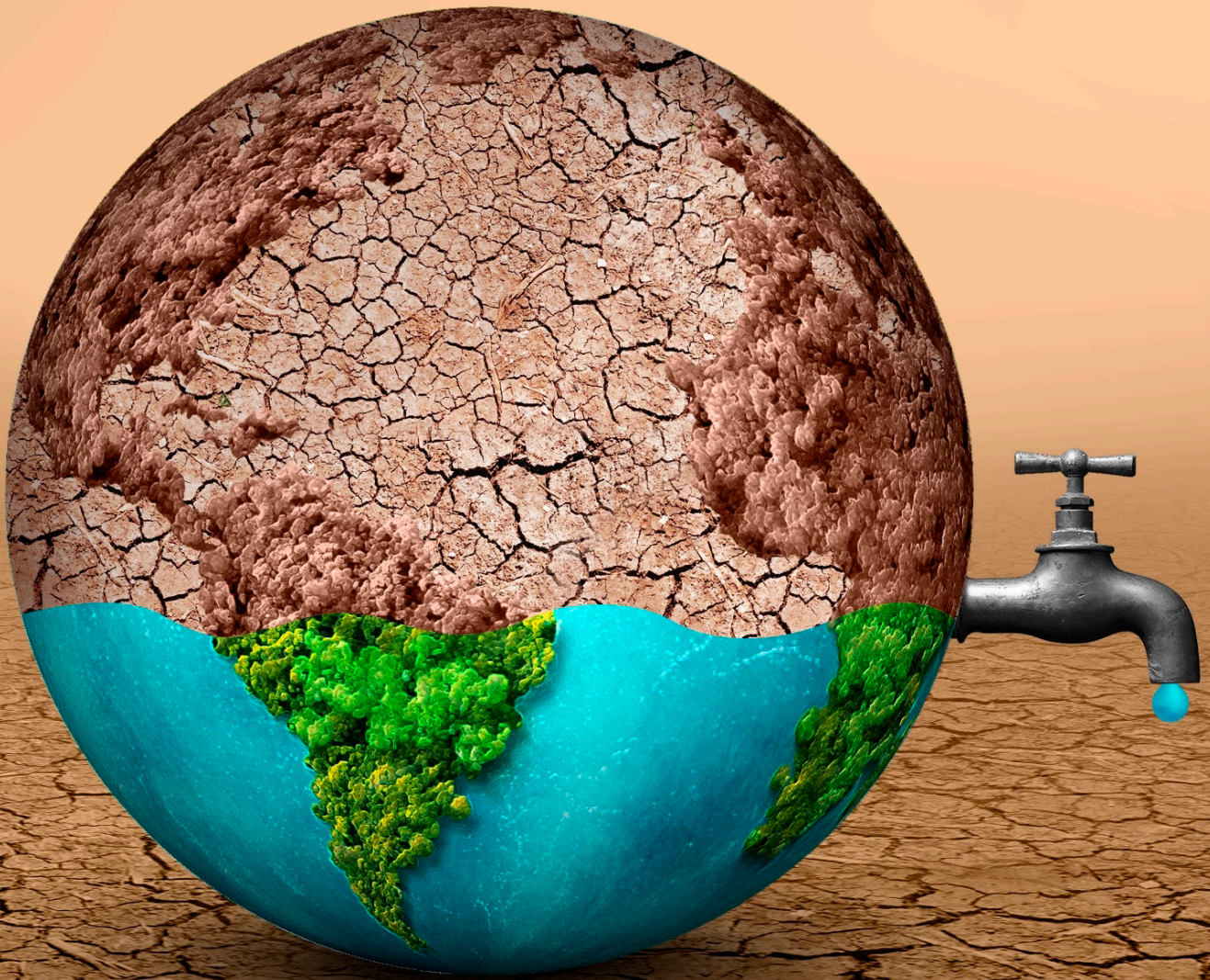


FOCUS ON FRESHWATER – ADDRESSING CLIMATE IMPACTS ON WATER RESOURCES



Estimated read time:  4 min

KEY TAKEAWAYS

Climate change is impacting the supply of fresh water around the world.

A combination of strategies is necessary to protect water reserves, including climate mitigation and adaptation measures.



Water is essential for life on Earth. Water comprises 60-75 per cent of the weight of the average human body. A human being can survive for up to a month without food, but not more than three days without water. The body will experience dehydration if it loses three per cent of its water and 15 per cent loss of body water can be fatal.

Water is also essential for healthy, thriving societies and communities. Water is necessary for drinking, sanitation, hygiene, agriculture and manufacturing. Ground and surface water form a crucial part of life-sustaining systems such as forests and mangroves. Without fresh water from rivers, lakes, aquifers and wetlands, the planet would be uninhabitable.

Climate change – long-term shifts in temperature and weather patterns – is impacting the supply of fresh water around the world. Unpredictable weather is resulting in increased incidents of droughts, hurricanes, snowstorms, and flooding. Impacts also include pollution caused by sediment run-off; forest fires; pesticides and weedicides; pharmaceuticals; microfibres; microplastics; and saltwater intrusion into groundwater.

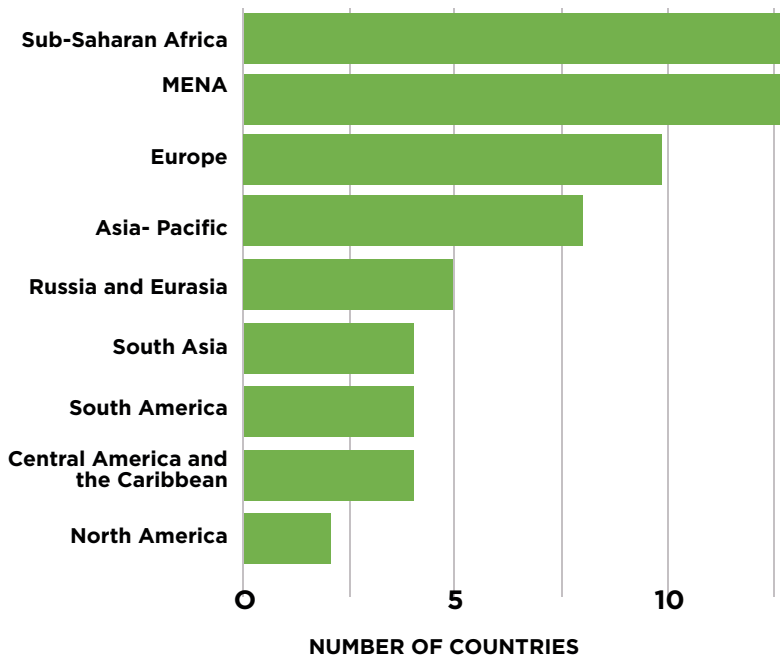
Developing states, particularly those located in the tropics and global south, generally lack the infrastructure and waste management systems to ensure water purification and distribution following extreme weather events. As of 2022, over two billion people were estimated to be living under water stress (UNEP 2022), and that number is expected to increase if climate resilience strategies are not implemented urgently. According to the Ecological Threat Report 2022 published by the Institute of Economics & Peace, countries in Sub-Saharan Africa and the Middle East and Northern Africa (MENA) face the greatest threat of severe water stress by 2040. The number of countries experiencing extremely high water stress is also projected to grow to 63 in 2040 from 17 in 2022 (Institute of Economics & Peace 2022).

The challenge is indeed great, but there is still hope. Recognising the importance of water to the planet's survival, the UN included management of water resources in the Sustainable Development Goals (SDGs). UN SDG #6 - Clean water and sanitation - contains targets related to:

- Equitable access to clean and affordable drinking water
- Minimisation of release of hazardous chemicals and untreated wastewater
- Increased efficiency in water utilisation
- Restoration of water-related ecosystems
- International cooperation for capacity building in developing countries in the areas of water harvesting; desalination; water efficiency; recycling; and reuse technologies

Climate mitigation and adaptation strategies can also play a role in building resilience to climate change. The UN defines climate mitigation as human actions needed to reduce greenhouse gas (GHG) emissions while exploiting carbon sinks such as forests, to reduce emissions of carbon dioxide and other GHGs into the atmosphere. Individuals

Chart showing the number of countries projected to experience high water stress in 2040: By 2040, the Middle East and Northern Africa (MENA) are projected to have the same water stress levels as sub-Saharan Africa.



Source: WRI; IEP Calculations

and communities can contribute to climate mitigation by practising energy efficiency and limiting consumption. Climate adaptation refers to a combination of natural, technical and technological options, as well as social and institutional measures, to mitigate damage due to climate change. Climate adaptation is likely to yield rapid benefits, mainly at the local level (UN Water 2020).

Water management can contribute significantly to climate resilience, as water-related ecosystems absorb carbon dioxide, provide food and water needed to sustain lives and livelihoods. NGC is contributing towards climate adaptation and resilience in Trinidad and Tobago and the Caribbean through public education. The company recently launched the Climate Adaptation and Resilience Portal (CARP), which provides information on natural disasters in the context of climate change. The portal contains data and resources for resilience planning, including interactive maps, climate information, and case studies

from different countries. NGC also provides information through its CariGreen site that highlights energy efficiency and renewable energy projects being undertaken across the region. Individuals can also access NGC's Energy SmartTT app that provides resources for calculating the energy consumed by individuals and households. NGC remains committed to leading the conversation about climate adaptation and resilience to effect positive change across the nation. ■

References

Institute of Economics & Peace. 2022. Ecological Threat Report: Analysing Ecological Threats, Resilience & Peace. Sydney: Institute of Economics & Peace.

Sargen, Molly. 2023. The Harvard University The Graduate School of Arts and Sciences. November. Accessed December 07, 2023. <https://sitn.hms.harvard.edu/uncategorized/2019/biological-roles-of-water-why-is-water-necessary-for-life/>.

UN Water. 2020. UN World Water Development Report: Water and Climate Change. United Nations.

UNEP. 2022. Freshwater Strategic Priorities 2022 - 2025. UNEP Inter-Divisional Water Group.