

# Water scarcity in Africa and the Middle East: get the data

To give a better sense of the challenge facing these areas, here is data pulled together and mapped from two sources

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With a rising global population, increasing water use per capita and depleting reserves of groundwater, there's no doubt that blue gold, as water is sometimes called, is an increasingly precious resource. Yet despite a wealth of reports, books and films examining the problem of water scarcity, it doesn't always feature high on the agenda.

This year's political unrest in the water-starved Middle East has raised the profile of the issue, with various commentators predicting that lack of water will be the region's next big issue.

This data, pulled together from two sources and illustrated in map form here, shows the challenge of water scarcity in the Middle East and wider world. The first set of data is a summary of a 2011 commercial dataset created by risk analysts Maplecroft. This data ranks more than 180 countries and assigns each a label to describe whether its exposure to water stress is low, medium, high or extreme.

The second data source is the UN Food and Agriculture Organisation's Aquastat tool. This is less up-to-date and less comprehensive but available in full, providing some interesting, if sometimes quite old, figures which compare how much fresh water (surface and ground) a country could sustainably provide with the amount that is actually consumed there. The higher the proportion of its renewable water resource that a country uses, the more exposed it is to water stress.

It's no surprise to see that all the sixteen extreme cases are countries in or around the Middle East and North Africa. Bahrain clocks in at first place on the Maplecroft rankings, though according to the Aquastat data the tiny nation uses "only" 220% of its available renewable water reserves, compared to 943% in Saudi Arabia and a remarkable 2,465% in Kuwait. Presumably much of the excess comes from desalination plants rather than draining non-renewable groundwater, though the Aquastat data doesn't confirm this.

However, it's not only the Middle East that's feeling the pinch. Australia, South Africa, Spain, India, Cuba, Hong Kong - a large number of countries are ranked as having a "high" level of water stress by Maplecroft, which means having water demand above 40% of the maximum renewable resource or more than 1,700 cubic metres a person a year.

Looking at the map, it's easy to see the footprint of Hadley cells, the global circulation patterns that help ensure that the world's driest regions sit between the stormy equatorial regions and the drizzly zones further north and south. But there's plenty of deviation from this pattern on the map, highlighting the fact that each region is unique - and that water management is just as crucial as the amount of rainfall that a country receives.

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