



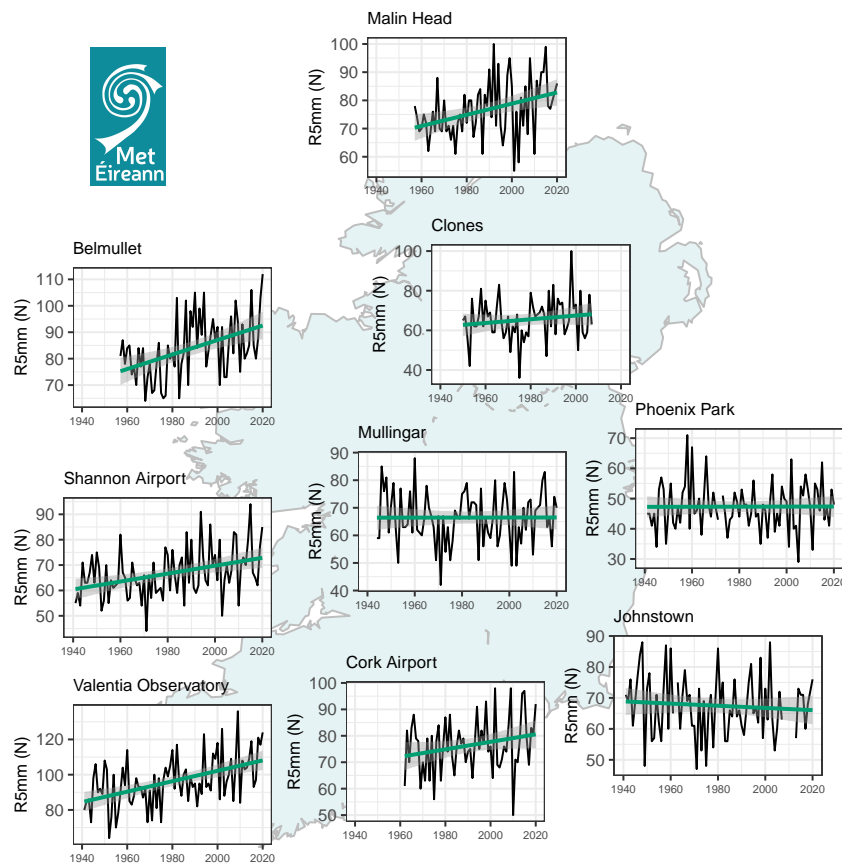
R5mm

Key Message

- Some stations (particularly in the west) are observing an increase in the number of days exceeding 5mm of rain, but with greater uncertainty for stations further east.

Definition

- Daily precipitation (**R**), based on 09UTC - 09UTC observations, are used to calculate this index.
- The **R5mm** index is calculated by counting the number of times the daily precipitation exceeds 5mm ($R \geq 5\text{mm}$) during the period of interest (year, season or month)





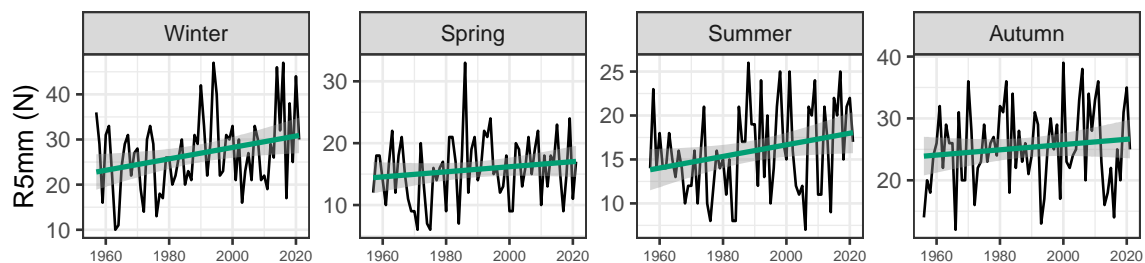
Trends

- The graphs above indicate that **R5mm** is primarily increasing at western coastal locations.
- Stations further east tend to exhibit less coherent trends.
- Ongoing research into data rescue and homogenisation have found that while the majority of stations are exhibiting an increasing trend in **R5mm**, only a small number of these have been found to be statistically significant, [Ryan et al., 2021].
- **R5mm** is not a standard ETCCDI index. Global analysis of similar threshold-based rainfall indices have found pockets of the globe where significant increases are occurring, such as eastern Europe or central USA, [Dunn et al., 2020].

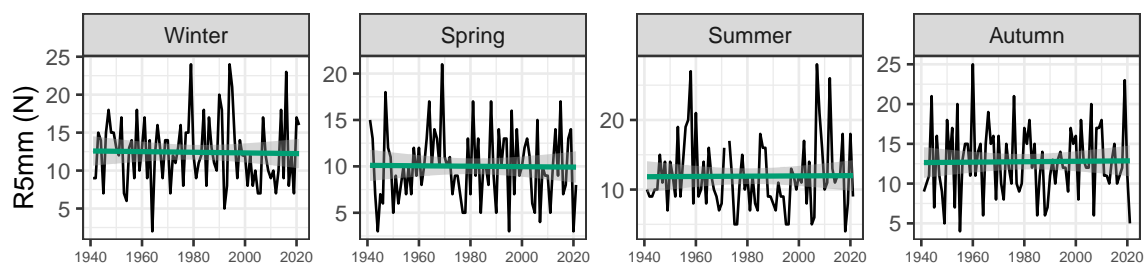
Seasonality

- The moderate increase in **R5mm** at western stations is present for most seasons, shown below for Belmullet, though trends are less certain than for annual values.
- The lack of a signal in the east is evident for all seasons, shown below for Phoenix Park.

Belmullet



Phoenix Park



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>.

Ciara Ryan et al. Long-term trends in extreme precipitation indices in Ireland. *International Journal of Climatology*, 2021. doi: <https://doi.org/10.1002/joc.7475>.