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"Role of river basin organizations in water security around the World: Best experiences".

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Good morning dear Colleagues and Friends,

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.

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

It is necessary to react quickly, before it is too late, and it is thus essential to adapt water resources management policies and mechanisms to face these changes: I**n short to adapt us!**

Quick action will allow reducing costs and damage.

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 agriculture, electricity, domestic uses, transports, industry, leisure, tourism, fish farming, fishing, etc.;
- to control pollution by developing wastewater treatment and recycling,
- to protect and restore aquatic ecosystems: rivers, lakes, wetlands, aquifers, costal areas,
- 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, but mainly significant progress has been made since the 1990s.

Significant progress has been made since the 1990s

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:
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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.

Cooperation between riparian Countries should be increased for better management of transboundary rivers, lakes and aquifers.

It seems especially necessary to support the establishment of International Commissions or similar joint organizations, such as Basin Authorities, and to reinforce those already existing.

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, by restoring the free flow of rivers and preserving – rehabilitating the natural flood storage areas,
- forecasting of events by identifying zones at risk, controlling urbanization and prohibiting buildings in exposed areas,
- 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.

The availability of fresh water - in sufficient quantity and quality – is already and may become, in less than a generation from now, one of the main limiting factors of the economic and social development in many countries.

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.

It is essential to intensify efforts for better managing water demand, for better water efficiency and thus for reducing the pressures on the resources, especially in a period of drought, by reducing, in particular, abstractions for irrigation, that are the most significant uses in many areas.

Very often, the rarefaction of the resource will require looking for water saving, by, first of all, managing the demand but also by mobilizing non-conventional water and by re-using water, by systematically fostering ecologically sound solutions, socially acceptable and economically reasonable.

Mobilizing new resources and creating reserves should be planned after rationalizing water demands and only when it will be ecologically acceptable and economically reasonable. The economic incidence of treated wastewater re-use should not be forgotten, in period of drought in particular.

Building new dams will not be enough without the implementation of water saving and recycling programmes: the solutions will pass through proactive water management together with constant incentive measures for more integrated uses facilitated by innovation and new technologies.

Water Scarcity Management Plans should prioritize drinking water supply, making sure that water is fairly and soundly shared between 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.

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 too often dispersed, heterogeneous and incomplete, and is rarely comparable and adapted to the prerequisites for objective decision-making...

Moreover, in many countries, it is a fact that public, semi-public and even private organizations lack sufficient means for producing, exchanging, gathering, standardizing, summarizing and for capitalizing it among them.

It is necessary to define common standards for globally gathering comparable data, produced by the various stakeholders, in order to organize real information systems at the level of national or transboundary basins and to synthesize the information needed for the definition of policies at all useful levels.

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

Systems for warning against floods, droughts and pollution should be improved, developed and coordinated for better facing the natural disasters caused by water and for protecting human lives and properties.

With the fulgurating development of Internet, new “intelligent” on-line services will develop and allow responding in real-time to the most frequent questions asked by the various categories of managers.

If climate change can no more be doubted, significant uncertainties remain regarding its local impact and the best way of facing it in each situation. It is necessary to reinforce research on climate in each large basin or areas.

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.

A significant part of the installations and developments is carried out by private firms, by riverside property owners or individual users, whose combined initiatives do not necessarily correspond to the general interest, in the absence of a global policy, the elaboration of which they would have been associated to.

In each country, a clear legal framework has to specify the rights and obligations of the different stakeholders, their responsibilities, the decentralization levels, the proceedings and means allocated to achieve integrated water management.

A new water resource management approach will only be possible if it is based on the acceptance of all stakeholders in each basin.

A concerted participation will ensure the social and economic acceptability of decisions, taking into account the real needs, the provisions to be acted upon and the stakeholders' contribution capabilities in social and economic life and their real mobilization for acting on the same track.

An active participation of the users is the best means 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.

These Basin Committees should be involved in the decision-making related to water policy in the basin, with procedures that clearly define their role.

It is necessary to establish inter-sectoral links to foster exchanges of information and experience and coordination of actions in each basin. In particular, each sector must be well informed on the possible effects of climate change on its activity.

These Basin Committees can only succeed if their role is not just reduced to approve decisions taken by other authorities: they should really be associated in the decision making process.

More and more stakeholders are involved in water management: New parties are coming into the scene to mingle with full time water professionals and their direct or indirect role will become more and more important: They all have in common, on the one hand, that water is not their profession and that they have not been prepared to play a role in this issue and, on the other, that they are often geographically dispersed, even isolated sometimes, especially in rural areas.

It is extremely important to develop specific means to raise their awareness, and provide them with the information they require, in the appropriate forms and supports.

We welcomed, with great interest, the initiative of the International Secretariat for Water in Montreal to jointly promote with INBO a **"Blue Passport of basin citizens**" so that local decision-makers, economic partners and the population develop a stronger sense of belonging to this basic geographical unit for water management, which is the river basin. Interested Basin Organizations, on a voluntary basis of course, may join the project and develop their own passport adapted to the situation of their river basin.

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.

The implementation of regularly updated planning processes is well adapted to the uncertainty that remains on the forms that the phenomenon will take in each basin.

This means that it is important to regularly update the Management Plans to face, in a pragmatic way, the various situations encountered and their evolution in the coming years, while relying on observation and increasingly fine projections of the climate change effects.

As shown in the assessment of River Basin Management Plans that has been made, it is necessary to develop more highly integrated approaches on surface, ground and coastal waters and seek transverse and cross-sectoral solutions to reduce pressures on available resources, protect or restore aquatic ecosystems and the hydro-morphology of rivers.

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.

But, the financial resources specifically devoted to the management of water resources and aquatic ecosystems are notoriously inadequate in the context of current changes, they only represent a small share of resources devoted to public services (drinking water supply, sanitation, irrigation …) and major infrastructure, while the water resource is likely to be the limiting factor!

When a river is dry, or when the level of an aquifer is lowering, how can we feed the supply systems?

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.

In the final analysis, it is clear that, except in some particular cases, the funds required greatly exceed the conventional financing possibilities coming from only national or territorial public budgets, whose revenue relies on global tax systems.

The bi or multilateral development aid is usually composed of loans, mainly soft loans, which will nevertheless have to be reimbursed. It only represents a part, which is important, but will be insufficient and it is not realistic to expect a significant increase in the short-term at least, due to the difficult economic situation of many industrialized countries.

"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.

These arrangements should be an incentive to limiting wastage and to removing pollution by changing the users' behaviour.

In conclusion: Business as usual cannot continue:

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

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.

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!

The International Network of Basin Organizations – INBO - was created in 1994, 20 Years ago, to exchange its member's field experiences in order to develop and improve basin management and transboundary cooperation in the world.

INBO intends to actively contribute to the efforts made for adapting to the effects of changes, by helping to establish and strengthen basin organizations, as water management institutions to guarantee a long-term and rational meeting of the needs of the populations, of economic sectors and of ecosystems.

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