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ADOUR-GARONNE

ETABLISSEMENT PUBLIC DU MINISTERE
DU DEVELOPPEMENT DURABLE

Specific issues and challenges regarding the development of River Basin Management Plans in the EU: Example of a french basin: Adour Garonne

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Deputy Director General
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Outline

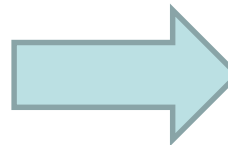
- 1-Institutional Frame work
of Water policy**
- 2-What is a Water agency ?**
- 3-River basin characterisation**
- 4-Monitoring and status assessment**
- 5-How to set environmental
objectives?**
- 6-Programme of measures**
- 7- Main findings**



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INSTITUTIONAL FRAME WORK OF WATER POLICY



Key dates

3 laws to reconcile economic development and ensure quality/quantity of water including ecosystems:

- 1964
- 1992

=> 2000 EU-Water Framework Directive

- 2006

French water policy principles

- ✓ A global integrated approach :
- ✓ At catchment area level : the « basin »
- ✓ Decentralized management and local decision-making
- ✓ Involvement of the population
- ✓ Water is free but water service has to be paid by the users





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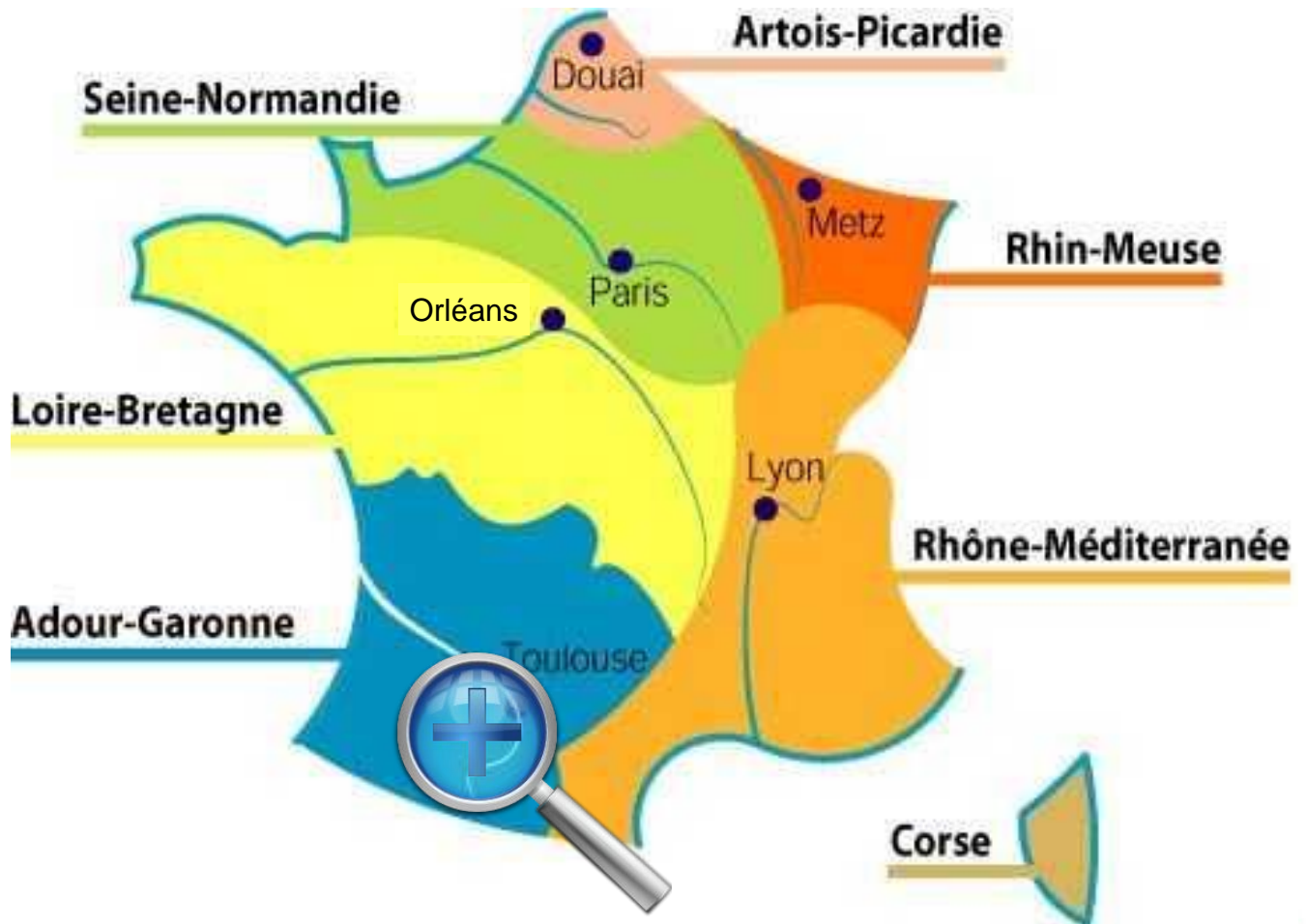
WHAT IS A WATER AGENCY ?



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6 water agencies



Since
1964!

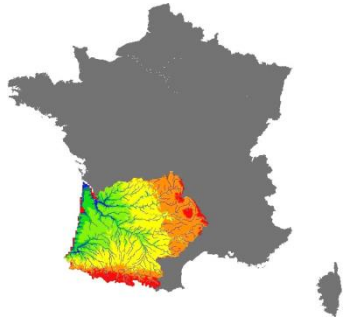
50 years
old



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What is a water agency?



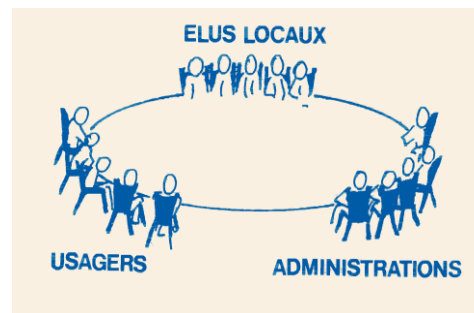
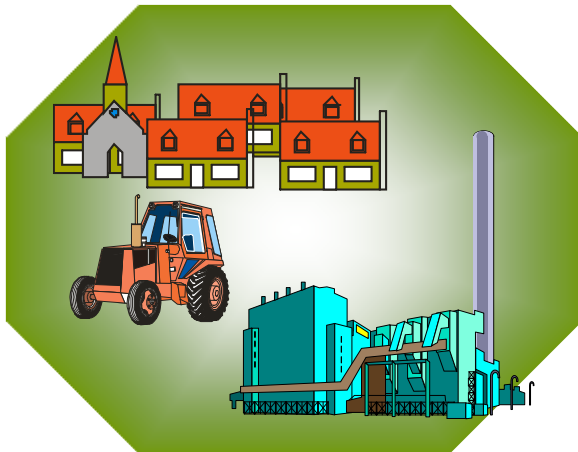
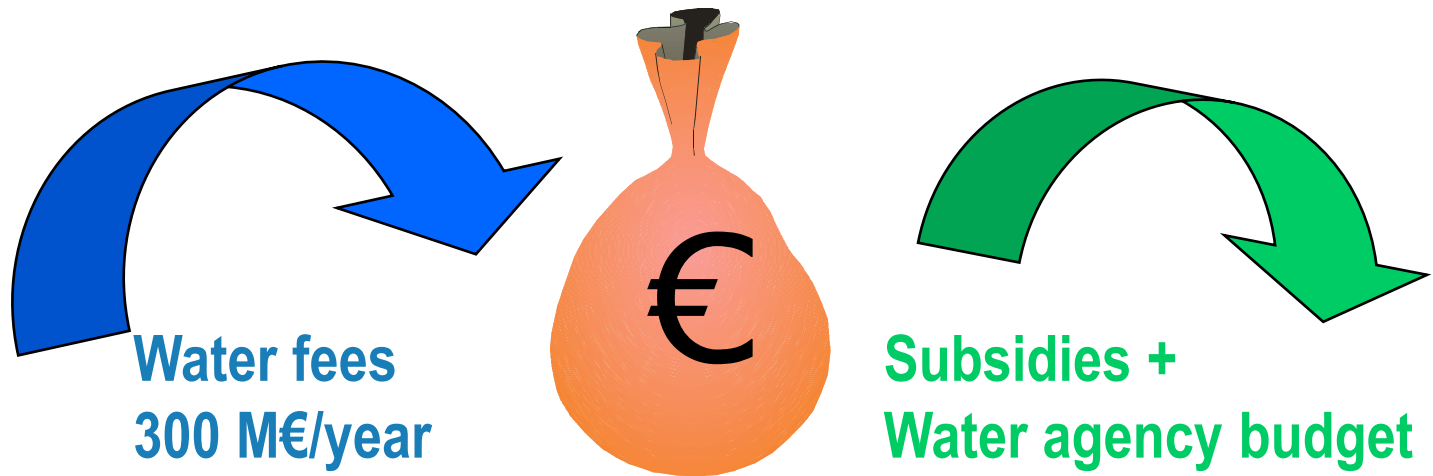
- A local public organisation
- Collect fees on water uses and Finance water protection and management measures in order to ensure all water use;
- Provide knowledge and data on water
- Financial autonomy
- No police power
- 50 years'old (1964)
- 256 staff in Adour Garonne (5 spots)



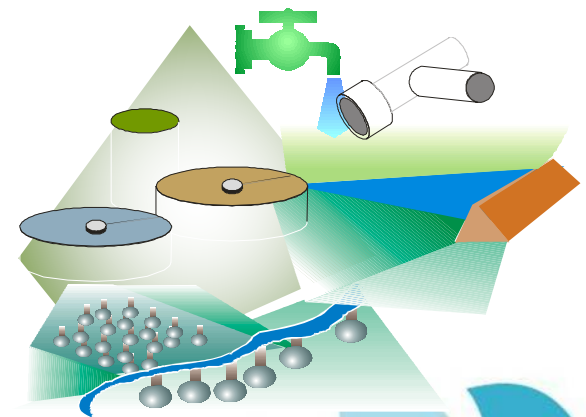
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An autonomous fund based on the « polluter-pays » principle



Water agency board





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The river basin committee

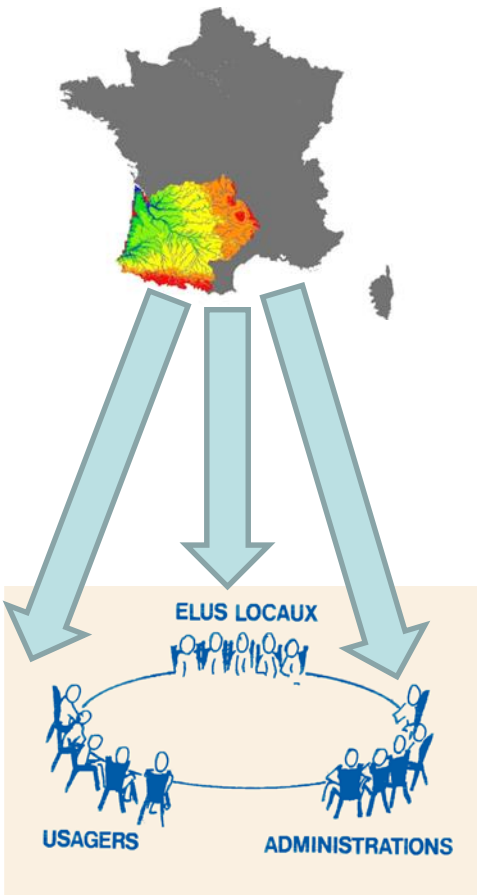
Main stakeholders

54 elected officials (local authorities - 40%)

54 water users (40%)

27 State (20%)

- Appoint the representatives of the water agency board
- Approve the main lines of the Water agency 6-year programme
- a place to discuss on water issues
- Elaborate the 6 year **Basin Water Management Master Plan**





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ADOUR GARONNE RIVER BASIN CHARACTERISATION



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Welcome in Europe

India :
3.29 M km²
313 inhab/km²

Europe :
4.32 M km²
112 inhab/km²

Adour-Garonne :
56 inhab/km²





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France & Adour Garonne basin

Adour-Garonne :

**20% of national
territory**

7 M inhabitants

**Rural and agricultural
basin**

**56 inhab/km²
(118 in France)**

2 large cities (1 Mon)

7 000 municipalities

35 cities > 20,000 inhab

**4500 villages < 500
inhab**



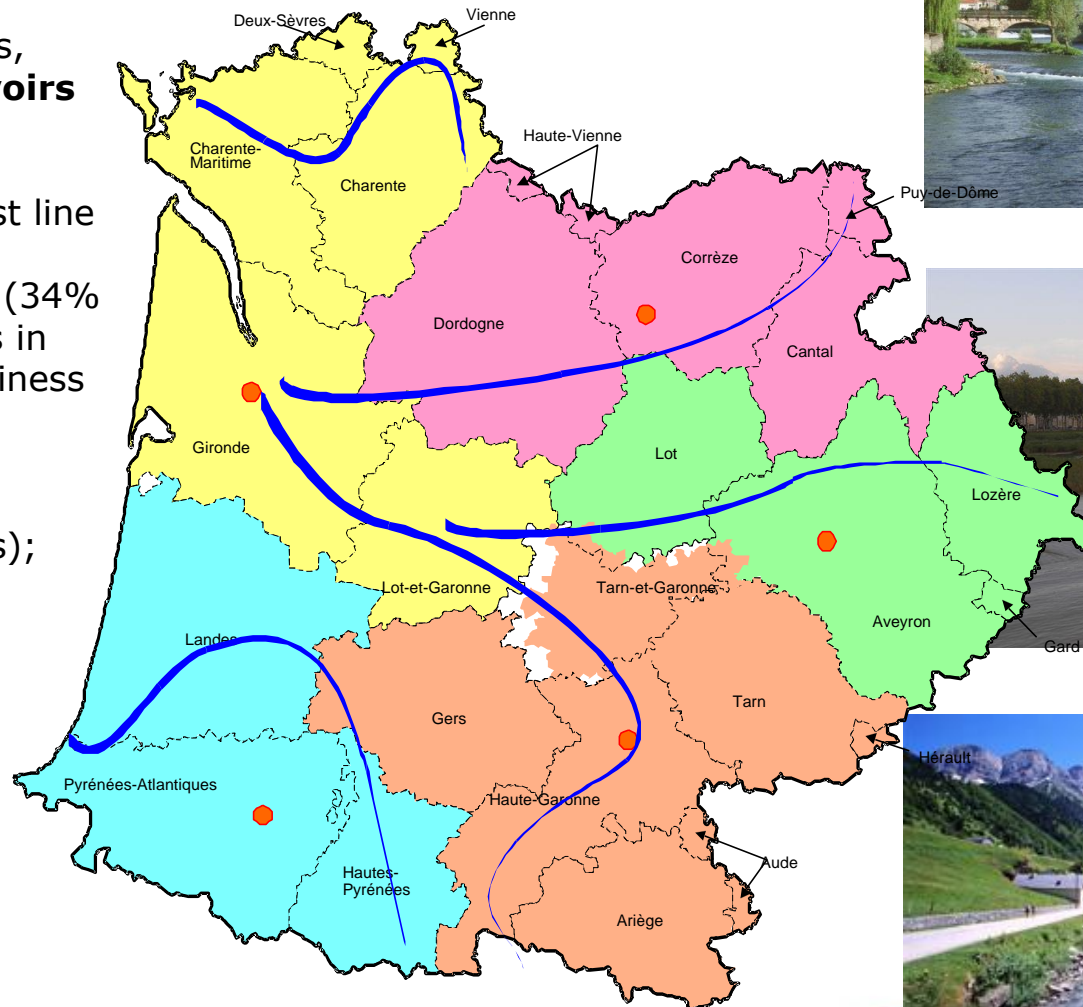


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« Adour Garonne basin »

- **120,000 km** waterways,
- Many **lakes** and **reservoirs**
- **2900 water bodies**
- **420 km** of Atlantic coast line
- **Agricultural vocation** (34% of french irrigated crops in surface) and an agribusiness industry
- **High technology industries** (aeronautics); Decline of traditional industries
- **The Hydroelectricity**
20% of national hydro-electrical energy production
- **Fish and aquatic resources**



EuroIndia Forum 3



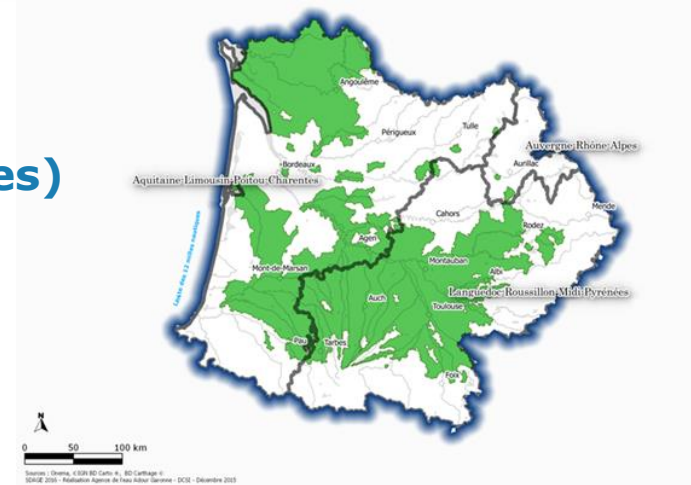
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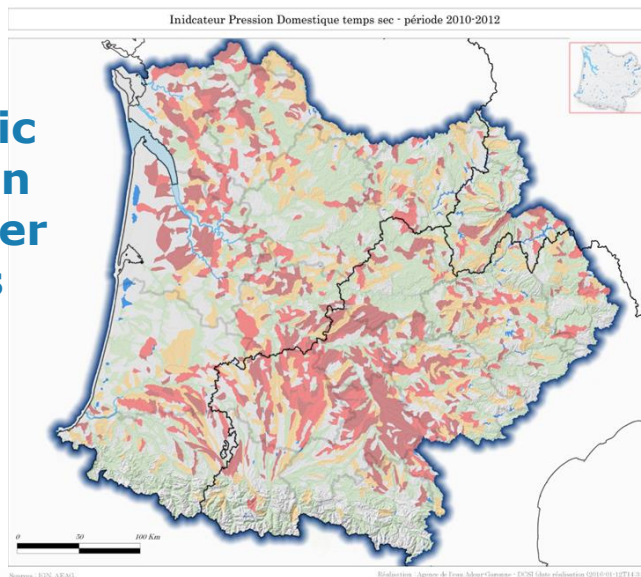
Main pressures => impacts?

Data gathered
to calculate
water fees is
used to
increase
knowledge

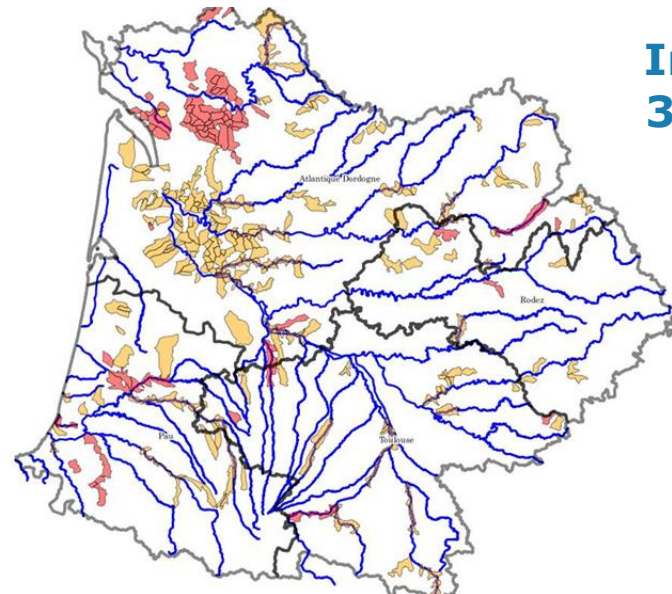
**Agricultural
(NO₃, pesticides)
1000 water
bodies.**



**Domestic
pollution
800 water
bodies**



**Industries
300 water
bodies.**





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MONITORING PROGRAMMES AND STATUS ASSESSMENT



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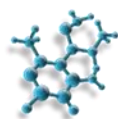
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Physico-chemistry

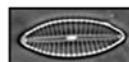


1970

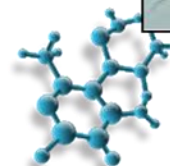
50 Parameters



1990



60 Parameters



2000



**...and
biological
indicators**

400 Parameters

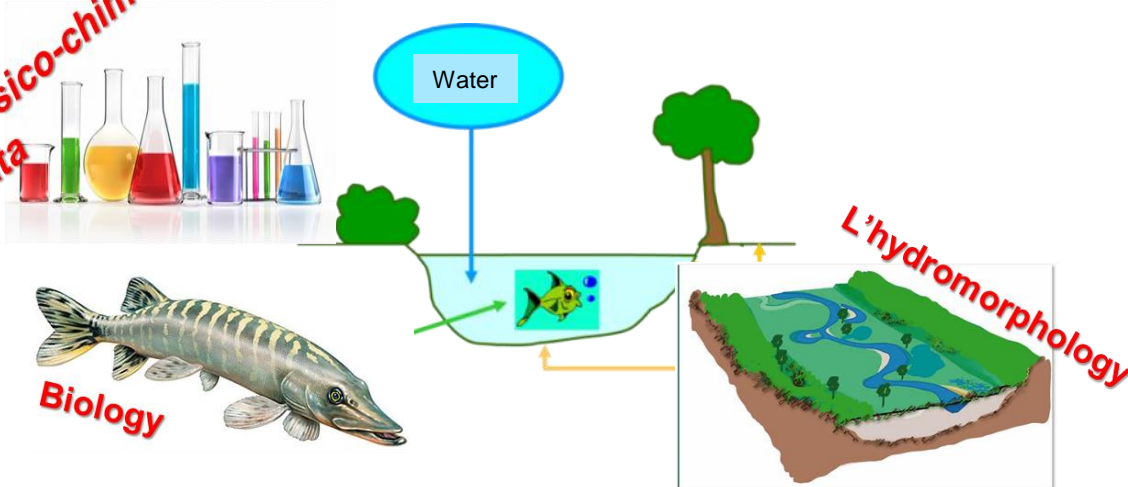


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How to assess water status?

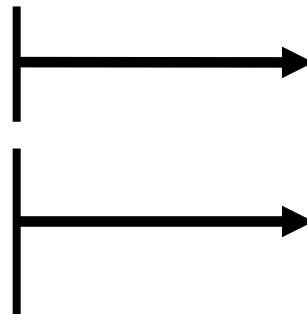
physico-chemical
data



Ecological status

Chemical
status

Blue	Very good
Green	Good
Yellow	Medium
Orange	Low
Red	Bad



← good 

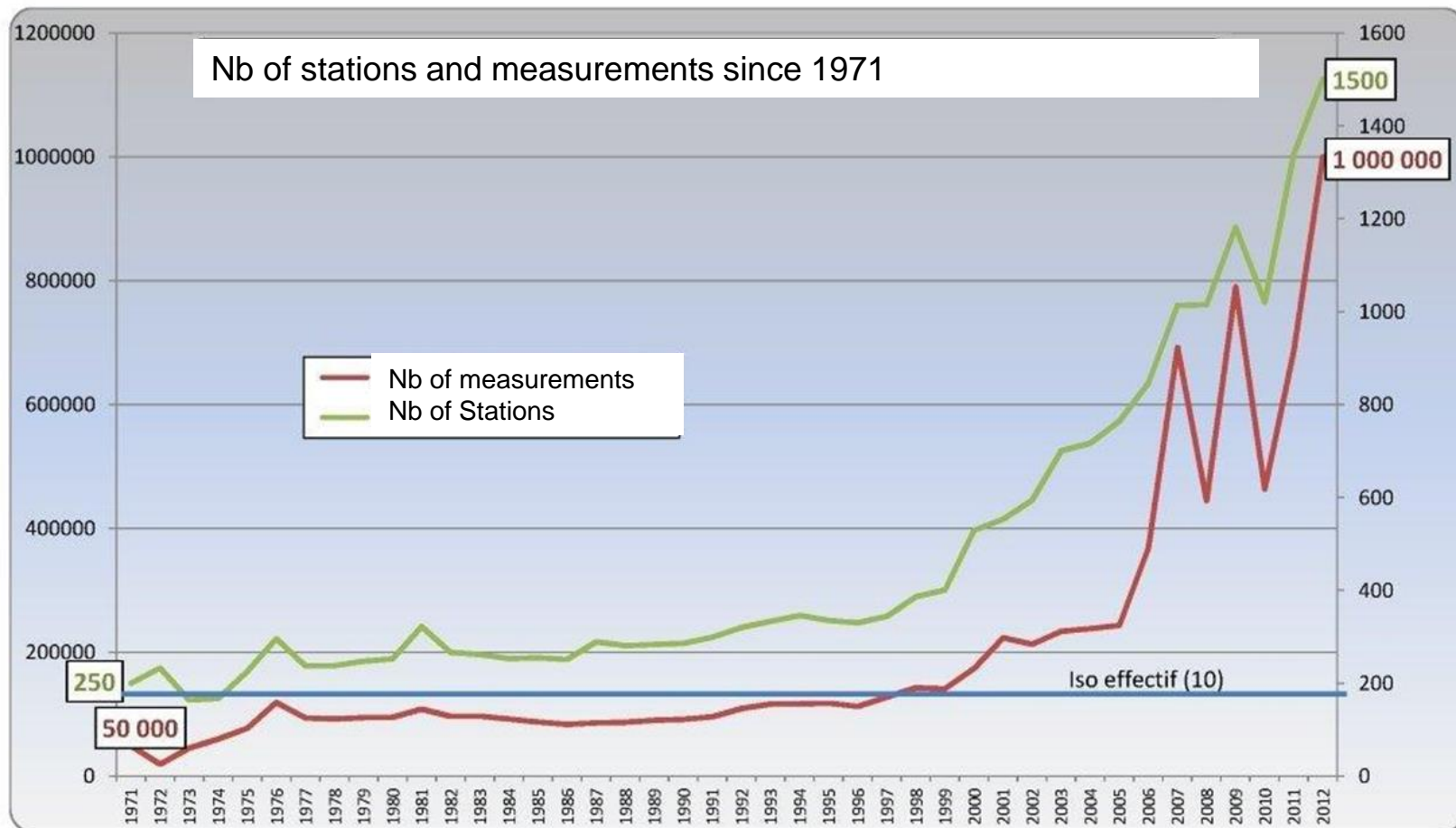
← Not good 



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An increasing demand of datas/standards





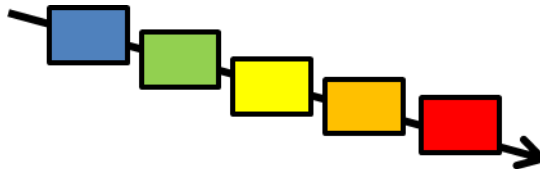
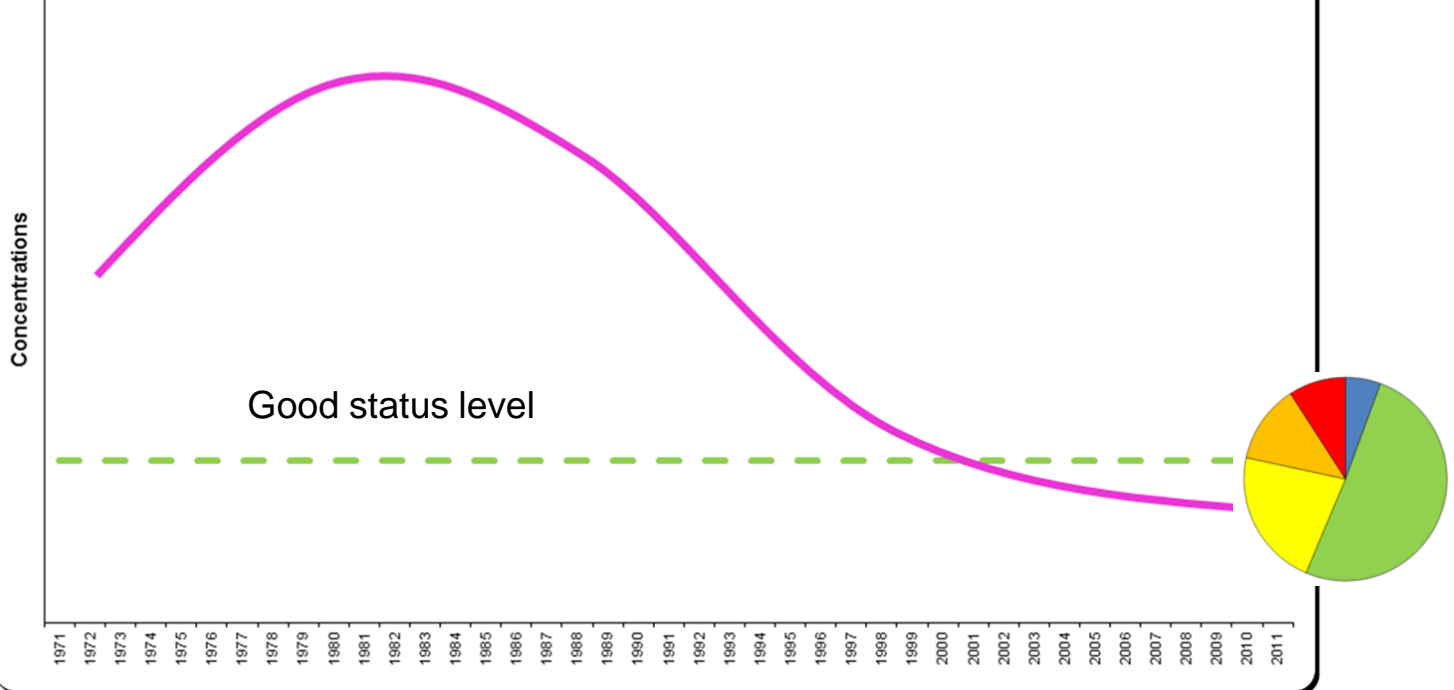
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Pollution decrease since 1971



Macropollutants





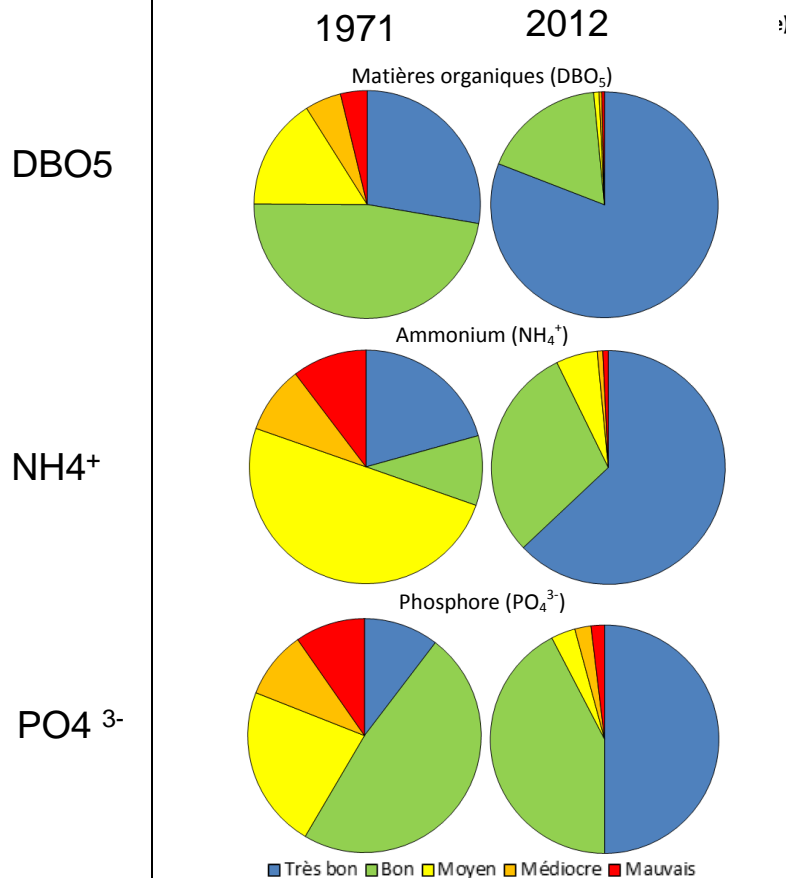
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How to measure progress with increasing standards?

A progress in chemical status

Evolution de la qualité de l'eau des rivières du bassin Adour-Garonne sur 300 stations identiques (1971/2012)



But low improvement in ecological status

- Recent measurements
- Changes in parameters
- Diffuse pollution



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HOW TO SET GOALS?



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Surface water bodies

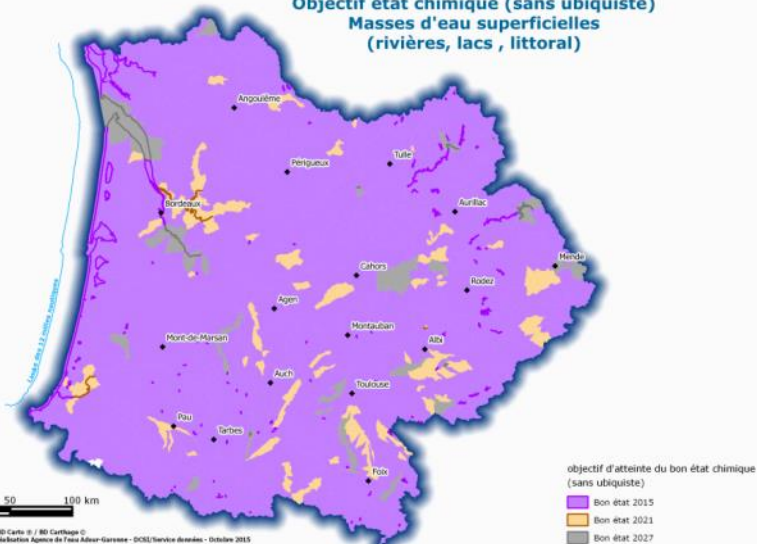
Goals:

43% of rivers in good status in 2015

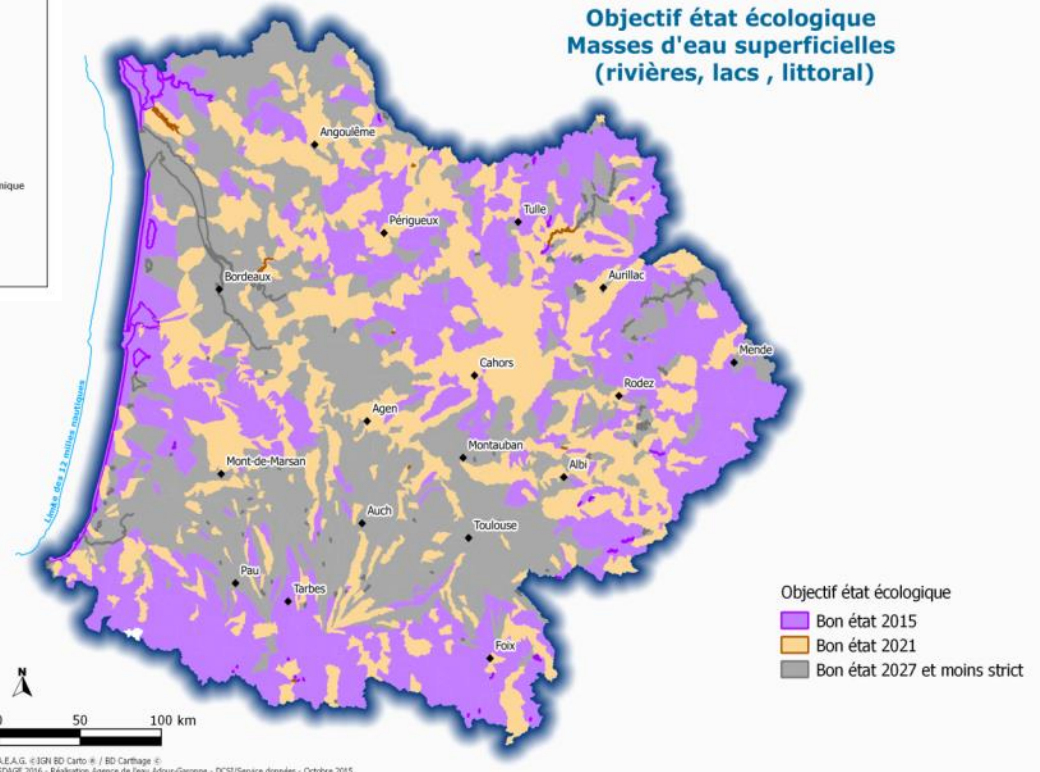
70% of rivers in good status by 2021

100% in 2027?

Objectif état chimique (sans ubiquiste)
Masses d'eau superficielles
(rivières, lacs, littoral)



Objectif état écologique
Masses d'eau superficielles
(rivières, lacs, littoral)





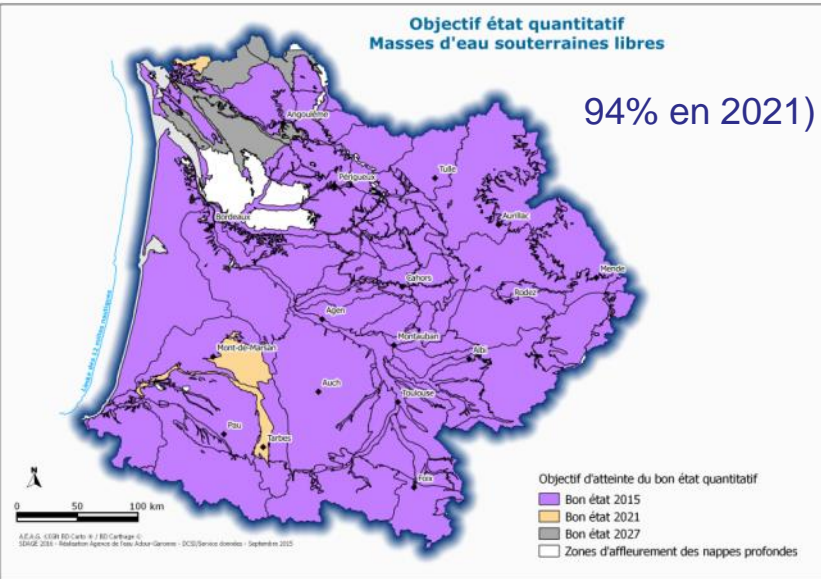
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Ground Water bodies

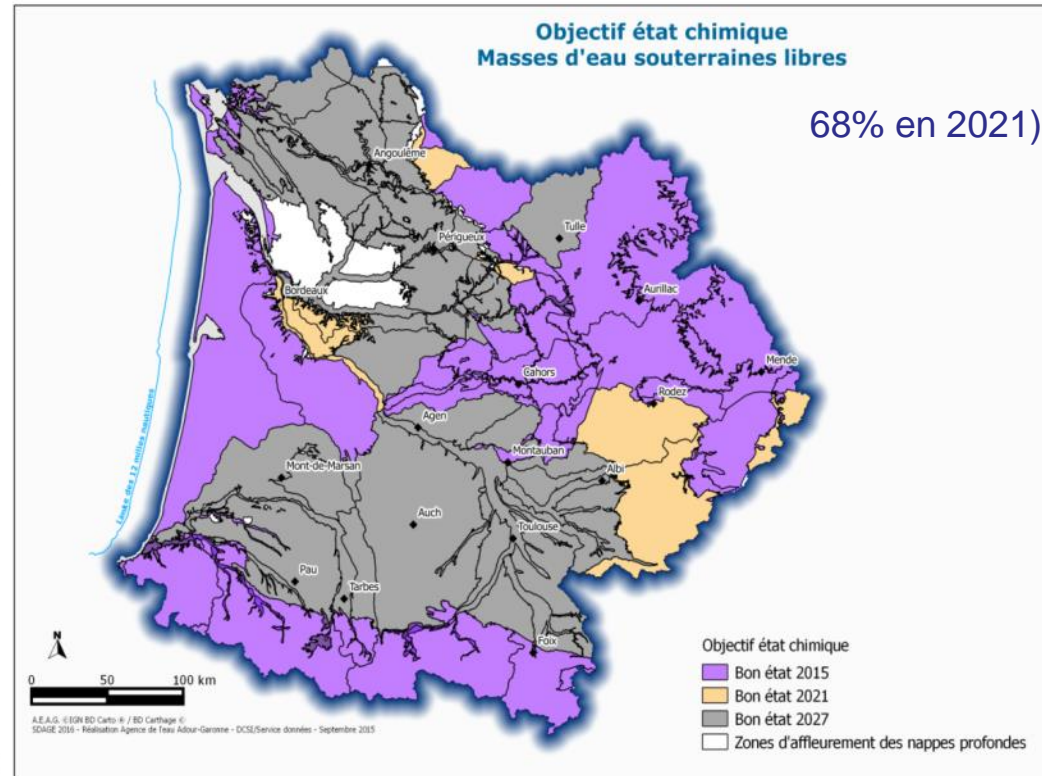
Objectif état quantitatif
Masses d'eau souterraines libres

94% en 2021)



Objectif état chimique
Masses d'eau souterraines libres

68% en 2021)



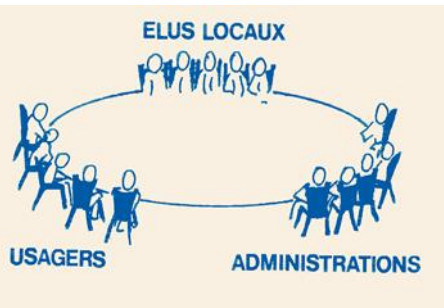
How to set goals?

Risk : pressure*status

Compromise

**Technical, social, economic,
feasibility**

Cost-benefit, who pays what?



**Proposal of the
Water committee
Public consultation**



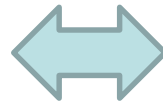
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PROGRAMME OF WORK & MEASURES FOR 2016-2021

How to restore/preserve water quality-quantity?

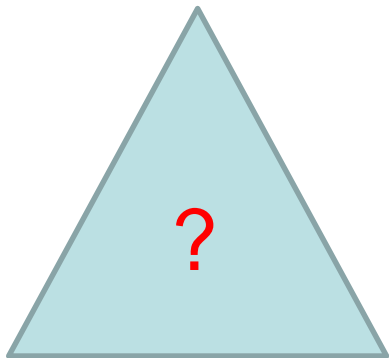
Basin level
***Direct* measures**



National level
***Indirect* measures**

- Agricultural policy
- Energy policy
- Industrial policy
- Land management
- Other environmental policies

Market



Regulation

**Voluntary
measures**

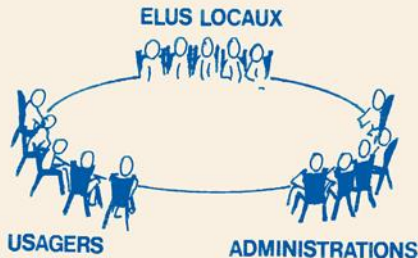


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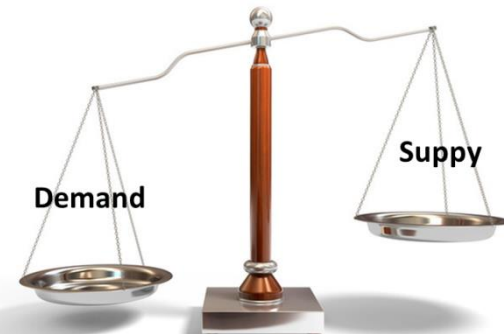
Programme of measures

- 1-Water Governance**
- 2-Pollution reduction**
- 3-Water Quantity**
- 4-Preservation of water
and aquatic
environment**



500 M€/year

**50% from water
agency**





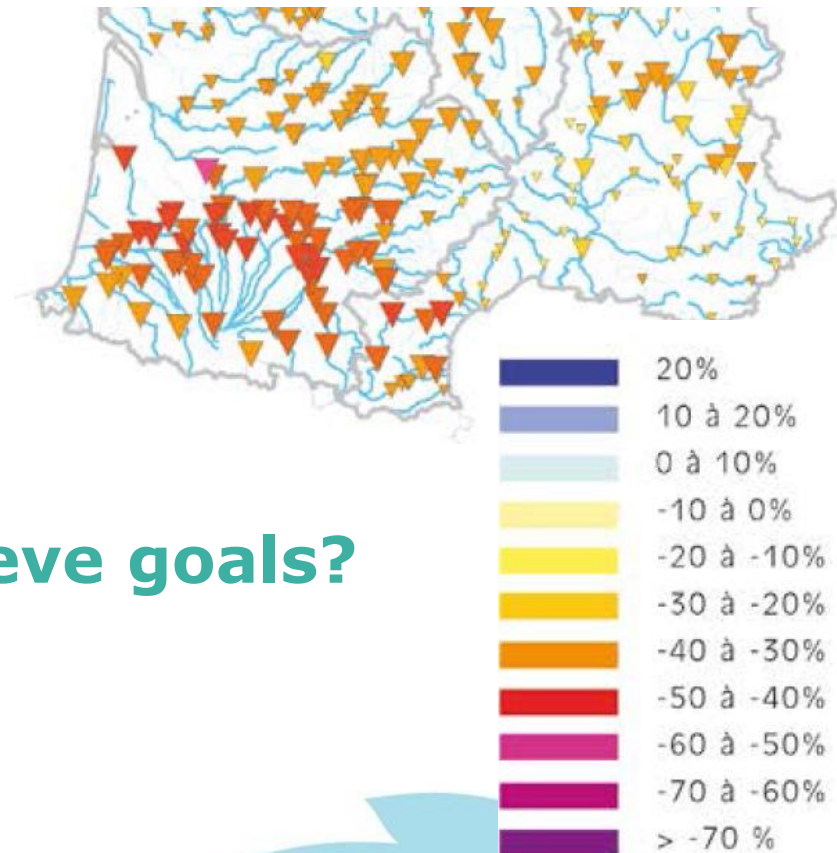
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Climate change by 2050

-20 and -40% water flows in the summer period

On average recharge could be reduced by 30 to 55%



=> How to achieve goals?

Findings from our experience



- How to involve stakeholders in planning and action
- Water management does not know administrative boundaries
- Need for a multi-scale approach
- Promote simplicity and step by step approach
- Think management and maintenance before investment;
- preventive >> curative measures
- Someone has to pay
- No regulation without transparency and control
- Need for combination of measures and therefore for coordination

