

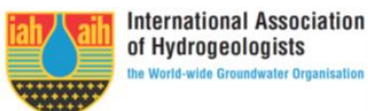
# Groundwater: making the invisible visible



## Groundwater: a critical resource under threat

Groundwater is a vital resource, out of sight, but almost everywhere under our feet. It provides up to half the world's drinking water. Our food supply, natural environment and sanitation all rely on groundwater. Without better stewardship we face the threat of water supplies becoming inadequate or polluted. There is a pressing need for greater awareness of a looming water crisis and concerted action to protect life on the planet.

For more information contact Ian Davey: [info@iah.org](mailto:info@iah.org)



IAH is an incorporated charitable organisation  
Company Registration Number: 3956233  
Charity Registration Number: 1083019

Email: [info@iah.org](mailto:info@iah.org)  
Web: [www.iah.org](http://www.iah.org)  
Tel: +44 118 380 5251

## A year for groundwater

In this 'year for groundwater' the International Association of Hydrogeologists is highlighting the need to ensure wise use and protection of groundwater resources. We are urging people to think about how much water they use and where it really comes from, and to consider what we all can do to protect this vital resource. We invite everyone to support WWD 2022 and to sign the São Paulo-Brussels Groundwater Declaration (<https://brabeldeclaration.getresponsepages.com/>):

- **Groundwater is critical to Earth's survival:** Aquifers, our planet's natural reservoirs, account for 97% of the fresh and liquid water. Springs from aquifers feed rivers and when we use these for our water supply, agriculture and industry, a large proportion of this is actually groundwater.
- **Groundwater across the world is under threat** because of over-abstraction and pollution. It is an essential ally in the fight against poverty and child mortality. In many locations it is the only source of water. Groundwater supports the very survival of vulnerable populations.
- **Groundwater can help in adapting to climate change** and in protecting and restoring vulnerable ecosystems - but it needs to be sustainably managed through monitoring, regulation, and communication.
- **Across the world, countries import enormous volumes of water**, embedded in imported food, clothes and industrial goods. Much of this is groundwater. This can create problems for other countries in managing water and growing food for themselves.
- **Action is needed** to empower institutions responsible for the protection of groundwater, to promote more efficient, ethical and democratic policies.
- **Greater effort** is needed from governments as well as hydrogeologists, NGOs and wider society, to protect this crucial resource for planetary well-being and dignified human life

## About Groundwater

"If the earth has a hidden underground pulse, that pulse is groundwater," says Professor David Kremer, President of the International Association of Hydrogeologists.

Almost all the fresh water in the world is groundwater and life would not be possible without it. It is found in large quantities in underground aquifers - rocks, sands and gravels, and is replenished by rain and melting snow. It sustains life even in periods of drought and feeds springs, rivers, lakes and wetlands, and seeps into our oceans. It is extracted to the surface by pumps and wells, and supplies the water we use for drinking, sanitation and agriculture. It also supports ecosystems, such as marshes and rivers. Groundwater maintains internationally important wetlands, often giving rise to distinctive ecosystems.



A SAHARAN OASIS – FORMED BY GROUNDWATER

There is growing concern that in many places human activities are polluting this water supply and making it unusable. Over-exploitation is also leading to land instability and subsidence as well as sea water intrusion under the land in coastal regions.

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## Notes for editors

### World Water Day

World Water Day is on 22 March every year. It is an annual United Nations Observance, started in 1993, that celebrates water and raises awareness of the 2 billion people currently living without access to safe water. The day is used to advocate for the sustainable management of freshwater resources. A core focus of World Water Day is to inspire action towards Sustainable Development Goal (SDG) 6: water and sanitation for all by 2030. The UN World Water Development Report (WWDR) is released each year around World Water Day.

### The International Association of Hydrogeologists

The International Association of Hydrogeologists (IAH/AIH) was founded in 1956. It is a scientific, educational and charitable professional membership association for scientists, engineers, water managers and other professionals working in the fields of groundwater resource planning, management and protection. IAH/AIH has more than 4000 members in 130 countries, 50 national chapters and 15 scientific and technical commissions and networks. Our mission is to further the understanding, wise use and protection of groundwater resources throughout the world.

#### Find out more:

- World Water Day 2022 website: [www.worldwaterday.org](http://www.worldwaterday.org)
- UN World Water Development Report 2022: [www.unwater.org/publication\\_categories/world-water-development-report](http://www.unwater.org/publication_categories/world-water-development-report)
- International Groundwater Resources Assessment Centre: [www.un-igrac.org](http://www.un-igrac.org)
- International Association of Hydrogeologists: *São Paulo-Brussels Groundwater Declaration*: <https://iah.org/news/make-a-difference-in-groundwater>
- UN-Water: *Summary Progress Update 2021: SDG 6 — water and sanitation for all*: <https://www.unwater.org/publications/summary-progress-update-2021-sdg-6-water-and-sanitation-for-all/>
- UN-Water SDG 6 Data Portal: [www.sdg6data.org](http://www.sdg6data.org)
- FAO The Water-Energy-Food Nexus: <http://www.fao.org/3/bl496e/bl496e.pdf>
- World Bank: *Quality Unknown: The Invisible Water Crisis*: <https://www.worldbank.org/en/news/feature/2019/08/20/quality-unknown>
- Future changes in the trading of virtual water: <https://www.nature.com/articles/s41467-020-17400-4>



*SUBSISTENCE IRRIGATION FROM GROUNDWATER IN SUB-SAHARAN AFRICA*

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