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### topic 3.1: "Basin Management and Transboundary Cooperation".





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**What are the  
success and  
failures stories  
of hydro  
solidarity and  
IWRM at basin  
level?**

**How to organize  
and enable  
stakeholders  
participation ?**

*How can  
transboundary water  
resources be  
managed more  
sustainably by all the  
riparian countries  
concerned?*

*What are the tools to  
be used for better  
basin management  
and transboundary  
cooperation over  
surface and ground  
water ?*

**WWF5 – Topic 3.1**

**4 questions were selected:**





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**23 October 2000**



**The European Framework Directive:**  
**the future of water resource management**  
**In the European Union.**



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**Implementation of**  
**the UN Convention**  
**for the international water courses management**  
**in Europe – HELSINKY 1992**  
**is also a major milestone for promoting the**  
**principles of good governance**





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**water resources management should be organized:**

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



**River basins are natural units, where water runs,  
on the ground and in sub-soil**



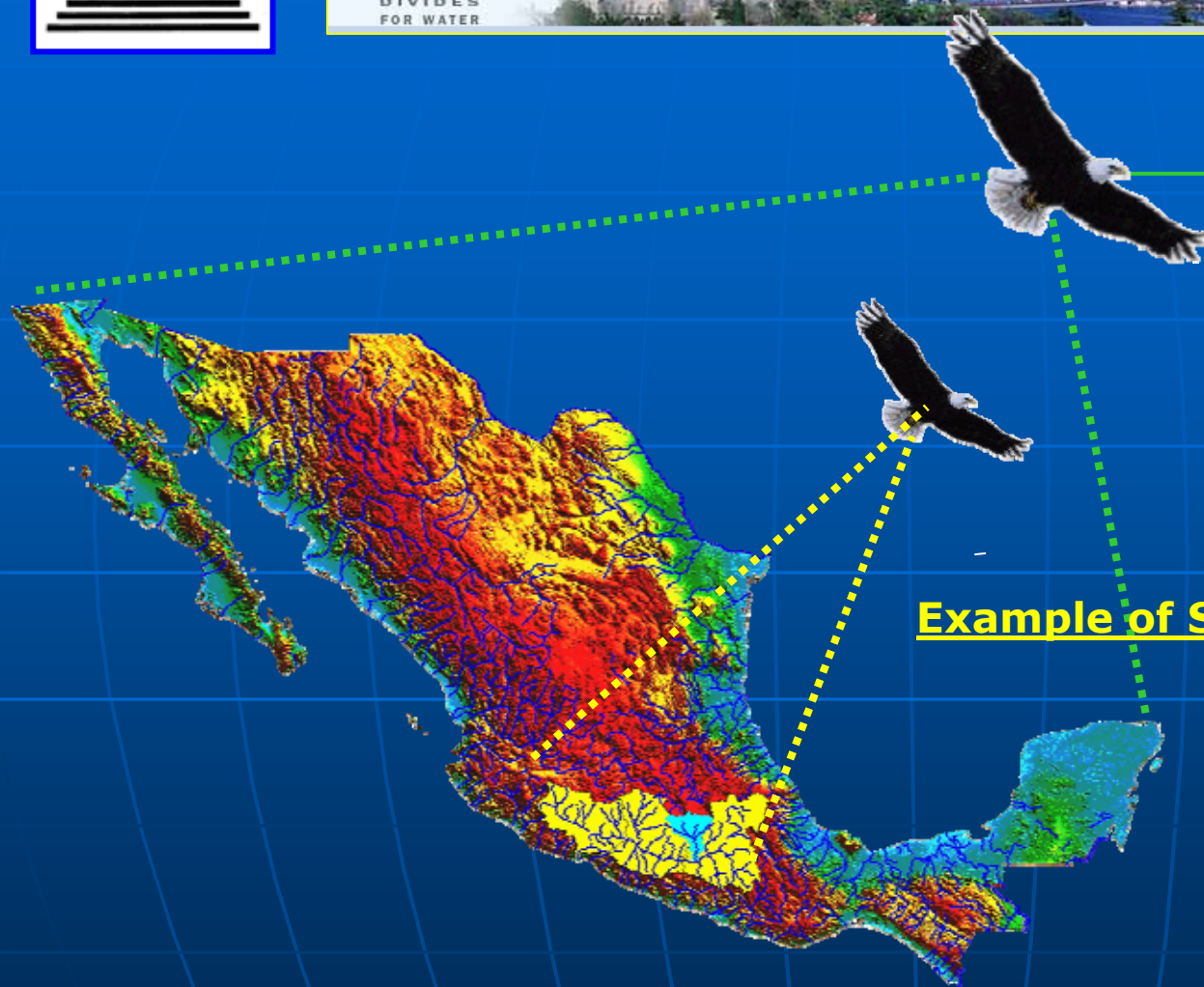
5th WORLD WATER FORUM

**water resources management should be organized:**

BRIDGING  
DIVIDES  
FOR WATER



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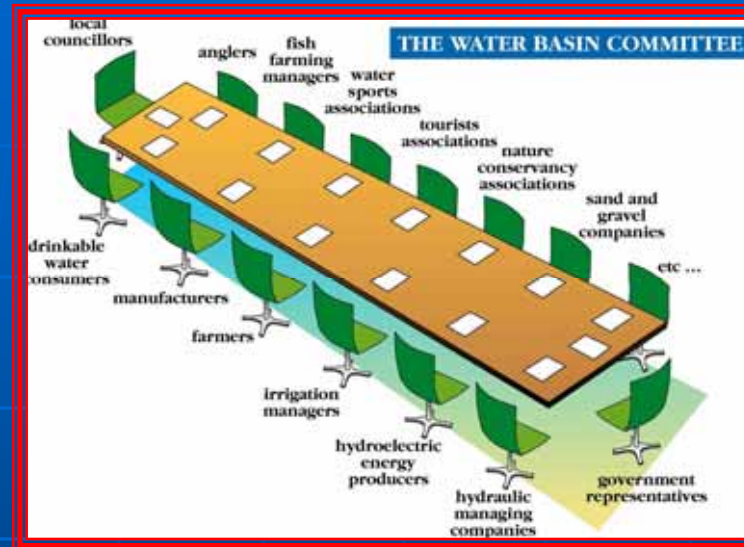


**Example of SINA and SIRA in Mexico**

**2) based on integrated information systems,**  
allowing knowledge on resources and their uses, polluting pressures,  
ecosystems and their functioning, the follow-up of their evolutions  
and risk assessment.



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### 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, especially, in Basin Councils or Committees.

- Information, awareness and education of populations or users and of their representatives are essential,



5th WORLD WATER FORUM

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**2004**

### *Description of the initial situation*

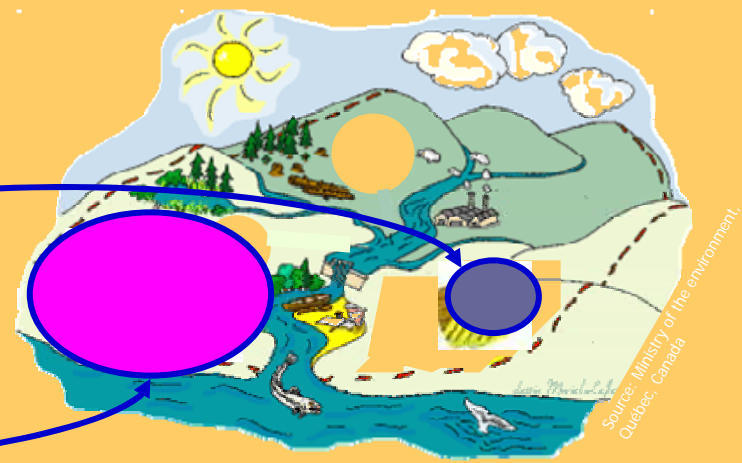


Focus on economic aspects:

- 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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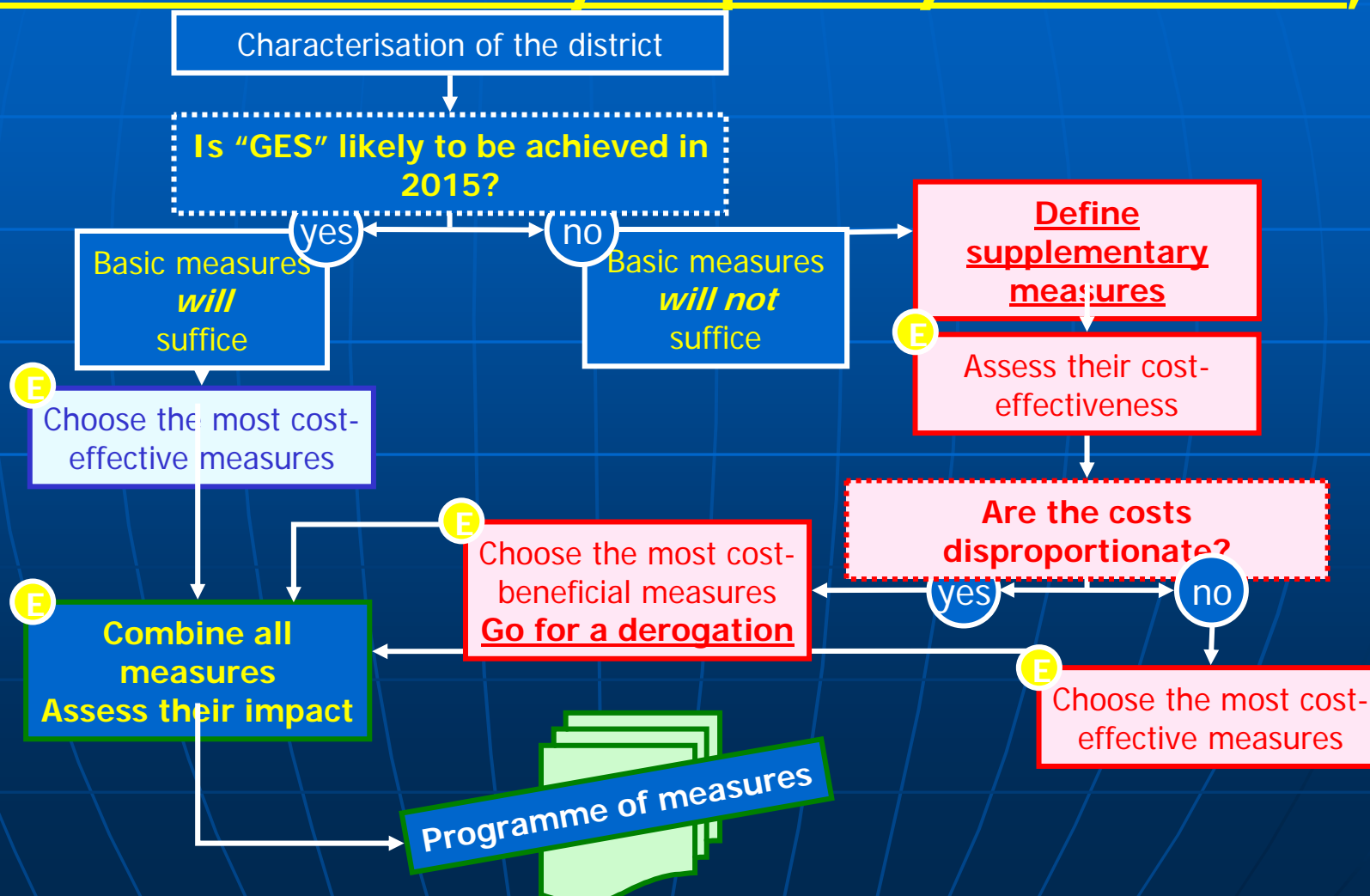
**water resources management should be organized:**

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## 5) through the development of Programs of Measures and multiyear priority investments;





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

### **VARIOUS COMPLEMENTARY SYSTEMS FOR COST RECOVERY**

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

- General taxes or penal fines
- New ecological tax.

#### **WATER-RELATED CHARGES:**

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

#### **THE PRICING OF COMMUNITY SERVICES:**

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

#### **TRANSFERTS: International aid or from other economical sectors.**



## DEFINING ROLES AND RESPONSIBILITIES OF EACH:



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- **A clear legal framework** must specify, in each country, the rights and obligations, the possible levels of decentralization, the institutional responsibilities of the different stakeholders, the processes and means needed for good water governance,



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## Conflicts

requirements collected  
from each point of view



Designing a program  
through **dialogue**



Reaching **agreement**  
with an ambitious program





« **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

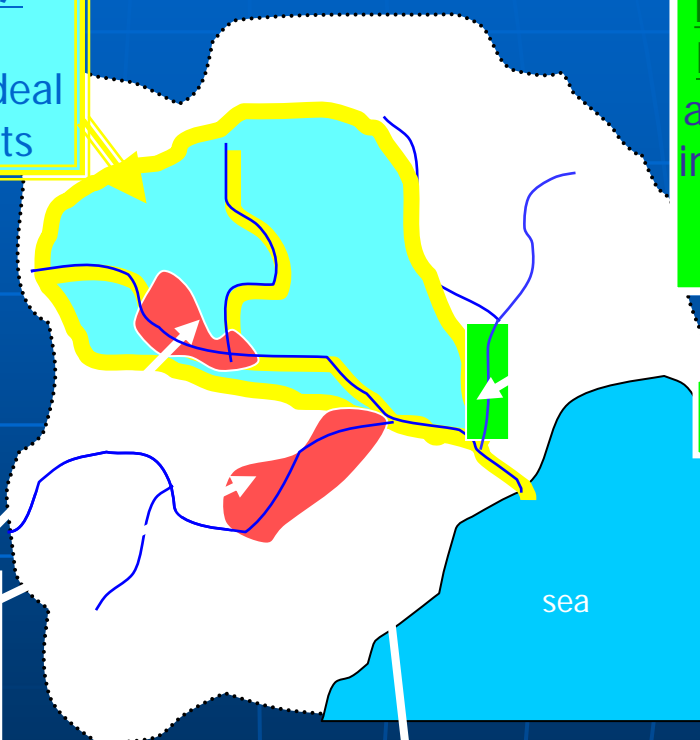
**THE DIFFERENT  
HYDROLOGICAL  
SCALES:**

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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# **INTEGRATED WATER RESOURCE MANAGEMENT**

- **OVERALL MEETING  
OF RATIONAL AND LEGITIMATE DEMANDS**

- Agriculture
- Domestic uses
- Industry
- Fish farming
- Electricity
- Transports
- Leisure
- Fishing

- **WASTEWATER TREATMENT AND RECYCLING,**

- **CONSERVATION OF ECOSYSTEMS:**

**rivers, lakes, wetlands, aquifers, costal areas,**

- **RISK PREVENTION :**

- Erosion
- Drought
- Floods



# **ASSESSING WATER QUALITY:** *In Europe,*

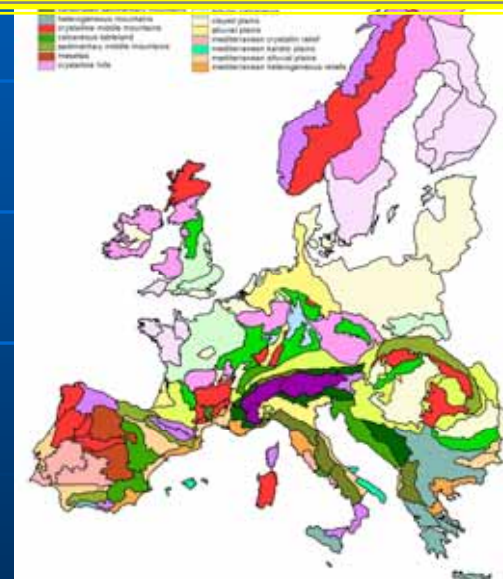


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**50,000 "WATER BODIES" have been identified:**

- River WB = 27 455
- Lake WB = 10 060
- Groundwater WB = 7 719
- HMWB/AWB = 5 783

## European Hydro – eco-regions



## ➤ IN FRANCE :

- River WB = 3 522
- Lake WB = 471
- Groundwater WB = 539
- HMWB/AWB = 912
- Good Status = 984
- At Risk = 941

**THE DEFINITION  
OF COMMON FRAMES  
OF REFERENCES.**



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Costs	Definition	Example
Direct cost	Capital costs	<i>Principal and interest, depreciation</i>
	Operating costs	<i>Wages, electricity, maintenance of equipment, analyses of the quality of water...</i>
Environmental cost	Costs of the damages to the environment caused by a given activity	<i>Contamination of an aquifer, destruction of wetlands...</i>
Resource cost	Value of the alternative foregone by choosing a particular activity (= opportunity costs)	<i>Cost of electricity that could have been produced if water would be available instead of being pumped for irrigation</i>

Sum = full cost



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

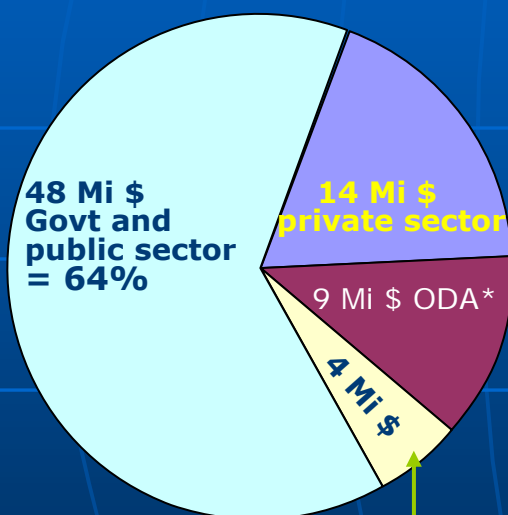


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**Who will pay ?**

**FOR THE NEXT 25 YEARS**

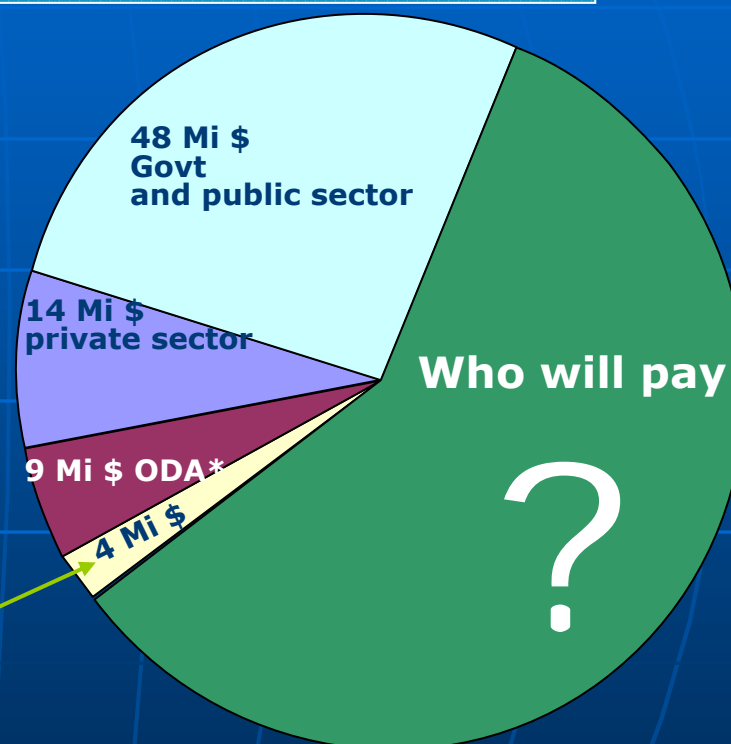
**NOW**



International firms

**75 milliards \$ / year**

\* Official Development Assistance



**180 milliards \$ / year**



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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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**Abstraction  
taxes**

**THE « POLLUTER - USER – PAYS » PRINCIPLE**

**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 = 5-year Program**

**Big developers**

**Local authorities**

**Farmers**

**Industrialists**



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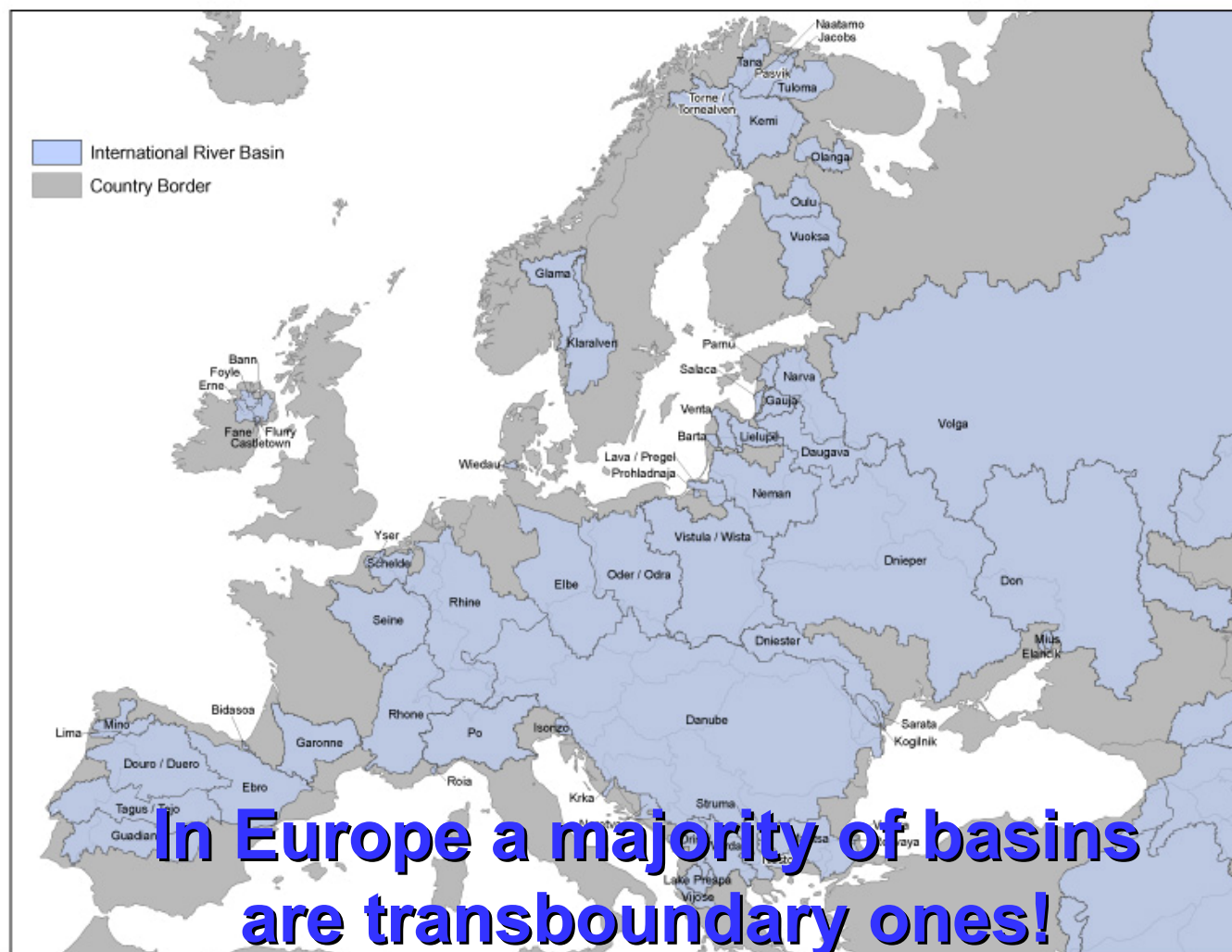


## TWO HUNDRED AND SEVENTY SIX RIVERS OR LAKES AND HUNDREDS OF AQUIFERS ARE TRANSBOUNDARY ONES

<i>Transboundary basins per continent.</i>			<i>Pourcentage du territoire</i>
<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 %
<i>TOTAL</i>		276	45 %



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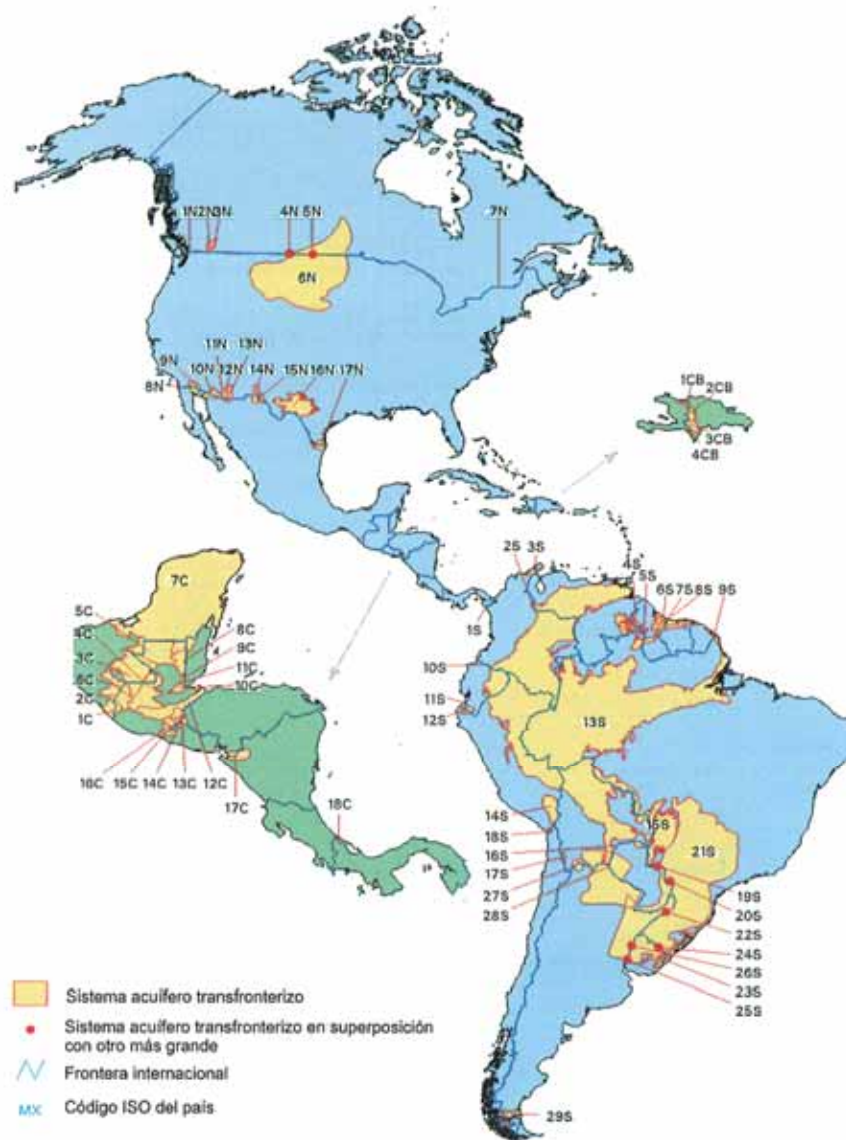


**In Europe a majority of basins  
are transboundary ones!**



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## Sistemas Acuíferos Transfronterizos de las Américas





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- The 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (**Helsinki Water Convention**), originally limited to Europe beyond the UNECE region, has been the basis for adoption of many bilateral and multilateral agreements, most notably the 1994 Convention on the Cooperation for the Protection and Sustainable Use of the Danube River.
- At the global level, **the 1997 Convention** on the Non-navigational Uses of International Watercourses enables inter-state cooperation on international watercourses has not been ratified yet, but its core principles are already part of many international customary agreements.
- The United Nations International Law Commission has prepared a set of **articles related to the use of shared aquifers** which was adopted during the last session of the UN General Assembly.
- **The European Water Framework Directive** is still implemented by the 27 EU Members States and some neighbor Countries and fixes as a common objective before 2015 the good ecological statute of water and ecosystems in all the concerned basins including all the transboundary ones.



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- **As regards large transboundary rivers, lakes or aquifers** cooperation agreements should be signed by riparian countries and management plans designed at the level of the whole basin, especially in **International or transboundary Commissions, Authorities or Organizations.**



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## NOW WE MAY GO AHEAD FOR BETTER BASIN MANAGEMENT AROUND THE WORLD

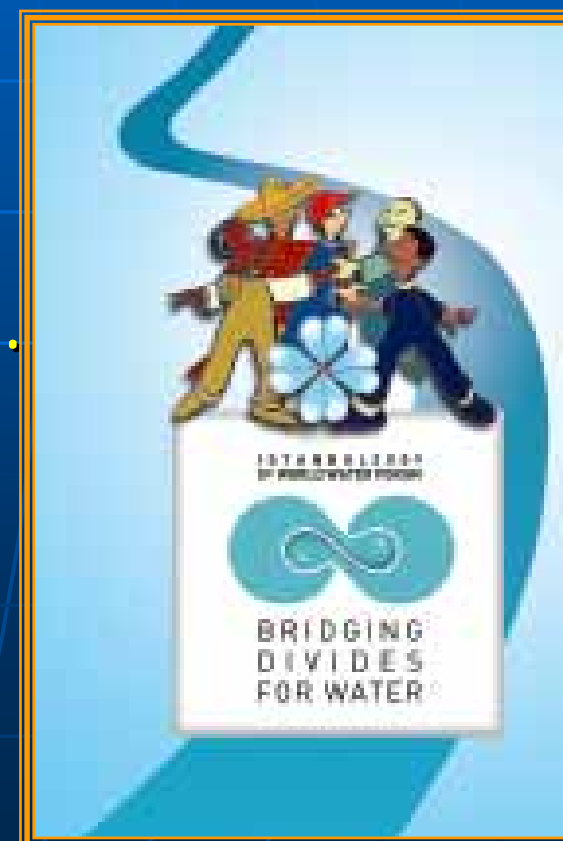




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# Basin Management and Transboundary cooperation

- The key of success is  
a strong political support....
- Yes, we can!
- Just do it!!!!!!



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