

3: UK Weather and Climate (CET/EWP)

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[Global temperatures](#) are rising and have now reached unprecedented levels compared to [the last millennium](#). What has been happening over the British Isles? The region has the longest instrumental records anywhere in the world, allowing recent changes to be judged in the context of the last 250-350 years. The second (after the global) most well-known temperature record is the Central England temperature (CET) series. The series starts in 1659. Developed by Manley (1974), and enhanced by Parker *et al.* (1992) who added the daily series back to 1772, it is routinely updated and the monthly data can be found [online](#).

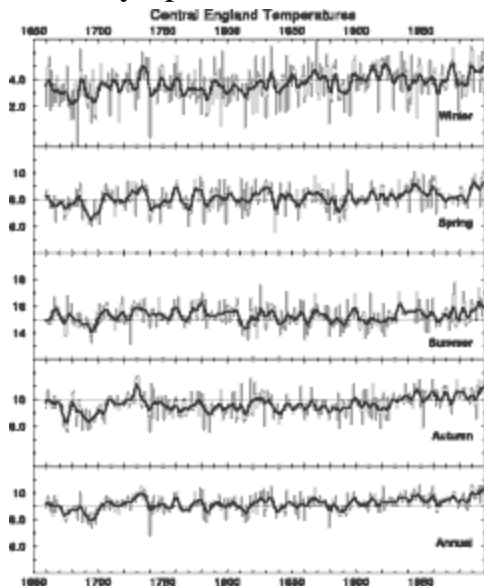


Figure 1: Central England Temperature

Figure 1 shows seasonal and annual temperatures for the entire CET series. All show unprecedented warmth during the 1990s, but earlier decades such as the 1730s and 1820s are comparable. Variability is greatest in winter compared to the other seasons. Annually the coolest period was the late 17th century, but two extremely cool years, 1740 and 1879, stand out. 1740 was a severe shock to the region and to much of Europe, coming just after the warm 1730s. In Ireland, as many people died of famine in this year as in the more well-known ‘potato’ famine of 1845-7, and it is known as the forgotten famine (Dickson, 1997). The warmest year was 1995, comparable to a number of other years in the 1990s and also to 1949.

Precipitation records for the region are nearly as long, but given the greater spatial variability, regional averages for England and Wales (EWP) have only been developed back to 1766 and are routinely updated by the Met. Office and the monthly data can be found [online](#). Figure 2 shows seasonal and annual EWP time series. There is no evidence of longer-term trends but winters have been wetter since 1860 and summers have become drier since then, particularly since the 1970s. The greater seasonal contrast has led to severe problems for the water industry, particularly in the south and east of England where the seasonal cycle is strongest.

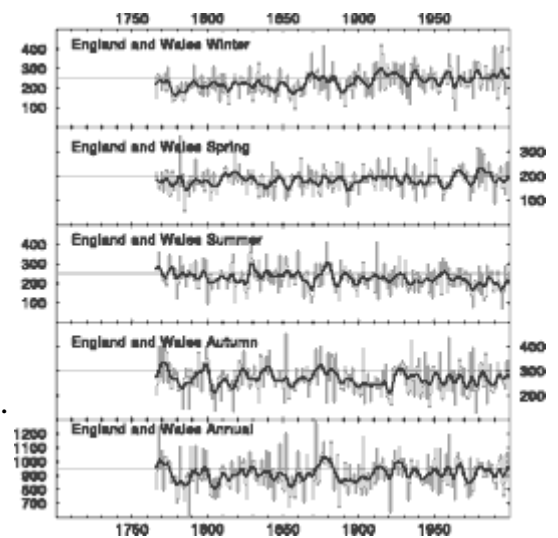


Figure 2: Precipitation

References and other background material

- Dickson, D., 1997: *Arctic Ireland: The extraordinary story of the great frost and forgotten famine of 1740-41*. White Row Press Ltd, Belfast, 94pp.

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- Manley, G., 1974: Central England temperatures: Monthly means 1659 to 1973. *Q.J.R. Met. Soc.* **100**, 389-405.
- Parker, D.E., Legg, T.P. and Folland, C.K., 1992: A new daily Central England temperature series, 1772-1991. *Int. J. Climatol.* **12**, 317-342.

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