



The National
Allotment Society

National Society of Allotment and Leisure Gardeners Ltd



Drought
Risk
and You

Climate predictions for allotments



The DRY project has worked with allotment holders, the National Allotment Society and commercial growers to bring together the knowledge and advice in this guide



Natural
Environment
Research Council

This leaflet summarises some of the key findings gained from modelling future climate changes across the UK. This can help you to prepare for likely changes in average rainfall and temperature on your allotment.

The DRY project worked with the UK Centre for Ecology & Hydrology to model the hydrological impact of possible future climate projections (different 'What ifs') for seven different river catchments throughout the country.

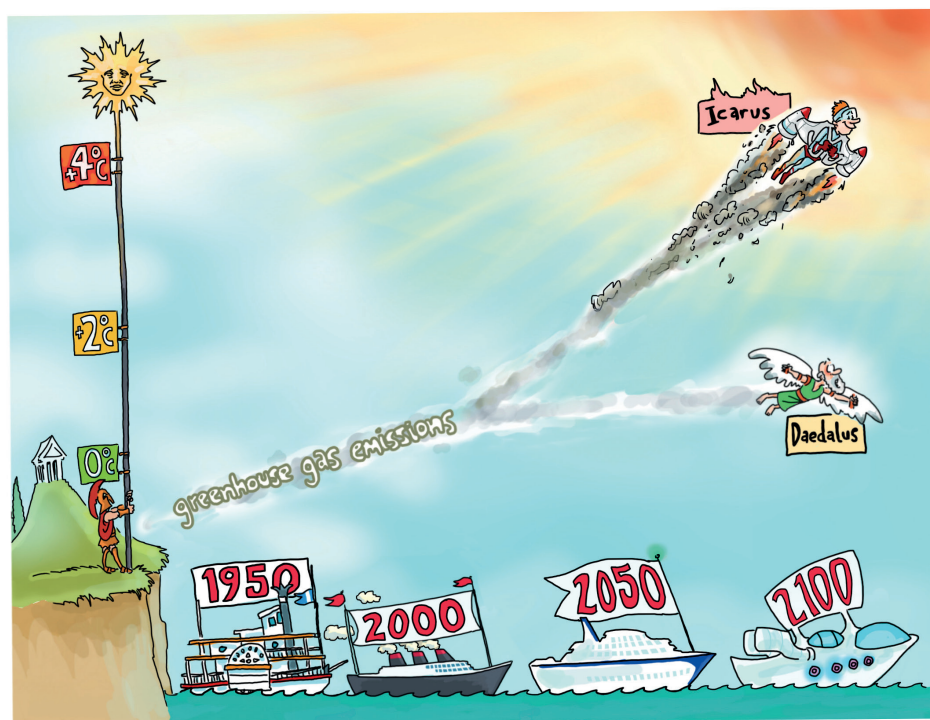
In the UK, climate change models are predicting wetter winters and drier summers with higher average temperatures in all seasons.

The infographic below shows the (global) average surface temperature change against time. The greenhouse gas emissions trail (pre-2005) is the historical average. The lower trail (cartooned as Daedalus) represents the

"... as an allotment holder, it's wetter winters, drier summers. It's just making sure that we capture the water to use in the summer ..."

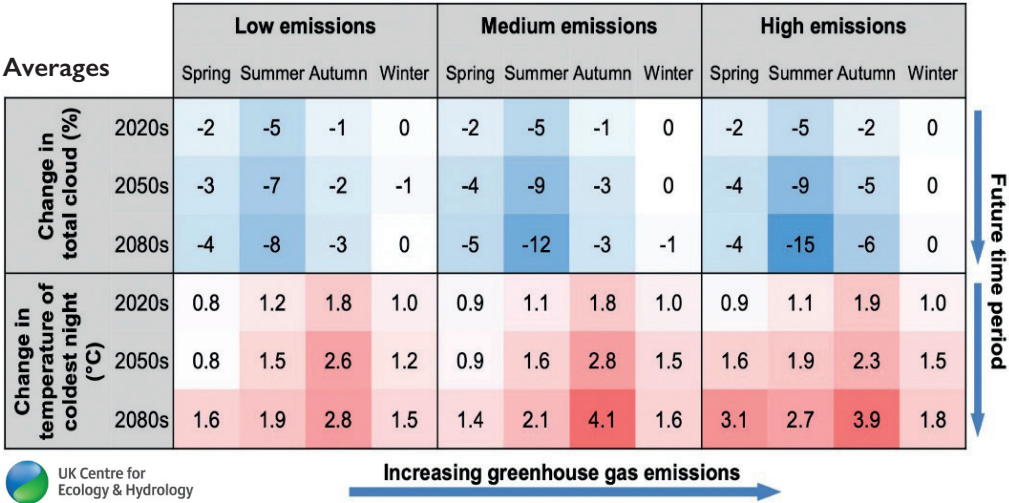
**Sheila from Frampton,
in South Gloucestershire**

low emission scenario. This requires negative emissions from energy use in the second half of the 21st century. The upper trail (cartooned as Icarus) represents the high emissions scenario (often referred to as "business as usual") - a likely outcome if society does not make concerted efforts to cut greenhouse gas emissions.



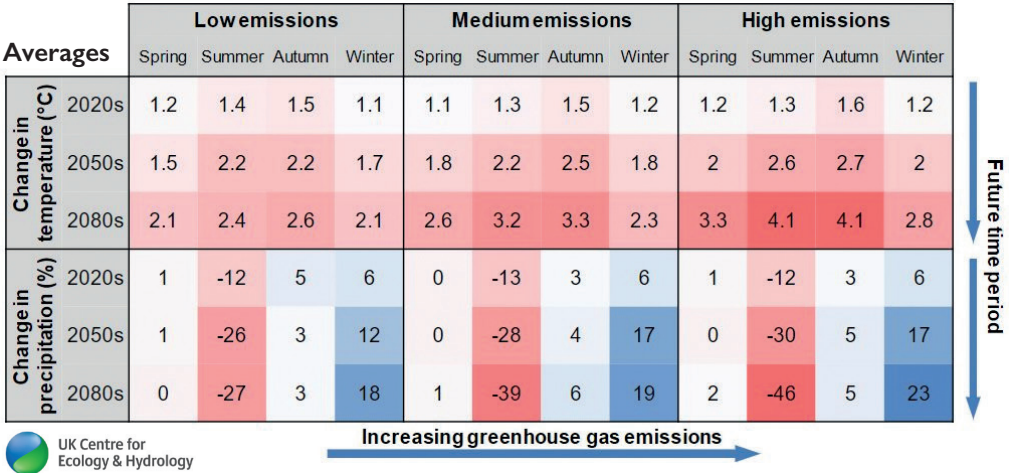
GLOBAL AVERAGE SURFACE TEMPERATURE AGAINST TIME

The following example tables are based on UKCP09 Climate Projections for the River Fowey catchment in Cornwall and gives the most probable average values to show the direction and scale of possible changes. For similar information on the other six catchments that the DRY project worked in, please see the DRY Utility (www.dryutility.info).



The table considers how three different levels of greenhouse gas emissions will impact the future climate compared to the 1961-1990 average. Low emissions: a decrease in the rate of greenhouse emissions. Medium emissions: the same rate of emissions as currently. High emissions: four times increase over the current rate of greenhouse emissions.

The following table for the River Fowey catchment shows cloud cover generally decreases with emissions scenarios over time, particularly in summer. Temperature of the coldest night increases over time, particularly in summer.

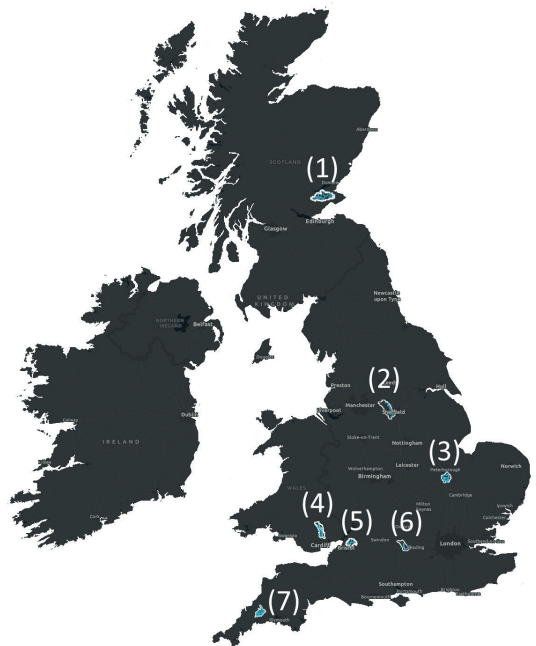


What future scenarios could mean:

- Temperatures increase with emissions scenario and with time, particularly in summer and autumn. Increasing temperatures will increase water loss by evaporation.
- There may be a need to store more winter rainfall for summer uses, to reduce any dependency on public water supply.
- The growing season may be extended, although warmer winters might mean more pests, e.g. slugs.
- Changing climate might affect crop/plant choice to mitigate climate change. For example, Lollo Rosso is more heat resistant than Webbs Wonderful and French beans are more drought tolerant than runner beans.
- Summer rainfall may become more intense, which may increase localised flood risk and soil erosion, even though the overall amount of summer rainfall is likely to decrease.



Warmer winters will reduce the number of hard frosts. This means that aphids and other plant-eating insects will not be killed during the winter. Therefore, they may breed more and become active earlier in the cropping season.



The **Drought Risk and You project (DRY)** worked in seven river catchments across the UK. The project looked at how we might bring together local knowledge in stories and specialist science as an evidence base for decision-making in drought risk management. One group that we worked with was the National Allotment Society.

All the resources produced by DRY are available on the DRY Utility website: <https://dryutility.info/>

These guides are also available as hardcopy through NAS.

DRY's seven river catchments:

- | | |
|---------------------------|-------------------|
| 1. Fife Eden | 4. Afon Ebbw |
| 2. Sheffield Don | 5. Bristol Frome |
| 3. Bevills Leam (Fenland) | 6. Berkshire Pang |
| | 7. Cornish Fowey |