

How much freshwater does each person need per day?

Survival \approx 7.5 L

Full hygiene \approx 20 L

About how many people lack access to safe freshwater? \approx 2.5 billion people

(85% of human population lives in driest parts of Earth)

How much freshwater do we (humans) use per day?

<http://www.theworldcounts.com/stories/average-daily-water-usage>

\approx 10 billion tons

Topic 4.2

Water Scarcity and Solutions

What do we use freshwater for?

Irrigation (agriculture - growing crops)

Generating electricity (hydro-electric, steam turbines)

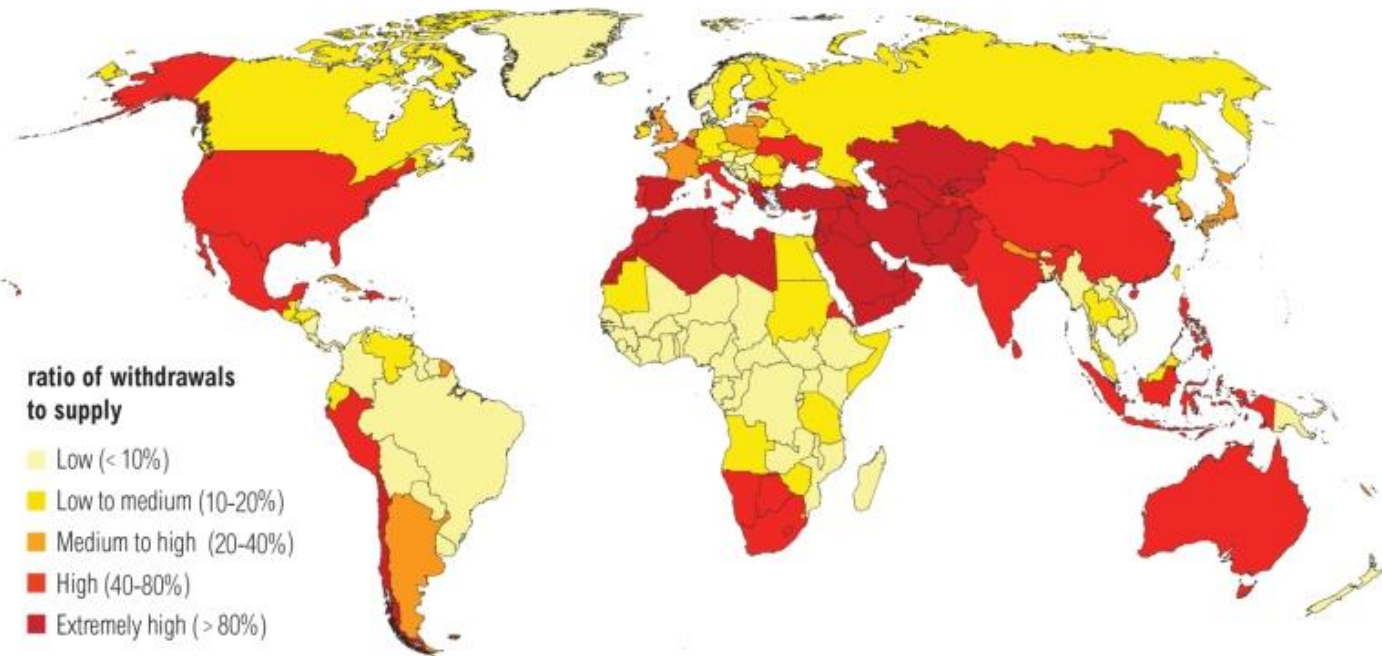
Cooling (nuclear power stations, factories)

Products (cement, paper, clothes)

Consumables (foodstuff, beverages, medicines)

Waste disposal (domestic sewage, chemicals)

Water Stress by Country: 2040



Which regions or countries are facing the highest water stress?

Why are these facing higher water stress?

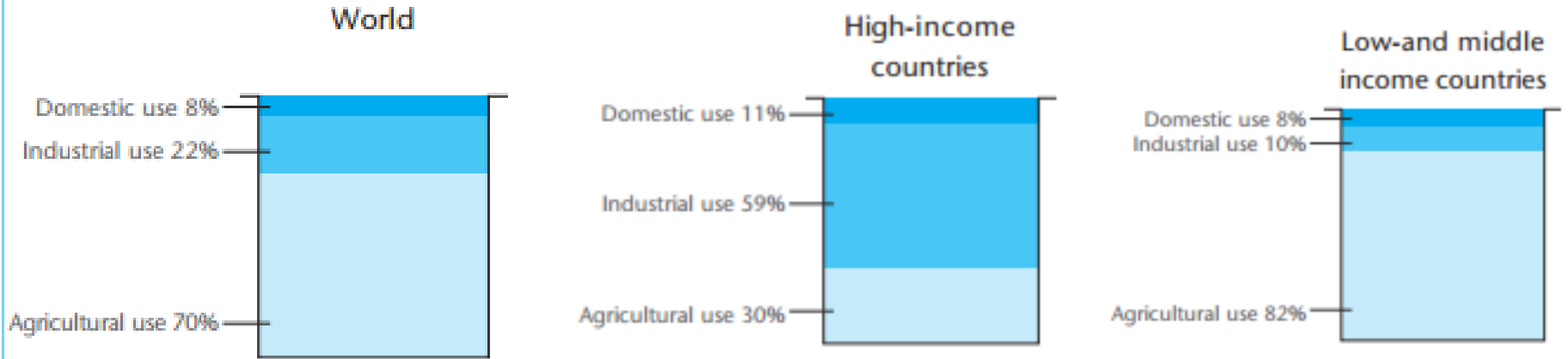
Why are some countries facing lower water stress?

NOTE: Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

Competing water uses for main income groups of countries⁶

Industrial use of water increases with country income, going from 10% for low- and middle- income countries to 59% for high-income countries.

Ref. 6: "Water for People, Water for Life" United Nations World Water Development Report, UNESCO, 2003
www.unesdoc.unesco.org



Mali (LEDC: North-West Africa) $\approx 4 \text{ m}^3$ per year per person
India (NIC: South Asia) $\approx 52 \text{ m}^3$ per year per person
USA (MEDC: North America) $\approx 215 \text{ m}^3$ per year per person