FRESH WATER IS A TIME BOMB!!!
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!
Global warming cannot now be avoided. Fresh water resources will be directly affected in the coming years!

- 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)
The climate change is likely to increase the frequency of extreme events, such as floods and droughts.
Adaptation of water management to climate change is needed

The demographic, economic and ecological consequences of the climate change are likely to be very significant.

It is thus essential to adapt water resources management policies, by taking into account the new elements of this change.

It is especially necessary to quickly evaluate the hydrological consequences of this change, according to various scenarios, to increase the thinking about and prospective, by developing adapted research programs.
Water resources and global changes

Conflicts!!
Created in 1994 to facilitate operational exchanges between BO

**INBO’s REGIONAL NETWORKS**

- North American Network of Basin Organizations (NANBO)
- Latin American Network of Basin Organizations (LANBO)
- Brazilian Network of Basin Organizations (BNBO)
- EUROPE-INBO Group for WFD
- Mediterranean Network of Basin Organizations (MENBO)
- African Network of Basin Organizations (ANBO)
- EECCA Network of Basin Organizations
- Central and Eastern European Network of Basin Organizations (CEENBO)
- Network of Asian River Basin Organizations (NARBO)

188 FULL MEMBERS or PERMANENT OBSERVERS in 81 COUNTRIES
INTEGRATED WATER RESOURCE MANAGEMENT

- **OVERALL MEETING OF RATIONAL AND LEGITIMATE DEMANDS**
  - Agriculture
  - Electricity
  - Domestic uses
  - Transports
  - Industry
  - Leisure
  - Fish farming
  - Fishing

- **WASTEWATER TREATMENT AND RECYCLING**,

- **CONSERVATION OF ECOSYSTEMS:**
  - rivers, lakes, wetlands, aquifers, costal areas,

- **RISK PREVENTION:**
  - Erosion
  - Drought
  - Floods
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,
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.

water resources management should be organized:

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) with the participation in decision-making of the concerned Governmental Administrations, local Authorities, the representatives of different categories of users and associations for environmental protection or of public interest.
4) based on management plans or master plans that define the medium and long-term objectives to be achieved;

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

6) with the mobilization of specific financial resources, based on the « polluter-pays » principle and « user-pays » systems;
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,
River basins are natural units, where water runs, on the ground and in sub-soil.

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

« UPSTREAM-DOWNSTREAM » COMMON CAUSE ON THE SCALE OF BASINS AND SUB-BASINS
What do we consider as a Basin?

The concept includes all water resources

SURFACE and Groundwater
Water has no boundary

RESEAU INTERNATIONAL DES ORGANISMES DE BASSIN
INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS
RED INTERNACIONAL DE ORGANISMOS DE CUENCA
### Transboundary basins per continent.

<table>
<thead>
<tr>
<th>Continent</th>
<th>2002</th>
<th>Percentage Of territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>59</td>
<td>62 %</td>
</tr>
<tr>
<td>Asia</td>
<td>57</td>
<td>39 %</td>
</tr>
<tr>
<td><strong>Europe</strong></td>
<td>69</td>
<td>54 %</td>
</tr>
<tr>
<td>America North</td>
<td>40</td>
<td>35 %</td>
</tr>
<tr>
<td>America South</td>
<td>38</td>
<td>60 %</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>276</td>
<td>45 %</td>
</tr>
</tbody>
</table>
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 and aquifers basins.
Implementation of the UN Convention for the international water courses management in Europe – HELSINKY 1992

Building the data administration and sharing capacities of the national and local Authorities involved in 2 pilot basins, by using methodologies that can be replicated in other transboundary basins of the region.

www.unece.org
the World Pact for better basin management

International Network of Basin Organizations

World Pact for better basin management

The World Pact for basin management is an international initiative that brings together basin organizations, practitioners, and stakeholders to address the challenges facing river basins around the world. The Pact aims to promote sustainable basin management practices, enhance collaboration, and improve the effectiveness of water governance.

Part 1: The Pact

The World Pact for basin management is a collaborative effort among basin organizations, practitioners, and stakeholders. It aims to promote sustainable basin management practices and enhance collaboration.

Part 2: Key Elements

- Enhancing water governance: Promoting an integrated approach to water governance.
- Improving basin management: Strengthening basin management practices.
- Collaboration and partnerships: Fostering cooperation among basin organizations.
- Knowledge sharing: Sharing best practices and lessons learned.
- Capacity building: Enhancing the capacity of basin management institutions.

The World Pact for basin management is a platform for basin organizations to come together, share knowledge, and work towards a common goal of sustainable basin management.
"Indian floods: kill 350, leave 4m homeless in 5 Indian states"
THE DIFFERENT HYDROLOGICAL SCALES:

- **District** = river basins + associated groundwaters and coastal waters

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

- **Water bodies** scale of evaluation of the achievement of good status

«UPSTREAM-DOWNSTREAM» COMMON CAUSE ON THE SCALE OF BASINS AND SUB-BASINS
FLOOD CONTROL: PROTECTION, FORECAST, PREVENTION.

PROTECTION AGAINST FLOODS MUST PASS THROUGH A COORDINATED APPROACH, COMBINING, ON THE SCALE OF BASINS AND SUB-BASINS:

- Protecting people and properties,
- Reducing vulnerabilities,
  - Restoring the free flow of rivers,
  - Preserving - rehabilitating the natural flooding areas,
- Foreseeing hazardous events,
  - Identification of hazardous areas,
  - Prohibition of buildings in the exposed areas,
- Warning and educating.
Reuters, Feb. 20, 2006

“Approximately 11 million people are threatened by starvation in Djibouti, Ethiopia, Kenya, Somalia and Tanzania… Rain is unlikely before April”
Urban uses:
- drinking water supply
- wastewater treatment

Industrial uses
- abstraction
- discharges

Agricultural uses
- abstraction
- diffuse discharges

Recreational / ecological uses
- angling
- bathing...

Conservation of ecosystems:
- rivers, lakes, wetlands, aquifers, coastal areas,

CLIMATE CHANGE CONCERNS
ALL MAJOR WATER USES

WATER ALLOCATION BETWEEN SECTORS,
IS WATER EQUITABLY AND SOUNDLY SHARED BETWEEN 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.
WITH REGARD TO DROUGHTS:

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

... MUST BECOME PRIORITIES.
A NEW APPROACH TO WATER USES IN AGRICULTURE SHOULD BE LOOKED FOR.
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.
If we cannot measure, we cannot manage!!

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

**Uses**

**Seasonal variations**

**Geographic locations**

**Economical informations**

**Information**
- Quantity
- Quality
- Ecology
- Requirements
- Abstractions
- Discharges
  - Flowrates
  - Pollution
- Frequencies
- G.I.S
- Cost, budget...
Integrated information and monitoring systems which are reliable, representative, harmonized and easily accessible, and specific research should be organized in each basin,
MORE AND MORE STAKEHOLDERS ARE INVOLVED IN WATER MANAGEMENT

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
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,
Conflicts
requirements collected
from each point of view

Designing a program
through dialogue

Reaching agreement
with an ambitious program

TO SOLVE POSSIBLE CONFLICTS ON WATER USE:
"DIALOGUE IS THE BEGINNING OF WISDOM".
INBO RECOMMENDS THAT THIS PARTICIPATION BE ORGANIZED IN BASIN COMMITTEES OR COUNCILS.

IN PARTICULAR, THEY SHOULD BE 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.
Le passeport de demain ?
Tomorrow’s passport?
¿El pasaporte de mañana?
4) Based on management plans or master plans that define the medium and long-term objectives to be achieved;
water resources management should be organized:

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

Characterisation of the district

Is “GES” likely to be achieved in 2015?

- yes
  - Choose the most cost-effective measures
  - Combine all measures
  - Assess their impact
  - Programme of measures

- no
  - Basic measures will **not** suffice
  - Define supplementary measures
  - Assess their cost-effectiveness
  - Are the costs disproportionate?
    - yes
      - Go for a derogation
    - no
      - Choose the most cost-effective measures
6) with the mobilization of specific financial resources,

**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 = 6-year Program
  - Big developers
  - Local authorities
  - Farmers
  - Industrialists
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

- 48 Mi $ Govt and public sector = 64%
- 14 Mi $ private sector
- 9 Mi $ ODA*
- 4 Mi $ International firms

Who will pay?

75 milliards $ / year

180 milliards $ / year

* Official Development Assistance
**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**
**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
6) with the mobilization of specific financial resources, water resources management should be organized:

VARIOUS COMPLEMENTARY SYSTEMS FOR COST RECOVERY: THE 3x”’T”

**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.
IN CONCLUSION:
BUSINESS AS USUAL CANNOT CONTINUE!

- integrated and sound water resources management is more than ever a priority when this scarce resource is already a limiting factor for sustainable development in many countries in the world.

MOBILIZATION IS ESSENTIAL FOR HUMANITY TO WIN THE WATER BATTLE AND PREPARE THE FUTURE!
The International Network of Basin Organizations (INBO),
The Global Water Partnership (GWP),
The French Development Agency (AFD),
The GEF, UNESCO and UNECE,
Investing in IWRM, it pays back!
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!

LET’S GET MOBILIZED! YES WE CAN.....
TOGETHER WE MAKE WATER A GLOBAL PRIORITY

THE 7th DAEGU/GYEONGBUK WORLD WATER FORUM

DAEGU & GYEONGBUK, KOREA
12-17 APRIL 2015
TOGETHER WE MAKE WATER A GLOBAL PRIORITY

PROCESSES TOWARDS WORLD WATER FORUM 2015

Political processes

Regional Processes

Thematic Process

Science and Technology Process

Other components:
Citizen and Youth Forum, EXPO and Fair, Water Prizes, Side Events
## The Thematic Framework Development for WWF 2015

<table>
<thead>
<tr>
<th>Action Goals</th>
<th>Topics</th>
<th>Selected European topics</th>
</tr>
</thead>
</table>
| 1. A water-safe world for all | 1.1 Enough water for all  
1.2 Integrated sanitation services for all  
1.3 Adapting to Change: Managing risk and uncertainty for resilience  
1.4 Infrastructure for sustainable water services | To be decided            |
| 2. Water for Development and Prosperity | 2.1 Water for Food  
2.2 Water for Energy  
2.3 Water and Cities  
2.4 Green Growth, water stewardship and industry | —                         |
| 3. Water for Harmony between Humans and Nature | 3.1 Smart implementation of IWRM  
3.2 Managing and restoring ecosystems for water services and bio-diversity  
3.3 Ensuring water quality from ridge to reef | —                         |
## The Thematic Framework Development cont’d

<table>
<thead>
<tr>
<th>Action Tools</th>
<th>Topics</th>
<th>European mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Implementation mechanisms</td>
<td>4.1 Effective governance, enhanced political decisions, stakeholder participation and technical information</td>
<td>To be decided</td>
</tr>
<tr>
<td></td>
<td>4.2 Cooperation for reducing conflict and improving transboundary water management</td>
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<td>4.3 Water cultures, justice and equity</td>
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<td></td>
<td>4.4 Economics and Financing for better choices and more and wiser investments</td>
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<tr>
<td></td>
<td>4.5 Enhancing education and capacity building</td>
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THANK YOU FOR YOUR ATTENTION!

www.inbo-news.org
mail: inbo@wanadoo.fr

Réseau International des Organismes de Bassin
International Network of Basin Organizations
Red Internacional de Organismos de Cuenca
INBO initiatives are open
to your participation:
your inputs are welcome!

http://www.inbo-news.org

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canin organizations over the world