Heatwave and Heat Stress Indices

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| No | Shorthand | Name | Definition |  |
| 1 | HWDI | Heatwave Duration Index | Maximum period of at least five consecutive days where daily maximum temperature is above the 1961–1990 mean +5 °C | Frich et al. (2002): Observed coherent changes in climatic extremes during the second half of the twentieth century. Clim. Res. 19 (3), 193–212 |
| 2 | HI | Heat Index | Combines air temperature and relative humidity to determine an apparent temperature (how hot it feels).  Widely used in the United States when temperatures are >26°C and relative humidity is ≥ 40 percent | Lee Veronique, Fernanda Zermoglio, Kristie L. Ebi, 2019: HEAT WAVES AND HUMAN HEALTH: EMERGING EVIDENCE AND EXPERIENCE TO INFORM RISK MANAGEMENT IN A WARMING WORLD. TECHNICAL REPORT, Chemonics International Inc.  1717 H Street NW, Washington, DC 20006  (Indices are Adapted from WMO & WHO 2015) |
| 3 |  | Humidex | Combines temperature and humidity into one number to reflect perceived temperature on the following scales of comfort related to the body’s coping mechanisms: 1) Less than 29 – no discomfort; 2) 30–39 – some discomfort; 3) 40–45 – great discomfort; 4) Above 45 – dangerous; 5) Above 54 – heat stroke imminent.  Widely used in Canada, > 40 considered high Humidex during which all unnecessary activity should be curtailed |
| 4 | AT | Apparent Temperature | An estimate of what the temperature "feels like”; Uses absolute humidity with a dewpoint of 14°C as a reference level from which air temperature is adjusted.  Widely used in Australia; AT is measurable over a range of temperatures above 20°C and considers the cooling effects of the wind at lower temperatures |
| 5 | NET | Net Effective Temperature | Considers the effect of air temperature, wind speed and relative humidity.  Monitored in Hong Kong, China and Portugal; Alerts for temperature extremes typically issued when NET is forecast to be lower or higher than the 2.5th percentile or 97.5th percentile, respectively |
| 6 | WBGT | Wet-bulb Globe Temperature | Combines temperature and humidity into a single number; Affected by wind and radiation; A measure of 35°C is thought to be the threshold for human survivability (Sherwood and Huber 2010) |
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