



Budapest Water Summit Civil Forum



BUDAPEST WATER SUMMIT

Give the future a chance!



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...

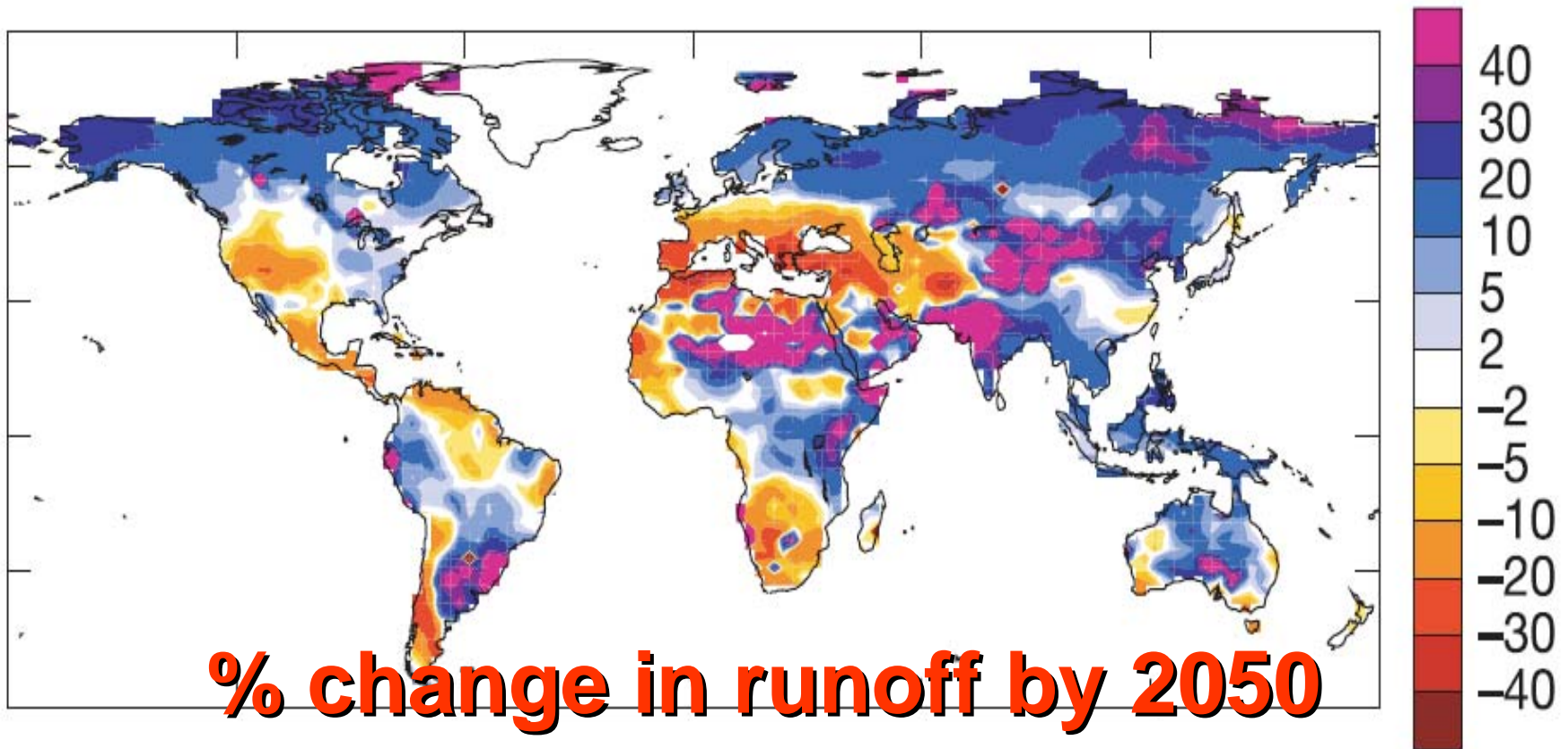
**Wastage and pollution of inland freshwater
might limit development
in most countries of the world before 2025 !**

Global warming cannot now be avoided



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

a



% change in runoff by 2050

water

availability



Better Water Governance is needed!



TECHNICAL SOLUTIONS DO EXIST,
BUT :
THE PROBLEMS ARE ABOVE ALL
INSTITUTIONAL ONES:



FOSTERING GOOD WATER GOVERNANCE

In view to foster good water governance, improvements could be considered at two levels:

1. Management of water resources in their natural environment,

1. Management of collective water services or utilities, such as drinking water, sanitation, irrigation, etc.

The resources specifically devoted to the management of water resources and aquatic ecosystems are notoriously inadequate in the context of current changes, they only represent a small share of resources devoted to public services (drinking water supply, sanitation, irrigation ...) and major infrastructure, while water resource is likely to be the limiting factor!

When a river is dry, or when the level of an aquifer is lowering, how can we feed the supply systems?



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- **When a river is dry,
or when the level of an aquifer is lowering,
how can we feed the supply systems?**



DEFINING ROLES AND RESPONSIBILITIES OF EACH:



Multilateral organizations

International commissions

Central or federal government

Local authorities = states (Federation)
= municipalities
= villages

Large public regional planners

basin organizations?

Water users : = community

= individuals

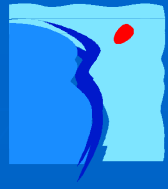
Civil Society : = enterprises
= researchers
= NGOs



MAIN BASIC FUNCTIONS



- ❑ **International agreements**
- ❑ **Legislation - Regulations**
- ❑ **Standardization**
- ❑ **Authorizations for abstraction or discharge - Water policing**
- ❑ **Monitoring**
- ❑ **Follow-up of the environment and uses**
- ❑ **Warning and protection**
- ❑ **Planning**
- ❑ **Funding - Programming**
- ❑ **Investments**
- ❑ **Operation - Maintenance**
- ❑ **Research**
- ❑ **Training**
- ❑ **Information**



DEFINING ROLES AND RESPONSIBILITIES OF EACH:



- **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,

Institutions may be effective only:

- if they have mandates clearly defining their tasks and responsibilities, and
- if they have the necessary and sufficient human, technical and financial resources and their sustainability guaranteed.



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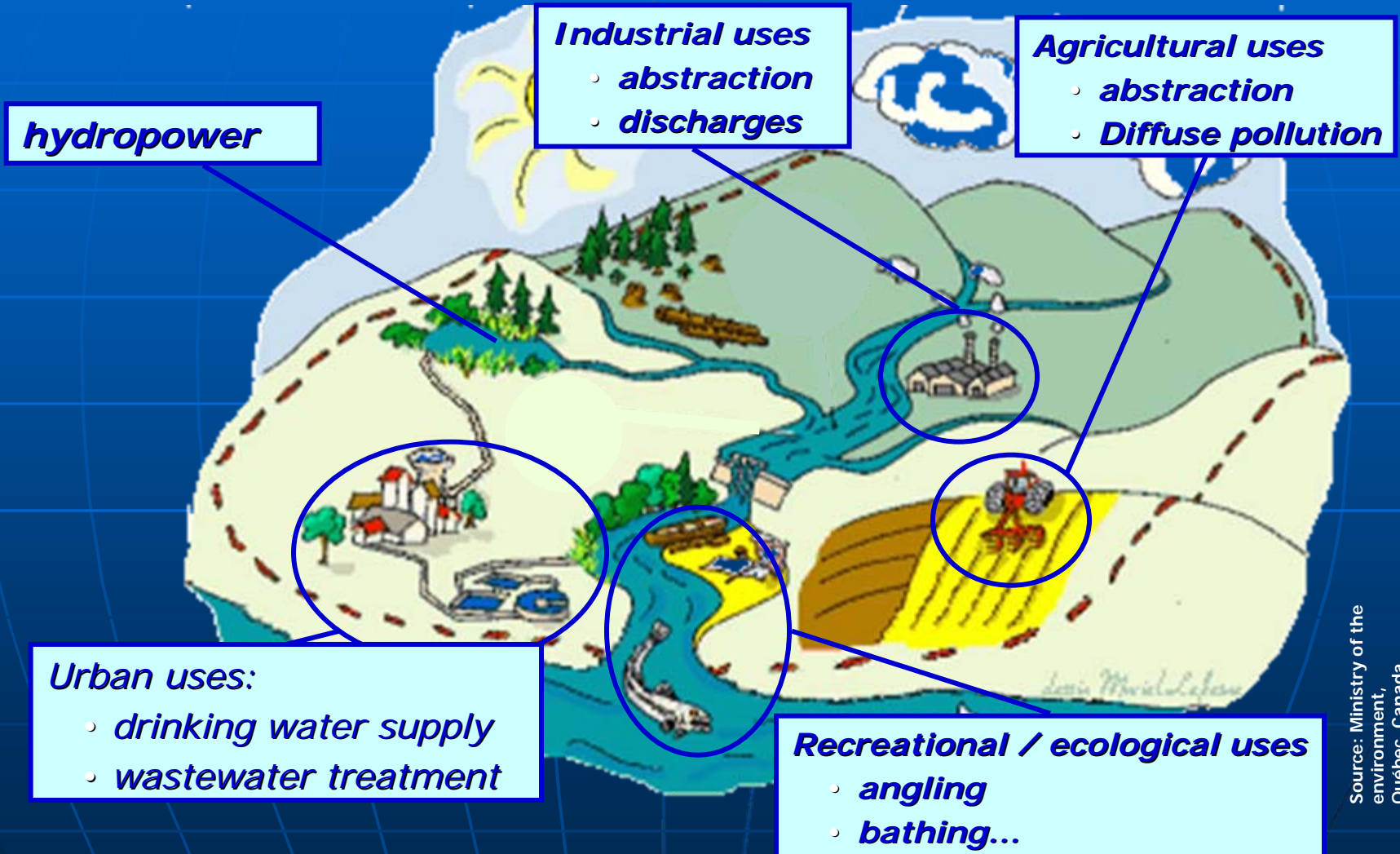


INTEGRATED WATER RESOURCE MANAGEMENT

- 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



ALL THE MAJOR WATER USES ARE CONCERNED





As everything is linked in each Water Body,

it's important to take into account :

- all the aspects of water management and their impacts,
- the problems of water sharing and Environmental flow,
- the problems of quality of water and the aquatic ecosystems,
- **AND**, in particular, obvious interfaces with navigation, energy production, the prevention and protection against floods and droughts,

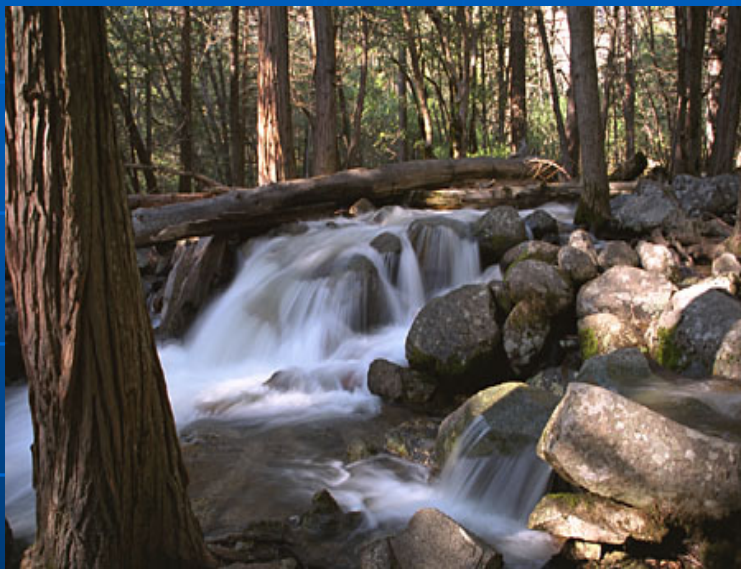


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All kinds of water Are taken into consideration



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- * surface waters
- * groundwater



- * transitional water
- * coastal waters



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A PARTICIPATORY WORKING METHOD:



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**THE PREREQUISITE
TO REAL TRANSPARENCY
IS THE EFFECTIVE PARTICIPATION
OF THE PUBLIC,
THROUGH PLANNED CONSULTATIONS
AND
INSTITUTIONAL ARRANGEMENTS
ORGANIZING THIS OFFICIALLY.**



Conflicts

requirements collected from each point of view

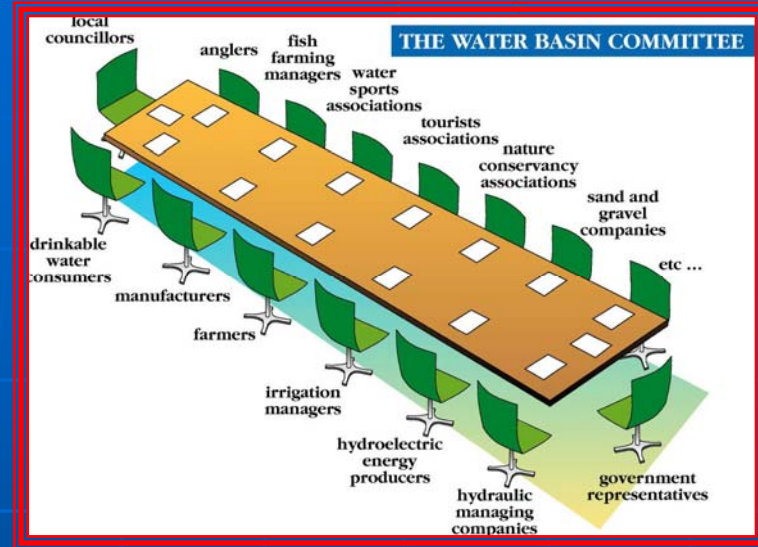


Designing a program through **dialogue**



Reaching **agreement** with an ambitious program





2) 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,

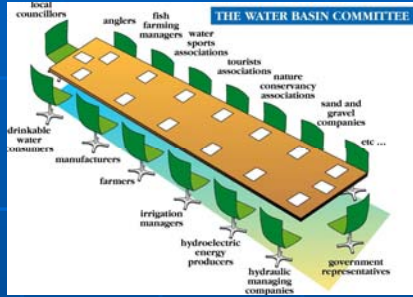
especially, in Basin Councils or Committees.

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



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STATE



**AUTHORIZATION
FOR ABSTRACTIONS
AND DISCHARGES**

DIALOGUE

**FUNDING
AND
PROGRAMMING**

**BUILDING
AND OPERATION
OF INFRASTRUCTURES**

- Water Agencies
- River Basin Committees

- State administrations
- Municipalities
- Industrialists
- Farmers
- Developers



DIALOGUE



- Regions - Provinces
- Departments
- Municipalities
- Regional Development Companies
- Industrialists
- Farmers
- Fish farmers
- Fishermen
- Inland navigation
- Electricity Operators
- Carriers
- Protectors of nature
- Associations of consumers, etc ...

Dialogue could be institutionalized at 3 levels

1

At national level

National Water Committee

Orientation of national policy, laws, regulations

2

At the level of the rivers, lakes, aquifers basins

River Basin Committee

- Basin Management Plans
- Priorities for the programmes of investments and Measures
- Water charges or taxes

3

At the level of tributaries and aquifers

Local Water Commission

- Local Management Plans and actions programmes,
- Setting up local water communities



water resources management should be organized:



Example of SINA and SIRA in Mexico

3) 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.



If we cannot measure, we cannot manage!!



DIALOGUE



INFORMATION

- Resources
 - Surface water (Rivers – Lakes)
 - Groundwater
- Use
 - Wetlands

- Quantity
- Quality
- Ecology

- Requirements
- Abstractions
- Discharges
 - Flowrates
 - Pollution

→ Seasonal variations

- Frequencies

→ Geographic locations

- G.I.S

→ Economical informations

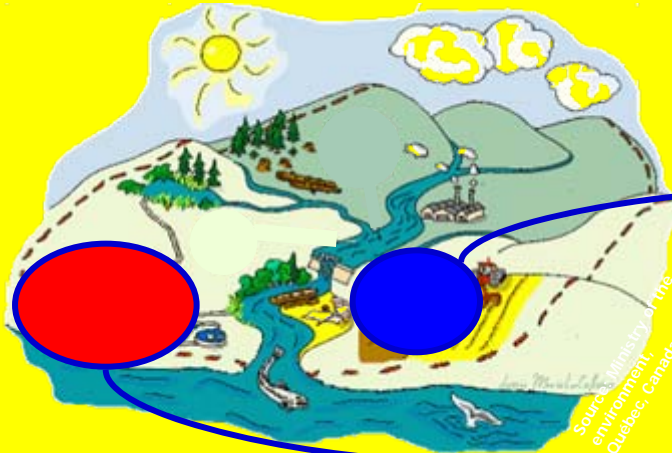
- Cost, budget...

water resources management should be organized:



2000

Description of the initial situation

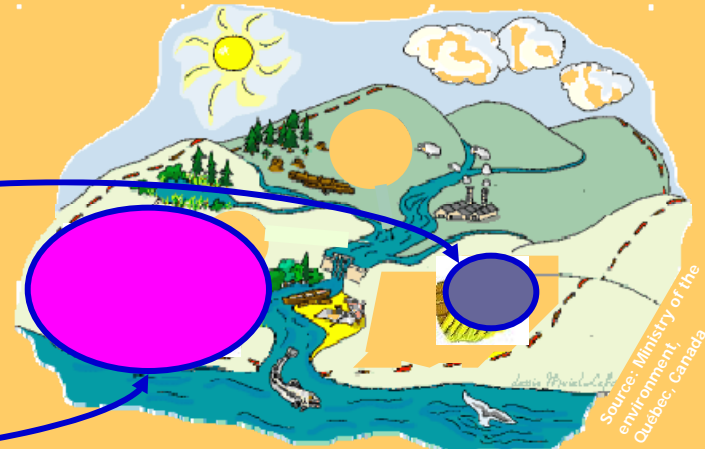


Focus on economic aspects:

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

2025

Baseline scenario: projection for 2025



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

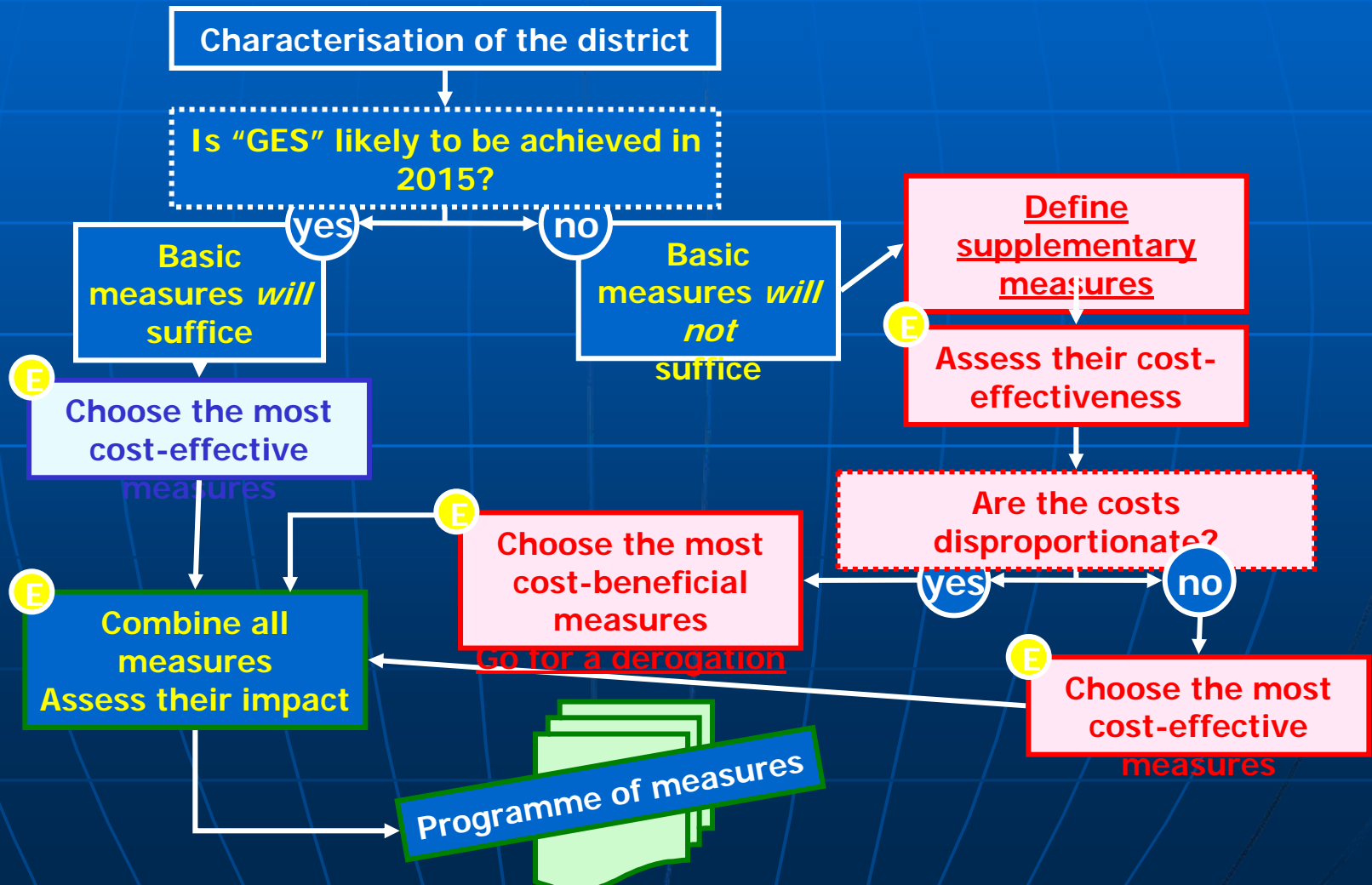
that define the medium and long-term objectives to be achieved;

As adaptation actions will take several decades before having a visible and significant effect

water resources management should be organized:



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



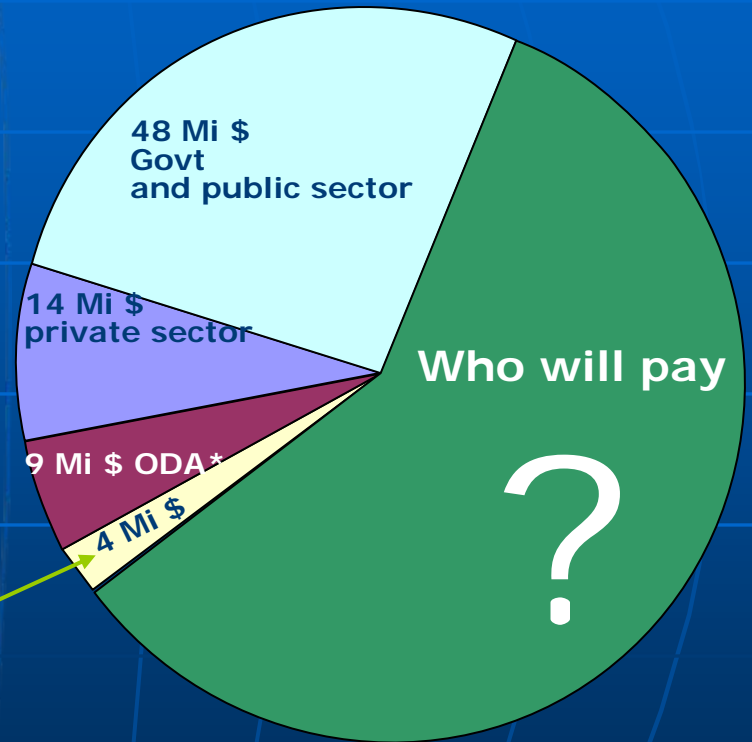
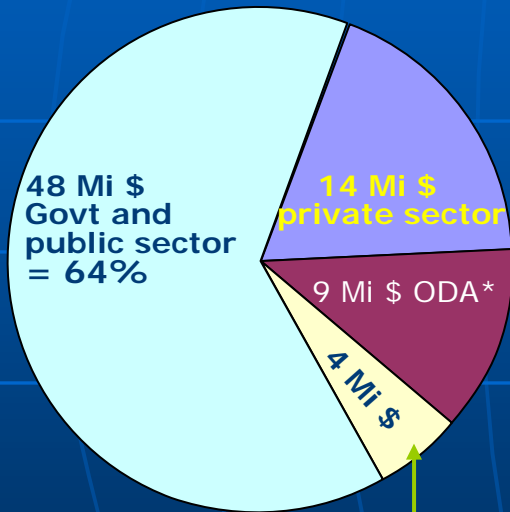
**IF WE ARE NOT ABLE TO MOBILIZE ENOUGH MONEY,
WE SHALL NOT HAVE THE FRESH WATER WE NEED!**



Who will pay ?

FOR THE NEXT 25 YEARS

NOW



75 milliards \$ / year

180 milliards \$ / year

* Official Development Assistance



TRANSPARENCY OF COSTS AND POLLUTER-PAYS PRINCIPLE:



- **DO THE CURRENT PRICES COVER THE COSTS OF THE SERVICE, I.E., THE OPERATING AND RENEWAL COSTS?**
- **DOES THE IMPLEMENTATION OF THE POLLUTER-PAYS PRINCIPLE ALLOW CHARGING TO THE POLLUTERS THE COSTS EQUIVALENT TO THE ENVIRONMENTAL DAMAGE THEY CAUSE?**
- **WHAT IS THE SHARING OF THE CHARGES BETWEEN THE DIFFERENT ECONOMIC SECTORS (HOUSEHOLDS, INDUSTRY, FARMING, ETC.)?**



TRANSPARENCY OF COSTS AND POLLUTER-PAYS PRINCIPLE:



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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



water resources management should be organized:



the mobilization of specific financial resources,

VARIOUS COMPLEMENTARY SYSTEMS FOR COST RECOVERY: THE 3x"T"

TAXES:

* Paid to the GENERAL STATE 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

TARIFFS 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.



FINANCING WATER POLICY :

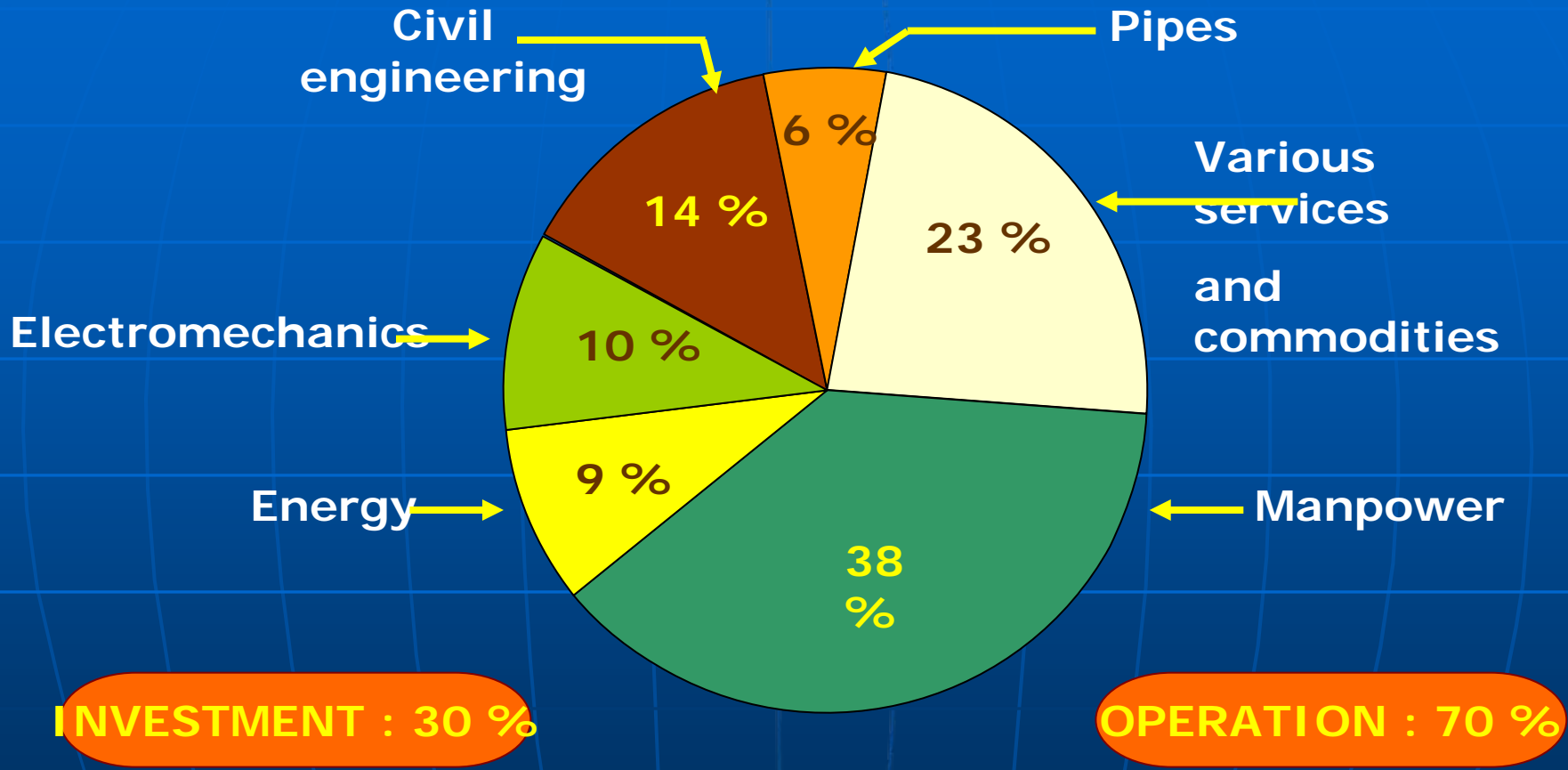


EQUALIZATION OF FINANCIAL EFFORTS:

- 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



STRUCTURE OF WATER PRICE IN %



Personnel costs represent :

- 38 % of the total water cost
- 55 % of operating costs



WATER PROFESSIONS - II -



The best staff structure in the water sector is estimated at :

- 500 to 700 staff members

* for 1,000,000 inhabitants covered by a water supply service

* for 1,000,000 inhabitants connected to a sewerage network

- 5 to 8 staff members

* per 1.000.000 m³ used in the other sectors
(*hydropower, industry, irrigation...*)

- 80 % of workers and technicians

15 % of middle managers-foremen

5 % of engineers and senior executives

- PROFESSIONAL WATER TRAINING IS NEEDED!





Indeed, basins are the natural territories,
in which water runs,
on the soil or in the sub-soil,
whatever are the national or administrative boundaries
or limits crossed.



An overall approach should be organized
on the relevant scale
of basin areas of rivers, lakes and aquifers,



water resources management should be organized:



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

It is necessary to repeat the obvious:

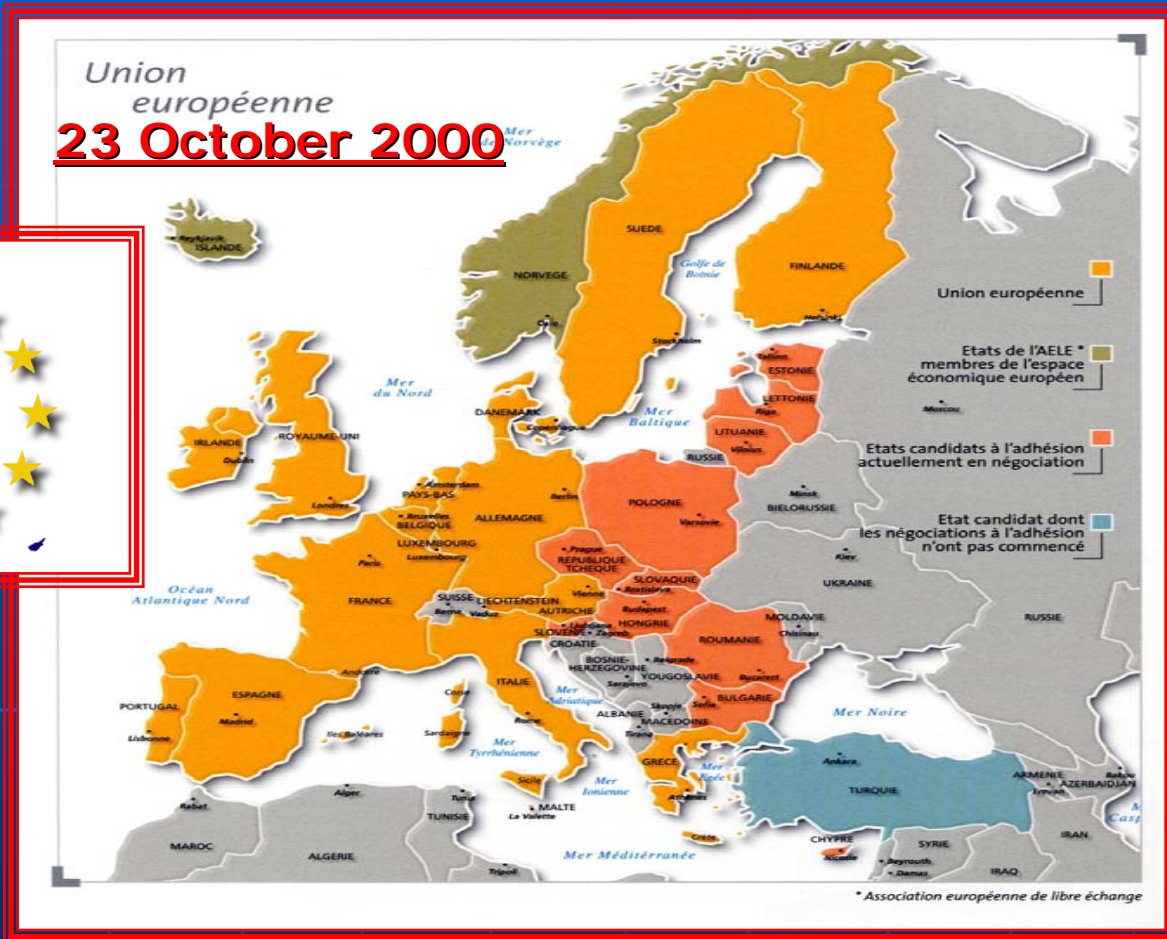
The basins of rivers, lakes and aquifers are the natural geographic areas where water flows on the soil or in the ground, from upstream to downstream, whatever are the administrative boundaries or limits crossed.

The European Framework Directive:



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In Europe, for the first time in the world,
28 countries adopted
The same basin oriented approach!



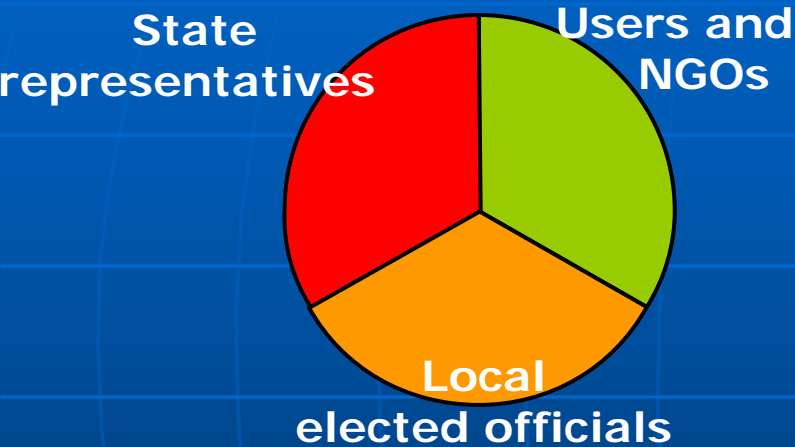
In particular and whatever the historical, political and socioeconomic situation, this integrated water resources management requires the establishment of bodies, in the form of basin organizations, agencies, commissions or authorities, adapted to each situation. They need to have the means and necessary competences to fulfill their tasks, especially planning, coordination of initiatives, management of information systems, implementation of studies and research or education and awareness of the various partners.

Today, it is useless to "reinvent the wheel"
as all effective tools are available to move forward fast
if there is a political will to decide to do so! 😊 😊

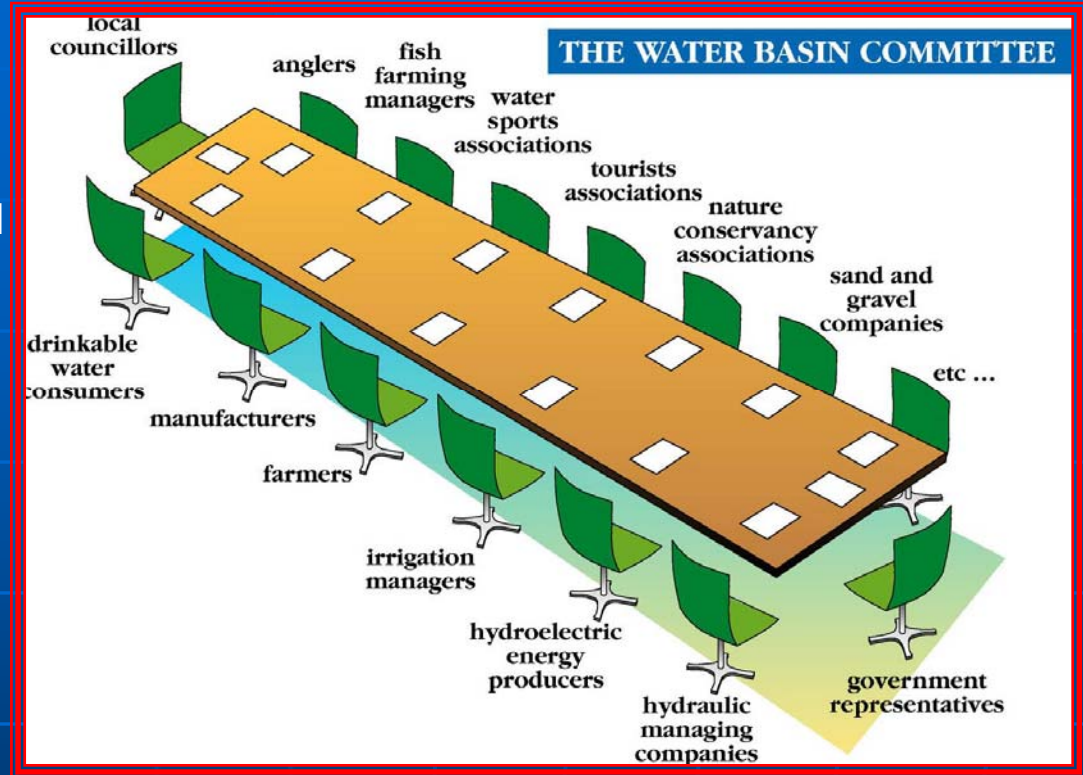
The creation and strengthening of basin organizations should be supported worldwide and ensure effective management of water resources and aquatic ecosystems!



«THE WATER PARLIAMENT»
The River Basin Committee



Elects the Chairman



- The representatives of populations and local authorities, water users or organizations representing collective interest participate in basin management beside administrations, especially, in 6 Basin Committees.



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 % ↓

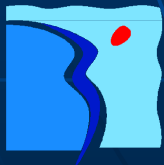
Aid = 6-year Program

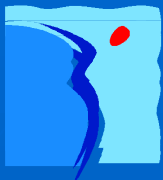
Big developers

Local authorities

Farmers

Industrialists





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Transboundary basins per continent.

| | | <i>2002</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> | | 263 | 45 % |



Transboundary basins:

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Many agreements were signed,
in the past centuries,
between riparian countries
of transboundary rivers, to ensure:

- free navigation,
- the share of river flows,
- the prevention of floods,
- the building of hydropower dams.



Transboundary basins:

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But,

today, there are still too few agreements,
conventions or treaties, dealing with:

- **pollution control,**
 - **aquifers management,**
- and, a fortiori,
- **the integrated management
of shared river basins.**



INTERNATIONAL NETWORK of TRANSBOUNDARY BASINS ORGANIZATIONS

*Appropriate integrated management of rivers, lakes or aquifers,
shared by several riparian countries,
is now of strategic significance :*

**For these large transboundary rivers and aquifers,
cooperation agreements
between the riparian countries
should be considered.**

*Several countries have already established
an appropriate basin organization
and a large number are considering doing so,
in cooperation with international organizations and programs.*



The Helsinki Convention on the protection and use of transboundary watercourses and international lakes of 17 March 1992 gives a cooperation framework in this field which is now applicable to all the countries of the world.

Moreover, the United Nations Convention of 21 May 1997, on the uses other than navigation on international watercourses, even if did not yet come into effect, defines principles recognized as a basis for relations among riparian States concerned.

Resolution A/RES/63/124, adopted in December 2008 by the General Assembly of the United Nations, offers to the States a legal framework for transboundary aquifers management.



- **To get things done, we need cooperation agreements on transboundary basins that lead to the establishment of international commissions, authorities or transboundary basin organizations.**
- Such commissions, authorities or international organizations allow: better dialogue, exchanging useful information, resolving potential conflicts, sharing benefits from better joint management and strengthening transboundary cooperation.



INVESTING IN IWRM... IT PAYS BACK!



■ 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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Give the future a chance!

**MERCI DE VOTRE ATTENTION!
THANK YOU FOR YOUR ATTENTION!**

International office for Water

PARIS - FRANCE

www.oewater.org



Investing in IWRM, it pays back!

