

Global English News

Water Bankruptcy

Beneath our feet lies a hidden world that billions of people depend on without ever thinking about it. Deep underground, vast layers of rock and sediment hold enormous reserves of water in formations called **aquifers**. For thousands of years, these natural storage systems have provided reliable access to freshwater for drinking, farming, and industry. But today, the **scarcity** of surface water is pushing communities to pump **groundwater** at rates far beyond what nature can replace. The **overexploitation** of these underground reserves is accelerating at an **unsustainable** pace across large parts of the world, from India and Pakistan to the American Great Plains. Once an aquifer is emptied, it can take hundreds or even thousands of years to **replenish**. Scientists warn that this invisible groundwater crisis represents one of the most serious forms of environmental **depletion** facing humanity today, and it is one that most people never see coming.

The regions under the greatest pressure are often those that can least afford it. Across the world's **arid** zones — stretching from North Africa and the Middle East through Central Asia — populations are growing rapidly while natural water sources are shrinking. The concept of **water stress** describes a situation where demand for clean water consistently exceeds local supply, and dozens of countries now face this condition permanently. Seasonal rivers that once carried water year-round have become dependent on irregular **precipitation**, and some have lost major **tributary** streams entirely. Farmers who once relied on reliable rainfall have turned to deep-well **irrigation** to keep their fields productive, placing enormous **strain** on underground reserves. In cities such as Chennai, Cape Town, and Mexico City, municipal authorities have faced near-collapse of water supply systems, forcing dramatic emergency measures to prevent millions of residents from running out of water altogether.

Agriculture is by far the world's largest consumer of freshwater, accounting for roughly 70 percent of total global **consumption**. Crops require enormous volumes of water, much of which is lost through **evaporation** from fields before it can even be absorbed by plant roots. Where farming methods remain **inefficient** — relying on flood irrigation rather than precision systems — water losses can reach staggering levels. Industrial activity adds further pressure: factories use water for cooling, cleaning, and processing, and many of them **contaminate** local rivers and lakes with chemical **runoff** in the process. As global demand for food and manufactured goods continues to **intensify**, both sectors are drawing on freshwater resources that are already under severe stress. The challenge is not simply to grow more food or produce more goods, but to completely rethink the relationship between economic production and **crop yield** in a water-limited world.

Water has long been treated as a public good, freely available to anyone who needs it. But as supplies dwindle, many governments and corporations are beginning to treat it as a **commodity** — something to be owned, traded, and priced. This shift has triggered serious **geopolitical** tension, particularly in regions where major rivers cross national borders. **Transboundary** water systems like the Nile, the Mekong, and the Colorado River serve dozens of nations and millions of people, yet the **allocation** of their flows is governed by outdated agreements, bilateral **disputes**, and competing national interests. Wealthier nations and corporations often use their financial **leverage** to secure access to water resources that poorer communities depend on for survival. The **privatization** of municipal water systems in some countries has brought investment but also price increases that have put basic water access out of reach for the poorest residents.

Technology offers some promising paths forward, though none of them are simple or cheap. **Desalination** — the process of removing salt from seawater to produce drinking water — has expanded rapidly along the coastlines of the Middle East, Australia, and California. Modern desalination plants can now produce freshwater at costs that were unthinkable twenty years ago, but they remain energy-intensive and produce large quantities of **brine** as a byproduct, which must be carefully managed to avoid damaging marine ecosystems. In cities, the treatment and **recycle** of **wastewater** is emerging as a critical strategy, turning what was once discarded into a valuable resource. New **membrane** technologies are making these processes more efficient and affordable. Several countries are running **pilot program** trials that capture rainwater, filter stormwater, and reuse treated sewage at an urban scale, building an **infrastructure** for water recovery that could dramatically reduce dependence on natural sources.

Technology alone cannot solve the water crisis. Changes in behavior, policy, and pricing are equally essential. Many water economists argue that the most powerful tool available is **conservation** pricing — charging more for water as consumption rises, which creates a direct financial incentive to use less. When governments apply a tiered **tariff** system, households and businesses that consume heavily pay significantly more per unit, while modest users pay less. This approach can **incentivize** dramatic reductions in waste without restricting specific behaviors. Setting a clear **benchmark** for water use — such as a maximum number of liters per person per day — gives communities a measurable target to work toward. Some cities have adopted **voluntary** reduction programs with remarkable success, while others have introduced **mandate**-based restrictions during periods of drought. Ensuring **compliance** across both the public and private sectors remains one of the most difficult challenges that water managers face worldwide.

The water crisis is ultimately a global problem that no single nation can resolve alone. Addressing it will require a broad **coalition** of governments, international organizations, scientists, and civil society groups working together toward common goals. A new generation of multilateral agreements — built around shared data, transparent monitoring, and **equitable** principles — is urgently needed to replace the fragmented, outdated **treaty** frameworks that currently govern most international river systems. **Accountability** mechanisms must be built into any new arrangements so that nations can be held to their commitments. Policymakers must also **integrate** water security into climate planning, energy strategy, and food policy, recognizing that these systems are deeply interconnected. Without deliberate action, the current **trajectory** points toward more frequent crises, more displacement, and more conflict. But with the right commitment, it is still possible to build a more **resilient** relationship between human civilization and the water that sustains it.

Beyond the Headlines

Most people think about water as something they drink or wash with — but hidden inside nearly every product we consume is a much larger quantity of what researchers call **virtual water**. This is the water **embedded** in a product's production process: the water used to grow the cotton in a T-shirt, to feed the cattle that become a hamburger, or to cool the servers that store your photos in the cloud. The **footprint** of some foods is **staggering**. A single kilogram of beef requires roughly fifteen thousand liters of water to produce. A cup of coffee contains around 140 liters of virtual water. Much of this water comes from **reservoir** systems and underground sources that are already under severe stress through **extraction**. When wealthy nations import food from water-scarce regions, they effectively **infiltrate** local water supplies without the local population ever having a say in how their resources are used.

Vocabulary

Paragraph 1

aquifer (n.)	(n.) An underground layer of rock or sediment that holds water and can be drilled into to access it. <i>"The region's farmers depend on an ancient aquifer that took thousands of years to fill."</i>
scarcity (n.)	(n.) A situation in which something is in very short supply relative to demand. <i>"The scarcity of clean drinking water is one of the defining challenges of the 21st century."</i>
groundwater (n.)	(n.) Water held underground in soil or between rock formations, often accessed by wells or pumps. <i>"Millions of rural households rely on groundwater because they have no access to municipal supplies."</i>
overexploitation (n.)	(n.) The excessive use of a natural resource at a rate that exceeds its ability to recover. <i>"The overexploitation of fish stocks in the North Atlantic has driven several species close to collapse."</i>
unsustainable (adj.)	(adj.) Describing a practice that cannot be maintained over time without causing lasting damage. <i>"The unsustainable rate of deforestation in the region is pushing local wildlife toward extinction."</i>
replenish (v.)	(v.) To refill or restore a supply to its previous level. <i>"It takes decades for heavy rainfall to fully replenish an aquifer that has been heavily pumped."</i>
depletion (n.)	(n.) The gradual reduction of a resource until very little or none remains. <i>"The depletion of the ozone layer was a major environmental concern throughout the 1980s and 1990s."</i>

Paragraph 2

arid (adj.)	(adj.) Describing land or climate that receives very little rainfall and is therefore extremely dry. <i>"Crops struggle to grow in arid conditions without extensive irrigation systems."</i>
water stress (n. phrase)	(n. phrase) A condition in which the demand for water regularly exceeds the available supply in a given area. <i>"The country has experienced severe water stress for decades due to its rapidly growing population."</i>
precipitation (n.)	(n.) Water that falls from the atmosphere as rain, snow, sleet, or hail. <i>"Annual precipitation in the desert region averages less than fifty millimeters per year."</i>
tributary (n.)	(n.) A smaller river or stream that flows into a larger river. <i>"The dam built on the main tributary reduced the river's overall flow by nearly forty percent."</i>
irrigation (n.)	(n.) The process of supplying water to agricultural land through artificial channels, pipes, or sprinkler systems. <i>"Drip irrigation can reduce water use by up to fifty percent compared with traditional flooding methods."</i>
strain (n.)	(n.) Serious pressure or stress placed on a system or resource, often to the point of damage. <i>"The rapid growth of the city has placed enormous strain on its aging water supply network."</i>

Paragraph 3

consumption (n.)	(n.) The use or intake of a resource, especially at a measurable rate. <i>"Household energy consumption dropped significantly after the government introduced smart meters."</i>
evaporation (n.)	(n.) The process by which liquid water turns into water vapor and rises into the atmosphere. <i>"High temperatures increase the rate of evaporation from open reservoirs, reducing available supply."</i>
inefficient (adj.)	(adj.) Failing to make the best use of available time, resources, or energy. <i>"The old pumping system was so inefficient that nearly a third of the water was lost before reaching consumers."</i>
contaminate (v.)	(v.) To make something impure or unsafe by introducing harmful substances into it. <i>"Industrial discharge was found to contaminate groundwater across a wide area around the factory site."</i>
runoff (n.)	(n.) Water from rain or irrigation that flows over the surface of the land and into waterways, often carrying pollutants with it. <i>"Agricultural runoff containing pesticides and fertilizers has damaged river ecosystems across the region."</i>
intensify (v.)	(v.) To become greater in strength, force, or degree, or to make something do so. <i>"Climate change is expected to intensify extreme weather events, including both floods and droughts."</i>
crop yield (n. phrase)	(n. phrase) The quantity of a crop produced per unit of land area during a given harvest. <i>"Improved seed varieties have significantly increased the crop yield of rice farms in Southeast Asia."</i>

Paragraph 4

commodity (n.)	(n.) A raw material or product that can be bought, sold, and traded, typically on a large scale. <i>"Oil has been the world's most politically sensitive commodity for over a century."</i>
geopolitical (adj.)	(adj.) Relating to how geography, resources, and politics interact to shape international relations. <i>"Control of the strait has enormous geopolitical significance for the nations that border it."</i>
transboundary (adj.)	(adj.) Crossing or existing across the borders of two or more countries. <i>"Managing transboundary air pollution requires cooperation between neighboring governments."</i>
allocation (n.)	(n.) The process of distributing a resource or share among different parties according to a plan or agreement. <i>"The water allocation system assigns each farmer a fixed quantity based on the size of their land."</i>
dispute (n.)	(n.) A disagreement or conflict, especially one that is ongoing or difficult to resolve. <i>"The two countries have been locked in a dispute over fishing rights for more than a decade."</i>
leverage (n.)	(n.) Power or influence over others, especially used to gain an advantage in a negotiation. <i>"The company used its market leverage to force suppliers to accept much lower prices."</i>

privatization (n.)	(n.) The transfer of a service or industry from government to private ownership and control. <i>“The privatization of the rail network was controversial because it led to higher ticket prices.”</i>
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Paragraph 5

desalination (n.)	(n.) The process of removing salt from seawater or brackish water to make it suitable for drinking or agriculture. <i>“Saudi Arabia meets much of its freshwater demand through large-scale desalination plants on the coast.”</i>
brine (n.)	(n.) A highly concentrated solution of salt in water, produced as a byproduct of the desalination process. <i>“Disposing of brine responsibly is one of the biggest environmental challenges facing desalination plants.”</i>
recycle (v.)	(v.) To process used or waste material so that it can be used again. <i>“Singapore has built systems to recycle wastewater to a standard safe enough for industrial and even drinking use.”</i>
wastewater (n.)	(n.) Water that has been used in homes, factories, or other settings and carries waste material. <i>“Treating and reusing wastewater has become a central strategy in cities facing chronic water shortages.”</i>
membrane (n.)	(n.) A thin, flexible layer of material that allows some substances to pass through while blocking others, used in filtration systems. <i>“Advances in membrane design have made reverse osmosis filtration faster and more cost-effective.”</i>
pilot program (n. phrase)	(n. phrase) A small-scale trial of a plan or system, carried out before deciding whether to implement it fully. <i>“The city launched a pilot program to test whether rooftop rainwater collection could reduce pressure on reservoirs.”</i>
infrastructure (n.)	(n.) The basic physical systems and facilities that a society or organization needs to function, such as pipes, roads, and power grids. <i>“Aging infrastructure is causing the city to lose nearly a quarter of its treated water to leaks.”</i>

Paragraph 6

conservation (n.)	(n.) The careful use and protection of natural resources to prevent waste and ensure long-term availability. <i>“Public education campaigns played a key role in promoting water conservation during the drought.”</i>
tariff (n.)	(n.) A fixed charge or rate applied to a service or product, set by an authority or government. <i>“The new electricity tariff structure penalizes households that use more than a set monthly limit.”</i>
incentivize (v.)	(v.) To encourage a particular behavior by offering a reward or financial benefit. <i>“The government offered tax breaks to incentivize businesses to install solar panels.”</i>
benchmark (n.)	(n.) A standard or reference point used to measure or evaluate performance or progress. <i>“The company set a benchmark of reducing carbon emissions by thirty percent within five years.”</i>
voluntary (adj.)	(adj.) Done by choice, without being required or forced by law or authority. <i>“Participation in the recycling scheme is voluntary, but the majority of residents choose to take part.”</i>

mandate (n.)	(n.) An official order or requirement issued by an authority that must be followed. <i>“The government issued a mandate requiring all new buildings to include water recycling systems.”</i>
compliance (n.)	(n.) The act of following rules, regulations, or official requirements. <i>“The factory was fined for non-compliance with environmental discharge standards.”</i>

Paragraph 7

coalition (n.)	(n.) A group of different parties, organizations, or countries that come together to achieve a shared goal. <i>“A coalition of environmental groups successfully lobbied for stronger protections for the river basin.”</i>
equitable (adj.)	(adj.) Fair and reasonable, giving everyone an equal share or opportunity according to their needs. <i>“An equitable distribution of aid ensures that the most vulnerable communities receive support first.”</i>
treaty (n.)	(n.) A formal, legally binding agreement made between two or more countries. <i>“The treaty established clear limits on the amount of water each country could draw from the shared river.”</i>
accountability (n.)	(n.) The obligation to accept responsibility for one's actions and be answerable to others for outcomes. <i>“Without clear accountability measures, governments often fail to meet their environmental pledges.”</i>
integrate (v.)	(v.) To combine different elements or systems into a unified, coherent whole. <i>“The new policy aims to integrate public transportation planning with urban housing development.”</i>
trajectory (n.)	(n.) The path or direction that something follows over time, especially in terms of development or change. <i>“If current trends continue, the trajectory of global temperature rise will exceed safe limits by mid-century.”</i>
resilient (adj.)	(adj.) Able to recover quickly from difficulties or adapt successfully to changing conditions. <i>“Cities that invest in green infrastructure tend to be more resilient in the face of extreme weather events.”</i>

Beyond the Headlines

virtual water (n. phrase)	(n. phrase) The total amount of water used throughout the entire production process of a product, which is not visible in the final item itself. <i>“Trading in virtual water allows dry countries to import water-intensive products rather than strain their own resources.”</i>
embedded (adj.)	(adj.) Firmly fixed within something larger, or deeply integrated into a process or system. <i>“The carbon embedded in manufactured goods is often far greater than the emissions from transporting them.”</i>
footprint (n.)	(n.) The total impact or resource use associated with a person, product, or activity, measured in a specific category such as water or carbon. <i>“Switching to a plant-based diet can dramatically reduce an individual's water footprint.”</i>
staggering (adj.)	(adj.) So large or surprising that it is difficult to fully comprehend. <i>“The staggering cost of rebuilding after the flood exceeded the country's entire annual budget.”</i>

reservoir (n.)	(n.) A large natural or artificial lake used to store water for public use or industrial purposes. <i>“After three years of drought, the city’s main reservoir had dropped to just twelve percent of its capacity.”</i>
extraction (n.)	(n.) The process of removing a resource from its natural source, typically at a large scale. <i>“The extraction of minerals from the riverbed has caused serious damage to the local aquatic ecosystem.”</i>
infiltrate (v.)	(v.) To pass into or through something gradually, often without being noticed or invited. <i>“Pollutants from the industrial site were found to infiltrate the water table over a wide area.”</i>

Language Review

Exercise A — Collocations

Match each item in Column A with the word or phrase in Column B that forms a natural collocation from the article. Write the correct letter next to each number.

Column A	Column B
1. water	a. dispute
2. pilot	b. stress
3. financial	c. footprint
4. crop	d. program
5. transboundary	e. leverage
6. carbon	f. tariff
7. bilateral	g. yield
8. tiered	h. river system

Exercise B — Vocabulary Quiz

Choose the best answer (a, b, c, or d) for each question. Some questions may have more than one correct answer — select all that apply.

- Which word best describes a practice that cannot continue without causing long-term damage?
 - equitable
 - unsustainable
 - transboundary
 - voluntary
- A government charges households more per liter as their monthly usage increases. This pricing model is best described as a:
 - mandate
 - benchmark
 - tiered tariff
 - pilot program
- Which of the following is a byproduct of the desalination process that must be carefully managed?
 - runoff
 - precipitation
 - membrane
 - brine
- The word "allocation" is closest in meaning to:
 - extraction
 - distribution

- c. infiltration
- d. depletion

5. Which sentence uses "leverage" correctly?
- a. The country used its leverage to demand fairer terms in the water-sharing agreement.
 - b. Scientists leverage the aquifer by drilling deeper wells each year.
 - c. The treaty leverage both nations to reduce their water consumption.
 - d. Leverage is what happens when a reservoir drops below safe levels.
6. A city runs a small test of a new rainwater collection system before committing to a nationwide rollout. This is an example of:
- a. privatization
 - b. a benchmark
 - c. a pilot program
 - d. compliance
7. Which two words are most closely related in meaning as used in the article?
- a. scarcity and depletion
 - b. brine and membrane
 - c. coalition and treaty
 - d. precipitation and irrigation
8. The concept of "virtual water" refers to:
- a. water stored digitally in cloud computing systems
 - b. water used in the production process of a product
 - c. desalinated water that has been filtered through a membrane
 - d. groundwater that cannot be accessed without specialist equipment

Exercise C — Discussion Questions

Discuss the following questions with a partner or in a small group. Use evidence from the article to support your ideas.

1. The article describes water increasingly being treated as a commodity. Do you think water should be privately owned and priced like other goods, or should it remain a public resource? What are the risks of each approach?
2. Agriculture accounts for roughly 70 percent of global freshwater consumption. Should governments place limits on how much water farmers are allowed to use? What would be the advantages and disadvantages of such restrictions?
3. The article mentions that some cities have achieved dramatic results through voluntary water reduction programs, while others have relied on mandates. Which approach do you think is more effective in your cultural context, and why?
4. Think about the products you use every day. How does the concept of virtual water change the way you think about your own consumption habits? Which products surprise you most?
5. The article argues that solving the water crisis requires international cooperation. What obstacles make this kind of cooperation difficult, and what could make it more likely to succeed?