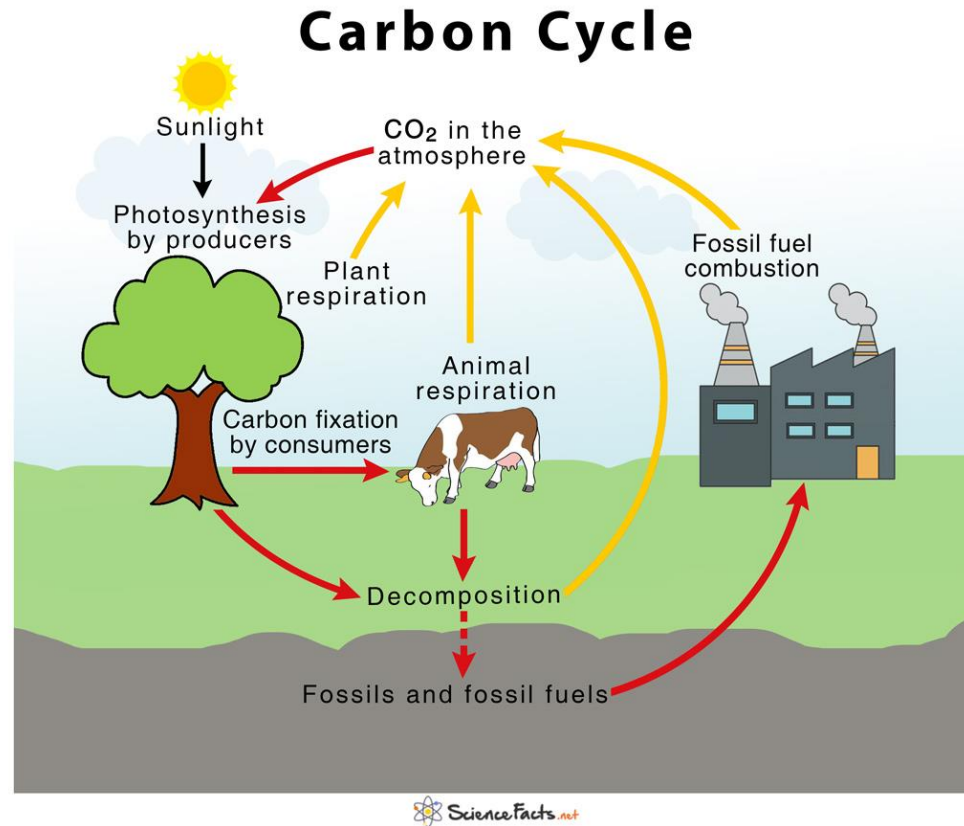


DEMYSTIFYING CARBON



WHAT IS CARBON

THE CARBON CYCLE



Source: The Carbon Cycle, Science Facts

Carbon is a fundamental chemical element found in all living organisms and many inorganic materials. It is essential for life on Earth. The world would be -18 degrees without Carbon.

Greenhouse gases:

GHGs are gases that trap heat in the Earth's atmosphere, leading to the greenhouse effect and global warming.

Common GHGs: Carbon Dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated gases, and water vapor.

Carbon Footprint:

Definition: The total amount of GHGs emitted directly or indirectly by a person, organisation, event, or product.

Components of a carbon footprint:

Scope 1 (direct emissions).

Scope 2 (Indirect emissions from purchased electricity etc).

Scope 3 (Indirect emissions from activities such as supply chain, transportation, and waste disposal)

IMPORTANCE OF UNDERSTANDING CARBON AND TERMINOLOGY

Understanding carbon and its terminology enables businesses to accurately measure, manage and reduce their carbon footprint, leading to cost savings, regulatory compliance and enhance their reputation

WHY?

Environmental impact: Excessive carbon emissions contribute to climate change, leading to rising temperatures, extreme weather events, sea level rise, and biodiversity loss.

Regulatory compliance: Increasing regulations and carbon pricing mechanisms require some businesses to measure, report, and reduce their carbon emissions.

Business opportunities: Embracing carbon reduction initiatives can lead to cost savings, innovation, competitive advantage and enhancing reputation.

TERMINOLOGY

Carbon zero: Achieving no greenhouse gas emissions during production and/or operation.

Decarbonisation: Eliminate the use of fossil fuels and rapidly cut greenhouse gas emissions ([Travel to a Thriving Future, 2022](#))

Carbon neutrality: Achieving a balance between the amount of carbon emitted and the amount removed from the atmosphere.

Carbon offsetting: Compensating for carbon emissions by investing in projects that reduce or capture an equivalent amount of carbon elsewhere.

Carbon sequestration: The process of capturing and storing carbon dioxide from the atmosphere in natural ecosystems or geological formations.

Carbon footprint: total amount of greenhouse gases emitted directly or indirectly by an individual, organisation, event, or product.

PRIMARY SOURCES OF A CARBON FOOTPRINT IS:

- Energy
- Transport
- Waste

STARTING POINT TO REDUCE CARBON



Energy Efficiency

Review where your energy comes from. Switch to renewable energy sources where possible, this will improve energy efficiency in operations and reducing costs in the longer term.



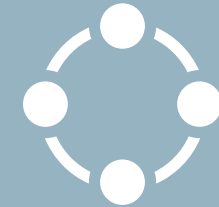
Transportation

Review transportation operations and opt for sustainable transportation where possible. This could include changing to electric vehicles, ride sharing, reducing transport required within your business.



Waste Reduction

Complete a waste audit of your business and see how you can reduce waste to landfill. This might be through implementing composting, reviewing recycling processes, reviewing supply chain and mitigating waste from the source.



Carbon counting

Contact a carbon counting organisation to discover how you can work out how much carbon your business produces, and where you can work to directly reduce that amount.

CARBON COUNTING ORGANISATIONS




Toitū Envirocare

"Toitū" embodies caring for the life of this place, our people, and future generations. Committed to holistic sustainability. Leading businesses with carbon and environmental certification programs, providing science-based tools, actions, and evidence for genuine progress.

More information [here](#).



Carbon Trail

 CarbonTrails simplifies climate action by utilising your existing data to assess your emissions and suggest actionable steps. Trusted by numerous businesses across New Zealand, both large and small, since 2022, CarbonTrails provides clarity on your current emissions status and facilitates sharing progress with your team and customers.

More information [here](#).



Ekos

Ekos specialises in Carbon Management and Carbon Forestry, founded by Sean Weaver, a prominent forest ecologist. Passionate about engaging with organisations in Climate Action.

More information [here](#).

CERTIFICATIONS AND BEST PRACTICES

BUSINESSES SHOULD PURSUE CARBON CERTIFICATION AND ADHERE TO BEST PRACTICES IN CARBON MANAGEMENT TO ENHANCE CREDIBILITY, GAIN A COMPETITIVE EDGE, AND ENSURE REGULATORY COMPLIANCE.

CERTIFICATIONS:

There are a range of carbon organisations that provide certifications that meet international carbon certification (ISO) standards.

Getting certified by a reputable carbon counting organisation supports any claims you make in becoming carbon zero or neutral. It allows you to speak about your efforts, goals and reduction targets without any greenwashing or misunderstanding.

Some of NZ's certification programs are Toitu Envirocares, Carbon Conscious, Net Zero Carbon and Climate Positive.

BEST PRACTICES:

- **Setting clear goals:** establishing carbon reduction targets aligned with science-based methodologies.
- **Measurement and Reporting:** Regularly measuring and reporting carbon emissions, and continuously tracking progress.
- **Stakeholder engagement and education:** involving employees, customers, and suppliers in carbon reduction efforts.
- **Continuous Improvement:** iterating and improving carbon management strategies over time.