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**Mr. Jean - François DONZIER**  
**General Manager**  
**International Office for Water**  
**Permanent Technical Secretary**  
**INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS**



# INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

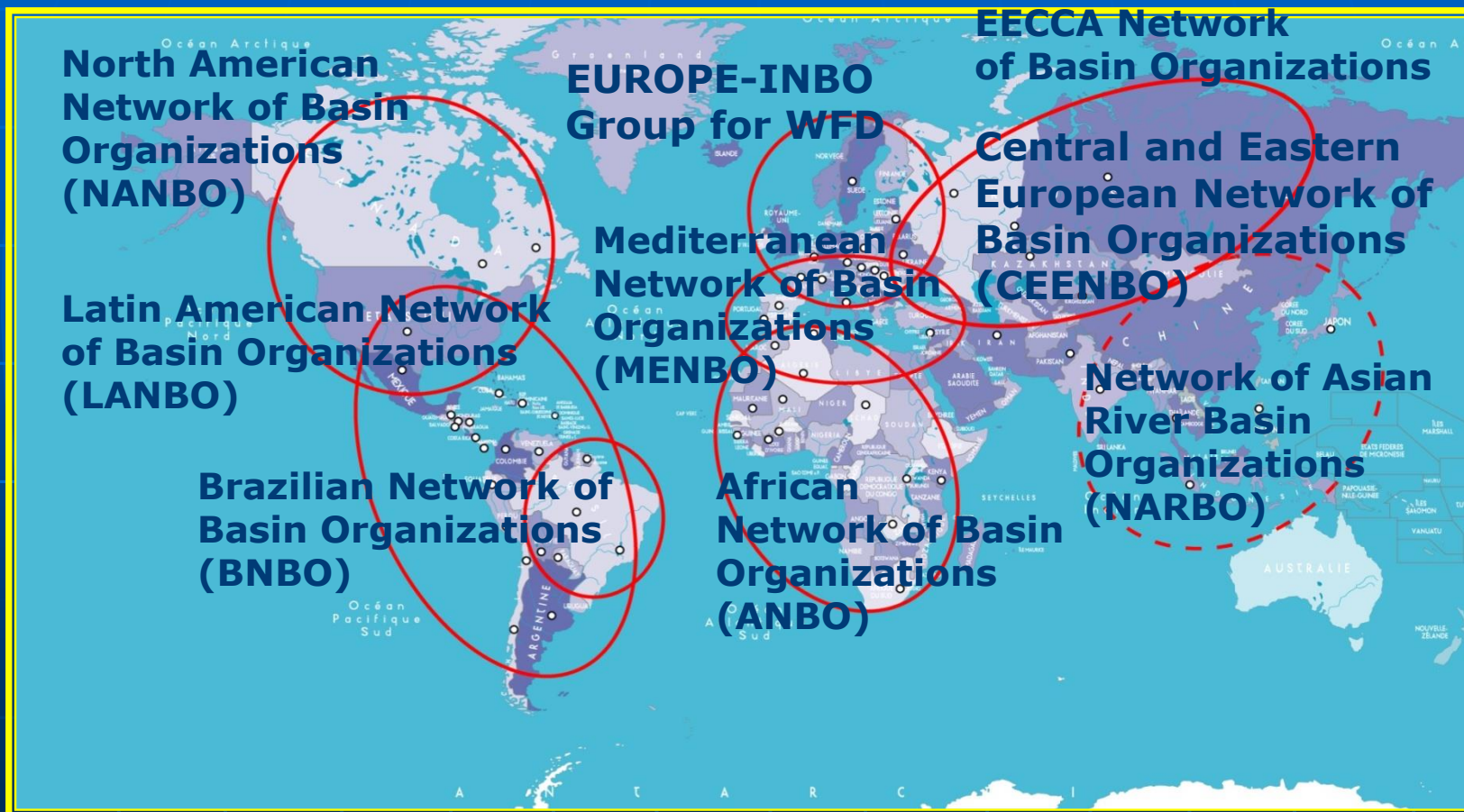
**Created in 1994 to facilitate  
operational exchanges between BO**



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Technical  
Secretariat  
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## INBO's REGIONAL NETWORKS



**192 FULL MEMBERS or PERMANENT OBSERVERS  
in 88 COUNTRIES**



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## **WATER OVER THE WORLD,** **A worrying situation:**

- Natural hazards are poorly controlled,
- Wastage is inadmissible,
- Water pollution is significantly increasing,
- The situation of the poorest people is intolerable,
- Ecosystems are destroyed...

**Wastage and pollution of inland freshwater  
might limit development  
in most countries of the world before 2025 !**



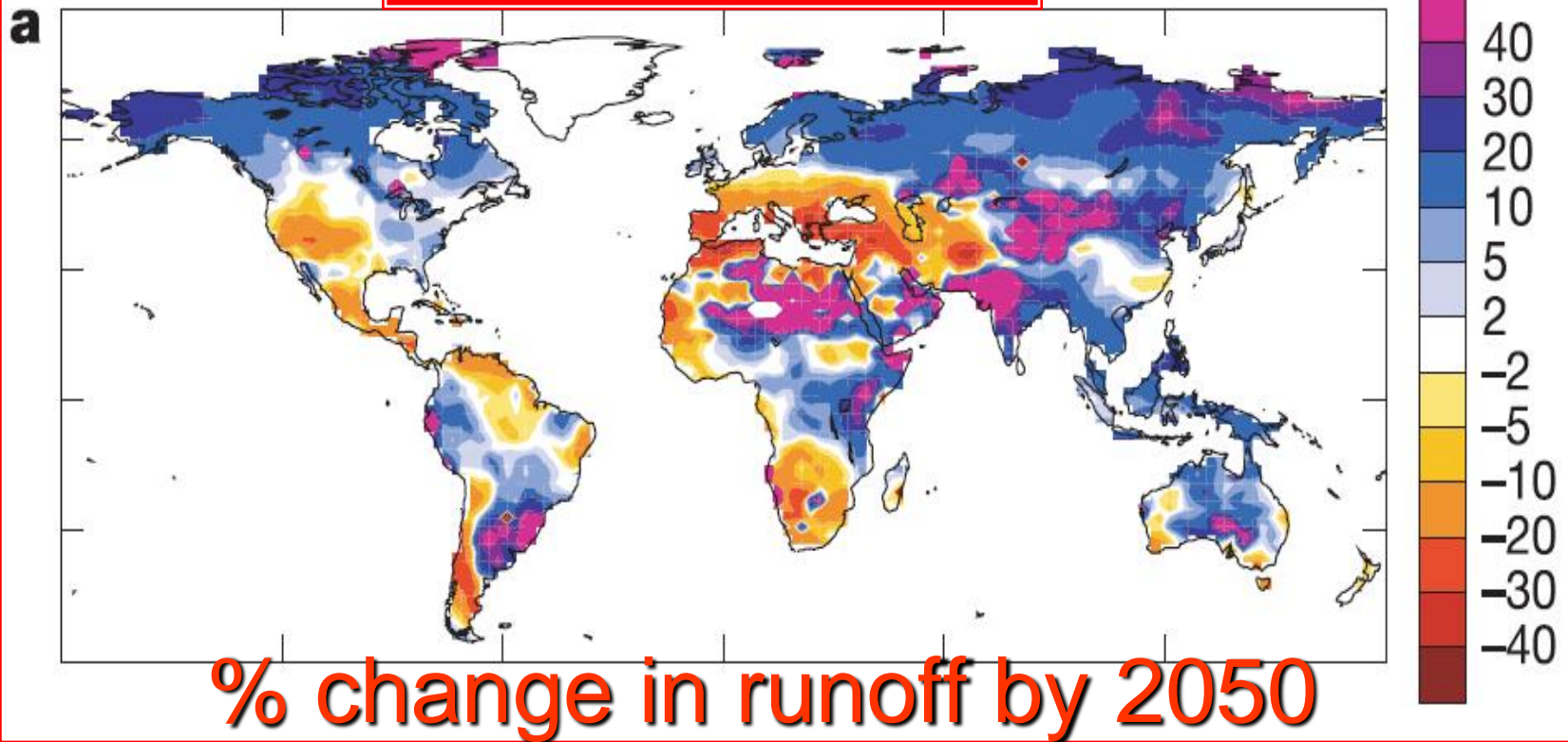
# Global warming cannot now be avoided.

Fresh water resources  
will be directly affected in the coming years!



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water availability



- Many of the major “food-bowls” of the world are projected to become significantly drier
- Globally there will be more precipitation
- Higher temperatures will tend to reduce run off
- A few important areas drier (Mediterranean, southern South America, northern Brazil, west and south Africa)



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**TECHNICAL SOLUTIONS DO EXIST,**

***BUT :***

**THE PROBLEMS ARE ABOVE ALL**

**INSTITUTIONAL ONES:**

**The necessary reforms  
are slow to appear,**

- centralisation,
- bureaucracy,
- sectoral approaches,
- no legislative, regulatory and normative framework,
- insufficient means for the administrations & local authorities,
- poor knowledge of the resources, uses and pollution,
- basic and continuing training and education are deficient,
- no dialogue,
- financial resources are too low,
- lack of financial guarantees and contractual systems, etc.



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## Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers

We, representatives of governments, international organizations, donors, national and transboundary basin organizations of rivers, lakes or aquifers, local authorities, of the civil society and companies, support the integration of fresh water into the Global Climate Action Agenda, especially for initiating or strengthening necessary adaptation actions in the basins of rivers, lakes, aquifers, large wetlands as well as coastal areas.

### GENERAL STATEMENT

Climate change is already affecting and will increasingly affect the quantity and quality of freshwater and aquatic ecosystems, especially through the intensity and greater frequency of extreme hydrological events, such as floods and droughts, as well as the increase in ocean level, which affects economic and social development and the

We recognize that adaptation actions should be undertaken without delay to minimize the impacts of climate change on the populations' health and safety, on economic development and the environment, considering the importance of the protection of water-related ecosystems.

**The basins are natural areas where water flows on the surface and in the subsoil: they are the relevant territories for organizing water resources management.**

In order to ensure more effectiveness, these actions to adapt to climate change should thus be implemented at the level of river, lake and aquifer basins, through a joint, participative, integrated and sustainable water resources management.

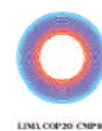
### We should act quickly before it is too late!

To that end, mobilizing new and increasing funding dedicated to climate change adaptation in basins is essential. Therefore, new basin organizations and existing ones should be financed and strengthened to facilitate the cooperation, coordination and exchange of information, dialogue, consultation and prevention of conflicts between stakeholders and to enhance the implementation of adaptation measures and the sharing of benefits on the basin scale,

We encourage donors to support prior assessments and actions for adaptation to climate change in basins,

Local authorities and communities, economic sectors and the civil society should be better associated and involved in basin management, including in the definition and implementation of adaptation measures.

Cooperation and exchange should increase between the institutions involved, especially among the basin organizations at the global and regional levels in order to facilitate the transfer of experience and know-how on best practices in basin management and adaptation to climate change.



MARRAKECH  
COP22|2016|CMP12  
UN CLIMATE CHANGE CONFERENCE



**357 SIGNATORIES!!**

vCOP22

Paris Pact



www.inbo-news.org  
www.cop22.ma





# Paris Pact on water and adaptation to climate change in basins



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## **RECOMMENDED ACTIONS:**

### **1) Reinforce capacity development and knowledge,**

Establish risk warning and water information systems in a context of uncertainty.

### **2) Adapt basin management planning to climate change,**

Better controlling water demand and developing a more efficient and sustainable use of water resources (including groundwater) - Enhance the services of water-related ecosystems

### **3) Reinforce governance,**

Create new basin organizations and reinforce existing ones

Support mechanisms for the involvement of the stakeholders in basin management,

### **4) Ensure adequate financing.**

Establish investment program and sustainable financing mechanisms

**We do not have to reinvent the wheel to act quickly!**

**Did you sign it?**





**IF WE ARE NOT ABLE TO MOBILIZE ENOUGH MONEY,  
WE SHALL NOT HAVE THE FRESH WATER WE NEED!**

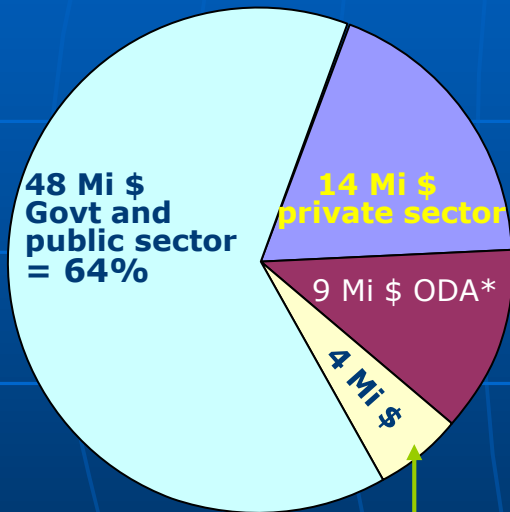


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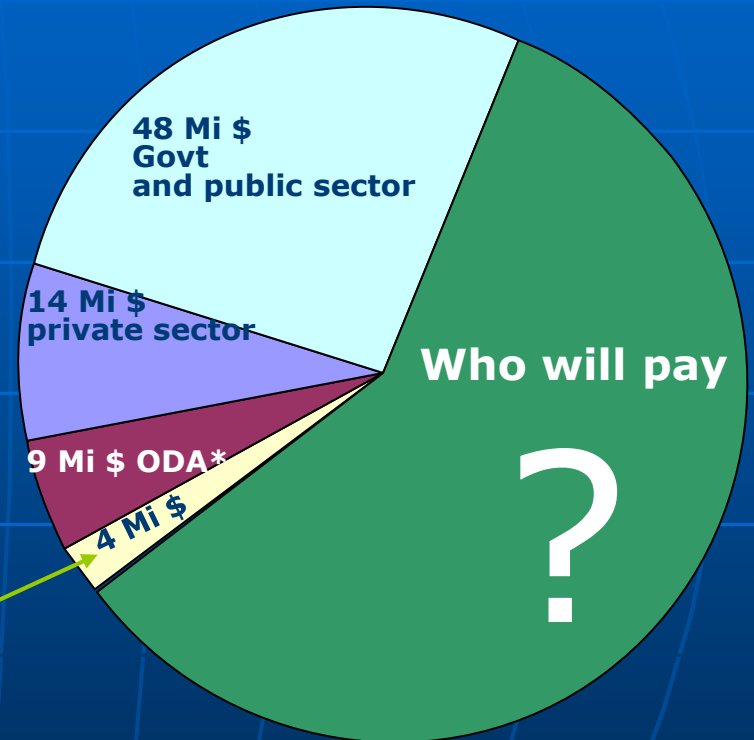
**Who will pay ?**

**FOR THE NEXT 25 YEARS**

**NOW**



International firms



**75 milliards \$ / year**

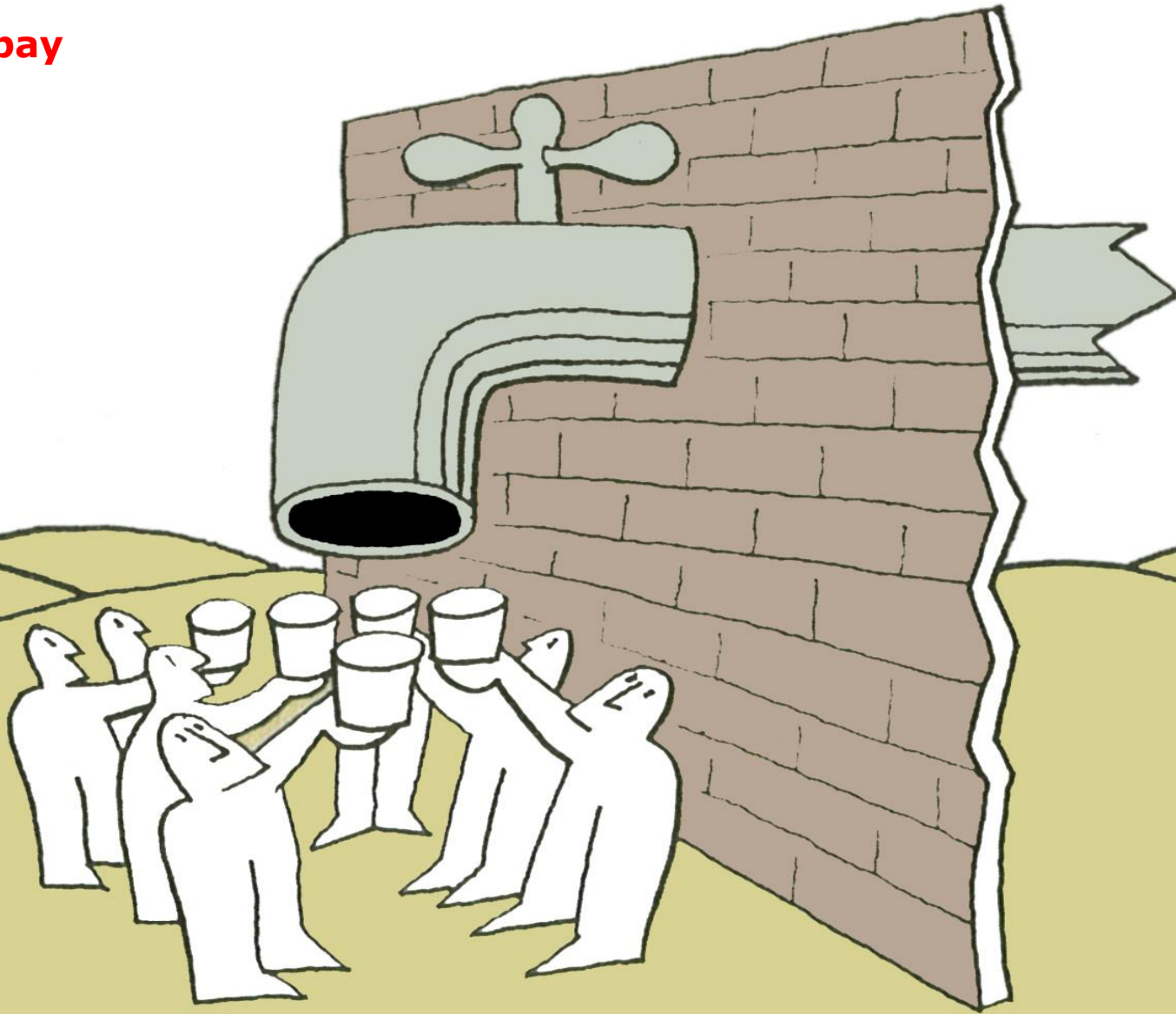
**180 milliards \$ / year**

\* Official Development Assistance



Who will pay

?



**Money does not fall from the Sky!**

SKY 360 08



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## FINANCING WATER POLICY :

**ALL THE USERS MUST CONTRIBUTE**



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- ➡ The taxpayer : - income taxes, taxes
- ➡ The offender : - fines
- ➡ The user : - water-related taxes
- ➡ The polluter : - price of community services
- ➡ The individuals : - price of his own works

**There is always someone who has to pay !**

**THE CHOICE DEPENDS OF EACH NATIONALPARTNERS**



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## **FINANCING WATER POLICY:**



**The international official aid  
only represents 10%  
of the investments made worldwide.**



**Public budgets cannot bear  
alone all the investment and operating costs.**



**The users must contribute according to  
the "polluter-pays" principle  
and the "users-pay" systems.**

**= WATER MUST PAY FOR WATER**



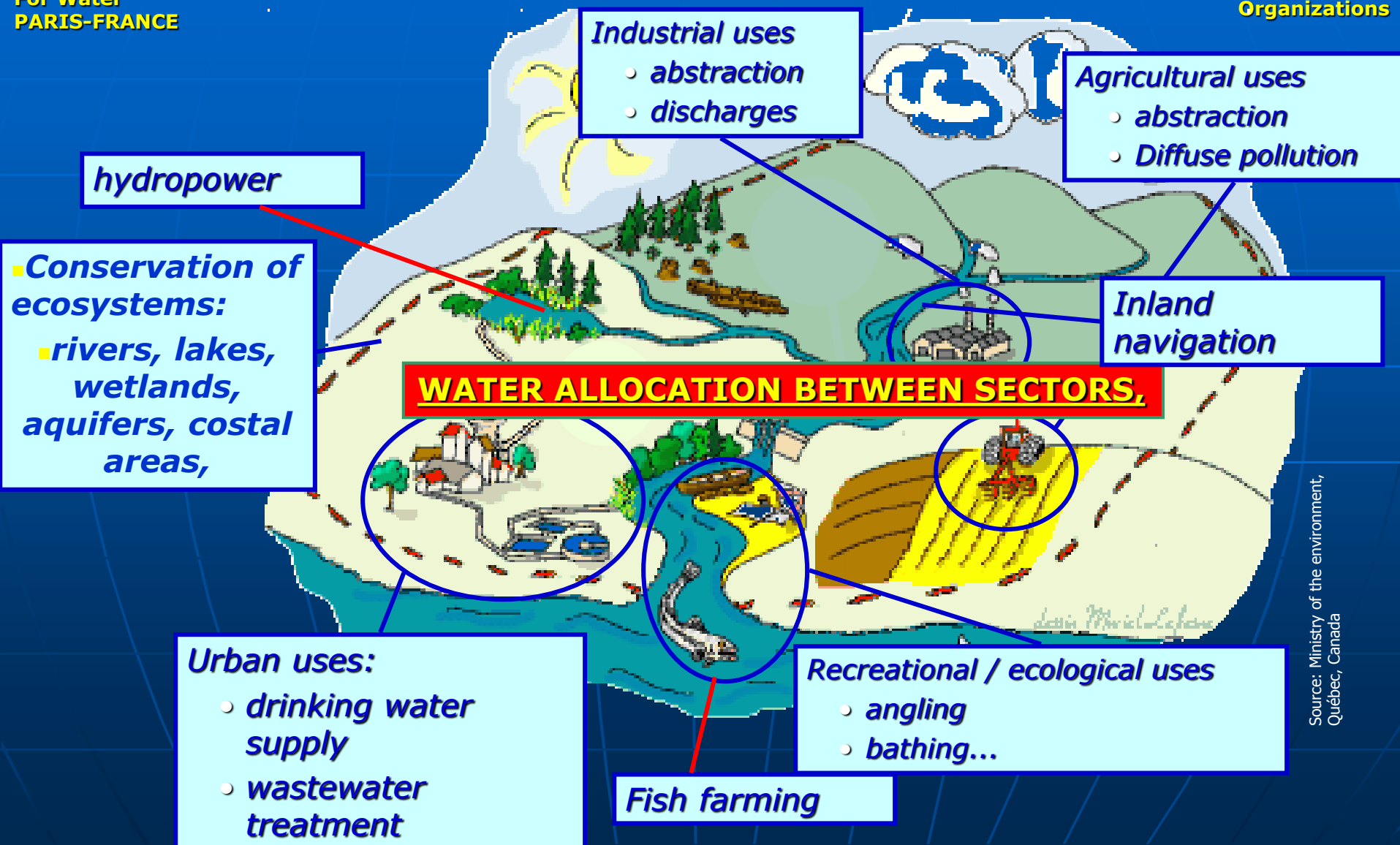
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# IWRM CONCERNS

## ALL MAJOR WATER USES







# INTEGRATED WATER RESOURCE MANAGEMENT :



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**DEFINING ROLES AND RESPONSIBILITIES OF EACH:**  
**There is never a sole and unique manager!**

**Multilateral organizations**

**International commissions**

**Central or federal government**

<b>Local authorities</b>	<b>=</b>	<b>states (Federation)</b>
	<b>=</b>	<b>municipalities</b>
	<b>=</b>	<b>villages</b>

**Large public regional planners**

**basin organizations?**

<b>Water users :</b>	<b>=</b>	<b>community</b>
	<b>=</b>	<b>individuals</b>

<b>Civil Society :</b>	<b>=</b>	<b>enterprises</b>
	<b>=</b>	<b>researchers</b>
	<b>=</b>	<b>NGOs</b>



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**water resources management should be organized:**



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**1) on the scale of local, national, transboundary  
basins of rivers, lakes and aquifers;**



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# « UPSTREAM-DOWNSTREAM » COMMON CAUSE ON THE SCALE OF BASINS AND SUB-BASINS



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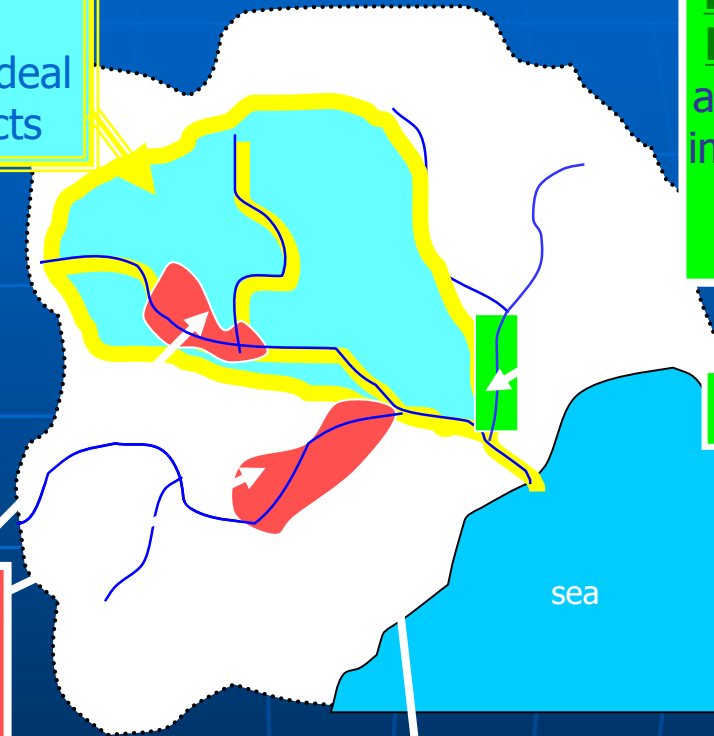
## Sub-basin / Sector / Water type

element of district to deal  
with particular aspects

## THE DIFFERENT HYDROLOGICAL SCALES:

### Water bodies

scale of evaluation  
of the achievement  
of good status



### District =

river basins + associated  
groundwaters and coastal waters

**Heavily modified water  
bodies (HMWB):** human  
activity carried out makes it  
impossible to reach the goal  
without disproportionate  
costs (change activity...)

⇒ no link with pollution



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# TWO HUNDRED AND SIXTY THREE RIVERS OR LAKES AND HUNDREDS OF AQUIFERS ARE TRANSBOUNDARY ONES



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## *Transboundary basins per continent.*

		2002	Pourcentage du territoire
<i>Afrique</i>		59	62 %
<i>Asie</i>		57	39 %
<i>Europe</i>		69	54 %
<i>Amerique du Nord</i>		40	35 %
<i>Amerique du Sud</i>		38	60 %
<b>TOTAL</b>		<b>263</b>	<b>45 %</b>





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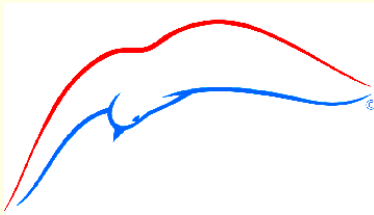
# International Commission for the Léman Lake



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## Up Stream basin of the Léman Lake





Vaud  
Valais  
Genève



Secrétariat  
permanent

Collaboration F - CH  
en cas de pollution

Relations  
publiques

**International  
Commission  
for  
the Léman Lake**

## Sous-commission technique

Comité  
opérationnel

Bureau

Conseil  
scientifique

Programme de surveillance

Pollutions  
domestiques

Pollutions  
agricoles

Pollutions  
industrielles

Renaturation

Méthodologie

Subvention à la  
déphosphatation



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**If we cannot measure, we cannot manage!!**



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**DIALOGUE**



**INFORMATION**



**Resources**

- Surface water (Rivers –Lakes)
- Groundwater
- Wetlands
- Costal waters

- Quantity
- Quality
- Ecology
- Requirements
- Abstractions
- Discharges



**Uses**

- Flowrates
- Pollution



**Seasonal variations**

- Frequencies



**Geographic locations**

- G.I.S



**Economical informations**

- Cost, budget...





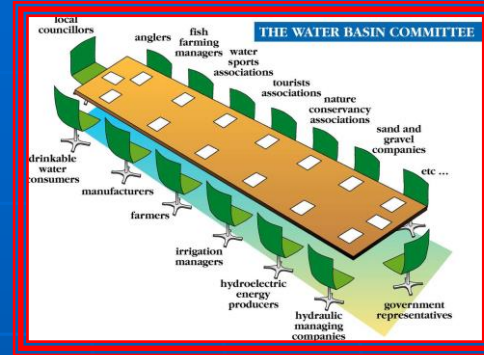
# water resources management should be organized:



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**Conflicts** requirements collected  
from each point of view



Designing a program  
through **dialogue**

Reaching **agreement**  
with an ambitious program



## **3) with the participation in decision-making**

of the concerned Governmental Administrations and local Authorities,  
the representatives of different categories of users  
and associations for environmental protection or of public interest.



# water resources management should be organized:

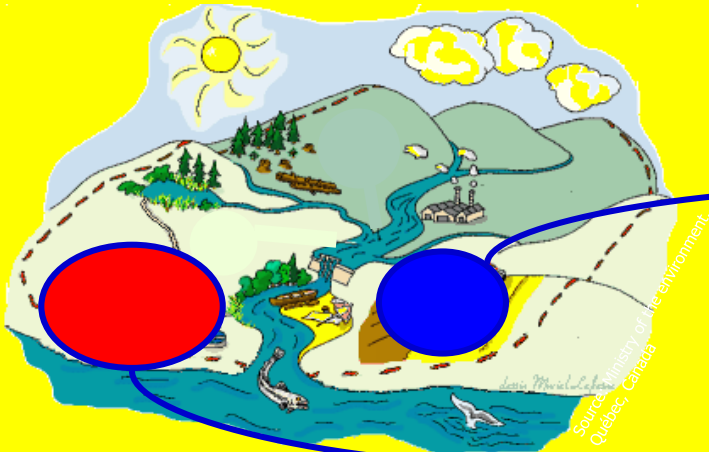


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**2004**

## *Description of the initial situation*

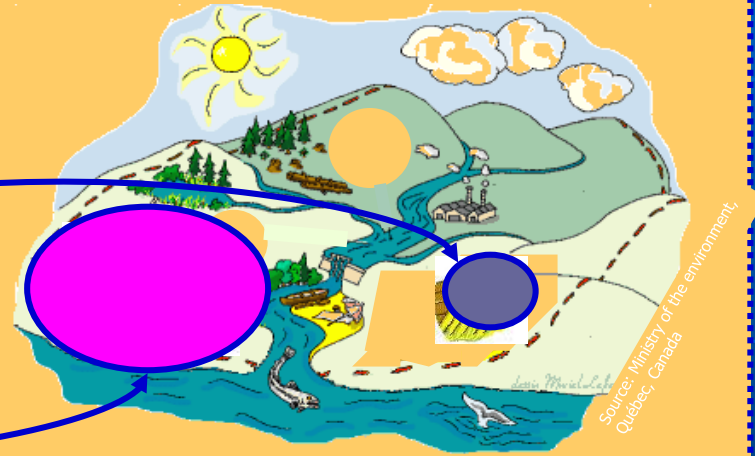


Focus on economic aspects:

- estimate the economic "weight" of water uses and services
- assess the level of recovery of costs of water services

**2015**

## *Baseline scenario: projection for 2015*



Baseline scenario:

- appraisal of evolutions of uses, pressures...
- identification of potential gaps in water status with GES

**4) based on management plans or master plans**  
that define the medium and long-term objectives to be achieved;



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## **6) with the mobilization of specific financial resources,**

**«WATER AS RAW MATERIAL» IS FREE  
BUT  
MANAGING IT AND THE NATURAL ENVIRONMENTS  
AND  
USING IT IMPLY COSTS**

- **ADMINISTRATION**
- **STUDIES - MEASUREMENTS - ANALYSES**
- **INVESTMENTS**
- **RENEWAL – HEAVY MAINTENANCE**
- **OPERATION - MAINTENANCE**
- **RELATIONS WITH « CLIENTS »**
- **COMMUNICATION - INFORMATION**
- **EDUCATION**

**TODAY, « WATER MUST PAY FOR WATER »**

**FINANCING WATER POLICY:**



# THE COSTS TO BE FINANCED

Costs	Definition	Example
Direct costs	Financial expenses	<i>Amortization, capital and interests, renewals</i>
	Operating expenses	<i>Wages, electricity, Rents, equipment maintenance, analyses ...</i>
Environmental costs	Costs of damage caused to the environment by a specific activity	<i>Pollution of an aquifer, destruction of wetlands...</i>
« Resource » cost	Value of the alternative disregarded when choosing a particular activity (= opportunity costs)	<i>Cost of the electricity which could have been produced if water had been available and not pumped for irrigation</i>

**= total cost -**



# FINANCING WATER POLICY:



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## MOBILIZATION OF INCREASING FINANCIAL RESOURCES:

- "Users-polluters-pay" principles
- Equalizing devices – common cause
- Public - private partnerships
- International aid
- Economic incentives

## VARIOUS COMPLEMENTARY SYSTEMS FOR COST RECOVER "3Ts Rule"

### ADMINISTRATIVE TAXES: paid to the general budget.

- General taxes or penal fines
- New ecological tax.

### WATER-RELATED TAXES:

- National taxes – transiting through
- "Special Accounts of the Treasury"
- Basin taxes – levied by the Water Agency

### THE PRICING OF COMMUNITY SERVICES - TARIFFS:

- Price of raw water – levied by big developers
- Price of drinking water – levied by the municipalities or water and sanitation suppliers

### TRANSFERTS:

- International aid
- Between économetrical sectors (energy, mines, transport)





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## EQUALIZATION OF FINANCIAL EFFORTS:

- Territorial equalization:  
in the same geographic area or basin
- Sectoral equalization:  
between public services – drinking water – electricity – sanitation – solid wastes ...
- Equalization between users:  
rich, poor, big consumers / polluters,  
small consumers / polluters
- Equalization between functions:  
between upstream and downstream areas,  
between commercial services and administrative functions



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# THE « POLLUTER - USER – PAYS » PRINCIPLE

**Abstraction  
taxes**

**French WA = 2.300 Bi €/year!**

**Pollution  
taxes**

**The Water Agency's Budget  
adopted by the Board of Directors  
with approval of the Basin Committee**

10 %

**Studies & Research**

**Operation**

**Measurement networks**

90 %

**Aid = 6-year Program**

**Big developers**

**Local authorities**

**Farmers**

**Industrialists**

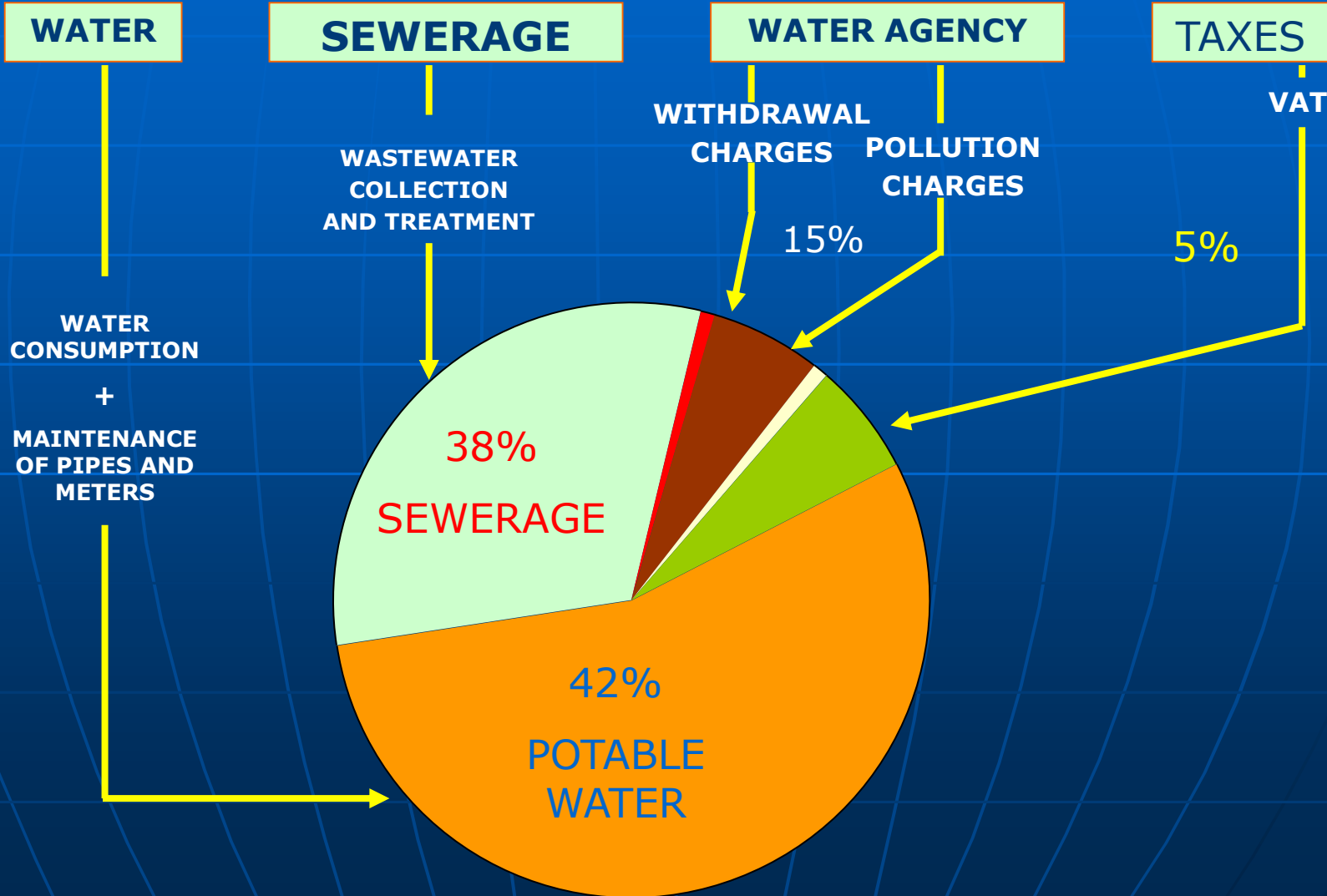


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# WATER PRICE





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# IS THE WATER SUPPLIED EXPENSIVE ?



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## IN FRANCE :



Water price is different in every service for water supply and sanitation,



It corresponds to the total cost of services (investment and operation), taxes (VAT) and charges (Water Agencies and FNDAAE) included,



In 2007, its national average was 3,00 €/m<sup>3</sup> :  
- drinking water  
- collection and treatment of wastewater + sludge,



It corresponds to :

**1 M3 = 1,000 liters  
Of drinking  
+ treated waste water**

**3,00 €/m<sup>3</sup>**

- 1 pack of mild cigarettes,
- 2 litres of superpetrol,
- 1 "can of Coke" in a bar,
- 10 liters of mineral water.



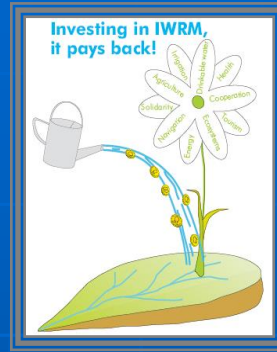


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# INVESTING IN IWRM... IT PAYS BACK!



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## ■ CONCLUSION:

- Various combinations of responsibilities are possible,
- There is no system better than the others:
  - The results depend on:
    - ❖ A strong political will,
    - ❖ A long-term stability of the established mechanisms,
    - ❖ The efficiency of the management of each organization,
    - ❖ The available human and financial resources.
  - The implementation of reforms can only be gradual,
  - The real involvement of local authorities, users and collective interest groups in decision-making facilitates its « acceptability », an offer/demand adequacy and the establishment of new financing systems.



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### ■ **CONCLUSION (2):**

#### ➤ **Total cost recovery still do not exist anywhere,**

- The opportunity and environmental costs are hardly mentioned,
- Investment must still be/has been strongly subsidized,
- Sometimes the operating expenses are still not covered,

#### ➤ **The creation of new incomes coming from the users:**

- ❖ Pricing of community services, payment for ecological services
- ❖ Taxes / common cause systems,
- ❖ Application of the « users – polluters - pay » principles,

**relies on:**

- **the existence of full-right « Basin Councils » ...which « push »,**
- **the specific allocation of the newly collected financial resources,**
- **their non-substitution to the credits already reserved for business as usual,**
- **the quick achievement of tangible results by demonstrating “good use”,**
- **the contribution to a real « + » for the payers!**

...the industrialists are often the driving forces  
for the new financing systems when they benefit from them.

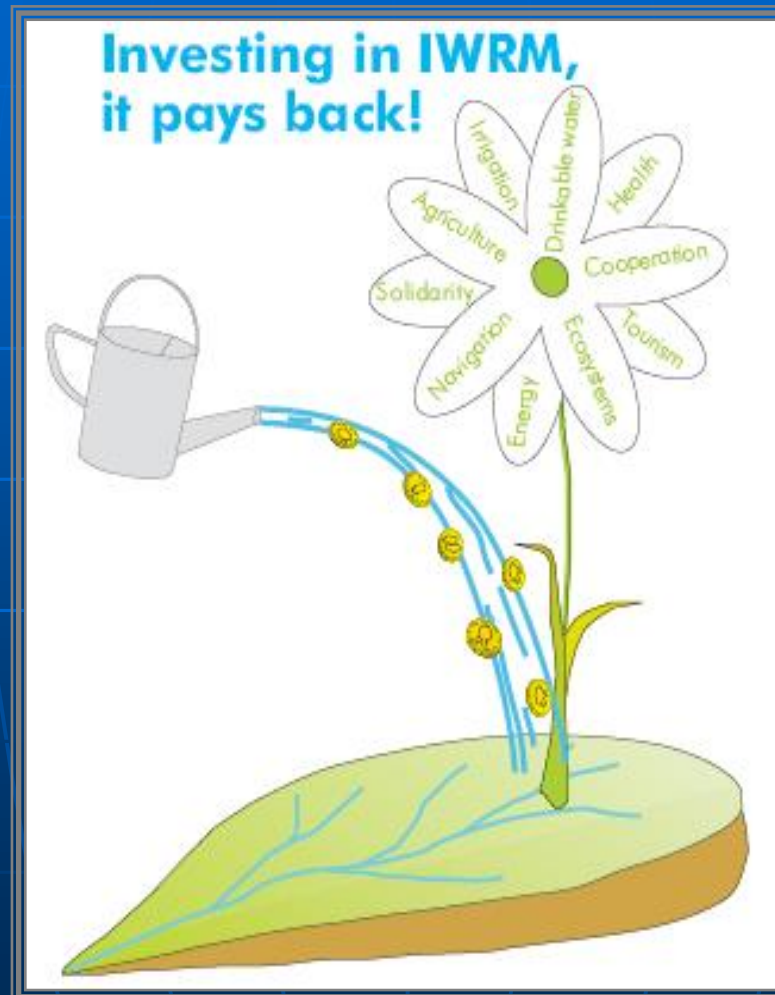


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WE SHALL NOT HAVE THE FRESH WATER WE NEED!**



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**THANK YOU FOR YOUR ATTENTION!**

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**الشبكة الدولية لهيئات الأحواض**