

GROWING WATER SHORTAGES and water pollution in developing and developed countries alike have plunged the world into a water crisis. This has prompted the United Nations to declare 2003 the International Year of Freshwater “to raise awareness and galvanize action to better manage and protect this crucial resource.” During the past century, water use has increased sixfold, and the quantity and quality of freshwater resources continue to be threatened by a growing population, according to the *UN World Water Development Report*—launched on March 22, 2003, to coincide with the annual observance of World Water Day and the World Water Forum, which was held in Japan.

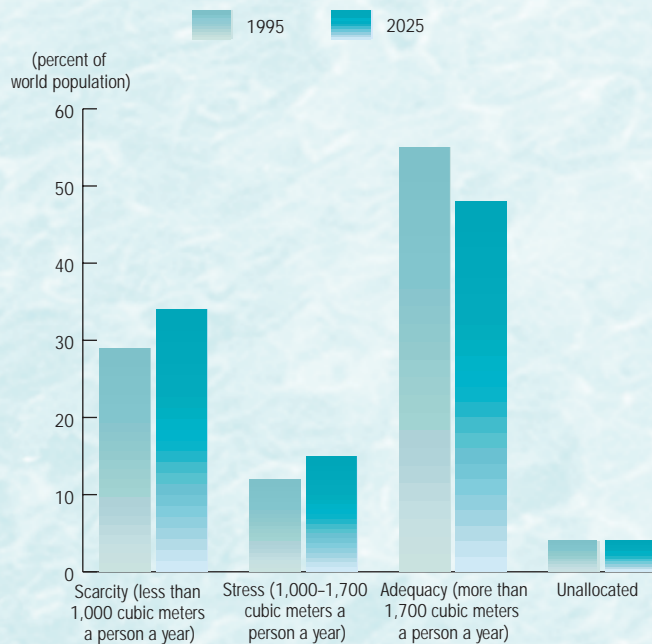
Most of the earth’s water is salty. Freshwater makes up only 2.53 percent, and about two-thirds of it is frozen in glaciers and permanent snow cover, leaving less than 1 percent available for use. The world’s 6 billion inhabitants already appropriate more than half of all accessible freshwater contained in rivers, lakes, and underground aquifers. By 2025, this share will have risen to 70 percent, reflecting the growth of the population alone, which is projected to increase to more than 8 billion by 2025. The share could be 90 percent by 2025 if per capita consumption of water goes on rising at its current rate, leaving just 10 percent for all other living beings (plants and animals).

Plunging into Crisis

Freshwater resources come under increasing pressure

Rising tide of scarcity and stress

In 1995, more than 40 percent of the world’s population lived in conditions of water scarcity or water stress. This percentage will increase to almost half the world’s population by 2025.



Sources: United Nations Development Program; United Nations Environment Program; World Bank; World Resources Institute, *World Resources 2000–2001—People and Ecosystems: The Fraying Web of Life* (Washington: World Resources Institute) p. 110.

Shrinking pool

Despite progress made in recent decades, some 1.1 billion people today go without safe drinking water, and 2.4 billion people lack access to adequate sanitation. More than 2.2 million people die each year from diseases related to contaminated drinking water and poor sanitation. The situation is expected to get worse as areas of freshwater scarcity and water stress expand, particularly in North Africa and western Asia.

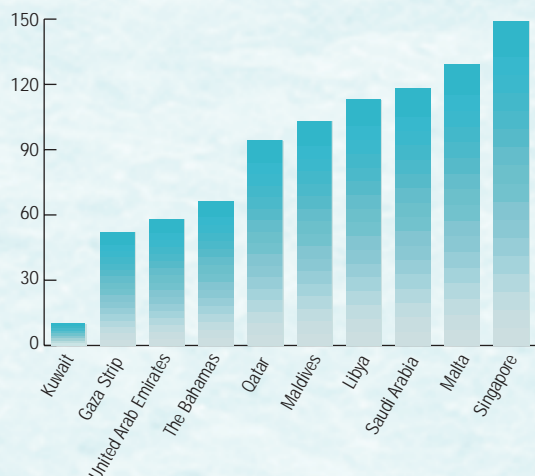
The amount of freshwater needed to maintain an acceptable living standard varies widely, but it is generally accepted that when freshwater availability falls below 1,700 cubic meters a person a year, a country faces water stress (1 cubic meter = 1,000 liters). When this number falls below 1,000 cubic meters, a country is facing chronic water scarcity.

Competing uses

Most of the water used by people around the world is for agriculture (mainly for irrigation). Industry accounts for close to 23 percent of all annual water use, and domestic use (household, drinking water, and sanitation) accounts for 8 percent. This distribution varies greatly; in high-income countries, industry uses up much more water than does agriculture. In the years ahead, competition among industries, agriculture, and drinking water will be stiffest in developing countries, where populations and industries are growing fastest.

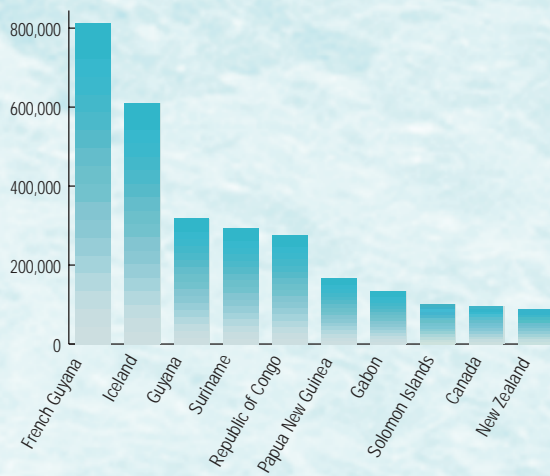
Countries and territories with smallest amount of renewable freshwater resources

(cubic meters a person a year)



Countries with greatest amount of renewable freshwater resources (excluding Greenland)

(cubic meters a person a year)



Going to waste

About 2 million tons of waste are dumped every day into rivers, lakes, and streams. It is estimated that the amount of polluted water worldwide exceeds the total amount of water contained in the world's 10 largest river basins at any given moment. If pollution keeps pace with population growth, by 2025, the world will effectively have lost almost nine times the total amount of freshwater that countries currently use each year for irrigation.

Out of 122 countries ranked according to a range of factors, including the quantity and quality of freshwater (especially groundwater), wastewater treatment facilities, and application of pollution regulations, Belgium scores lowest because of the limited availability and poor quality of its groundwater, combined with heavy industrial pollution and poor treatment of wastewater.

Countries

with worst water quality

Belgium	-2.25
Morocco	-1.36
India	-1.31
Jordan	-1.26
Sudan	-1.06
Niger	-1.04
Burkina Faso	-1.00
Burundi	-0.95
Central African Republic	-0.81
Rwanda	-0.78

Countries

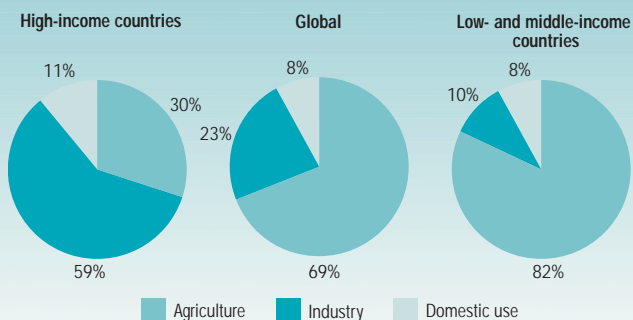
with best water quality

Finland	1.85
Canada	1.54
New Zealand	1.53
United Kingdom	1.42
Japan	1.32
Norway	1.31
Russian Federation	1.30
Republic of Korea	1.27
Sweden	1.19
France	1.13

Note: High numbers represent higher sustainability; zero represents the average.

Sea of challenges

The international community pledged in the 2000 UN Millennium Development Goals to halve, by 2015, the proportion of people without access to safe drinking water and basic sanitation. For this target to be reached, an additional 1.5 billion people will require improved access to water. The challenge for sanitation is more daunting. An additional 1.9 billion people will need better access.



Unless otherwise indicated, this article is based on the report published by the United Nations in 2003, *Water for People, Water for Life, The United Nations World Water Development Report* (Paris: UNESCO Publishing, Berghahn Books).