

# On the counting and characterisation of heatwaves (HW's)

A HW day has 3 possible definitions:

- Tx90: A day where TX exceeds the 90th percentile.
- Tn90: A day where TN exceeds the 90th percentile.
- EHF: A day where the EHF is positive.

Notes:

- Base period should be 1961 - 1990 unless data precludes this.
- Leap days are ignored and deleted from data.
- The reference to the heatwave season is for the year it commences in.
- If there are no heatwaves in a given period, then HWN and HWF = 0. All other aspects = NA.

For each of the above definitions there are 5 HW Aspects:

HW Number (HWN): The number of HW's ( $\geq 3$  HW days) that begin in the period of interest as well as those that start prior to but continue into the period of interest.

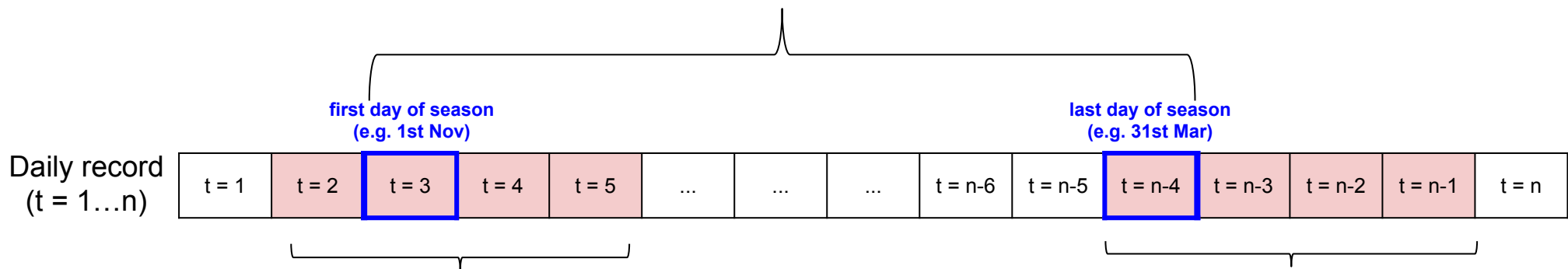
HW Frequency (HWF): The number of days that contribute to heatwaves defined by HWN. For HW's that begin prior to the period of interest, only the HW days within the period of interest are counted. Similarly, for HW's that continue beyond the period of interest, only HW days within the period of interest are counted. For HW's that extend beyond the period of interest, a maximum of 14 days beyond the period of interest is counted toward HWF.

HW Duration (HWD): Length in days of the longest heatwave defined by HWN.

HW Magnitude (HWM): The mean of the mean HW magnitude of each heatwave defined by HWN.

HW Amplitude (HWA): The peak daily value in the hottest heatwave (defined as the heatwave with highest HWM).

Period of interest  
(could be a month, season, year, etc.)



While there are three heatwave days inside the period of interest, do not include this heatwave since it began before the period of interest. Note that if  $t = 2$  was NOT a heatwave day then  $t = 3:6$  would be counted as a heatwave inside the period of interest.

Even though only one heatwave day occurs inside period of interest, it is part of a heatwave event (length  $\geq 3$  days) that begun in the period of interest, therefore count these four days in all heatwave aspect calculations.