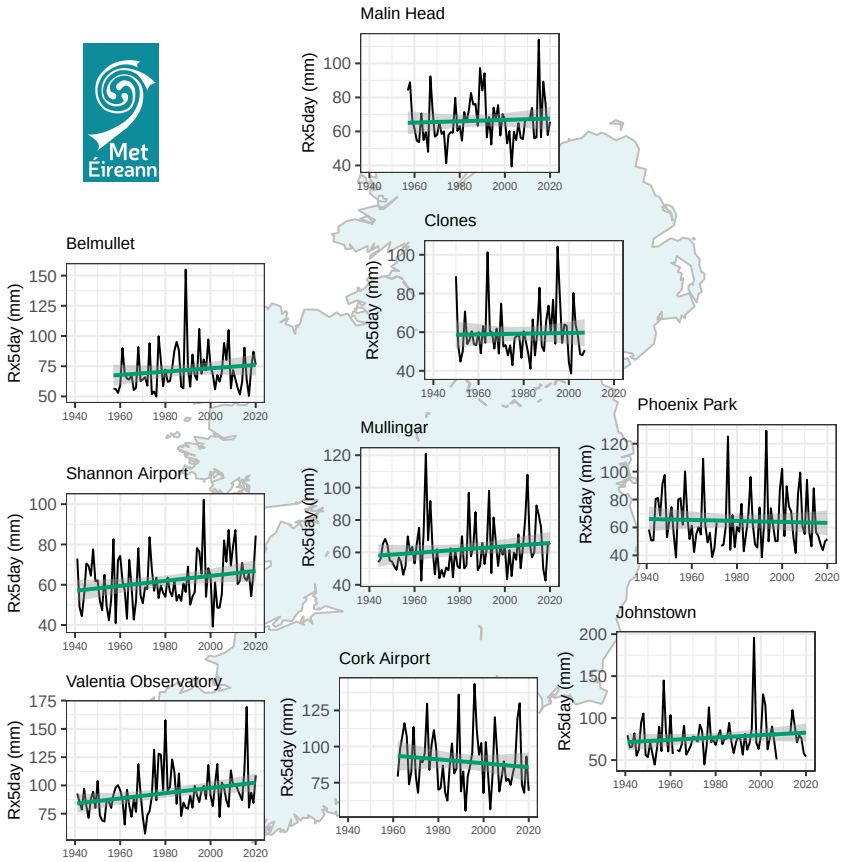
Wettest 5-Day Period (Rx5day)

Key Message

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

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)

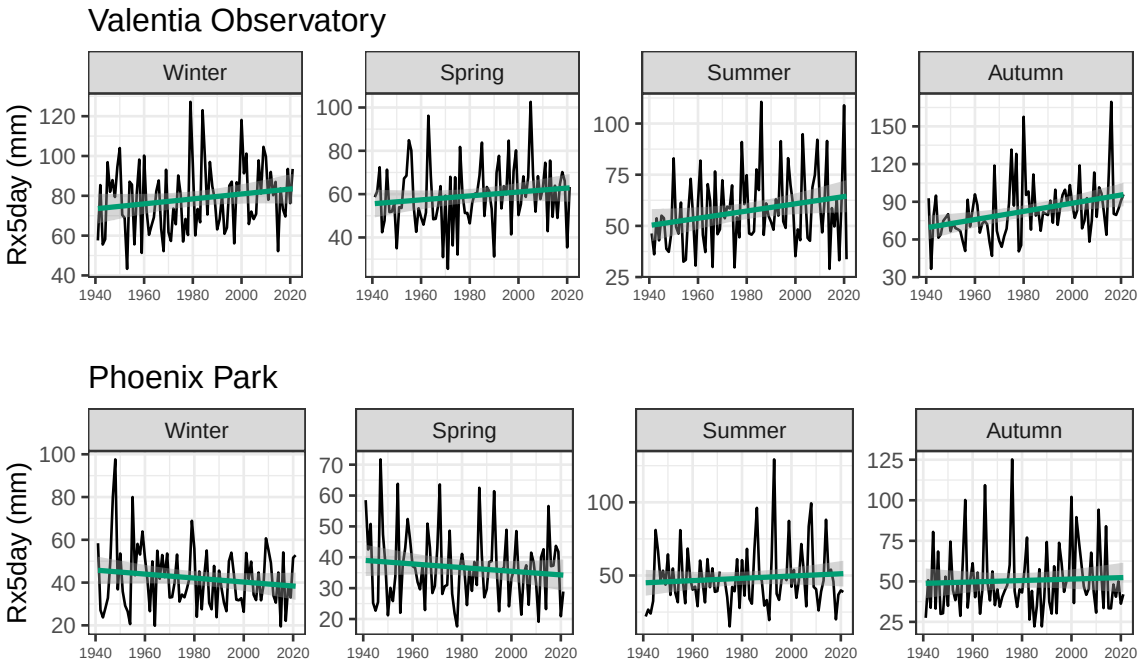


Trends

- 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., 2021].
- Global analysis of extremes of 5-day rainfall accumulations has found pockets of the globe where significant increases are occurring, such as eastern Europe or central USA, [Dunn et al., 2020].

Seasonality

- The increase in **Rx5day** at Valentia Observatory is most prevalent in summer and autumn, though this is not consistent across all stations that are showing an increasing trend.
- Meanwhile there is no discernible signal at 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.