

The delegates at the Paris Conference on Climate Change agreed on 12 December 2015 to keep the temperature rise to below 1.5 degrees C. The United Kingdom ratified the Climate Agreement on 17th of November 2016 as the 111th country to do so. It is now becoming law. We can help by using less energy. These are some things everyone can do.

1) Replacing ordinary bulbs by LED light bulbs, much longer lasting (if properly made!)

LEDs for use in ordinary fittings are now for sale – for both bayonet (B22) and screw (E27) and small bayonet (B15) and small screw (E14). It makes good sense to replace standard light bulbs as well as the CFL bulbs (curled tubes as on the picture) by LED ones especially when the CFL bulbs start becoming dim. I saw LEDs on the shelves of Waitrose, Tesco, Sainsbury, Homebase, B&Q, Maplins and Asda. They use about a ninth of the energy of old-fashioned fluorescent bulbs; and about half of the curly CFL ones which take such a long time to warm up and contain toxic mercury. LED bulbs for use in the home now tend to give a **warm white** type of light (WW or 2700 Kelvin on packet). Apparently the US has used less energy than before, because so many people switched to LED lightbulbs!

- a) **800 lumen** bulbs (=60 Watt equivalent or over for light to read by
- b) **510 lumen** bulbs (=40 Watt equivalent) suitable for background lighting.
- c) **900 to 1300 lumen** bulbs (= 100 Watt equivalent) for fine work
- d) **1521 lumen bulbs** (> 100 Watt equivalent (At B&Q and Maplins at about £7. You may have to order)

Prices: from £4.99 to £10.00 for 800+ lumen light bulbs
 (= 60 Watt equivalent) and
 From £4.00 to £7.00 for 400-500 lumen light bulbs
 (= 40 Watt equivalent).

Named brand bulbs (OSRAM, Philips, Luceco, GE Electric, Diall) are under warranty for in between 3 and 6 years.
 Please dispose of the curly toxic CFL bulbs in special bins, e.g. at Sainsbury's

GU10 and GU5.3 / MR16 halogen bulb replacement LED lightbulbs: 2 types of light fitting!!



Take the old halogen bulb along when buying LED spotlight bulbs to make sure the bulb fits the socket. **MR 16 & Gu10 have different pins!**

The left bulb uses a GU5.3/MR16 fitting: straight pins

Solar LED lights for Africa

Something else which people might like to do, is help, especially women and children, in Africa to use a solar lamp instead of the very dangerous, often home-made kerosene lanterns more than 550 million Africans have to rely on. The toxic black fumes damage people's lungs, and if one of these lanterns falls over, a child doing her (or his) homework, can get terribly burnt. Also buying kerosene is a recurring expense, while sunshine doesn't cost users anything. With the free light children can spend an additional hour doing homework. Last but not least, helping someone to purchase a solar lamp, cuts a considerable amount of greenhouse gas. And especially in countries already suffering climate change – whether in the form of drought lasting for years, or in the form of devastating flooding – limiting greenhouse gas is important. A gift of just £3 makes it possible for a family to buy a solar lamp. Just look online at **solar-aid.org** By Autumn 2015:

10 million	\$345 million	2 billion extra	5.8 million	880,000tonnes
People with	Saved by	Study hours for	People noticing	Of CO ₂ averted
Access to safe,	Families	Children	Better health	
Clean solar light				

Look at the Solar-Aid website. Contact Solar Aid, Can Mezzanine, 49-51c East Road, London N1 6AH, Tel. 020 7278 0400

2) Plastics recycling (info about recycling e.g. at: (<http://www.birmingham.gov.uk/recycling#mixedmaterials>

We can help by limiting the amount of plastic items that ends up in landfill - or worse, in the oceans, threatening marine life that ingest them. Most of the three million tonnes of plastic the UK produces each year are thrown out by households. Plastic pots, such as yoghurt pots can now be put in the recycling bin with (PET plastic) bottles. But remove labels, please. Soft plastics may contain toxic phthalates, which can affect reproductive health. Some types of plastic are degradable:

1) bio-degradable or oxo-degradable ones (some salts added), which are plant-or oil-based, can be consumed by bacteria, so I put my bio-degradable New Scientist wrapper, at the back of the garden under a bush (they need to be open to the air) to become soil in the future; light polythene now tends to be bio-degradable

2) photo-degradable ones break up in ever smaller bits – *Don't mix with plastics for recycling!* Small plastic bits in the oceans can be gobbled up by fish and turtles, who mistake plastic globules for tasty fish eggs. Beauty products and toothpastes may contain microscopic plastic particles for greater abrasiveness, so check for ingredients called PP, PE, PET or PMMA, all different types of plastic. Plastic carrier bags **can** be recycled and some shops like Sainsbury's accept them. Think of reusing magazine wrappers when food shopping instead of small bags provided by shops for your produce.

3) Food choices. Also think of limiting food waste

Eating less meat saves a great deal of emissions, as its production is very energy-intensive. Cattle are fed cattle-cakes which contain soya. Large amounts of soya are grow on land cleared of tropical forest, such as in the Amazon forest – often illegally, and flown over to Britain. According to Guy Watson (of Riverford organic box schemes) livestock agriculture contributes 10-12% of manmade climate change. Please consider joining the 'Meatless Monday' movement. Below two veggie recipes to feed 1 or 2 people on a meatless day:

I add two recipes for meatless protein dishes here:

i) My mum's standby oatflake fritters, ii) Chickpea flour crepes + 3) Meatless ragout as filling for crepes,

<p>i) My mum's standby oatflake fritters 2 oz porridge oats 2 oz mature cheese, grated 1 egg (When out of eggs, I used 4 tablespoons of chickpea (gram) flour + milk instead! Half tsp marmite. half an onion, cut into small pieces Pinch salt, black pepper, ¼ tsp of cumin seed Mix into a dropping consistency, and fry in a smear of corn oil in a non-stick frying pan. I use one with a ceramic coating and a see-through glass lid, for use without butter or oil</p>	<p>ii) Gram flour crepes (no eggs necessary) 2 oz of chickpea flour 4 fluid oz of water ¼ tsp of turmeric, 1/8 tsp of chilli powder, pinch salt 1 tbsp finely cut green herbs (coriander, chives) Mix and leave to stand for an hour or so. Fry in a hot frying pan, smeared with oil. Perhaps fill them with meatless ragout, such as the one below Filling for crepes (possibly with some kind of meatless ragout, e.g.: Finely cut onion, mushrooms, veg, perhaps 1oz cheese Heaped tbsp flour, salt and pepper to taste 1 tbsp butter or sunflower or (g)rapeseed oil¹ Milk, water or stock</p>
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I use a frying pan with a ceramic coating and a see-through glass lid for use without butter or oil
 PS: Vegetable oil tends to be palm oil, often from plantations in illegally cleared tropical forests

Drawing the curtains, when it gets dark

You need less energy to warmyour rooms/ Much warmer!!

Drying your washing

Please don't use dryers. If at all possible, hang your washing outside. The result is nicer and fresher anyway

