



# World Environmental Day 4 – Climate Change

Sarah Judkins

Proud history, bright future.



# Introduction to climate change

- Climate change is one of the biggest challenges we're facing as a species. Human activity over the last 200 years has meant that we're standing on the brink of an environmental disaster. Yet we're told that there are still things we can do to minimise the damage. Reducing your carbon footprint is one such action. The next few slides are going to take a look at what this means and what steps you can take.
- In brief – You can minimise your carbon footprint and help the environment in many different ways. Whether at home, work, school, or while you travel, small changes can add up. To reduce your carbon footprint, you'll want to do things like reduce the amount of energy you use, eat fewer animal products, shop locally, travel smart and reduce your waste.

# Oshkosh 1070F versus carbon footprint.

- Burning approximately 3 litres of diesel to the mile when loaded may seem extreme in the context of global warming.
- KBR/FTX are constantly looking for innovative ways in which we can rebalance the carbon foot print of HET – this is done in many ways.
- We refurbish, reuse and recycle where ever we can.
- We use oil sampling rather than change oils are prescribed intervals reducing contaminated waste.
- We reuse tyre casings.
- We recut tyres.
- We leave vehicles at sites, to minimise empty miles and wasting fuel.
- Our lights are on PIR minimising waste.
- We plan our routes to minimise distance travelled.
- Have you got any more suggestions on how we can reduce our carbon footprint?

# Demystifying the terminology

- Carbon footprint – A measure of the total amount of greenhouse gasses released into the atmosphere as a result of an individual's, organisation's or nations actions, its usually measured in tonnes of Co2e (carbon dioxide equivalent).
- Greenhouse gasses (GHG). Any type of gas in the atmosphere that blocks heat from escaping. In relation to carbon footprint and climate change, the main ones to mention are carbon dioxide, nitrous oxide and methane.
- The greenhouse effect – The process through which GHG's in the Earth's atmosphere trap heat from the sun. Although this is a natural phenomenon that keeps the planet habitable, our GHG emissions are causing the Earth to warm up at an unnatural rate.



# Climate Change – Global Warming



- Climate Change – a pattern of long-term change in the temperature and weather patterns either globally or regionally. Although these alterations occur naturally, man made climate change is rapidly accelerating the pace of them.
- Global Warming – the rapid increase in average surface temperatures on Earth caused by the accumulation of GHG's in the atmosphere. It is just one element of climate change.
- Fossil Fuels – natural resources that produce carbon dioxide and other greenhouse gases when burnt. Coal, oil and natural gas are all examples.

# Emissions league table

Country	Emissions per capita (tonnes of Co2)	Total annual emissions (tonnes of Co2)
Australia	19.96	417.04 million
USA	16..21	5.27 billion
Canada	15.55	571.14 million
China	6.92	9.84 billion
UK	5.81	387.39 million
India	1.84	2.46 billion
Nigeria	0.64	122.78 million

- Just looking at the numbers in the adjacent chart, you may feel there is little point anyone of us trying to do our bit to reverse the degradation of our planet, when the emissions being generated by Australia, Canada, UK and Nigeria do not even equate to the out put of India 1.5 billion tonnes compared to 2.46 billion tonnes
- China, the US and India are responsible for CO2 emissions circa of 17.57 billion tonnes
- The biggest mistake we can make is thinking somebody else will save our homes, our planet for us, when in reality we all have a responsibility to future generations to do what we can.
- Failure - it is not an option!

# How do I know what my carbon footprint is?

- Amazingly, just 100 companies are responsible for 71% of global green house gases.
- This does not mean as individuals we do not have a carbon footprint. Our actions and lifestyle choices have some impact on the environment.
- For those of you interested in working out your carbon footprint the WWF calculator is worth checking out.
- To understand what your carbon footprint is you need to look at several key areas of your lifestyle, including:
  - Your home, energy use and waste production.
  - Travel.
  - Your diet.
  - Your shopping habits.



# What can we do to reduce our carbon footprint at home



Energy	
Manufacturer Model	Fridge-Freezer
More efficient	<b>A+</b>
A	
B	
C	
D	
E	
F	
G	
Less efficient	
Energy consumption kWh/year (Based on standard test results for 24h)	XYZ
<small>Actual consumption will depend on how the appliance is used and where it is located.</small>	
Fresh food volume l	XYZ
Frozen food volume l	XYZ
Noise (dB(A) re 1 pW)	
<small>Further information is contained in product literature.</small>	

Energy	
Manufacturer Model	Fridge-Freezer
More efficient	<b>A+</b>
A	
B	
C	
D	
E	
F	
G	
Less efficient	
Energy consumption kWh/year (Based on standard test results for 24h)	XYZ
<small>Actual consumption will depend on how the appliance is used and where it is located.</small>	
Fresh food volume l	XYZ
Frozen food volume l	XYZ
Noise (dB(A) re 1 pW)	
<small>Further information is contained in product literature.</small>	

Energy	
Manufacturer Model	Fridge-Freezer
More efficient	<b>A</b>
A	
B	
C	
D	
E	
F	
G	
Less efficient	
Energy consumption kWh/year (Based on standard test results for 24h)	325
<small>Actual consumption will depend on how the appliance is used and where it is located.</small>	
Fresh food volume l	100
Frozen food volume l	125
Noise (dB(A) re 1 pW)	
<small>Further information is contained in product literature.</small>	

- Insulate your home – insulating your loft and maybe your walls will help retain heat in the winter and keep the house cooler in the summer it will help cut down your household bills.
- Switch to renewable energy Consider installing solar panels you can now harness the energy your panels generate for use later in the day.
- Buy energy efficient appliances
- Use less water, turn taps off while you clean your teeth, take short showers rather than running a bath

# Changing our diet

- Change your diet – the food we eat has a significant impact on the environment. Meat and dairy products require a lot of land, water and energy to produce. They also produce a lot of methane a greenhouse gas
- Buy from local food producers
- Eat what is in season
- Composting is good for the environment, particularly when food waste is such a big issue either start composting for yourself or join a local scheme. You can help reduce landfill methane emissions and you don't use energy to produce the compost that is good for your garden too.



# Changes that we can make at work

- Turn off the lights when your not in your office or you leave the room.
- Turn off your computers and screen when they are not in use.
- Try moving away from printed documents where possible, and encourage others to work on their digital skills for the workplace.
- Are you close enough to consider walking or cycling to work?
- Eliminate single use plastics.
- Reduce, reuse and recycle where ever you can.



# Reducing the carbon footprint of travel

- Use local transport to reduce your carbon footprint if you can.
- Fly direct – to your chosen destination.
- Offset your carbon footprint by paying a premium to fund projects aimed at reducing our carbon footprint
  - These carbon offsets cover all kinds of incentive, such as restoring forests and making energy and transportation more efficient

## Take a water bottle with you

- pack it in your luggage
- Helping you to reduce single use plastics



# Raising Awareness

- As I completed this piece of work there are many things I had never considered or been aware of I'm ashamed to say.
- I have learnt so much from the Internet and the various articles I have read which are just of the few of the hundreds that are available.
- Whether you believe you can make a difference or not; the suggestions made are easy do, not time consuming and the majority will have no ill affect on your finances.
- I will definitely be giving some of these ideas ago, we owe it to ourselves and future generations to preserve the bio-diversity and ecosystems we have and enjoy on planet Earth.



**“IT IS ONE WORLD.AND IT’S IN OUR CARE. FOR THE FIRST TIME IN THE HISTORY OF HUMANITY, FOR THE FIRST TIME IN 500 MILLION YEARS, ONE SPECIES HAS THE FUTURE IN THE PALM OF ITS HANDS”**

(David Attenborough)