

What is Going On?



Introduction

The above photograph is an impression from my garden, apparently of a storm blowing dust all the way from the Sahara desert some four or five years ago and giving the sun its unusual colouring. Just another example of the strange weather patterns we are now getting and which it is difficult to explain.

Global warming and climate change are much talked about, but the concepts are still viewed with scepticism by many and responsible local, national and international leaders are perplexed as to how to deal with the problems that will arise as a result of these changes.

“Global warming is the long-term rise in the average temperature of the Earth's climate system. It is a major aspect of climate change, and has been demonstrated by direct temperature measurements and by measurements of various effects of the

warming. Global warming and climate change are often used interchangeably. But more accurately, global warming is the mainly human-caused increase in global surface temperatures and its projected continuation, while *climate change* includes both global warming and its effects, such as changes in precipitation.” (Copied from *Wikipedia*: ‘Global warming’.

“The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report concluded, “It is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century”.” (Ibid)

“These findings have been recognized by the national science academies of the major industrialized nations and are not disputed by any scientific body of national or international standing.” (Ibid)

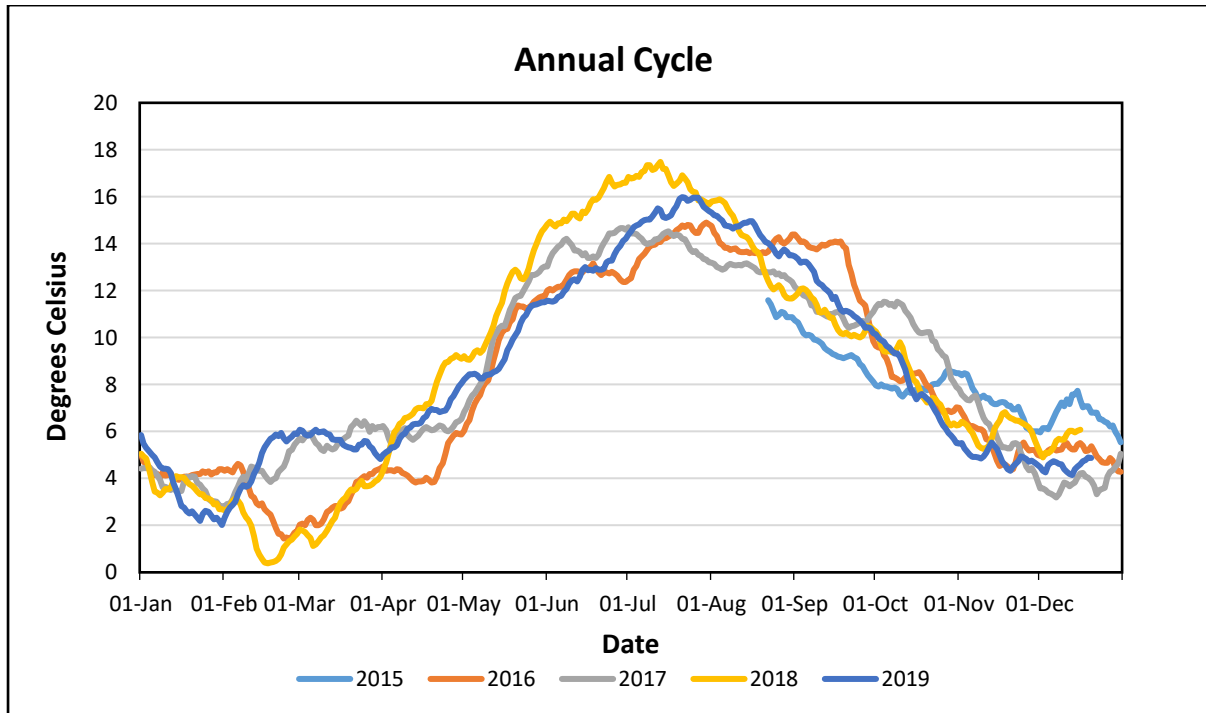
The following is an attempt to catch these changes in an amateurish way over a relative short period in my particular locality, Mow Cop on the outskirts of the City of Stoke-on-Trent, but just inside Cheshire County, England.

Global warming and climate change are not abstract constructs, but part of everyday realities that affect us all. I will not claim that this in any way is a scientific study, and I am not a meteorologist and only know about weather patterns what I hear and see on radio and TV.

However, for the last 5 years or so one of my first activities every the morning is to take a reading of the thermometer placed in my backyard. As I am afflicted with Parkinson’s disease the intension has been to correlate these readings with ‘UPDRS’ (Unified Parkinson’s Disease Rating Scale) observations to see if the strength of symptoms vary with weather conditions. This study is therefore a by-product of this other investigation.

The thermometer, I use, is a simple plastic plate with a glass tube in the middle. The scale is the simple Celcius scale with 0° at the freezing point and 100° at the boiling point, and as indicated above I take the reading soon after getting out of bed. I started the exercise in August 2015.

Annual Cycle



The above diagram shows the annual cycle for each of the five years, and it will not come as a surprise that it shows the summer months – June, July, August - to be warmer than the winter months – December, January, February. But what is also noticeable is that for the year 2018 (yellow) the early months were somewhat colder than in previous years due to the so-called 'Beast from the East' while the summer months were 2-3 degrees warmer than in previous years.

These observations are shown in a tabular form below. It is noted that the annual average temperature fluctuates, but the 4th quarter of 2019 was particular cold and

Table 1: Temperature changes by regular 3 months quarters.

| | 2015 | 2016 | 2017 | 2018 | 2019 |
|------------------|-------------------------------|-------|-------|-------|-------|
| | <----- Degrees Celcius -----> | | | | |
| Quarter 1 | | 3.22 | 4.41 | 2.49 | 4.50 |
| Quarter 2 | | 8.91 | 8.70 | 11.31 | 9.49 |
| Quarter 3 | 10.33 | 13.95 | 13.27 | 14.00 | 14.08 |
| Quarter 4 | 7.46 | 6.17 | 7.88 | 6.79 | 5.77 |
| Annual | 8.58 | 8.02 | 8.64 | 8.66 | 8.37 |

lowered the average for the year below the average for some previous years despite the first and third quarter being warmer than before.

Table 2 show the same changes arranged differently by 3 monthly seasons rather than quarters defined by calendar months.

Table 2: Temperature changes by seasons.

| | 2015 | 2016 | 2017 | 2018 | 2019 |
|-----------------|-------------------------------|-------|-------|-------|-------|
| | <----- Degrees Celcius -----> | | | | |
| Spring | | 5.48 | 7.43 | 7.12 | 6.94 |
| Summer | | 13.60 | 13.68 | 15.59 | 14.36 |
| Autumn | 8.12 | 8.71 | 9.07 | 8.37 | 7.89 |
| Winter*) | 4.51 | 4.44 | 2.92 | 4.66 | |
| Annual | 8.58 | 8.02 | 8.64 | 8.66 | 8.37 |

Note: Spring ~ March-May; Summer ~ June-August; Autumn ~ September –November; Winter~ December-February.

*) 2015/16, 2016/17, 2017/18 etc.

Extremes

Another way of looking at the changes is by comparing the extremes year by year.

Table 3 shows the warmest and the coldest days for each of the four years 2016-2019 and the relevant temperature measurement. However no particular pattern seems to emerge.

Table 3: Warmest and coldest days.

| | Warmest | | Coldest | | Average |
|-------------|---------|-------------|---------|-------------|---------|
| | Date | Temperature | Date | Temperature | |
| 2016 | 18-Jul | 22 | 07-Mar | -2.5 | 8.02 |
| 2017 | 17-Jun | 20 | 27-Jan | -1.5 | 8.64 |
| 2018 | 02-Jul | 24 | 28-Feb | -7.0 | 8.66 |
| 2019 | 29-Jun | 22 | 02-Feb | -4.0 | 8.37 |

In table 4 below we have counted the number of days temperatures within three intervals were recorded.

It is noted that the number of days when temperatures of below 5° C were recorded have ‘shrunk’ from more than 100 days to only 81. Conversely the number of days when temperatures of more than 5° C were recorded have increased from 236 to 264 with part of this increase being days when more than 15°C were recorded.

Table 4:

| | < 5° C | 5° C-15° C | > 15° C | Other | Total |
|-------------|--------------------------|------------|---------|-------|-------|
| | <----- No of days -----> | | | | |
| 2016 | 106 | 214 | 22 | 24 | 366 |
| 2017 | 81 | 251 | 19 | 14 | 365 |
| 2018 | 97 | 201 | 51 | 16 | 365 |
| 2019 | 81 | 239 | 35 | 10 | 365 |

Longitudinal evidence

We can now aggregate the readings for all five years into one graph to provide a longitudinal view of the temperatures. The diagram is shown in the appendix.

As I have referred to above the readings are taken first thing in the morning, in winter months even before sunrise. They are therefore likely to be lower than temperatures discussed in scientific literature and referred to in radio and TV broadcasts.

Conclusion

As already indicated the above study is not scientific, even less a proof of anything. However, despite its shortcomings it is at least evidence. As such it is not conclusive, but perhaps it will make you the reader stop and think. If Global Warming and/or Climate Change can be mapped in this way whether caused by man or being perhaps we cannot afford to ignore that possibility. Perhaps it is time we cut out our bad habits? In the second case, just maybe cutting out our bad habits will help to alleviate the consequences of global warming.

The above information has been researched and compiled by Knud Møller at **KVM Research**. If you want to know more please look at my website www.kvmresearch.co.uk, give me a ring on 01782 499384 or send me an email on knudvmoller@gmail.com © 2020

Appendix

