

Discover News-sheet

July 2019



Climate Crisis – what can we do?

Dear Friends,

The climate crisis is very serious. All the evidence suggests that the situation is getting worse. We wonder whatever we can do to make a difference – and often we feel rather helpless.

Discover has a positive and practical suggestion. **We can indeed do something!**

Research recently published by ecologist Professor Dr Thomas Crowther of the Swiss Federal Institute of Technology in Zurich (ETH Zurich) gives us cause for hope and action. His research claims that the worst effects of climate change can be avoided if 1.2 trillion trees were to be planted¹. That is 33% more trees than are on the earth today.

Our friends in Africa suffer the effects of the climate crisis more than we do, whilst it is we in the rich North that have largely caused the problem. That more trees are being planted in the UK is, of course, good news. But what more could we do?

We can compensate for our oversized CO2 footprint by supporting our colleagues in Africa to plant trees.

There are websites available which enable us to calculate our carbon footprint, see below. They are comprehensive, they include travel, home heating and electricity consumption, which are the major sources of CO2, and our eating habits and consumer lifestyle. When I did this, my footprint came to 13,66 tonnes of CO2 per year, rather more than even the average for western Europe of 12.5 tons per person. But when I left out a flight to Uganda, my total came to the less startling, though still bad, 9,89 tonnes per year! But maybe I did not remember everything I do!

The calculation of how many trees one needs to plant to compensate for one's footprint is a very inexact science.

Several websites seem to suggest that a tropical tree will absorb on average 22 kg of CO2 per year, or 1000 kg in just over 45 years. If so, and if one assumes that a tree planted today will survive for 45 years, then to compensate for my CO2 output of 13.66 tonnes I need to plant 13.66 trees every year. In practice, one must plant possibly 5 trees to be sure that one comes to maturity. In this case, I need to plant 5 x 13.66 or 68.3 trees.

How can I plant so many trees?

¹ <https://www.weforum.org/agenda/2019/03/planting-1-2-trillion-trees-could-neutralize-co2-emissions-says-ecologist>

No problem! Two of our partners in Uganda are eager to plant more trees. The first is the Kasese Network. Their aim is that 50 farmers in each of their three centres should plant 100 trees. That is a total of 15,000 trees. They estimate that the project will cost £9000; thus the cost per tree is 60 pence. The second is Eric Kihuluka and the Mikwano project in Kaliro who are working with 220 schools in Kaliro District. Eric's cost estimate per tree is similar – they will plant just as many trees as they can with the funds that become available.

So how much should I donate to our Discover partners? I calculate $68.3 \times 0.6 = £41$ per year. That does not break the bank!

Would you be willing to join me in taking part in this action?

You may at least like to compensate for your holiday and every day transport. The following figures indicate how quickly we produce CO₂:

- An average sized family car that covers 12,000 kilometres produces between 2500 and 3500 kg CO₂ each year.
- A return flight from Stuttgart to Majorca produces 562kg CO₂ per passenger or Stuttgart to Berlin 318kg CO₂.
- A 5-day cruise in a ship with 1000 – 2000 passengers produces 1,143 kg CO₂ per person.

There are other advantages from tree planting programmes. Trees also sequester additional carbon into the earth. Trees have a positive influence on rainfall and increase humidity. Some trees provide timber, some fruit, some medicine, some shade, some increase soil fertility. Most absorb pollutants from the atmosphere and also provide opportunities for employment.

Having said all this, we must also, urgently, reduce our footprint. I quote from a reliable German website, "To protect the environment, including for future generations, each person should generate no more than 2 tons of CO₂ each year in order not to contribute to global warming. The actual emissions per person today are about 6 times higher."

The references below enable us to calculate our footprint. They also give ideas about how we could make our footprint smaller.

The newsletter I shared recently with colleagues in Africa, to which I received positive feedback, includes much info about the climate crisis that is already well-known in Europe. Even so, you may be interested to read it: [Here on our Homepage](#).

Please join us in this programme.

With best wishes,

Keith

References 1 to 3 are different footprint calculators in metric units and 4 in imperial units. Note that some calculators give the carbon footprint, and some the carbon dioxide footprint. The carbon dioxide footprint is greater than the carbon footprint by a factor of 3.67.

1. <https://footprint.wwf.org.uk>
2. <https://www.carbonfootprint.com/calculator.aspx>
3. https://co2.myclimate.org/en/footprint_calculators/new
4. <http://www.carbonify.com/carbon-calculator.htm>).