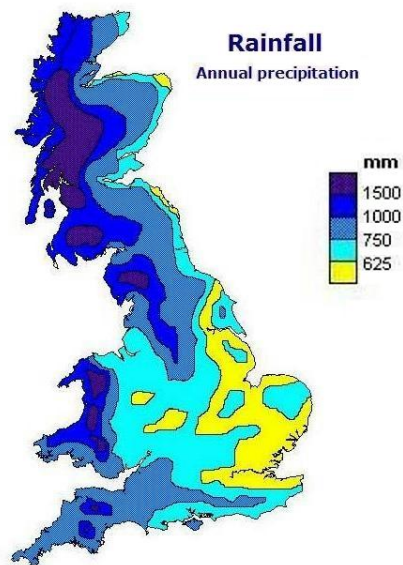
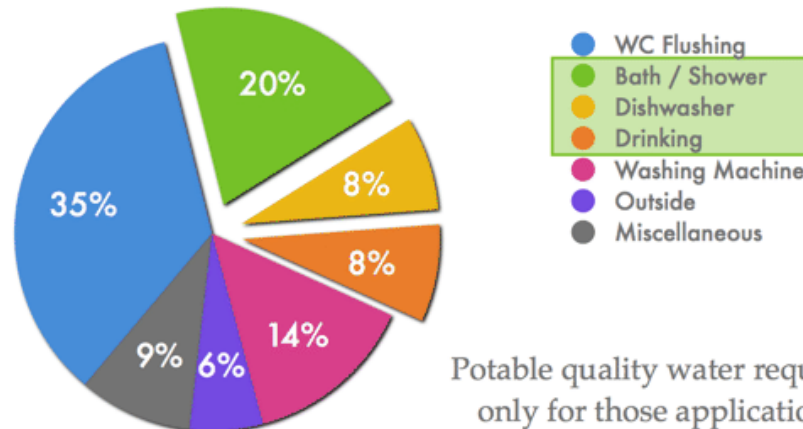


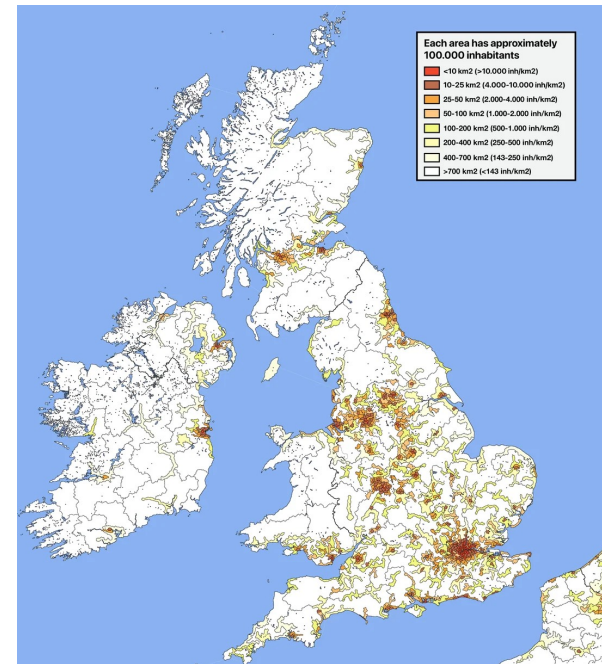
UK WATER : SUPPLY DEMAND, TRANSFER



UK domestic water use



Potable quality water required only for those applications **indicated** – approximately one third of total domestic use



- The heaviest rainfall in the UK falls in the north and west over the hills and mountains of Scotland, Wales, the Lake District and the Pennines where over 1000mm falls p.a.
- This is relief rainfall caused by the moist prevailing westerly winds rising and cooling over the hills.
- The south and east of the UK is much drier with <625 mm p.a. in many places.
- This area is said to be in a rain shadow.
- The main sources of water in the UK are surface water (river, lakes and reservoirs - man-made lakes) and ground water found in underground aquifers.
- In England 30% of drinking water comes from ground water aquifers and 70% from surface water. The figure for ground water supplies is much higher in London.
- Changing climate can affect water supplies in two ways. The increase in torrential storms is leading to pollution incidents where sewage contaminates fresh water. The increase in droughts, particularly in the south and east, leads to water shortages and the depletion of ground water supplies.

- The overall demand for water in the UK follows the population density quite closely. London the largest population centre by far is in the south east, and the second city, Birmingham is in the midlands.
- Label London, Birmingham and Manchester on the above map.
- Water is need for domestic use, but also for industry, agriculture and services and these too are concentrated in the midlands, south and east.
- Domestic use of water has increased over the past 50 years. Look at the pie chart above and try to explain why. (Think about appliances and lifestyle)
- How are we now trying to conserve water and reduce its wastage?
- The imbalance, illustrated by the above two maps, shows that water in the UK is not located where it is mostly required.
- This has led to large scale transfers of water from the wetter, but underpopulated north and west to the drier and densely populated midlands and south east.
- Birmingham gets a large percentage of its water from reservoirs in the mountains of Wales, transferred eastwards by aqueduct.
- Manchester still gets much of its water from lakes in the Lake District, again transferred south by aqueduct. Most of the rest comes from reservoirs in the wetter Pennines.

