



**AUSTRALIAN CENTRE FOR  
EDUCATION & TRAINING**

# **ACET-Global: the importance of education and the environment**



Australian expertise



25+ university collaborations



15+ years of business experience



20K+ people trained globally



15+ years of lecturing globally

## Corporate Social Responsibility



Global Peace Project



Global Sanitation and Sustainability Project



Global Road Safety Project



Global Entrepreneurship Project



Global Climate Action Project



Global Water Management Project



Global Air Quality Project

# Acknowledgement of Traditional Custodians

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We acknowledge the Traditional Custodians of the land on which we work and live, and recognise their continuing connection to land, water and community. We pay respect to Elders past, present and emerging.

## Speaker profile - Miranda

- Business Relations Officer
- International Relations and Sociology
  - Environmental policy, management, and communication
- Sport/Camping/Cooking/Travel



## Speaker profile - Daniella

- CSR Project Supervisor and Business Relations Officer
- Environmental Science
- Community engagement and education
- Dance/Art/Camping



## Global Climate Action Project (GCAP)

- What is the problem? How severe is it?
- What is the impact? Why act on it? Why learn about it?
- What are the solutions? What actions can be taken by organisations, governments, and individuals?



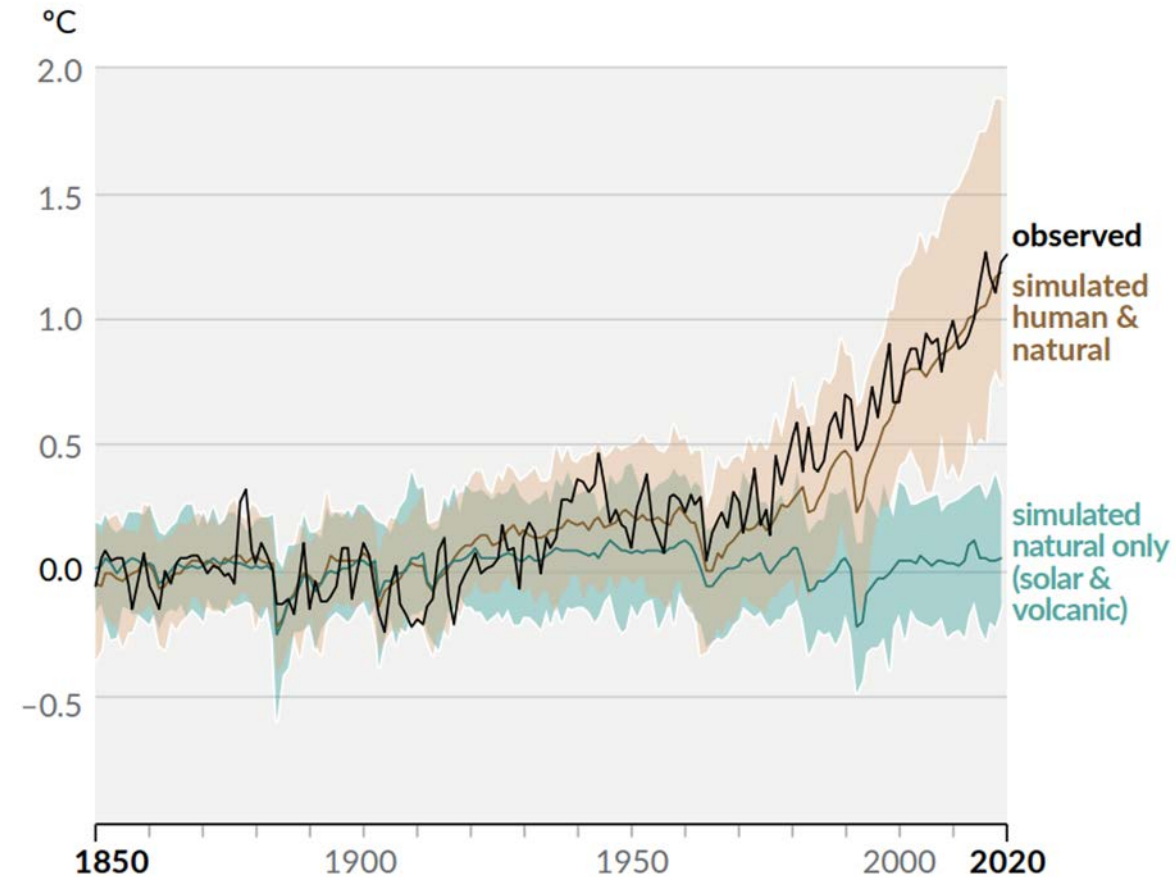
# What is the Problem?



## IPCC 2021 report

- Global temperature risen  $\sim 1.7^{\circ}\text{C}$  since 1850 - 1900
- Causing changes in the atmosphere, ocean, and biosphere
- Driven largely by burning of fossil fuels, causing release of greenhouse gases
- Anthropogenic

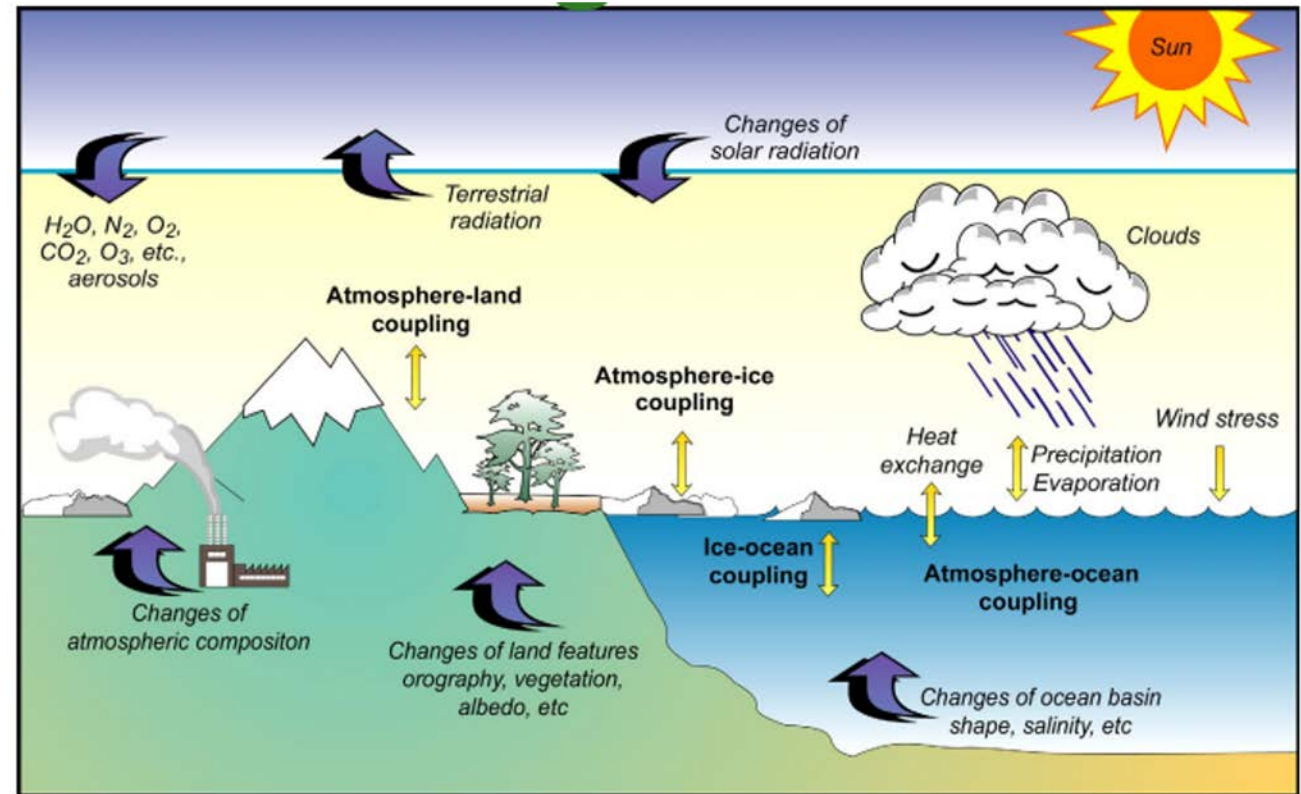
*“It is unequivocal that human influence has warmed the atmosphere, ocean and land”*



# Why is this Important?

## Environmental impacts of climate change

- More severe and more frequent extreme weather events
  - Heat waves, droughts, bushfires, heavy downpours, floods, cyclones etc.
- Melting ice caps and sea level rise
- Ocean acidification
- Ecosystem damage and biodiversity loss

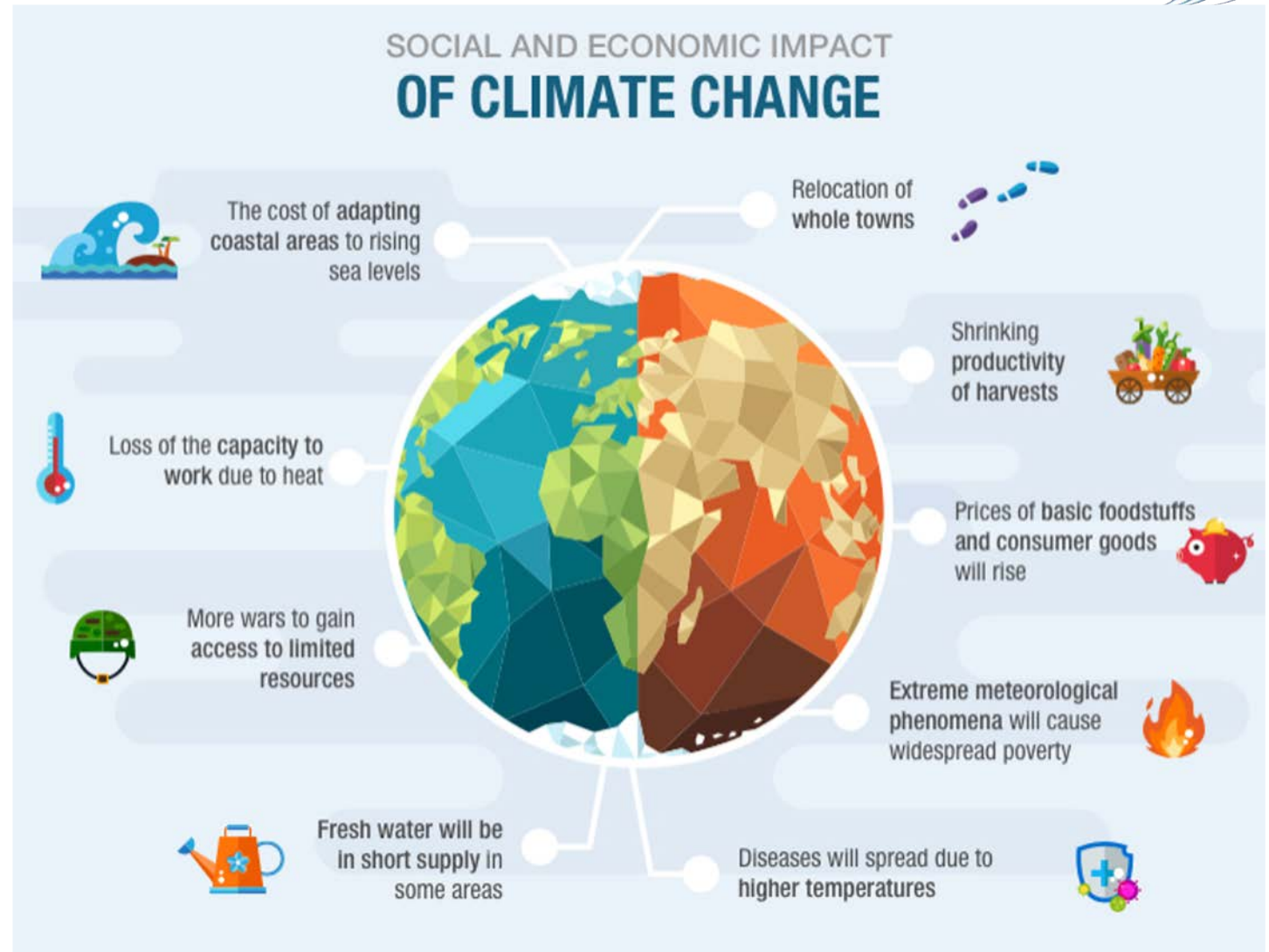




# Why is this Important?

## Additional impacts of climate change

- Impacts all areas of life
- UN Sustainable Development Goals
- Immediate action is imperative



# What is Climate Action?



The **core aims** of climate action should be:

1. Using energy more efficiently
2. Use cleaner energy generating processes
3. Managing natural resources more effectively

Climate action offers an abundance of valuable co-benefits, that achieve economic, social and environmental interest

Climate action offers meaningful opportunities to stimulate and lure investment, that advances economic outcomes

Climate action is an insurance mechanism, providing a low to medium-risk solution to an incredibly high-risk problem

# Benefits of Climate Action



<b>Economic</b>	<b>Social</b>
<ol style="list-style-type: none"><li>1. Investment supports local economies and stimulates innovation</li><li>2. New green technologies improve efficiency</li><li>3. Creation of new and reliable jobs</li></ol> <p>(Deichmann &amp; Zhang, 2013, p.131-151)</p>	<ol style="list-style-type: none"><li>1. Increased employment opportunities</li><li>2. Positively reformed energy prices</li><li>3. Improved health outcomes</li></ol> <p>(Deichmann &amp; Zhang, 2013, p.165-190).</p>



## Solar energy production in Australia

- Solar cost reduced by 40%-60% over 10 years  
(Reserve Bank of Australia, 2020)
- ~18,000 people employed in the solar sector (ABS, 2020)
- 14,000+ more jobs can be created by 2030 through policy making  
(Climate Council, 2016)

## RE:NEW program, London

- 103,205 buildings retrofitted with energy-efficiency measure
- 46,000 tons of GHG abated each year
- \$16.1 million worth of savings.
- 2,100 full-time jobs created

(Day, et al, 2018, p.49; London City Hall, n.d.)



## Bus Rapid Transport, Rio De Janeiro





- 120 kms of new bus routes
- Increased bus trips from 18% to 63%
- TransOeste corridor reduced travel times by 55%
- Saved 107 kilo tons of GHGs
- 20% reduction in road fatalities  
(Institute for Transportation & Development Policy , n.d; Day, et al, 2018, p.78)

# Australia's Climate Action

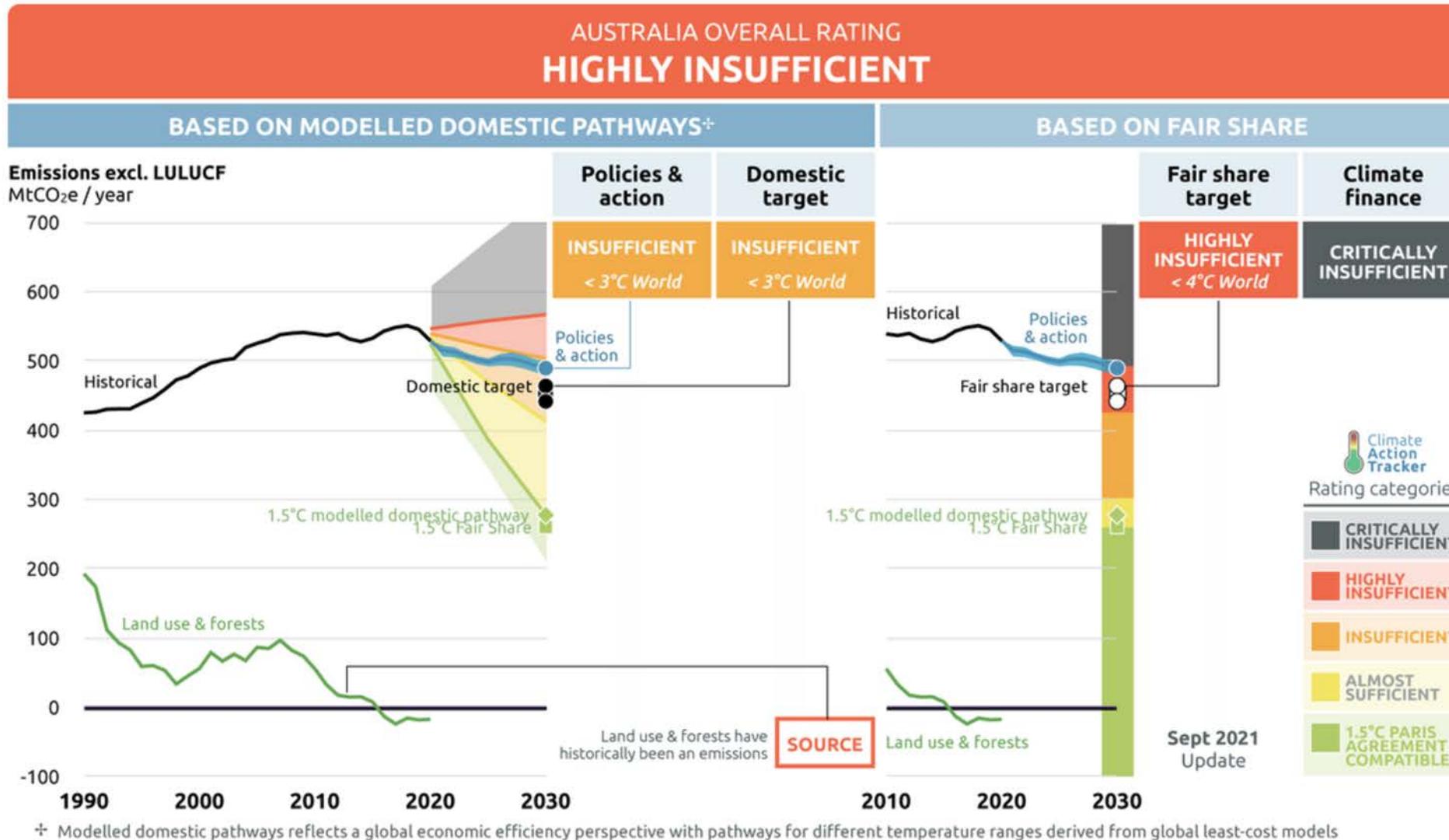


- International Summits
  - Paris 2015, emissions reduction target of 26–28% below 2005 levels by 2030
- 2011 *Clean Energy Air Act* → repealed in 2014
- October 2021, net-zero emissions target for 2050

## AUSTRALIA'S TECHNOLOGY-LED APPROACH

 <p>Over \$1.4 billion committed to the <b>Australian Renewable Energy Agency (ARENA)</b> over the next 10 years, with an additional \$75 million allocated to low emissions technologies like EV charging</p>	 <p>\$2.5 billion for projects through the <b>Emissions Reduction Fund</b> - Australia's carbon offset scheme - and \$2 billion for further abatement through the <b>Climate Solutions Fund</b></p>
 <p>The <b>Clean Energy Finance Corporation (CEFC)</b> is investing \$10 billion to catalyse private sector investment in low emissions technology</p>	 <p>Over <b>\$1.2 billion</b> committed to supporting clean hydrogen so far, including up to <b>7 Clean Hydrogen Industrial Hubs</b></p>
 <p>Investing with our partners overseas, including \$565 million for <b>international low emissions technology partnerships</b></p>	 <p>Over \$300 million for <b>Carbon Capture Use and Storage (CCUS)</b> hubs and technologies</p>
	 <p>\$280 million to support industrial facilities to further reduce emissions using the new <b>Safeguard Crediting Mechanism</b></p>

# Australia's Climate Action - Analysis



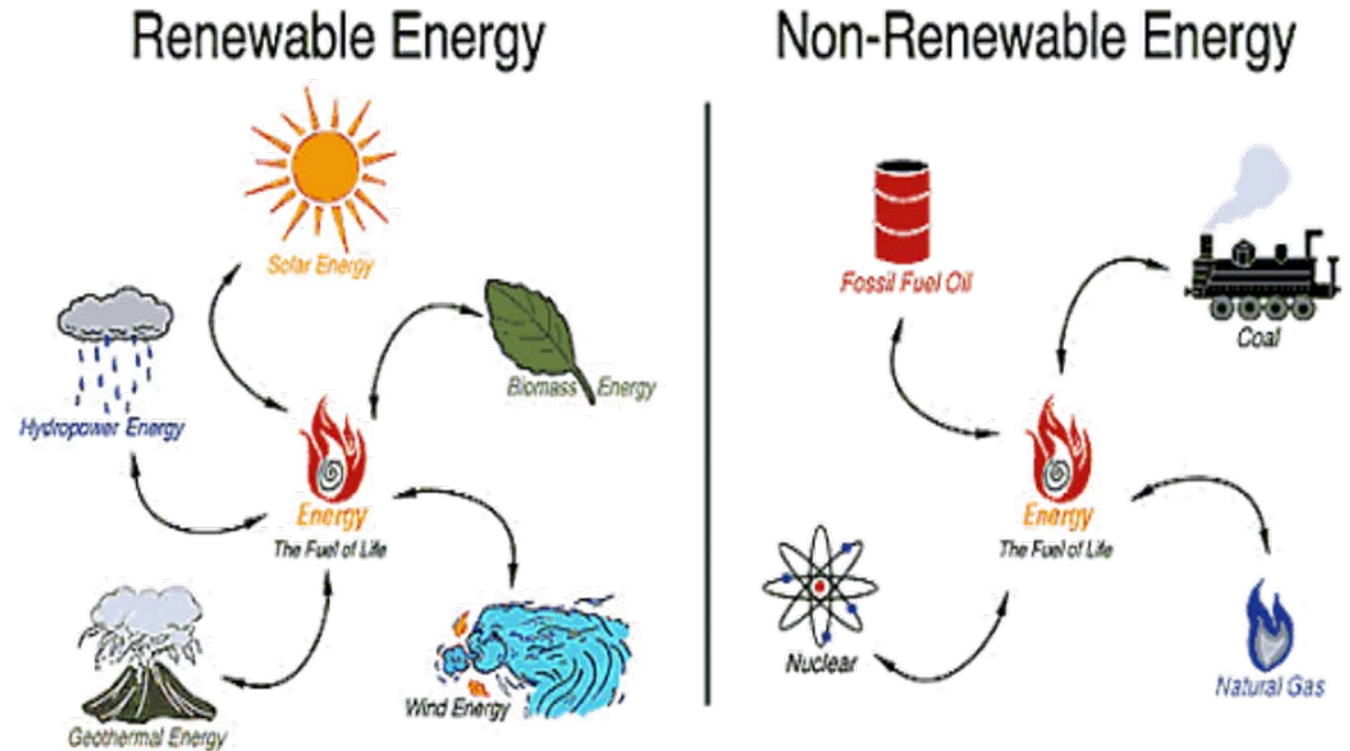
February 2022, the Climate Council concluded that **Australia should aim to reduce its emissions by 75% below 2005 levels by 2030, and achieve net zero emissions by 2035.**

# Solution 1: Renewable Energy

- Renewable energy accounted for 29% of worldwide power generation in 2020.

Many benefits:

- Minimises total GHG emissions
- Mitigates climate change and protects the environment
- Reduces air pollution and improves air quality
- Supports public health
- Inexhaustible power source



## Solar

- 6.5% of total electricity generated in 2020
  - 23.5% of total *clean* energy
- Over 3 million households have rooftop solar panels installed
- Issues with reliability

Bungala Solar Farm, South Australia



## Wind

- Australia's leading source of clean energy
- 9.9% of total electricity generated in 2020
  - 35.9% of total *clean* energy
- Currently the cheapest source of large-scale renewable energy

Granville harbour wind farm, Tasmania



(Clean Energy Council, 2021)



# Victoria's Renewable Energy Action Plan

- Launched in 2017, pledged \$146 million in funding to increase renewable energy generation to 40% by 2025.
- Emphasis on expanding wind power
- Estimated to create 11,000 new jobs
- The pledge is backed by \$1.6 billion funding in the 2020–21 Victorian Budget.

Our approach will focus on:



Creating new jobs, investment  
and energy sector growth



Empowering and engaging  
households, businesses,  
and communities



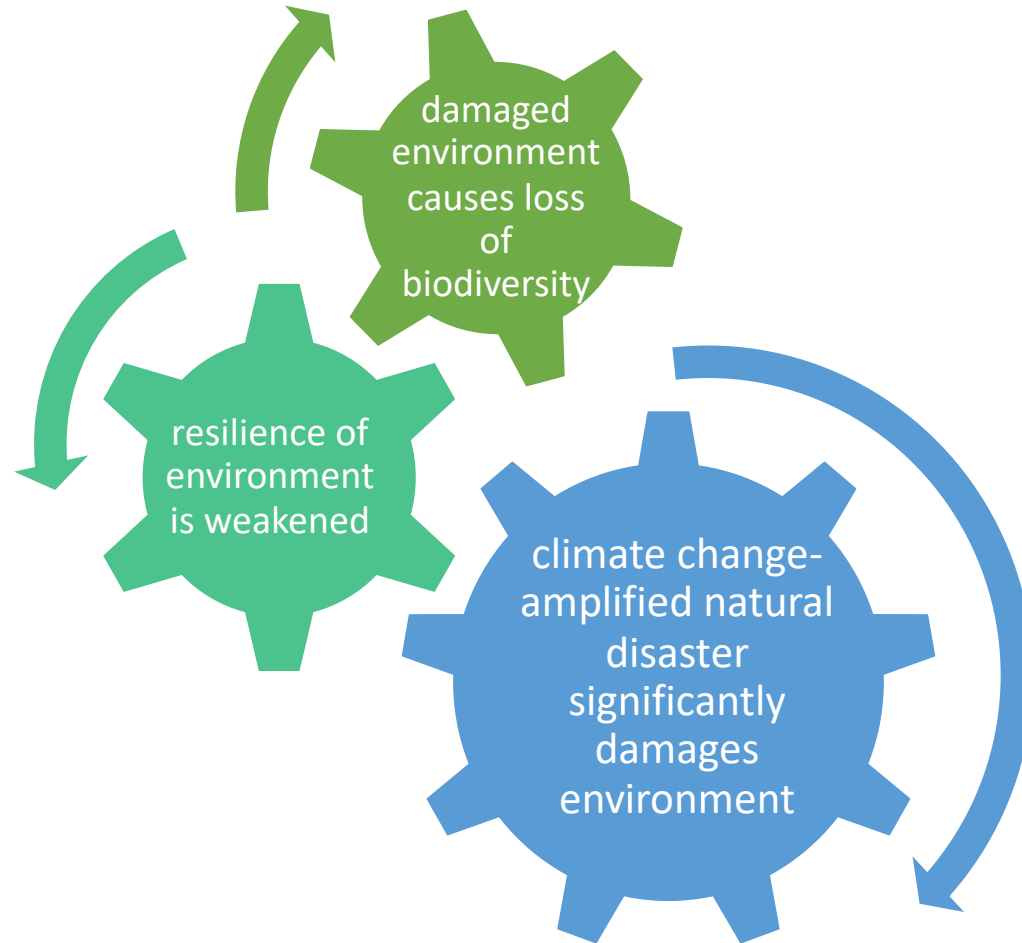
Strengthening our affordable,  
reliable and resilient  
energy system



# Solution 2: Urban Green Spaces

## Key benefits:

- Support local ecosystems and biodiversity
- Minimise GHG emissions & Improved air quality
- Mitigates urban heat island effect
- Increased opportunities for physical activity
- Provision of stress relief and psychological well being



# Solution 3: Individual Action

## Dietary Habits

1. Adopt a plant-rich diet
2. Reduce your waste
3. Eat local and seasonal
4. Compost
5. Go organic

<https://www.acet-global.com/global-climate-action-project.html>

## ADDRESS CLIMATE CHANGE THROUGH IMPROVING YOUR DIETARY HABITS

SIMPLE INDIVIDUAL STEPS WITH HUGE IMPACT



### CHOOSE A PLANT-RICH DIET EAT MORE VEGGIES!

The animal agriculture sector is one of the most significant contributors to climate change. By reducing your consumption of animal protein (like meat, dairy, and eggs) by half and switching to a plant-rich diet, you can cut your diet's carbon footprint by more than forty percent.

### REDUCE YOUR WASTE MAKE IT A HABIT TO RECYCLE TOO!

Reuse and recycle what you can't reduce. This helps minimise the harmful impacts of pollutants. Reusing and recycling also reduces the demand for new raw materials, ultimately helping to decrease the negative impacts of sourcing and transporting new raw materials.



### EAT LOCAL SUPPORT YOUR LOCAL FARMERS!

If your food comes from the other side of the country, or even the other side of the world, consider similar foods which are farmed closer to home. This practice significantly reduces the environmental impacts caused by transporting food items over a vast distance.

### MAKE COMPOST COMPOST FOR THE ENVIRONMENT!

At least half of what's thrown into most residential rubbish bins is compostable, yet it will end up in landfills, where it releases leachates and methane while decomposing. By composting organic matter instead, you can decrease greenhouse gas emissions and restore essential nutrients to the soil. Composting at home is a great way for individuals to help save the planet AND enrich the local environment.



### GO ORGANIC BUY ORGANIC OPTIONS!

Organic farming systems produce lower greenhouse gas emissions per hectare and have higher rates of carbon capture in soils than non-organic farms. Research has also shown that organic farms better support local biodiversity, compared to non-organic farms. Choosing organic options when possible can really help make a difference for the environment, plus it's a healthier option for you!

# Solution 3:

## Individual Action

1. Optimise your travel style
2. Adopt renewable energy

<https://www.acet-global.com/global-climate-action-project.html>

### ADDRESS CLIMATE CHANGE THROUGH ADOPTING RENEWABLE ENERGY

SIMPLE INDIVIDUAL STEPS WITH HUGE IMPACT

#### REDUCE POLLUTION FOR A CLEANER ATMOSPHERE!



The combustion of fossil fuels is driving the increase of greenhouse gas emissions. As humans burn fossil fuels, climate change is exacerbated, endangering our planet further. By choosing renewable energy sources instead of fossil fuels, you can help reduce greenhouse gas emissions. Fewer emissions mean less pollution and a safer environment.

#### IMPROVE AIR QUALITY AND BREATHE SAFELY!

Fossil fuel refineries and combustion expose living organisms - including humans - to poor air quality. As a consequence, they are forced to breathe in a concentration of harmful gases that can negatively affect their health and growth. By choosing to use renewable energy, you can help minimise this issue and improve air quality.



#### SUPPORT BETTER PUBLIC HEALTH FOR A HEALTHY LIFESTYLE!



Societies in which fossil fuels (like coal and oil) are produced and used often experience higher associated levels of poor public health. This is because the methods of mining, refining, and using these fuels contaminate the land and aquatic environments, as well as creating air pollution. Renewable energy generation is cleaner and greener, so by choosing renewable energy, you can support better public health for everyone!

#### USE INEXHAUSTIBLE ENERGY SOURCES AND NEVER RUN OUT OF POWER!

Strong winds, bright sunshine, plentiful organic material, heat from the earth and the power of tides and fast-moving rivers each have the ability to provide enormous amounts of safe, continuously replenished energy. In contrast, non-renewable energy sources, like coal and oil, are limited and declining. By choosing renewables, you can help support more sustainable options.



#### PROTECT THE ENVIRONMENT SAFEGUARD NATURAL HABITATS!



Fossil fuel extraction methods (like mining and drilling) have a huge impact on the natural environment. These human activities can lead to extinctions by destroying critical habitats, displacing native species, and even changing animals' migration patterns. Renewable energy generation is more responsible, with less impact on the natural environment. By choosing renewable energy instead, you can help protect habitats and save species!

### ADDRESS CLIMATE CHANGE THROUGH OPTIMISING YOUR TRAVELLING STYLE

SIMPLE INDIVIDUAL STEPS WITH HUGE IMPACT



#### GO CAR-FREE REDUCE POLLUTION!

Cars are a highly energy-intensive means of transportation and generally rely on fossil fuel use. By using alternatives like walking, biking, public transport, or even ride sharing, you can reduce your greenhouse gas emissions considerably.

#### DRIVE WISELY REDUCE EMISSIONS!

Drive efficiently, and accelerate and brake smoothly to reduce the energy use of your car - it will reduce your fuel costs and put less stress on the car, and it's also safer! You can reduce emissions further by maintaining your car properly. Get regular routine tunings and servicing, follow the manufacturer's maintenance schedule, and use the recommended motor oil.



#### PACK LIGHTLY OPTIMISE YOUR AIR TRAVEL!



Extra weight matters when you're flying. The more a plane carries, the higher its carbon emissions. Pack only what you really need - by travelling lightly, you have less impact on the climate. You'll also appreciate having a lighter bag to carry around, and may save money by avoiding checked luggage!

#### USE PUBLIC TRANSPORT SHARE THE LOAD!

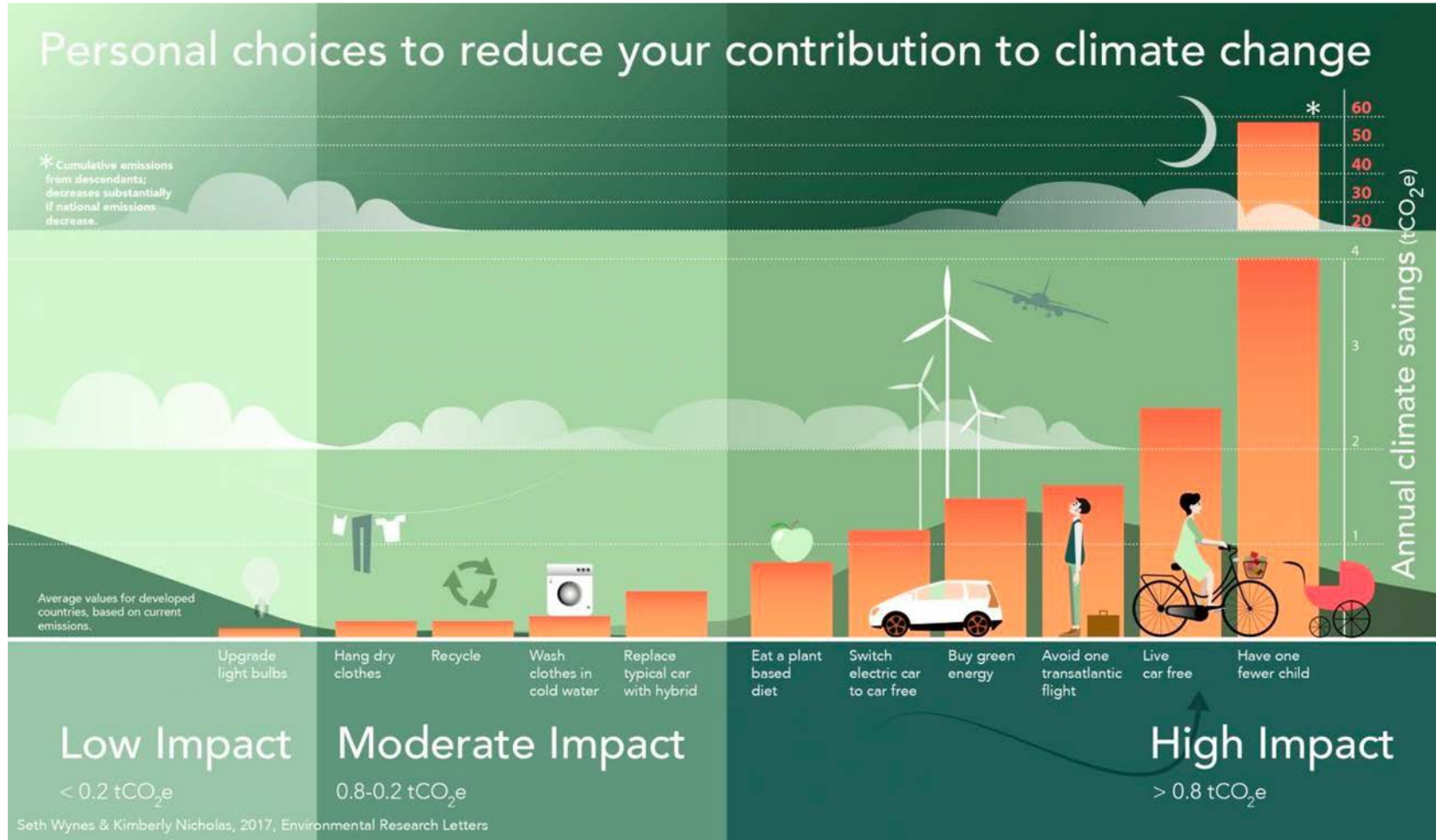
Using public transport whenever you can is one of the easiest and smartest things you can do for the planet. It means you don't generate any extra carbon emissions via private transport. It can also contribute to your commute or travel experience by providing opportunities to meet others or connect with locals.



#### OPTIMISE YOUR HOTEL STAY TREAT IT LIKE YOUR HOME!

A useful tip is to remember to be climate-conscious and act as though you were at home while staying in hotels or other accommodation. Avoid getting fresh towels if you don't need them, don't have long showers, and make sure to turn off the TV, lights, and air conditioner or heater when you leave the room.

# Solution: Individual Action



*Environmental Research Letters, 2017*

Calculate your personal carbon footprint at <https://www.carbonfootprint.com/calculator.aspx>

# Where to go from here

- Eco- anxiety
- Power of individual action
- Resources
- Education



<https://www.ecoanxiety.com/>  
<https://www.psychologyforasafeclimate.org/>  
[https://www.acf.org.au/take\\_care](https://www.acf.org.au/take_care)



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# THANK YOU



## Any Questions?

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