

**Technical** 

PARIS

Secretariat

### GENERAL ASSEMBLIES OF THE AFRICAN NETWORK OF BASIN ORGANIZATIONS AND OF THE NETWORK OF TRANSBOUNDARY BASIN ORGANIZATIONS



International
Network
of Basin
Organizations

JOHANNESBURG (SOUTH AFRICA)
Kopanong Hotel and Conference Centre





RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS RED INTERNACIONAL DE ORGANISMOS DE CUENCA 流域组织国际网

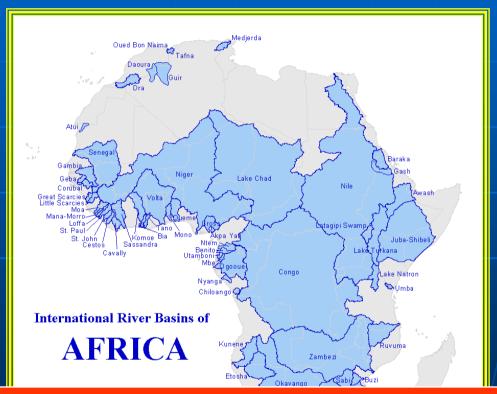
Международная сеть водохозяйственных организаций الشبكة الدولية لهيئات الأحواض

### GENERAL ASSEMBLIES OF THE AFRICAN NETWORK OF BASIN ORGANIZATIONS AND OF THE NETWORK OF TRANSBOUNDARY BASIN ORGANIZATIONS



#### **JOHANNESBURG (SOUTH AFRICA)**

**Kopanong Hotel and Conference Centre** 





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## Paper of Mr. Jean - François DONZIER

General Manager
International Office for Water
Permanent Technical Secretary

RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS RED INTERNACIONAL DE ORGANISMOS DE CUENCA Международная сеть водохозяйственных организаций, الشبكة الدولية لهيئات الأحواض



# INBO General Objective: To Organized better IWRM



Réseau International des Organismes de Bassin

### at basin level!





Permanent Technical Secretariat PARIS

المكتب الدولي للمياه

#### International Network of Basin Organisations:

### 158 FULL MEMBERS or PERMANENT OBSERVERS in 52 COUNTRIES!



International Network of Basin Organizations

الشبكة الدولية لهيئات الأحواض



Permanent Technical Secretariat operated by International Office for Water, PARIS



#### **INBO's REGIONAL NETWORKS**



# INBO member organizations, belonging to the same geographic region, may create a "Regional Network", if they wish so in order to:

- > strengthen relations between member organizations from neighboring countries,
- > develop INBO joint activities in the region,
- > organize joint activities of regional interest.
- ❖ In Africa = ANBO/RAOB,
- ❖ In Latin America = LANBO/RELOC,
- ❖ In Central and Eastern Europ = CEENBO,
- ❖ In the Mediterranean = MED-INBO/REMOB/REMOC,
- ❖ In EECCA-Eastern Europe, Caucasus & Central Asia (project)
- ☐ International Network of <u>Transboundary</u> Basins Organizations ☐ "EUROPE INBO" "EURO RIOB" "EURO RIOC"

### INTERNATIONAL NETWORK of TRANSBOUNDARY BASINS ORGANIZATIONS

WHY A NETWORK OF INTERNATIONAL COMMISSIONS AND TRANSBOUNDARY BASINS **ORGANIZATIONS** 



### INTERNATIONAL NETWORK of TRANSBOUNDARY BASINS ORGANIZATIONS

- For million years, water has been naturally flowing in river basins, disregarding borders and the administrative limits created by mankind.
- Depuis des millénaires, l'eau s'écoule naturellement dans les bassins versants sans se soucier des frontières, ni des limites administratives créées par les hommes.
- Desde milenios, el agua corre naturalmente en las cuencas hidrográficas sin tener cuenta de las fronteras ni de las limites administrativas creadas por los hombres.





There are 263 transboundary rivers and lakes and hundreds of aquifers over the world, the basins of which cover an area of about 50% of the emerged lands.

Water has no boundary >>>



RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS RED INTERNACIONAL DE ORGANISMOS DE CUENCA

### INTERNATIONAL NETWORK of TRANSBOUNDARY BASINS ORGANIZATIONS

There basins shared by at least two countries host two-fifths of the world population :

15% of the Countries depend on more than 50% of the water resources of upstream countries.

For instance, Iraq, Sudan, Syria, Egypt, Paraguay, Niger, Congo, Gambia, Botswana or Mauritania, Luxembourg, Romania, the Netherlands, Bulgaria or Hungary have more than 2/3 of their resources coming from bordering countries.

It is estimated that 48% of the world population will live in highly degraded river basins in 2025.





Transboundary basins per continent.

	2002	Pourcentage du territoire
Afrique	59	<b>62</b> %
Asie	57	39 %
Europe	69	54 %
Amerique du Nord	<b>₹</b> , ()	35 %
Amerique du Sud	38	<u>50 %</u>
TOTAL	263	45 %





### **Cooperation beyond EU current and future borders**

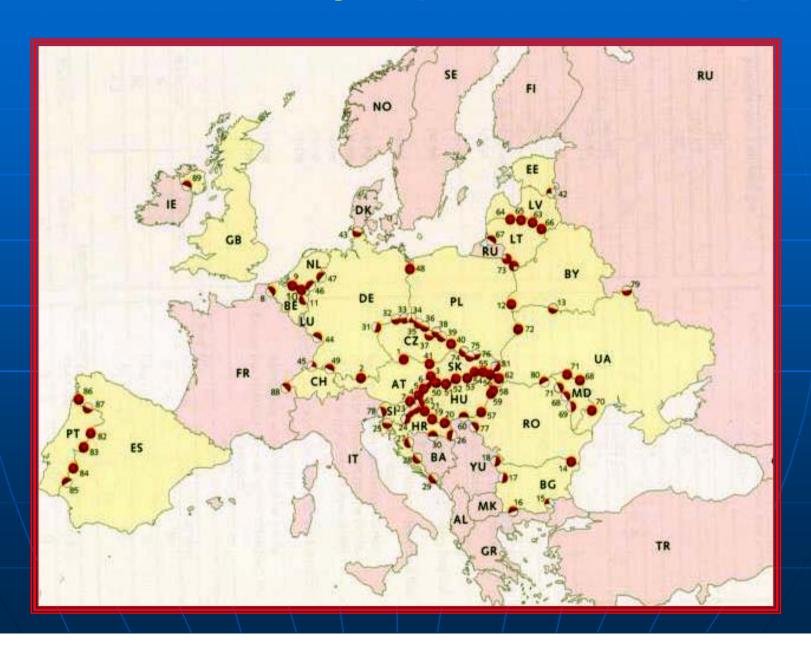




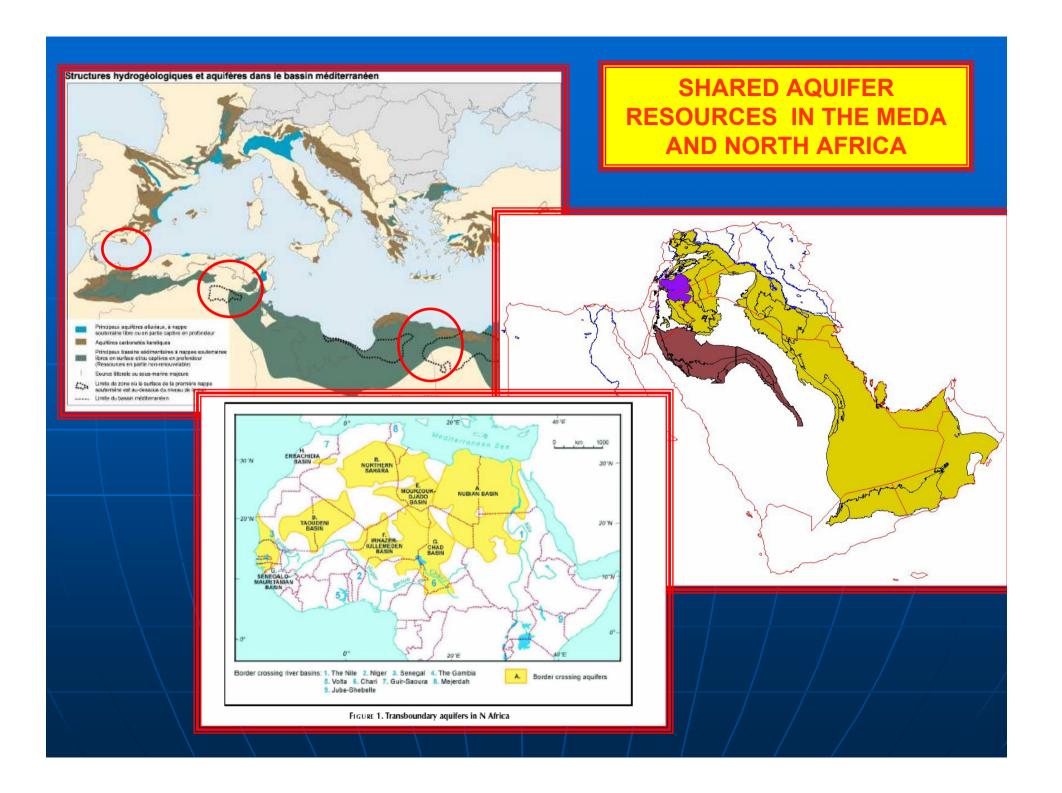
Danube river basin: 18 countries, 817.000 km² catchment area

#### **UNECE**

### Transboundary aquifers in Europe









#### Transboundary basins:



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:



### 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.

The creation of a specialized Network Tio **International Commissions** and Transboundary Basin Organizations has been decided during the constitutive Assembly, held in Thonon-les Bains, 25 & 26 November 2002.



# International Network of Basin Organisations, OBJECTIVES:



- to develop relations between basin organizations interested in comprehensive water resource management at the river basin level,
- to favor exchanges of experiences and expertise among them,
- to promote the principles and means of sound water management in cooperation programs,
- to facilitate the implementation of tools suitable for institutional and financial management, programming, organization of data banks, and for models adapted to the needs,
- to promote information and training programs
   for the different stakeholders involved in water management
   as well as for the executives and staff
   of the member basin organizations,
- to evaluate ongoing actions and disseminate their results.

### 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, inland or international seas, 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.







International Network of Basin Organizations

# Implementation of the European Water Framework Directive in the 27 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.

### INBO/GWP Associated Program:





# Associated Programme GWP-INBO 4 main fields of collaboration



### Output 1:

Promoting Twinning between Basins
Organizations for Developing Integrated Water
Resources Management best Practices

- Direct experiences sharing
- Exchange of decision-makers and technicians....













The "Twin Basins project", supported by the European Union, give a sponsorship for travels and accomodation, to basin organizations which sign twinning agreement between them to exchange their staffs.

At the moment 34 twinning have been signed.



# Associated Programme GWP-INBO 4 main fields of collaboration

- Output 2:
- Capacities mobilisation
  from Basin Organizations:
- Assistance with the implementation of institutional reforms,
- Initiation of <u>basin pilot projects</u>,
- Support to countries sharing a transboundary basin,
- Assisting with the <u>setting-up of</u> new basin organizations,
- Professional training of technical teams,



## Associated Programme GWP-INBO

#### 4 main fields of collaboration

- □ Output 2:
- Capacities mobilisation
  from Basin Organizations
- Design of monitoring networks and databases,
- Assesment to <u>planning process</u>,
- Establishment of institutional mechanisms for users' <u>participation</u> in decision-making,
- Financial and economical studies,
- Assisting with the <u>setting-up of new water taxes</u>...

#### The European Water Initiative for African transboundary rivers,



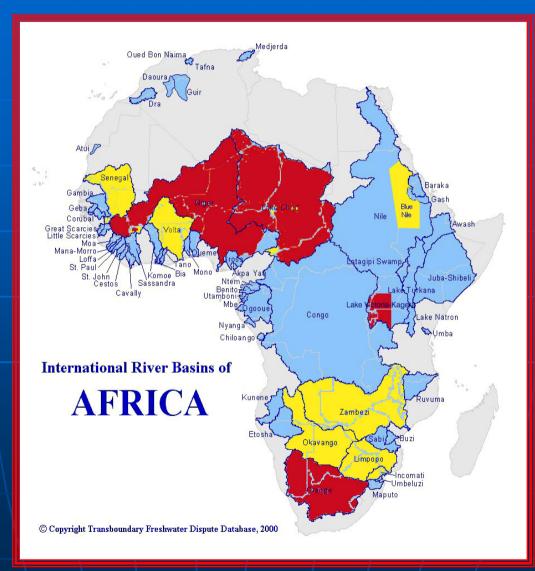
### EUWI

**5** selected pilot basins:

Orange-Senqu, Lake Chad, Lake Victoria/Kagera, Niger and Volta.

**Animated by:** 

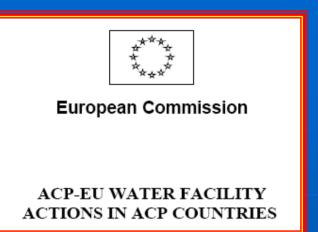














# • TEST FOR A SET OF INDICATORS OF PERFORMANCES OF BASIN ORGANIZATIONS

# Transboundary management of the Irtysh River Basin



# Conférence de DUSHANBE « Gestion des fleuves d'Asie Centrale »



### Conférence de DUSHANBE

« Gestion des fleuves d'Asie Centrale »



# la Cumbre Binacional del Río Bravo / Río Grande



### Commission du Mekong







### FLOOD CONTROL: FORECAST, PREVENTION, PROTECTION

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



# Associated Programme GWP-INBO 4 main fields of collaboration



- Output 3:
- Synthesis of knowledge and Know-How:
- To identify good practices,
- To set common, easily accessible and measurable performance indicators,
- To train staff and stakeholders from basin organizations,







**Organizations** 



### Towards a European-wide exchange Network for improving dissemination of IWRM research outcomes:

- identifying and describing the national research programs which have a relationship to IWRM in UE countries,
- locating the sources of information on recent and current projects,
- identifying and contacting the persons-in-charge of these programs
- organising workshops of these program managers to prepare the basis of a long-term collaboration,
- proposing new ways to develop a more demand-driven research, and a better dissemination of outputs.



#### Bringing together National and Regional research programmes to develop joint activities

- Exchanges of experiences and good practice
- Research needs assessment on Integrated Water Resources Management brought on by the WFD
- Common strategic orientations
- Joint dissemination approaches

#### Common forum and platform for knowledge transfer

- To facilitate communication between researchers, water policy makers, research programme managers and water managers
- To create new RTD/policy interfaces

#### A network based on an interdisciplinary approach

- Encompassing social sciences, economics, technical and ecological fields
- To be extended to other research programme from all member states and neighbouring countries

Towards future transnational and transregional research programmes





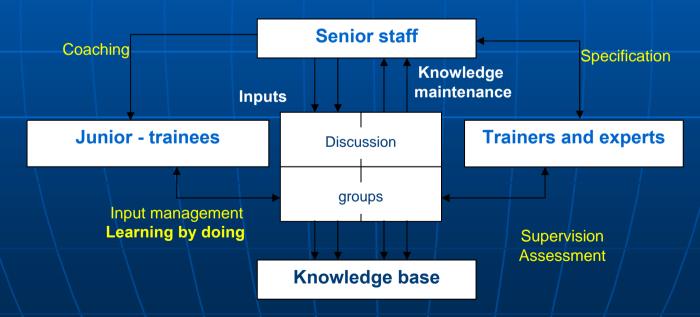




Project supported by the European Programme Leonardo Da Vinci

### « WFD Community »:

a Virtual Learning computering system for Water professionnals



The basis of our future internal Virtual "University"



### Many questions indeed arise!





Framework
Directive:
good status
for waters
in the Union
before 2015



'good ' ecological quality

?

How to define

How to define the 'sustainable' functioning of the aquatic ecosystems

?

How to achieve
the environmental objectives
and ensure a consistent
implementation
in the Union

?

... And how to ensure comparability in the classification of ecological status and of monitoring in the Union

?



### INBO joins the Strategic Coordination Group of the WFD Common Implementation Strategy



#### **Fourteen CIS 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

nt	er	·C	ali	b	ra	ti	0	n l	P	rocess	
Economics and the environment The implementation challenge of the WFD	Identification of Water Bodies	Analysus of Pressures and Impacts	dentification & Designation of Heavely Modified & Artificial Water Bodies	Transitional and Coastal Waters	owards a guidance on establishment of the intercalibration network and the process on the intercalibration exercise	Monitoring under the Water Framework Directive	Public Participation in relation to the WFD	mplementing the Geographical Information System Elements (GIS) of the Water Framework Directive	River and lakes - Typology, reference, conditions	Common Natural Water Fran	Common Implementation Strategy for the Water Framework Directive (2000/60/EC)
The imple		An	Identifi N		Towards a guidance on esta network and the proces	Monitoring under	Public Par	Implementing the G Elements (GIS) of th	River and lakes	River and lak at	Guidence document n.* 11 Planning process
Guidance document n°1	Guidance document n°2	Guidance document n°3	Guidance document n°4	Guidance document n°5	Guidance document n"6	Guidance document n°7	Guidance document n°8	Guidance document n°9	Guidance document n°10	Guidance document n°11	产生





### **CIS** priorities for 2006:



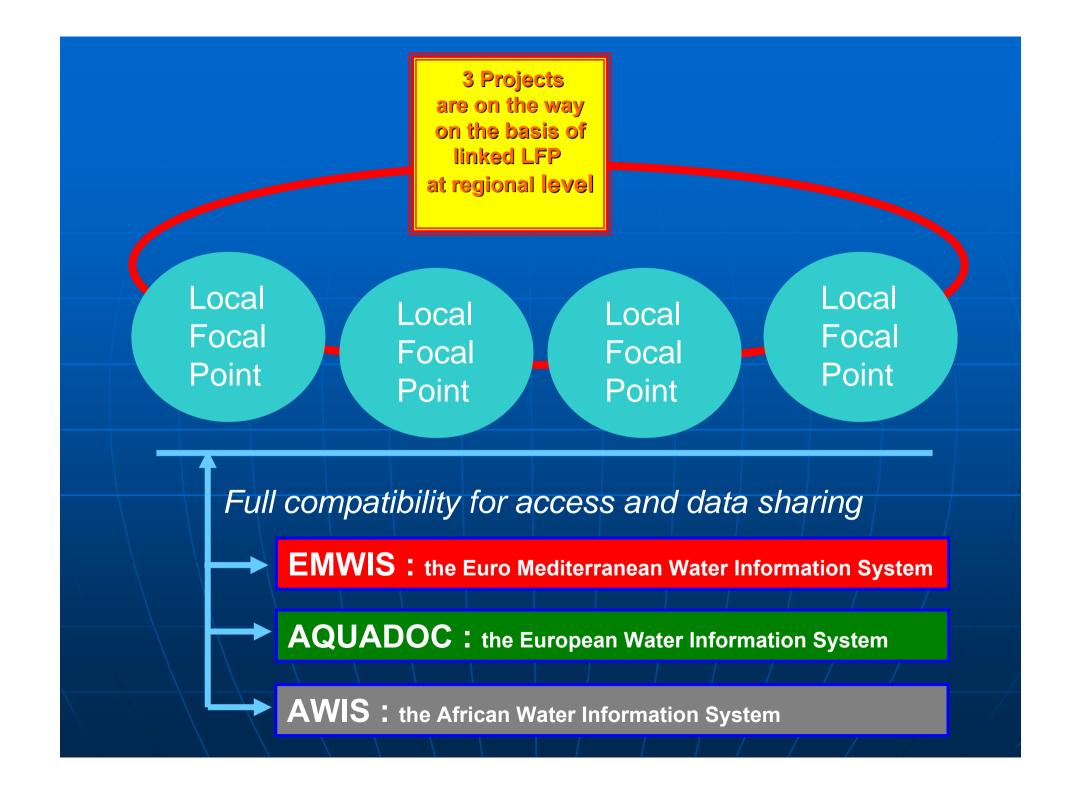
- Climate Change
- Droughts and Floods
- Intercalibration exercise
- WFD and agriculture
- Hydromorphology (hydropower and navigation)
- New Pilot River Basin exercise
- Reporting and WISE
- Priority substances / Chemical monitoring
- Cost effectiveness





# Associated Programme GWP-INBO 4 main fields of collaboration

- □ Output 4:
- The networking of water
  Information- documentation
  systems
- Exchange of information and documentation,
- Assistance with the structuring of the National Relay Documentation Centers,
- AQUADOC-INTER, SEMIDE or AWIS?





المكتب الدولى للمياه

### SEMID

www.semide.org

Système Euro-Méditerranéen d'information sur les savoir-faire dans le domaine de l'Eau



نظام المعلومات الأورو-متوسطي حول المهارات في مجال المياه



International
Network
of Basin
Organizations

### EMW

S

www.emwis.org

EuroMediterranean
Information
System on know
how in the water
sector

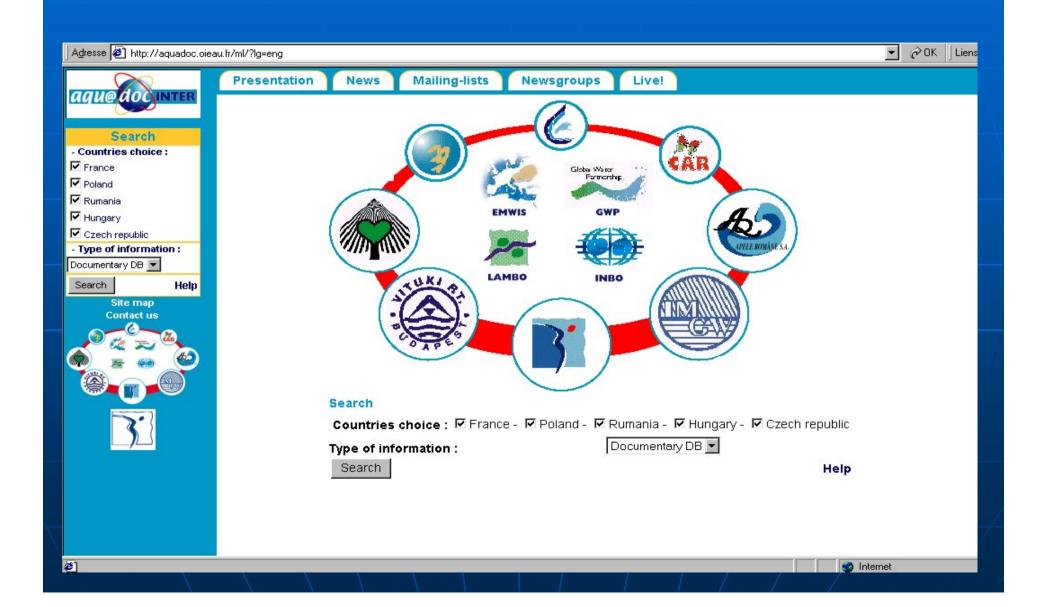


**EURO-MEDITERRANEAN PARTNERSHIP** 



### "AQUADOC-INTERNATIONAL-CEE"

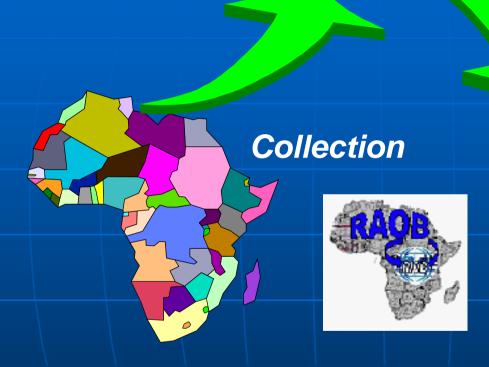






# AWIS: the African Water Information System





Dissemination to stakeholders

Continent-wide needs: no time, no money for reinventing the wheel!

Local knowledge: lots of valuable information are produced every day (projects implementation plans, evaluation reports, legal documents, ...)





#### **MEXICO March 2006 IVth World Water Forum**





### INBO has organized 4 official sessions:

1,250 participants!

- 1.on the management of transboundary basins,
- 2. on the implementation
  - of the European Water Framework Directive,
- 3.on the participation of the public and water users in basin management,
- 4.On Tranboundary Basin in Africa (RAOB).

on 18 March 2006 BANAMEX CENTER, within the « IWRM » topic of the 4th World Water Forum.







« <u>La Lettre du RIOB »,</u> <u>N°14 et 15.</u>





### Pour les années 2006 et 2007:

- le tirage se fait en 3 langues, anglais, français et espagnol,
- 15.000 exemplaires sont tirés, dont :
  - 8.000 ex. en anglais,
  - 4.500 ex. en français,
  - 2.500 ex. en espagnol,
- la version électronique est téléchargeable sur notre site Internet.

POUR 2007, MERCI, DONC, D'ENVOYEZ, COMME EN 2006:
VOS INFORMATIONS, VOS CARTES ET VOS PHOTOS!!

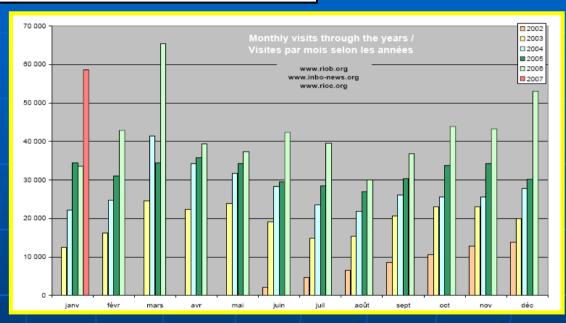
### www.riob.org:



# Il y a eu 1.545.400 visiteurs, depuis son ouverture !!!!!

### **Dont:**

- 60.000 en 2002,
- 240.000 en 2003,
- 330,000 en 2004,
- 383.000 en 2005,
- 532,400 en 2006



### Avec un maximum mensuel de:

- 65.500 visites, en Mars 2006,

### Et une moyenne actuelle de:

- 45.000 visites par mois!!

# GENERAL ASSEMBLIES OF THE AFRICAN NETWORK OF BASIN ORGANIZATIONS & OF THE NETWORK OF TRANSBOUNDARY BASIN ORGANIZATIONS

## 3 workshops will deal with central topics for the implementation of IWRM:

- statutes and responsibilities of transboundary basin organizations,
- <u>preparation of basin management plans and</u> action programs, financing basin organizations and their programs,
- monitoring and information systems in the management of transboundary basins.

## ASSEMBLEES GENERALES DU RESEAU AFRICAIN DES ORGANISMES DE BASSIN ET DU RESEAU DES ORGANISMESDE BASSINS TRANSFRONTALIERS

# 3 ateliers de travail sont organisés sur des thèmes centraux pour l'application de la GIRE:

- Les statuts et les compétences des organismes de bassins transfrontaliers,
- L'élaboration des plans de gestion et des programmes d'actions de bassin, le financement des organismes de bassin et de leurs programmes,
- Le monitoring et les systèmes d'information des bassins transfrontaliers.



## RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS RED INTERNACIONAL DE ORGANISMOS DE CUENCA



Международная сеть водохозяйственных организаций

الشبكة الدولية لهيئات الأحواض

流域组织国际网





### INTEGRATED WATER RESOURCE MANAGEMENT:

#### **DEFINING ROLES AND RESPONSIBILITIES OF EACH:**



**Multilateral organizations** 



**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

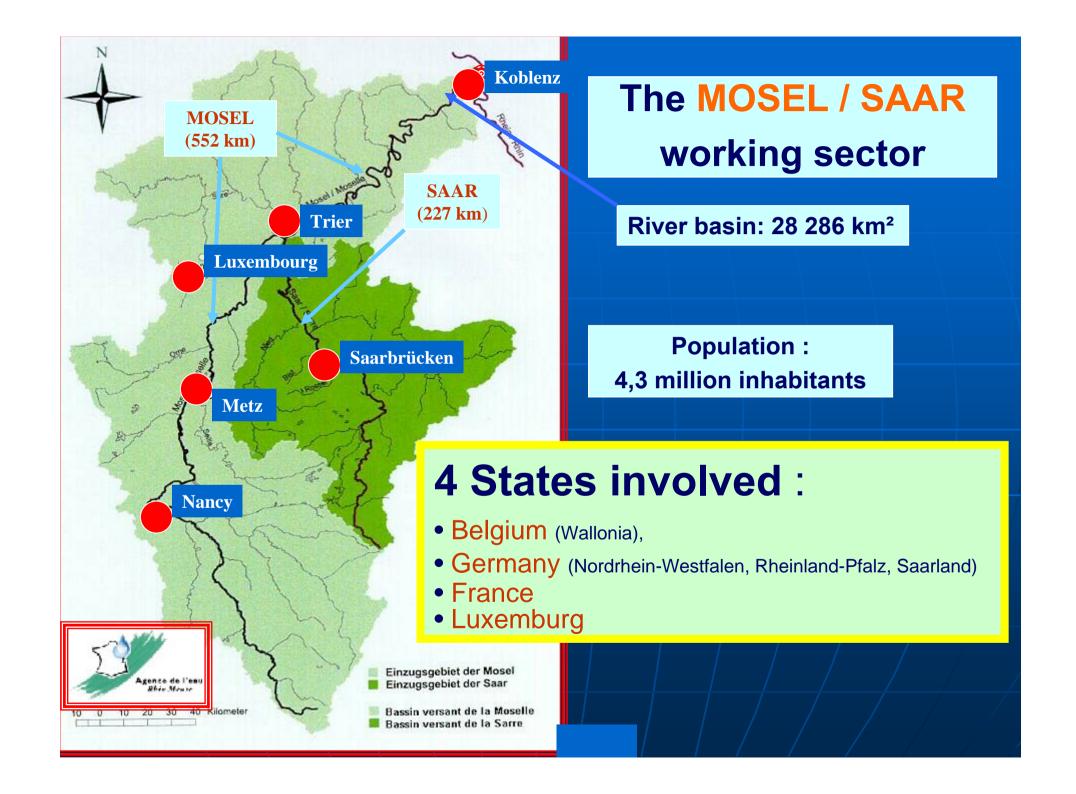


### INTEGRATED WATER RESOURCE MANAGEMENT: MAIN BASIC FUNCTIONS

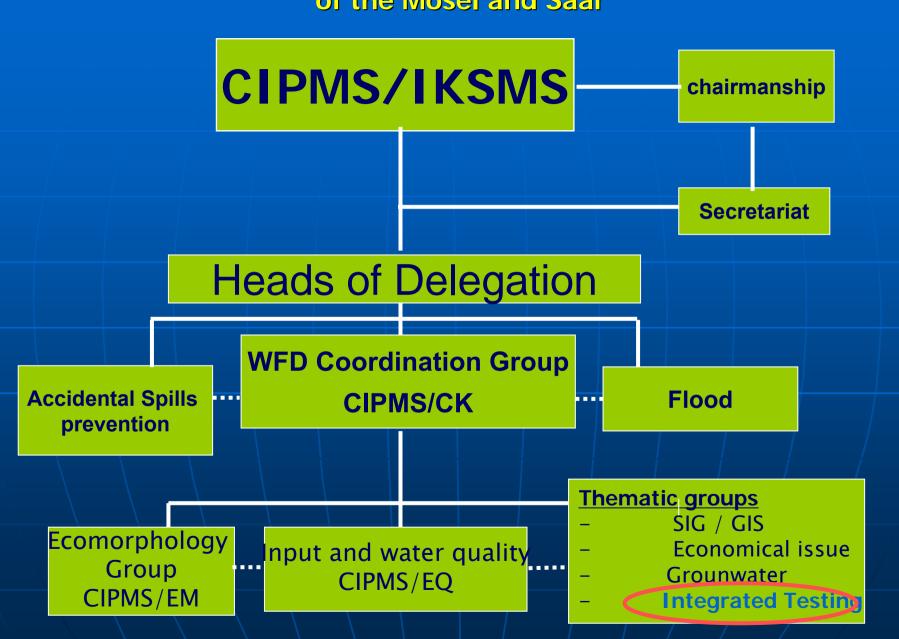
- International agreements
- Legislation Regulations
- Standardization
- Authorizations for abstraction or discharge - Water policing
- Monitoring
- Follow-up of the environment and uses
- Warning and protection
- Planning
- Funding Programming
- **Investments**
- Operation Maintenance
- Research
- Training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



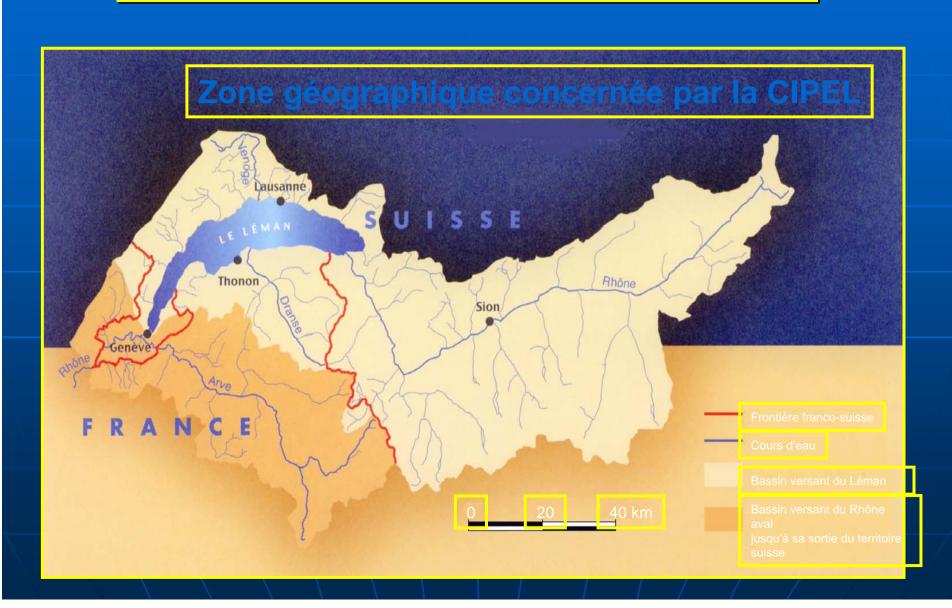


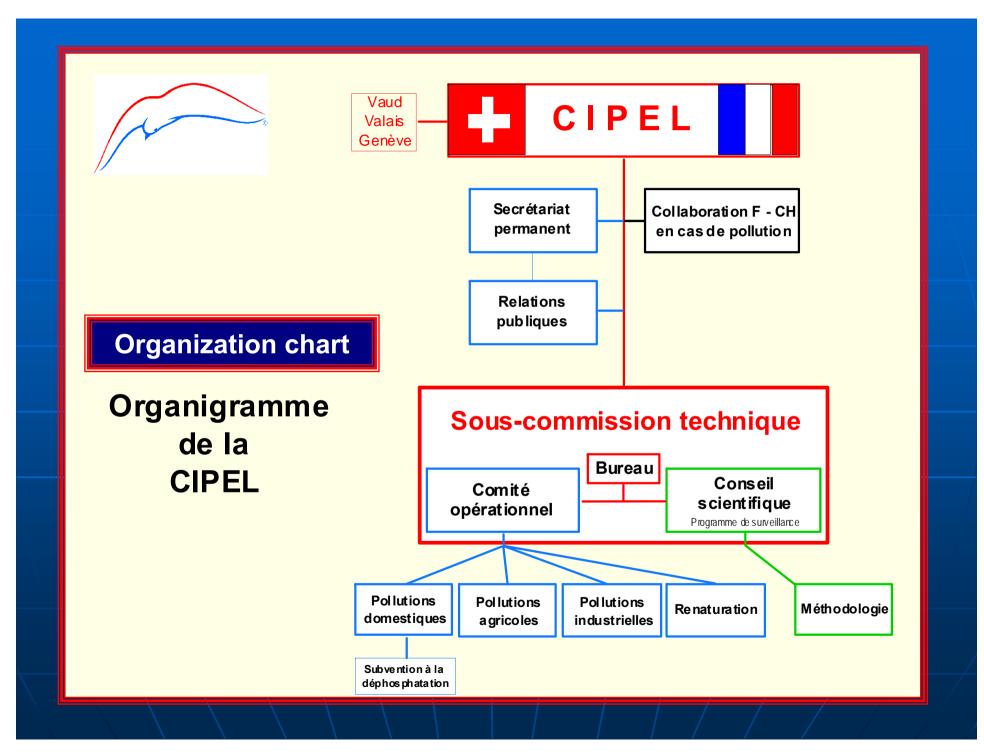


### Commissions for the Protection of the Mosel and Saar



## International Commission for Leman Lake Protection - CIPEL









- FOR EACH BASIN, MUST BE FORMULATED:
- "MANAGEMENT PLANS",
   DEFINING THE OBJECTIVES TO ACHIEVE,

AND

> "PROGRAMS OF MEASURES",
DEFINING THE NECESSARY ACTIONS.



## THE CHARACTERISATION OF THE BASIN



International Network of Basin Organizations

2004

2015

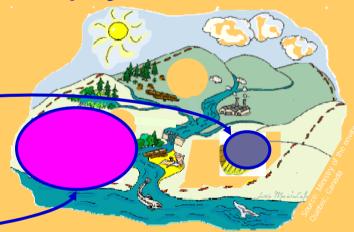




#### Focus on economic aspects:

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

### Baseline scenario: projection for 2015



#### Baseline scenario:

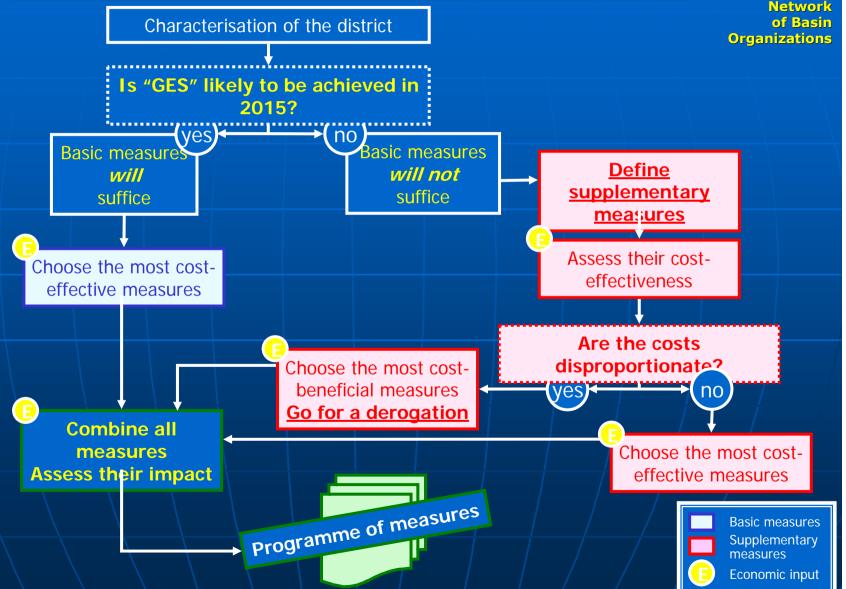
- appraisal of evolutions of uses, pressures...
- identification of potential gaps in water status with GES



### FLOW CHART OF THE CONSTRUCTION OF THE PROGRAMME OF MEASURES



International Network of Basin





## TRANSPARENY OF COSTS AND POLLUTER-PAYS PRINCIPLE:



International Network of Basin Organizations

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





### A PARTICIPATORY WORKING METHOD:



### THE PREREQUISITE TO REAL TRANSPARENCY IS THE EFFECTIVE PARTICIPATION OF THE PUBLIC, THROUGH PLANNED CONSULTATIONS **DURING THE WHOLE PROCESS.**





### **WATER INFORMATION SYSTEMS**

- Integrated monitoring systems
- reliable, representative,
- harmonized and easily accessible should be organized in each District.



Technica Secret

PARTS

#### **COMPLEX INFORMATION SYSTEMS**



f Basin

zations

International **Data Data Data Data** 

**Production Transfer** and Use **Storage** 

- measures
- withdrawals
- analyses
- location

- automatic
- on-line
- manual
- periodical
- Banks
- thematic
- geographic · warning
- specialized · telematic
- general

- models
- expert systems

**Interpratation** 

- directories
- mapping
- assistance to decisionmaking
- publications

INVESTMENT AND **OPERATION** 

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

#### **WATER REPORT DOMAIN**

- Numerous producers hold data for their own needs
- Hardly accessible data
- Various themes: resources, uses, discharges, treatment plants, ecosystems, economy etc.

### Need for coordinated data management :

- To share informations and avoid redundancy
- To be able to transfer and synthesis the data
- •To inform all water users, and increase public awarness
- •To ensure the safeguard of a "data heritage"
- To highlight specific data and follow up water policy



#### **KNOWN FACT: REAL DEMANDS**

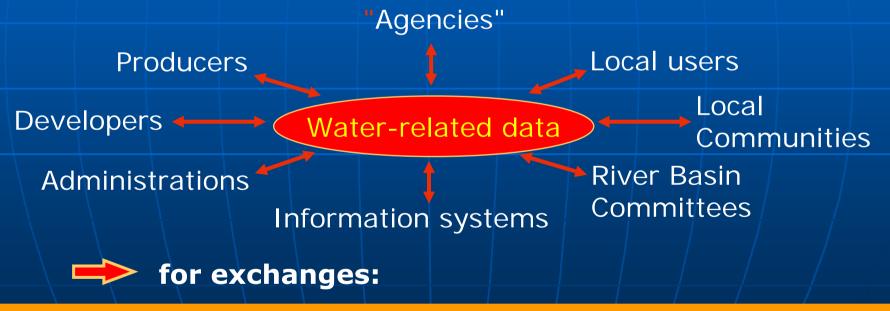


**Organizations** 

for accessing the information:

at local, national and international levels, in order to

- conform with standards
- define and control water policy
- ensure a demand / resource balance inform and communicate
- control water supply and sanitation



- between topics (various producers)
- between areas (administrative areas and river basins)



### **ASSSESSING WATER QUALITY:**



TODAY, THE SYSTEMS FOR ASSESSING WATER RESOURCES AND FOR FORMULATING THE OBJECTIVES TO ACHIEVE VARY CONSIDERABLY FROM ONE COUNTRY TO ANOTHER.



### THE EU WF DIRECTIVE REQUIRES:

- THE IDENTIFICATION OF "WATER BODIES",
- THE DEFINITION OF COMMON FRAMES OF REFERENCES.



### **ASSSESSING WATER QUALITY:**



### THE IDENTIFICATION OF 50,000 "WATER BODIES":

• River WB = 27 455

• Lake WB = 10 060

Groundwater WB = 7 719

• HMWB/AWB = 5 783

#### IN FRANCE:

• River WB = 3 522

• Lake WB = 471

• Groundwater WB = 539

• HMWB/AWB = 912

• Good Status = 984

• At Risk = 941