

GALMUN 2024



UNEA

Research Report



Definitions

UNEP: The United Nations Environment Programme (UNEP) is the leading global authority on the environment. UNEP's mission is to inspire, inform, and enable nations and peoples to improve their quality of life without compromising that of future generations.

UNEA: The United Nations Environment Assembly (UNEA) is the world's highest-level decision-making body for matters related to the environment.

Bodies of water: oceans, seas, Lakes, rivers, and streams.

Ecosystem: a symbiotic system made up of different creatures and bodies that interact and form a living space that is highly interconnected. Examples of ecosystems could be forests, coral reefs, oceans, deserts, and more. Ecosystems, due to their complexity, are highly sensitive to environmental change, which could leave detrimental effects.

Agriculture: Farming and growing of trees and plants to feed humans or cattle.

Point source pollution: any single identifiable source of pollution from which pollutants are discharged.

Non-point source pollution: any source of water pollution that is not caused by a single source.

Transboundary Water: This is the movement of water across boundaries and borders. These include rivers, lakes, streams, and more.

Salinity: the quality of being saline or, in other words, saltiness.

Background

One of the challenges the globe faces during this century is water pollution. Water is an essential resource that living things rely on for life, and it is crucial for economic and social advancement, energy generation, and more. Polluted water, according to the World Health Organization (WHO) is water that has its composition altered to the point that it becomes unusable. We can understand water pollution as occurring when harmful substances (often chemicals or microorganisms) contaminate a stream, river, lake, ocean, aquifer, or other bodies of water, making the water quality toxic, unhealthy, and even dangerous to all living creatures. The source of pollution can be from a one-point source, like a single oil spill or broken sewage pipe, or it could be no-point source pollution from multiple sources at once, such as the use of toxins in agriculture, oil residue from urban environments, etc. This interferes with the nature of the ecosystems and affects the beneficial use of water as it becomes undrinkable and can't be used for agriculture, and it also causes diseases.

The pollution of freshwater can be caused by several reasons. Climate change can lead to weather conditions that mix freshwater sources with saltwater sources. The changes in



temperature can also lead to the growth of algae and bacteria in freshwater sources, rendering them undrinkable. Climate disasters, exasperated by climate change, can also lead to the destruction of human infrastructure around water bodies, causing spillage and pollution. Human intervention is also a leading cause. This is done by improper disposal of sewage and waste from cities, factories and other facilities into clean water bodies, turning water bodies into sources of toxicity that have a dire effect on the environment. Agriculture is also responsible for the excessive usage of large amounts of water thus draining up many freshwater sources. In addition, accidents caused by Human facilities can also ruin water bodies, such as oil spills, radioactive disasters, destruction of infrastructure and more.

The effects of water pollution are drastic. The loss of biodiversity, contamination of food chains, and diseases transmitted by drinking unclean water. It also has a heavy effect on human health, with many becoming sick and dying due to contaminated water. It can also lead to toxins ending up in our food due to the use of contaminated water in agriculture. It can also lead to social and political troubles, as the lack of fresh drinking water can lead to large strains on societies desperate for water, especially in Third World countries.

Current Situation

In the past couple of decades, many lakes and water reservoirs have shrunk, mainly due to climate change and excessive water use. Reports show a significant decrease of water from lakes, which account for 90% of the Earth's surface freshwater. In 2023, 42% of household wastewater worldwide is not treated properly, thus polluting the environment and other bodies of water. Only 60% of water bodies worldwide have been accessed to have been 'ambient' or, in other words, suitable for human use or suitable for its ecosystem, which means that 40% of water bodies around the world are polluted. This has been exacerbated by the climate change and the lack of cooperation between countries in regulation and enforcing policies that ensure the preservation of water and their protection from pollution. It is, therefore, within the interest of the international community to prevent the pollution of water bodies, for the sake of the preservation of the environment, the stability of societies and the protection of ecosystems.

Treaties and resolutions

1992 Convention on the Protection and Use of Transboundary

Watercourses and International Lakes

Stresses the importance of preventing the pollution of waters and encourages the cooperation between different states in the transportation and the clean use of water.

UN Resolution A/RES/70/1 and the Sustainable Development Goals



UN resolution that set up the plans for Sustainable Development until 2030. They include many goals and objectives which the UN aims at achieving before 2030. Goal 6 of the Sustainable Development Goals (SDG 6) is “Ensure availability and sustainable management of water and sanitation for all”.

UN Resolution A/RES/71/203

that focuses on International Decade for Action "Water for Sustainable Development" 2018-2028

Dedicates a decade from 2018-2028 for the development of regulations and infrastructure for the preservation and management of water. It declares:

- “Proclaims the period from 2018 to 2028 the International Decade for Action, “Water for Sustainable Development”, to commence on World Water Day, 22 March 2018, and terminate on World Water Day, 22 March 2028.”
- “Decides that the objectives of the Decade should be a greater focus on the sustainable development and integrated management of water resources for the achievement of social, economic and environmental objectives and on the implementation and promotion of related programmes and projects, as well as on the furtherance of cooperation and partnership at all levels in order to help to achieve internationally agreed water-related goals and targets, including those contained in the 2030 Agenda for Sustainable Development;”

Global Wastewater Initiative (GW2I)

Initiative by the United Nations Environmental Program that aims for sustainable management of sewage and wastewater in order to prevent it from polluting water bodies. It does so by supporting countries to develop regulation, technologies, policies and projects to achieve this aim.

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

Program by the United Nations Environmental Program that aims at the protection of the biodiversity and ecosystems in seas and oceans from human sources of pollution such as sewage, agricultural waste water, radioactive and toxic waste from factories, oil spills and more.



Questions to Consider

- How is your country considering improving its water ecosystem?
- How does/can pollution of bodies of water affect your country (financially, socially, etc.)?
- Is your country ready for a water crisis? How can it help in innovating new technologies and new techniques to help the marine environment?
- How can countries work together to improve agreements related to shared water bodies and resources?
- How does the loss and pollution of bodies of water affect countries worldwide?
- How can the international community work at depolluting water bodies?
- What did your country do to protect water bodies in it? What is it planning to do regarding protecting water bodies in the future?
- What measures should be taken to ensure clean water access for citizens during wars?

Relevant media

Here are some statistics about water pollution worldwide and access to fresh water worldwide:

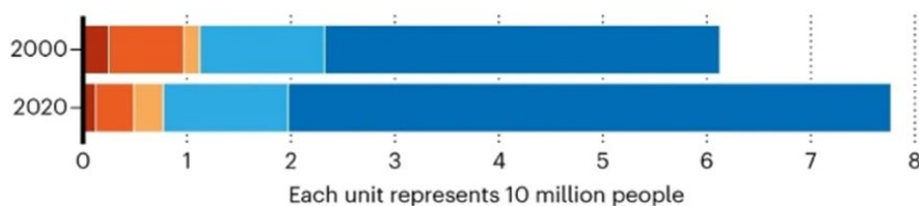
<https://www.macrotrends.net/countries/ranking/clean-water-access-statistics>

A TALE OF TWO HALVES

Between 2000 and 2020, more people gained access to safe water and sanitation. But nearly 500 million people are still using open defecation.

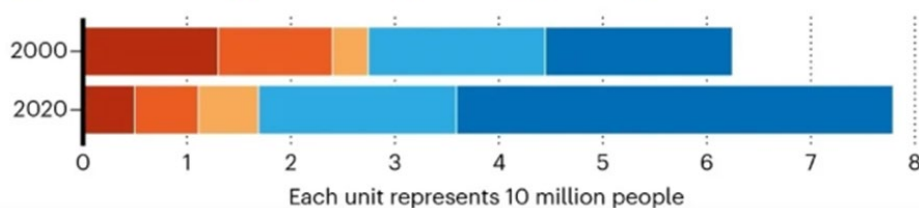
Access to safely managed drinking water services

■ Surface water ■ Unimproved ■ Limited ■ Basic ■ Safely managed



Access to safely managed sanitation services

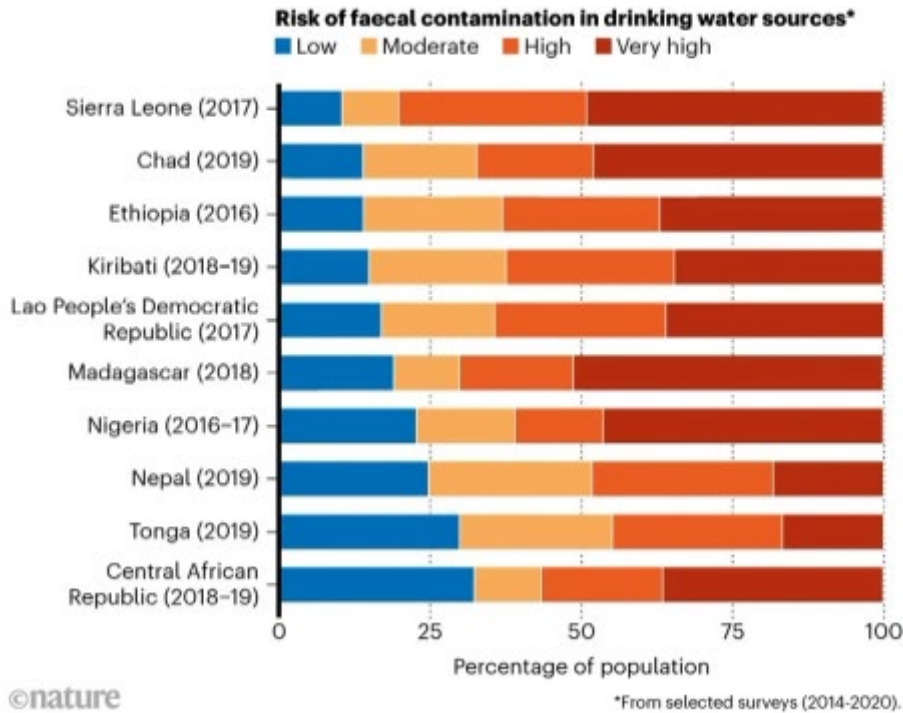
■ Open defecation ■ Unimproved ■ Limited ■ Basic ■ Safely managed





FAECAL CONTAMINATION

Ten countries with high levels of exposure to faecal contamination in their water supplies. At least two-thirds of the population of each is unable to access uncontaminated water.

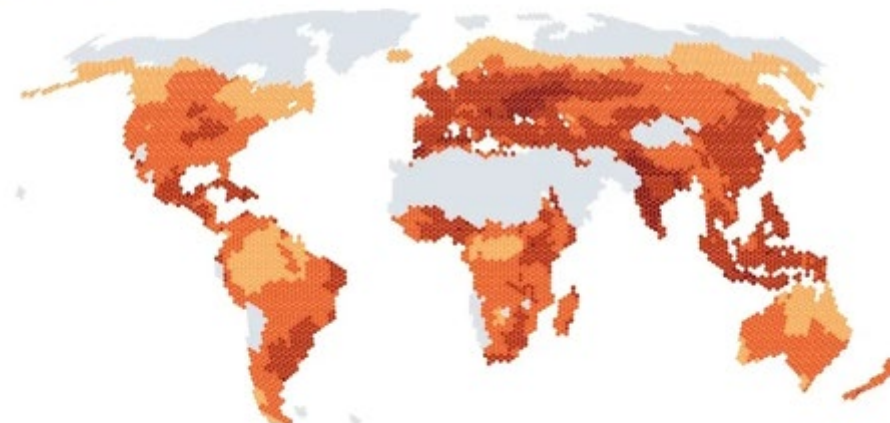


SCORCHED EARTH

Large parts of the world are at high or very high risk of drought, with most drought-related deaths occurring in Africa. The UN estimates that some 43,000 people might have died in Somalia last year because of a lack of rainfall.

Drought risk*

■ Low ■ Moderate ■ High ■ Very high ■ Desert or cold region



*Drought risk is based on data on drought hazard, vulnerability and exposure between 1901 and 2010. The index is scored on a scale of 0 (lowest risk) to 1 (highest risk).

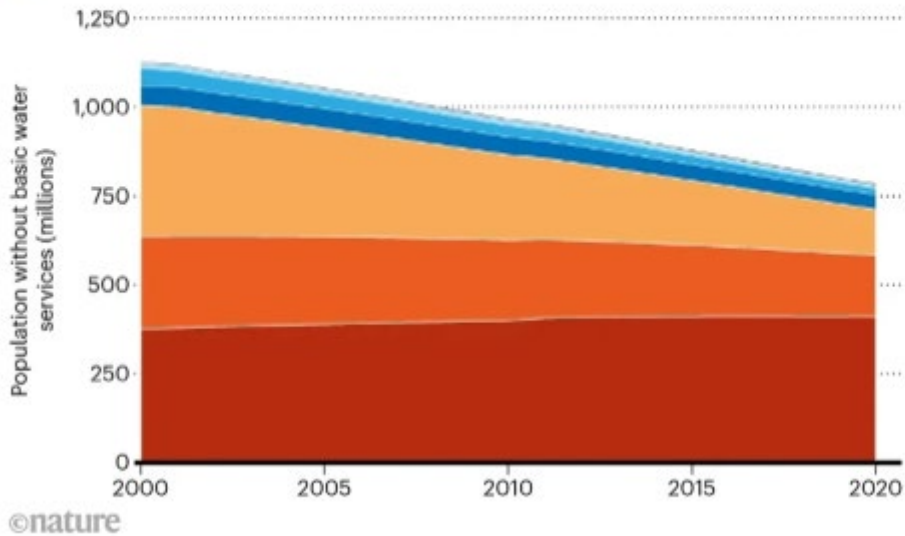
©nature



THE NEGLECT OF AFRICA

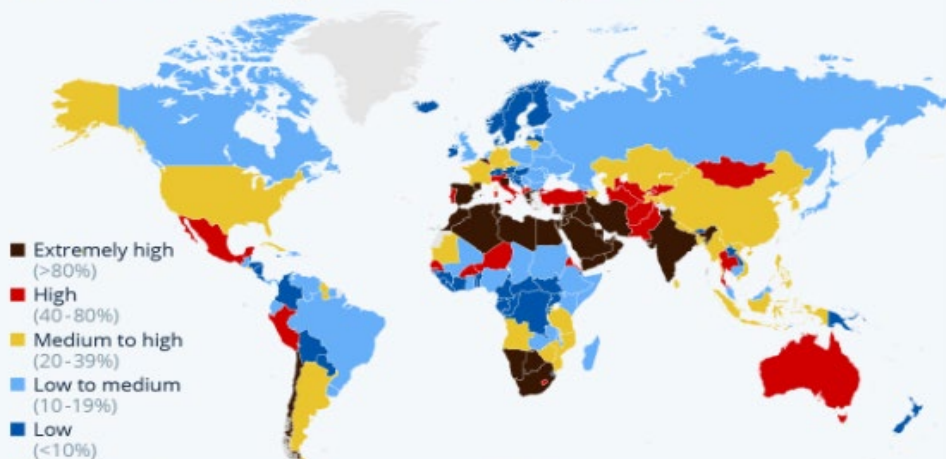
Sub-Saharan Africa is the only region of the world where more people are without basic drinking water services now than in 2000.

- Sub-Saharan Africa
- Central and Southern Asia
- Eastern and South-Eastern Asia
- Northern Africa and Western Asia
- Latin America and Caribbean
- Europe and Northern America
- Oceania



Where Water Stress Will Be Highest by 2050

Projected ratio of human water demand to water availability (water stress level) in 2050*



* According to "business as usual" scenario = middle-of-the-road future where temperatures increase by 2.8°C to 4.6°C by 2100

Source: World Resources Institute





Bibliography and Helpful Resources:

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<https://www.unwater.org/water-facts/water-quality-and-wastewater>
- Achieving the SDGs requires public-private collaboration on water. Here's why:
<https://www.weforum.org/agenda/2023/09/public-private-collaboration-key-achieving-sdgs-water>
- Global water crisis: Facts, FAQs, and how to help
<https://www.worldvision.org/clean-water-news-stories/global-water-crisis-facts>
- CNN - The world's largest lakes are shrinking dramatically, and scientists say they have figured out why
<https://edition.cnn.com/2023/05/18/world/disappearing-lakes-reservoirs-water-climate-intl/index.html>
- Basic Information about Nonpoint Source (NPS) Pollution
<https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution>
- Ten causes of the global water crisis
<https://concernusa.org/news/global-water-crisis-causes/>
- Sustainable Development Goals: Goal 6
<https://sdgs.un.org/goals/goal6>
- UN Water
<https://www.sdg6data.org/en>
- What can you do to prevent water pollution
<https://www.nrdc.org/stories/water-pollution-everything-you-need-know#prevent>
- The Impact of Water Pollution on Aquatic Life
<https://www.aquaread.com/blog/impact-of-water-pollution-on-aquatic-life/>
- Definitions, Objectives and Components of Transboundary Water Allocation
https://unece.org/sites/default/files/2021-12/CHAPTER_2.pdf
- Where Water Stress Will Be Highest by 2050
<https://www.statista.com/chart/26140/water-stress-projections-global/>
- The World Faces a Water Crisis, and 4 Powerful Charts Show How
<https://www.scientificamerican.com/article/the-world-faces-a-water-crisis-and-4-powerful-charts-show-how/>