

BRIEF OF PROPOSALS RELATING TO THE QUESTION OF WATER GOVERNANCE

"We the undersigned, recognized members of the world scientific community, hereby warn the whole of humanity of what might happen. A far-reaching change in the management of the planet and the life therein is necessary if we want to avoid widespread suffering and an irreversible mutilation of our entire habitat on this planet.

Our biggest danger is finding ourselves trapped in an ecological declining spiral, of poverty and unrest, leading to our social, economical and environmental downfall.

In publishing this warning, we, the scientists, hope to reach and move people everywhere. We need vast amounts of help. We are appealing to every man and woman to join us in our task¹".

Extracts from "World's Scientists Warning to Humanity" (1992)

If there is one field in which governance is necessary, even vital, it is that of water supply, for it is indeed in this field *"that a far-reaching change in the management of our planet and the life therein is necessary"*. Why? Because water is Life and because, on this planet, water commands and regulates all fundamental phenomena and all essential interactions. The European Water Charter maintains as of its first article: *"There is no life without water, it is a precious asset, indispensable to all human activities"*.

Serious competitiveness currently exists in the field of water supply between the various sectors in which it is used: agriculture, towns, industry, energy, and leisure activities. Another predominant factor is the priority of cost effectiveness. Some people are worried about the formation of powerful financial networks and industrial giants on a world scale which could aggravate the economic and geopolitical struggle between the various parties concerned. Many specialists believe that supremacy, hegemony and absolute national sovereignty are the brakes on water supply governance implementation. They point out, for instance, that Egypt and Hungary are beholden for more than 95% of their water supply, which is originating from other countries, Rumania for 82%, Holland for 89%, Germany for 51%, and Belgium for 33%. Moreover, they stress, the Nile and the Congo concern nine riverside countries, the Euphrates and the Tigris four, the Mekong six, the Amazon seven and the Zambezi eight. In reality, there are more than two hundred catchment areas which ignore political frontiers. This is a paramount issue telling us the importance of basin catchment for biodiversity and human life. A vast coverage for a world-wide governance of the resource as noted by the Platform for a reasonable and united world sponsored by the Alliance. In the water supply issue, this text sees, in fact, a *"concrete, urgent, planetary challenge"* and, emphasizing, the vital role of this element, the Platform stresses *"active subsidiarity by prioritizing local initiatives and by placing them in an overall vision"*.

The quality of the water supply and the access to this vital resource are both matters for an eminently local and manifestly geopolitical management. A policy is not so much a group of rules, texts, laws and procedures decreed by the government as a system of thoughts, a philosophy, one might say, inside the distribution system itself; for, when all is said and done,

¹ Position adopted in November 1992 by the "Union of Concerned Scientists" which assembles close to 1,600 scientists including 102 Nobel prizewinners.

is water not interconnected with the network of rivers all leading to the same point - the ocean, starting point and initiator of the hydrologic cycle?

The control of the water supply is a powerful political instrument, more powerful even than that of another more viscous and fairly nauseating liquid: petrol. Moreover, contrary to petrol, water is irreplaceable: in the spring of 2001, Zhu Rongji, the Chinese Prime Minister declared while in visit to Paris: *"The scarcity of water is a serious obstacle to the economic and social development of China"*. (*"Le Monde"*, August 18th, 2001)

The governance of water must work towards peace and understanding between men because:

A world in which the access to water is threatened is a dangerous world.

The supply of water is the world's disaster zone - owing notably to irrational management. Today, more than two billion people live without access to potable water and more than 2,6 billion are without sanitation.

This situation is peace threatening.

Water stress affects mainly the South, again emphasizing the differences between rich and poor countries. Since 1977, at the United Nations conference concerning the water supply in Mar del Plata, the same emergencies, as those currently mentioned, were already up for consideration.

Moreover, any water supply policy has repercussions on:

- The climate as it is more and more supported by strong scientific evidence
- Food
- Human health via supplies of drinking water
- The environment
- The management of waste water
- Conflicts between men, within a country (India and United States) similarly between countries or States, as is proved by the military operations in the Middle East, to give just one most symbolic and distressing example of the suffering inflicted on men and the gross injustices suffered in the use of the resource. Often moreover, conflicts with regard to the supply of water find- in part, at the very least- their poisonous roots in religion, in the interest of the State, or in racism.

And, in fact, water is full of symbols, spirituality in many revelatory religions and beliefs. The Christian baptism, the obligatory ritual ablutions before each of the five Muslim prayers, and the Buddhist immersion in the Ganges are several examples of this. Water, for many human civilisations, is an environment in which rites of passage are taught, an environment where we are in contact with life, with the hard human condition, for water is the living environment par excellence. Water, say the Dogons of Mali, is inhabited by *Nommo*, a spirit with extraordinary, mysterious and sometimes formidable power to which human beings have a duty to show absolute veneration. *Nommo* can, in actual fact, decide where it will rain and assure prosperity just as he can cause drought and misery, if, by chance, man happens to neglect his worship. For the Ancient Egyptians, the source of all life, whether it be human or divine, is the mass of primitive water personified by name Nu, and which is at the source of two sacred rivers: on the one hand, the Nile, which gives life and, on the other hand, the Sky, on which floats the boat of Râ, the sun. As to the Chinese, they held water in awe: was their country not a land of drought and floods? Around 250 BC the Middle Empire deified Li Bing, governor of what is now Szechuan province, a genius in the field of hydraulics who built the

first dam on the Minjiang, a tributary to the Yangtse. He also invented a system of canals which, when open, permitted irrigation and, when closed kept flood water under control. Long before the famous statue of the zouave (Algerian soldier during the French rule) was erected at the Pont de l'Alma (Alma Bridge on the river Seine) in Paris, Li Bing placed three human statues in the river to keep a watch on tides: if their feet were visible, it meant drought and the dam gates were opened; if their shoulders were under water, it meant flooding and the gates were shut. From that point on, there was constant progress in human control over water, and the Chinese put in place sophisticated systems of bamboo pipes to irrigate the fields and supply towns (Hangzhu in 1089, Canton in 1096)².

The presence of water in spirituality is not a thing of the past. Far from it! In May 1999, the Roman Catholic bishops from the Columbia River catchment area in California highlighted, in a pastoral letter, the role of the river and wanted to influence the debate in progress concerning the watercourse which was the object of many controversial developments. These clergymen maintain that the Columbia River is a "*driving force in the spiritual life of the area*" and that it must not merely be seen as a "*beast of burden for the economy*"³.

Without water, health is illusive, food impossible to produce. They say in Mali: "*It is water that controls man*". Man can survive for one month without food, but, deprived of water, he will die within a week as was demonstrated by the French physician Alain Bombard. Water forms the base of food safety. Several weeks away from a vital conference on world food, Jacques Diouf, director general of the FAO emphasizes in the organization's annual report, published in September 2001, that food safety is deteriorating all over the world owing to drought, flooding and other natural disasters⁴.

At the dawn of this millennium, Humanity who is able to explode the atom and control its infernal power, the same Humanity who has walked on the moon, accepts, without thinking, that more than two billion men are unable to satisfy their basic water requirements. **At the start of the third millennium, one person in six does not have access to drinking water and one person in four does not have any sanitation facilities.** Peter Gleick, in his book "*The World's water*", estimates at 50 billion dollars per year, the amount necessary to satisfy the water supply requirements of the poor including up-to-date sanitation facilities; this amount being by far inferior to the social costs currently incurred owing to bad management and inadequate sanitation facilities.

Millions of people are still exposed to waterborne diseases and the financial institutions, research establishments and international organizations such as the WHO seem curiously lacking in willingness to eradicate the affections of another age such as cholera, trachoma, malaria, bilharziasis and dracontiasis (Guinea worm). But, in the rich countries, an unobtrusive, rampant, insidious contamination of water by pesticides, drugs⁵, various chemical products⁶ -even radioactive products and resistant micro-organisms- is mobilizing vast sums of money and worrying specialists and lawmakers as is proved by the complex "*Safe Drinking Water Act*" and "*Clean Water Act*" voted by Congress in the United States for example, the delays concerning discussion of the law relating to water supply in the French Parliament or the powerful demonstrations observed in Spain with regard to the National Hydrologic Plan (NHP)- which aims to transfer water from the Ebro to Andalusia- and to the

² Larbi Bouguerra, "Water under threat", Zed Books, London, 2006.

³ Los Angeles Times, 8th May 1999.

⁴ International Herald Tribune, 12th September 2001.

⁵ Patrick J. Philippe and al, "Pharmaceutical formulation facilities as sources of opioids and other pharmaceuticals to wastewater treatment plant effluents", *Environmental Science & Technology*, 2010, 44 (13), pp.4910-4916.

⁶ Andreas Musolff and al., « Micropollutant loads in the urban water cycle », *Environmental Science & Technology*, 2010, 44(13), pp 4877-4883.

pollution from the river Segura in Murcia. The NHP is considered questionable, even absurd, by the demonstrators who are appealing to the European Union about it and point out: *"Instead of managing a traditional supply-side policy, we are asking for a new method of management based on water supply requirements. The key word is: economise and spare water"*⁷ adding that the liquid is wasted by the irrigated Andalusian agriculture. These accurate words would be applicable to many other countries where the only known management is that of supply when the aim must be to improve the efficiency of consumption. Irrigation, in numerous countries, is manifestly inefficient since only 37% of water supplied in this way to the crop is effectively absorbed by the plant; the rest can be considered as lost⁸.

And, in point of fact, 70% of the earth's harvest only germinates as a result of irrigation water⁹ and this, in many places, is either inadequate or wasted. Sandra Postel, from World Watch Institute, draws, in a recent book, a very gloomy picture of the irrigation water situation - the levels of which are dropping everywhere, she maintains, owing to an excessive dewatering, a "mining" operation, just about everywhere in the world; from Central China and the north to the west of the United States and from the Arabian Peninsula to Pakistan not forgetting either South and North-west India or North Africa. This overexploitation of fresh water is highly dangerous as the lowering of the water table causes a catastrophic intrusion of salt water from the sea and subsidence, as can be seen, for example, at Gaza in Palestine, in Mexico, in California and around lake Houla, not far from the southern border of Lebanon. The effects of this excessive dewatering are added, in some cases, to the uncontrolled felling of the trees in the forests. The role of conservation of these trees vis-à-vis rainwater is, nevertheless, well known. To say nothing of their role in the struggle against erosion. A new system of irrigation has to be determined to avoid man facing a major crisis, threatened with soil salinization, waterlogging, sedimentation and siltation. All these factors are matters for world governance, assures Sandra Postel, who criticizes industrial agriculture as being guilty of a lack of consideration for the future and sustainability.

It is useful, here, to remember that sustainable agriculture calls on several important factors:

- Correct management of the available biomass - both plant and animal
- Integration of plant and animal production and the suppression of specialization
- Adaptation of cultivation to local climate and edaphic (relating to the soil) conditions
- Adaptation of food patterns to the agricultural possibilities of each area.

It is sadly clear that the consumer way of life led by some, is hardly encouraging to such an agriculture which, should it be extended to the entire planet, would be a genuine disaster for the hydrosphere with its annihilated forests, reduced biological diversity and agro-toxic products.

We must, in actual fact, bear in mind that a meat diet requires a lot more land than a vegetarian diet and that the production of a kilo of meat – in the case of battery breeding – bestows 350g of nitrogen on the environment whilst wise management of the biomass would have beneficial results for the resource: regenerating the soil, correcting erosion, reducing irrigation, re-establishing the water balance in the fields, and eliminating the use of toxic pesticides which contaminate the hydrosphere. For Joseph Orszàgh (Mons-Hainaut University), *"the day humanity decides to stop throwing human and animal waste either directly or indirectly into water, we will have the key to mastering the world's water supply problems"*. Currently, men expect contradictory services of water: to clean them and feed