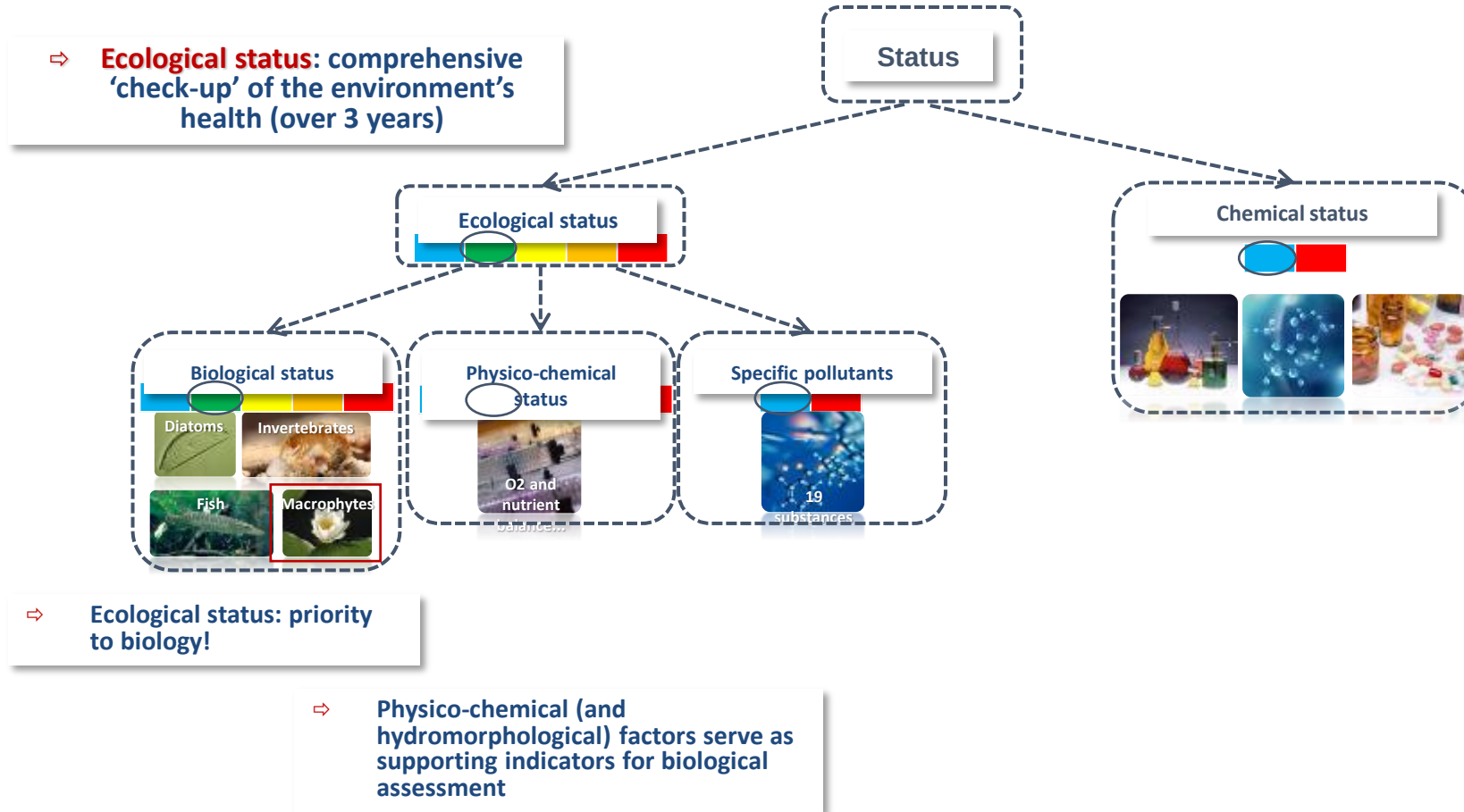
Surveillance networks

- **Monitoring and Control Network (RCS)**
 - ❖ Designed to provide an overview of the general condition of water bodies
- **Operational Monitoring Network (RCO)**
 - ❖ Monitoring of water bodies at risk of failing to achieve good status and tracking improvements following the measures implemented
- **Artois-Picardie Historical Network (RHAP)**
 - ❖ To continue collecting data over long time periods
 - ❖ Meeting local needs



Regulatory Oversight

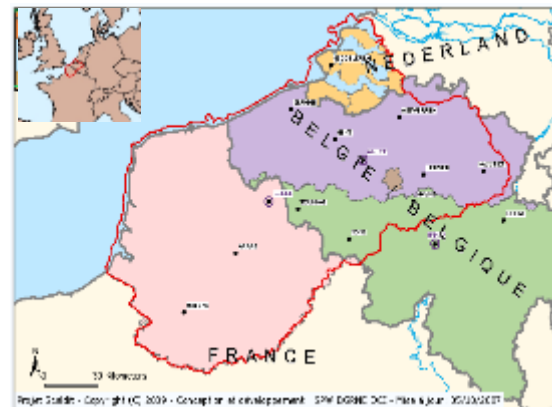
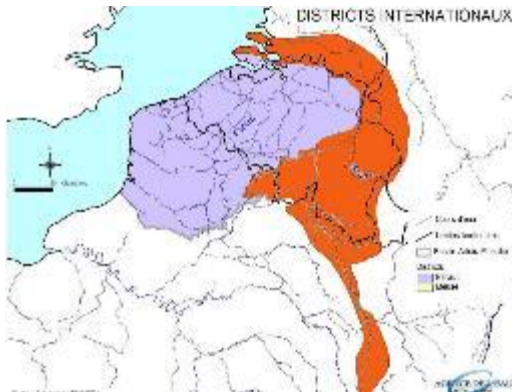
Assessment of the status of surface waters



Regulatory Oversight

Assessment of the state of the environment – key principles

- **Key environmental characteristics:**
 - ❖ European scale (international river basin districts)
 - ❖ Principle of deviation from the reference standard based on water body types



Regulatory Oversight

Assessment of status – Definition of ESU water bodies

- **Defined by:**

- ❖ A natural typology
- ❖ A set of homogeneous pressures
- ❖ A 'good status' objective for 2015, 2021 and 2027

66 ESU water
bodies

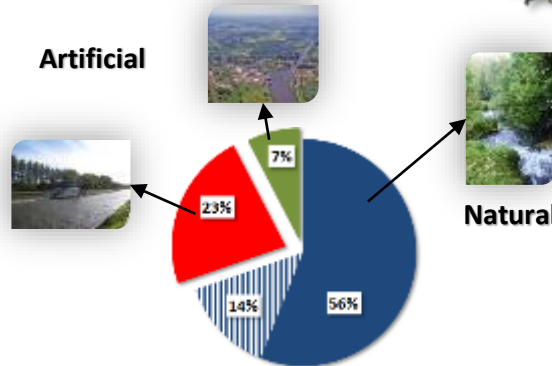


⇒ The quality of a watercourse is linked to the characteristics of **the catchment area**

this is the management unit, also known as a 'water body'

⇒ **Water body:** Assessment and reporting unit

Heavily
modified

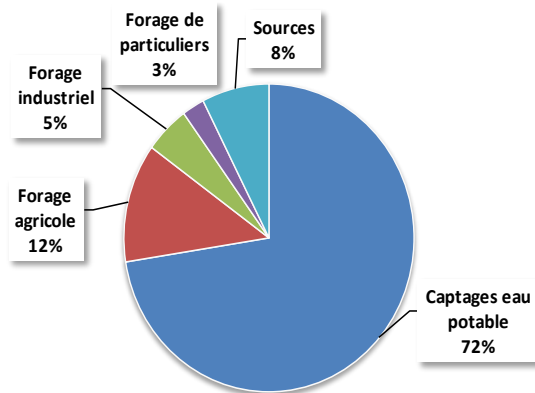
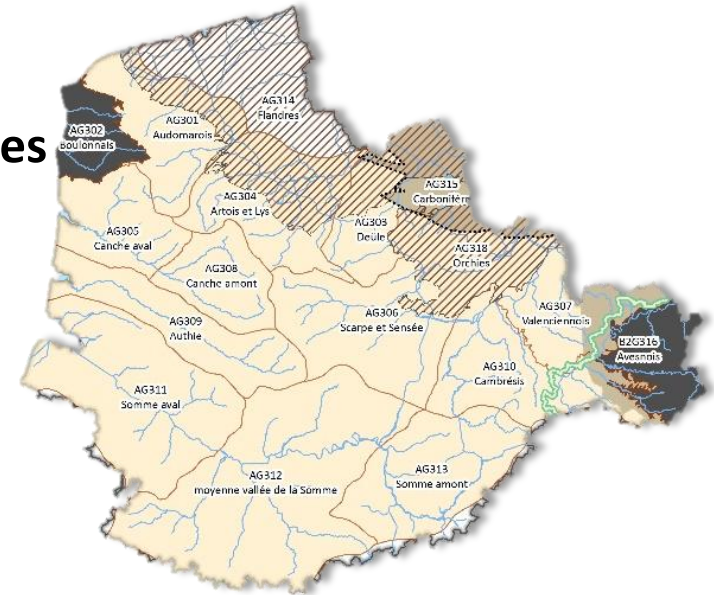


Regulatory Monitoring

Assessment of status – Definition of ESO water bodies

- **Extent:**
 - Representing one or more aquifers
 - In hydraulic communication
 - Bounded by piezometric ridges, major watercourses or geological features

17 ESO water bodies

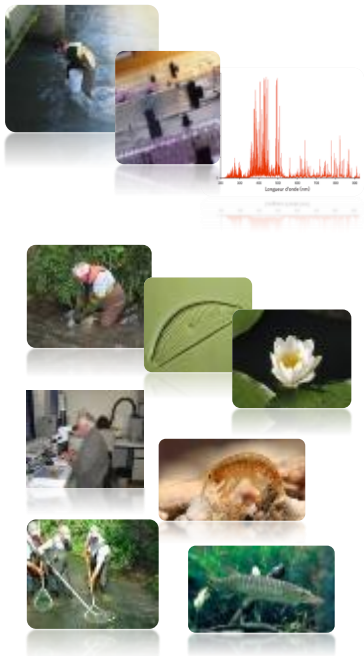


⇒ Importance of abstraction points in monitoring networks

Regulatory Oversight

Parameters monitored

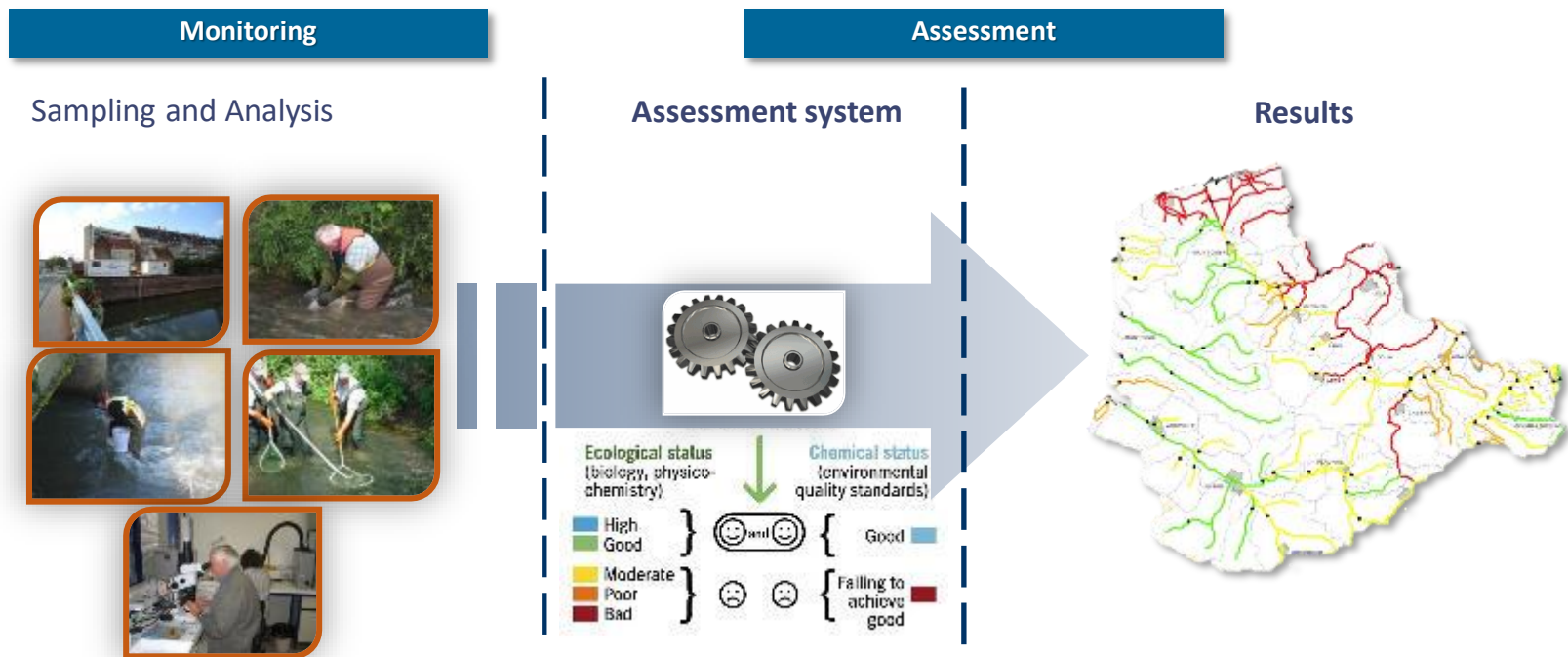
- Parameters and monitoring frequencies set out in the regulations



	Inland waters		Coastal waters		Groundwater	
	Rivers	Lakes / Water bodies	Transition	Coastal waters		
Physico-chemistry	12× per year				2× per year	<u>Every year</u>
Substances	4 to 12× per year					
Phytoplankton	8× per year					
Macrophytes & phytobenthos	1× per year					<u>Every year or every two years</u>
Macroalgae & Angiosperms						
Benthic invertebrates						
Fish						

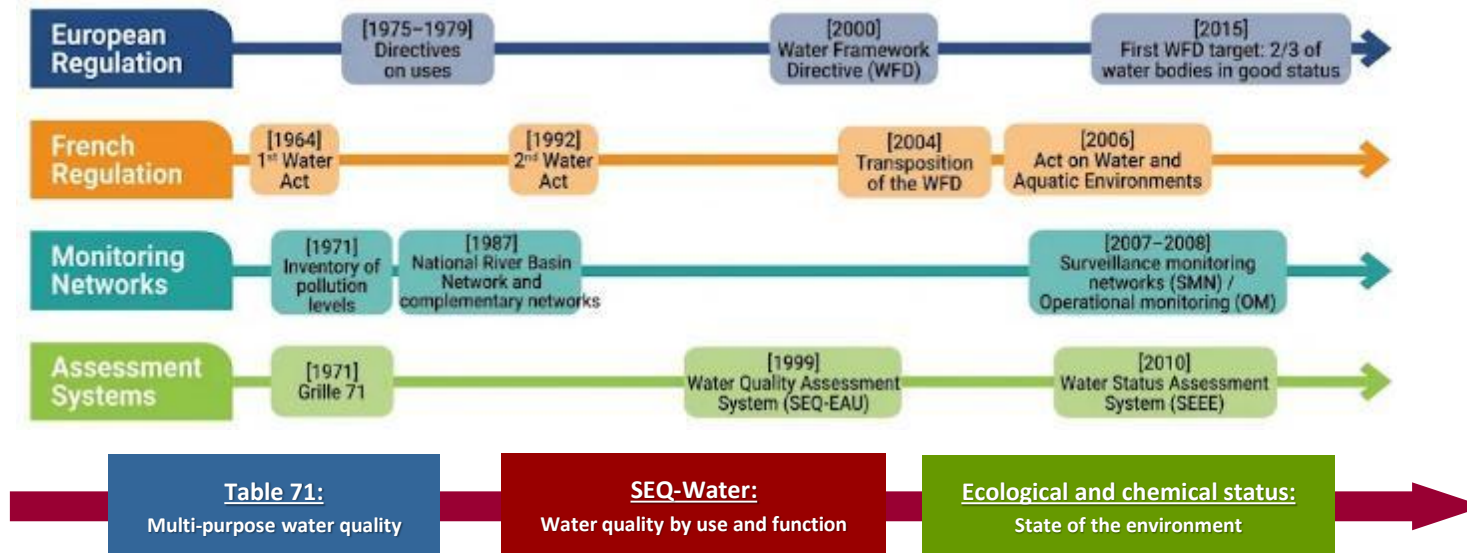
Regulatory Monitoring

- **Water Agencies:** 50 years' experience in monitoring and assessing the state of the environment



Regulatory Monitoring

- Various assessment systems have been developed, in accordance with:
 - current European and national regulations
 - the standards set for different uses (drinking water, bathing water, fish-rearing water, etc.)
 - the main problems observed and current challenges (point source pollution, eutrophication, nitrates and pesticides, contaminated sediments, emerging substances, etc.)



Regulatory Oversight

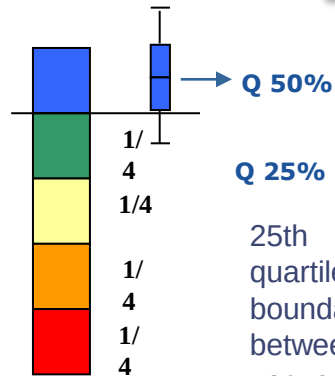
The Principles of Assessment

- **Quality assessment system**
 - Quality classes
 - Deviation from the benchmark, one out/all out

Based on an understanding of constantly changing environments

Thresholds established for each category
(e.g. 'invertebrates' grid)

		IBGN 2007	Types of waterbodies and their codification			
		Waterbody characteristics	5	4	3	2.1
		River characteristics (Banks and Type)	Large	Medium	Small	Very small
20	CLAY-SANDY DEPOSITS	General case	16 [15-13-9-6]			
		Exogenous to HBA	15 [14-12-9-5]			
9	CALCAREOUS TARIRES	A-HBR2 n°57	15 [14-12-9-5]			
		General case	15 [14-12-9-5] 17 [16-14-10-6]			
22	ARDENNES	General case	19 [18-15-11-6]			



25th quartile = boundary between very good status and good status

⇒ New lists of substances

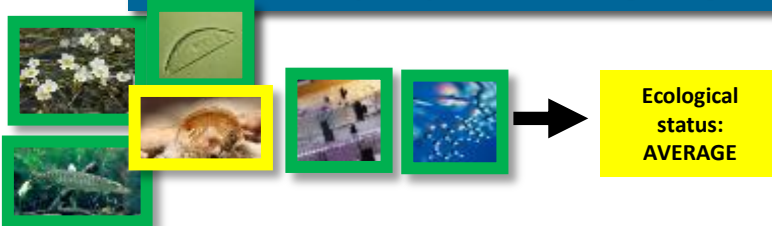
⇒ Taking geochemical pools into account

⇒ New, more comprehensive biological indicators

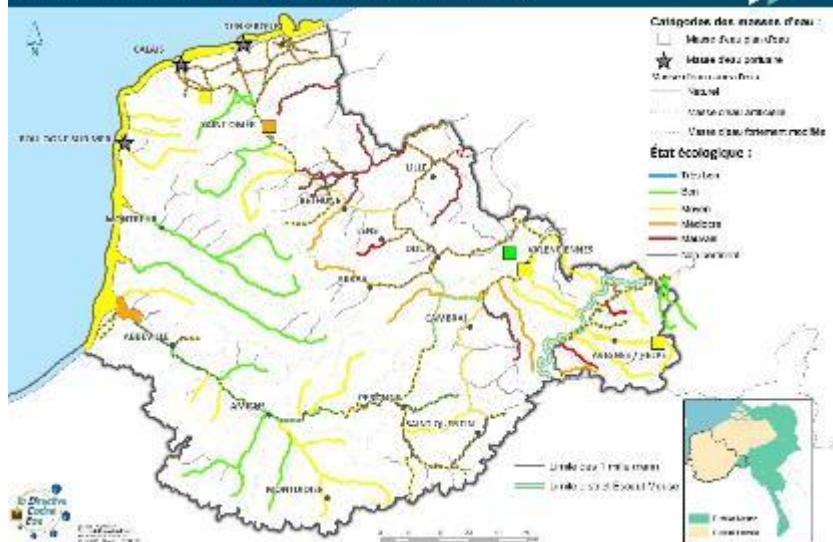
⇒ Impact of climate change

⇒ ...

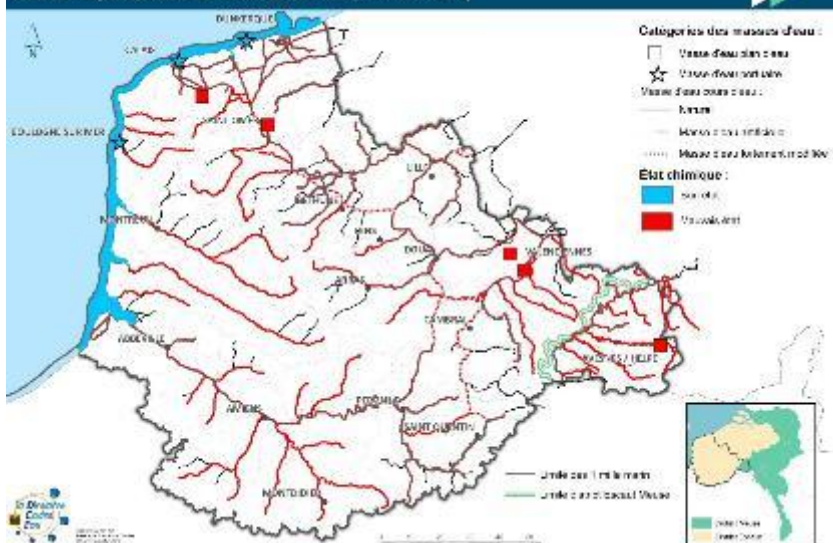
At station level: principle of the downgrading factor



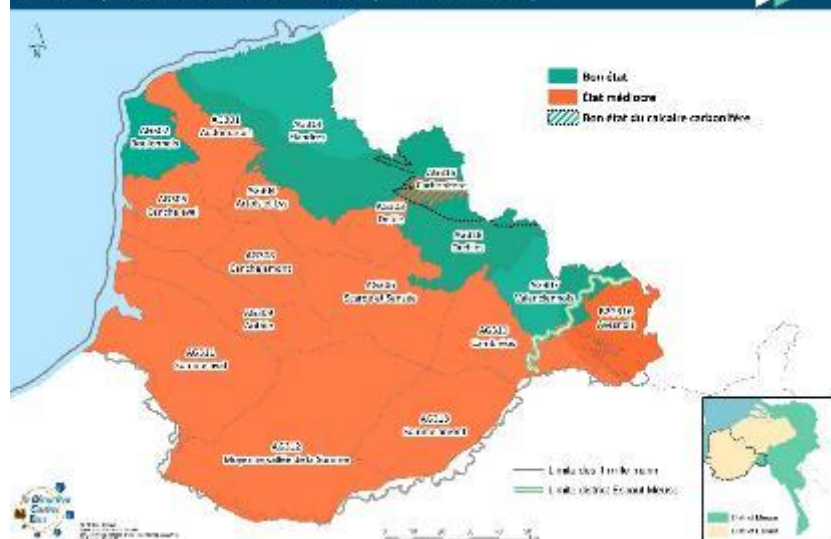
État écologique des masses d'eau de surface (données 2015-2017)



État chimique des masses d'eau de surface (données 2017)



État chimique des masses d'eau souterraines (données 2012-2018)



Assessment of the current situation
against the objectives

⇒ Basis for drawing up the SDAGE and
the monitoring programme

Data produced

- **Thousands of data points are generated each year as part of the**
 - **ESU: in 2025, nearly 1 million chemical, physico-chemical and biological data points across 215 stations**
 - **ESO: in 2025, approximately 410,000 chemical data points spread across 180 stations**
- **The Agency produces some of the data in collaboration with its partners**



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OFFICE FRANÇAIS
DE LA BIODIVERSITÉ



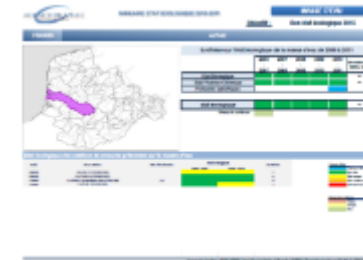
Data produced

Availability



LE SERVICE PUBLIC
D'INFORMATION SUR L'EAU

- The Agency's data is **PUBLIC**
- Available at:
 - The Agency's website under the 'Data' section
 - River basin portal
 - National databases



NAADES

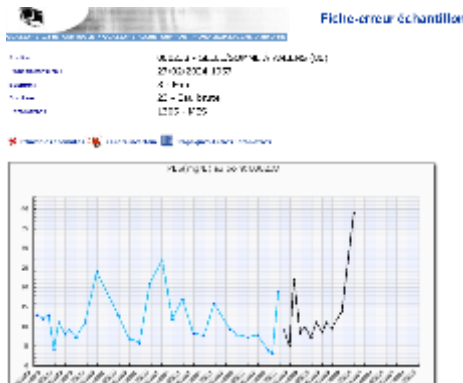
Données sur la qualité des eaux de surface



Data produced
by the Water Agency

- **Private service providers (laboratories, engineering consultancies, etc.)**
 - Selected through public procurement procedures
 - Technical requirements
 - Audits
 - Data exchange scenario
 - Data checking and validation

Kontenart	Kontennummer
1. Asset (Aktiva)	00000000000000000000
2. Liability (Passiva)	00000000000000000000
3. Equity (Eigenkapital)	00000000000000000000
4. Income Statement (GuV)	00000000000000000000
5. Balance Sheet (Bilanz)	00000000000000000000
6. Profit and Loss Statement (GuV)	00000000000000000000
7. Balance Sheet (Bilanz)	00000000000000000000
8. Profit and Loss Statement (GuV)	00000000000000000000
9. Balance Sheet (Bilanz)	00000000000000000000
10. Profit and Loss Statement (GuV)	00000000000000000000





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Water taxation

Implementing partners:



Water taxation



**12^e Programme
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Water taxation

A unique and self-sustaining economic model

Since their creation 60 years ago, the water agencies have applied the principle:



**POLLUTER
AND
WATER USER
= PAYER**

In fact, all water users pay a levy calculated on the basis of the volumes abstracted from natural environments, consumption levels and pollutant discharges.

These charges constitute the main source of revenue for the agency's water, more than 90 per cent of which is used for water-related initiatives...

Water pays for water!

A collaborative model



Charge rates and subsidy levels are discussed and voted on locally by the river basin committee.

The reform of water charges was the subject of two years of consultation with representatives of elected officials and water users.

Key legislation

The 1964 Act

- established the river basin financial agencies
- introduces charges payable by public and private bodies whose activities render the agency's intervention necessary or useful

2004 Environment Charter:

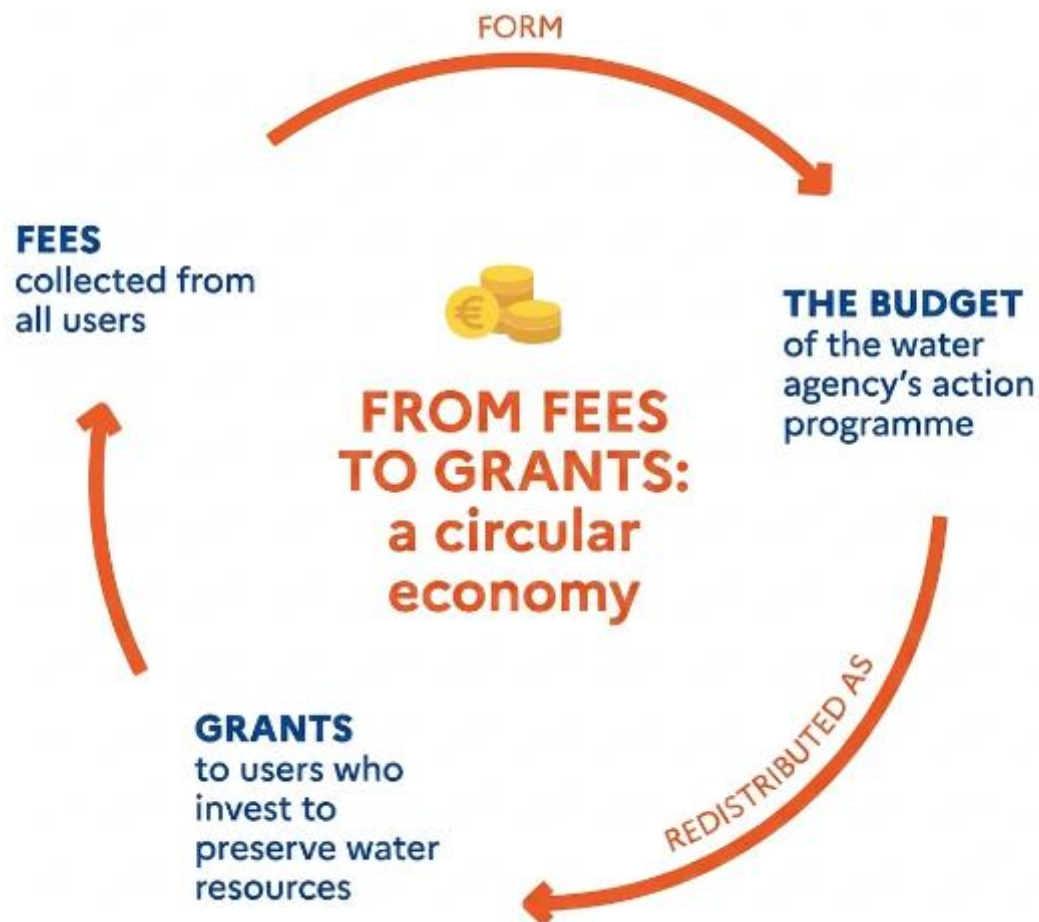
- recognises the fundamental duties relating to environmental protection
- sets out the principles of prevention, precaution and the polluter pays principle

The 2006 Act on Water and Aquatic Environments (LEMA):

- reforms the system of charges levied by water agencies
- introduces seven charges, which serve as tools to promote the principles of prevention and remediation of environmental damage
- sets the maximum rates for each charge and the thresholds for collection
- Sets out the general terms and conditions for the charges – further details are provided by the numerous implementing regulations

A royalty that is reinvested

Across the regions



Tax revenue is pooled and then reinvested, in line with the programme's priorities, in initiatives to conserve water.

Water agency charges

Local authorities

The water abstraction charge

The drinking water consumption charge

The charge for the performance of drinking water networks

The charge for the performance of collective sewerage systems

Businesses

The charge for water abstraction

The drinking water consumption charge

The non-domestic water pollution charge

Farmers

The water abstraction charge

Livestock pollution charge

The diffuse pollution charge

Other

The charge for the protection of the aquatic environment

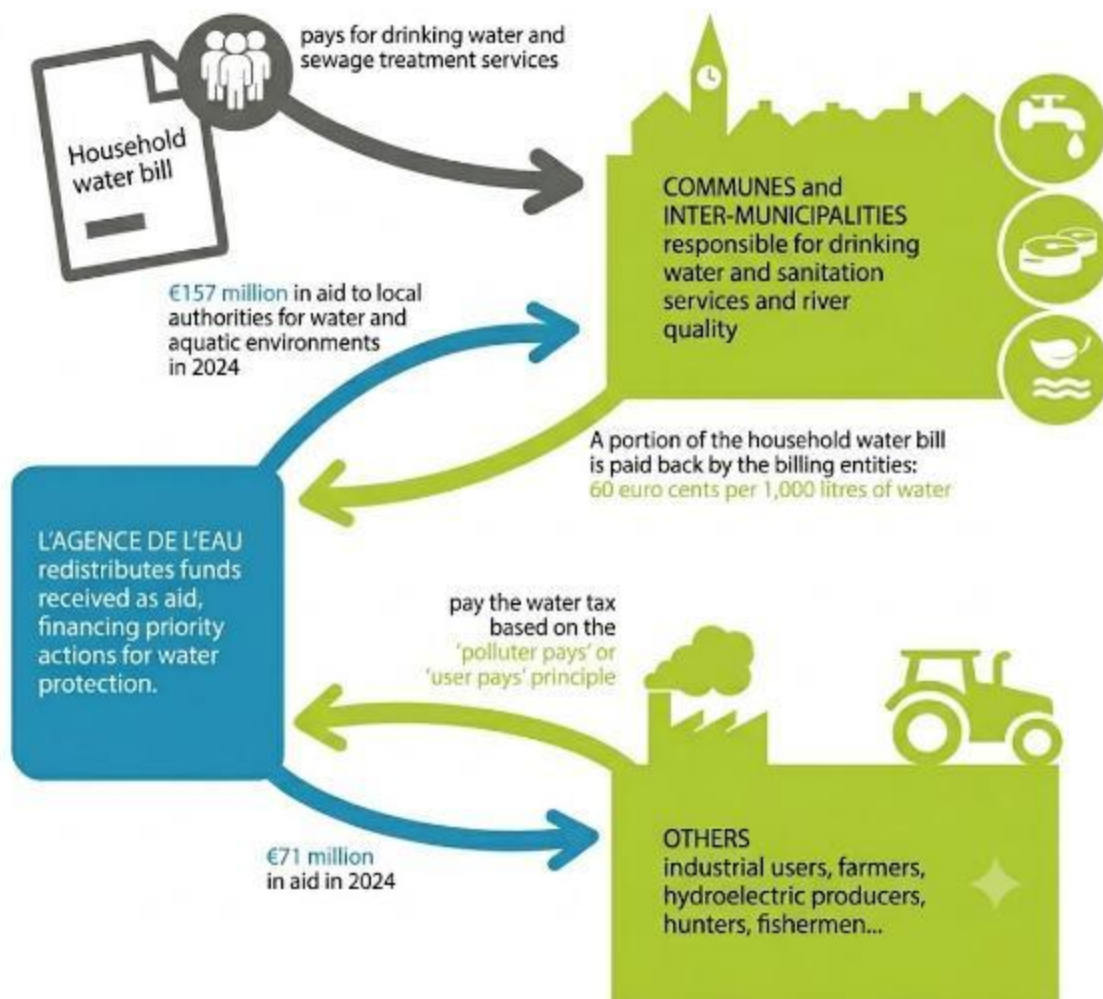
The hunting licence fee

The charge for storage during low-water periods

The charge for diffuse pollution

For the Artois-Picardy catchment area

In the Artois-Picardie catchment



DID YOU KNOW?

The average price of water in the Artois-Picardie basin is **€5.31 incl. VAT/m³**. For a household consuming \$120 m³ per year*, this represents an expenditure of around €468 €468 per year.

The components of the water price are:

- The **drinking water distribution service** (standing charge, consumption);
- The **wastewater collection and treatment service** (sewerage);
- **Water agency levies**, which represent an average of 11% of the total water bill;
- **Contributions to public bodies** (Voies Navigables de France...) averaging €0.005 per m³ across the basin;
- **Value Added Tax (VAT)** of 5.5% on drinking water and 10% on sanitation.

** average volume of water consumed by a household (two adults and two children) over the course of a year in the Artois-Picardie basin in 2024*

Artois-Picardy catchment area – 2024 figures

SECURING ROYALTY REVENUES



Figures

3 402

Fee declaration forms
(excluding fees for diffuse
pollution)

95,3 %

Utilisation rate of the online
online fee declaration
process (excluding diffuse
pollution) against
an objective target of 93 %

**More than
338 M€**

Total amount collected,
taking into account revenue
from the fee for diffuse
pollution, **whose management
is ensured by the Artois-
Picardie Water Agency
on behalf of the 6 agencies**

For the Artois-Picardy catchment area

revenues / levies

Who pays what to the water agency for 100€ of levies in 2024?
(values resulting from a percentage per 100€) - source Artois-Picardie Water Agency



0.30 €
of pollution levy
paid by the
farmers
concerned



6.80 €
of pollution levy
paid by industrialists
(including collection
networks) and the
economic activities
concomitant



65.27 €
of domestic pollution levy
paid by subscribers
including collection networks



13.58 € of diffuse
pollution levy
paid by distributors
of phytosanitary
products and
reflected in
product prices



100 €
of levies issued
by the water agency
in 2024



0.24 € of levy for the protection
of the aquatic environment
paid by fishermen



2.00 € of hunting levy
paid by hunters



1.10 €
of abstraction
levy
paid by irrigators



2.30 €
of abstraction
levy
paid by economic
activities



8.41 €
of abstraction levy
paid by local authorities
for water supply

For the Artois-Picardy catchment area

Interventions / Funding

How is funding for the protection of water resources distributed for every 100 € of funding in 2024?* (values resulting from a percentage per 100 € of funding in 2024) • source Artois-Picardie Water Agency.



8.73 €
to economic operators
for industrial depollution



44.41 €
to local authorities for
wastewater treatment and
rainwater management



6,97 €
for combatting
diffuse pollution and
protecting
catchments

100 €
of funding granted
by the agency in 2024
(excluding green fund and fight against leaks)



0,68 €
to rural and urban local
authorities for improving
the quality of the drinking
water service



11,96 €
for quantitative
management and
water savings



13,69 €
aux collectivités
pour the preservation
of the quality et la
richesse des milieux
aquatiques



13,56 €
for the animation of water
policies, raising awareness of
water issues, and
international solidarity
(including OFB contribution)

*Calculation based on the 256.94 million € of funding paid out in 2024, including funding and the OFB contribution, but excluding state allocations under the green fund and the fight against leaks.

Water agency charges



**More than just a
tax – a tool for
action**

By raising awareness and encouraging behavioural change, these charges do more than simply fund the 12^e intervention programme.

They are also a powerful tool for the conservation water resources and aquatic environments.

Sources: some of the slides presented come from the AERMC – many thanks to them



Funded by
the European Union

EU4GREEN
RECOVERY
EAST

Pogramme of measures (action programme)

Implementing partners:



The 2025–2030 Action Programme



**12^e Programme
d'intervention**

2025-2030

Ensemble, préservons l'eau
pour l'avenir durable de nos territoires

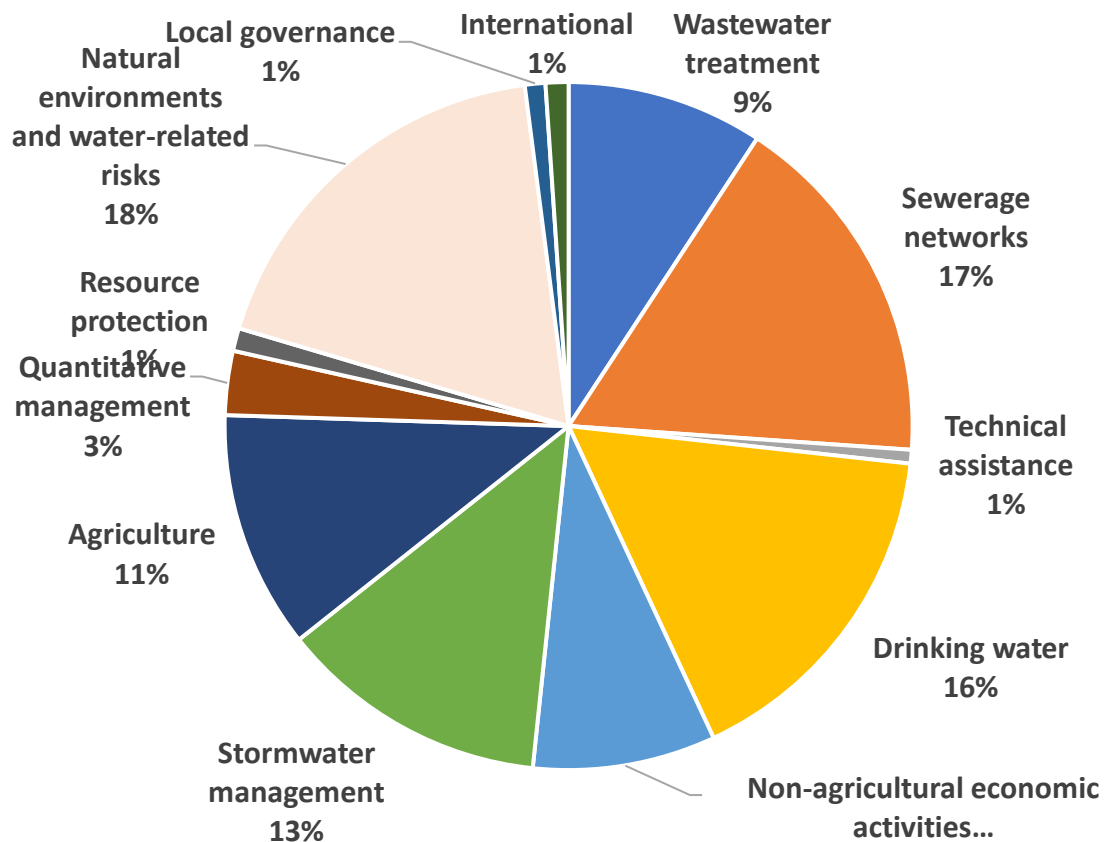


An ambitious action programme

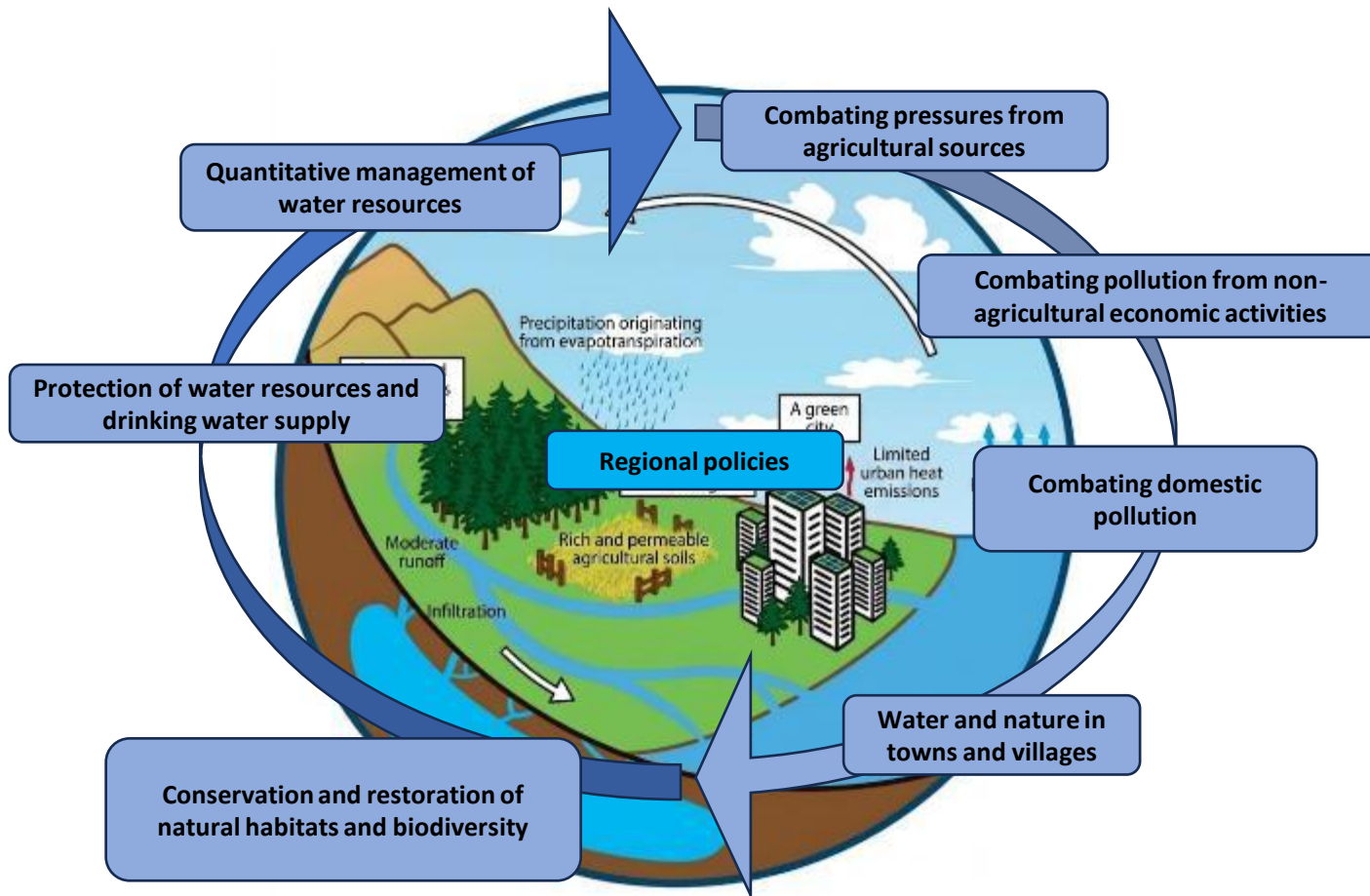
€1.249 billion over 2025–2030:

- €105 million (8%) for the institution's running costs
(staff, premises, IT, etc.)
- €46 million (4%) for expenditure related to the Agency's remit in the areas of knowledge, monitoring, planning, communication, consultation, tax audits, etc.
- €931 million (75%) in aid in the form of investment or operating grants for projects eligible under the intervention programme, plus €200 million in aid in the form of a repayable advance (a zero-interest loan over 20 years with a one-year grace period)
- €167 million (13%) paid to the French Office for Biodiversity to fund its budget

Breakdown of funding by theme



The programme's deliberations cover the entire water cycle



International initiatives

The 5 main challenges

- Preserving and restoring the ecological functionality of aquatic environments and wetlands
- Ensuring drinking water of satisfactory quality and quantity
- Making use of the natural functioning of ecosystems to prevent and limit the negative effects of flooding
- Protecting coastal and marine environments
- Implementing public policies consistent with water management

Small water cycle

- **Wastewater treatment plants**

- Design and construction work relating to wastewater treatment facilities
- Limiting wastewater discharges during rainy weather

- **Sewerage networks**

- Construction and extension of sewerage networks
- Upgrading of networks (dry weather and rainwater)

- **Drinking water supply**

- Securing water supplies for local areas (quality/quantity)

- **Water savings**

- Reducing leaks in the networks
- Measures to reduce water consumption in public buildings and by residents
- Making use of non-conventional water sources

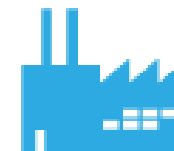


➡ to improve the physical, chemical and quantitative status of water bodies

The water cycle

- **Industries**

- Process changes and wastewater treatment to reduce pollution
- Stormwater management to limit discharges into combined sewer systems or receiving waters
- Promoting water savings



- **Stormwater management**

- Addressing the consequences of increasing soil sealing
- Prioritising integrated and sustainable stormwater management schemes : disconnecting rainwater from the networks to promote infiltration at source, particularly through nature-based solutions



- **Agriculture**

- Promote the agro-ecological transition of farms to reduce diffuse pollution (nitrates, pesticides)
- Promote more water-efficient production systems



 **to improve the physico-chemical and quantitative status of water bodies**

The water cycle: a focus on natural environments

- **A policy that supports several key priorities for the Agency**

- Restoring and maintaining watercourses
- Restoring the ecological continuity of watercourses
- Restoring and maintaining wetlands, and acquiring new ones
- Restoring and maintaining non-wetland natural habitats
- wetlands
- Combat soil erosion in rural areas
- Prevent flooding
- Removing toxic sediments



 **to improve the physico-chemical, hydromorphological and biological status of water bodies**

Key conditions

- Minimum water price required to implement sustainable asset management
- Understanding of water and sanitation assets
- Development of strategies and action plans at the appropriate geographical scale, identifying the most relevant measures to resolve problems
- Preventive measures > remedial measures
- Promotion of nature-based solutions



Funded by
the European Union

EU4GREEN
RECOVERY
EAST

Rainwater management in cities: innovative solutions

Implementing partners:





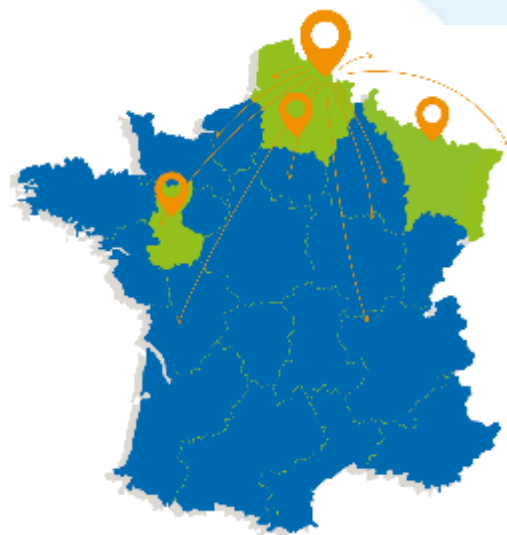
Sustainable and integrated rainwater management



L'ADOPTA est cofinancée par l'Union européenne avec le Fonds européen de développement régional (FEDER)



ADOPTA



Over 25
years'
experien
e

4 branches:
Douai, 60, 57 and
49/53



A regional, national
and international
reach

Association for the Operational
Development and Promotion of
Alternative Rainwater Management
Techniques

Over 200
members and
7 funding
partners

Programmes
Awareness-
raising
Support

OUR FACILITATION TOOLS

Training



Events (conferences, workshops, forums, etc.)



Project support



Publications



Showrooms



Videos



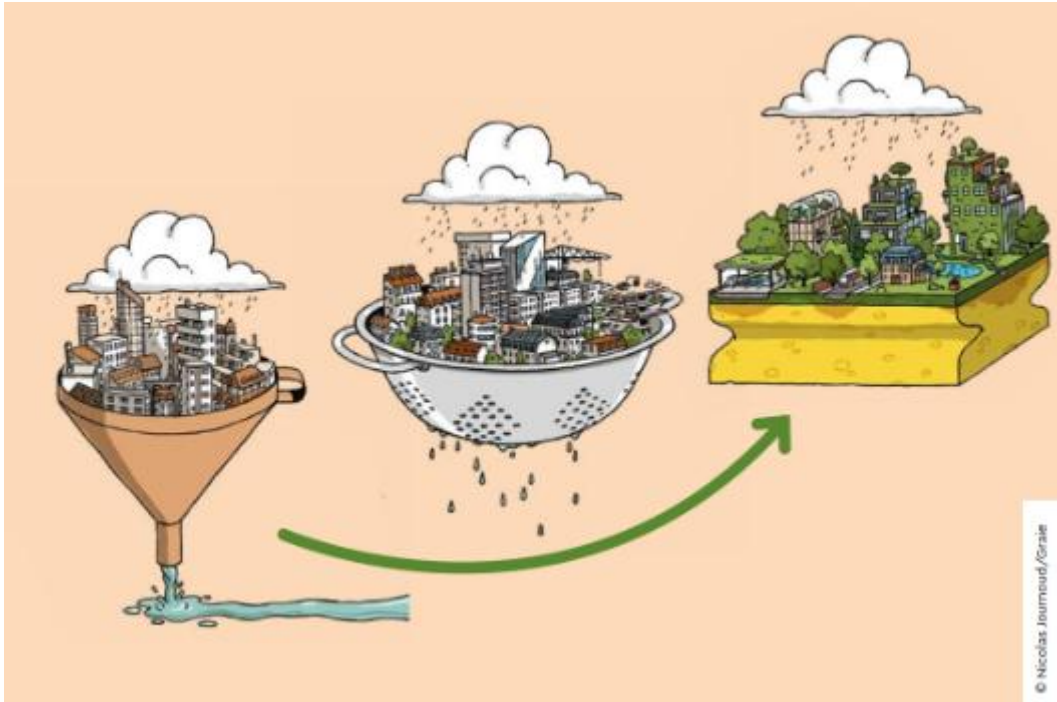
www.adopta.fr

 Association ADOPTA

 Adopta

 ADOPTA

MOVING FROM A 'FUNNEL' LANDSCAPE TO A 'SPONGE' LANDSCAPE

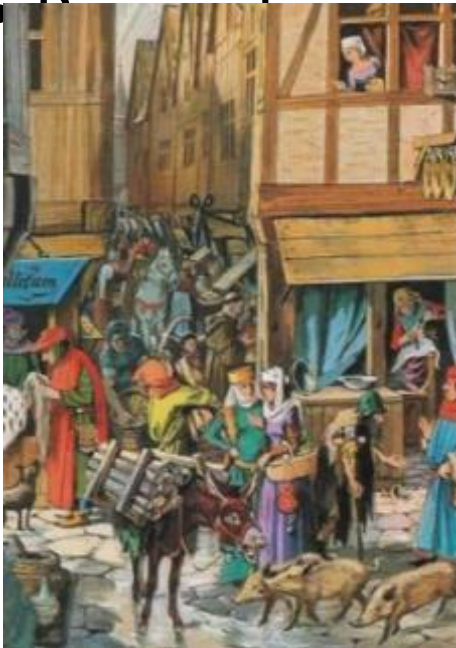


MOVING FROM A 'FUNNEL' CITY TO A



IN THE CITY

In the Middle Ages

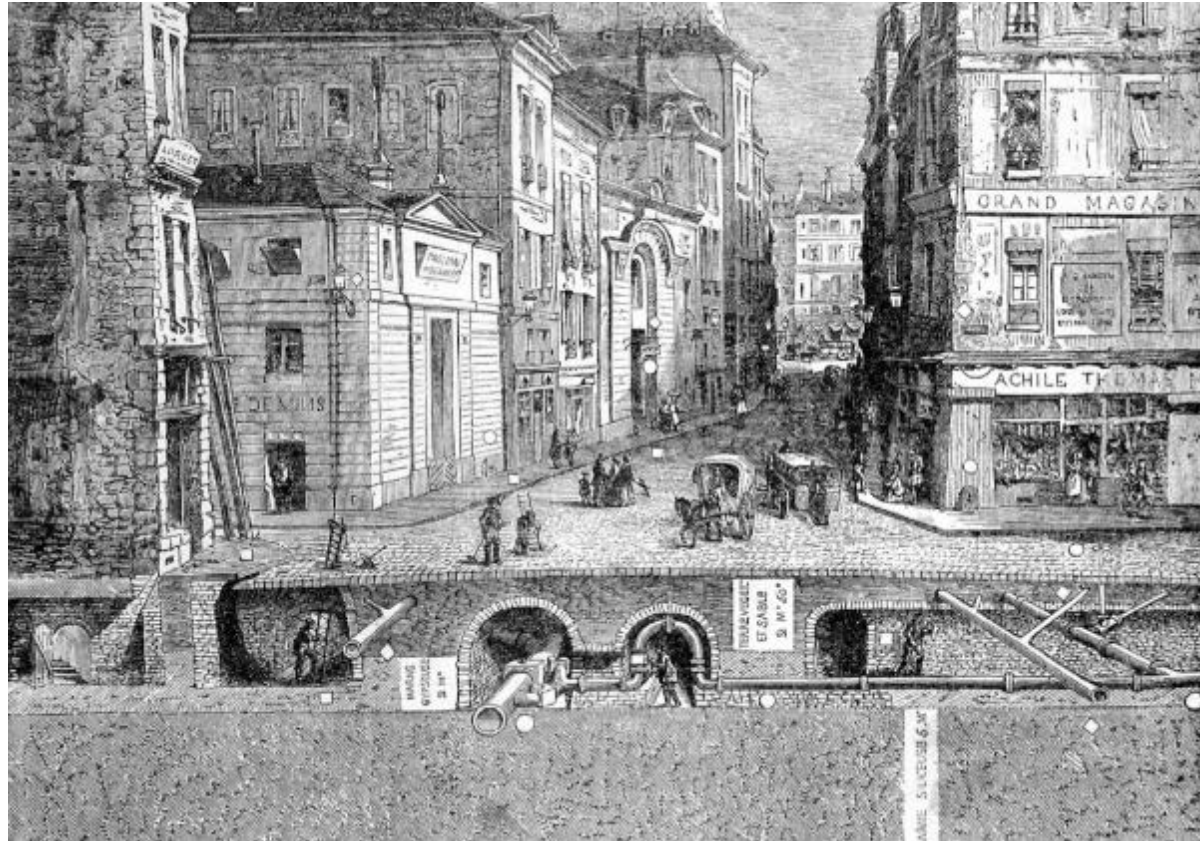


<https://www.curieuseshistoires.net/expression-tenir-haut-pave-ruelles-moyen-age/>



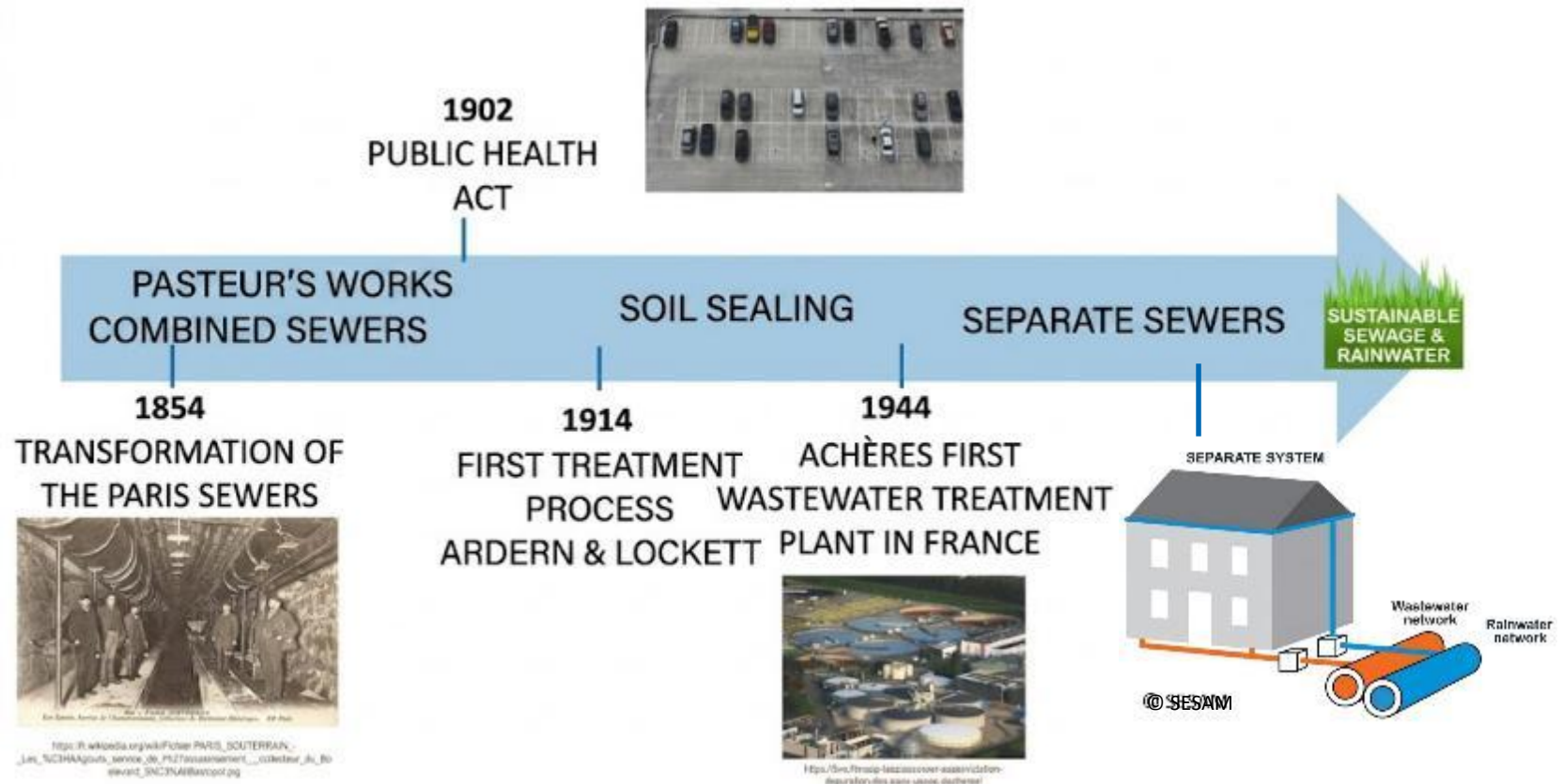
https://www.parismuseescollections.paris.fr/sites/default/files/styles/pm_diaporama/public/atoms/images/CAR/aze_carg035089_001.jpg?itok=j3ACoWkI

19TH-CENTURY HYGIENIST POLICY^{ème}



<https://www.lelivrescolaire.fr/page/31309907>

The legacy of this policy



CURRENT ISSUES

- Widespread urbanisation



Waterproofing of
surfaces



Filling in ponds



River management

CURRENT ISSUES

- Pervasive urbanisation



Land consumption for the period 2009-2021 (m²)

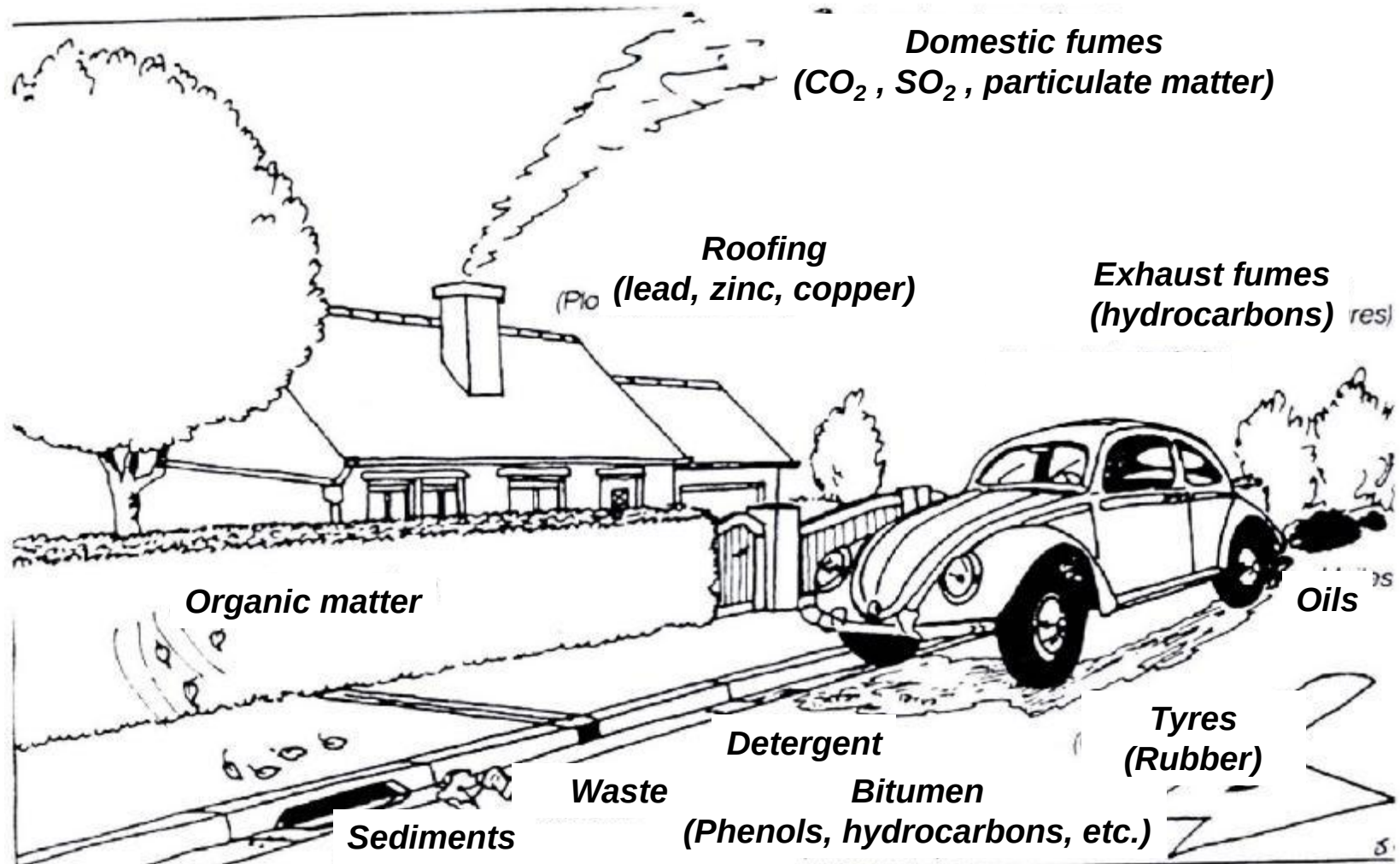
legend

- from 0 to 10 000 m² (between 0 and 1 ha)
- from 10 000 to 20 000 m² (between 1 and 2 ha)
- from 20 000 to 50 000 m² (between 2 and 5 ha)
- from 50 000 to 100 000 m² (between 5 and 10 ha)
- from 100 000 to 200 000 m² (between 10 and 20 ha)
- more than 200 000 m² (more than 20 ha)

<https://artificialisation.developpement-durable.gouv.fr/cartographie-artificialisation>

- Growth in the urban population: 23% between 1982 and 2011
- Urban areas have expanded by 42 per cent, rising from 84,000 km² to 119,000 km²

Various sources of pollution



RUTPs: WHAT VOLUMES DO THEY REPRESENT?

« Urban Discharges during Wet Weather »

on a day of heavy rainfall :

- by volume 2 to 10 times more than wastewater
- by pollution 10 times the discharges of wastewater treatment plants

□ **RUDW = □ 365 days of WWTP discharges**

**responsible for the reclassification
of most watercourses**

Issues and principles of GDIEP

Lille (59), 2008



Raimbeaucourt (59), 2021



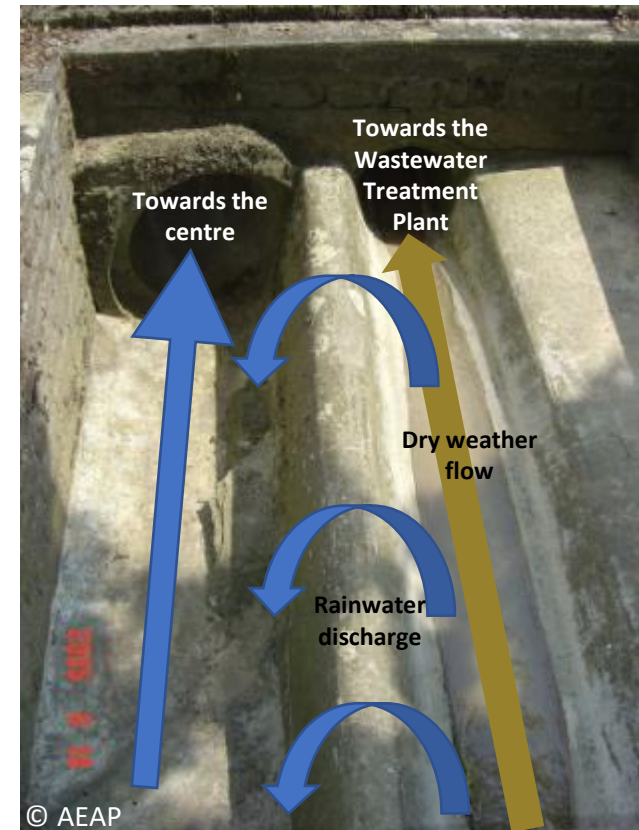
© Municipality of Raimbeaucourt

Lompret (59), 2023



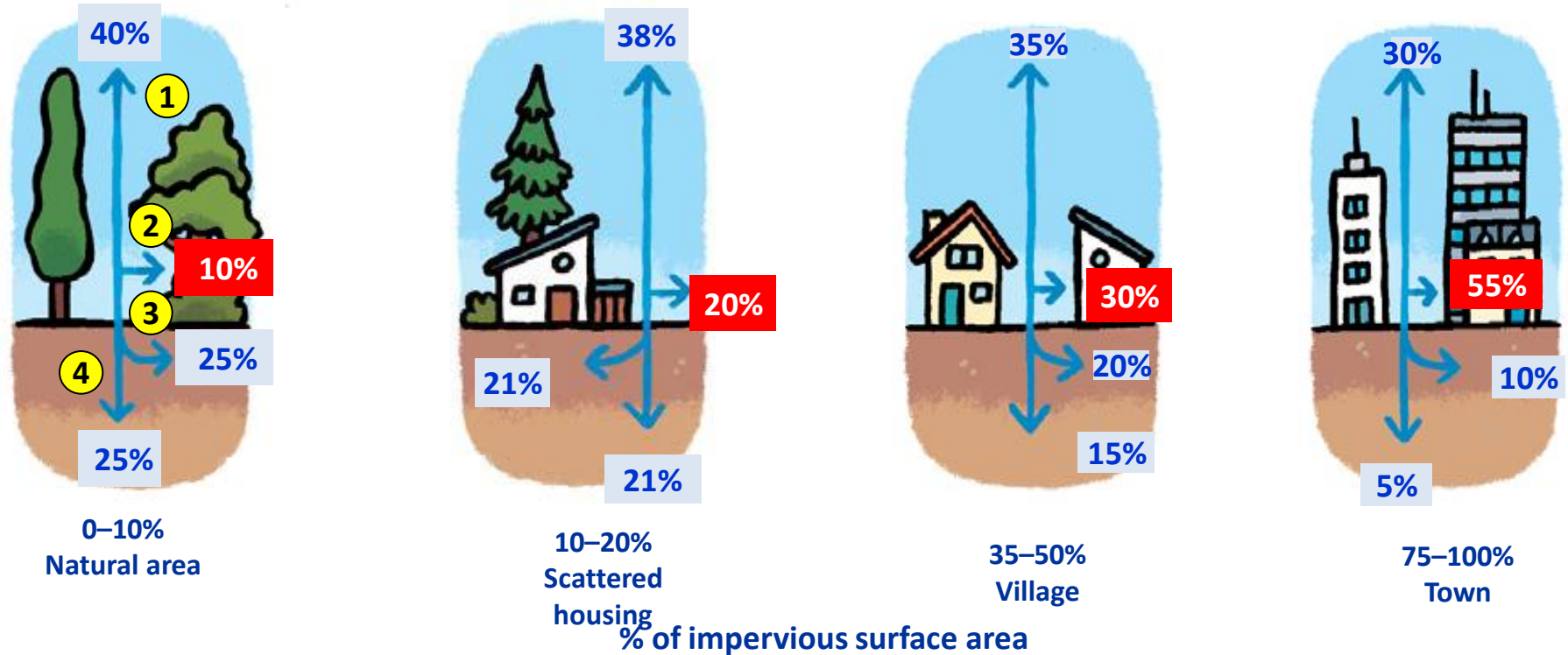
© France Bleu

Rainwater overflow:





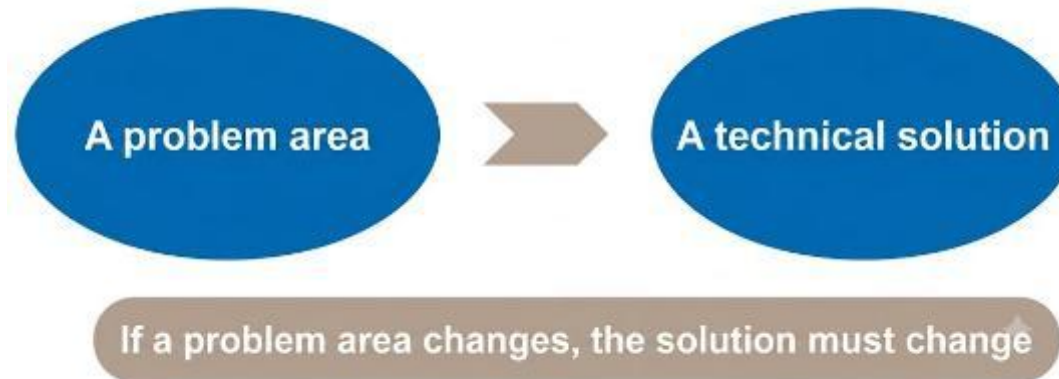
Issues and principles of GDIEP



- ① Evapotranspiration
- ② **Runoff**
- ③ Surface infiltration
- ④ **Deep infiltration**

Source: Greater Lyon

Issues and principles of GDIEP



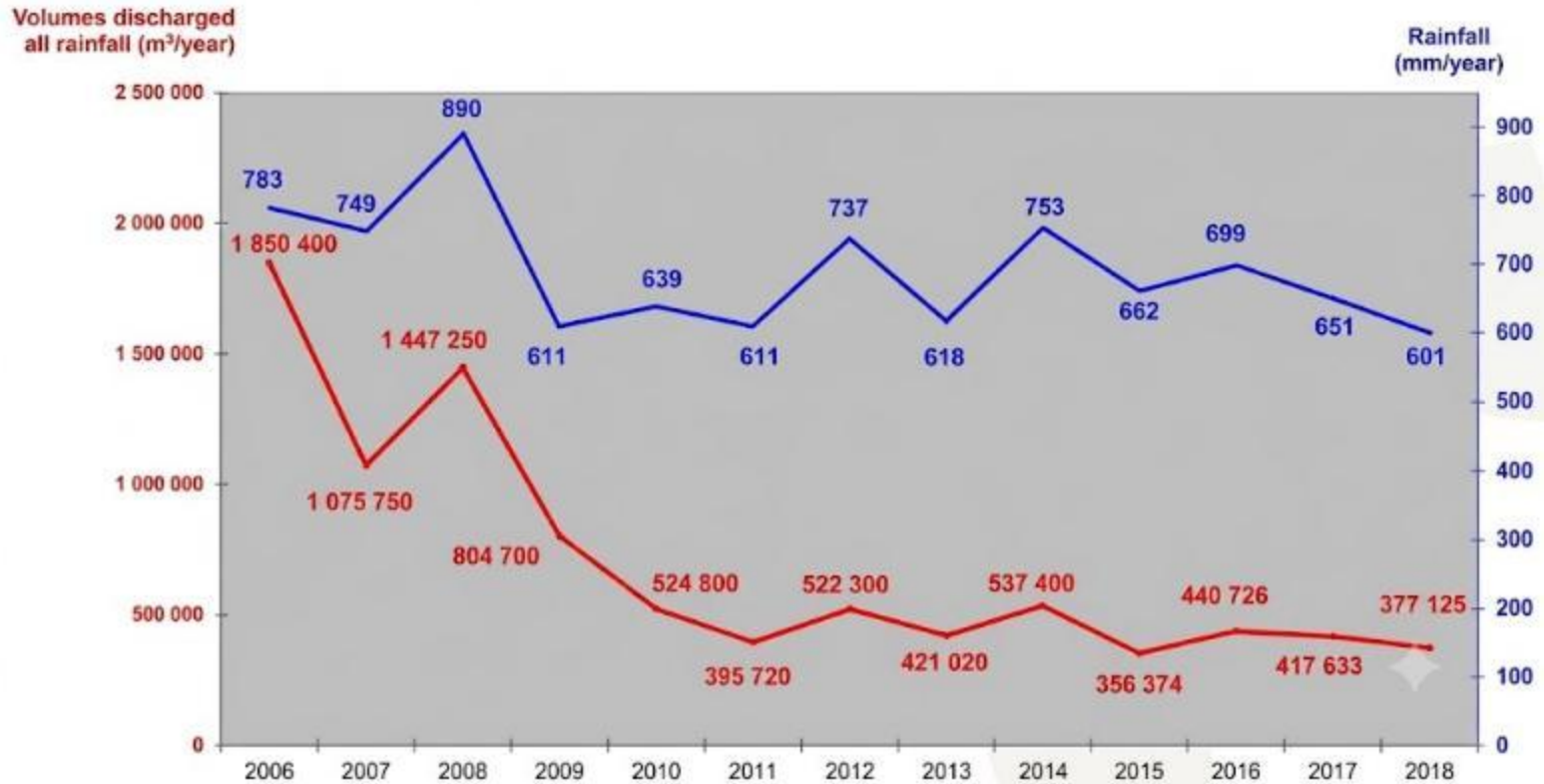
This is the case here:

Networks are becoming overloaded, watercourses are polluted despite wastewater treatment, and biodiversity is severely affected.

→ Policy **change**

We are no longer able to manage water once it is in the network, so we are ensuring that it no longer enters it.

THE CHALLENGES FACING THE GDIEP



Trends in UT spills in Douai

Source: Douaisis Agglo

Issues and principles of GDIEP

- Key principles



ALLOWING TIME TO MANAGE WATER



BUT OF COURSE! IF THE WATER FALLING IN MY GARDEN SOAKS IN, WHY CAN'T I LET THE WATER FALLING ON ROOFS AND ROADS SOAK IN TOO?

Issues and principles of Integrated Sustainable Stormwater Management

5 good reasons to adopt sustainable and integrated Rainwater management



**COMBATING
FLOODING**



**IMPROVING THE QUALITY
OF RIVERS**



**ADAPTING TO
CLIMATE CHANGE**



**CONTROLLING
COSTS**



**REINTRODUCING
NATURE INTO THE CITY**

Issues and principles of GDIEP

Water & the City / The Permeable City



Illustrations by Nicolas Journoud, for Méli Mélo ©Graie

SUSTAINABLE AND INTEGRATED RAIN WATER MANAGEMENT

MANY BENEFITS

Reduction in discharge
volumes

Recharge of groundwater
aquifers

Soil hydration
Soil purification
capacity

Mitigation of urban heat
islands

Increased biodiversity

Creation of ecological
corridors

Improvement of the living
environment

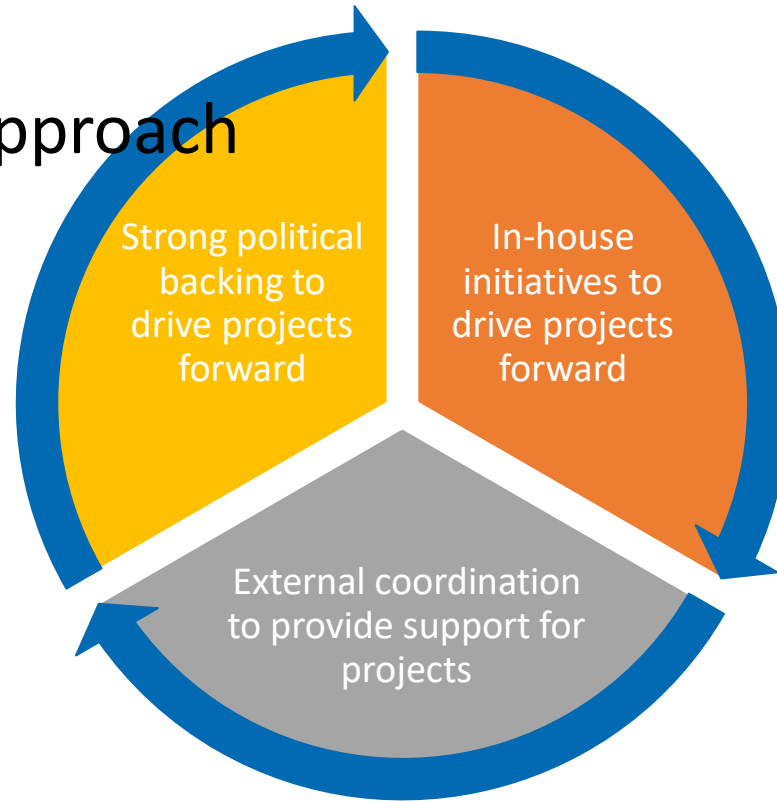
Cost savings



© AERM

Requirements for success

- A three-part approach



Conditions for success

- A culture of cross-functional collaboration



- ☐ Compare different scenarios (**cost/hydraulic efficiency/maintenance – dual function – integration into the landscape**),
- ☐ Understand the regulations,
- ☐ Limit impervious surfaces (porous materials, vegetation, etc.),
- ☐ Prioritise discharge options: **storage + infiltration or storage + delayed flow**
- ☐ Adopt a holistic approach,
- ☐ Use a multidisciplinary project management team,
- ☐ consider future management,
- ☐ do not forget to communicate (**local residents/technical services/service providers**),
- ☐ consider the consequences in the event of malfunctions,

Conditions for success

- Plan and manage as early as possible
 - Manage as close as possible to the point of delivery
 - Integration into the project as early as possible
 - No specific structures required to manage stormwater:
 - Plan for stormwater management at the project stage
 - Give the space a second fonction
 - A road network also becomes a stormwater management system
 - Landscaping can serve as a swale or a floodplain
- **CONDITIONS:** Working in project mode and fostering cross-functional collaboration



A holistic approach to the localisation of stormwater management



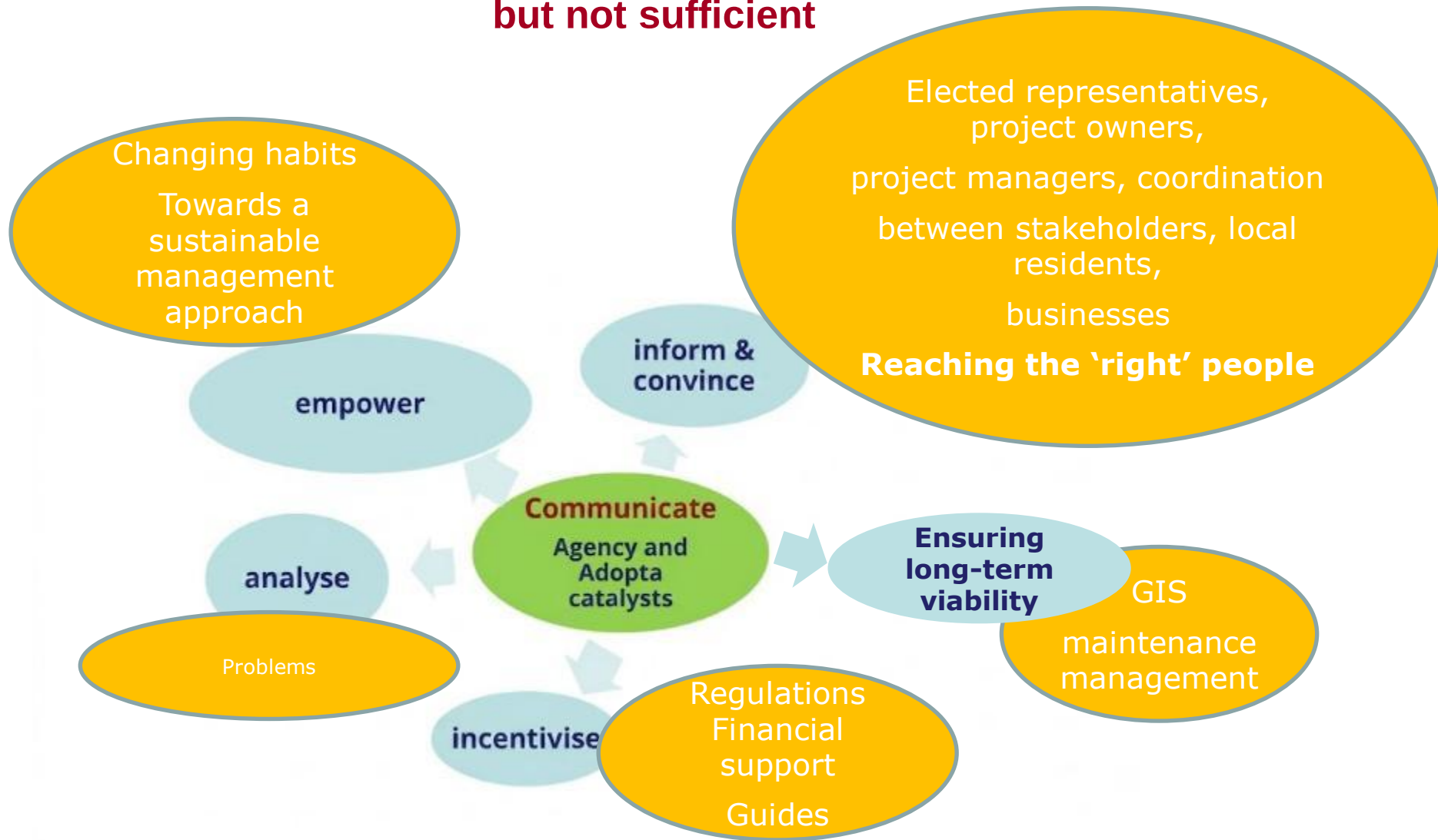
The SDAGE of the Artois-Picardie Basin 2016-2021 :

- ✓ *Document for the application of the W.F.D. – 23rd October 2000*
- ✓ *Applicable 2016-2021*
- ✓ *Defines the orientations and ambitions for the Artois-Picardie Basin in the field of water*
- ✓ *Approved by prefectural decree*

Objectives :

- **non-deterioration** of the quality of waters
- **achievement of good ecological status** of the masses of water in **2021-2026**
- suppression or reduction of discharges of substances according to their nocivity
- ...

Regulations, the toolkit and financial support: necessary but not sufficient



Technical answers

'Remedial' solutions



'Integrated management' approach



Do not pit them against each other or separate them

Different timeframes

THE 'TOOLKIT' FOR SUSTAINABLE AND INTEGRATED RAINWATER MANAGEMENT

