

Global water shortages looming

...here is what can be done about them

AT least 50% of the planet's population- four billion people-deal with water shortfalls at least one month of the year. By 2025, 1.8 billion people are likely to face what the Food and Agriculture Organisation (FAO) calls 'absolute water scarcity'.

In the face of that, the United Nations Environment Assembly passed a resolution in March that calls for countries to better manage aquatic ecosystems and strengthen their collaboration around water to support sustainable development. Drought resilience will also be a focus of World Environment Day 2024 (June 5), hosted by Saudi Arabia.

'Solutions are within reach,' says Leticia Carvalho, principal coordinator, Freshwater and Marine Ecosystems Branch, United Nations Environment Programme (UNEP). 'But we need innovative thinking, greater political commitment and collaboration, and increased financing so that when it comes to water, no one is left behind.'

Here is a look at five things countries and individuals can do to stem water shortfalls:

1. Protect and restore natural spaces.

The ecosystems that supply humanity with fresh water are

disappearing at an alarming rate. Wetlands, peatlands, forested catchment areas, lakes, rivers and groundwater aquifers are falling victim to climate change, overexploitation and pollution. This is undermining their ability to provide communities with water. These natural spaces urgently need to be protected and those that have been degraded, revived through large-scale restoration.

Countries would be well served to develop specific, measurable targets for this work. Nations would ideally weave those goals into national plans to counter climate change, protect biodiversity, and avoid drought and desertification. This work is especially important for securing water supplies for cities, many of which are suffering from water shortages.

2. Be more efficient with water, especially for farming.

Agriculture accounts for some 70% of all fresh water used globally. Adopting water-saving food production methods, such as hydroponics, drip irrigation and agroforestry, can help water reserves stretch further.

Also helpful: encouraging people to switch to plant-based diets, which generally require less water than those based around meat. Beef, for example, is thought to have one of the biggest water footprints, requiring as much as 15,000 litres of water to produce a kilo of meat.

3. Deal with water leaks.

Being efficient also means reducing the amount of water lost through leaky municipal infrastructure and building piping. There

are no global data for the amount of water lost this way, but national numbers suggest the total is massive. In the US alone, household leaks waste nearly one trillion gallons of water per year.

4. Exploit unconventional water sources.

As supplies of lake, river and aquifer water dwindle, countries will need to get creative. This means taking advantage of undervalued water resources, such as by treating and reusing wastewater. Countries and communities can also implement rainwater harvesting, which involves collecting and storing water for use in dry spells.

Desalinating saltwater is also an option in some places if done sustainably. The problem: the process often leads to the discharge of toxic brine into the ocean and increased greenhouse gas emissions from the energy required to fuel the process.

5. Track water quality.

Often, water is plentiful but is too polluted to be useful for drinking, manufacturing or recreation. Measuring water quality can help policymakers prioritise actions to clean up water sources. This evaluation can be complemented by satellite data, artificial intelligence and even citizen science.

UNEP's Freshwater Ecosystems Explorer provides decisionmakers with water quality data, helping to spur action to protect and restore freshwater ecosystems.

