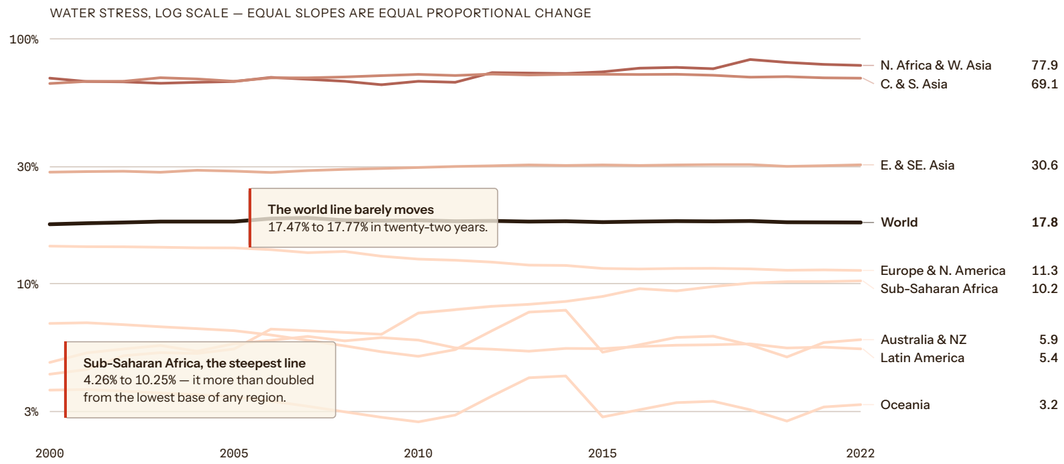
Water Atlas

Between 2000 and 2022 the world's water stress went from 17.47% to 17.77% — a rise of 0.3 points in twenty-two years. The global figure is almost still. Underneath it, the regions have pulled apart.

Water stress is how much freshwater a place withdraws each year against how much it has, after the flow rivers need to stay alive is set aside. Every figure in these ten pages comes from FAO, the World Bank or the WHO/UNICEF Joint Monitoring Programme, and every page names its source.

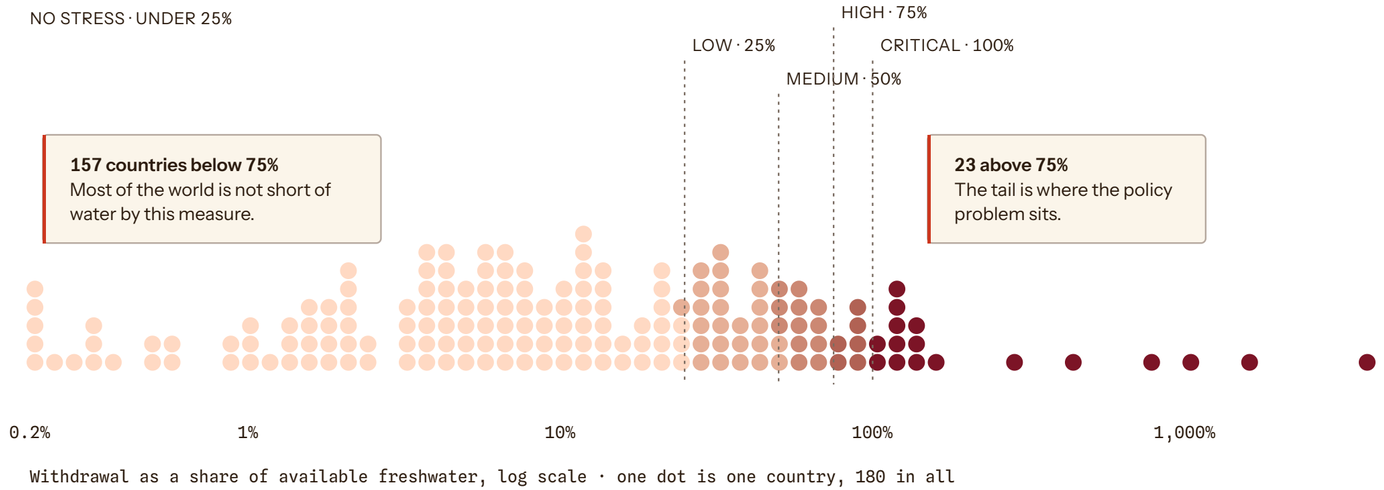


Water stress UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

Read as Each line is a UN SDG region. The heavy line is the world.

A single ratio, and five thresholds

SDG 6.4.2 divides what a country withdraws by what it has available. Below 25% there is no stress. Above 100% a country is spending water it cannot replace — from fossil groundwater, desalination, or another country's river.



180 countries	23 above 75%	17 above 100%
report SDG 6.4.2 for at least one year since 2000	high or critical stress in their latest year	withdrawing more than is renewed

The dots pile up at the left. Most countries are not short of water in this sense: of the 180 that report the indicator, most sit below the 25% line. The story is in the tail, where 23 countries are above 75% and 17 are above 100%.

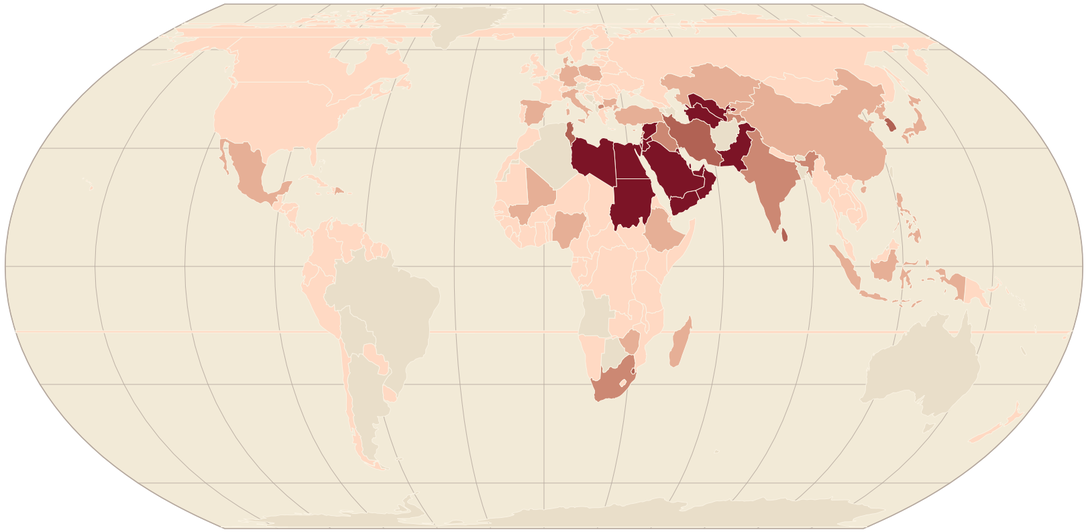
A ratio above 100% is not an error. Kuwait withdraws 3,850% of its renewable freshwater, almost all of it either desalinated seawater or groundwater that does not come back.

`Water stress` UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

`Definition` Withdrawal ÷ (renewable resources − environmental flow requirement), FAO.

Stress is regional, not global

Of 174 areas on this map, 145 report the indicator. The band that runs from North Africa through the Gulf into Central and South Asia is where the pressure concentrates.



Run the years and the map barely moves in most of the world. What changes is concentrated: the Gulf deepens, Central Asia holds, and a band across the Sahel and East Africa shifts up a class as withdrawal grows against a fixed resource.

Pale areas do not report the indicator: 29 of the areas drawn here, including Greenland, Western Sahara, Antarctica and several small territories. They are left uncoloured rather than filled with an estimate.

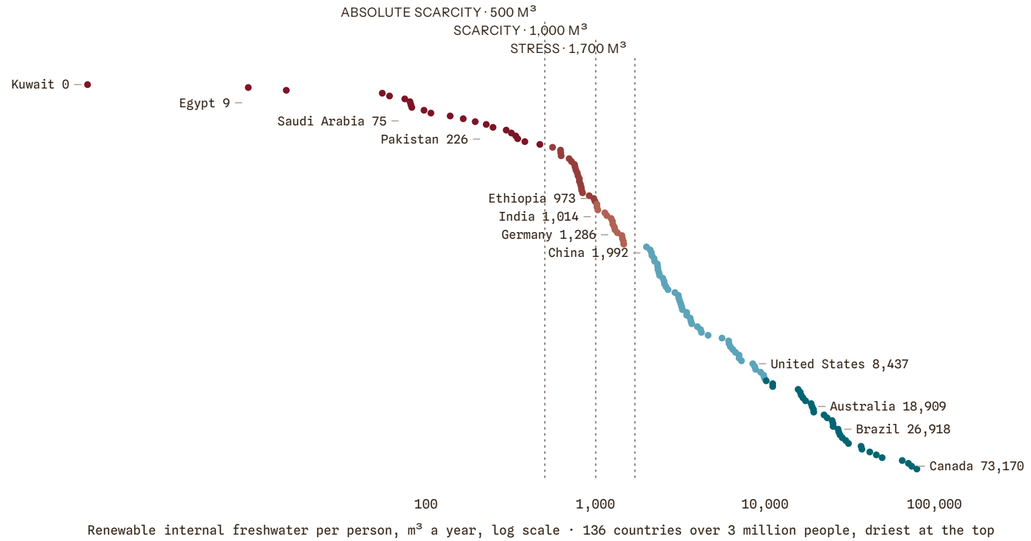
`Water stress` UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

`Projection` Equal Earth (Savric, Patterson and Jenny, 2018), an equal-area projection: a country's area on the page is proportional to its area on the ground.

`Boundaries` Natural Earth 110m via world-atlas 2.0.2 · public domain

Scarcity is a number per person

Water stress measures pressure on the resource. This measures the resource itself: renewable internal freshwater divided by population. The thresholds are Falkenmark's, and they are the ones most water agencies still use.



The scale is logarithmic because it has to be: the distance from Kuwait to Iceland is five orders of magnitude. Below 1,700 m³ a person a year a country is called water-stressed; below 1,000, scarce; below 500, absolutely scarce.

Renewable internal resources count rainfall that becomes river flow and groundwater inside a country's own borders. Egypt's figure is low because the Nile arrives from outside it — the water it uses is real, but it is not internal.

75 countries	56 below 1,000	28 below 500
below 1,700 m³ a person, of 183 with data	the scarcity threshold	absolute scarcity

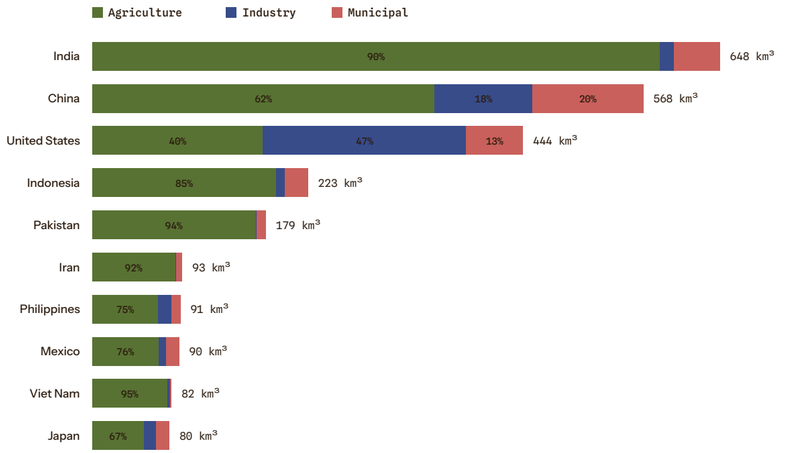
Resources Renewable internal freshwater resources per capita (cubic meters) · World Development Indicators · indicator ER.H2O.INTR.PC

Thresholds Falkenmark, Lundqvist and Widstrand (1989), as used by FAO and UN-Water.

Shown 136 countries with more than 3 million people, so the dot plot stays readable.

Four fifths of it grows food

Across the 179 countries that report all three sectors, agriculture takes 71.0% of freshwater withdrawal, industry 15.7% and households and services 13.3%. The mix is what separates one water crisis from another.



Annual freshwater withdrawal, most recent year for each country · world total 3,855 km³ across 179 countries

India and China withdraw more freshwater than the next eight countries on this list together, and both take most of it for irrigation. The United States is the outlier in the other direction: industry, mostly thermal power cooling, takes about as much as its farms.

Switch to shares and the bars square off. The point of the second view is that a country's water problem is a different problem depending on which sector holds the tap.

3,855 km³ a year

total withdrawal across 179 reporting countries

71.0 % agriculture

withdrawal-weighted across those countries

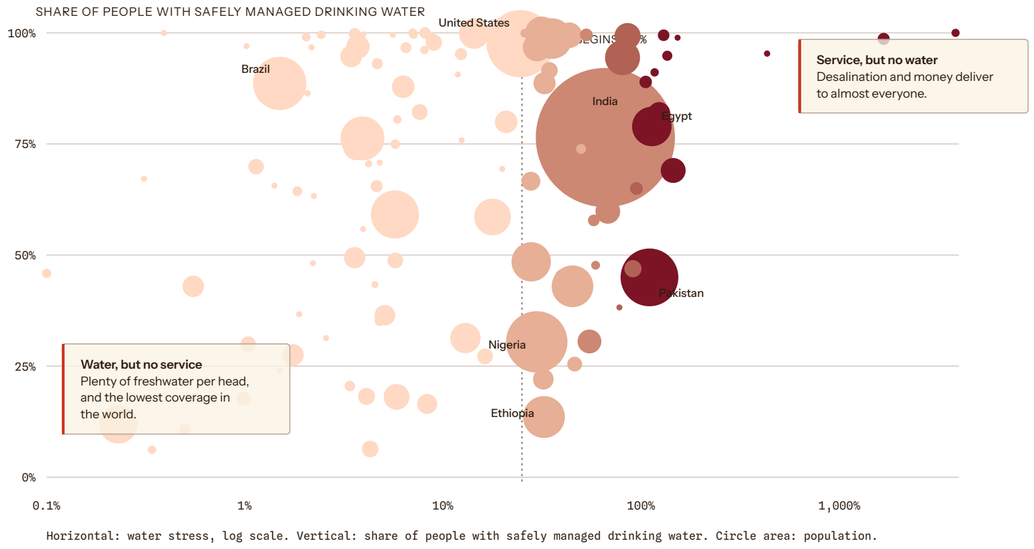
`Withdrawal` Annual freshwater withdrawals, total (billion cubic meters) · World Development Indicators

`Sector shares` ER.H2O.FWAG.ZS, ER.H2O.FWIN.ZS, ER.H2O.FWDM.ZS · World Development Indicators

`Computed` Sector totals are withdrawal-weighted sums of country values covering 100.0% of reported withdrawal. FAO does not publish this aggregate; it is computed here.

Having water and getting water are different problems

If stress caused thirst, this chart would slope. It does not. The countries where the most people lack safely managed drinking water are mostly not the most stressed ones.



The Gulf states sit at the far right — extreme stress — and near the top, because desalination and money deliver water to almost everyone. Much of Sub-Saharan Africa sits at the left, with plenty of water by this measure, and near the bottom, because delivering it is an infrastructure problem, not a hydrological one.

Two axes, two sources, 126 countries with both. Circle area is population, so the eye weights India and Nigeria correctly rather than treating every country as one dot.

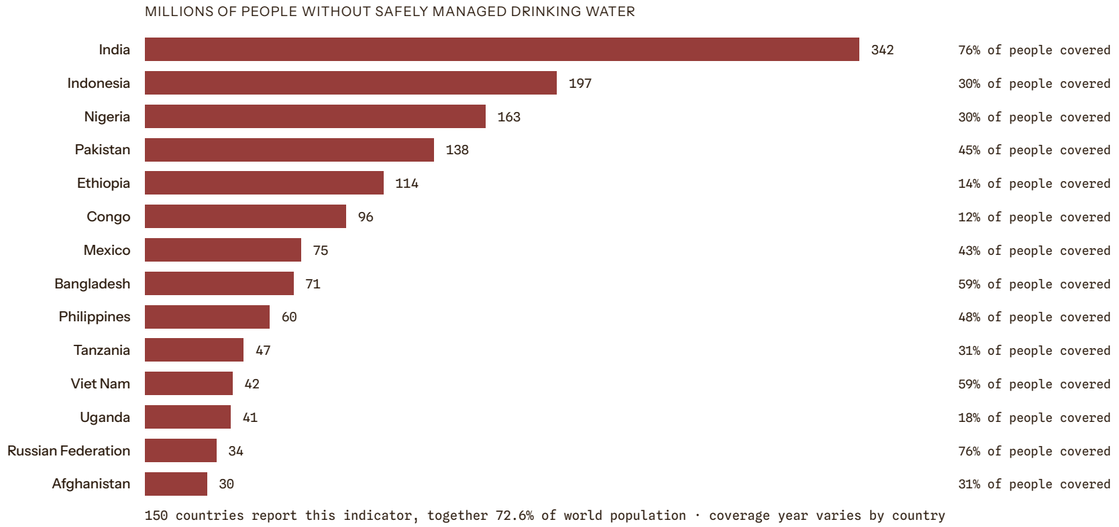
`Water stress` UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

`Drinking water` People using safely managed drinking water services (% of population) · World Development Indicators

`Population` Population, total · World Development Indicators

1.97 billion people

Percentages hide size. Converting each country's coverage into the number of people it leaves out puts the problem where it actually is.



India alone accounts for about 342 million of them. Mexico appears on this list at 43% coverage — a reminder that the deficit is not confined to the poorest countries.

This is a computed figure, not a published one: each country's population multiplied by the share without safely managed service, then summed. It counts only the 150 countries that report the indicator, together 72.6% of world population, so the real total is higher.

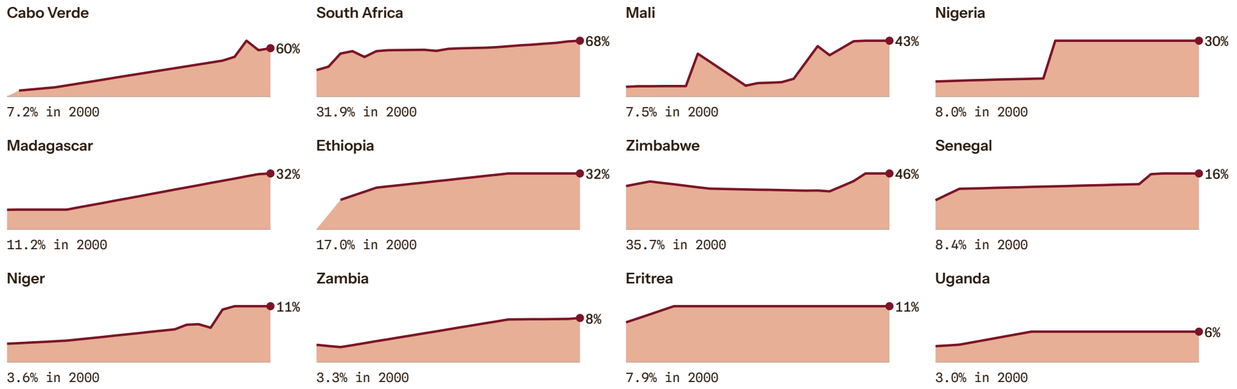
`Drinking water` People using safely managed drinking water services (% of population) · World Development Indicators · indicator SH.H2O.SMDW.ZS

`Definition` Safely managed: an improved source on the premises, available when needed, free from contamination.

`Computed` Population × (100 − coverage), summed. Stated here because no agency publishes this exact number.

Sub-Saharan Africa more than doubled

Regional stress went from 4.26% in 2000 to 10.25% in 2022. It is still the least stressed large region in the world, and it is the one changing quickest.



Water stress by year, 2000 to 2022, the twelve largest rises in Sub-Saharan Africa · each panel has its own vertical scale, printed at the end of the line

Nothing here is a water shortage yet. What these twelve curves show is demand arriving: irrigation, cities and industry drawing on a resource that is not growing. The steepest are small or arid countries where a modest absolute rise is a large proportional one.

4.3 → 10.2 %

Sub-Saharan Africa, 2000 to 2022

2.4× rise

the largest proportional rise of any SDG region

`Water stress` UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

`Selection` The twelve countries in the region with the largest rise in points, 2000 to 2022, among those with a full series.

`Scales` Each panel is scaled to its own maximum, which is printed at the end of its line. The panels are not comparable to each other by height.

Every number, and where it came from

Eight series from two APIs, retrieved on 2026-09-20. Nothing is estimated, interpolated or filled in.

SERIES	CODE	COMPILED BY	YEARS	VALUES
Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	ER.H2O.FWST.ZS	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	5,266
Renewable internal freshwater resources per capita (cubic meters)	ER.H2O.INTR.PC	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	7,472
Annual freshwater withdrawals, total (billion cubic meters)	ER.H2O.FWTL.K3	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	5,811
Annual freshwater withdrawals, agriculture (% of total freshwater withdrawal)	ER.H2O.FWAG.ZS	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	5,676
Annual freshwater withdrawals, industry (% of total freshwater withdrawal)	ER.H2O.FWIN.ZS	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	5,578
Annual freshwater withdrawals, domestic (% of total freshwater withdrawal)	ER.H2O.FWDM.ZS	AQUASTAT - FAO's Global Information System on Water and Agriculture, Food and Agriculture Organization of the United Nations (FAO)	1990–2022	5,647
People using safely managed drinking water services (% of population)	SH.H2O.SMDW.ZS	WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene, World Health Organization (WHO)	2000–2024	4,411
Population, total	SP.POP.TOTL	World Population Prospects, United Nations (UN)	1990–2024	9,240
Level of water stress (used throughout)	ER_H2O_STRESS	Food and Agriculture Organization of the United Nations (FAO), via the UN SDG API	2000–2022	217 areas

Retrieved World Bank Indicators API and UN SDG API, 2026-09-20. Raw responses are kept in source/data/raw/ and the build is reproducible from them.

Licences World Bank indicators CC BY 4.0 · FAO AQUASTAT terms for the underlying water data · Natural Earth boundaries, public domain.

Where two sources disagree

The World Bank publishes FAO's water stress indicator as well. Across the 178 countries in both, the median difference is 0.004 points — the same series. One country differs materially: the United Arab Emirates, 1,668.7% in FAO's SDG database against 1,509.9% in the World Bank's copy for the same year. The atlas uses FAO's own series throughout, because FAO is the custodian agency for this indicator and publishes the regional and world aggregates that pages 01 and 08 depend on.

What is missing

Coverage is uneven and is stated on each page: 29 mapped areas do not report water stress, 150 countries report safely managed drinking water, and sector splits exist for 179 countries. Two figures in this atlas are computed rather than published — the sector totals on page 05 and the people without safe water on page 07 — and both say so where they appear.

Licences

World Bank indicators are published under CC BY 4.0. The UN SDG database redistributes FAO's series; FAO's AQUASTAT terms apply to the underlying data. Country outlines are Natural Earth, public domain. This is concept work by Studio Helper, not a publication of any of these agencies.

Seven things the data says

Each of these is a figure from the pages before it, not an interpretation added afterwards.

01	The world average has not moved. It rose 0.3 points in twenty-two years.	17.77%
02	Northern Africa and Western Asia now withdraws more than three quarters of what it has.	77.9%
03	Sub-Saharan Africa's stress more than doubled — from the lowest base of any region.	4.3→10.2
04	Europe and Northern America is the one region where stress fell.	14.2→11.3
05	Agriculture takes four fifths of every litre withdrawn.	71.0%
06	Stress does not predict access. The two maps do not line up.	126 countries
07	People still without safely managed drinking water, in reporting countries alone.	1.97 bn

On this atlas

Water Atlas is self-initiated concept work by Studio Helper. It uses only published data from FAO, the World Bank and the WHO/UNICEF Joint Monitoring Programme, and it is not endorsed by any of them. No figure in these ten pages was invented, rounded up for effect, or carried over from a previous version of a dataset.

The charts are computed in Python and drawn as SVG, so the page, the PDF and the printed sheet are the same marks. The build is reproducible: four scripts, listed in the README.

Studio Helper
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`Water stress` UN SDG indicator SDG 6.4.2, series ER_H2O_STRESS, compiled by Food and Agriculture Organization of the United Nations (FAO). 2000–2022, retrieved 2026-09-20 from the UN SDG API.

`Everything else` World Bank Indicators API: AQUASTAT withdrawal and resource series, WHO/UNICEF JMP drinking water, UN population.

Back to the first page ↑