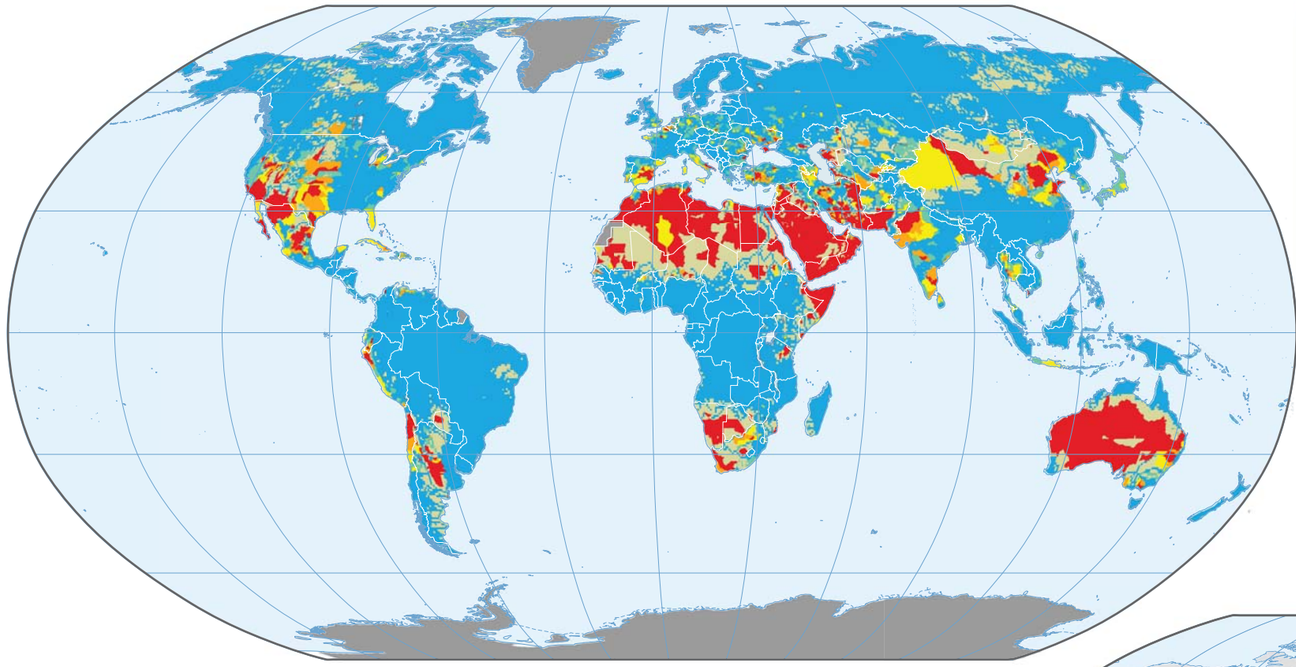
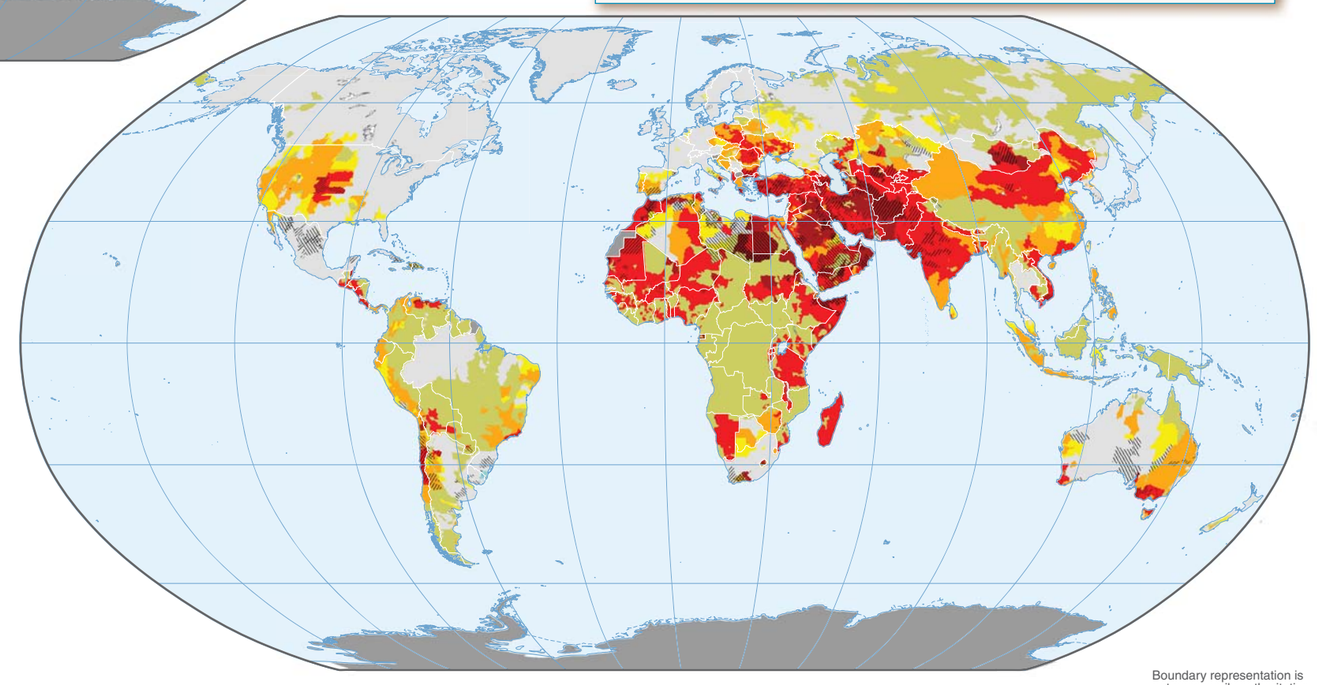


Present Water Stress
(Water Withdrawal Ratio)

- Low stress (less than 10 percent)
- Moderate stress (10 to 20 percent)
- Medium-high stress (20 to 40 percent)
- High stress (40 to 80 percent)
- Extremely high stress (80 percent or more)
- Arid and low water use
- No data or out of area

Projected Change in Water Stress to 2025

- Significantly less stressed
- Moderately less stressed
- Near-normal conditions
- Drier but still low stress
- Moderately more stressed
- Severely more stressed
- Extremely more stressed
- Exceptionally more stressed
- Uncertainty in magnitude
- Uncertainty in direction
- No data or out of area



Present water stress is defined as the ratio of total freshwater withdrawals (circa 2000) to annual renewable freshwater supply (1960-90 climatological norm), a quantity often referred to as the water withdrawal ratio (WWR). This provides an assessment of freshwater availability in a typical year relative to recent levels of socioeconomic demand for fresh water. High levels of water stress indicate that socioeconomic demand for freshwater approaches (or exceeds) the annual renewable supply.

The projected change in water stress is calculated as the ratio of projected water stress to present water stress during a 10-year time frame centered on the year 2025. The analysis looks at the A1B scenario of economic and environmental change used by the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. The projected change in water stress indicator has categories which are analogous to a drought severity scale. For example, areas with a projected category of “extremely more stressed” are projected to experience the same level of water stress as areas experiencing “extreme drought” today.

Analysis is done at a level below the nation-state. For large countries (e.g. China, India, Russia, United States, etc.) aggregation of stress at the nation-state level would mask the risk of social disruption at local levels.

Source: World Resources Institute and ISciences, LLC.

Boundary representation is not necessarily authoritative.