



Water and food for Gaza



The vast majority of Palestinians in Gaza have been displaced multiple times, and many are dying from Israeli-induced starvation. An unprecedented water crisis is also unfolding across the enclave, heaping further misery on its residents.

Gaza was already suffering a water crisis before nearly 22 months of Israeli bombardment and ground operations damaged more than 80 percent of the territory's water infrastructure.

Israel reconnected some water mains in northern Gaza to the Israeli water company Mekorot after cutting off supplies early in the war, but residents said water still is not flowing.

Local authorities say this is due to war damage to Gaza's water distribution network with many main pipes destroyed.



Many wells in Gaza are simply inaccessible because they are located within combat zones, too close to Israeli military installations or in areas subject to forced evacuation.

Wells usually run on electric pumps, and energy has been scarce since Israel cut Gaza's power. Generators could power the pumps, but hospitals are prioritised for the limited fuel deliveries.

Gaza's desalination plants are out of operation except for a single site that reopened last week after Israel restored its electricity supply. To find water, hundreds of thousands of people are still trying to extract groundwater directly from wells.

However, coastal Gaza's aquifer is naturally brackish and far exceeds salinity standards for potable water. In 2021, UNICEF warned that nearly 100 percent of Gaza's groundwater was unfit for consumption.



Weaponizing water can escalate conflicts, worsen humanitarian crises, and hinder post-war recovery.

As UNICEF spokeswoman Rosalia Bollen says, **"Just like food, water should never be used for political ends,"**

Dursun Yıldız -Director

Rising Water Insecurity Risks in the Sub Saharan Africa



Compiled by Dursun Yıldız

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The United Nations defines water security as: The capacity of a population to safeguard sustainable access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability. But Sub-Saharan Africa is falling short of these objectives.

Pressures on Africa's water systems are escalating. Water demands are mounting more rapidly in Sub-Saharan Africa than anywhere else on Earth. The World Resources Institute calculates that total regional water use will soar 163 percent by mid-century, driven by surging agricultural and domestic requirements. Water claims from industry and manufacturing are expected to skyrocket, nearly quadrupling from 2010 to 2050.

Regional population is projected to climb 79 percent by 2054, adding another 981 million people. Much of this growth will occur in cities, often in sprawling informal settlements and intermediary towns lacking public services and infrastructure capacities. The population living in urban areas with perennial water shortages could spike sixfold to reach 162 million in 2050. Such trajectories raise the specter of increasing competition among different users for limited resources. As water demands balloon, strains on water supplies are also worsening. The frequency of droughts has tripled across Sub-Saharan Africa since the 1970s, and flooding surged more than tenfold.

Depending upon the models and scenarios analyzed, differing projections foresee that the number of people around the region suffering water stress could spike up to 921 million or fall by 429 million by 2050

Sub-Saharan Africa ranks as the world's most water-insecure region

From the Sahel to South Africa, some 869 million people, more than the total populations of the United States and European Union combined, lack safely managed drinking water. Since 2015, the share of inhabitants using safely managed drinking water services has barely crept upwards from 27 to just 31 percent, even as Sub-Saharan Africa's population climbed by almost 20 percent during the same period.

Less than 10 percent of Sub-Saharan Africa's wastewater is treated before being discharged directly back into the environment. Worsening water-related disasters impact some 15 million people a year, on average, annually, causing billions of dollars in damages.

All told, Sub-Saharan Africa ranks as the world's most water-insecure region. In a global assessment of 186 countries evaluating 10 components of water security—water availability, water quality, and water safety—the United Nations found every country in the region rated water insecure, and 12 states scored critically insecure.

The stakes could not be higher. The nations of Sub-Saharan Africa, all low-income or lower-middle-income countries, could see their GDP tumble a crushing 10–15 percent by mid-century if they fail to resolve growing water challenges.

How to build resilience capacity

Realizing water security in this landscape of shifting pressures and unpredictable disruptions will place a premium on flexible and resilient approaches that can succeed across a range of potential futures and advance common goals among multiple stakeholders. Resilience for water security can be defined as the ability of people and systems to anticipate, adapt to, and recover from shocks and stresses in a manner that reduces vulnerability, protects livelihoods, accelerates and sustains recovery, and supports economic and social development. Resilience entails building capacities within institutions, systems, and societies to address evolving risks and their underlying causes. To deal with risks, three resilience capacities are vital: (1) absorptive capacities—to prevent, mitigate, and withstand stresses; (2) adaptive capacities to create diverse options for adjusting and rebounding; and (3) enabling capacities creating decisionmaking structures and processes to identify and address root causes of risks and enact integrated practical solutions. To these ends, promoting sustainable infrastructure, actionable information, and effective institutions are the interlocking building blocks of resilient water systems.



Some recommendations

Water systems in Sub-Saharan Africa are increasingly in crisis. Growing populations and expanding economies are relentlessly driving rising demands.. Seven in ten people living south of the Sahara lack access to safe drinking water. Many service providers lose more water to broken pipes and faulty metering than they deliver to consumers. The water that does arrive is often dangerously polluted. More frequent and ferocious floods and droughts increasingly threaten water infrastructure, but inadequate resources and ineffective management often undermine efforts to expand

Lack of sustainable infrastructure ,reliable water data as well as effective governance structures make sustainable water management very difficult in the Sub-Saharan Africa

Sustainable infrastructure constitutes the backbone of resilient water systems. Pumping stations, storage facilities, treatment plants, distribution and drainage networks provide absorptive and adaptive capacities to meet the stresses of growing demands and mitigate and rebound from the impacts of extreme events. Yet across Sub-Saharan Africa, inadequate resources and deficient management often undermine effective infrastructure development. Much infrastructure development struggles under a costly and wasteful cycle of build, neglect, rebuild. Up to 40 percent of new rural water points in some states fail within two years. Similarly, an alarming proportion of the region's water supplies disappears into leaking pipes, defective metering, and theft. Known as "non-revenue water" (NRW), these losses represent water supplies produced by utilities or service providers but lost or unaccounted for in the distribution system. For a dozen Sub-Saharan African countries reporting data for 2023, NRW averaged 30–60 percent, with some providers recording losses above 90 percent.



Managing complex water security risks depends on accurate, timely, and consistent information to guide policymaking, implementation, and evaluation. Much of Sub-Saharan Africa, though, suffers from a comparative paucity of detailed and accessible water data. African policymakers recognize a lack of adequate data as a significant obstacle to achieving their water security goals. Improving and ensuring the collection and application of such information streams will demand increased capacity building in national water and weather services, strengthened collaboration among data providers and end-users, and defined responsibilities and policies for data access and availability

Sub-Saharan Africa exhibits a diversity of governance structures, but most water systems are managed by a mix of government institutions overseeing public utilities, traditional authorities, or community-based management, and private sector actors.



Decisionmakers in Sub-Saharan Africa must reconcile a host of overlapping socioeconomic, environmental, and policy challenges to fulfill their countries' future water needs. Promoting water security for the region will require adopting integrated approaches recognizing interconnections and interdependencies between stakeholders, water uses and resources, and levels of governance to build the resilient practices, infrastructure, and institutions needed to chart sustainable pathways forward.

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Unprecedented continental drying, shrinking freshwater availability, and increasing land contributions to sea level rise

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Changes in terrestrial water storage (TWS) are a critical indicator of freshwater availability. We use NASA GRACE/GRACE-FO data to show that the continents have undergone unprecedented TWS loss since 2002. Areas experiencing drying increased by twice the size of California annually, creating “mega-drying” regions across the Northern Hemisphere. While most of the world’s dry/wet areas continue to get drier/wetter, dry areas are now drying faster than wet areas are wetting. Changes in TWS are driven by high-latitude water losses, intense Central American/European droughts, and groundwater depletion, which accounts for 68% of TWS loss over non-glaciated continental regions. “Continental drying” is having profound global impacts. Since 2002, 75% of the population lives in 101 countries that have been losing freshwater water. Furthermore, the continents now contribute more freshwater to sea level rise than the ice sheets, and drying regions now contribute more than land glaciers and ice caps. Urgent action is required to prepare for the major impacts of results presented.

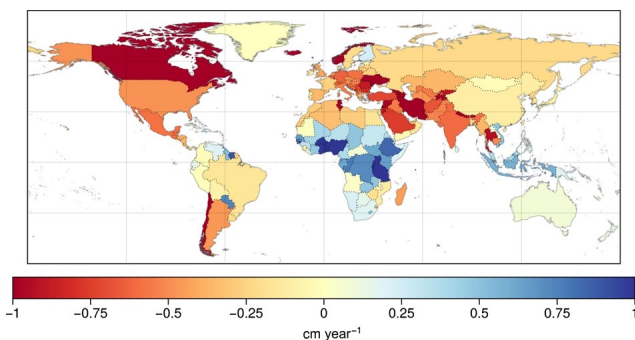
Climate change is driving profound changes within the Earth system, including to its water cycle. While global temperatures continue to reach record heights , with the year 2024 being the hottest year in the past 175 years , the planet is experiencing increasing extremes of flooding and drought , widespread glacial and ice sheet melt and sea level rise , and greater risk of wildfire and biodiversity loss .

As global patterns of precipitation, evaporation, and streamflow change, terrestrial water storage (TWS; all of the ice, snow, surface water, canopy water, soil moisture, and groundwater stored on land) has been shifting rapidly in response . Shifting patterns of TWS threaten water availability and sustainable water management for people and the environment, putting livelihoods and food security at risk while acting as a trigger for climate migration and transboundary conflict both intra- and internationally.

As the dry areas of the world become drier and surface water storage in rivers and lakes declines, society is becoming more reliant on groundwater. This increased reliance has led to its long-term depletion, which is exacerbated by global shortcomings in groundwater management and which amplifies rates of TWS loss through a positive feedback. The consequences of global groundwater depletion include reduced irrigation water supply and threats to agricultural productivity, reduced capacity for climate adaptation, drought resilience and for growth in desert cities, reduced biodiversity and damage to groundwater dependent ecosystems, decreasing access as water tables fall, and many others.

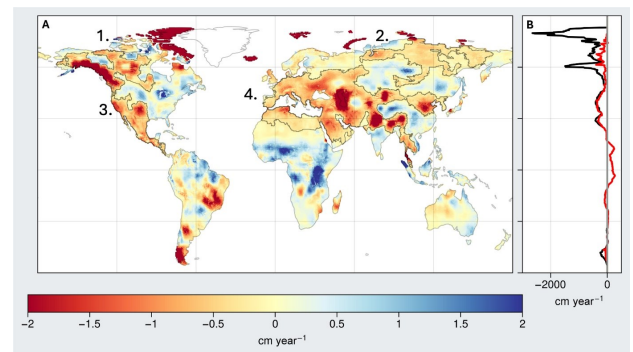
Global TWS changes also have major consequences for interannual variations in sea level and long-term global mean sea level (GMSL) rise. The loss of freshwater from the continents and the ice sheets eventually leads to a corresponding increase in ocean water mass. While the continental contribution drives GMSL variations at seasonal and interannual timescales, its long-term contribution at longer timescales has, until recently, been smaller than the ice sheets on human timescales. If the TWS trends identified here continue, then this may never again be the case.

We find that, while most of the world's dry areas continue to get drier and its wet areas continue to get wetter, dry areas are drying at a faster rate than wet areas are wetting. At the same time, the area experiencing drying has increased, while the area experiencing wetting has decreased. We show that changes in TWS since previous global studies are robust and are driven primarily by high-latitude water losses in Canada and Russia (most likely due to ice and permafrost melt), by the extreme Central American and European droughts of the past several years, and by continued global groundwater depletion, which accounts for 68% of the TWS trend over the non-glaciated continents.

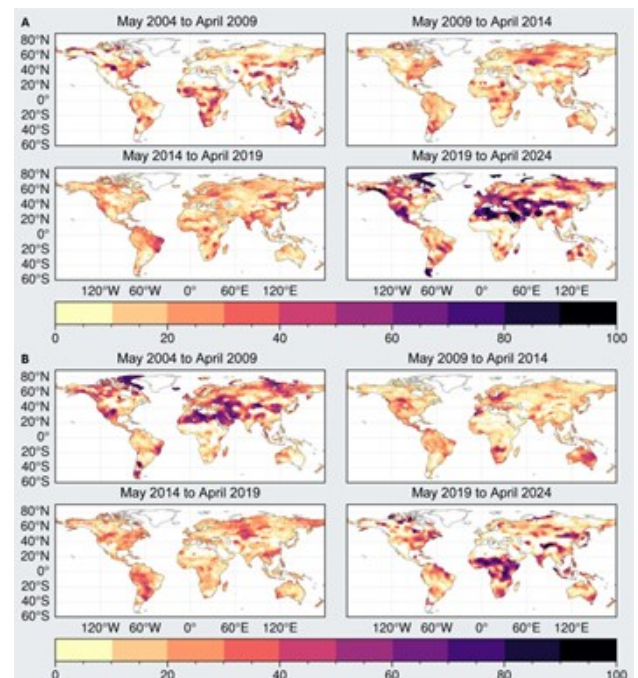


Long-term mean TWS trends from GRACE/FO by country.

We note that this continental drying affects most of the population and countries in the world. Roughly 75% of the global population lives in the 101 countries that have been losing freshwater water since 2002. Within the global water budget, the continents are now contributing more freshwater to sea level rise than the individual ice sheets. Furthermore, the drying regions on the continents now contribute more to sea level rise than GICs on land. Without urgent attention and action, the findings presented here may well continue to worsen, leading to accelerations in water insecurity and sea level rise.



Global map of long-term TWS trends from GRACE/FO



Mapping location and presence of dry and wet extremes.

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HPA President Yıldız: Droughts are intensifying and becoming more frequent. Water management policies must be revised.



The General Directorate of Meteorology's meteorological drought maps for the past five years indicate that regional droughts are intensifying in frequency and severity in certain regions. This indicates that some regions are experiencing persistent drought effects of varying degrees. Therefore, water management and water users must review their management approach and usage habits. Water management policies must be revised, and water usage habits must be changed.

The increasing impact of drought is being experienced not only in Türkiye but also in many countries around the world. In a statement released in recent months, the World Meteorological Organization (WMO) stated that rising temperatures are affecting the water cycle, that water scarcity risks are rising globally, and that water management policies urgently need to be revised. It also called for the rapid implementation of individual and institutional measures to protect water resources and reduce consumption.



Water restrictions are not only an environmental problem; they also have serious social and economic consequences. Restricting water consumption can cause significant hardship, especially for rural residents and small agricultural businesses. As the climate crisis reaches a point where its impacts are clearly felt worldwide, all countries must prepare for similar crises and strengthen their water infrastructure as much as possible.

Central Asian states stepping up efforts to tackle water-related challenges



An increasing amount of time and resources is being devoted to averting a crisis.

Aug 21, 2025

An extremely dry summer has caused water shortages across Central Asia. (Photo: gov.kz)

Summer can be a quiet time in Central Asian capitals, but this August officials in Kazakhstan, Turkmenistan and Uzbekistan have launched initiatives designed to get a handle on water-related challenges threatening the region.

Uzbekistan has unveiled a three-year water-management program that strives to promote conservation via the modernization of the country's vast irrigation network. Under the plan, antiquated equipment will be replaced on over 2,500 kilometers of canals and other hydraulic systems, covering 1.4 million hectares of farmland.

Drip technologies will be introduced on 300,000 hectares, and digital systems will manage water flows across the network, the program envisions. Pumping stations will be powered by renewable energy sources.

Once implemented, the modernization is projected to reduce soil salinity and bring 460,000 hectares of land back into cultivation. According to initial projections, overhauling the network will save 10 billion cubic meters of water during the first year of the program, and up to 14 billion cubic meters by 2028. Uzbek officials have not put a price tag on the modernization initiative.

A statement released August 12 by Uzbek President Shavkat Mirziyoyev announced the creation of a water-management training center that

will help ensure state personnel make the most efficient use of the new technologies. A public awareness campaign will also be developed to encourage better water-conservation habits among the population.

Kazakh officials, meanwhile, are allocating 305 million tenge (about \$566,000) to expand the national Caspian Sea Research Institute.



The sea's level has declined by roughly two meters over the past two decades due to global warming-related factors, and some projections show the shrinkage will accelerate so that by the end of the century the sea may lose up to a quarter of its surface area.

The upgrade to the Kazakh institute will facilitate research aimed at gaining a better understanding of the factors driving the decline, while also helping develop effective restoration measures. The funding will additionally enable experts to broaden efforts to measure fish stocks and search for the causes of mass seal deaths.

A more immediate concern for Kazakhstan is an extremely dry summer that has caused a water shortage. The Syr Darya River is running at up to 40 percent below its normal water level for this time of year, threatening crop yields in the Turkestan and Kyzylorda regions. Reservoirs are also recording worryingly low levels.

Kazakh Deputy Prime Minister Kanat Bozumbayev announced that Uzbekistan and Kyrgyzstan have agreed to allocate 600 million cubic meters of water to Kazakhstan to alleviate the shortfall over the near term. The Uzbek and Kyrgyz supplies are expected to start flowing into Kazakhstan by the end of August. Local media also report that Kazakh officials are exploring a deal with an American firm, Dynamic Aviation, to confront yet another water-related hazard — flooding. dollars worth of property damage.

Authorities are eager to avoid a repeat of the widespread flooding in 2024 that displaced tens of thousands of citizens and caused millions of

On August 12, company officials met with Nurzhan Nurzhigitov, Kazakhstan's minister of water resource management, to discuss potential projects on flood forecasting and mitigation. Virginia-based Dynamic Aviation also bills itself as a "leading company specializing in oil spill response."

Meanwhile, Turkmenistan is trying to catalyze a multilateral response to the Caspian Sea-level issue. The Trend news agency reported August 12 that Turkmen Foreign Minister Rashid Meredov has circulated a blueprint outlining possibilities for collective action and is seeking commitments from other regional states to convene a



summit of Central Asian leaders devoted specifically to preserving the sea's "ecological integrity."

At an August 14 meeting of the Central Asian Interstate Commission for Water Coordination (ICWC), a forum that brings together officials and experts from all five regional states, Bozumbayev, the deputy Kazakh prime minister, sounded an alarm, asserting that dwindling water resources are insufficient to meet growing agricultural needs. He also acknowledged that the ICWC to date has been ineffective in creating a viable resource-management system.

"The times require more dynamic [action] from us," Bozumbayev said, according to a government statement. "It is necessary not only to discuss and plan, but also to take specific measures."

Officials from Kazakhstan, Tajikistan and Uzbekistan have convened multiple meetings in August, striving to develop more efficient water distribution and management systems covering the Amu Darya and Syr Darya river basins.

Source: <https://eurasianet.org/central-asian-states-stepping-up-efforts-to-tackle-water-related->

Turkey approves increased water flow to aid Iraq amid growing crisis



Turkish President Recep Tayyip Erdogan receives Iraq's Parliament Speaker Mahmoud al-Mashhadani in Ankara on July 1, 2025. Photo: Turkish presidency

02-07-2025

ERBIL- Turkey has agreed to increase the release of water into the Tigris and Euphrates rivers by 420 cubic meters per second daily, starting Wednesday, in response to Iraq's worsening water crisis, the Iraqi parliament announced.

The agreement follows a meeting in Ankara on Tuesday between Turkish President Recep Tayyip Erdogan and Iraqi Parliament Speaker Mahmoud al-Mashhadani.

According to an official statement from the Iraqi legislature, the Turkish president approved Mashhadani's "request to release 420 cubic meters of water per second daily, starting from tomorrow, Wednesday."

Mashhadani had "requested that [Iraq's] water issue receive the Turkish leadership's attention" to ensure water access for all Iraqi citizens, "especially in regions suffering from drought and scarcity in southern Iraq." The statement cited Erdogan as "responding positively," stating, "Turkey shares what God has bestowed upon it with its brothers in Iraq and will not withhold it from them." Iraq relies heavily on the Tigris and Euphrates rivers for its water supply, both of which originate in Turkey. However, some experts argue that extensive dam projects in Turkey, including the Southeast Anatolia Project (GAP), have drastically reduced water flow downstream into Iraq.

Iraq and Turkey are also engaged in agreements and negotiations regarding water sharing.

In April 2024, Iraqi Prime Minister Mohammed Shia' al-Sudani and the Turkish President, Erdogan, signed a multi-billion-dollar strategic agreement in Baghdad to manage shared water resources. The 10-year pact included joint river management projects and opened the door for increased Turkish investment under Iraqi coordination. Despite this milestone agreement, Iraq continues to face a severe water crisis.



In late May, Iraq's water reserves dropped to their lowest levels in 80 years, according to Khaled Shamal, spokesperson for the Iraqi water resources ministry. "At the start of the summer season, we should have at least 18 billion cubic meters of water. Today, we only have about 10 billion," he warned in an interview with Rudaw, noting



that agricultural plans have been drastically cut. Given the ongoing crisis, Iraqi politicians have consistently called for a binding, comprehensive international agreement with Turkey to secure Iraq's fair share of water and ensure long-term sustainability. Public pressure is also growing. Southern provinces like Basra have seen widespread protests in recent weeks over severe water shortages and pollution.

Source: <https://www.rudaw.net/english/middleeast/iraq/020720251>



GAZA NEEDS HELP



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We need to build a future,
Where people live in harmony with nature

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