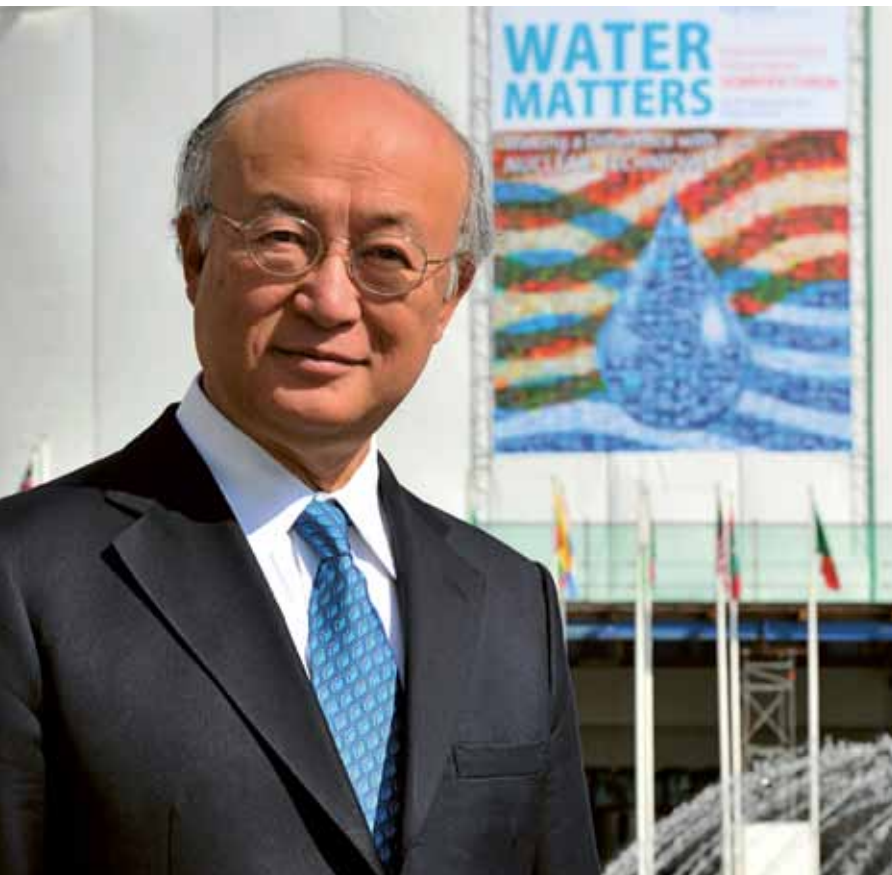


by Yukiya Amano

# Why Water Matters



**Nuclear techniques can help countries to manage their freshwater supplies and protect the environment.**

**T**he world faces acute water shortages. The current African drought is just the latest tragic example. One billion people have no access to adequate drinking water. Five million — mainly children — die each year due to water-borne diseases. Those numbers are expected to rise.

For over half a century, the IAEA has been doing everything it can to help, deploying its unique expertise in using nuclear techniques to understand and manage water. In more than 90 countries, our experts work with national counterparts to find, manage and conserve freshwater supplies and protect our oceans.

In the Santa Elena province in Ecuador, for example, the IAEA has worked with local partners to

give over a quarter of a million people continuous access to fresh water for the first time. I saw this successful project myself in July 2011. Together with our partners, we investigate and measure the aquifers so that wells can be drilled in the right places and long-term sustainability of water supply is assured.

The IAEA is working with partners in Bangladesh to mitigate contamination of groundwater by natural arsenic, the worst such case in the world. The use of nuclear techniques made it possible to locate safe alternative supplies of water quickly and cheaply.

In Africa, where many farmers are confronted with arid growing conditions, water is becoming a rare commodity. The IAEA is working with 19 African countries to teach farmers to use appropriate, small-scale irrigation technology, supported by nuclear techniques, to make sure that every drop reaches the crops to produce greater yields.

The IAEA's experts also use nuclear techniques to protect the marine environments. Pollution threatens many of the world's seas and oceans, on which countless people depend for their livelihood. In 12 countries that ring the Caribbean, for example, the IAEA is helping to establish a laboratory infrastructure to identify sources of pollution and better protect seas and coastlines.

In order to raise awareness among the world's decision-makers about water issues, and about the enormous benefits of using low-cost nuclear techniques to address them, I decided that the September 2011 IAEA Scientific Forum should focus on this subject.

This issue of the IAEA Bulletin highlights the benefits of nuclear techniques in tackling global water challenges. It also describes our work with many national and international partners to improve global access to sustainable supplies of clean water and to protect the environment. I hope you will find it interesting and informative. ☸

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