



流域组织国际网

Международная сеть водохозяйственных организаций,
Réseau International des Organismes de Bassin
International Network of Basin Organizations
Red Internacional de Organismos de Cuenca

الشبكة الدولية لهيئات الأحواض



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



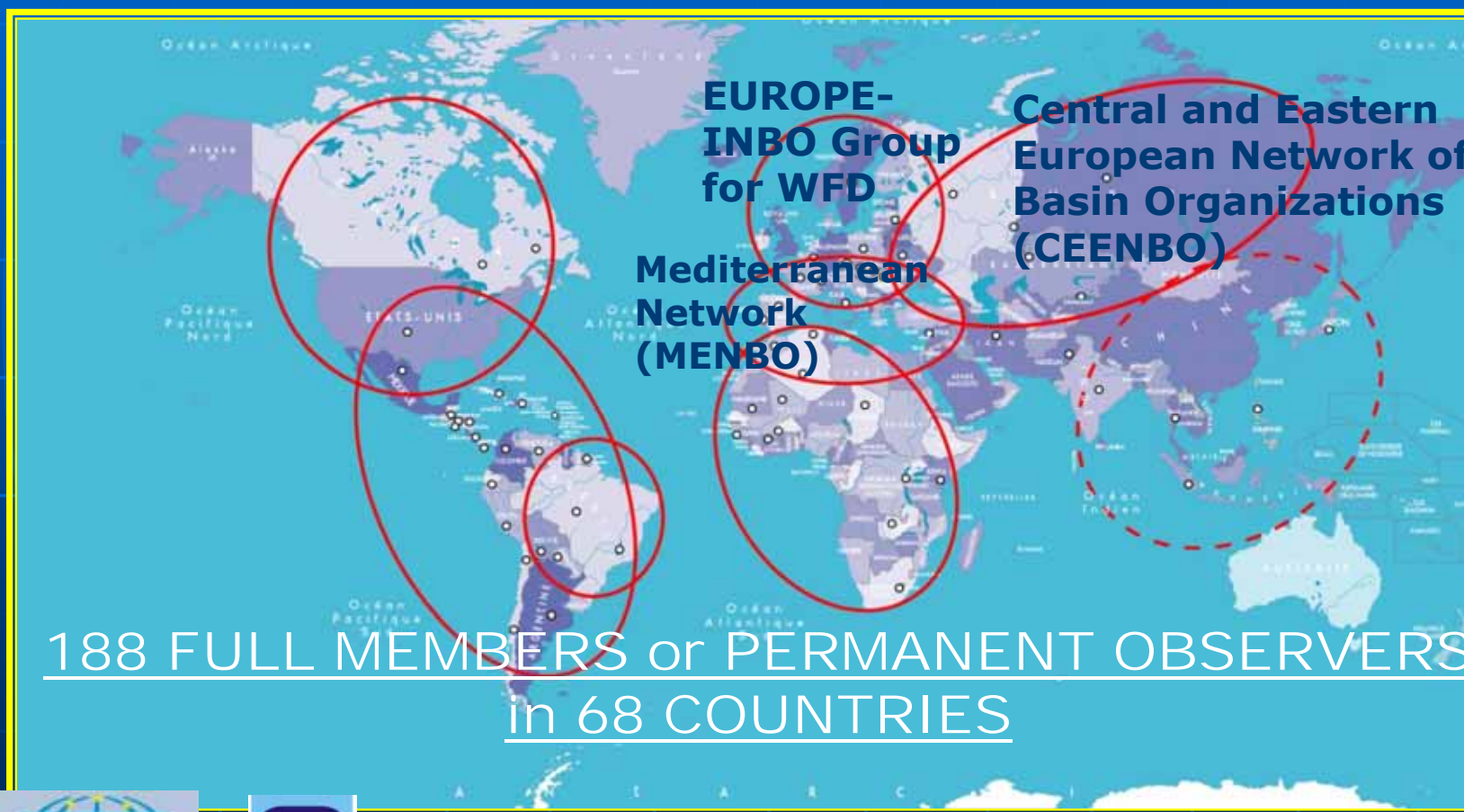
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INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

Created in 1994 to facilitate
operational exchanges between BO



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EUROPE-INBO



MENBO

C E E N B O

CEENBO



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WWF5 – Topic 3.1

4 questions were selected:



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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?*

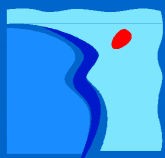
*What are the tools to
be used for better
basin management
and transboundary
cooperation over
surface and ground
water ?*

5th WORLD WATER FORUM
ISTANBUL 2009



BRIDGING
DIVIDES
FOR WATER





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TOWARDS A GLOBAL WATER CRISIS?

WATER OVER THE WORLD, A worrying situation!



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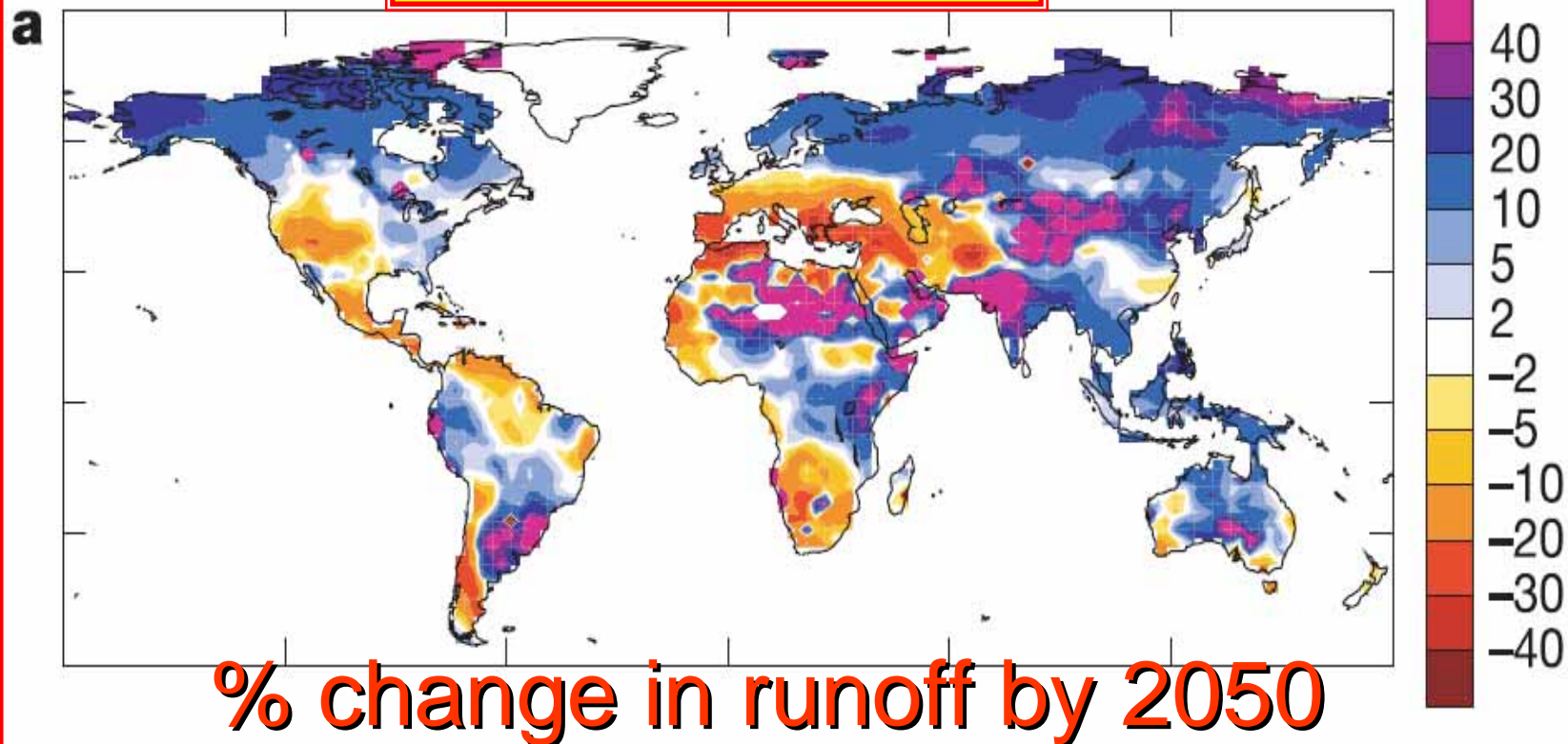
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**Global warming cannot now be avoided.
Fresh water resources
will be directly affected in the coming years!**



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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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water resources management should be organized:



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- 1) on the scale of local, national or transboundary basins of rivers, lakes and aquifers;
- 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.
- 3) based on management plans or master plans that define the medium and long-term objectives to be achieved;

A solution?

IWRM: Integrated Water Resources Management



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water resources management should be organized:



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- 4) through the development of Programs of Measures and multiyear priority investments;
- 5) with the mobilization of specific financial resources,
based on the « polluter-pays » principle and « user-pays » systems;
- 6) 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.

A solution?

IWRM: Integrated Water Resources Management



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**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,**



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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

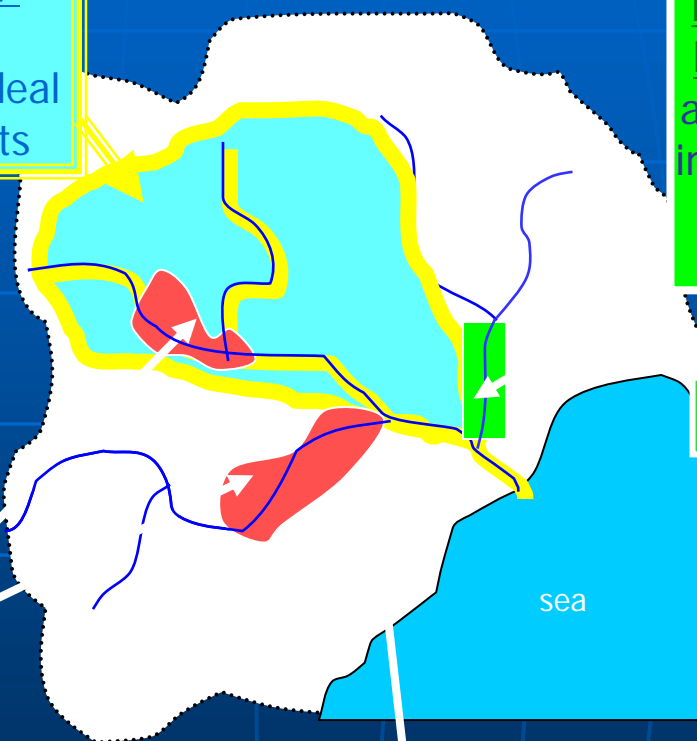
THE DIFFERENT HYDROLOGICAL SCALES:

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	<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 %



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In Europe a majority of basins are transboundary ones!



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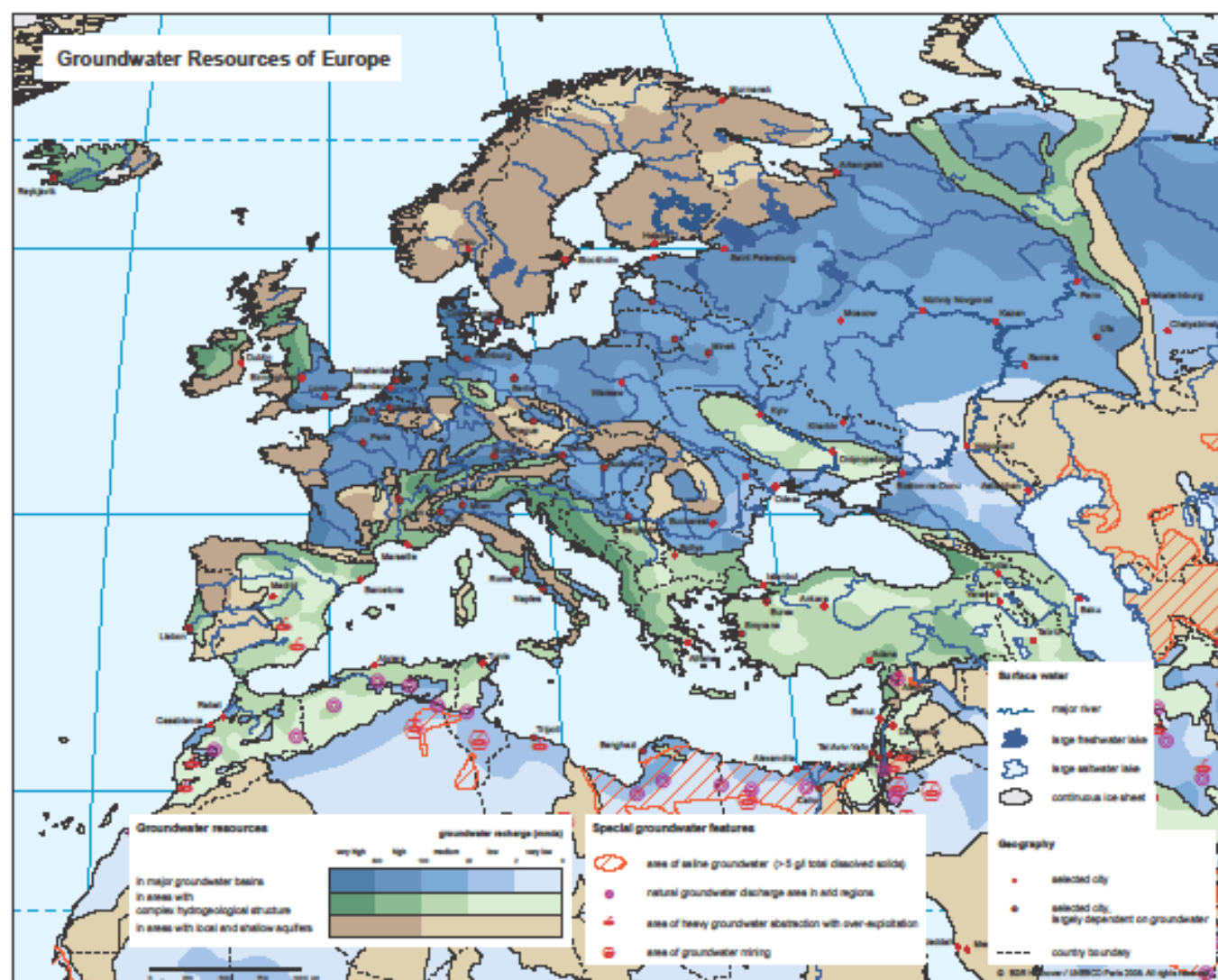


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The aquifers in Europe are also concerned:



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GENERAL ASSEMBLY

The Martinique, 24 – 28 January 2004

« DECLARATION OF TROIS-ILETS »



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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 all the basins, especially in International or transboundary Commissions, Authorities or Organizations.



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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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DIFFERENT TYPES OF BASIN ORGANIZATIONS:



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- **Administrative Commissions, with or without permanent secretariat,** in which mainly participate representatives of the « ministries » concerned to coordinate their various projects on the same river or aquifer, to exchange information or data, formalized or not, on emergency situations in particular, to define common rules (navigation, etc.), and whenever necessary, to allocate the available resources between the categories of uses, the countries or regions, especially in periods of crisis or when regulation structures do exist, etc.,
- **Arbitration « Authorities »,** to which the interested « parties » refer for decision-making on the conflicts which arise; this is the case of the **Joint International Commission** (IJC) between the USA and Canada, for example.



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DIFFERENT TYPES OF BASIN ORGANIZATIONS:



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- **Organizations taking charge of contracting large structuring or combined installations;**

this is the case for navigation, flood control, the building of reservoirs, especially for irrigation, hydropower production, etc.

These organizations, often created as public or private « companies » have usually the concession of community facilities for which they are responsible for their construction and long-term management, generally for providing services, raw water or by levying specific taxes.

- **« Agencies »**, which are in charge of carrying out tasks for medium-term planning and for collecting taxes on abstractions and discharges to finance or support the investments necessary for achieving the set objectives. In some cases, they can also be responsible for water policing, studies, data production or collection, etc.



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IWRM



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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



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IWRM CONCERNS

ALL MAJOR WATER USES

hydropower

Industrial uses

- abstraction
- discharges

Agricultural uses

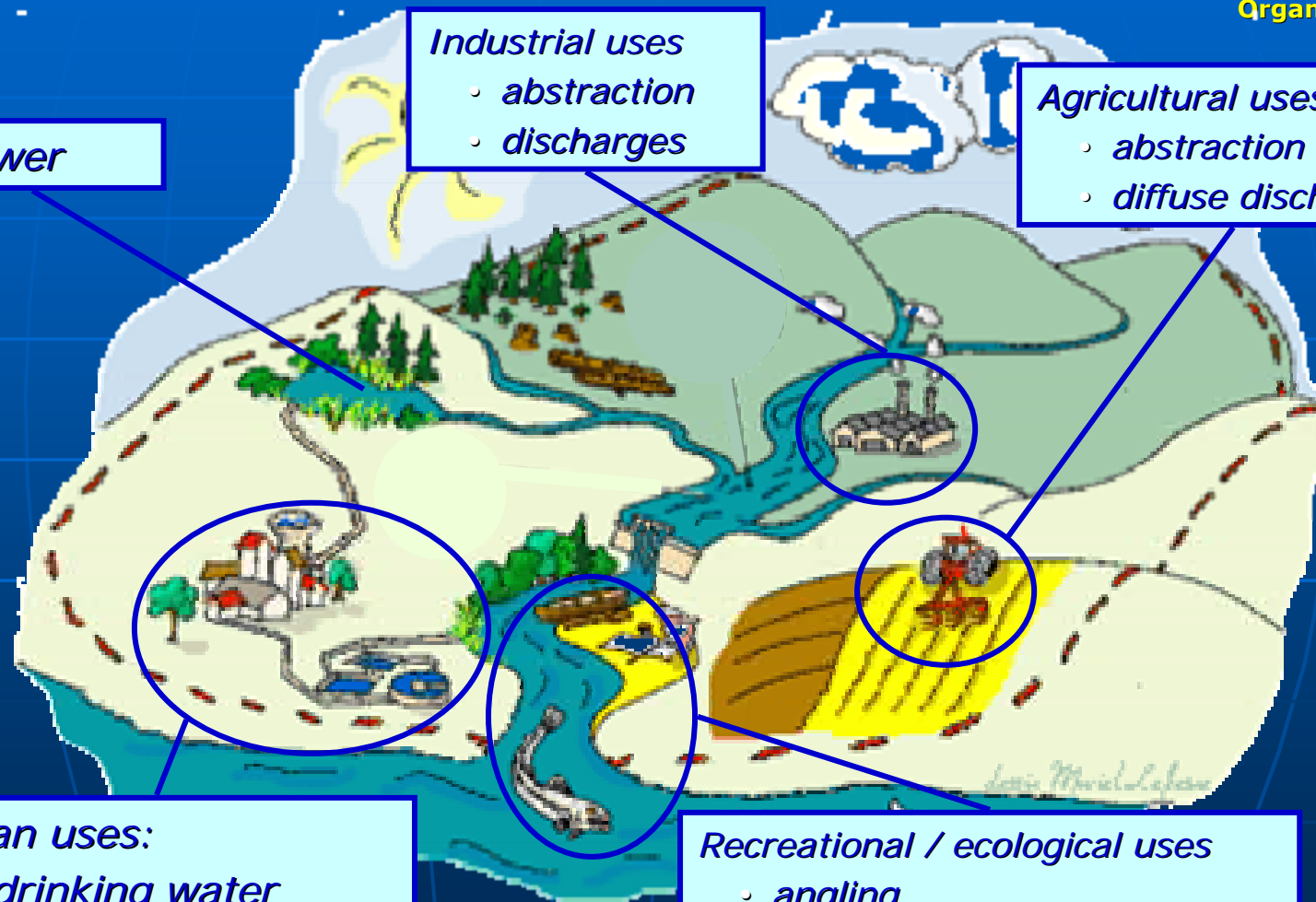
- abstraction
- diffuse discharges

Urban uses:

- drinking water supply
- wastewater treatment

Recreational / ecological uses

- angling
- bathing...



Source: Ministry of the environment,
Québec, Canada



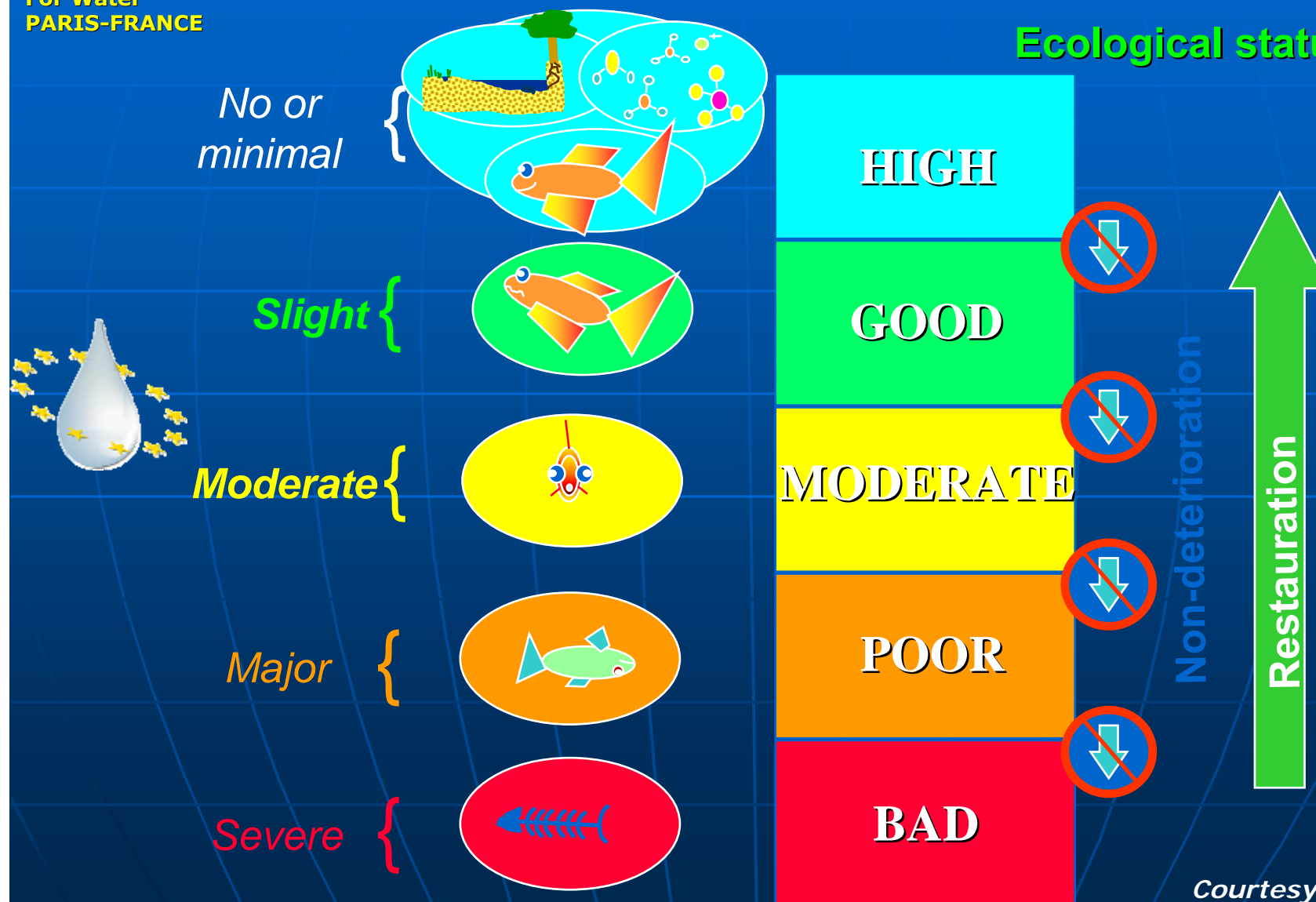
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Ecological objectives

Ecological status



Courtesy Peter Pollard



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FLOOD CONTROL: FORECAST, PREVENTION, PROTECTION

- **Foreseeing hazardous events,**
- **Reducing vulnerabilities,**
- **Protecting people and properties,**
- **Warning and educating.**



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WITH REGARD TO DROUGHTS:



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- **WATER SAVING,**
- **AVOIDING WASTAGES,**
- **LEAK DETECTION,**
- **RECYCLING,**
- **THE REUSE OF TREATED WASTE WATER,**
- **GROUNDWATER RECHARGE,**
- **THE DESALINATION OF SEA WATER,**
- **RESEARCH ON LOW-CONSUMPTION USES...**

... MUST BECOME PRIORITIES.



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GENERAL ASSEMBLY

The Martinique, 24 – 28 January 2004

« DECLARATION OF TROIS-ILETS »



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- The representatives of populations and local authorities, water users or organizations representing collective interest should participate in this management beside administrations, especially, **in Basin Councils or Committees.**
- Information, awareness and education of populations or users and of their representatives are essential,

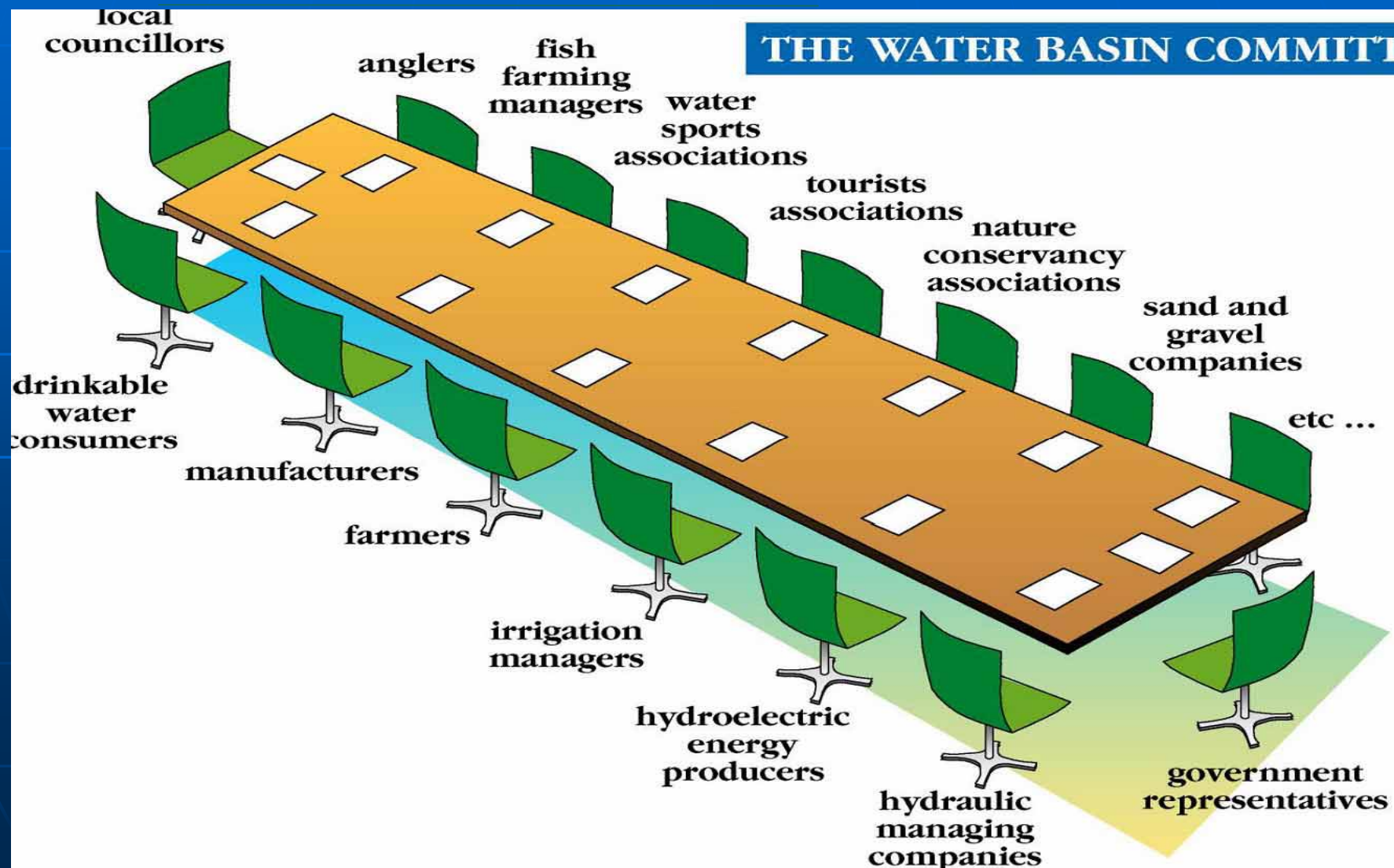


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A River Basin Agency is integrating various stakeholders



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Conflicts

requirements collected
from each point of view



Designing a program
through **dialogue**



Reaching **agreement**
with an ambitious program





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Integrated information and monitoring systems



International

The National Water Commission

- Allows consistency at national level,
- Defines policy directives,
- Deals with inter-basin strategies and national security.

The Basin Organizations

- Prepare the basin plan,
- Manage the national waters in the basin,
- Coordinate integrated management,
- Harmonize specific actions,
- Facilitate and assist in the involvement of the society through the Basin Council Assembly.

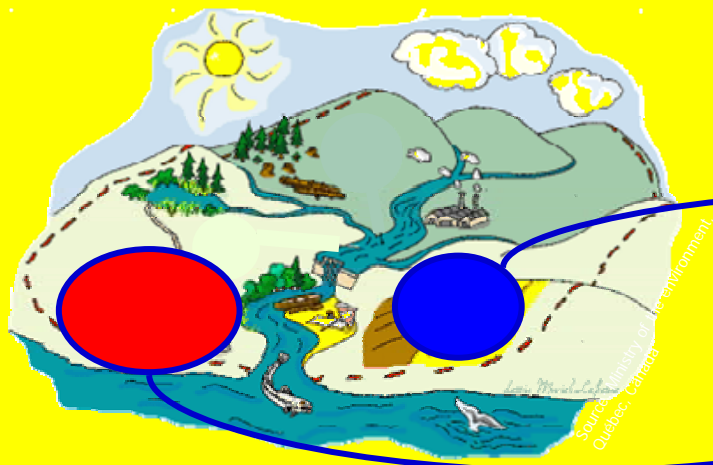
- Integrated information and monitoring systems which are reliable, representative, harmonized and easily accessible, and specific research should be organized in each basin,



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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



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2015

Baseline scenario: projection for 2015



Baseline scenario:

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

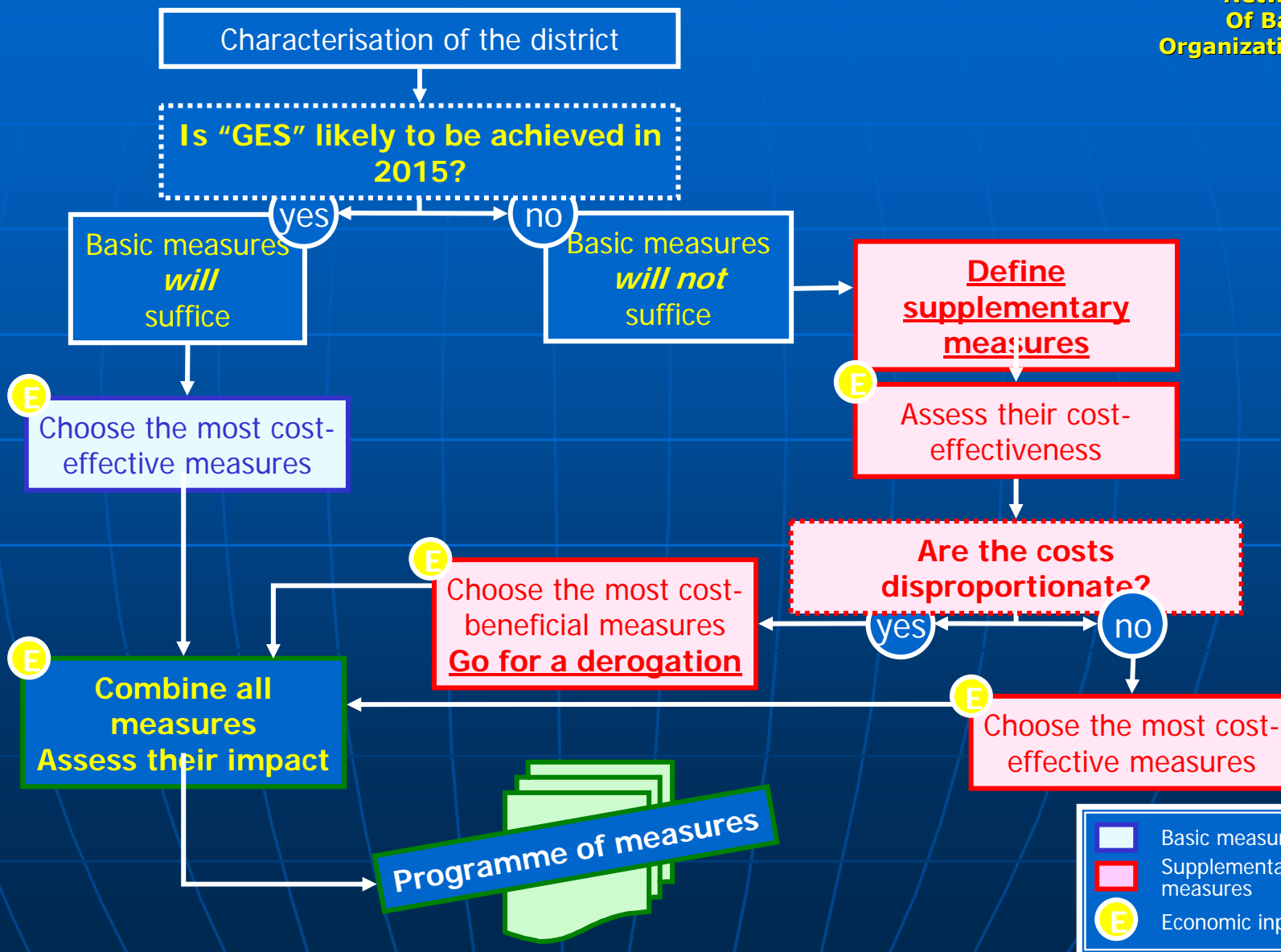


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FLOW CHART OF THE CONSTRUCTION OF THE PROGRAMME OF MEASURES



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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



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THE « POLLUTER - USER – PAYS » PRINCIPLE

**Abstraction
taxes**

**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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23 October 2000



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



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The European Water Framework Directive



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VERY AMBITIOUS CHALLENGES:

- PREVENTING THE DETERIORATION
OF WATER RESOURCES,
- REDUCING THE EMISSIONS OF SUBSTANCES,
- ACHIEVING A "GOOD STATUS"
FOR WATER AND AQUATIC ENVIRONMENTS.



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As everything is linked in each Water Body,
for a real implémentation of the WFD,



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it's important to take into account:

- not only the problems of quality of water and the environments,
- **BUT**, all the aspects of water management and their impacts,
- **AND**, in particular, obvious interfaces with navigation, energy production, the prevention and protection against floods and droughts,

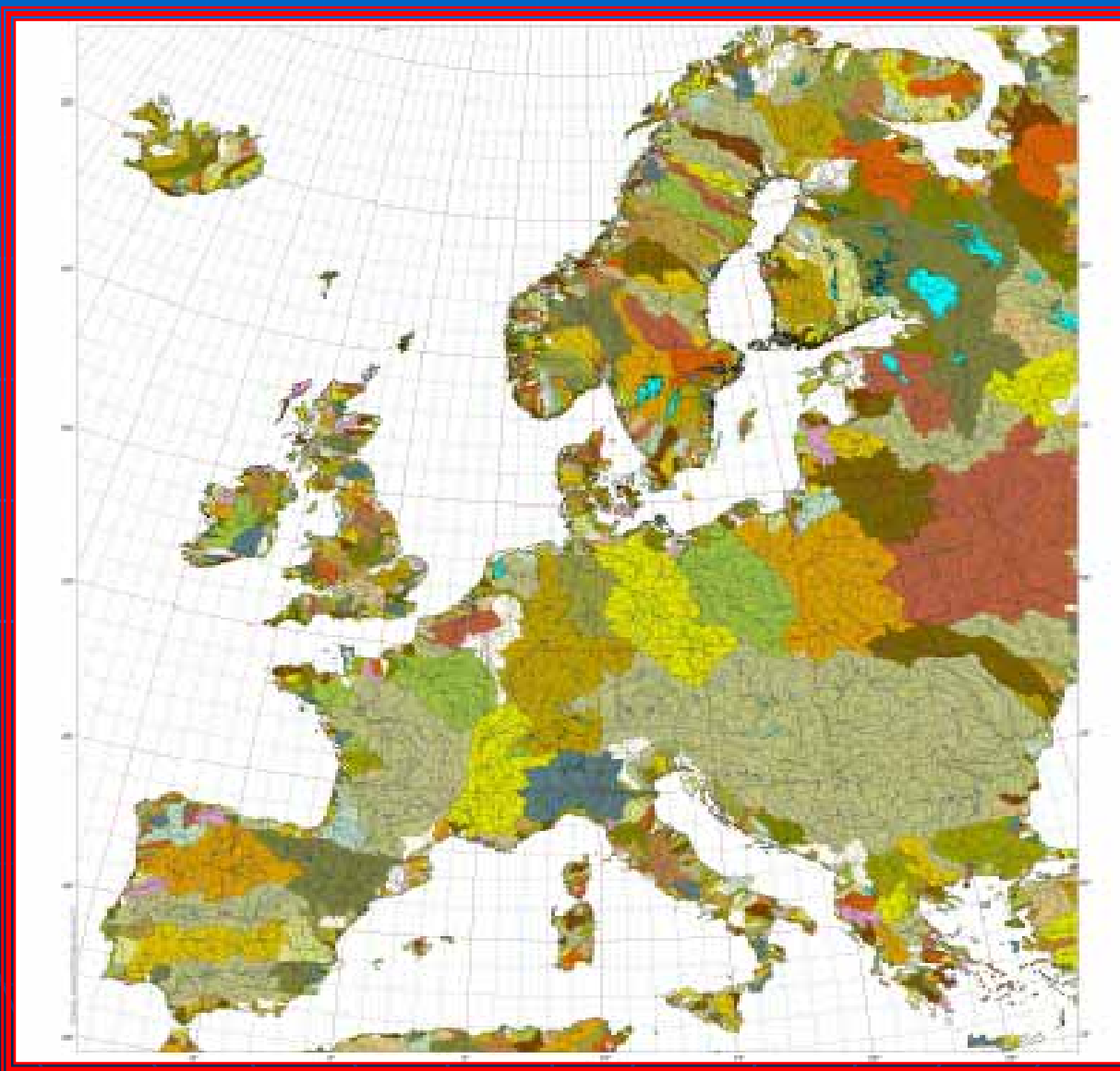


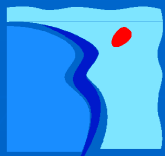
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All the river basins in Europe are concerned:



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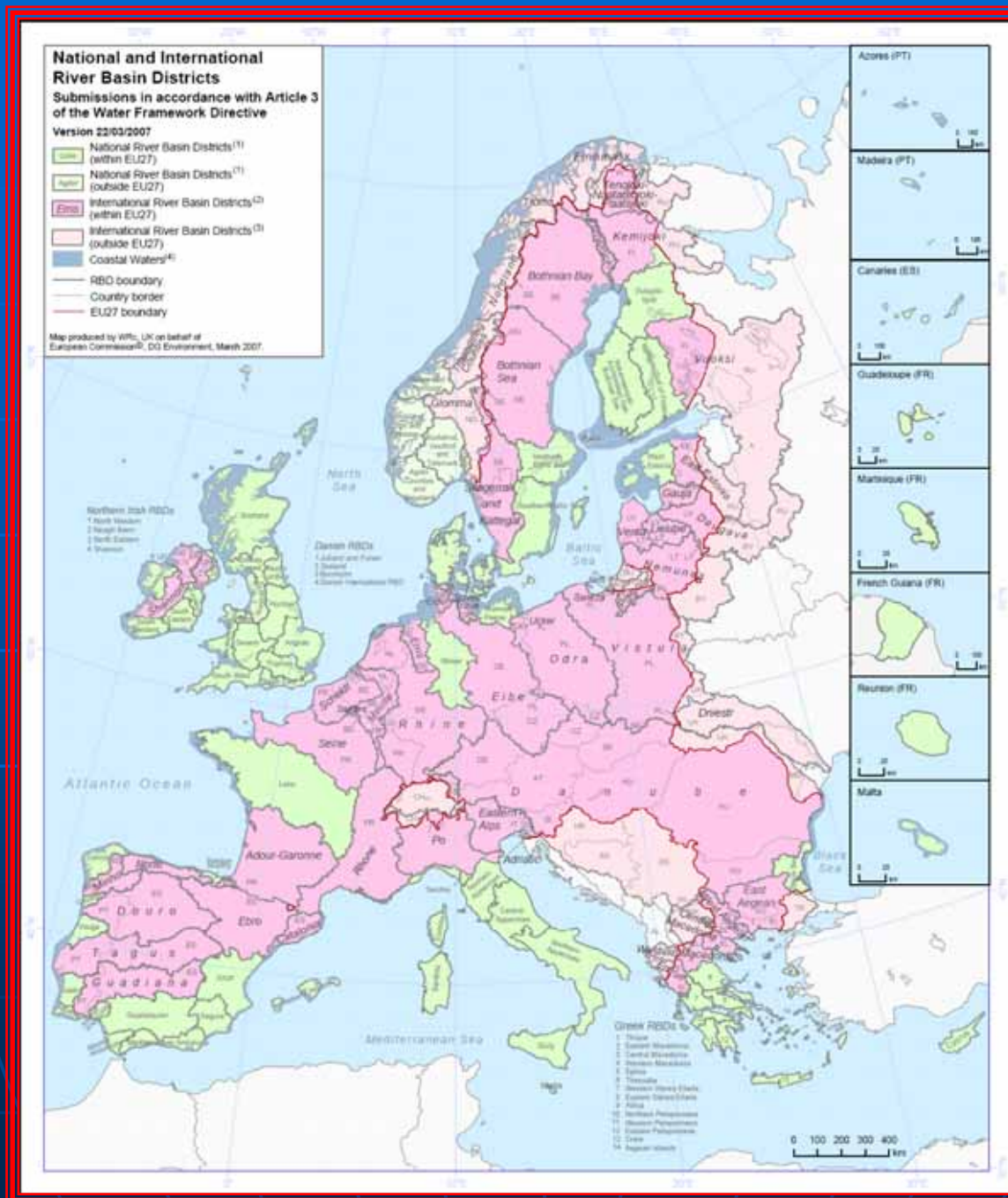




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50,000 "WATER BODIES" have been identified:

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

Legend:

- evergreen sclerophyllous plants
- semi-deciduous sclerophyllous plants
- dry grassy mobile mountains
- extensive steppe
- semi-arid mobile mountains
- tundra
- alpine plants
- mediterranean sclerophyllous plants
- mediterranean forest plants
- mediterranean alpine plants
- mediterranean indigenous plants

➤ 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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the European Water Framework Directive

■ **FOR EACH DISTRICT,
MUST BE FORMULATED:**

- A **"MANAGEMENT PLANS"**,
DEFINING THE OBJECTIVES TO ACHIEVE,
AND
- **"PROGRAMS OF MEASURES"**,
DEFINING THE NECESSARY ACTIONS.

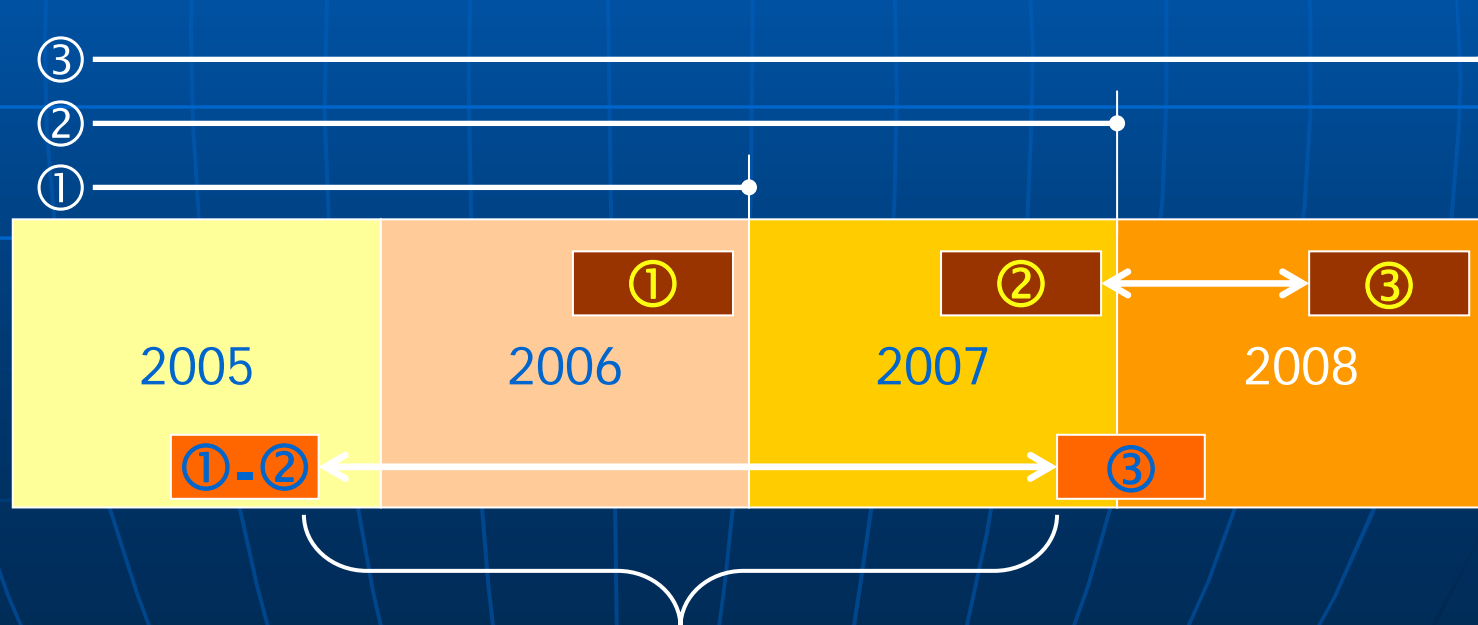


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Obligations of the directive

Member States have to consult the public on :

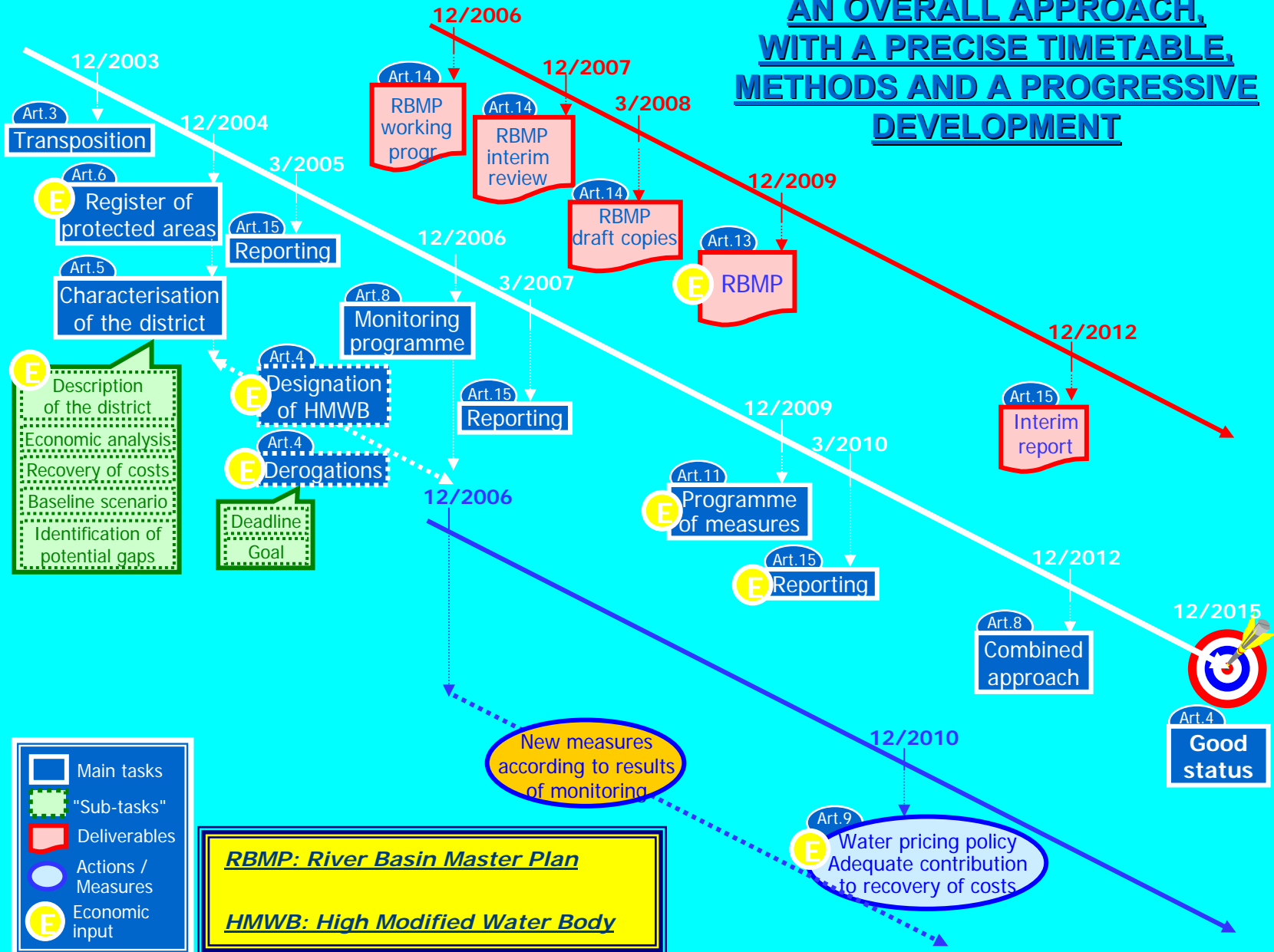
- ① the timetable and work programme,
- ② an overview of the significant water management issues identified in the river basin
- ③ draft copies of the river basin management plan



In France a operational national timetable



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CIS Achievements



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Seventeen Guidance Documents

- 1) Economics and the Environment
- 2) Identification of Water Bodies
- 3) Analysis of Pressures and Impacts
- 4) Artificial and Heavily Modified Water Bodies
- 5) Transitional and Coastal Waters –Typology, Reference Conditions
- 6) Intercalibration Network and the Intercalibration Process
- 7) Monitoring
- 8) Public Participation
- 9) GIS and the WFD
- 10) Rivers and Lakes Typology
- 11) Planning Process
- 12) Wetlands
- 13) Classification
- 14) Reporting...





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Basin Management and Transboundary cooperation



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

MERCI DE VOTRE ATTENTION!
THANK YOU FOR YOUR ATTENTION!

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riob2@wanadoo.fr

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Vízgyűjtő Szervezetek Nemzetközi Hálózata

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INBO initiatives are open
to your participation :
your inputs are welcome !

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***For developing and strengthening
basin organizations over the world***