Resource Pack Four: Issues with increasing water demand

Task

Change each of the four problems below into an image to show the possible impact of increasing water use.

Our main supply of fresh water is either from groundwater or surface water (e.g. rivers and lakes). Oman gets 83% of its water form groundwater because there is very little water on the surface. The UK gets most of its water from the surface but it still gets about one third from groundwater. If demand for water from groundwater increases several problems can occur.

For example:

1. **Subsidence** As the water table drops the land above it can subside (collapse). Due to huge amounts of water being abstracted in London over the last 150 years the city has sunk by almost 1 metre.
2. **Saltwater Intrusion** If the groundwater level drops below the sea level, salty water can seep into the groundwater. This means the groundwater cannot easily be used.
3. **Groundwater pollution** The groundwater supply in some areas is getting polluted with, for example nitrates and heavy metals, from industry and fertiliser and pesticides used on farms.
4. **Sea Level Change** Due to climate change our sea is expanding and ice melting. This causes the sea level to rise. This causes two key problems for water supply:
    a) More of the freshwater (ice) becomes salty sea.
    b) There is more chance that the groundwater will be below sea level, and so this can result in salt water intrusion of the groundwater supply

1	2	3	4

Think what will happen to the total supply of fresh water on the Earth if these impacts occur