



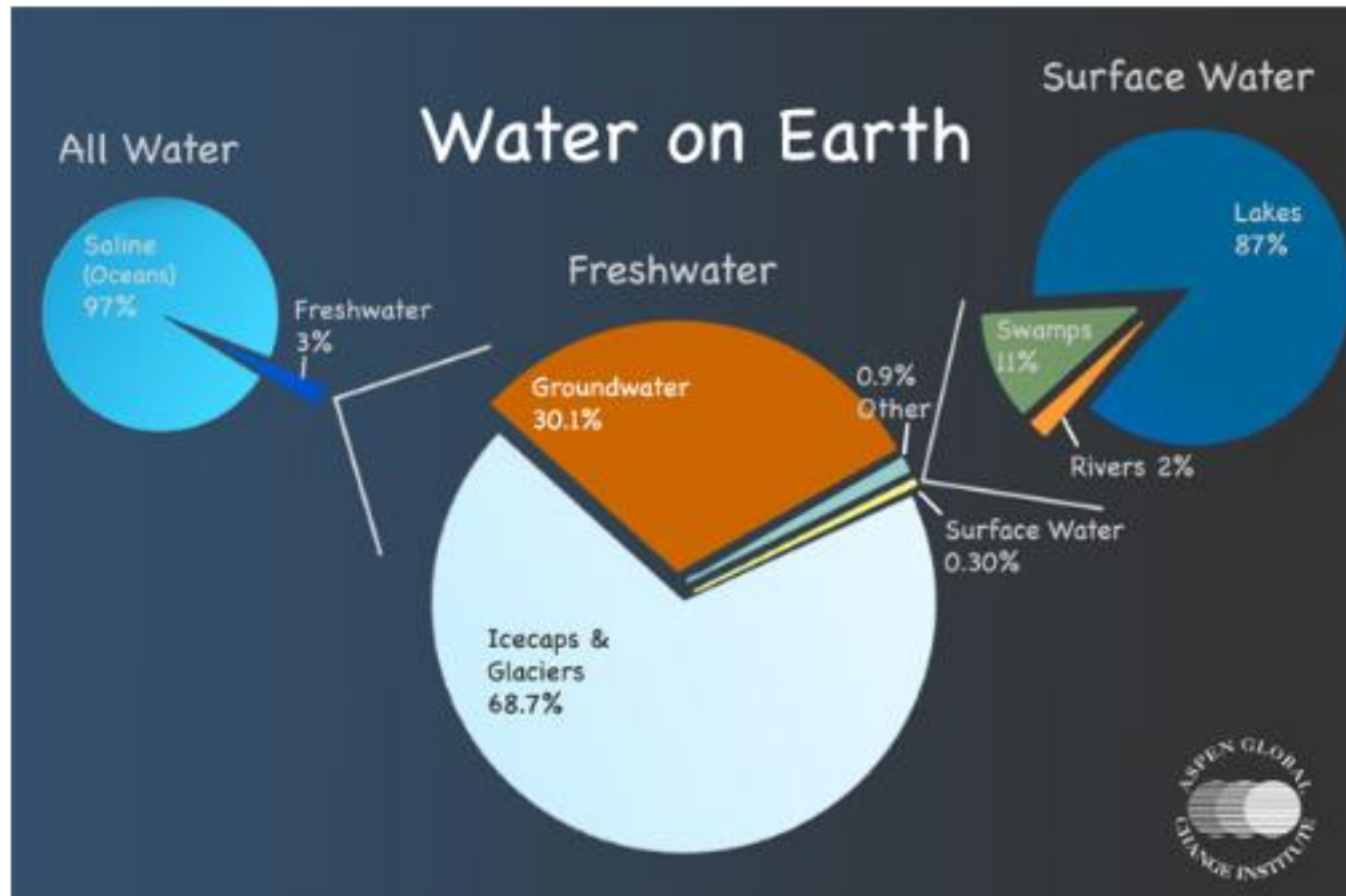
Just a drop

**....and every
drop counts**

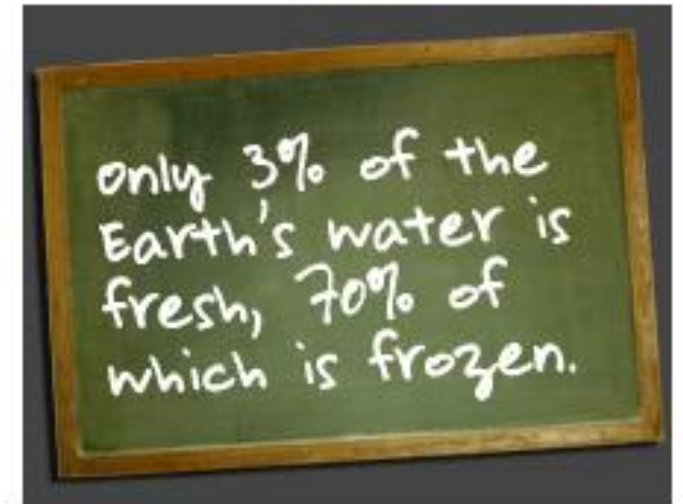
Water is Life: How to Use Less

“When the well is dry, we know the worth of
water.”

(Benjamin Franklin, 1746)



Water Distribution *Water on Earth.*
 Most of the water on Earth is either salty or inaccessible to humans. Only 3% is fresh, and of that only about 32% is unfrozen.



Impact of Climate Change on Fresh Water Resources

- “The availability of fresh water will be substantially changed in a world affected by global warming.”
- “...increase of temperature will mean that a higher proportion of the rain falling...will evaporate.”
- “...the more intense hydrological cycle associated with global warming will lead to increased frequency & intensity of both floods & droughts.”

Daily Weather Recording

Date:

25/7/19

9.00 GMT

Maximum
Temp

38.7°C

Minimum
Temp

19.4°C

Ground
Temp

17.6°C

Daily
Rainfall

0 mm

Monthly
Rainfall

17.9 mm

Yearly
Rainfall

2915 mm

Weather Recording

Monitoring the weather is particularly important for horticulture. Knowledge about climate trends helps us to cultivate our plant collection and make decisions about future plans for the Garden.

Recording the weather since 1904
We started systematically recording weather data here in 1904. First thing each morning our staff record rainfall, air and ground temperature, relative humidity, wind speed and cloud cover - using the weather station in our Research plots. The data we record is then sent on to the Meteorological Office to support national weather records.

Driest Botanic Garden in the UK
Cambridge is in the driest region of the UK - with a 30-year average annual rainfall of just 557 mm. This compares with a UK 30-year average annual of around 1150mm. This makes us the driest Botanic Garden in the UK - the annual average received by RBG Kew was 629mm, Oxford Botanic Garden 646mm, and RBG Edinburgh 698mm.

Highs and lows of Cambridge weather
Our driest year, since we started recording, was in 1996, when just under 400mm of rain fell. Our wettest year was 2012, when 812.5 mm rain fell. Summer temperature maximums are usually reached in July, with a 30-year average of 22°C. The hottest day ever recorded at the Garden was 35.7°C, in August 2003. The coldest was -17.2°C, recorded in the Winter of 1947.

Finding enough snow to build a snowman in the Garden is actually pretty rare.



Our weather station is located in the Research plots - just behind this sign. Readings are taken daily by our staff.

UK Climate Projections 2018 (UKCP18)

- By the end of the 21st century, all areas of the UK are projected to be warmer, more so in the summer
- Hot summers are expected to be more common; summers are expected to become dryer too
- But...increases in the intensity of heavy summer rainfall events

Domestic Water Consumption

- National (Waterwise.org.uk):
 - Average 141 litres/head/day
 - Metered = 127 l/h/d (c.50% of households)
 - Unmetered = 160 l/h/d

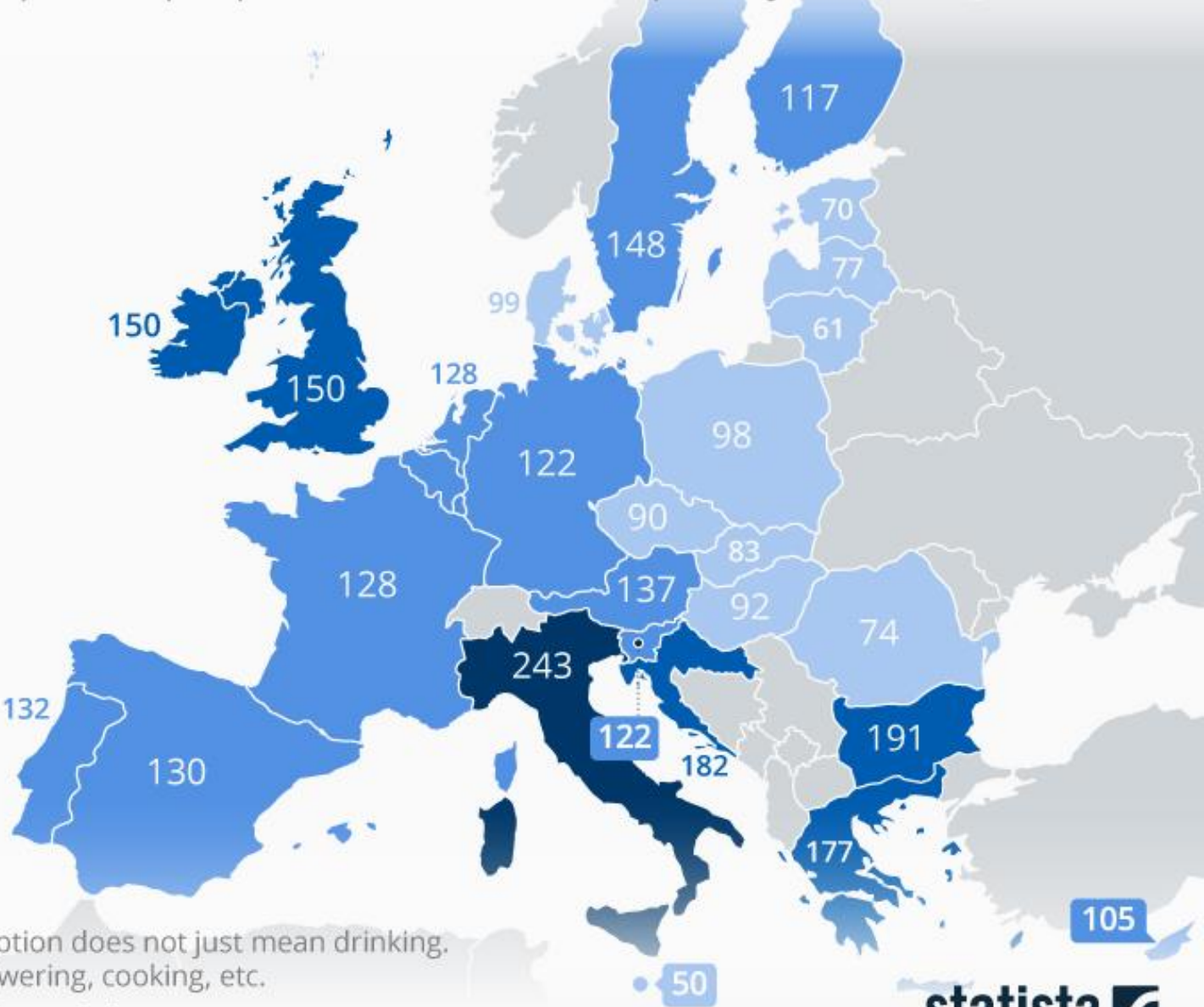
- Local (Cambridge Water):
 - Average = 137 l/h/d
 - Metered = 123 l/h/d (c.75% of households)
 - Unmetered = 168 l/h/d

Where Europeans Consume The Most Tap Water

Average consumption of tap water per person in the EU (litres per day)*



- 200+
- 150-200
- 100-150
- 50-100



* 2014-15. Consumption does not just mean drinking. Also includes showering, cooking, etc.

Domestic Use

- 5 minute power shower = 65 litres
- Bath = 80 litres
- Kitchen/bathroom tap = 15-17 litres per minute
- Toilet = 5-9 litres per flush (say, 25-45 litres per day)
- Garden hosepipe = 225 litres in 15 minutes

Domestic Use #2

- Washing machine = 50 litres/cycle
- Dishwasher = 14 litres/cycle; 10 litres/cycle (eco-setting)
- Washing up by hand = 8 litres per bowl wash
- Car wash = 250 litres (hose pipe); 30 litres (bucket wash)

Water Saving Measures

- Low-flush toilet or 'Hippo' in cistern
- Brief shower (< 5 minutes) instead of bath
- Don't brush teeth under running tap
- Wash car with bucket & sponge, not a hose
- Act swiftly to repair dripping taps etc.
- Use water butts for garden watering
- Switch to a water meter

Dry Garden – Cambridge University Botanic Garden

Dry Garden

Visit our Dry Garden for water-wise planting and drought-tolerant planting inspiration.

The Dry Garden is sponsored by [The Cambridge Water Company](#).

Water is a precious resource locally and globally. Rainfall in Cambridge has averaged only 557 mm annually over the last 30 years and Cambridge's climate is classified as 'semi-arid'. The Dry Garden has been designed as a beautiful, water-wise planting.



Eddington = 80 litres per day

- Dual flush WCs and low water consumption appliances (where provided)
- Rainwater collection taking water from roofs and filtering and storing it in underground tanks for non-potable demands, such as WCs
- Greywater collection and recycling for use in non-potable demands
- Water for irrigation of communal landscaping supplied from rainwater or greywater

2022 Drought (Cam catchment)

- Rainfall: 12 months to October 2022 = 77% of long-term average (LTA)
- October River Flow:
 - R. Cam @ Dernford = 33% of LTA ('Exceptionally low')
 - R. Rhee @ Burnt Mill = 44% of LTA ('Notably low')
- October water levels in Chalk aquifer:
 - Linton = 'Notably low'
 - Gog Magog/Stapleford = 'Below normal'
 - Ickleton = 'Below normal'

East Anglia Monthly Rainfall Surplus/Deficit

