Friends of Hoddles Creek Inc. ABN 16 968 261 143
email: friendsofhoddlescreek@gmail.com. Mail: PO Box 298 Yarra Junction VIC 3797
web: www.friendsofhoddlescreek.com

Autumn 2020

FRIENDS OF HODDLES CREEK NEWSLETTER

THE CLIMATE ISSUE

Thanks to Yarra Ranges Council for their generous printing of the Newsletter.

Our thoughts are with everyone in Hoddles Creek during the unprecedented impact of the COVID-19 pandemic. Please stay at home as much as possible (unless you are an emergency worker, in which case, thank you), buy only what you need, keep your distance from one another, wash your hands frequently with soap and water and, most of all, be kind.

How big is your footprint?

'Carbon Footprint' is the term used to describe the amount of carbon dioxide released into the atmosphere as a result of the activities of an individual, organisation, or community.

Calculating our individual or household carbon footprint is a way for us to understand how we are contributing to greenhouse emissions and climate change, and what we as individuals can do about it. Just imagine how much impact we could make if every one of us decided to make a change to our current lifestyle – we could really make an impact!

Calculating your footprint

The first step is to calculate your own footprint – there are so many different calculators online it can be hard to choose. I chose the one from www.carbonfootprint.com/calculator.aspx, because it's free and easy to use and it gives a final comparison of your footprint to the country average and the world target.

Most calculators also provide examples of how you can offset your footprint through a donation to a renewable energy or sustainable industry project, many in developing countries. But the idea here is about reducing our own footprint, not just maintaining the status quo.

I was pleased to see that my personal carbon footprint was less than half of the average Australian, but realise I still have a long way to go before my footprint on the earth is neutral.

Shrinking your footprint

There are endless lists available online with tips and ideas for how we, as individuals, can reduce our personal footprint. The following tips may give you some ideas for a starting point:

Household:

- Fit energy saving light bulbs – LEDs can save 90% of lighting energy costs
- Switch lights off and unplug household devices when not in use
- Replace your old fridge/freezer (if it's over 15 years old) with a new energy efficient model
- Install solar panels on your roof – even without a battery storage system, you can probably provide enough electricity during daylight hours for your household and any excess will be fed back into the grid
- Insulate your house – roof, walls and underfloor if possible
- Wash clothes in cold water, ditch the dryer and hang clothes on the line to dry

Transport:

- Maintain your car and keep tyres properly inflated
- When things return to normal after COVID-19, car pool to work or for the school run and use public transport. For those who commute to the city by train – why not car share to the train station in Lilydale?

(Continued on page 2)

My carbon footprint

(Continued from page 1)

- Use public transport instead of your car – not always a practical option for those of us who live in the bush, but increased demand would probably improve the services and schedule (e.g., along Warburton Highway).
- Walk or cycle for short journeys and where possible and practical – not just good for the environment, but good for our health as well
- Reduce the number of flights you take and, when you do fly, travel economy class. If you can't avoid flying, offset the carbon emissions of your travel
- See if your employer will allow you to work from home – in these current circumstances this may become a preferred/permanent option for many occupations
- When purchasing a new car, choose a low emission vehicle or consider a hybrid or full electric car. Research* suggests that electric cars are better for the environment – they emit less greenhouse gases and air pollutants over their life than a petrol or diesel car (even after the production of the vehicle and the generation of the electricity required to fuel them is considered) .

Produce:

- Don't buy bottled water if your tap water is safe to drink
- Buy local/seasonal fruit and vegetables, or even try growing your own
- Eat less meat, especially red meat
- Reduce food wastage and freeze leftovers
- Support our local industry and avoid buying imported products
- Buy food in bulk (share with a friend or family member) and avoid excess packaging

Lifestyle:

- Learn the 5 R's: **Refuse, Reduce, Reuse, Rot, Recycle**, and practise them daily
- Refuse – avoid single use plastics and paper products by saying 'No, thank you', opting for reusables
- Reduce – downsize your purchases, opting to be more mindful of what you really need
- Reuse – keep items out of landfill by maintaining and repairing, or upcycling when it breaks
- Rot – compost your food scraps and use the compost in your vegetable garden
- Recycle – properly recycle plastic, paper, glass or metal
- Embrace a minimalist lifestyle – declutter your home and donate unwanted items to charity
- Consider purchasing second-hand clothes, toys, gifts and household items.

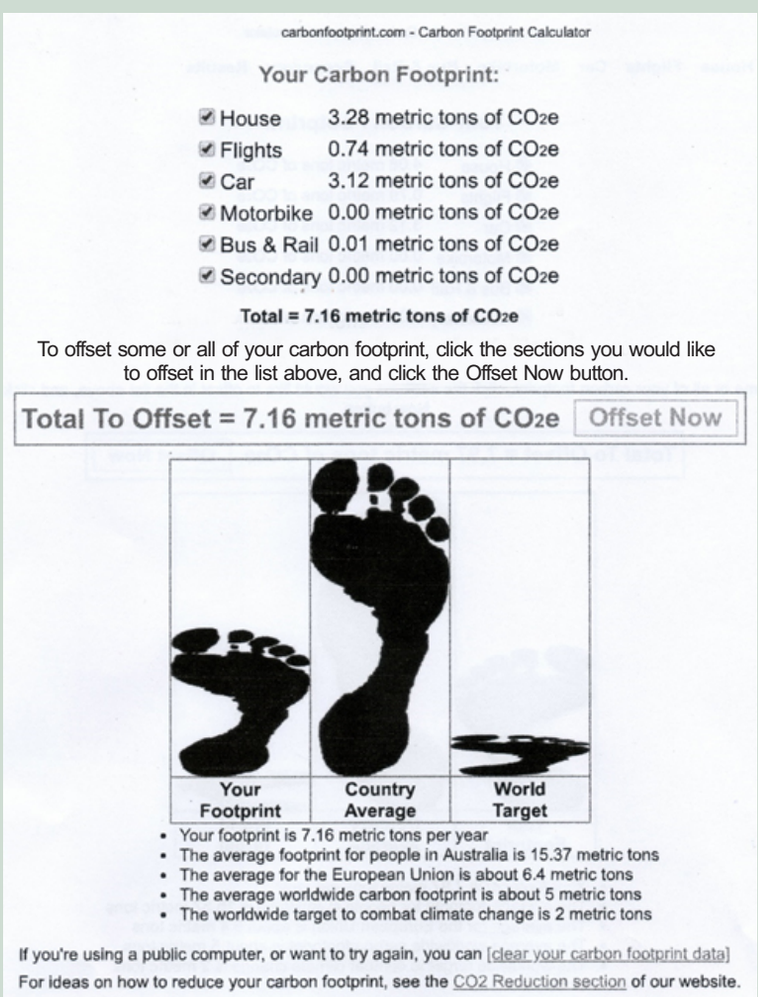
Friends of Hoddles Creek are concerned about our changing climate. We want to preserve our beautiful bushland and wildlife for future generations.

If you've taken the time to read this article, then why not take up the challenge? Calculate your carbon footprint (you may be surprised) and take deliberate action to start reducing it today. We would love to hear your feedback.

* References:

https://theicct.org/sites/default/files/publications/EV-life-cycle-GHG_ICCT-Briefing_09022018_vF.pdf

https://www.edfenergy.com/electric-cars/environment



Sample printout of the carbon footprint calculation from www.carbonfootprint.com.

Like to join FOHC? The Friends of Hoddles Creek are always on the lookout for new members to add new ideas, new helpers and new friends to our group. If you'd like to join, simply contact us with your name, address and phone or email details. You can mail these to FOHC, PO Box 298, Yarra Junction, Vic 3797, or email us at friendsofhoddlescreek@gmail.com.

See more at our website (www.friendsofhoddlescreek.com) or on Facebook – just search 'Friends of Hoddles Creek' or 'FOHC'.

"like" us on Facebook

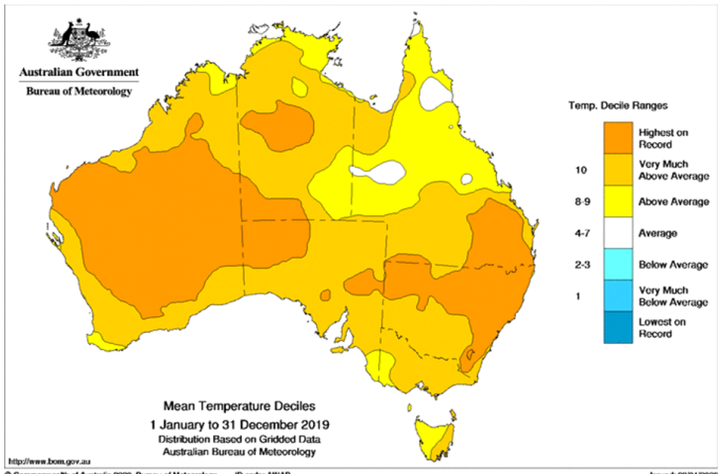
Climate change is real

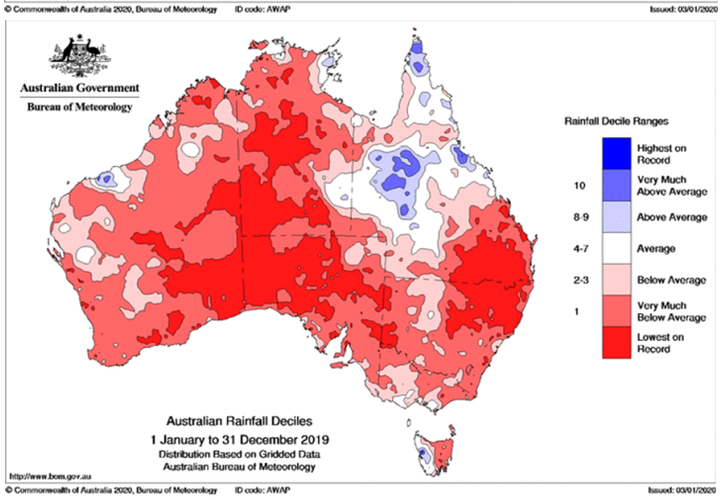
Most people would agree that the summer of 2019 - 2020 has been extraordinary. Statistics from The Bureau of Meteorology in their annual Climate Statement for 2019 support this claim, with weather records on temperature and rainfall having been broken almost all over the country.

Australia has been experiencing the impacts of climate change with unprecedented natural events of drought, bushfires and floods. Increasing global temperatures, driven mainly by higher carbon dioxide levels from the burning of fossil fuels, is an attributed cause of extreme weather events, not only in Australia, but around the world.

Some sobering statistics on climate change:

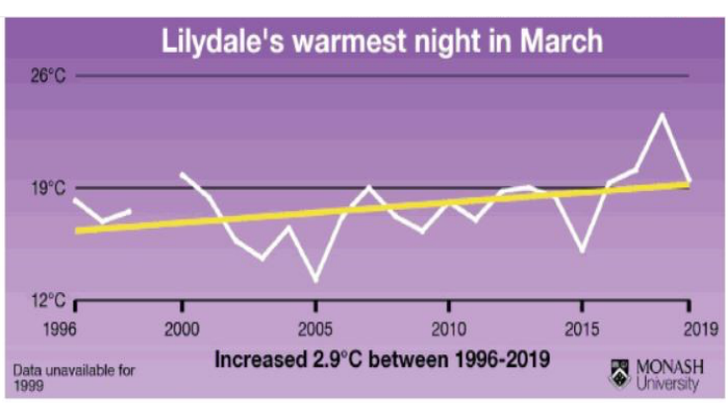
- Australia's warmest year on record, with the annual national mean temperature 1.52 °C above average
- Mean annual maximum and minimum temperatures above average for all States and the Northern Territory
- Annual national mean maximum temperature warmest on record (2.09 °C above average)
- Widespread warmth throughout the year, with 6 months amongst the 10 warmest on record for Australian mean temperature
- Australia's driest year on record
- Nationally-averaged rainfall 40% below average for the year, at 277.6 mm
- Much of Australia affected by drought, especially severe in New South Wales and southern Queensland
- Widespread severe fire weather throughout the year; national annual accumulated Forest Fire Danger Index highest since 1950, when national records began
- One of the strongest positive Indian Ocean Dipole events on record; El Niño-Southern Oscillation neutral through the year





A complete analysis of these statistics can be found in the Bureau of Meteorology Annual Climate Statement 2019, available via the following link: http://www.bom.gov.au/climate/current/annual/aus/

Weather versus climate



If you think nights around the Yarra Valley are getting warmer, you'd be right. The graph tracks the temperature of March's warmest night at the Coldstream weather station. On average, the warmest March night has increased by around 2.9°C since the mid-1990s.

Dr Ailie Gallant
CLIMATE SCIENTIST
MONASH UNIVERSITY

This article was first published in the Lilydale & Yarra Valley Leader, March 3, 2020
http://leader.smedia.com.au/lilydale-yarra-valley

While the warmest night-time temperature changes each year, shown by the white line, the average warmest night-time temperature has increased gradually since the mid-1990s, shown by the yellow line.

The two lines reflect the difference between weather and climate. Weather is the state of the atmosphere at a specific place and time. It is what you see and feel outside day-to-day. Climate describes the average weather in a specific place over a long time. For example, Melbourne has a temperate oceanic climate.

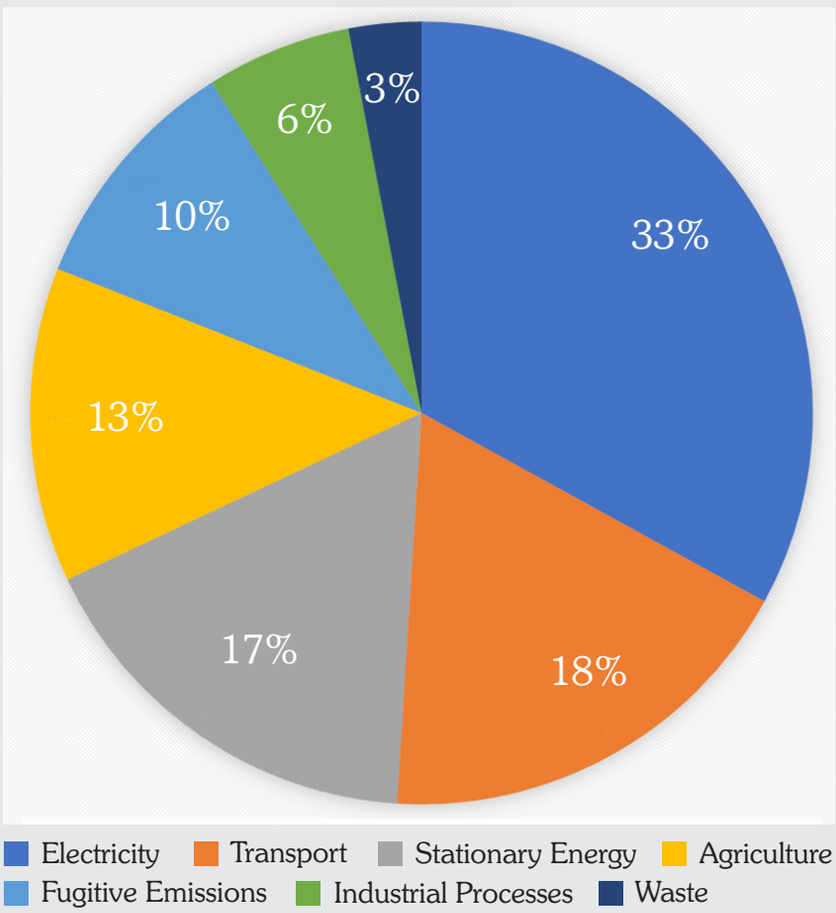
While weather changes, climate should be steady over centuries unless it is forced to change – as is happening now due to human activities.

Greenhouse Gases

It is widely accepted by the scientific community that increases in greenhouse gases due to human activity have been the main cause of global warming and climate change since the mid-twentieth century.

The pie graph below illustrates the sources of these greenhouse emissions and their related human activities in Australia for 2017.

Greenhouse Gas Emissions in Australia 2017



Statistics sourced from Climate Council Working Paper: Australia's Rising Greenhouse Gas Emissions, 2018

Electricity production is clearly the largest source of greenhouse gas emissions in Australia. Emissions are produced by burning fossil fuels (coal, gas and oil) to produce electricity. **They can be significantly reduced with energy efficiency and renewable energy and storage processes.**

Transport emissions are produced from the combustion of fuels (petrol, diesel and aviation fuel) for transportation, including road, rail, domestic aviation and shipping. They have risen with population growth and number of cars on the road (responsible for almost half of transport emissions), and increased demand for freight is driving up truck emissions (pardon the pun). Domestic air travel continues to increase, due to work and lifestyle demands and choices. **Greater use of public transport and a move towards electric cars, bikes, trucks and buses can help reduce these emissions.**

Stationary energy emissions (also called direct combustion) are produced from burning fuels for energy used directly (rather than to generate electricity), in the form of heat, steam or pressure. They come from energy production, mining, manufacturing, commercial and residential buildings (mainly from heating). **Reducing our reliance on fossil fuels, increasing our use of renewable energy and improvements in energy efficiency can help reduce these emissions.**

Agriculture emissions include methane and nitrous oxide produced by the digestive processes of animals (such as cattle and sheep), manure management, rice cultivation, agricultural soils and field burning of agricultural residues. They also include carbon dioxide emissions produced by the application of fertilizers, including urea and lime. Two-thirds of agricultural emissions are the result of grazing beef and sheep. **Sustainable agriculture and eating less meat would help.**

Fugitive emissions, as their name suggests, are produced when greenhouse gases like methane and carbon dioxide escape and are released (through venting or leaks) during the extraction, processing and delivery of fossil fuels. These emissions are mainly linked to Australia's increasing LNG production and exports. When gas is extracted, greenhouse gases like methane are released into the atmosphere.

Emissions from industrial processes are produced as a by-product of materials and reactions used in production processes. These include the production of chemical, metal and mineral products and the consumption of synthetic gases.

Waste emissions are produced in landfill, waste water treatment, waste incineration and the biological treatment of solid waste. Methane is the major greenhouse gas that is produced when organic matter decays in the absence of oxygen.

A more detailed analysis of greenhouse gas emissions can be found in the Climate Council Working Paper: Australia's Rising Greenhouse Gas Emissions 2018, available with the following link:

https://www.climatecouncil.org.au/wp-content/uploads/2018/06/CC_MVSA0143-Briefing-Paper-Australias-Rising-Emissions_V8-FA_Low-Res_Single-Pages3.pdf