Water
share it, don't steal it

Loïc Fauchon
President of the World Water Council

The current obsession with doom and gloom extends to water. It is threatened by population growth, excessive development and climate extremes.
While it is true that water resources need to be used more carefully, the demand for water also needs to be regulated. The international community has a duty to implement water policies that are both international and local.

“The obituaries column is always more popular than the births column”[1]. Nowadays the general outlook is one of doom and gloom and the media feed on developing crises and disasters, forgetting earlier disasters as they move onto new ones. It is worthwhile cultivating a sense of guilt because it encourages both the principle of excessive precaution and individual giving.

On this subject the philosopher Hans Jonas spoke of the “heuristics of fear”. But in reality “this subject only reaches and affects a small part of the world’s population, that which does not have to be concerned daily with meeting the essential requirements of tomorrow” as C. Lévêque expresses well in *La Biodiversité au quotidien* (Everyday Biodiversity).

And fear is a poor adviser. It is sometimes the basis of narrow mindedness and excess. Discussion, or more precisely lack of discussion, of the climate in recent years is a glaring example. After the Copenhagen soap opera where everyone sang from their own hymn-sheet and there was no conductor, where the “ecological populism” had the upper hand for a time over “genuine diplomacy”, we are probably now ready for calmer discussion.

The climate, the air, biodiversity, water and other essential resources demand attention, thoroughness and respect. And now is a good time to discuss them as simply and objectively as the general public wants. We should make an effort to contribute to these issues as if we were attempting a "Journey to the centre of water", a water journey through the past and present in order to improve our understanding of the realities of the future.

[1] *Christian Lévêque: La Biodiversité au quotidien (Everyday Biodiversity), Quae editions, 2008.*

The universality of water

Water has always been at the heart of man's concerns. Because as Antoine de Saint Exupéry wrote "Water is not merely essential to life, it is life". And, closer to home, the ingenious irrigation in Palmyra and Persepolis, the quality of Roman, Greek and so many other aqueducts show that down the centuries controlling water became an obsession. Because there is no life without water. Which is why there have always been conflicts or even fights to control wells or springs, even though most of the famous "water wars" were merely quarrels between neighbours or tribes.

Awareness of the importance of water did not become universal until much later. It was not until 1972 in Stockholm and then 1977 in Mar del Plata that the human community asserted the right everyone to have access to enough drinking water to meet their everyday needs.

Since that time, year after year the UNO, its General Assembly, agencies and a majority of States have reaffirmed their desire to tackle the planet's water and sanitation problems more effectively. The problems may be summarised in a few statistics that are quoted the world over.

Even though there may not be a shortage of water in the world, not everybody has access to it. Fresh water is spread very unequally over the planet with stark regional contrasts. Less than ten countries share 60% of the world's freshwater reserves and therefore while some suffer from a chronic deficiency, others have endless resources.

As far as consumption is concerned, on average an American uses approximately a thousand litres of water a day, a European 250 and an African 50.

Finally, the health statistics are appalling: several million people die each year from waterborne diseases including 1.5 million children under five from diarrhoea.

Threats to water

Even though there is plenty of water on the planet, it is not always there where and when we need it. And even when it is present the quality sometimes leaves a lot to be desired. Because water is under attack, mainly by the human race. These attacks, which are the consequences of rapid worldwide growth, include population growth, urbanisation, coastal settlement, improvements in the standard of living, pollution and the destruction of natural environments that themselves result in climatic extremes.

Firstly, we are faced with the explosion in population growth that affects a large part of the planet because the world's population has increased and is continuing to do so. There will be between 9 and 10 billion of us by 2050 compared to 2 billion in 1900 and 6.8 billion today.

Between 150,000 and 200,000 children are born every day, which means additional needs that the countries in most difficulty will be unable to meet. The new arrivals will require extra resources, resources of high quality water in the right place at the right time. Failing this we will accelerate migration resulting in injustice and instability.

The 20,000 people who die every day from a lack of drinking water do so firstly because they live in deplorable conditions but mainly because overpopulation in the areas concerned makes drinking water a rare commodity. The lack of water resources in several regions in the world, in addition to the trend towards consumption and modernism, encourages people to migrate to the cities and coastal areas.

The second problem we face in all countries, whether in the north or south, is excessive, anarchic urbanisation in megalopolises that are constantly increasing in size, number and poverty. These megalopolises have enormous domestic and industrial water requirements that result in considerable, often dangerous, pollution. The impact on health is significant and we are well aware that the hospitals in many countries are filled with patients suffering from waterborne diseases.

Half of the world's population currently lives in cities and this phenomenon, which will increase in the future, puts significant pressure on resources.

Urbanisation means people leaving rural areas, implies slums, polluted water tables, rivers and lakes and creates unacceptable tension. According to UN-Habitat the United Nations Human Settlement Programme, two billion people will be living in slums by 2030.

Another problem with coastal settlement is not only the increased number of people moving to coastal areas but also the increase in tourism which creates additional pressure.

The coast, which is an interface between land and sea and a complex ecological environment, is extremely popular. Two thirds of the world's population lives in coastal areas less than 80 km from the sea and most major cities are located on the coast. Coastal sectors, which include 18 of the world's 27 megalopolises, are faced with considerable migratory pressure.

The consequences of this are disastrous:

- a significant increase in the demand for water in coastal areas. In the Mediterranean for example, tourists may consume between four and eight times more water than local populations (as much as 880 litres for the luxury tourist industry). Filling swimming pools, watering golf courses and green spaces also require a lot of water.
- over-exploitation of coastal water tables and problems of contamination by seawater.
- increased vulnerability to natural risks, particularly flooding due to high tides and storms.
- "artificialisation", i.e. concreting that sometimes results in the disappearance of wetland (half disappeared in the 20th century), worsened erosion and a reduction in the surface area of farming land.

There is therefore a progressive deterioration of river environments and marine and coastal ecosystems. We are not only destroying biodiversity but we are also threatening the capacity of ecosystems to provide vital ecological services such as the supply of fresh water, pollution filtration, the supply of food through fishing, etc.

We are therefore imposing ourselves throughout the world without any concern for the fragile natural balances surrounding us. Diversity and living beings are therefore being damaged and we are shaping our own fate by eliminating large tracts of life on earth.

Cities, intensive farming and industry badly pollute the air and water, endangering the health of billions of human beings but above all

damaging the quality of water resources to such an extent that the state of rivers or water tables can now be considered a new type of health time-bomb.

In the future we will be forced to pay much more to treat our domestic and industrial waste. We have to convince political decision-makers that nowadays it is wiser to invest in a sewage treatment plant than have to tackle significant increases in typhoid or malaria in the very near future.

Finally, improvements in the standard of living result in changes in eating habits that require increasing quantities of water. As an example, a vegetarian diet requires only 2,000 litres of water a day compared to 5,000 litres for a meat-based diet. Eating a kilo of beef means consuming the 16,000 litres of water needed to produce it. This quantity is the "hidden water" currently known as "virtual water".

Similarly, improvements in the standard of living result in the need for industrial water. For example, approximately 400,000 litres of water are needed to manufacture a car. Bearing in mind that China has become the world's largest automobile market, even bigger than the United States, it is easy to imagine the impact on the necessary availability of water resources for the automobile industry.

And clearly climate change may add to these enormous difficulties.

Will there be more droughts in some areas and more flooding elsewhere? It is possible and not for the first time in the history of the human race. If this happens we know what the consequences will be for water.

In such extreme situations even more public money will be needed for over-dimensioned equipment and infrastructures: in some places dams will be raised even higher to tackle rising water levels; in others it will prove necessary to pump longer and deeper to reduce the effects of water shortage.

But the climate must not become the scapegoat that enables people to forget their faults, shortcomings and excesses. There will not be a shortage of water in thirty years because of global warming. Almost 2 billion human beings already have insufficient water and twice that number have little or no access to acceptable sanitary facilities.

The lack of water or water of poor quality is by far the main cause of mortality in the world, "ten times more than all wars combined".

Children are the first affected: 5,000 children under 5 years old die each day as a result of diarrhoea caused by poor quality water.

Hospitals in many countries are filled with patients suffering from waterborne diseases.

Even though sanitation includes access to toilets, it should not be restricted to such a limited definition. Above all sanitation means the need for a complete purification treatment. Sanitation also implies dignity and access to education.

Improved sanitation would reduce healthcare costs: as an example, in Sub-Saharan Africa where, in the course of a normal day half the hospital beds are occupied by people suffering from faecally transmitted diseases, the treatment of avoidable infectious diarrhoea accounts for 12% of the total healthcare budget.

The World Health Organisation estimates that nearly two hundred million school/educational days could be saved each year if the Millennium Development Goal on sanitation was achieved. In the Alwar District of India school sanitation increased the enrolment of girls by a third and improved the children's academic performance by 25%.

Even though water and sanitation definitely need science, they must first of all increase our awareness. The awareness that encourages us to act to save the earth or participate in launching anti-flu or AIDS campaigns should also focus on the fight against waterborne diseases that have made a particularly alarming comeback throughout the world.

Give water to help development

At this point in the history of water we are well aware that we are facing major challenges: how to get more water resources and also protect, store and best use them today and tomorrow for future generations.

This awareness is recent. It is not only between people that we need to share the use of water, but it is between people and nature that water needs to be harmoniously and yet painstakingly shared.

The question is not simple and the responses are sometimes thought-provoking. Respecting biodiversity is currently a universal dogma that an overly environmental approach shields from being questioned. And yet we are encouraged to forget that biodiversity is a daily concern, that we ourselves are part of biodiversity.

Biodiversity can also threaten and kill. If certain parts of the world have been sanitised, drained and deforested over the centuries it is because part of the tropical environment was where life-threatening waterborne diseases were rife.

Some people would doubtless consider it sacrilegious to claim that public health should sometimes take priority over conserving biodiversity. And yet, as Christian Lévêque puts it, “Mankind is not only a harmful species, it is also capable of having a positive influence on its environment”. And when the Camargue region is talked of as being a nature reserve that needs to be protected from excessive numbers of visitors, “Don’t forget” he says “that the Camargue was built by Man, not nature”.

There is therefore the need for a new approach, a flexible balance. This balance, which implies acceptance of both development and protection, remains a constant battle. Because even though we may be encouraged to change our behaviour significantly over time, we should bear in mind that this easier to say and do for the rich than for the poor. In the concept of sustainable development, some emphasise the “sustainable” while for others, the weaker, oppressed, the “development”

aspect is far more important. We should not let the desires, or even obsessions, of the affluent deprive the poor of their most basic needs.

We should work towards a world in which stealing is replaced by sharing. Development will then not only be sustainable, it might even be fair...

The same applies to water and it is the huge responsibility of the international water authorities as well as political and local decision makers to focus on water and make it one of the priorities of public policy.

There are two aspects to this priority: as we increase the quantity of fresh and then drinking water to satisfy the needs of increasing populations throughout the world, genuine policies for controlling demand will be indispensible to limit, then partly reduce individual and collective waste.

To meet the world's ever-increasing demand for water and increase the water supply to our cities and those areas where the supply is inadequate, we will have to continue making greater demands on our rivers, lakes, underground water and the sea itself.

The most recent innovations are already introducing a new situation as regards the geography of water. We are going to have to dig deeper and deeper for water while taking care not to empty the Earth's guts. We will have to start looking after our underground water resources with the sort of care we have hitherto reserved for oil.

We will get better at extracting salt from water, and not just removing the salt from seawater. We will also be desalinating those millions of square kilometres beneath which lie reserves of brackish water. The use of reverse osmosis and gigantic new facilities have greatly reduced the price of desalination. This price will have to reduce even more so that countries suffering water stress can afford to use it.

We will have to take greater care over our future use of significant quantities of every type of salt to make sure they aren't dumped back into nature to damage sea and river ecosystems.

We will be shifting water from region to region over greater and greater distances. We will learn how to recycle purified water and use it in the agricultural and leisure sectors. As Hassan II, the late king of Morocco said, "Not one drop of water into the sea". While we have not yet reached this point, we can already imagine creating a sort of new "little water cycle" that will delay or reduce the water returned to the grand cycle in which it returns to the sea then the sky through evaporation to re-water the earth as rain and snow.

We will have to keep storing, pumping, transferring, desalinating and recycling water for many years yet. And to do this mankind will need all its ingenuity; it is this ingenuity we should be encouraging more than ever.

All these technologies, even the most recent, are very energy-hungry. This is why we urgently need to establish the link between water and energy more strongly than in the past. And this is why during the preparations for the Copenhagen summit the World Water Council called for us to "establish a much closer link between water and energy". It stated that improved water management is indispensible to a number of future energy solutions. This is why the WWC is asking delegates to the December 2010 COP 16 conference in Cancun to treat investment in water infrastructure as a key point of any climate agreement. It is now indispensible to discuss and implement a single "water-energy-climate package".

Easy water is a thing of the past

But increasing the quantity of water available, having enough water for energy and enough energy for water is not enough. We now have to accept that resolving tensions around water resources does not consist solely in increasing the water offer but also on controlling demand.

We now live in a world of rare resources and we need to protect and husband our resources on a global scale. Our habits and behaviour are going to have to change radically and soon.

Because increasing the drinking water available is costing more and more, particularly in today's context of climate change and financial crisis. Increasing the drinking water available threatens the environment when mankind confuses meeting essential needs with the pillaging of water resources.

If we accept that our behaviour is becoming ever more unreasonable and incoherent, we must agree that in the future we need to stop spending more and more money to produce water to be wasted and to go unused.

In this context, easily available water is now a thing of the past. We cannot allow leaks to remain unrepaired for years when there are unacceptable shortages of water. We can no longer allow some people to waste water when social pricing is needed to protect the poorest.

Controlling demand also means more careful management of dams, purification plants and piping because waste and loss are enormous.

Most of all controlling demand means agreeing on the implementation of long-term measures governing agricultural use of water.

Because farming alone uses nearly three-quarters of the world's fresh water, one of our main challenges is how we manage rural water resources. We need to increase flow-rates, track down leaks, reduce water loss and use more suitable technology. The room for improvement is considerable and the cost is not always exorbitant. Put simply, increasing water productivity should not alarm us when it results in less tension about resources.

Wherever possible we should also encourage waterless farming or at least farming that can make do with rainwater alone and does not require irrigation.

Lastly, a very recent area of research is the subject of drastically reducing the quantity of food wasted throughout the production-distribution-consumption chain. A recent study in the UK found that households threw one quarter of the food they bought in the dustbin. This is a virtual economy that could result in colossal savings in water worldwide.

It is now time to transform the principle of virtual water into a reality to help us make sustainable reductions in our water footprint. We urgently need to have better information on the quantities of water we need, particularly to produce commodities and industrial goods. This knowledge will be the basis for choices that will have a major effect on future water consumption and the flow of water transferred between regions and countries. This knowledge will probably challenge the now common notion that in order to achieve food security, regions and countries have to dominate one another in terms of food. In the future the comparative rarity of water resources will see food security becoming more dependent on countries negotiating with one another, thereby creating a new type of interdependence between them.

This subject remains very sensitive but the way is open for us to change both the places where food is produced in terms of available resources and certain types of consumption when you know that it takes 5 to 10 times more water to produce 1 kg of meat than 1 kg of wheat.

A slow change of culture is taking place worldwide. But in many places this will mean the implementation of drastic policies to encourage saving. This recently happened in California where the State legislature declared a state of water emergency. At the beginning of 2009 the Governor, Arnold Schwarzenegger, passed measures reducing agricultural, industrial and domestic water consumption by 20% in one year. Incidentally, it will be very interesting over the coming year to see whether California manages to achieve the target it has set itself.

Only public opinion as reported in the media and stoked by the fear of increasing tension caused by water shortages will make the whole subject of controlling demand for water a worldwide challenge.

Water as a political and social phenomenon

At this stage in our argument it will be understood that the problem of water is changing in two new areas at the same time.

The first is that we are now facing a problem of accessibility to water rather than that of the presence of water; the water is there but it is vital for the survival of the human race that it should be where it is needed when it is needed. We therefore have to go out and find it in places where it has not hitherto been needed.

The second is that water technology is being influenced by water politics. So the future of water no longer depends solely on technical progress but also and mainly on political and societal commitments.

Like air, water is one of the new rare commodities and the notion of rarity is too often economic. Are such new rare commodities sustainable? As far as water is concerned the answer is probably "yes", but this raises the question of how we should act on this rare commodity and whether it is sustainable or ephemeral.

The answer probably depends on what we might call "political accessibility" and is related to the following imperatives:

Providing the money indispensible for water sanitation. Political leaders should also accept the introduction of facilities to pay for the energy required for water or agree a moratorium on increases in the price of energy for water. Innovating in funding gives it a local legitimacy through micro-finance and a reality built on solidarity and decentralised cooperation between rich and poor countries. Local entrepreneurs like local savings schemes constitute an exploitable avenue if the public accounts for water and sanitation are both independent and transparent and if investing in this field is made both profitable and appropriate.

Clearly asserting the right of each person to access the resource. But the right to water does not mean that water is free, it is an acknowledgement of the prerequisite we have

already mentioned. It is an affirmation of a priority by which the dignity of each person is recognised for the simple reason that dignity is not negotiable. Concretely this means that the right to water and sanitation must be incorporated in the legislation of every country. It also means setting up minimum water allocations for the poorest, connecting slum populations to the water and sanitation systems, systematically providing water and sanitation points in all public buildings, particularly schools.

Balance how water governance is distributed between the right institutional levels: States and international organisations to legislate and monitor compliance with genuinely strategic policies; water catchment areas to bring genuine coherence to the installation of infrastructure to protect and exploit; local level where people know better than anyone how water distribution and anti-pollution should be managed. Effective water management needs democratic, decentralised institutions and should be based on concerted action to bring water to people, facilitate transparency and ensure that every user is water-responsible and eco-vigilant.

Transferring and adapting knowledge to the necessities of the poorest regions and countries to achieve general sharing of knowledge about water. Research and development programmes cannot remain uniformly governed by purely geopolitical factors. We have to come up with cheaper, rural solutions by accepting that the projected Bamako water purification plant will not be like the one in Saragossa. In concrete terms this means that we should be founding schools all over the world to train the technicians and managers required by the public water and sanitation services. Several Maintenance Schools have been founded since the Mexico World Water Forum in 2006 where the concept was presented by the World Water Council. Dozens still need to be built and political leaders ought to make a contribution by making the transfer of knowledge about water a high-profile priority.

In conclusion, this means mustering the willpower and the skill to cope with the increasing number and diversity of water-related natural disasters and their consequences.

The future diplomacy of water

We are now at a crossroads on the long road in the development of human society; we are hesitating and wondering which way to turn.

Do we keep moving forward ignoring the collateral damage we have caused or that has been caused by the express train of growth, crushing everything in its path including mankind and nature?

Or can we find a way forward that brings more measured progress? One based on awareness that we now need to strike a balance between mankind and nature?

Why then question the basis of a type of growth that has enabled our economies and our societies to make significant development over the last century? Is it because we suspect that such growth has harmed our planet? Probably. But this does not mean we should reject what we have achieved over the last century in favour of mere superstition.

We need to work for growth based on respect and that takes the balance between ecosystems into account. Growth based on sharing and which ensures that the enrichment of mankind does not involve the impoverishment of nature. This is what we mean by green growth and we should promote it. But we must not forget that one half of mankind first needs to experience growth so we should not deprive them of the essentials to life, health and dignity.

Although this green growth is probably more balanced, it is not, as some have claimed, a "green revolution". It does, however, strike a balance between the short and long term, between necessary human activity and the survival of the natural world that is the basis of genuine global balance.

Such green growth will be based on a "blue economy", an approach to water politics that requires well thought-out, reasonable management of our water resources.

In order for these simple provisions to be implemented in the modern world the international community probably needs to

devise a way of working together and of getting organised. Nobody doubts that in the coming years types of development aid will arise from what will be known as the "Powers of the Centre". Naturally China and India as well as Brazil, Morocco, Turkey, the UAE, Indonesia and others who are both new international bankers and purveyors of technical and financial ideas and solutions are already present on the scene.

For these countries there is an urgent need for water diplomacy that agrees both on the balance between the major continental water masses, the calming of potential conflicts around several cross-frontier basins and the refinancing of the debts in the poorest countries in favour of water and sanitation. On this last point working together is essential between bilateral and multilateral donors so that debt cancellation and relief can be granted in exchange for preferential reinvestment in the water sector.

The cause of water will only make progress if we can discuss peacefully and objectively. Just as we now have particle accelerators, this cause needs an "efficiency accelerator" that will at last produce an international water politics strategy and the affirmation of genuine collective responsibility. This is the *raison d'être* of the World Water Council's wish to make its modest contribution to this cause.