

水资源
国际办公室
巴黎



流域组织
国际网

报告人

Jean-François DONZIER

总负责人

水资源国际办公室

常务技术秘书

流域组织国际网

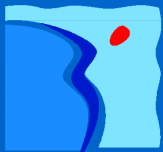
Mr. Jean - François DONZIER

General Manager

International Office for Water

Permanent Technical Secretary

INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS



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**International
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**In the European Union, for the first time in the World,
28 EU countries + 2 adopted
The same basin oriented approach!**

■ **Directives:**

- **Water Framework Directive**
- **Groundwater Directive**
- **Directive on Environmental Quality Standards (EQS)**
- **Urban Waste Water Directive**
- **Nitrates Directive**
- **Floods Directive**

■ **+ quantitative and adaptive water management issues:**

- **Communication on Water Scarcity and Drought**
- **Policy paper accompanying the White Paper on Adapting to Climate change on Water, Coasts and Marine Issues.**



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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,**



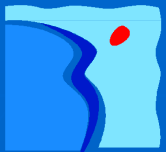
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All the river basins in Europe are concerned:



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

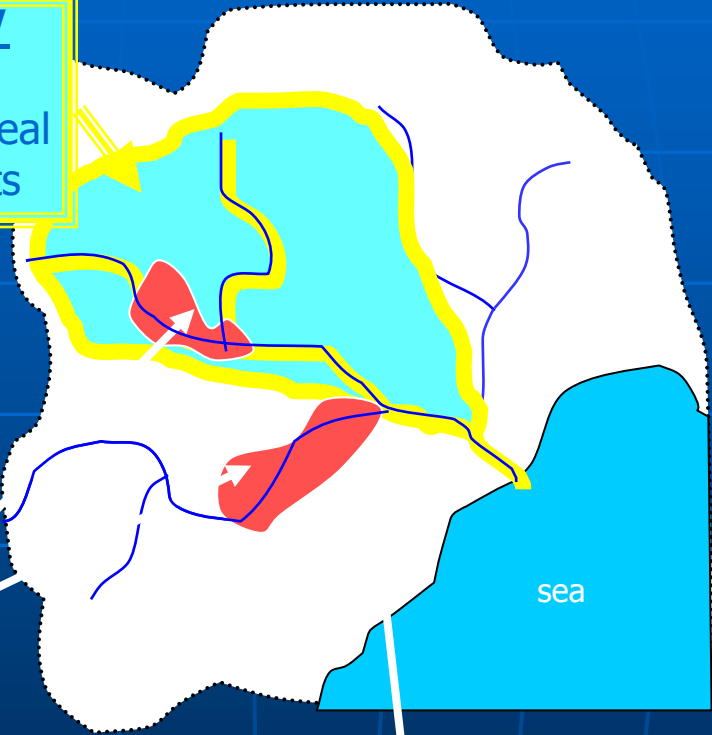


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**Sub-basin/Sector/
Water type**
element of district to deal
with particular aspects

THE DIFFERENT HYDROLOGICAL SCALES:

Water bodies
scale of evaluation
of the achievement
of good status



District =
river basins + associated
groundwaters and coastal waters



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**Implementation of
the European Water Framework Directive
in the 28 countries**

of the enlarged European Union,

**as well as in the candidate countries for accession,
is a major milestone for promoting the principles
of good governance advocated by INBO.**

Directive 2000/60/EC of 23 October 2000

establishing a framework for the Community action in the field of water policy.



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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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The concept includes all

SURFACE and



Groundwater



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

it's important to take into account:



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



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River Basin Management Plan



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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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THE EUROPEAN UNION'S FLOODS DIRECTIVE PLANS A NEW APPROACH PASSING THROUGH:

- A PRELIMINARY FLOOD RISK ASSESSMENT**
- THE SELECTION OF AREAS WITH SIGNIFICANT POTENTIAL FLOOD RISK,**
- HAZARD AND RISK MAPPING OF THESE AREAS,**
- APPROVAL OF FLOOD RISK MANAGEMENT PLANS ,**
- AND OF THEIR PROGRAMMES OF MEASURES BY DECEMBER 2015.**

**IN THE TRANSBOUNDARY BASINS IN PARTICULAR,
COOPERATION BETWEEN RIPARIAN STATES SHOULD BE PROMOTED
FOR JOINTLY LOOKING FOR COORDINATED SOLUTIONS
AND FOR SHARING INFORMATION AND RESPONSIBILITIES..**



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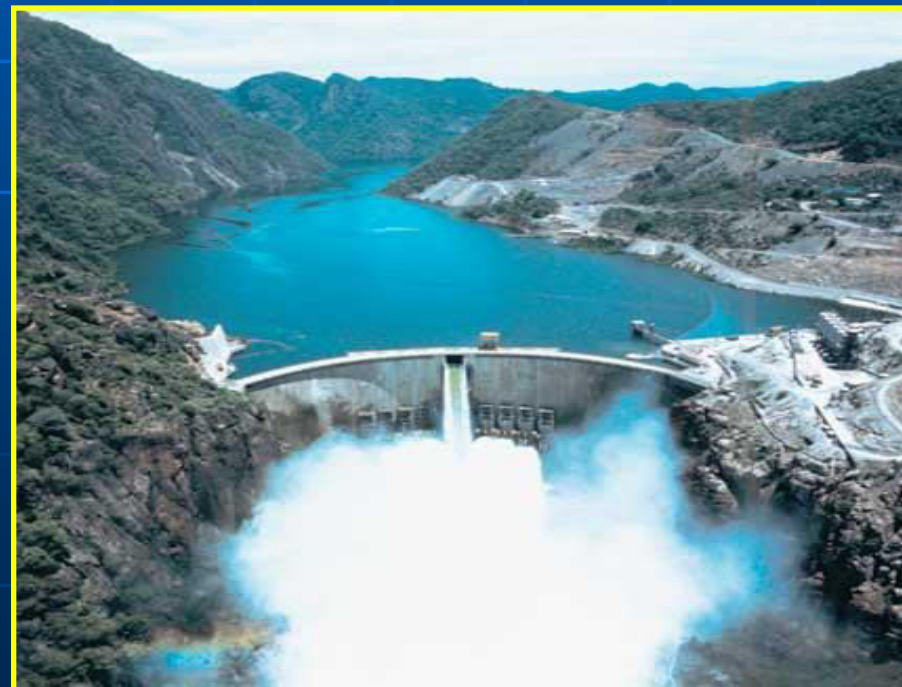
WITH REGARD TO DROUGHTS:



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WATER SCARCITY MANAGEMENT PLANS SHOULD PRIORITIZE THE VARIOUS USES, ENSURING A BETTER OPTIMIZATION OF WATER AND AVOIDING WASTAGES.

MOBILIZING NEW RESOURCES SHOULD BE PLANNED WHEN THEY ARE ECOLOGICALLY ACCEPTABLE AND ECONOMICALLY REASONABLE.





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WITH REGARD TO DROUGHTS:



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AVOIDING WASTAGES

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

... MUST BECOME PRIORITIES.

Natural Water Retention Measures

NWMMR as one of the responses can:

- *reduce impact of diffuse pollution,*
- *regulate the flow regime in natural pattern*
- *reduce vulnerability to Climate Change,*
- *restoring the deteriorated morphological element on the riparian area and the floodplain,*
- *improve water status (surface and groundwater) (incl. DW, BW),*
- *be a Better Environmental Option for Flood risk management supporting Natural Flood Risk Management.*



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AN OBLIGATION OF RESULT



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*General
obligation*

*Actions defined
with regards
to the goal*

*Good
status*

*Derogations to be
justified*

Achieving
a "good status"
for surface
and ground waters
With 3 steps:

- 2015
- 2021
- 2027



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the European Water Framework Directive

Forecast 3 Planning cycles ...

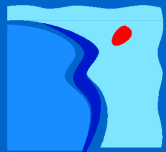
To reach these objectives ☺

2010–2015/2016–2021/2022–2027



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- **FOR EACH DISTRICT,
MUST BE FORMULATED:**
 - **A "MANAGEMENT PLANS",
DEFINING THE OBJECTIVES TO ACHIEVE,
AND**
 - **"PROGRAMS OF MEASURES",
DEFINING THE NECESSARY ACTIONS.**

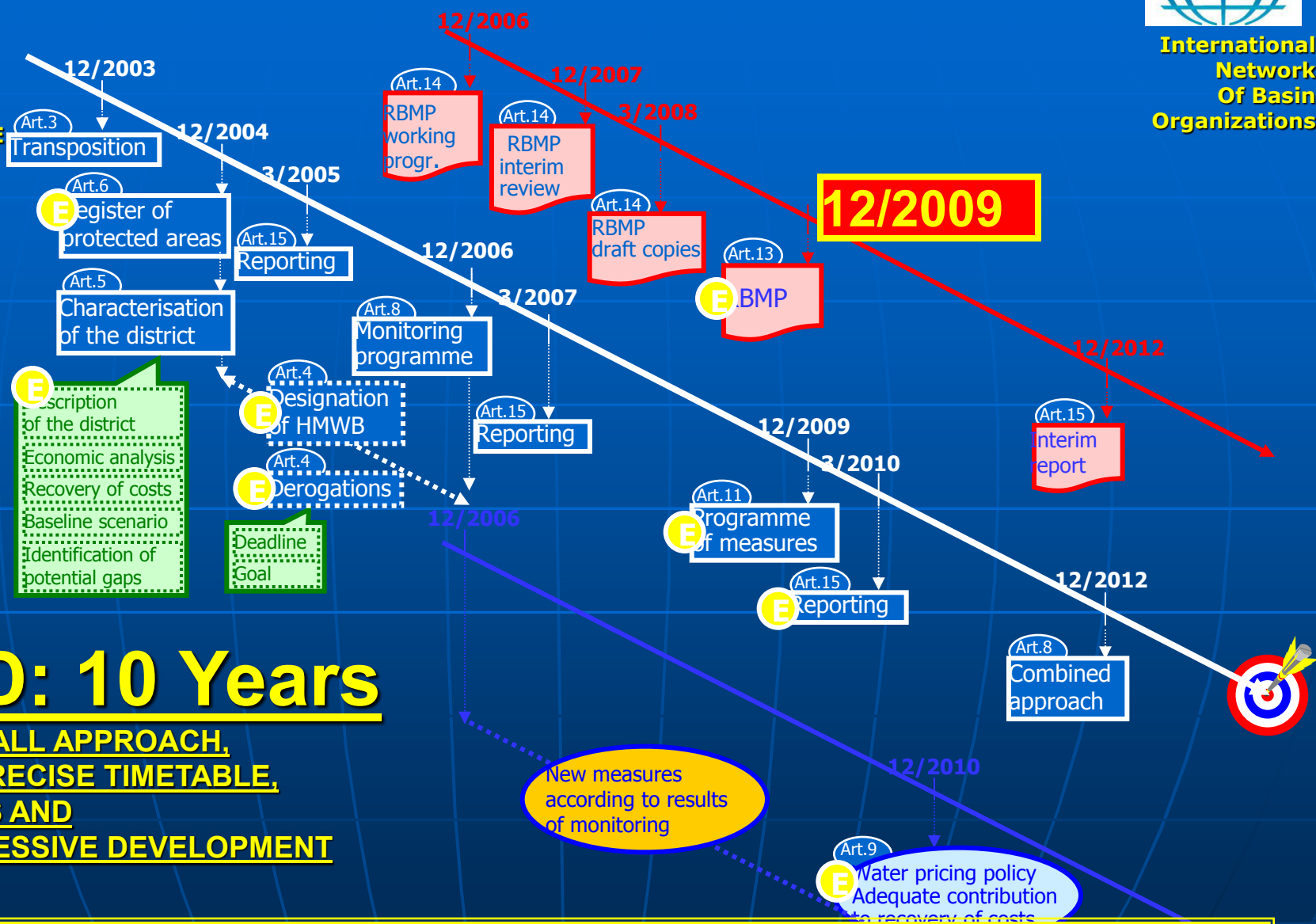


Directive 2000/60/EC of 23 October 2000



International Network Of Basin Organizations

International Office For Water PARIS-FRANCE



WFD: 10 Years

AN OVERALL APPROACH,
WITH A PRECISE TIMETABLE,
METHODS AND
A PROGRESSIVE DEVELOPMENT

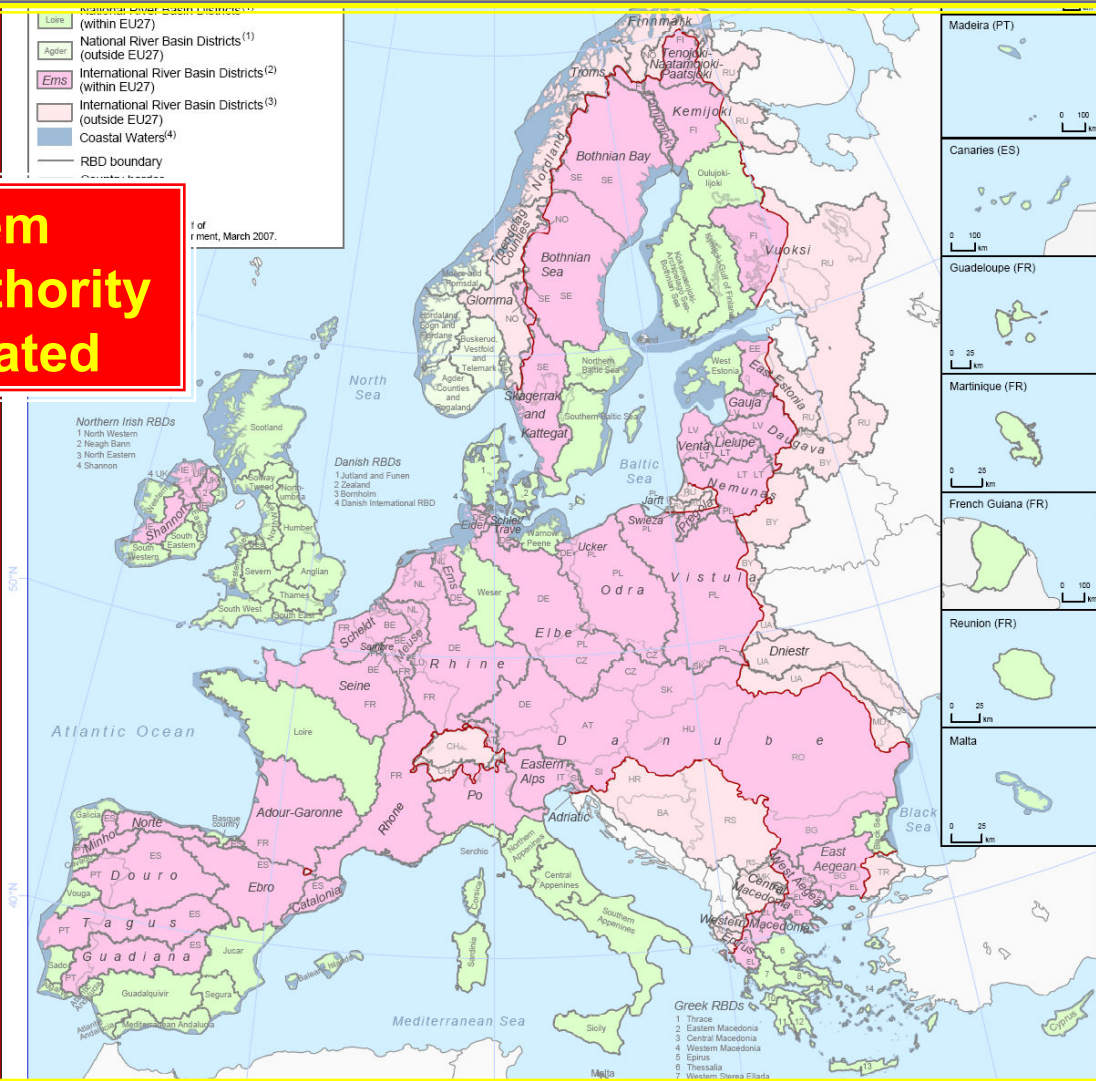
HUGE WORK has been achieved from 2000!!!

110 RIVER BASIN DISTRICTS HAVE BEEN ESTABLISHED 40 ARE INTERNATIONAL RIVER BASIN DISTRICTS



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**For each of them
a basin District Authority
has been nominated**

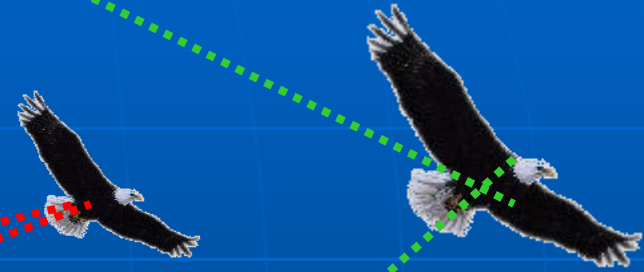
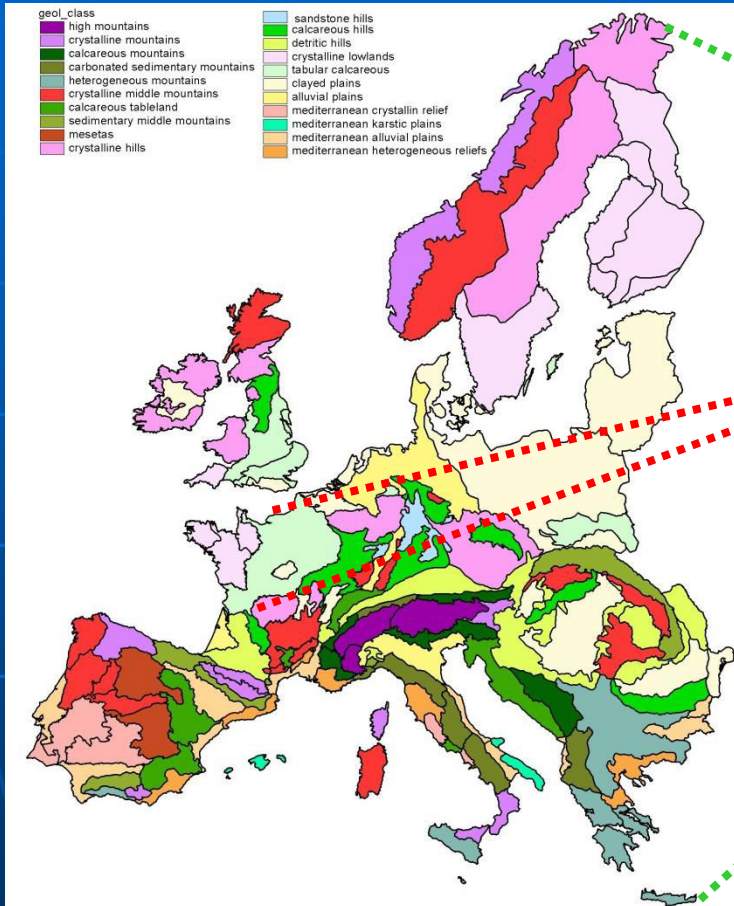
HUGE WORK has been achieved from 2000!!!

We cannot manage that we cannot measure!!



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- **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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ASSESSING WATER QUALITY:



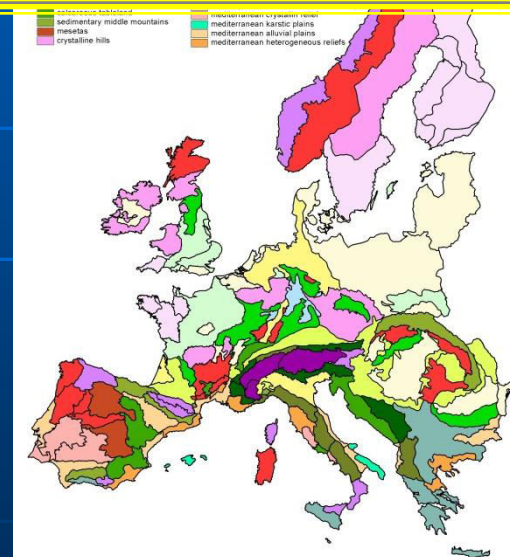
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In the European Union,

50,000 "WATER BODIES" have been identified:

European Hydro – eco-regions

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



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

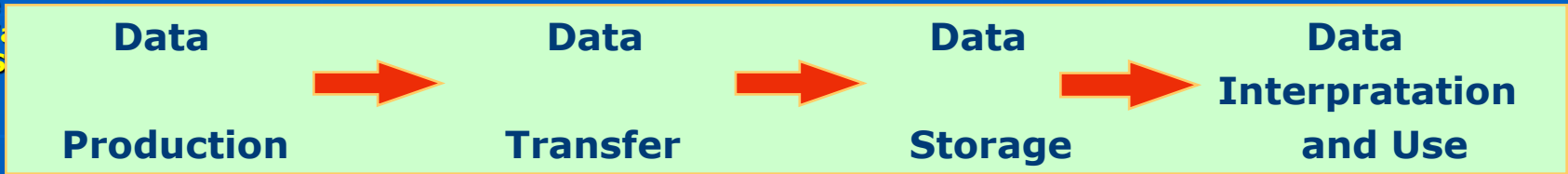


COMPLEX INFORMATION SYSTEMS



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Statistics
PARIS



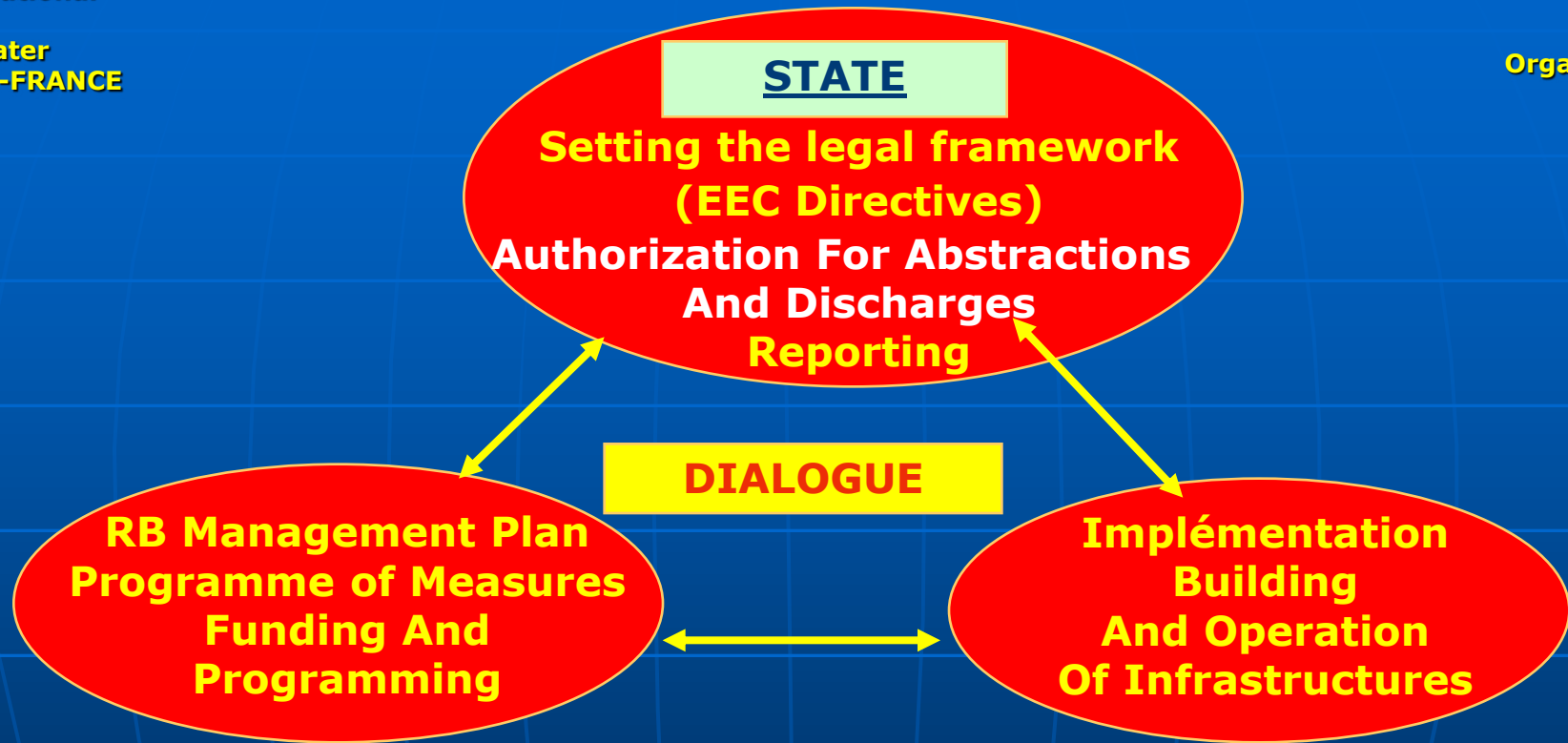
- measures
- withdrawals
- analyses
- location
- automatic
- on-line
- manual
- periodical
- Banks
- thematic
- geographic
- specialized
- general
- models
- expert systems
- warning
- telematic
- directories
- mapping
- assistance to decision-making
- publications

**INVESTMENT
AND
OPERATION**

AUTOMATIC WARNING OR OPERATION SYSTEMS - "SLOW" SYSTEMS FOR STATISTICS



Who is really in charge for implementing the WFD??



- River District Authorities
Water Agencies
- River Basin Committees

- State administrations
- Municipalities
- Industrialists
- Farmers
- Developers



ALL MAJOR WATER USES ARE CONCERNED



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**Inland
Navigation**

Industrial uses

- abstraction
- discharges

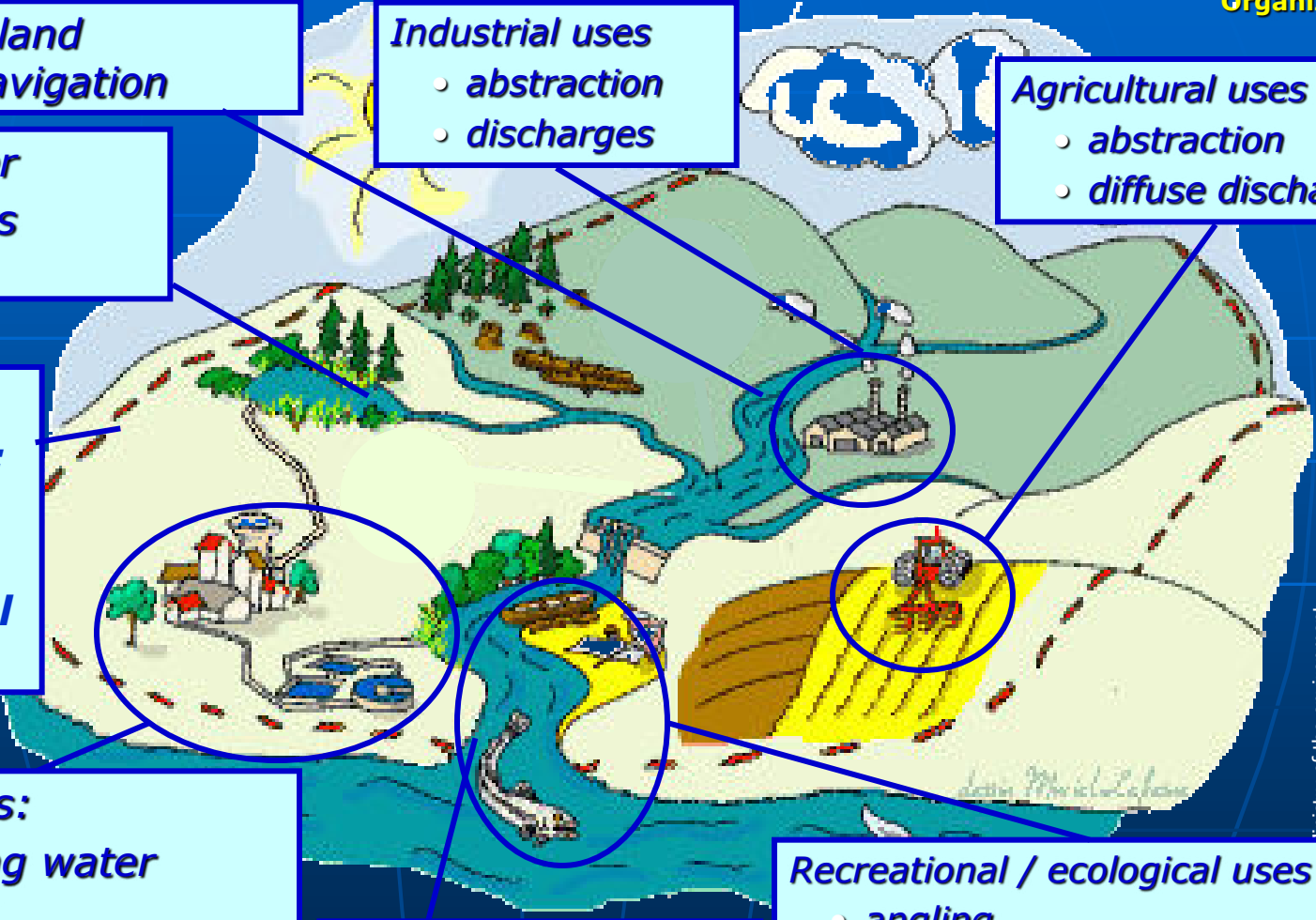
Agricultural uses

- abstraction
- diffuse discharges

**Hydropower
Powerplants
cooling**

**Conservation
of ecosystems:**

- rivers, lakes,
wetlands,
aquifers, costal
areas,



Urban uses:

- drinking water
supply
- wastewater
treatment

**Fish farming
Professional Fishing**

Recreational / ecological uses

- angling
- bathing...

A River Basin Management 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

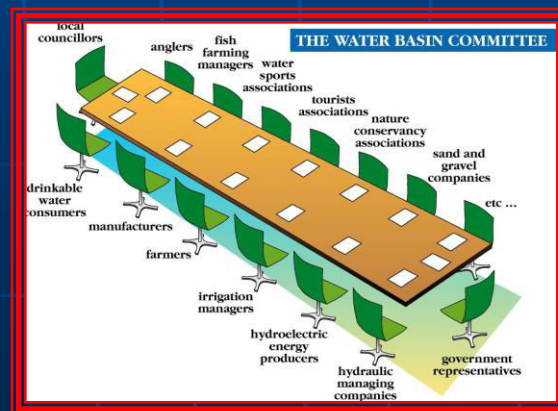


THEIR PARTICIPATION IS A KEY ISSUE!!

- **IN SOME EU COUNTRIES THIS PARTICIPATION IS ORGANIZED IN BASIN COMMITTEES OR COUNCILS.**

IN PARTICULAR, THEY ARE ASSOCIATED TO:

- THE DEFINITION OF LONG-TERM OBJECTIVES,
- **THE PREPARATION OF MANAGEMENT PLANS OR MASTER PLANS,**
- THE SELECTION OF DEVELOPMENT AND EQUIPMENT PRIORITIES,
- **THE JOINT IMPLEMENTATION OF PROGRAMMES OF MEASURES AND MULTIYEAR PRIORITY INVESTMENT PROGRAMMES,**
- THE ESTABLISHMENT OF FINANCING PRINCIPLES AND THE CALCULATION OF WATER TAXES THAT CONCERN THEM.



**EVERYWHERE, ONE OF THE PRIORITIES IS TRANSPARENCY
AND PUBLICLY OWNED WATER MANAGEMENT.**



Public Participation & Stakeholder Involvement

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

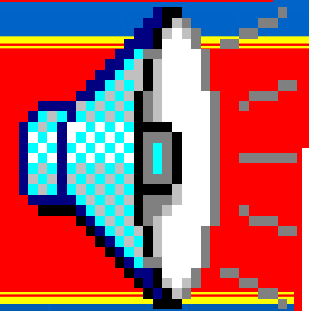
**IT WOULD BE A PITY
JUST TO ORGANIZE A "ONE SHOT" CONSULTATION
WITHOUT ANY FOLLOWING
ALL ALONG THE REAL IMPEMENTATION PHASE OF THE "WFD"...**

Governments decide, but local actors implement!!!!

● RHINE – MEUSE RIVER BASINS AND DISTRICTS



Promotion campaign in the media:
« MERCI, d'avance! »



•Postal delivery of the
questionnaires in the mailboxes
(1 800 000 copies)

BLOUP, BLOUP!! & CLAC, CLAC!!

2 friendly mascots
to get the public support
(so that it takes parts in the consultation)



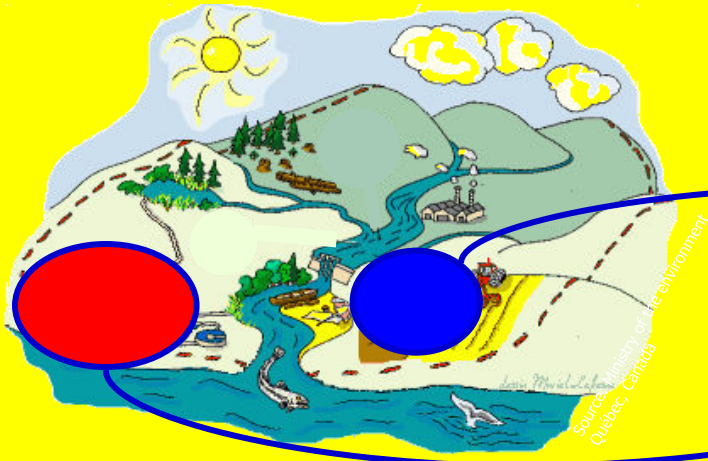


3 Planning cycles: 2010-2015 / 2016-2021 / 2022-2027



2016

Description of the initial situation

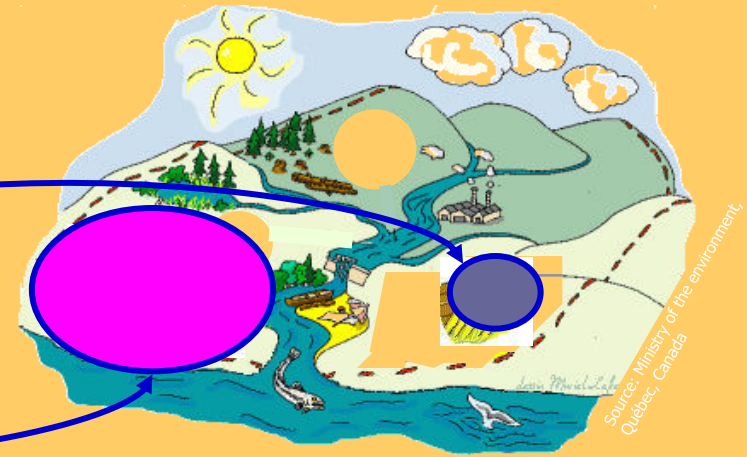


Focus on economic aspects:

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

2021

Baseline scenario: projection for 2021



Baseline scenario:

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

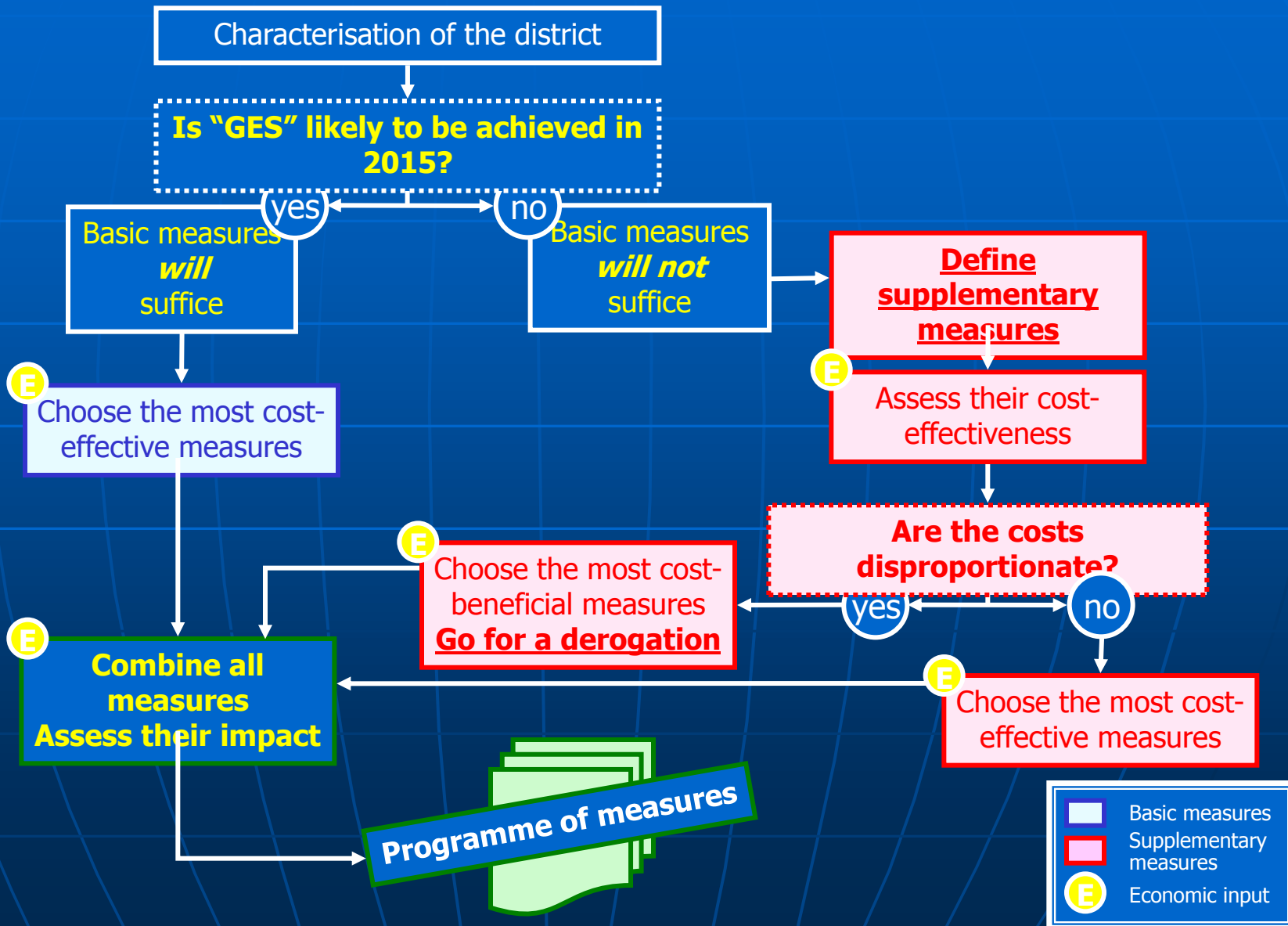
based on Basin Management Plans

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.



FLOW CHART OF THE CONSTRUCTION OF THE PROGRAMME OF MEASURES





TRANSPARENCY OF COSTS AND POLLUTER-PAYS PRINCIPLE:

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 -



THE « POLLUTER - USER – PAYS » PRINCIPLE

Abstraction
taxes

Pollution
taxes

The French 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

Regional developers

Local authorities

Farmers

Industrialists

The mobilization of specific financial resources?

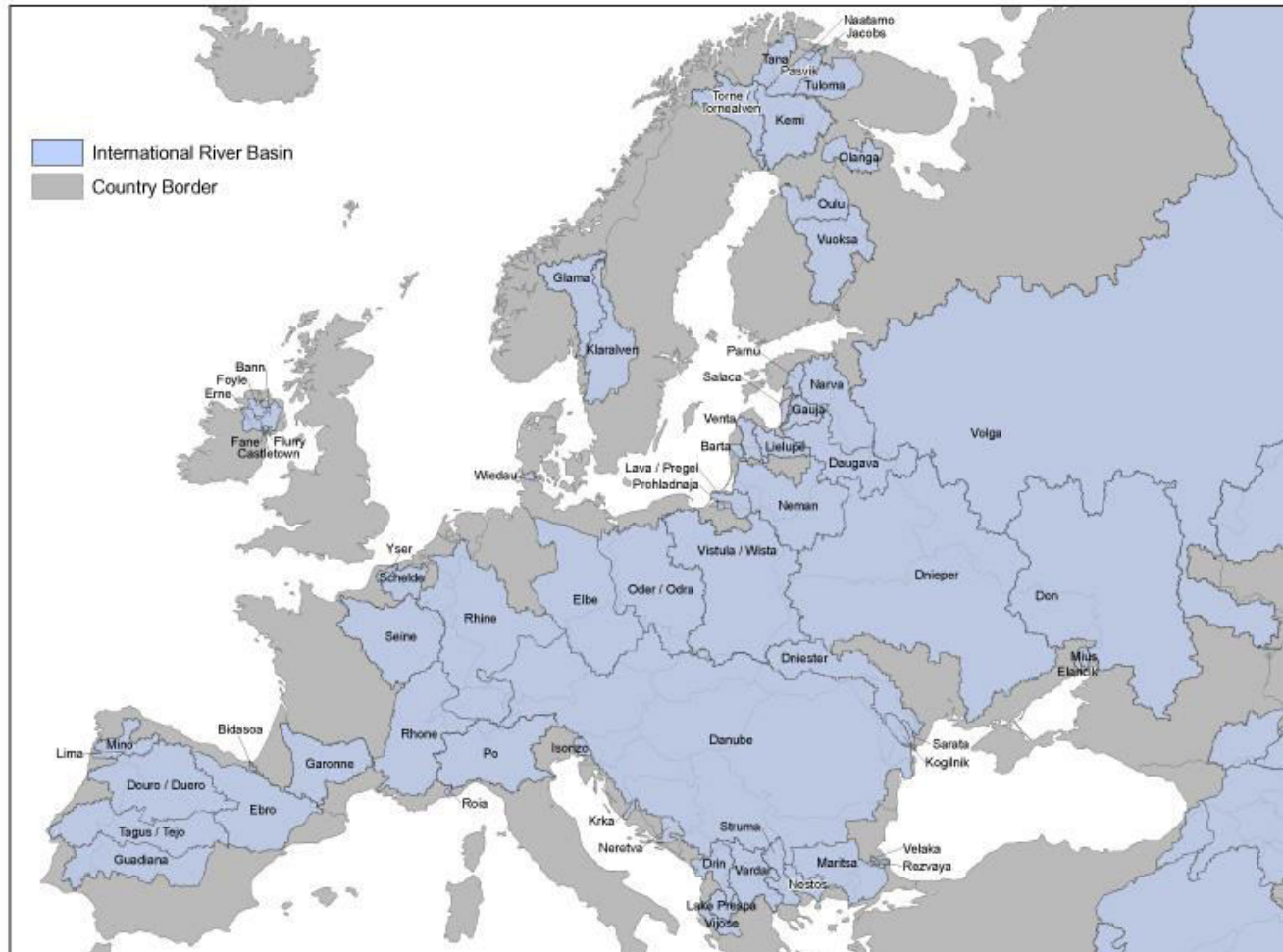


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In Europe 69 basins are transboundary ones!



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EURO-RIOB

EUROPE-INBO

**Visible progresses have been achieved for better
European Transboundary Basin Management !**

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

In Europe,
Riparian Countries in transboundary basins
have created joint managing bodies
.... sometime for decades.

Such International Commissions allow:

- better dialogue,
- exchanging useful information and warning,
- resolving potential conflicts,
- sharing benefits from better joint management and
- strengthening transboundary cooperation.





Cooperation beyond EU current and future borders



Danube river basin: 18 countries, 817.000 km² catchment area

Mechanisms of Cooperation



CONFERENCE OF THE PARTIES

International Commission for the Protection of the Danube River (ICPDR)

- Implementation of Danube River Protection Convention (DRPC)
- Decision making, management and coordination of regional cooperation
- Approval of the budget and annual work programme
- Follow up of activities and evaluation of results from Expert Groups
- Joint Action Programme

Permanent Secretariat (PS)

- Supporting the ICPDR sessions
- Supporting the Expert Groups and PMTF
- Co-ordinating the work programme
- Supporting project development and implementation
- Maintenance of the Information System

UNDP/GEF Danube Regional Project

- Creation of sustainable ecological conditions for land use and water management
- Capacity building and reinforcement of trans-boundary cooperation
- Strengthening public involvement in environmental decision making
- Reinforcement of monitoring, evaluation and Information System

ad-hoc Strategic Expert Group (S / EG)

- Strategic issues
- Legal issues
- Administrative and financial issues

River Basin Mgmt (RBM / EG)

- Integrated river basin management
- Implementation of EU Water Framework Directive

Ecology (ECO / EG)

- Habitats and species protection areas
- Management of wetlands and floodplains

Emissions (EMIS / EG)

- Emissions from point sources
- Emissions from diffuse sources
- Guidelines on BAT

Monitoring, Laboratory & Information Mgmt (MLIM / EG)

- Trans-National Monitoring Network (TNMN)
- Laboratory Quality Assurance

Accident Prevention & Control (APC / EG)

- Accidental pollution incidents
- AEWS operations
- Accident prevention

Flood Protection (FLOOD / EG)

- Preparation and Implementation of the Action plan for sustainable Flood protection

GIS ESG

Econ ESG

WG on Sava RBM Plan

Danube/ Black Sea JTWG

EMIS MLIM JTWG

WG Inventories

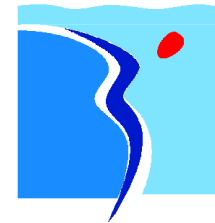
IHP Water Balance WG

- Preparation of the Water Balance

**At the end of the 1st planning period 2010 - 2015,
a common assessment of the RBMPs
is organized by the EC
between the different River Basin District Authorities.**

“THE PEER REVIEW MECHANISM”

**For mobilizing the practitioners of RBDs and their competent authorities
which will voluntarily submit RBMPs to the review performed by experts
from other similar authorities of other EU Countries**



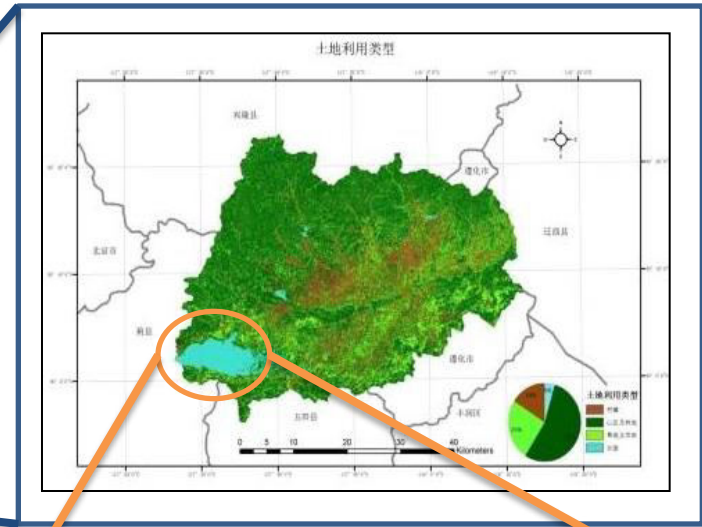
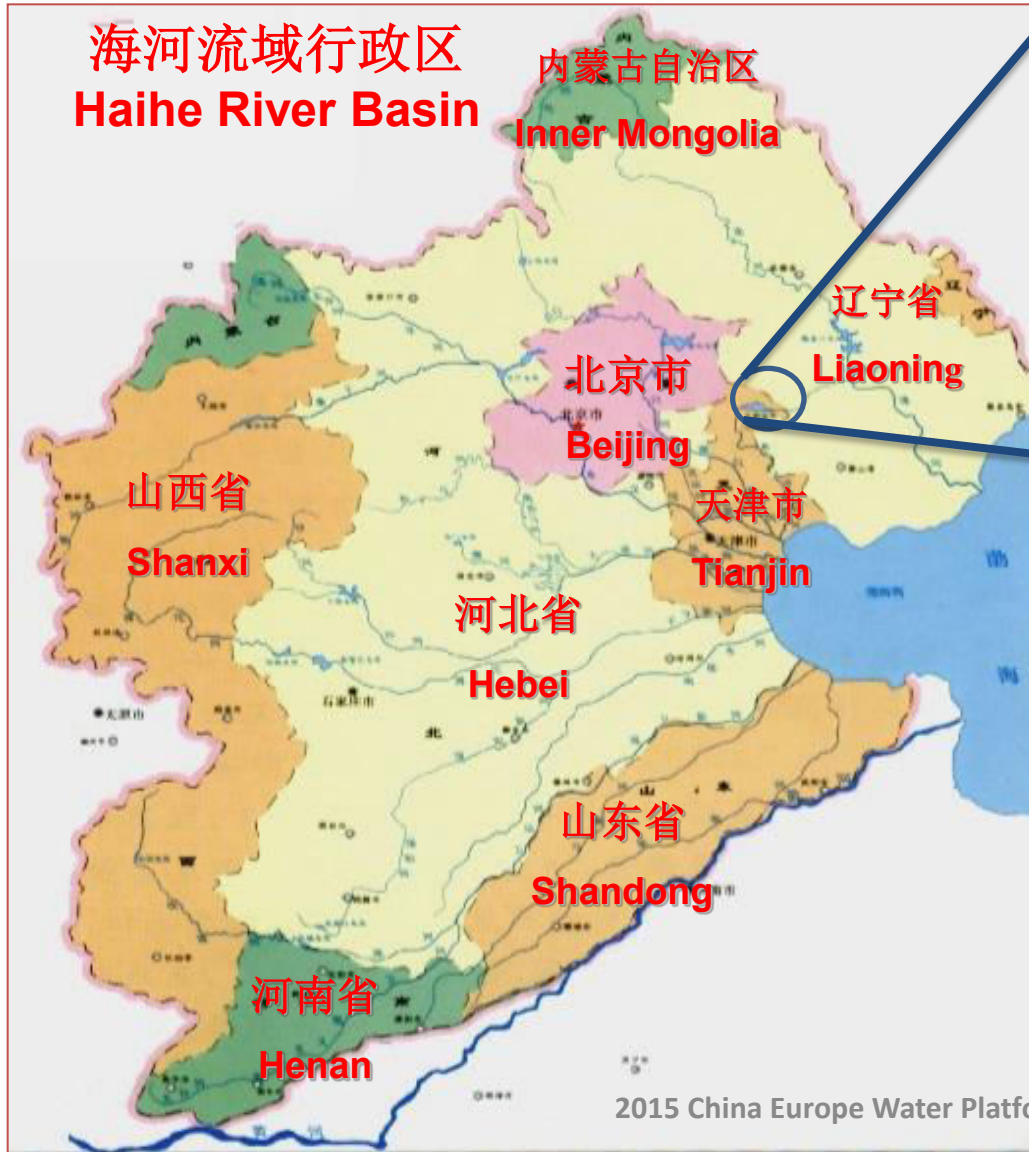
River Basin Management

River basin management planning along WFD principles : lessons learnt from French-Chinese cooperation on the Hai River basin

Agreement signed in 2009 between **Chinese Ministry of Water Resources (MWR)** and **French Ministry of Ecology and Sustainable Development (MEDDE)**,



River Basin Management / Hai River Basin project



Zhou River Basin

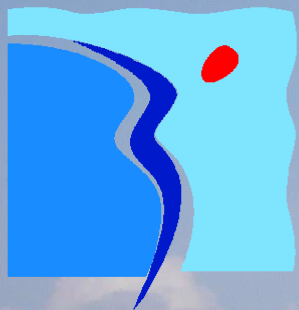


Yuqiao Reservoir

River Basin Management

Hai River Basin project

- *Governance and planning mechanisms for IWRM*
Test on Zhou sub-basin
 1. Elaboration of **diagnosis** and **River Basin Management Plan (RBMP)**
 2. Elaboration of a **Programme of Measures (PoMs)**,
 3. Setting up a **coordination group** for Zhou river basin management
 4. Joint analysis of results and **dissemination of good practices**.
- *Technical expertise and exchanges :*
 1. Diffuse pollution and eutrophication control,
 2. Assessment of **ecological and chemical status** of water bodies,
 3. Ecological restoration,
 4. Monitoring systems.



感谢您的关注！



THANK YOU FOR YOUR ATTENTION!

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