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Urgent need to manage water more sustainably, says UN report

Paris/New Delhi, 20 March – The planet is facing a 40% shortfall in water supply by 2030, unless we dramatically improve the management of this precious resource. This is the unavoidable conclusion reached in the 2015 United Nations World Water Development Report, “Water for a Sustainable World”, to be launched on 20 March in New Delhi (India), in time for World Water Day (22 March).

The Report is published by the World Water Assessment Programme, which is hosted by UNESCO, on behalf of UN-Water. It stresses the urgent need to change the way we use and manage this vital resource, as the United Nations prepares to adopt new Sustainable Development Goals,

“Water resources are a key element in policies to combat poverty, but are sometimes themselves threatened by development. Water directly influences our future, so we need to change the way we assess, manage and use this resource in the face of ever-rising demand and the over exploitation of our groundwater reserves. This is the appeal made by the latest edition of the UN World Water Development Report. The report’s observations are timely, because the international community has to draw up a new development programme, to take over from the Millennium Development Goals”, says UNESCO Director-General, Irina Bokova.

“There is already international consensus that water and sanitation are essential to the achievement of many sustainable development goals. They are inextricably linked to climate change, agriculture, food security, health, energy, equality, gender and education. Now, we must look forward to measurability, monitoring and implementation”, says Michel Jarraud, Chair of UN-Water and Secretary-General of the World Meteorological Organisation

Growing demand

In 2000 India had nearly 19 million mechanised or tube wells, compared to less than a million in 1960. This technological revolution has played an important role in the country’s efforts to combat poverty, but the ensuing development of irrigation has, in turn, resulted in significant water stress in some regions of the country, such as Maharashtra and Rajasthan.

This example alone illustrates the complex relationships between access to water and development. While water is essential for economic growth and the fight against poverty, it is also itself directly affected by economic development. To find a solution to this conundrum, we must seek a balance between water supply and demand. But we are nowhere near this. Despite the considerable progress that has been made in recent years, **748 million people are still without access to an improved drinking water source.** * And those first affected are the poor, the disadvantaged and women.

At the same time, the planet has never been so thirsty. To answer the needs of an ever-growing population, the agriculture and energy sectors have to keep producing more and more. From now until 2050, agriculture, which consumes most water, has to produce **60% more food** globally, 100% in developing countries. Demand for manufactured goods is also increasing, which, in turn, puts further pressure on water resources. Between 2000 and 2050, the demand for water by industry is expected to increase by 400%.

But while demand for water rockets – it is expected to increase by 55% by 2050 – and 20% of global groundwater sources are already overexploited, it is still not being managed sustainably. Intensive crop irrigation, uncontrolled release of pesticides and chemicals into watercourses and the absence of wastewater treatment – which is the case for **90% of wastewater in developing countries** – are all proof of this state of affairs.

Development is putting a strain on water

The environmental cost of practices like these is high. It means wide-scale water pollution and significant wastage. In the North China Plain, intensive irrigation has caused the water table to drop by over 40 metres. The environmental cost is also seen in terms of the sometimes irreversible damage to many ecosystems across the world, especially in wetlands and coastal areas. This substantially reduces their capacity to perform vital ecosystem services such as water purification and storage.

Climate change only adds to this pressure. The increased variation in rainfall and rising temperatures lead to greater evaporation and transpiration by vegetation. Meanwhile, sea level rise is threatening groundwater in coastal areas. Just like Calcutta (India), Shanghai (China) and Dacca (Bangladesh), other cities are finding their groundwater reserves are being contaminated by salt water. The picture is the same in the Pacific islands of Tuvalu and Samoa, whose inhabitants increasingly depend on imported water to satisfy their needs, as their own groundwater has become too salty.

According to the authors of the report, this growing pressure on water resources is also likely to lead to greater competition between sectors, as well as between regions and nations.

The time has therefore come for us to change the way we assess, manage and utilise this resource, the report stresses, pointing to failures in our governance of water. Water is too cheap, compared to its real value, and is rarely taken into account when decisions are made regarding energy and industry. In general, decisions that determine how most of water is used are taken by a limited number of players (public, parapublic and private) and follow a logic dictated by short-term goals, rather than environmental concerns.

The virtuous circle of sustainable development

The report emphasises the role of public authorities in influencing the strategic choices that will guarantee a lasting future for our water resources. In particular it recommends limiting the development of thermal power stations that, today, produce 80% of our electricity and consume vast quantities of water. This could be achieved, for example, by granting subsidies to renewable energies such as wind and solar, which are still relatively expensive. It could also mean rewarding farmers who use efficient irrigation methods. For example, in an arid country like Cyprus, subsidies like this have led to a major change in farmers' attitudes towards irrigation techniques and the imposition of techniques that consume less water.

The transition towards more sustainable models of production comes at a cost, but as the report points out, such investments are part of a virtuous circle. Indeed, studies show that

for every dollar invested to protect a catchment area up to \$200 can be saved on water treatment. So, while \$235,000 are needed annually to optimise the treatment of waste in order to maintain the Nakivubo marshlands in Uganda ecologically intact, this ecosystem provides a water purification service for Kampala that is estimated to be worth USD 2 million per year. In New York, managing the upstream catchment areas saves the city an estimated USD 300 million a year.

The efforts that some countries are making show that better governance and more careful use of water are possible, including in developing countries. The water authorities in Phnom Penh (Cambodia) are a case in point. This organisation, once accused of corruption and on the verge of bankruptcy has, in the space of a decade, become one of the world's most efficient water suppliers. It has reduced water losses from 60% in 1998 to 6% in 2008, which is equivalent to Singapore's entire water supply.

As the United Nations prepares to adopt the future **Sustainable Development Goals** for 2030, the report points to the need to devote an entire goal to water. It argues that the focus be extended from drinking water and sanitation – as was the case in the Millennium Development Goals - to the global management of the whole water cycle. The proposed SDGs would thus take into account questions of governance, water quality, wastewater management and the prevention of natural disasters. The Sustainable Development Goals will be finalised in the autumn of 2015 during the United Nations General Assembly.

The United Nations World Water Development Report is the result of collaboration between the 31 agencies of the United Nations system and the 37 international partners that make up UN-Water. It is produced by the World Water Assessment Programme (WWAP), hosted by UNESCO. The report presents an exhaustive account of the state of the world's water resources and, up until 2012, was published every three years. Since 2014 it has become an annual publication, devoted to a specific theme. Its publication is now timed to coincide with World Water Day, whose theme is also aligned with that of the report.

*A water source that is protected from outside contamination.

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