



Summer Days (SU)

Key Message

- There are some indications that Summer Days are increasing in Ireland, but these trends are generally not found to be statistically significant.

Definition

- Daily maximum temperature (**TX**), based on 09UTC - 09UTC observations, are used to calculate the index.
- The Summer Days (**SU**) index is calculated by counting the number of times the maximum temperature (**TX**) exceeds 25°C ($TX > 25^{\circ}\text{C}$) during the period of interest (year, season or month).

Trends

- Such high temperatures do not tend to occur very often in Ireland, particularly in Atlantic coastal areas.
- There is an increasing trend in the occurrence of Summer Days at the majority of Irish stations, although these trends are mostly not statistically significant.
- Global analyses indicate an increase in the **SU** index which is most apparent in inland continental areas, [Dunn et al., 2020].

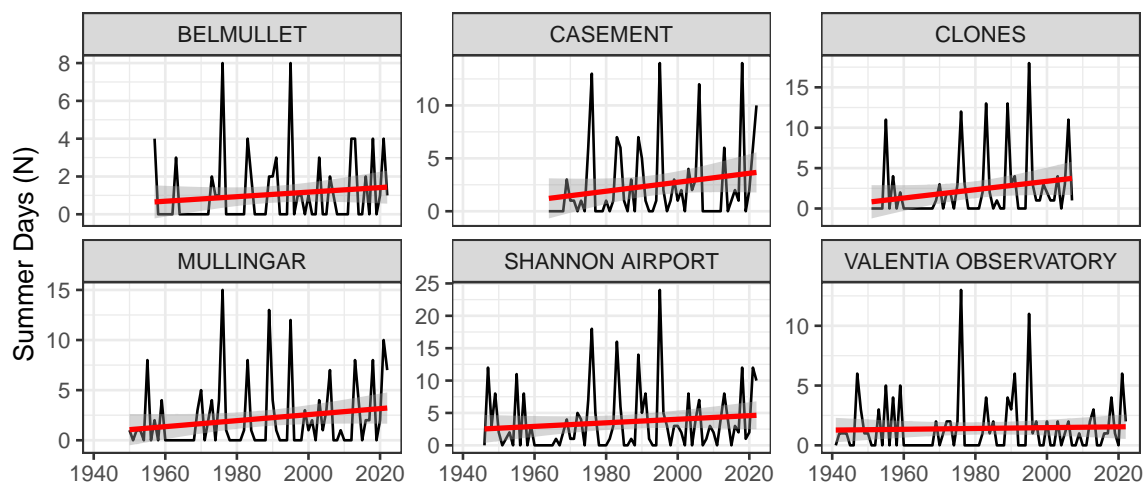




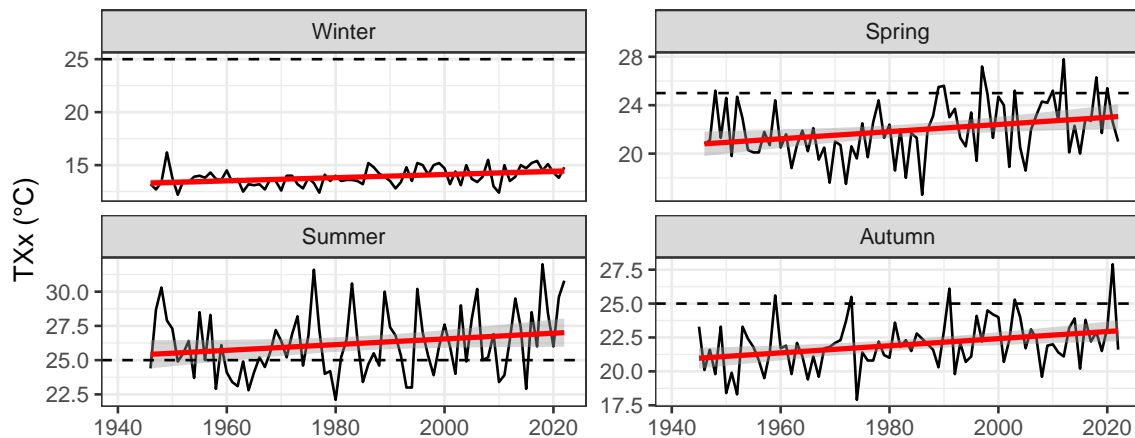
Table 1: Mean number of Summer Days (SU) during thirty year periods at 8 different stations

Station	1961-1990	1991-2020
Belmullet	0.8	1.2
Claremorris	1.7	2.6
Clones	2.0	3.1
Cork Airport	0.6	0.7
Malin Head	0.1	0.4
Mullingar	2.0	2.0
Shannon Airport	3.1	3.7
Valentia Observatory	1.2	1.3

Seasonality

- Summer Days occur predominantly during the summer season, but some have been observed in spring and autumn also.
- This is shown below for seasonal values of the **TX_x** at Shannon Airport Where the **SU** threshold (black dashed line) has been exceeded in spring, summer and autumn.

Shannon Airport



Data Access

Data for this index can be downloaded through the web-page below (or the QR code in the header):

- <https://www.met.ie/climate/climate-change-indices-etccdi/>

For further information contact Met Éireann Climate Enquiries: enquiries@met.ie



References

Robert JH Dunn et al. Development of an updated global land in situ-based data set of temperature and precipitation extremes: HadEX3. *Journal of Geophysical Research: Atmospheres*, 125(16):e2019JD032263, 2020. doi: <https://doi.org/10.1029/2019JD032263>.