
u3a Second Nature 007 (Oct 2023)

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Bulletin 007 - Halloween Issue

Second Nature is a newsletter sent by the u3a Subject Adviser on Climate Change and Environment to subscribers in the u3a Climate Network. The name reminds us that it should be second nature to think about environmental impact when we take decisions, and as instinctively as we think about the financial impact.



A few weeks ago we bought our three-year-old granddaughter a trident so she could be a little devil at Halloween. It is a role made for her. At least this particular piece of plastic tat was second hand, from a charity shop. I confess that I'm not a great fan of Trick or Treat: it didn't exist when I was a kid, but seems to have been imported from the US some time in the 1960s along with I Love Lucy, and seized on by marketing men and retailers as another way of making us spend money. It inspired a new industry, the growing of pumpkins for carving.

In 2020 the food charity [Hubbub](#) reported that half of the pumpkins we buy for Halloween are carved but the flesh not used; millions of them end up in the general household bin. It advised us to eat them, or compost them, put them out for birds, or

dispose of them in the food waste collection. In another forum I passed on this message, only to be rounded on by cooks who told me that pumpkins grown for carving are different from pumpkins grown for eating, and in fact taste like cardboard. You have been warned.

if you're bored with carving pumpkins, a face mask can save you a lot of work:



I'm not offering tips on how to have a greener Halloween: just use your common sense.

The Population Question

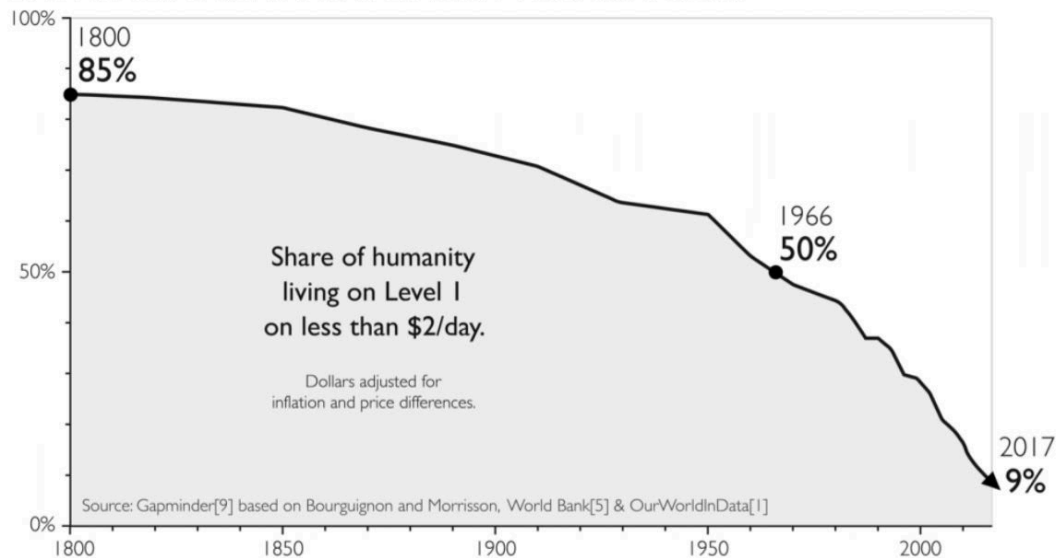
When you talk to people about climate emergency there are three common excuses given for doing nothing. They are:

- there is no point in us stopping our emissions until China stops. I talked about this in Issue 002 of this newsletter
- anyway, there are too many of us now, and
- anyway, it's too late.

In this bulletin I want to write about the second of these, which I am calling the population question.

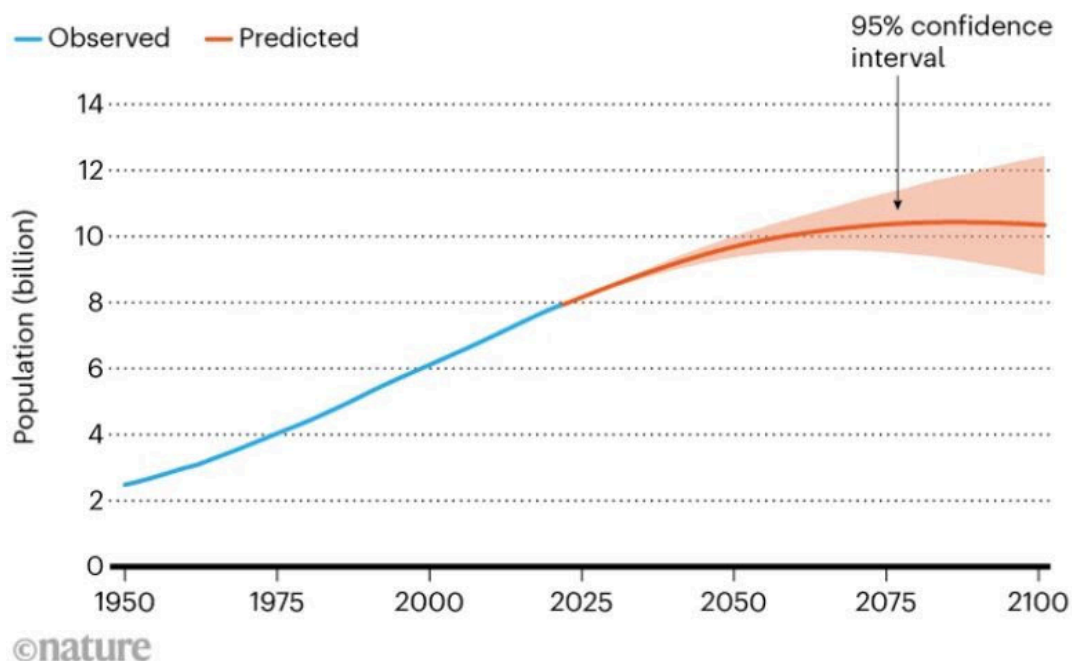
In 1954, the year that I was born, world population was 2.69bn, and on 15th November 2022 it was reported by the UN to have reached 8bn - that's an increase of 279% in just over 70 years. In 1954 more than half of humanity lived in extreme poverty, and few would have taken bets on our ability to feed a population of 8bn. In fact the percentage living in extreme poverty fell rapidly in the early 21st century, from 29.5% in 1997 to 9.1% in 2017.

EXTREME POVERTY RATE FROM 1800 TO TODAY



Of course 9% is still around 720m people. We need to fix that.

The UN Population Division is forecasting that population will reach around 10.4bn by 2100, by which time the growth will be zero or slightly negative. The increase that we see now is not due to rising birth rate but to people, on average, living longer. I assume that as a u3a we are in favour of that.

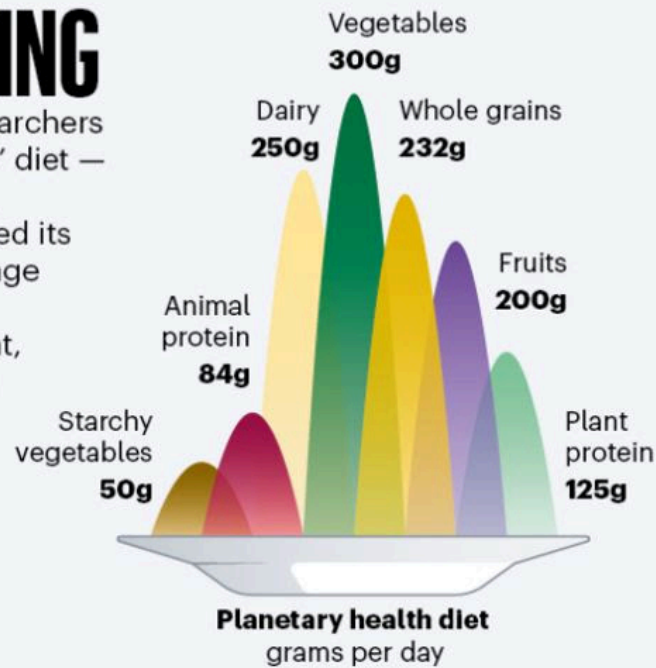


Can we feed 10.4bn people? In 2019 the [EAT-Lancet Commission](#) asked whether we could feed 10bn people in 2050 while staying within planetary boundaries. Reassuringly, it concluded that we can. The result is called the Planetary Health Diet or PHD and it looks like this:

HEALTHY EATING

A commission of food researchers devised a 'planetary health' diet — meant to be nutritious and sustainable — and compared its composition with the average diets in different regions. Further studies showed that, in many regions, following the proposed diet would be prohibitively expensive.

By Kerri Smith
Design by Jasiek Krzysztofiak



Although it is mainly plant-based it is not vegetarian.

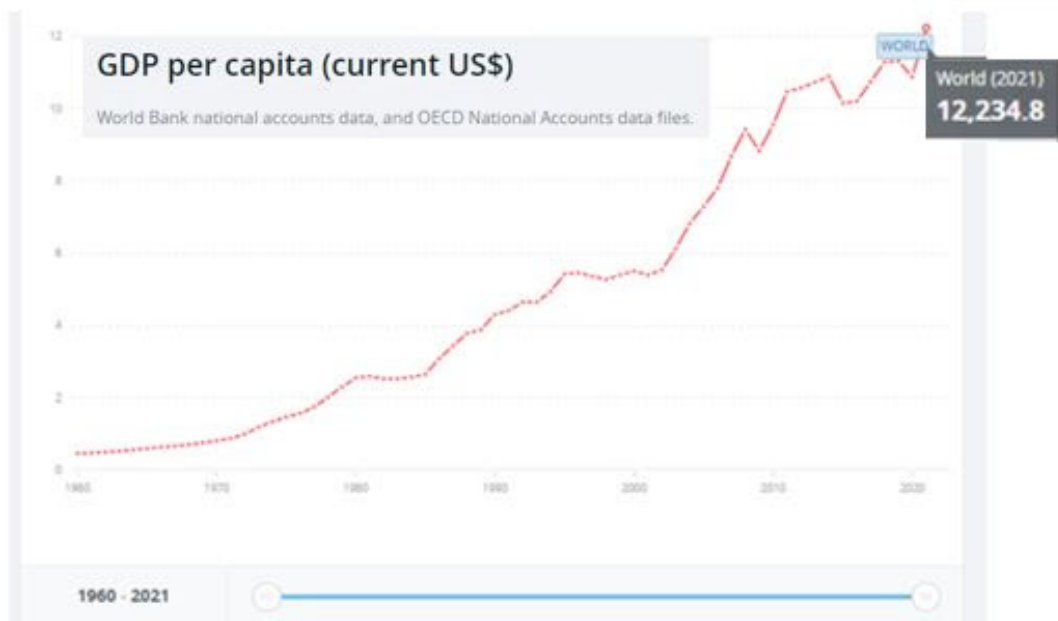
This is what a day's worth of food would look like. It might not go down well in Texas but if everybody in the world could have this the world would be a much better place.



There is even a [recipe book based on this diet](#). My copy is sustainable, because I got it second hand from Oxfam. I have to confess that I don't use it much.

I don't have space in this issue to expand on the idea of planetary boundaries (if you would like to know more a good place to start is the 2009 article '[A safe operating space for humanity](#)'). We can however do a back-of-an-envelope estimate of what world GDP would be if 10bn people have a decent standard of living. World GDP per capita has risen steadily (we have already seen that poverty is on the way down)

and in 2021 was \$12,235:



I'm surprised that it is that high. We know that income is not evenly distributed:



It looks like the low income countries have had a hard time.

Now a lot of environmentalists (and some economists) spit when you mention GDP. It doesn't measure wellbeing, they say, or quality of life. My answer is that it does if you are dirt poor. Anyway, I'm using it here simply as a measure of the size of the economy – the number of marketplace transactions if you like. I accept that GDP doesn't include things like volunteering or unpaid childcare or other caring work that people do.

Suppose for sake of argument we look to give 10.4bn people the income of the middle income countries. Here are some examples of such countries, and their GDP per capita:

Argentina \$10,636

Cuba \$9,467

Malaysia \$11,109

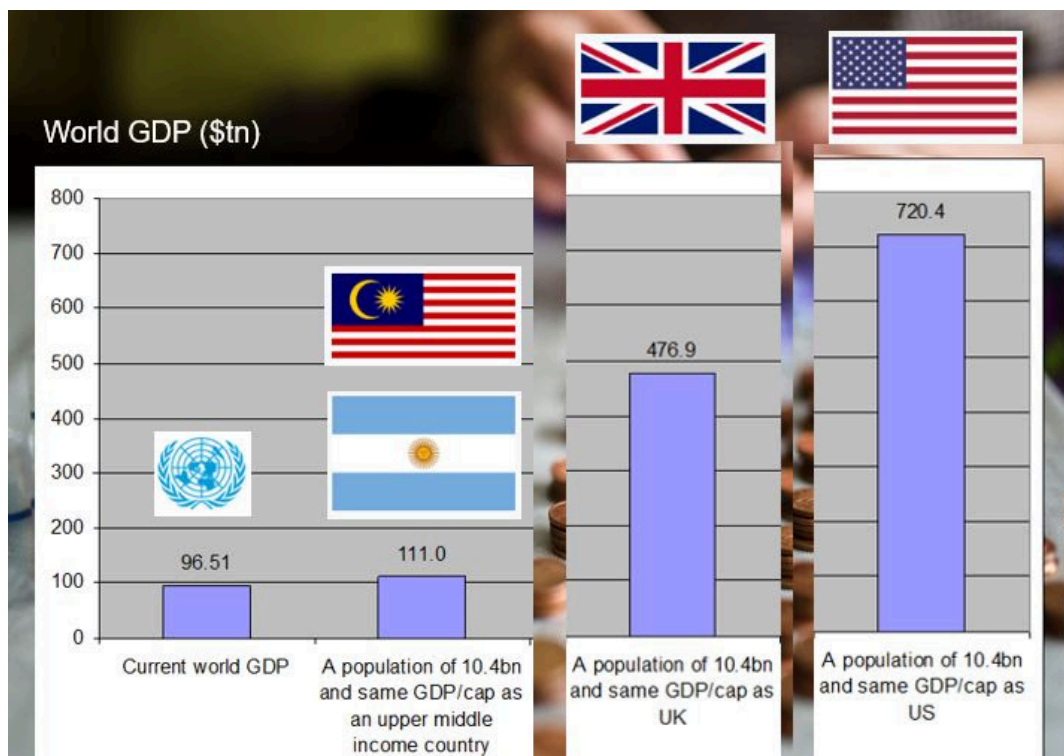
Mexico \$10,046

Current world GDP is \$96.51tn – a trillion dollars is a million million dollars, so we are talking about the equivalent annual income of 96,510 billionaires. If we take the same GDP per capita as the upper middle income countries, and give it to everybody, then world GDP has to grow by around 15%. This doesn't sound too hard, but remember that we are using a lower average than the 2021 average. This would represent a massive transfer of money from the developed world, so it isn't going to happen, but it sets some sort of lower limit.

UK GDP per capita in 2021 was \$46,510. If we gave 10.4bn people this standard of living then the world economy would have to grow almost 5 times.

US GDP per capita in 2021 was \$70,249. If we gave 10.4bn people the same standard of living then the world economy would have to grow more than 7 times.

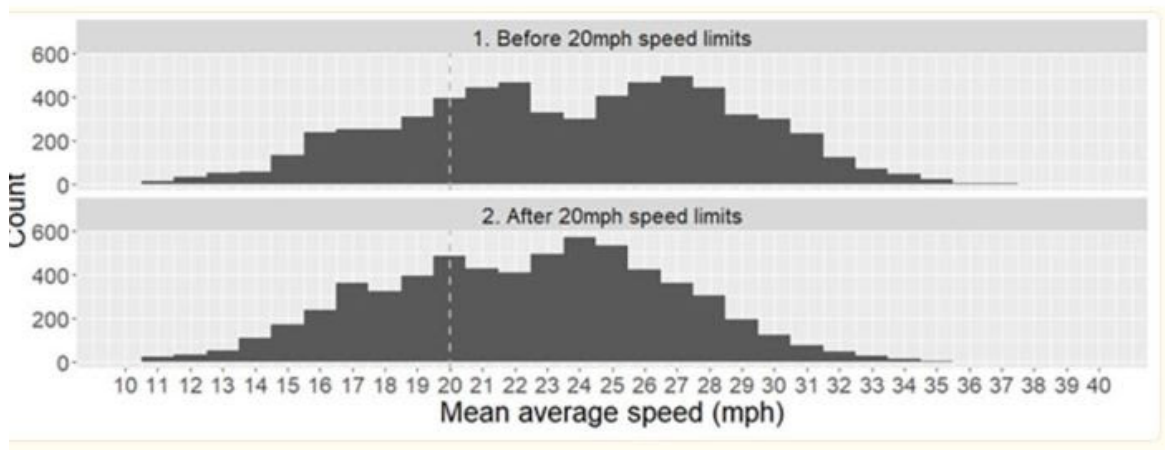
Our back-of-envelope model now looks like this:



This I think is the huge challenge because we need so much STUFF. To the best of my knowledge there is no equivalent to the Planetary Health Diet that deals with stuff – how much concrete, steel, aluminium, plastic, asphalt we can produce while staying within the planetary boundaries.

20 mph limits

20 mph speed limits have been in the news lately. Because I think that arguments should be based on data rather than opinions, I would urge anybody who wants to argue for or against them to read [this paper about the experience in Edinburgh](#), where 20 mph streets were introduced in 2018. The Council collected speed and volume data across a full week for 66 streets. You can see the result here:



The chart summarises 12,672 measurements. The average speed dropped by 1.34 mph and the median by 0.47 mph. You can see that both are above the speed limit - it seems a 20 mph limit is really a 24 mph limit.

The largest average speed reduction recorded in a single street was from 28.11 mph in 2016 to 17.7 mph in 2021, a reduction of 10.41 mph. The road layout was also changed on this street. It looks like physical measures to calm traffic have more effect than speed limits. They are expensive however compared with changing limits.

Road traffic collisions in Edinburgh have fallen since the 20 mph limit was introduced, from 95 a month in 2016 to 64 in 2018. This seems to be on the back of a general downward trend (2016 down 43% on the 1997 peak of 165) but the 20 mph limit appears to have accelerated this (pun unavoidable).

The Council's full evaluation is [here](#).

Feedback

Reader **Kevin** tells me that *when communicating with most people they [only] take interest in an area if it affects them. The only climate change item that I can think of that is going to make joe public sit up is the [heat events we had last year](#) which sadly led to more people passing away. Are there any others that you can think of as the sea level rise is not [happening] soon enough for joe public to care?*

My reply:

As regards heat, you may have seen a statement by Sadiq Khan that [London may be facing 45C heat in the foreseeable future](#). 45C will be no joke - the tube system isn't engineered to deal with it, nor are hospitals, schools, and care homes. Cities and large towns should be thinking about appointing a Chief Heat Officer. We need more shade trees, less black asphalt, more white roofs - there is a long list.

You could talk about climate change refugees. [This article](#) estimates that there could be 1.2 billion of them by 2050. It comes not from some green fringe group but from Zurich Insurance.

In some ways I regret this message. These pieces may be startling, but we shouldn't give way to doomism. Climate scientist [Michael Mann](#) argues strongly against doomism in his 2021 book *The New Climate War*, saying that it is just as damaging as denialism. The world's problems are difficult, but soluble, given leadership and political will.

If you have content that you would like to see in this newsletter send it to me. I reserve the right to decide what is included, and to edit things in the interest of brevity. I keep your emails in a Gmail folder to which only I have access; I will delete them when I don't need to refer to them any more.

References and Acknowledgements

I use a lot of links, because I want to make sure that you can track things back to where I got them from.

The picture of the masked pumpkins was taken in Langley, Hertfordshire in 2020.

The graph of world poverty is from the [Gapminder Foundation](#), which says that *our mission is to fight devastating ignorance with a fact-based worldview everyone can understand*. If you want to see what life is like on different incomes in different parts of the world, look at [Dollar Street](#).

The graph of world population is from Nature.

The graphic Healthy Eating comes from an article by Kerri Smith in Nature, 2nd December 2021. It is part of a larger [set of graphics on the PHD by Jasiak Krzysztofiak](#) which won an Information is Beautiful Award in 2022. The picture of a day's food in the PHD is by Sophie Vermeulen, one of the members of the EAT-Lancet Commission.

Data of world GDP and GDP per capita is from the World Bank and OECD, rounded to the nearest dollar.

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See also the [u3a Climate Change & Environment website](#).

A note on sources: I am a Guardianista (and indeed a Guardian Supporter) and I frequently forward links to content from that paper. This is for practical reasons, not political ones - unlike your favourite newspaper Guardian content is not behind a paywall (you may have to register, but you won't have to pay). I will from time to time link to content from The BBC, [The Conversation](#), [Ensia](#), Nature, and other sites that I feel are credible.

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