

**Press Release: The Royal Statistical Society announces
Statistic of the Year 2017**

Embargo: 00:01 GMT Monday 18 December 2017

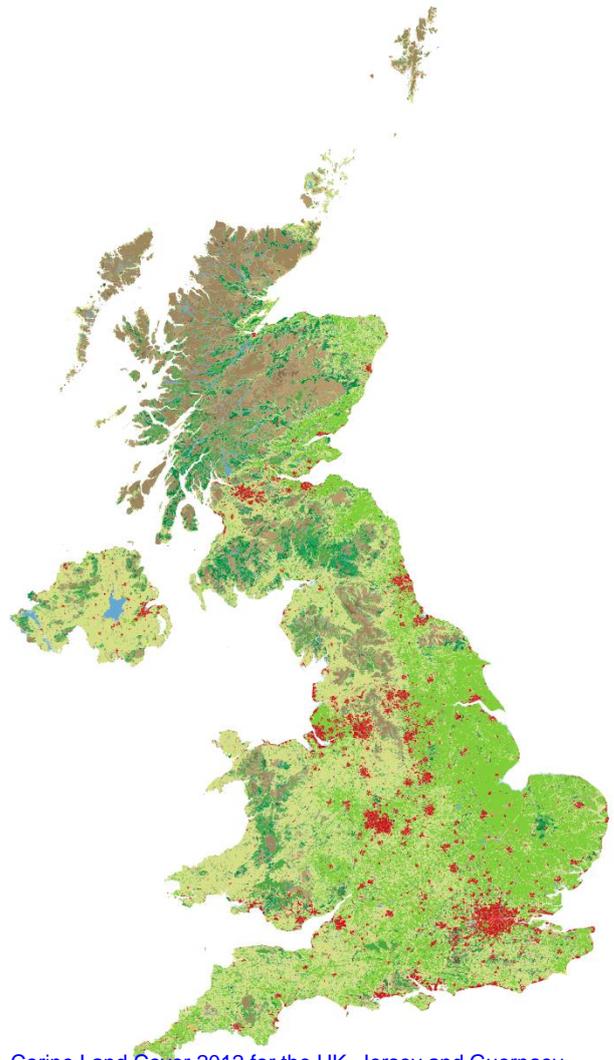
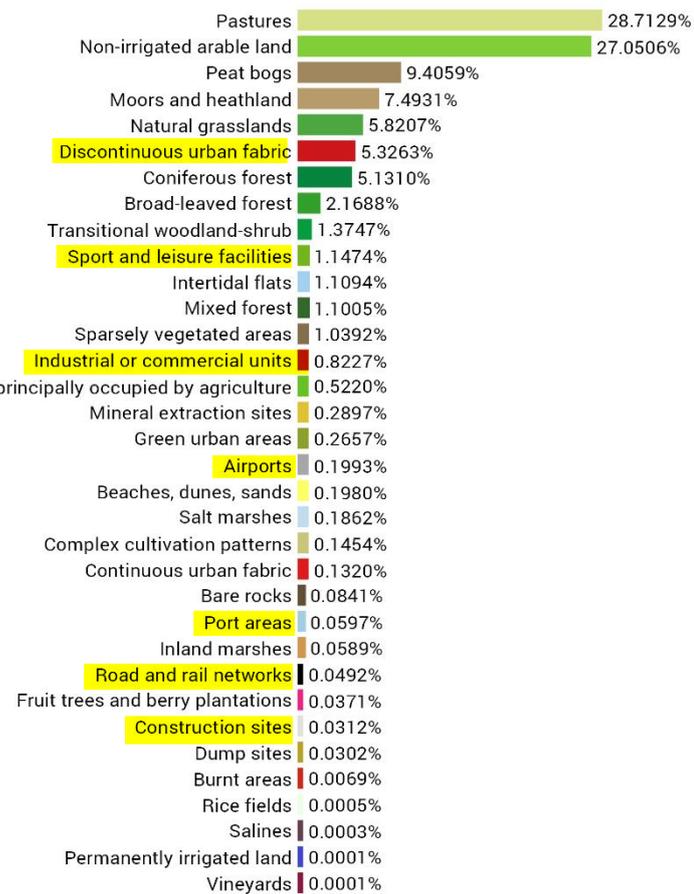
The Royal Statistical Society (RSS) is pleased to unveil its first ever UK Statistic of the Year and International Statistic of the Year, for 2017. Judges also commended five other runners up.

UK STATISTIC OF THE YEAR

0.1%

The percentage of the United Kingdom land area that is **densely** built upon.

UK Corine Land Cover



This figure shows what is officially designated 'continuous urban fabric' (CUF) in the UK. It was revealed this year in *A Land Cover Atlas of the United Kingdom* by Professor Alasdair Rae, from the University of Sheffield.

Land is designated as CUF (under the 'Corine Land Cover Classification System') if over 80% of ground is covered by artificial surfaces - what most people would call 'urban jungle'.

This statistic appealed to the judging panel because the debate about housing, urbanisation and environmental protection is highly topical and, the judges believe, it will come as a surprise to many people just how little of the UK has been 'concreted over'.

The same research estimated that only 5.4% of the UK land area has been built upon or, in other words, is urban fabric - while 9.4% consists of peat bogs.

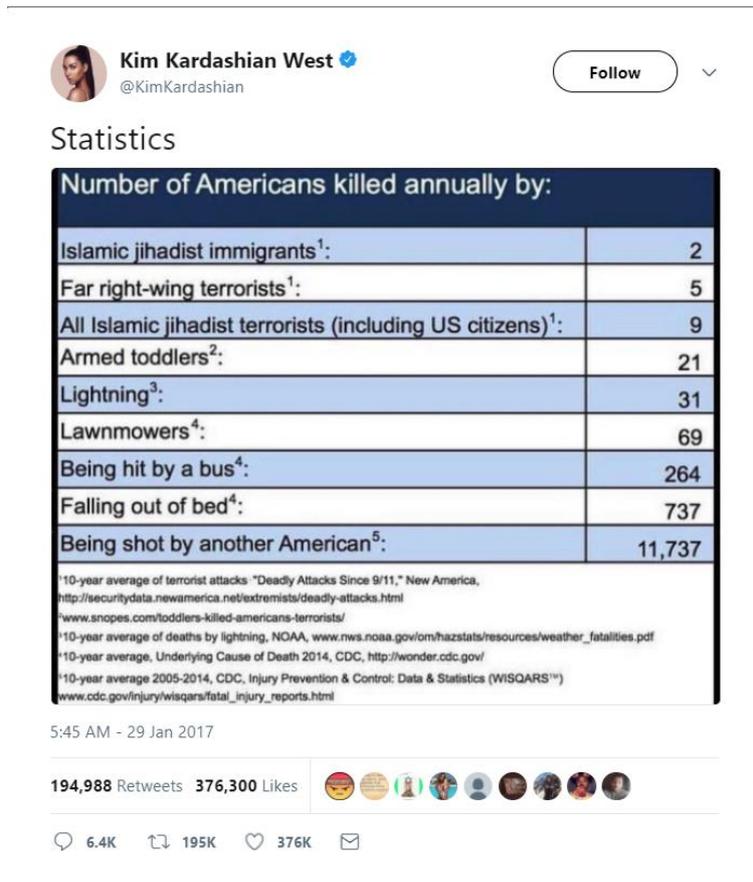
Source: <https://doi.org/10.15131/shef.data.5266495>

The Chair of the Judging Panel and RSS President, Professor Sir David Spiegelhalter, said: "The strength in this statistic is its surprise element. I think the figure is far smaller than most people will have expected. Whatever side of the argument you sit on, this statistic gives true insight into the landscape of the United Kingdom."

INTERNATIONAL STATISTIC OF THE YEAR

69

This **is** the annual number of **Americans** killed, on average, by lawnmowers -compared to two Americans killed annually, on average, by immigrant Jihadist terrorists.



The image is a screenshot of a tweet from Kim Kardashian West (@KimKardashian) posted on January 29, 2017, at 5:45 AM. The tweet features a table titled "Number of Americans killed annually by:" comparing various causes of death. The table shows that 11,737 Americans are killed annually by being shot by other Americans, while only 2 are killed by Islamic jihadist immigrants. Other causes include falling out of bed (737), being hit by a bus (264), lawnmowers (69), lightning (31), and armed toddlers (21). The tweet has 194,988 retweets and 376,300 likes. Below the table, there are five footnotes providing sources for the data: 1. "10-year average of terrorist attacks: 'Deadly Attacks Since 9/11,' New America, http://securitydata.newamerica.net/extremists/deadly-attacks.html"; 2. "www.snopes.com/toddlers-killed-americans-terrorists/"; 3. "10-year average of deaths by lightning, NOAA, www.nws.noaa.gov/om/hazstats/resources/weather_fatalities.pdf"; 4. "10-year average, Underlying Cause of Death 2014, CDC, http://wonder.cdc.gov/"; 5. "10-year average 2005-2014, CDC, Injury Prevention & Control: Data & Statistics (WISQARS™) www.cdc.gov/injury/wisqars/fatal_injury_reports.html".

Number of Americans killed annually by:	
Islamic jihadist immigrants ¹ :	2
Far right-wing terrorists ¹ :	5
All Islamic jihadist terrorists (including US citizens) ¹ :	9
Armed toddlers ² :	21
Lightning ³ :	31
Lawnmowers ⁴ :	69
Being hit by a bus ⁴ :	264
Falling out of bed ⁴ :	737
Being shot by another American ⁵ :	11,737

5:45 AM - 29 Jan 2017

194,988 Retweets 376,300 Likes

6.4K 195K 376K

The figure was highlighted in a [viral tweet](#) this year from Kim Kardashian in response to a migrant ban proposed by President Trump; it had originally appeared in a Richard Todd [article](#) for the Huffington Post.

Todd's statistics and Kardashian's tweet successfully highlighted the huge disparity between (i) the number of Americans killed each year (on average) by 'immigrant Islamic Jihadist terrorists' and (ii) the far higher average annual death tolls among those 'struck by lightning', killed by 'lawnmowers' and in particular 'shot by other Americans'.

Todd and Kardashian's use of these figures shows how everyone can deploy statistical evidence to inform debate and highlight misunderstandings of risk in people's lives.

At the very least, they clearly failed to show how someone can highlight the misunderstanding that the future can be

Member of the RSS judging panel, Dr Liberty Vittert, said: "Everyone on the panel was particularly taken by this statistic and its insight into risk - a key concept in both statistics and everyday life. When you consider that this figure was put into the public domain by Kim Kardashian, it becomes even more powerful because it shows anyone, statistician or not, can use statistics to illustrate an important point and illuminate the bigger picture."

What point? What picture?

predicted by numbers
without thought.

HIGHLY COMMENDED

- 3%

At the beginning of 2017, real average pay in the United Kingdom was still around 3% lower than in 2008.

The state of the UK economy is extensively covered in the media - especially in the final half of the year, with the annual Budget announced by the Chancellor in November.

The judging panel thought this statistic, (taken from the Office for National Statistics' analysis of real earnings) captures, amongst other things, how damaging the recession of the late noughties continues to be - nearly ten years later.

Source: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/articles/supplementaryanalysisofaverageweeklyearnings/latest>

Sir David Spiegelhalter, said: "This is a very simple but equally powerful statistic. It shows the enduring pressures on people's incomes, nearly a decade after the financial crash. It encapsulates the real problems facing millions of families, as well as the growing pressure on decision-makers to get things moving in the right direction once more."

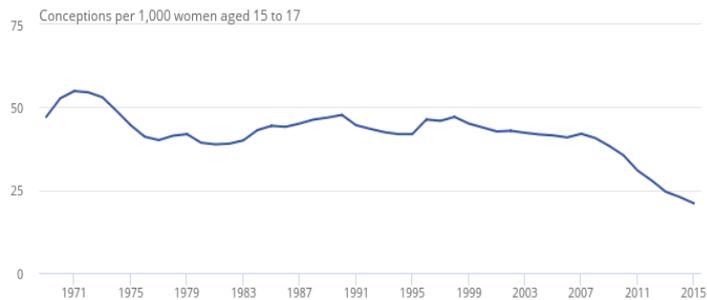
21.0

According to figures publicised this year, the under-18 conception rate in the UK in 2015 was 21.0 conceptions per thousand women aged 15 to 17. This is the lowest such rate recorded since comparable statistics were first produced in 1969.

This is one of several statistics about young people in the UK which show the significant changes in their lifestyle choices over the last 40 years or so. The numbers of young people drinking and smoking regularly have also similarly decreased.

Figure 3: Under 18 conception rate, 1969 to 2015

England and Wales



Source: Office for National Statistics

The judging panel thought the chosen statistic was a powerful one - demonstrating some significant improvements in sex education and access to health services for young people in the UK, as well as their own changing behavioural choices.

Source:

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/bulletins/conceptionstatistics/2015>

Member of the RSS judging panel and Chief Executive of Ipsos MORI, Ben Page, said: “A lot of work has been done on the [“perils of perception”](#): how **wrong** we are about a whole range of things about society. The judging panel felt this statistic, **showing** the sharp **fall** in teenagers and young women **having babies**, is a good example of this. The public believe one in five teenagers have babies - they are wrong. The fact that young people now drink less, fight less and are better educated, among other measures, has had some press coverage, but we think there should be much greater public awareness of such a dramatic change in young people’s behaviour.”

403.3

New figures, released in October 2017, showed that the concentration of carbon dioxide (CO2) in the atmosphere has now exceeded the symbolic threshold of 400 parts per million, reaching 403.3ppm - its highest level for around 800,000 years.

The calculations appeared in a report by the United Nations' World Meteorological Organization (WMO).

The WMO's report added that the atmosphere's rising CO2 levels "have the potential to initiate unprecedented changes in climate systems" - leading to "severe ecological and economic disruptions."

Before the Industrial Revolution, CO2 levels are believed to have been lower than 280ppm.

Source: <https://public.wmo.int/en/media/press-release/greenhouse-gas-concentrations-surge-new-record>

Dr Liberty Vittert, said: "The judging panel received some fascinating nominations on important 'green' issues - such as the amount of plastic in the oceans. But we felt this was the best environmental contender, with some striking figures being put forward in a very strong historical context."

7.7 billion

In June 2017, the number of active phone connections (7.7 billion) exceeded the world's population for the first time ever.

The judging panel thought this statistic was worthy of 'Highly Commended' status as this landmark was finally reached in 2017 after several years of dramatic increases in phone connections around the world.

It now seems **astounding** that, in 2001, **more than half** of the world's population had yet to make their first phone call.

Source: <https://www.gsmaintelligence.com/>

Member of the RSS judging panel and BBC journalist, Mark Easton, said: "In the view of the judging panel, this was a staggering statistic. It **shows** just how rapidly **the whole world** is now entering into the communication age."

< 0.005

For nearly 100 years, findings have been declared to be 'statistically significant' if " $P < 0.05$ ", which means that the chance of getting such dramatic results, if all that were operating were pure chance, was less than 5%. Many people have claimed that this is too lax a criterion, in that too many 'discoveries' are announced, only for them to disappear when experiments are repeated.

In 2017 a large group of prominent statisticians argued that the default criterion for 'significance' should be made more stringent and set to $P < 0.005$. This bold proposal would lead to radically fewer, but possibly more reliable, scientific claims.

Background information: <https://www.nature.com/articles/s41562-017-0189-z>

Sir David Spiegelhalter, said: "We think that few people will have heard of this statistic, or the concern about P values. However, this figure is at the heart of a very important and ongoing scientific debate. Statisticians want to ensure that numbers can be trusted but, if scientific experiments cannot be replicated, how can the public trust their findings? Those proposing this new criterion for scientific 'significance' claim it could lead to a major improvement in the quality of the published scientific literature."

BACKGROUND INFORMATION

Statistic of the Year is a new initiative by the Royal Statistical Society for 2017. In a similar vein to the Oxford English Dictionary's 'Word of the Year', the RSS looked for statistics that were felt to capture the overall spirit of the year. Nominations could be made by members of the general public and RSS members worldwide, while RSS staff also proactively looked for suitable statistics.

Commenting on the initiative, Hetan Shah, RSS's Executive Director, said: "We were delighted with the quality of the nominations for the inaugural 'Statistic of the Year'. Taken together the selected statistics tell us a story about important issues in 2017: land use (in the context of debates about housing), pressures on pay, mobile phone usage, teen pregnancies, our environment, and even deaths by lawnmowers. We're already looking forward to Statistic of the Year 2018."

The judging panel was chaired by RSS President, Professor Sir David Spiegelhalter. The other panel members were:

- **Mona Chalabi – Guardian US**
- **Professor Diane Coyle – University of Manchester**
- **Mark Easton – BBC News Home Editor**
- **Dame Jil Matheson – Former UK National Statistician**
- **Ben Page – Chief Executive, Ipsos MORI**

• **Dr Liberty Vittert - University of Glasgow**

ENDS

For more information, images or interview requests, please contact Mags Wiley, RSS Press & Policy Officer, at m.wiley@rss.org.uk or 020 7614 3920. Or for calls out of office hours, please call 07709 640476 or Director of Policy & Public Affairs, Iain Wilton on 07941 049205

Use the hashtag #StatoftheYear on Twitter to join the discussion.

The Royal Statistical Society (RSS) founded in 1834, is one of the world's most distinguished and renowned statistical societies. It is a learned society for statistics, a professional body for statisticians and a charity which promotes statistics, data and evidence for the public good. Today the RSS has over 8000 members around the world. www.rss.org.uk @RoyalStatSoc