World Water Day: A global awareness campaign to tackle the water crisis

World Water Day (WWD) has been celebrated on 22 March every year since 1993. It is an opportunity to learn more about water and its centrality in our lives and for the environment, and promote sustainable behaviours and actions towards this precious resource.

Every year, WWD focuses on a different theme. This year, it addresses Water and Food Security and it is coordinated by the Food and Agriculture Organization (FAO) of the United Nations on behalf of UN-Water. Feeding all mankind within the boundaries of the environment and our natural resources, especially water, will be a major challenge for humanity. There are seven billion people to feed on the planet today and this number is expected to rise to nine billion by 2050. This means that 70% more food will be needed, up to 100% in developing countries. All that we eat need water to grow; however our water resources are finite, and already under heavy pressure.

Changing diets and food preferences, in particular due to urbanization and income increase, are having a significant impact on our water resources, especially the global augmentation of meat consumption, which is expected to rise from 37 kilograms of meat per person per year in 1999/2001 to 52 kilograms in 2050 (from 27 to 44 kilograms in developing countries). Livestock requires feed crops to grow that in turn require water. Slaughtering and the processing of meat also require large quantities of water. This makes the virtual water content of meat particularly important.

The water we “eat”

Whereas a person needs to drink 2 to 4 liters of water everyday, it takes 2000 to 5000 litres of water to produce one person’s daily food. It takes for example 1500 litres of water to produce 1 kilogram of wheat and 15000 – ten times more! – to produce 1 kilogram of beef.

All that we eat – from crop and livestock production, inland fisheries or aquaculture – require water to grow. Only 70% of the water withdrawn from watercourses, wetlands, lakes and aquifers at global level are actually used for irrigation. Irrigated agriculture represents 20% of the total cultivated land and contributes 40% of the total food produced worldwide.

Water challenges to food security

By 2025, two-thirds of the world’s population could be living under water-critical conditions. The lack of water limits farmers’ ability to produce enough food or earn a living. South Asia, East Asia and the Middle East for example are already close to their resource limits, and their population is still growing.

Climate changes may increase the potential of agriculture in high latitude areas, whereas regions near the equator will experience more frequent and severe droughts, excessive rainfall, and floods, which can destroy crops and jeopardize food production. Populations who live in fragile environments and depend on agriculture for their livelihood face an immediate and increasing risk of crop failure or loss of livestock.

Unsustainable water withdrawals and water quality degradation can...
Secure water to secure food

Food production systems need to be improved in order to supply more and better food for growing populations, with reduced claim on water resources and limited damage to the environment. It is essential to increase water productivity in agriculture to achieve both water security and food security. Investments for smarter agricultural practices are urgently needed to improve the performance of both irrigated and rain-fed production and achieve “more crop per drop”.

Drainage water, treated wastewater, brackish and desalinated water can be re-used in agriculture, especially in the arid and semi-arid zones and in rapidly growing peri-urban areas, reducing the pressure on freshwater resources. Cities’ wastewaters are in fact a precious source of water and nutrients for agriculture that have to be properly managed to minimize environmental and health risks.

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Improved water harvesting and storage are also necessary to address climate changes and the increasing irregularity of rainfall. Different production systems can be integrated to increase water productivity. For example, growing numbers of farmers, particularly in Asia, are finding that they can both increase rice yields and add a valuable source of protein and income by using the water in their rice paddies to raise fish.

Besides, roughly 30% of the food produced worldwide – about 1.3 billion tones – is lost or wasted every year. The resources used to produce it, including water, are lost as well. It is time for consumers to change their attitude, make sustainable dietary choices and limit their food waste.