



CONSECUTIVE WET DAYS (CWD)

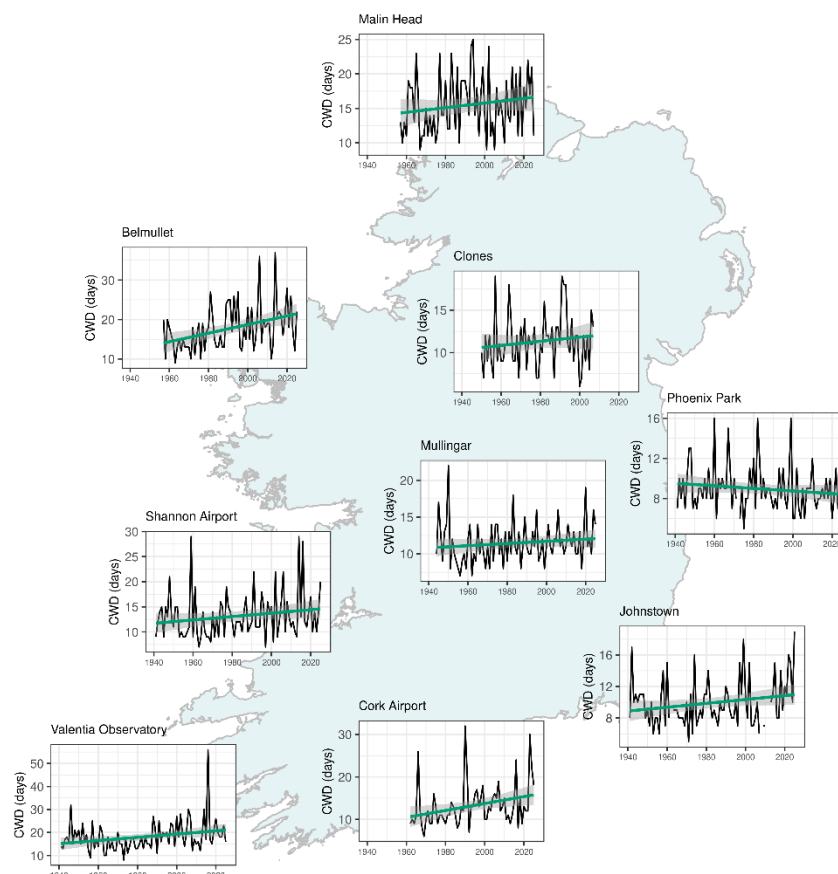
KEY MESSAGE

- Some stations are seeing increases in the number of consecutive wet days (mostly in the west), but the majority of stations do not have significant long-term trends.

DEFINITION

- Daily precipitation (R), based on 09UTC - 09UTC observations, are used to calculate this index.
- The **CWD** index is the largest number of consecutive “wet days” (where $R \geq 1\text{mm}$) during the period of interest (year, season or month).

TRENDS



- The graphs above and table below indicate that **CWD** is primarily increasing at some western coastal locations, with a lack of statistically significant trends elsewhere.



- Ongoing research into data rescue and homogenisation indicate that the significance of these positive trends in **CWD** weaken when data was extended back to the start of the 20th century, (Ryan, et al. 2022).
- Globally averaged **CWD** does not exhibit a strong signal but there are isolated pockets where trends are present, (Dunn, et al. 2020). One such area highlighted in this report is around Ireland, where increasing trends are found but are generally not statistically significant.
- The largest value for **CWD** occurred at Valentia Observatory between the 23rd of November 2015 and 17th of January 2016, a period of 56 consecutive days with at least 1mm of rainfall recorded.

Table 1: Mean number of CWD during thirty-year periods at 8 stations.

Station	1961-1990	1991-2020
Belmullet	15.4	19.9
Cork Airport	11.9	13.6
Johnstown	9.1	10.0
Malin Head	15.3	15.8
Mullingar	11.2	11.7
Phoenix Park	9.2	8.6
Shannon Airport	12.0	14.5
Valentia Observatory	15.4	21.1

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.