



Paper by
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**“Role of river basin organizations in water security around the World
for adapting to the effects of the climate changes:
Best experiences”.**



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Good morning dear colleagues and friends,

Clearly, fresh water is a time bomb on the planet in the very near future!!!!

And business as usual cannot continue.

Adaptation of water management to global changes is urgently needed worldwide!

I would like to ask you a question. Why, when everybody knows the importance of fresh water for our societies and the significant risks that we shall have to face, is there no greater mobilization to really anticipate the problem?

Floods, water-borne diseases, shortages, pollution, wastage, destruction of ecosystems: the seriousness of the situation encountered in many countries requires that comprehensive, integrated and consistent management of water resources be implemented to preserve the future and the human heritage.

Human activities have the highest impact on water resources, such as the increase in water abstractions for irrigation, the building of structures which modify hydrology, the creation of obstacles to flows, the destruction of wetlands and the increase in pollution of any origin, etc...

Climate change will exacerbate this situation and increase tensions, as one of the first consequences will be to modify hydrological cycles.

Over the past forty years, the number and intensity of floods and droughts have already increased, sometimes in a spectacular way. The melting of glaciers, in particular, has an effect on water supply, especially in low-water periods, and on the increase of flood hazards.

Indeed, these effects will cumulate with the significant pressures linked to demographic growth, urbanization and economic development.

The social, economic and ecological consequences are likely to be very significant. It is thus essential to work now to adapt water resources management policies.

“if the greenhouse-effect gases are responsible for climate change, fresh water is the first victim”!

It is necessary to react quickly, before it is too late.

It is thus essential to adapt water resources management policies and mechanisms to face these changes.

Quick action will allow reducing costs and damage.

The international network of basin organizations....

– “i-n-b-o” - was created in 1994, twenty years ago, to exchange its members’ field experiences in order to develop and improve basin management and transboundary cooperation in the world.

Inbo is worried about the “no-action cost”!

Unfortunately, it should be well admitted that the urgency of launching adaptation programmes, in which water management is a central element, the core, has not yet reached the political world and has not been systematically introduced, as evidence, into the plans of most countries or into the projects supported by many international organizations....

Adaptation is initially a problem of better water management and governance.

An integrated water resources management must have as joint objective:

- To meet rational and legitimate demands in all sectors;
- To control pollution by developing wastewater treatment and recycling,
- To protect and restore aquatic ecosystems,
- To prevent risks: erosion, floods and droughts.

The importance of aquatic environments in water policies is to be underlined: they are a natural infrastructure playing a key role in seasonal regulation of water resources and pollution control. We have to protect and rehabilitate them.

Is it 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.

River basin management experienced a quick development in many countries, which made it the basis of their national legislation on water or applied it in national or transboundary pilot basins. Some of them, such as France and Spain, have successfully implemented their water policy at basin level for more than fifty years,

Taking into account the experience acquired worldwide, it is now widely recognized that water resources management should be organized around [six key principles](#), which have to be implemented with appropriate legal and institutional frameworks in each country and at the regional level:

- 1) [Firstly, integrated water management is to be established on the scale of local, national or transboundary basins of rivers, lakes and aquifers, including their related coastal waters:](#)

In particular, surface water and aquifers must be taken into account in a joint basin management.

Water has no national or administrative boundary: it is thus necessary to take into account the specific situation of the 276 rivers or lakes and several hundreds of aquifers over the world, whose resources are shared by at least two riparian countries or sometimes much more. Their joint management is thus strategic and a priority.

With regard to floods:

It is, first, necessary to make the “upstream-downstream” solidarity a main item of consistent management on the scale of basins and sub-basins, as water obviously flows from mountains and hills to estuaries and the sea, from up to down!

Protection against floods must pass through a coordinated approach, combining protection of people and properties, reduction of vulnerabilities, forecasting of events, warning and education.

In the transboundary basins in particular, cooperation between riparian states, for jointly looking for coordinated solutions and for sharing information and responsibilities, should be promoted.

With regard to droughts:

Situations of water shortages, too often ignored, are a growing problem in an increasing number of areas and are likely to worsen in the future.

Climate change will worsen the structural problems which already lead to water scarcity in many areas.

On this subject, it is useful to distinguish drought from scarcity, the latter being initially related to a permanent and structural imbalance between available resources and abstractions.

The prevention of recurring droughts can, no more, be done on a case-by-case basis, but must be planned in the long term, by solving the structural problems which may occur.

Water scarcity management plans should prioritize the various uses, ensuring a better optimization of water and avoiding wastages.

Water saving, leak detection, recycling, the re-use of treated 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.

The farmers will be among the first victims of the fluctuations of water supply due to the variations of the climate.

2) Second key principle: improving knowledge of water resources, aquatic environments and of their uses is essential to allow decision-making.

We cannot manage what we cannot measure!!

It is recommended to promote the establishment of real water information systems in each basin, providing knowledge on resources and their uses, polluting pressures, ecosystems and their functioning, the follow-up of their evolutions and risk assessment.

These information systems will have to be used as an objective basis for dialogue, negotiation, reporting, decision-making and evaluation of undertaken actions, as well as coordination of financing from the various donors.

But, this information is bad: too often dispersed, heterogeneous and incomplete, and is rarely comparable and adapted to decision-making...

These information systems are priority tools to be developed in order to support an effective policy for water resources management and risk prevention.

3) Third principle: the participation of stakeholders and the civil society should be organized for a real mobilization of partners.

There is nowhere just one single organization in charge of all water issues and management. Indeed coordination and consultation between all concerned bodies and stakeholders is essential.

The sum of all initiatives carried out by private firms, by riverside property owners or individual users do not necessarily correspond to the general interest, in the absence of a global policy.

In each country, a clear legal framework has to specify the rights and obligations of the different stakeholders.

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.

4) Fourth and fifth principles: ambitious basin management plans or master plans and their programmes of measures have to be quickly drafted.

Nothing can be done in a short time!

Adaptation actions will take several decades before having a visible and significant effect, considering the time required for institutional reforms, for large-scale developments, for changing habits of consumption and use.

All the stakeholders in the basin must decide of the medium and long-term objectives to be jointly reached and draft their “shared vision” of the future of their water resources to be made official in their basin management plan.

It is necessary to develop more highly integrated approaches on surface, ground and coastal waters and seek transverse and cross-sectoral solutions.

6) finally, users may contribute in financing water by looking for geographical and inter-sectoral equalizations to gather the necessary amounts.

The investments necessary for improving public utilities, for their exploitation and maintenance and the renewal of installations, require huge financial resources.

Adaptation will require additional financial resources that will undoubtedly have to be found by adopting new mechanisms that are based on the users’ participation and solidarity and risk insurance systems.

“oecd 3t rule” - taxes, tariffs, transfers - has to be adopted everywhere to mobilize the necessary funds, based, if possible, on the “polluter-pays” principle and “user-pays” systems.

In conclusion: business as usual cannot continue:

Adaptation of water management to global changes is urgently needed worldwide!

Organizing this management on a basin scale is an effective solution that deserves to be developed, fostered and supported.

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!

This is not science fiction! This exists and works in many basins in the world...national or transboundary ones.

INBO member organizations have experience and expertise, which they intend to pool and put at the disposal of all the countries and institutions that would like to follow them in an effective basin management approach.

Investing in water management is profitable!

Let's get mobilized!

Thank you for your attention

