Forum: Economic and Social Council (ECOSOC)

Issue: Managing Water Scarcity Through Transboundary Resource Governance

Student Officer: Elga Sevrani

Position: Deputy President

Personal Introduction

Dear Delegates,

My name is Elga Sevrani. I am 16 years old and I attend the 10th grade at the Deutsche Schule Athen (DSA). I have the utmost honor to serve for the first time as Deputy President in this year's ACGMUN in the Economic and Social Council.

First and foremost, I would like to congratulate all of you for choosing to participate in the Model UN world, as it is a wonderful opportunity to gain a deep understanding in politics, diplomacy and work together with other delegates in order to be a step closer to change the world for the better.

This study guide is designed to help you understand the first topic of this committee "Managing Water Scarcity Through Transboundary Resource Governance". However, I strongly encourage you to pursue further independent research in order to gain a greater understanding of your country's policy and position on the matter.

If you have any questions, feel free to contact me via email.

I am looking forward to meeting you all soon!

Kind regards,

Elga Sevrani

(elgasevrani@gmail.com)

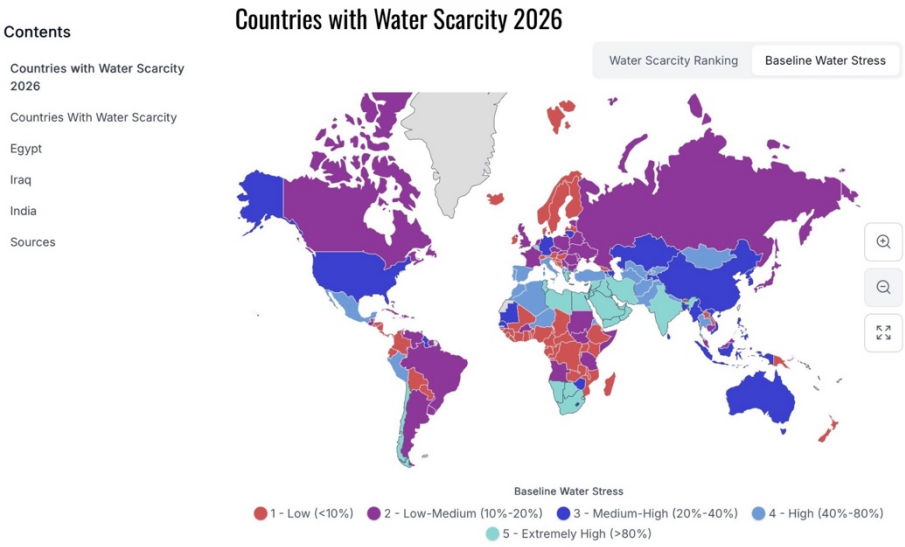
Topic Introduction

It is widely recognized that climate change has intensified in recent years and continues to impact our society in many different ways. With this in mind it is important to understand the nuances of water scarcity and the urgency to discover effective solutions more than ever, considering that it is a critical global issue that affects millions of people and ecosystems worldwide.

Water scarcity occurs when the demand of freshwater exceeds the available supply. This can have significant consequences, such as negatively affecting farmers' crops, which can lead to food shortages and therefore increased food prices. Additionally, high water stress can have devastating consequences for the environment, economic and social development as well as affect health, agriculture, and even political stability.

Given that many freshwater sources such as rivers and lakes cross national borders, it is crucial to recognize the importance of cooperation among states to issue and regulate shared water resources in a manner that is sustainable, unbiased and favourable to regional stability, considering that overuse by one country can negatively impact others.

However, most of the world's population faces significant water security threats, estimating that nearly 75% of people experience high threats levels[1],almost 4 billion people face severe scarcity for at least one month annually[2] and ¾ of the world's population lives in areas with extremely high-water stress[3]. It is expected that by 2030 approximately 2 billion people will live without safely managed drinking water, 3 billion without safely managed sanitation and 1.4 billion without basic hygiene[4].



[1] World enters "Era of global water bankruptcy" UN scientists formally define new post-crisis reality for billions,https://unu.edu/inweh/news/world-enters-era-of-global-water-bankruptcy
[2] The world has entered a new era of 'water bankruptcy' with irreversible consequences, https://edition.cnn.com/2026/01/20/climate/water-bankruptcy-drought-united-nations
[3] Looming water supply 'bankruptcy' puts billions at risk, UN report warns,https://www.reuters.com/sustainability/climate-energy/looming-water-supply-bankruptcy-puts-billions-risk-un-report-warns-2026-01-20/
[4] — SDG indicators, https://unstats.un.org/sdgs/report/2024/Goal-06/

Figure 1[5]: Map showing each country's water stress level as of 2026

As water scarcity continues to threaten economic and social development worldwide, urgent collective action is needed. Therefore, this topic aligns closely with this year's conference theme, as it calls for action to safeguard the future of the next generations.

Definition of Key Terms

Water Scarcity[6]

It arises when there are insufficient freshwater resources to meet the human and environmental needs of a territory

Water stress[7]

"A situation when there is not enough water in the area"

Freshwater Resources[8]

In simple terms it is defined as water that is not salty, which stems directly from glacier melt, rainwater, rivers and lakes. Its low concentration of dissolved salts excels for human consumption and for certain ecosystems that depend on it.

Renewable Water Resources[9]

"Renewable Water Resources refers to freshwater resources that can be naturally replenished through the hydrologic cycle (rain, snowmelt, riverflow), which involves processes such as evaporation, condensation and precipitation."

Transboundary Water Governance[10]

[5] World Population Review, https://worldpopulationreview.com/country-rankings/countries-with-water-scarcity
[6] Water scarcity | Description, mechanisms, effects, & solutions | Britannica, https://www.britannica.com/topic/water-scarcity
[7] Water stress, https://dictionary.cambridge.org/dictionary/english/water-stress
[8] Understanding fresh water: Definition and significance, https://blog.laica.com/en/understanding-fresh-water-definition-and-significance
Freshwater resources, https://fiveable.me/key-terms/ap-hug/freshwater-resources
[9] Renewable water, https://www.ebsco.com/research-starters/earth-and-atmospheric-sciences/renewable-water
[10] Transboundary water governance → term, https://prism.sustainability-directory.com/term/transboundary-water-governance

Addresses the shared management of water resources, such as lakes and rivers that span across political borders.

Transboundary Water Resource[11]

Transboundary Water Resource is defined as any surface or groundwater systems that crosses or lies on the border of two or more countries.

International Cooperation[12]

"International cooperation refers to the process of policy and behavior coordination among international actors and the resulting relationship state".

Water Allocation[13]

"Water Allocation refers to the management and distribution of water resources among various consumers and environmental needs to ensure fair and sustainable use, often through a regulatory system of licences and permits"

Sustainable Water Management[14]

Sustainable water management is ensuring that current water needs are fulfilled, in order to ensure that everyone has access to water, without endangering futuristic water necessities.

Upstream[15]

When talking specifically about water, upstream means that a part of a river or a lake is closer to its original source, meaning for example in mountains or glaciers.

Downstream[16]

[11] "CHAPTER II: DEFINITIONS, OBJECTIVES AND COMPONENTS OF TRANSBOUNDARY WATER ALLOCATION." *Https://Unece.Org/Sites/Default/Files/2021-12/CHAPTER_2.Pdf*, unece.org/sites/default/files/2021-12/CHAPTER_2.pdf. Accessed 22 Jan. 2026.
[12] Concept of international cooperation, https://en.icc.org.cn/profile/concept-of-international-cooperation/
[13] Page restricted, https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/water-allocation
[14] What is sustainable water management?, https://quenchbuggy.com/what-is-sustainable-water-management-why-is-it-important/
[15] Upstream, https://dictionary.cambridge.org/dictionary/english/upstream
[16] Downstream | Definition from the water topic | Water, https://www.ldoceonline.com/Water-topic/downstream

In contrast to upstream, downstream occurs when part of a river is farther from its source but closer to where it flows into a sea or a lake.

Water overuse[17]

"Water overuse refers to the excessive consumption of water resources beyond their natural replenishment rates, leading to depletion of freshwater supplies and environmental degradation."

Water pollution[18]

Water pollution arises when harmful substances, mostly chemicals or microorganisms, poison a stream, river, lake, ocean, aquifer or further bodies of water. It degrades the quality of water and therefore makes it toxic to humans or the environment.

Background Information

Historical importance of freshwater resources

As it is widely known, rivers and lakes serve as the main source for human needs and have impacted our world for thousands of years.

Freshwater is a source of life. While the human body is made up of approximately 60% of water[19] it can survive for around three weeks without food, but only three to five days without water. Additionally, have rivers played a significant role in agriculture, as they were used for transportation and trade, both of which are key foundations of civilization.

The importance of water, specifically rivers, however, is also notably seen through historical events, as they were essential for the rise of many empires and cities, such as the Mesopotamian and the Ancient Egyptian empires.

The Mesopotamian civilization flourished from roughly 3500BC to 539BC[20]. It lies in modern Iraq, alongside northeastern Syria, southeastern Turkey and western Iran[21]. It is also known as "The

[17] Water overuse, https://fiveable.me/key-terms/ap-hug/water-overuse
[18] Attention required! | Cloudflare, https://www.nrdc.org/stories/water-pollution-everything-you-need-know#whatis
[19] How long can you live without drinking, https://www.futura-sciences.com/en/how-long-can-you-live-without-drinking_9173/
[20] Judy Duchan's history of speech - Language pathology, https://www.acsu.buffalo.edu/~duchan/new_history/ancient_history/mesopotamia.html
[21] Ancient Mesopotamia - an overview | Department of archaeology, https://www.arch.cam.ac.uk/about-us/mesopotamia/mesopotamia-history

Land Between the Rivers" simply because the territory was between the two rivers Euphrates and Tigris[22].

Those rivers are the reason why the Mesopotamian empire rose and became the world's earliest civilization. Its location provided constant water sources, assisted trade and transportation, allowing people to travel from one place to another. The rivers flooded annually, leaving behind a rich, nutrient-dense slit. This natural fossilization made the land incredibly productive, supporting crops, including wheat and vegetables, which were crucial for survival and trade[23].

Furthermore, its rivers formed a system that created the right conditions for artificial irrigation to be developed on a large scale[24].

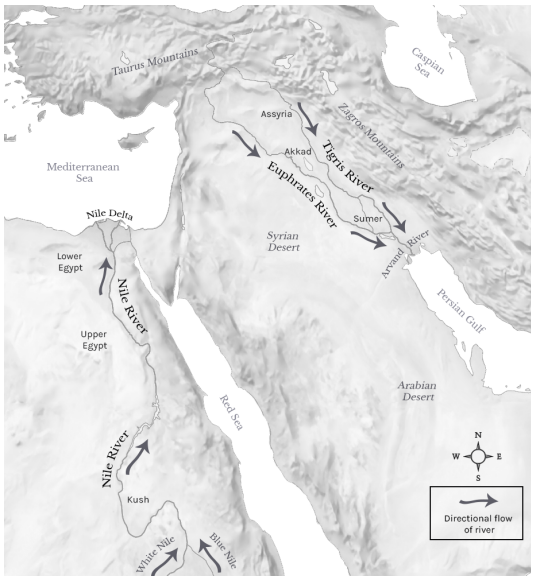


Figure 2[25]: Map showing Mesopotamia and its two rivers Tigris and Euphrates.

As mentioned before, rivers, specifically the Nile River, had an important impact on ancient Egypt as well. The Egyptian empire endured for over 3000 years and is commonly divided into several distinct

[22] Ancient Mesopotamia: "The land between Two Rivers", permanent exhibits, exhibits, Spurlock Museum, U of I, https://www.spurlock.illinois.edu/exhibits/permanent/mso/

[23] Between the Tigris and Euphrates rivers: Mesopotamia, https://nerd.wwnorton.com/ebooks/epub/worldscon4/EPUB/content/2.2-chapter02.xhtml

[24] How did Mesopotamia become the cradle of civilization?, https://www.thecollector.com/mesopotamia-cradle-of-civilization/

[25] Tigris, Euphrates, & Nile River flows, https://www.worldhistory.org/image/13560/tigris-euphrates--nile-river-flows/

historical periods[26]. While these periods will not be examined in detail, they highlight the long-term stability of the empire, largely due to the Nile River. It was a vital resource to ancient.

Egypt as it was a crucial water source for drinking, irrigation and the main way for trade, transportation and building materials, such as papyrus and mud bricks. Not only did it have the ability to sustain a powerful civilization, it also influenced their religion, as the river was considered a gift from the god Hapi, who "blessed the land with life"[27].

Figure 3[28]: Map showing ancient Egypt and the Nile River

Historical development

Throughout human history numerous revolutionary changes have occurred, many of which continue to inform and shape our modern world.

However, the past is not forgotten, and neither is the development of water management, since water is and always will continue to be the most precious resource for the wellbeing of humans. The methods historically employed have evolved enormously: from nature dependent systems, centered primarily on agriculture to highly complex, centralized and technology driven networks.

[26] "Institute of Egyptian Art & Archaeology." *Timeline of Ancient Egypt - Institute of Egyptian Art & Archaeology*, preview.memphis.edu/egypt/resources/timeline.php#:~:text=Brief%20Timeline%20of%20Ancient%20Egypt,THIRD%20INTERMEDIATE%20PERIOD%20(ca. Accessed 22 Jan. 2026.
[27] The Nile and Egyptian religion – Humanities: Prehistory to the 15th century, https://fscj.pressbooks.pub/earlyhumanities2ndedition/chapter/the-nile-and-egyptian-religion
[28] Map of ancient Egypt, https://www.worldhistory.org/image/12990/map-of-ancient-egypt/

Local water management in early civilization

Water management continues to be one of the most critical challenges the world faces today, due to various reasons. However, it was just as crucial in early civilizations as it is now, considering that numerous ancient cities would never have emerged, nor would the urban communities and towns, from which they developed. India for instance used traditional harvesting methods such as “Kunds” and “Tankas” in order to capture and store rainwater in regions with low rainfall, such as Chrchu and Rajasthan[29]. These were built with the aim of functioning as a source for drinking water and ensuring consistent supply for dry seasons.

As mentioned above, the rivers Euphrates and Tigris greatly impacted the rise of the Mesopotamian civilization. Nevertheless, dual challenges occurred of seasonal flooding and drought, which as a result, led to the development of an extensive network of canals. These systems ensured that crops would receive adequate moisture throughout the growing season[30].

Furthermore, it is worth mentioning the water management systems of Ancient Greece, which were one of the early adopters of aqueduct technology, with the aim of supplying clean water for civilizations and irrigation of agricultural land, in accordance with the invention of sewage systems[31]. Taking into consideration how many towns were built on hills and the establishment of significant cities was avoided, alternative solutions were required.

Thus, wells and underground channels were often combined with cisterns and adequateness, especially in dry areas or islands where rivers and streams were seasonal. These systems provided stable water supply for drinking, domestic use and irrigation, thereby reducing the reliance on rainfall.

Transition to International Challenge

Population growth

While it seems that water is infinite and always available, it is not[32]. Similar to oil, water is a finite resource. Water covers around 71% of the earth’s surface, however 97% of the earth’s water is found in oceans, making it unusable for human consumption. Only around 3% of the earth’s water remains to be freshwater and therefore safe for fulfilling humanitarian needs.

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[29] Kundi — timeless sanctuaries of rainwater in the heart of desert, https://www.downtoearth.org.in/water/kundi-timeless-sanctuaries-of-rainwater-in-the-heart-of-desert

[30] Water management in ancient civilizations: From aqueducts to qanats, https://www.ancient-origins.net/articles/ancient-water-management

[31] The groundwater studies of Ancient Greece, https://www.simmondsbristow.com.au/the-groundwater-studies-of-ancient-greece/

[32] The three percent, https://svs.gsfc.nasa.gov/11595/

Nevertheless, the percentage reduces by roughly 2.5%, given that 68.7% of that freshwater is in ice and glaciers and around 30.1% in groundwaters. Only a very small amount of freshwater, namely around 0.3% is available in lakes, rivers and swamps[33]. However, as global population growth continues, so does the demand for freshwater, since the need for drinking water, sanitation, agriculture and the development of infrastructure intensifies.

In many regions, water resources are being depleted faster than they can be replenished, which causes severe shortages, particularly in regions that are also experiencing the highest levels of population growth.

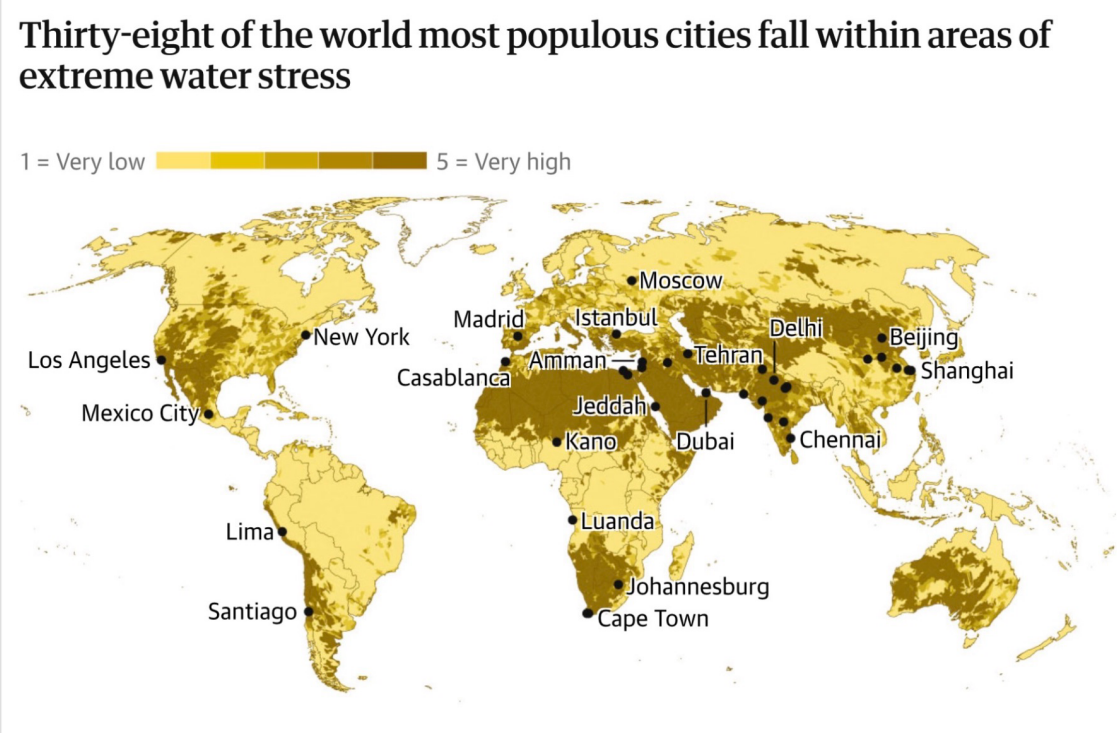

Figure 4[34] : Map showing cities that experience high water stress levels

Climate Change

A well-known global challenge the earth is facing at the moment is climate change, as it leads to numerous consequences, one of the most significant being its impact on water scarcity. Freshwater resources originate largely from glaciers and ice caps, however with the rising global temperatures they seem to rapidly be disappearing.

[33] Water facts - Worldwide water supply | ARWEC| CCAO | Area offices | California-great basin | Bureau of reclamation,https://www.usbr.gov/mp/arwec/water-facts-ww-water-sup.htmlr

[34] Half the world's 100 largest cities are in high water stress areas, analysis finds, https://www.theguardian.com/environment/2026/jan/22/half-world-100-largest-cities-in-high-water-stress-areas-analysis-finds

Additionally, the rise of global temperatures is also intensifying droughts, altering rainfall patterns and increasing wildfires, which cause the destruction of vegetation. As a result, it worsens and reduces groundwater recharge, increasing water scarcity and food insecurity as well as loss of lives and economic damage.

Moreover, it impacts the maximum capacity of the soils, land surface and atmosphere to retain water, which acts as the foundation for life, a buffer against extreme weather and a key regulator of the global climate system[35].

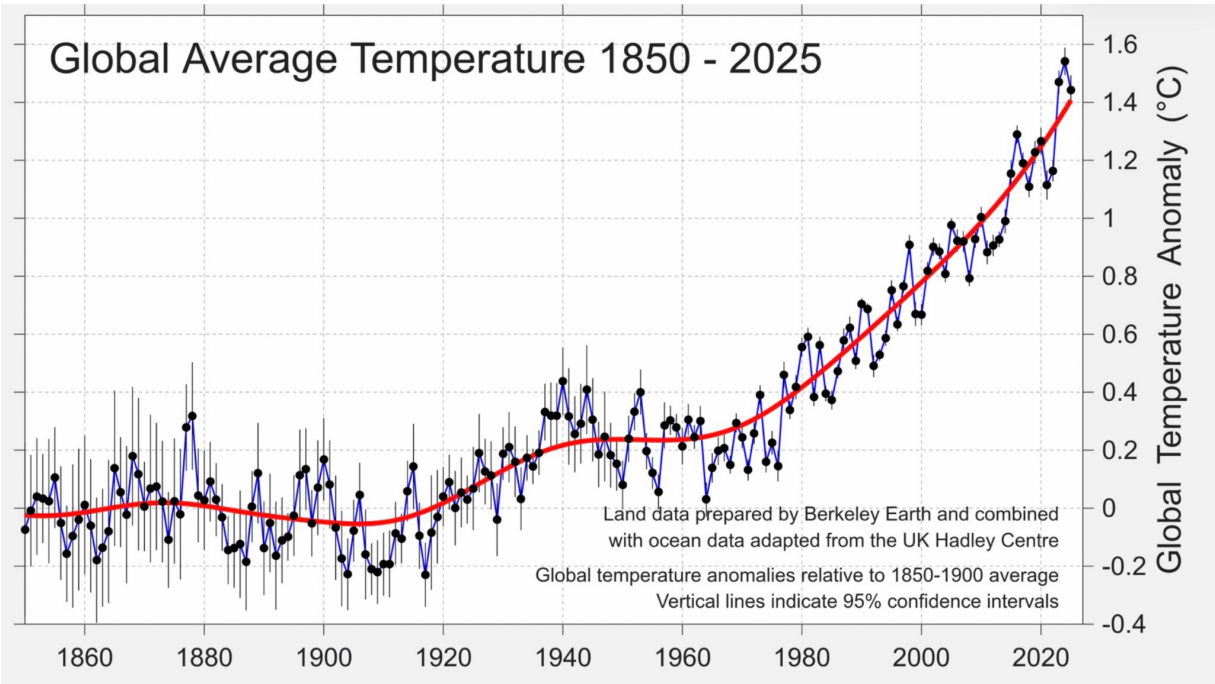

Figure 5[36]: Graph highlighting the increase of the global average temperatures from 1850-2025

Industrialization

The industrial revolution began in Great Britain in the early 18th to mid-19th centuries and fundamentally transformed daily human life as well as the operation of businesses[37].It deshaped economies that had been based on agriculture and handicrafts into economies based on large-scale industry, manufacturing the factory system. The introduction of new machines and new power sources not only affected the way the world functioned but also opened doors to a new world as well as

[35] Water – at the center of the climate crisis, https://www.un.org/en/climatechange/science/climate-issues/water
[36] Just a moment…, https://berkeleyearth.org/global-temperature-report-for-2025/
[37] Just a moment…, https://www.historic-uk.com/HistoryUK/HistoryofBritain/Timeline-Industrial-Revolution/

expanded employment. Prior to this period, most households were dependent on farming and lived in small, rural communities[38].

However, the need and will to work in industries grew and so did the environmental damages over time. While the creation of industries was a revolutionary change, it caused social and environmental challenges, one of them being, increasing pressure on freshwater resources. Most industries require a large amount of water due to numerous reasons, such as manufacturing, processing, cooling, cleaning and sanitation.

Nevertheless, can this lead to overuse of water resources as well as poor water management, given that constructions of dams and other infrastructures alter the flow of rivers and streams[39]. Additionally, do industries often discharge waste materials into water bodies, such as harmful chemicals, heavy metal and other pollutants causing further water damage.

Major Countries and Organizations Involved

Qatar

Qatar is one of the most affected countries by water scarcity. Its freshwater resources are limited and water storage is an important concern the country is facing. In 2010, Qatar had only 48 hours worth of water stored in case of emergencies[40]. In order to reduce high water stress levels, the state-owned water utility company Kahramaa invested in drinking water storage capacity, which led to the foundation of the Water Mega Reservoirs project.

It was founded on 12th May 2012, by the Prime Minister of Qatar, alongside with other governmental officials, with the aim of providing seven days of potable water storage as well as more control and flexibility for water supply for all places in Qatar[41].

This project was registered as the biggest water reservoir in the world in the Guinness Book of Worlds Records in 2020[42].

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[38] Industrial Revolution: Definition, history, pros, and cons,https://www.investopedia.com/terms/i/industrial-revolution.asp
[39] How does industrial waste get into water systems?, https://www.h2o-de.com/us/blog/how-does-industrial-waste-get-into-water-systems-and-what-are-its-effects
[40]Attention required!,https://www.ice.org.uk/news-views-insights/inside-infrastructure/how-qatar-faced-up-to-the-water-security-challenge
[41] GKW consult: Foundation stone ceremony for mega water reservoirs project, Qatar, in which GKW consult is involved as PMC,https://www.gkw-consult.com/en/news/news-message/article/foundation-stone-ceremony-for-mega-water-reservoirs-project-qatar-in-which-gkw-consult-is-involved/
[42] Mega reservoirs project | Department of Economic and Social Affairs,https://sdgs.un.org/partnerships/mega-reservoirs-project

In addition, water usage increased by 70% during 2006 and 2013[43] . Since then, Qatar's water consumption has remained high, caused by many factors, including population growth, industrial activity and urban development, followed by the high demand of water in households and agriculture[44].

Kuwait

Kuwait is a country in the Middle East sharing land borders with the Kingdom of Saudi Arabia and Iraq and lies across the Persian Gulf. It is considered a water-scarce region, as rainfall is insufficient and inconsistent, intensifying financial, economic and environmental impacts. Furthermore, Kuwait consists mostly of deserts making it harder for natural groundwaters to recharge and suspending surface waters such as lakes and rivers.

Currently, the main sources of freshwater are seawater desalination, brackish groundwater and recycling freshwater, meaning that Kuwait's freshwater relies on technology. Therefore, this water can be viewed as more of a manufactured product, rather than a natural resource. Seawater desalination is the primary source in Kuwait that produces freshwater for drinking, agriculture and other dependent industries. It is achieved through the distillation plant, which was firstly put into operation by the government in 1951 in order to use an efficient membrane filtration system to remove salt and impurities from seawater, generating freshwater suitable for various fields[45]. There are approximately eight desalination plants in Kuwait, along the coast.

[43] Just a moment…, https://www.arabianbusiness.com/politics-economics/qatar-water-use-up-70-in-seven-years-study-631457?__cf_chl_tk=M5HtzrrLRuNfK.udMJudpIku2H3Fvv2nh03qT5xZ9g0-1769935199-1.0.1.1-VOKRtJJt7RnLGpksm3iIrCWfVcOAMZgew5yFT2VI_Ts

[44] The water crisis in Qatar - Problems and solutions - Ehsanollah Bayat, https://ehsanollahbayat.com/water-crisis-qatar-problems-solutions/

[45] Google search,https://www.chunkerowaterplant.com/news/reverse-osmosis-in-kuwait

Figure 6[46]: Map showcasing the desalination plants in Kuwait

However, it is expected that these challenges will continue to increase, due to several factors, such as rapid population growth, urbanization, climate change, unsustainable consumption and inefficient water management[47].

Jordan

Jordan is ranked as the second most water scarce country in the world. In urban areas, water is constantly available once a week whereas in rural areas it is available less than once every two weeks. The number further decreases during the summer months. Additionally, it is worth mentioning that only 77.3% of existing sanitation systems are safely managed and only ⅓ of schools in Jordan are able to provide safe and sustainable access to water for drinking, cleaning and personal hygiene[48].

While natural processes, such as desertification certainly have an impact on Jordan's water scarcity, it is mainly caused by factors, such as political crises that occur in the region, by affecting for

[46] Water infrastructure in Kuwait, https://water.fanack.com/kuwait/water-infrastructure-in-kuwait/
[47] Water crisis in Kuwait, https://www.ecohubmap.com/hot-spot/water-crisis-in-kuwait/18bwrbklrddwv3g
[48] Attention required!, https://www.unicef.org/jordan/water-sanitation-and-hygiene

instance cross border water sources. Furthermore, the rapid population growth, including the 1 million Syrian refugees in the past decade[49], the poor infrastructure, water pollution and the misuse of water resources have all promoted the rise of water scarcity as well[50].

Currently the water supply per capita has dropped to around 100 cubic meters of renewable water sources per person annually. It is foreseen that by the year 2100 water stress levels will increase at an average annual rate of 1%-1.5%, meaning that 90% of households with low income will be affected and not provided with accessible freshwater[51].

However, the government has recognized the importance of the issue at hand and has not only been trying to promote public awareness through campaigns but also adopted the Jordan Water Sector Efficiency Project in March 2023 and the Financial Sustainability Roadmap for the Water Sector, which was adopted by the Cabinet of Ministers in November 2022, with the purpose of prioritising water sector efficiency, loss reduction, drought risk management, promotion of water-energy nexus solutions and water security. It is planned to save approximately 10 million cubic meters of water and improve water management[52].

Blocs Expected

Alliance 1: Ethiopia, Uganda, Tanzania, Kenya, Rwanda, Burundi, South Sudan, DR Congo, Eritrea, China, Laos, Myanmar, Kyrgyzstan, Tajikistan, Afghanistan, Turkey, Iran.

- Countries that are located upstream in shared river basins and tend to be strengthened by water scarcity not weakened by it as well as seek sovereignty

Alliance 2: Egypt, Iraq, Bangladesh, Pakistan, Sudan, Syria, Vietnam, Cambodia, Thailand, Uzbekistan, Kazakhstan, Turkmenistan

- Countries that are located downstream and are highly dependent on consistent flows as well as strongly support binding treaties, international legal frameworks and multilateral river basins institutions.

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[49] Just a moment…, https://news.stanford.edu/stories/2021/03/jordans-worsening-water-crisis-warning-world
[50] Water scarcity in the Jordan River Valley, https://ballardbrief.byu.edu/issue-briefs/water-scarcity-in-the-jordan-river-valley
[51] Attention required!, https://www.unicef.org/jordan/costs-water-crisis-jordan
[52] Estimated 1.6 million people in Jordan to benefit from new project to tackle Jordan's water crisis and build climate resilience, https://www.worldbank.org/en/news/press-release/2023/06/18/estimated-1-6-million-people-in-jordan-to-benefit-from-new-project-to-tackle-jordan-s-water-crisis-and-build-climate-res#:~:text=The%20Jordan%20Water%20Sector%20Efficiency%20Project%20is%20fully%20aligned%20with,the%20impacts%20of%20climate%20change

Timeline of Events

Date	Description of Event
3500BC- 539BC	Mesopotamian Civilization
Early 18th- mid 19th centuries	Industrial Revolution
1951	First distillation plant in Kuwait was put into operation
2010	Qatar has only 48 hours worth of water stored
12th May 2012	Foundation of Water Mega Reservation
2006-2013	Water usage in Qatar increased
2020	The Foundation of Water Mega Reservation was registered in the Guinness Book of World Records
November 2022	Adaption of the Financial Sustainability Roadmap for the Water Sector Efficiency Project by the Cabinet of Ministers
March 2023	Jordan Water Sector

Relevant UN Resolutions, Treaties & Events

- A/RES/64/292 (2010) - The Human Right to Water and Sanitation
- A/HRC/RES/15/9 (2010) - Human Rights Council Resolution
- A/RES/71/222 (2016) - International Decade for Action, "Water for Sustainable Development" (2018–2028)
- A/RES/75/212 (2020) - Midterm Comprehensive Review
- A/RES/77/334 (2023) - UN System-wide Strategy for Water and Sanitation

Previous Attempts to Solve the Issue

International Water Management Institute (IWMI)

The International Water Management Institute was founded in 1984 in order to address critical gaps in water management and improve irrigation performance in developing countries.

For instance, does the IWMI's MENADrought project, funded by USAID, cooperate with policymakers, water managers and engineers in Jordan, Lebanon and Morocco aiming to develop the training, data, tools and planning on rainfall, land surface temperature, soil moisture as well as vegetation health that is required, in order to quickly detect an emerging drought, mostly in the Middle East and North Africa, that are both regions that suffer intensely from water scarcity[53].

The International Fund for Agricultural Development (IFAD)

The International Fund for Agricultural Development is a specialized agency of the United Nations and an international financial institution, founded in 1977 and based in Rome, Italy. It issues water scarcity as a critical factor in rural poverty and food insecurity. IFAD has invested over US$1.4 billion in 110 agricultural and rural development projects, natural resource management; 52 of them include subcomponents with a focus on water- related activities worth a total of approximately US$473 million.

Furthermore, IFAD has provided about US$15 million in grant support for some 65 regional research and capacity-building programs, concerning water as well as showing support to further research and capacity-building programs concerned with the development and use of improved drought- resistant varieties of seeds[54].

Possible Solutions

Investment in Infrastructure

It is crucial for cities, especially the ones affected by high water pollution to invest in infrastructure, given the fact that poor infrastructure can have negative effects on human health and the economy, since it affects the quality of freshwater. For instance, could old, leaky pipelines be fixed, in order for communities to have access to reliable drinking water supply, without depleting groundwater resources.

International Cooperation

As previously stated, water overuse is one of the main factors that affect water scarcity. However, this can be reduced through international cooperation, which is essential for nations that share rivers or lakes. A nation that is located towards an upstream area and overuses freshwater, could drastically impact the water availability and quality for nations downstream,

[53] *The Nile River - Egypt Tour Magic*, egypttourmagic.com/the-nile-river/. Accessed 22 Jan. 2026.
[54] Just a moment…, https://www.ifad.org/documents/d/new-ifad.org/fighting-water-scarcity-in-the-arab-countries_eng-pdf

causing physical drying of rivers, complicating international relations of nations as well as reducing agricultural output and causing as a result an ecological collapse.

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