WATER FOR DEVELOPMENT

WORLD WATER DAY 2002 POINTS TO MOUNTING CHALLENGES

BY PETER RICKWOOD

A looming crisis that overshadows nearly two-thirds of the Earth's population is drawing closer because of continued human mismanagement of water, population growth and changing weather patterns.

In a joint statement, United Nations organizations drew attention to problems on the occasion of World Water Day 22 March 2002, for which the IAEA was the lead coordinating agency.

By 2025, if present consumption patterns continue, about five billion people will be living in areas where it will be difficult or impossible to meet all their needs for fresh water. Half of them will face severe shortages.

The UN organizations said that the implications will be extreme for the people most affected, who are among the world's poorest, limiting their ability to grow crops, which they need to survive, heightening disease and threatening States' national security.

"Fierce national competition over water resources has prompted fears that water issues contain the seeds of violent conflict," Kofi Annan, UN Secretary General said in a message for World Water Day.

"But the water problems facing our world need not be only a cause of tension; they can also be a catalyst for co-operation," Mr. Annan said.

Demand Outstripping Sup-ply. Less than 3% of water on Earth is fresh and most of it is in polar ice or too deep underground to reach. The amount of fresh water that is accessible in lakes, rivers and reservoirs is less than a quarter of 1% of the total.

In the 20th century, demand for water increased six-fold, more than double the rate of growth of the human population, while pollution and over-extraction in many regions of the world reduced the ability of supplies to meet demand.

The worst affected areas are in semi-arid regions of sub-Saharan Africa and Asia where by 2025 most of the 2.7 billion people expected to suffer severe water scarcity will be living. Unabated population growth in these regions and climate variability, says the World Meteorological Organization (WMO), will exacerbate the stress of water scarcity.

The key for countries of the regions — many among the world's least developed — to cope with the crisis, will be to develop improved management of water while putting into place strategies to adapt to climate variability, the WMO says.

An over arching challenge for the UN in the 21st century is to raise the productivity of water, to bring about a "blue revolution," said Mr. Annan.

Even where supplies are sufficient, or plentiful, they are increasingly at risk from pollution and rising demand, the Secretary-General said.

"We have to become wiser about how we manage water," said IAEA Director General Mohamed ElBaradei.

"We can't keep treating it as if it will never run out because there's a limited quantity of it on Earth. To manage it better we need to work together and set priorities that respect its limits — because without it human development cannot progress," he said.

Water drove the inception of life on Earth, and the development of human civilization, from the earliest agricultural communities to the greatest metropolitan centers. Failure to manage water has contributed to the collapse of civilizations, he said.

Current "explosive" urban and industrial development requires not only that water supplies are adequate to meet human, industrial and power generation demands, but also that there is awareness such development increases the risk of flooding, said the WMO.

Agriculture Uses Most Water. Agriculture consumes about 70% of the world's available water but experts say that where there are competing demands for water use, and groundwater sources have been depleted, small farmers are the first to lose their supply.

As a consequence farmers are displaced from their land and the landless, who help them, are made jobless. Environmental damage to wetlands and estuaries from upstream depletion, as well as an increase of water-borne disease, also occurs.

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There must be more emphasis towards increasing the efficiency of water management systems and increasing water productivity, getting more crops per drop, said the Food and Agriculture Organization of the UN (FAO).

Water stress leaves women the most vulnerable. Without a ready source of water they may have to walk for several hours every day to find it, or send their children to fetch it. Child nurturing and education suffer and the water available maybe unfit for human use.

Access to Safe Water. The UN estimates that 1.2 billion people lack access to safe water and about 2.5 billion are without access to proper sanitation.

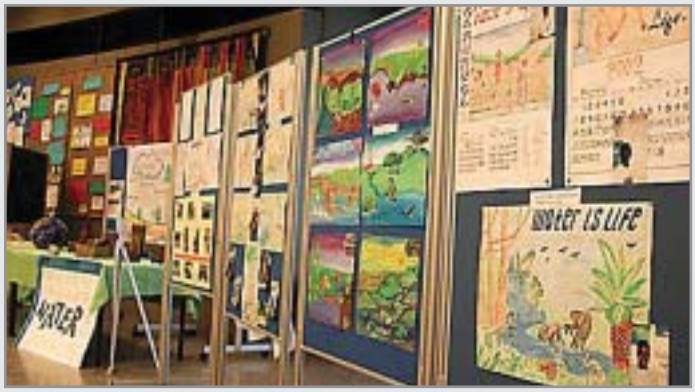
The absence of safe water translates into a tremendous burden of disease, linked to gastro-intestinal infection, making it a key water associated development issue, said the World Health Organization (WHO).

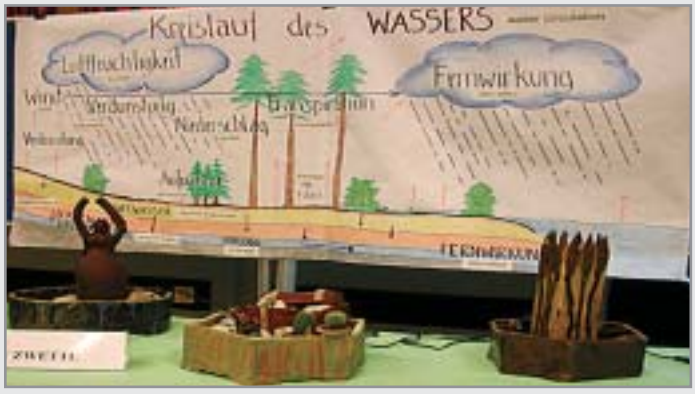
"Access to sanitation facilities is a basic human right that safeguards health and human dignity," said Sir Richard Jolly, Chair of the Geneva-based Water Supply and Sanitation Collaborative Council (WSCC).

"We know from experience that clean water alone leads only to minor health improvements. Sound hygiene behaviour must be recognized as a separate issue in its own right, with adequate sanitation and clean water as supporting components.

This year, water pollution, poor sanitation and water shortages will kill over 12 million people, said Klaus Töpfer, the Executive Director of the United Nations Environment Programme (UNEP).

Millions more are in bad health and trapped in poverty, said Mr. Töpfer, much of their energy and





Photos: The Austria-Uganda School Art Exhibition on Water during the World Water Day 2002 event at the IAEA.

MANY EYES, ONE WORLD: AUSTRIA & UGANDA SCHOOLS EXPLORE WATER FOR DEVELOPMENT

For World Water Day 2002, students from nine schools in Austria and ten schools in Uganda were asked to express themselves on the theme of Water for Development.

The results of this project are impressive, not only demonstrating the high level of creativity by the students, but also their commitment to the Earth and its environment.

The exhibits explored:

- the differences between water in Austria versus Africa through pantomime and drama;
- the joy that water brings to lives as reflected from a child's perspective through songs, art, and games;
- the science of water through projects on purification, circulation, and chemistry;
- the importance of protecting and conserving water through self discovery.

The idea of the project was not just to raise awareness about the importance of water, but also to develop a relationship between the schools in both countries and support the environmental component of their curricula. All levels of schools, primary through secondary, participated in both countries. It is hoped that the relationships started with the World Water Day project will continue throughout the school year, so that sister schools in both countries can develop a meaningful North-South dialogue.

The exhibit was open at the Vienna International Center in Austria, the headquarters of the IAEA, from 22 to 27 March 2002. It then moved to the Schulzentrum in Vienna, and remained open to the public from 8 to 27 April.

The art exhibit and schools project was made possible with support from the IAEA, the Governments of Austria and Uganda, and the Austrian Development Co-operation (ADC). The ADC is also supporting Uganda's efforts to improve its water resources management, through the South-Western Towns Water Sanitation Project. The IAEA is providing technical assistance through a pilot project.

Austrian Participating Schools

- Bhak Weiz, Steiermark Bundeshandels akademie und BHAS. Ages 14-19. Internet: www.bhak-weiz.ac.at
- HLW Zwettl, Lower Austria. Ages 14-19. Internet: www.hlwzwettl.ac.at
- Oeffentliches Stiftsgymnasium, Kresmuenster, Upper Austria Ages 10-18. Internet: www.kremsmuenster.at /stift/gym.htm
- BG and BRG Gmuend. Ages 10-18. Internet: www.bggmuend.ac.at
- Volksschule Silz, Tirol, Ages 6-10.
- Hauptschule II Enkplatz, Vienna, Ages 10-14.
- Differenzierte Kooperationschule, Hauptschule Augartenschule, Vienna. Ages 10-14. Internet: www.schulen.wien.at/schulen/902052
- Volksschule Johannes Messner I, Tirol Ages 6-10. Internet: www.vs-joh-messner.at
- HLA Yspertal, Lower Austria. Ages 14-19. Internet: www.hlaysper.ac.at

Uganda Participating Schools

- St. Gertrude's Vocational Girls Senior School, Kisoro. Ages 13-19.
- St. Paul's Mutolere Senior School, Kisoro. Ages 13-19.
- Mt. St. Mary's Namagunga, Lugazi. Ages 13-19.
- Kitante Hill Senior School, Kampala. Ages 13-19.
- Buligo Primary School, Iganga Private Day School. Ages 6-12.
- Green Hill Academy, Primary Wing, Kampala Large. Ages 6-13.
- King's College Buddo, Kampala. Ages 13 -19.
- St. Francis Primary School, Ntinda, Kampala. Ages 6-12.
- PMM Jinja Girls Senior School, Jinja. Ages 13-19.
- St. Luke Kitoola Primary School, Lugazi. Ages 6-12.

—By JoAnne Ford, IAEA Division of Public Information.

Visit the IAEA World Water Day Web site at http://waterday2002.iaea.org/.

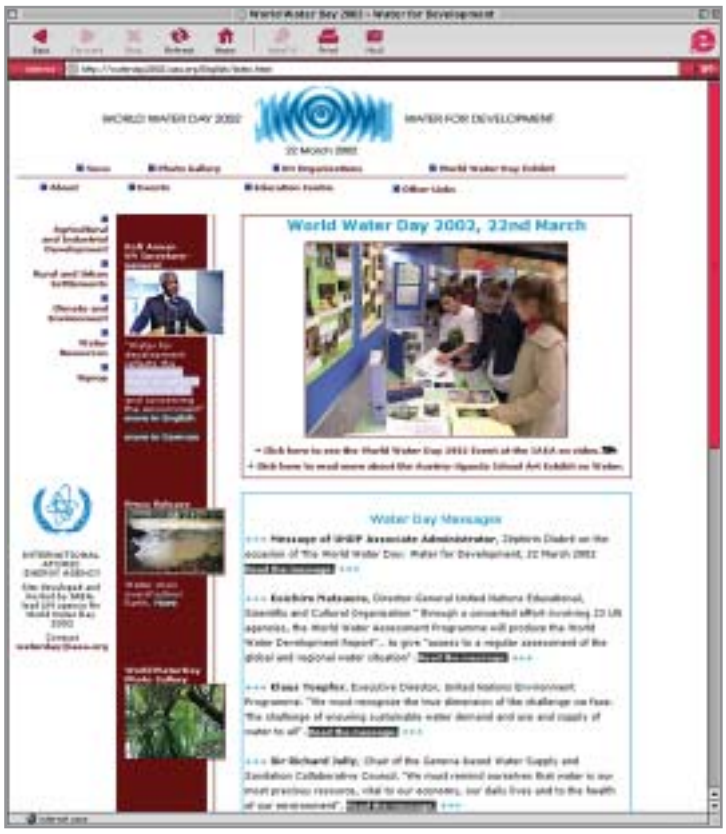


Photo: The IAEA published a Web site on World Water Day as part of its lead role in coordinating UN systemwide efforts.

time wasted in the quest for clean water.

Meeting Challenges. In the UN Millenium Declaration world leaders made a commitment to halve the number of people without access to safe and affordable water.

"Achievement of the goal will require better management — a mix of technological intervention and conservation," said IAEA Director General ElBaradei.

"Countries are already mobilizing at a national level but there is a clear need to offer assistance to many of the world's poorest nations to support measures that will prevent human suffering," he said.

In his World Water Day address, the UN Secretary General reported that, increasingly, countries with expertise in the management of watersheds and flood-plains, or with experience in efficient irrigation, are sharing the knowledge with others.

The IAEA is among UN agencies offering a wide array of responses to the crisis, providing Member States with skills to apply isotope hydrology, to better manage groundwater. The technique permits reliable and rapid mapping of underground water sources so that they can be used safely without being exhausted. The IAEA also fosters the development of desalination to turn salt water into sweet water.

African Ministers Appeal for Help. The ministers of water from 22 African countries called for a regional and global alliance, backed by funding, to tackle water and sanitation problems. They urged action to cut the death rate, as a result of poor hygiene and disease conta-minated water, to be at the centre of the World Summit on Sustainable Development, being held in Johannesburg from 26 August to 4 September 2002.

Uganda, a member of the group, has set a goal of providing safe water and adequate sanitation to 65% of its po-pulation by 2006 and to all its population by 2015.

To a large extent, the lack of safe water and sanitation keeps in motion a cycle of poverty and ill-health in many developing countries.

"Without adequate clean water there can be no escape from poverty. Water is the basis for good health and food pro-duction," Mr. Töpfer said.

The development of effec-tive water management offers great potential as a cost-effec-tive alternative to medical inter-vention to prevent and control water borne diseases, said the WHO.

"Water is probably the only natural resource to touch all aspects of human civilization — from agricultural and industrial development to the cultural and religious values embedded in society," said Koichiro Matsuura, Director General of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The need and demand for water, in fact, has been a driving force of social, economic and cultural development through human history, he said.

"It is no exaggeration to say that, if water is in crisis, de-velopment is in crisis too," he said. ❐