



WETTEST 5-DAY PERIOD (Rx5DAY)

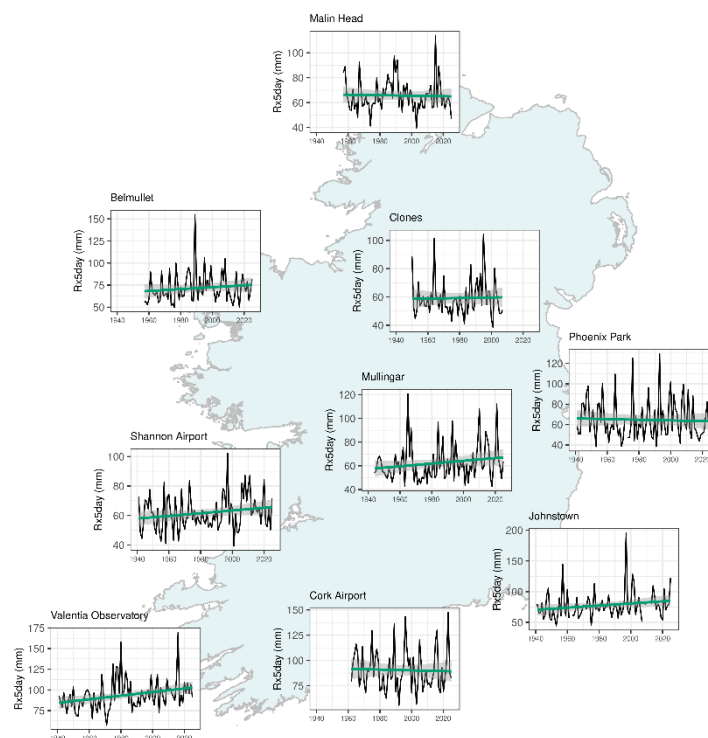
KEY MESSAGE

- There is a large degree of uncertainty in trends of the heaviest 5-day accumulations of rainfall at most stations, with very few significant long-term trends (mostly along the west coast).

DEFINITION

- Daily precipitation (R), based on 09UTC - 09UTC observations, are used to calculate this index.
- The **Rx5day** index is calculated by finding the maximum 5-day accumulated precipitation (in mm) during the period of interest (year, season or month).

TRENDS



- There is some indication of an increasing trend for some stations (particularly in the west) in Ireland, though many stations do not have significant long-term trends.
- Ongoing research into data rescue and homogenisation indicate that while the majority of stations are exhibiting an increasing trend in **Rx5day**, only a small number of these were found to be statistically significant, (Ryan, et al. 2022).
- Global analyses of **Rx5day** have found pockets of the globe where significant increases are occurring, such as eastern Europe or central USA, (Dunn, et al. 2020).



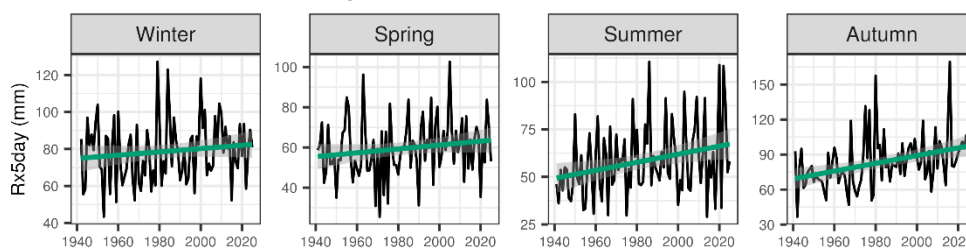
Table 1: Mean value of Rx5day in mm during thirty-year periods at 8 stations.

Station	1961-1990	1991-2020
Belmullet	72.8	72.7
Cork Airport	91.1	88.2
Johnstown	73.2	82.1
Malin Head	65.6	65.7
Mullingar	61.8	64.6
Phoenix Park	60.7	65.9
Shannon Airport	58.9	66.3
Valentia Observatory	93.9	97.4

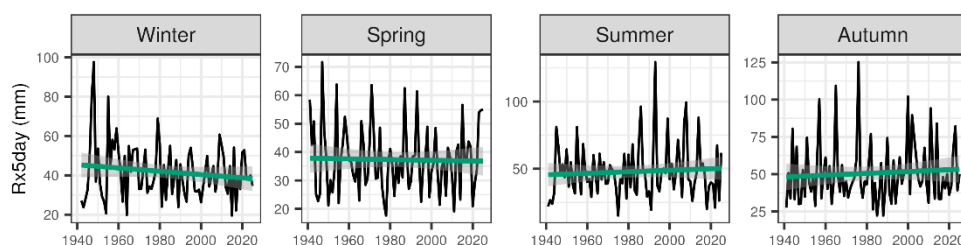
SEASONALITY

- The increase in **Rx5day** at Valentia is most prevalent in summer and autumn, though this is not consistent across all stations. Meanwhile there is no discernible signal at Phoenix Park.

Valentia Observatory



Phoenix Park



DATA ACCESS

Data for this index can be downloaded through the webpage 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

Dunn, Robert JH, Lisa V Alexander, Markus G Donat, Xuebin Zhang, Margot Bador, Nicholas Herold, Tanya and Allan, Rob Lippmann, Enric Aguilar, Abdoul Aziz Barry, and others. 2020. "Development of an updated global land in situ-based data set of temperature and precipitation extremes: HadEX3." *Journal of Geophysical Research: Atmospheres* e2019JD032263. doi:<https://doi.org/10.1029/2019JD032263>.

Ryan, Ciara, Mary Curley, Séamus Walsh, and Conor Murphy. 2022. "Long-term trends in extreme precipitation indices in Ireland." *International Journal of Climatology* (Wiley Online Library) 42 (7): 4040-4061. doi:[10.1002/joc.7475](https://doi.org/10.1002/joc.7475).