

HadISDH.extremes Update Document

Kate Willett (MOHC), 4th May 2023

General Notes:

HadISDH.extremes.v1.0.0.2022f is the first version of a heat extremes index monitoring product based on the wet bulb and dry bulb temperature.

This is a 5 by 5 gridded monthly product based on the maximum and minimum values of hourly/3-hourly/6-hourly/8-hourly weather station data for each day. These values have been quality controlled and processed into monthly indices and then gridded by simple averaging. Homogeneity scores for each gridbox month are allocated. Strict missing data thresholds are applied at the daily, monthly, annual, climatology and whole record level to ensure a minimum level of completeness. The data are provided as actual values and anomalies relative to the 1991-2020 climatology period. The use of anomalies is recommended where possible to minimise sampling bias.

Version Number X.Y.Z.0000p/f:

1.0.0.2022f

Major Changes X:

- None

Minor Changes Y:

- None.

Bug fixes / historical data updates Z:

- None.

Start Date DD.MM.YYYY: 1973-01-01

End Date DD.MM.YYYY: 2022-12-31

HadISDH Data Format (Baseline documentation): <https://zenodo.org/record/7963175>

Reference:

- Willett, K, *in press*: HadISDH.extremes Part 1: a gridded wet bulb temperature extremes index product for climate monitoring. *Advances in Atmospheric Sciences*, doi: 10.1007/s00376-023-2347-8.
<http://www.iapjournals.ac.cn/aas/en/article/doi/10.1007/s00376-023-2347-8>
- Willett, K. *in press*: HadISDH.extremes Part 2: exploring humid heat extremes using wet bulb temperature indices. *Advances in Atmospheric Sciences*, doi: 10.1007/s00376-023-2348-7.
<http://www.iapjournals.ac.cn/aas/en/article/doi/10.1007/s00376-023-2348-7>

Other notes: The update blog post is here: no post this year.