

Forum: Economic and Social Council I

Issue: Ensuring universal access to safe drinking water

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Introduction

Water is a necessity. Excluding fat, water makes out to be approximately three quarters of the human body. Health specialists state that drinking eight glasses (eight fluid ounces) of drinking water a day is essential to healthy development.

Drinking water is officially defined as water of sufficiently high quality that can be consumed or used without risk of short-term or long-term harm. In most developed countries, drinking water is the only supply of water to households, commerce and industry. However in developing countries, the case is significantly different.

In many parts of the world (particularly in Sub-Saharan Africa), water sources are contaminated with disease vectors (living carriers that transmit diseases), pathogens and high levels of dissolved chemicals and suspended solids. It is scientifically recognized that drinking water which contains these contaminants may lead to widespread illness and possible death.

In Less Economically Developed Countries such as Kenya, the percentages of populations with access to safe drinking water have fallen to rates as low as 57%. Appalling statistics such as these have led the United Nations to include ensuring access to safe drinking water in its Millennium Development Goals. The UN aims to half the amount of people who do not have safe access by 2015. Experts suggest this target may be reached. However, certain countries still face challenges.

Definition of Key Terms

Drinking Water

Water, treated or untreated, which is intended and suitable for human use and consumption; safe drinking water must be free from harmful chemicals and disease-causing bacteria cysts, viruses or other microorganisms.

Pathogens

Micro-organisms that may cause detrimental disease in other organisms; pathogens may either be bacteria, parasites or viruses. Pathogens occur from the accumulation of sewage. This may originate from runoff from farms or may occur in rural areas when sewage runoff is caused by irresponsible human waste removal. The harmfulness of pathogens varies greatly.

Pollutants

Pollutants act as water contaminants in both Less and More Economically Developed Countries. Pollutants may be hard chemicals or suspended solids; at high concentrations, they may cause grave diseases.

Millennium Development Goals (MDGs)

The MDGs are eight international development goals that 192 of the UN member states have agreed to achieve by 2015. Countries have worked on these goals but many are not on the right track. Access to safe water is a primary concern in Goal Seven of the MDG.

Water Crisis

The water crisis is a term given to the scarcity of the world's water supply in relation to human demand. The United Nations believes that we are currently experiencing this crisis.

General Overview

The causes of water contamination

Water contamination may occur due to a large variety of reasons. Human-created causes include industrial discharge from chemical industries, sewage from natural areas, pesticides from farming areas and soil contamination. Natural causes of water contamination involve the breeding and gradual increase of population of harmful microorganisms such as the bacteria *E. coli*.

The process of bioaccumulation illustrates how these contaminants affect consumers of the water they pollute. At first, the contaminants are dispersed into the water source and are of low concentrations. However as primary consumers drink the water and predators feed on these primary consumers, the concentration of the contaminants increase up the food chain, creating toxic levels of pollutants in high-end predators, such as humans.

Reasons behind limited access

There are two major reasons why some nations have less access to safe drinking water than others. The first is due to physical water scarcity. The second involves the cost of treating and cleaning water. Countries who cannot afford to do so suffer economic and political water scarcity.

Physical water scarcity

Physical water scarcity occurs in nations like Saudi Arabia and Mongolia; it only occurs when water resource development approaches or has exceeded sustainable limits. Physical water scarcity occurs in deserts or land-locked countries with limited mountainous water sources. River sources are rare and purified drinking water is hard to find or extract.

Economic or political water scarcity

Economic or political water scarcity occurs in nations like Kenya and Sudan. Political and economic issues commence to interfere with the development of resources and safe drinking water supply is limited. Water in countries like the Democratic Republic of Congo is rarely treated and this leads to the death of much of the population.

Also, the supplying of water requires great funding for piping leads to large infrastructure costs. Most debt impoverished nations cannot afford to maintain this access to safe water. People commence to spend a great percentage of their income on drinking water, reducing standards of living.

The problem with limited access to safe water

Drinking unsafe water or untreated water carries health risks; individuals are exposed to the harmfulness of water borne diseases such as cholera. It is estimated that three million people across Africa die annually as a result of the consumption of unsafe water. Approximately 12.3 million people in Sudan have contaminated water as their only source of drinking water. Also, in many cases, people in LEDCs in Africa take extreme measures to obtain their water. It has been recorded that a significant percentage of children walk three kilometers in Sub-Saharan Africa just to access water.

Timeline of Events

Date	Event
1900	Ship canal opens in Chicago, reversing the flow of the Chicago River, improving irrigation and water access to households. This proved o be the first large-scale effort to improve access to safe water.
1919	The formula for chlorination of water is found; chlorination helps eliminate traces of waterborne diseases such as cholera, typhoid and hepatitis A today.
1930	Hoover Dam is built and technology to eliminate flooding and perfect water supply is demonstrated to the world
1961	Kuwait commences to use sea-water desalination technology and improves access to safe water in the country. Other desert countries follow suit.

1972	Safe Water Act Issued; global awareness of the necessity for clean drinking water was achieved
1983	Bardenpho process found; South African engineer develops a wastewater treatment process that removes nitrates and phosphates without using chemicals. Immediately reduces water limitations significantly in Southern Africa

UN Involvement, Relevant Resolutions, Treaties and Events

- Observance of World Day for Water, 22nd December 1992 (193)
Declared Match 22nd of each year World Water Day, in conformity with the UN Conference on Environment and Development
- International Decade for Action, "Water for Life", 9th February 2004 (217)
Proclaims the period from 2005 to 2015 the International Decade for Action, "Water for Life"
The goals for this decade placed stronger focus on the access to safe water and water scarcity.
- Started primarily in 2000, the World Water Assessment Program (WWAP) monitors freshwater issues in order to provide recommendations, develop case studies and inform people about the decision making process. The WWAP produces a World Water Development Report every year.
- The World Health Organisation and the UNICEF held together a Joint Monitoring Program for Water Supply and Sanitation. Data analyzed by the JMP is used to develop further research into UNICEF's flagship production: *The State of the World's Children Report*.

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