

# Scope 3 Emissions Reporting for Tertiary Education

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## Introduction

A Greenhouse Gas (GHG) assessment separates emissions into three scope levels: scope 1, scope 2, and scope 3. The separation of scopes ensures that no double accounting occurs. Scopes are defined as follows:

- Scope 1: direct release of GHG emissions into the atmosphere from sources that are owned/controlled by the organisation e.g., transport fuels, natural gas
- Scope 2: release of GHG emissions from the generation of purchased electricity, heating, cooling or steam that is consumed by the organisation
- Scope 3: indirect release of GHG emissions from sources not owned/controlled by the organisation e.g., business travel, purchased goods/services, electricity from buildings occupied but not owned/controlled by the organisation

In 2007, the Australian Federal Government introduced the National Greenhouse and Energy Reporting Scheme (NGERS) to provide a national database of GHG emissions and energy consumption and production. Under NGERS, reporting of most scope 1 and scope 2 GHG emissions (but not scope 3) is mandatory for all the organisations whose energy production, energy use, or GHG emissions meet certain specified thresholds from sources over which they have operational control.

Additionally, in 2012 the Tertiary Education Facilities Management Association (TEFMA) launched an environmental survey (in addition to their benchmark survey) to collect, analyse and report on environmental performance in the Australasian tertiary education sector. The survey includes GHG emissions, where the reporting of scope 3 emissions is optional.

A holistic GHG assessment, however, will also account for scope 3 sources. This includes upstream emissions for the extraction, production and transport associated with the use of fuel, and transmission and distribution losses associated with electricity consumption as well as the sources covered below. This more comprehensive inventory should account for all emissions that would not have occurred if the organisation did not exist.

Many Australian tertiary education institutions are already reporting scope 1 and scope 2 emissions under NGERS and/or TEFMA. These are generally material (substantial) emissions, well defined (with a limited number of sources) and easily quantified. Some institutions are also voluntarily reporting a number of scope 3 emissions through different reporting schemes, but the number and type of sources reported vary greatly between institutions. Achieving a consensus on what scope 3 sources are material to tertiary education institutions would allow guiding reporting, doing cross-institutional assessment, and backing up claims of carbon emissions reductions.

This paper provides a background on the relevant standards for compiling comprehensive GHG inventories that include all scope 1, 2 & 3 emissions sources. Methodologies and possible categories are also described. This is intended to inform a discussion around how to reach a consensus on a uniform approach to GHG reporting in the tertiary education sector.

# Applicable Standards and Benefits

## The Greenhouse Gas Protocol

The primary guideline for compiling a comprehensive carbon inventory is The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)<sup>1</sup> published by the World Resource Institute (WRI) and World Business Council for Sustainable Development (WBCSD).

A subset of this is the Corporate Value Chain (Scope 3) Accounting and Reporting Standard.<sup>2</sup>

In addition to outlining processes and procedures for compiling a scope 3 inventory, the Standard provides a sample of goals and drivers for undertaking this task. These are summarised in Table 1. In many cases, these can also be seen as the benefits of using the GHG Protocol.

**Table 1.** Goals served by a scope 3 GHG inventory

<i>Goal 1. Identify and understand risks and opportunities associated with value chain emissions</i>
<ul style="list-style-type: none"><li>• Identify GHG-related risks in the value chain</li><li>• Identify new market opportunities</li><li>• Inform investment and procurement decisions</li></ul>
<i>Goal 2. Identify GHG reduction opportunities, set reduction targets and track performance</i>
<ul style="list-style-type: none"><li>• Identify GHG 'hot spots' and prioritise reduction efforts across the value chain</li><li>• Set scope 3 GHG reduction targets</li><li>• Quantify and report GHG performance over time</li></ul>
<i>Goal 3. Engage value chain partners in GHG management</i>
<ul style="list-style-type: none"><li>• Partner with suppliers, customers and other companies in the value chain to achieve GHG reductions</li><li>• Expand GHG accountability, transparency and management in the supply chain</li><li>• Enable greater transparency on efforts to engage suppliers</li><li>• Reduce energy use, costs and risks in the supply chain and avoid future costs related to energy and emissions</li><li>• Reduce costs through improved supply chain efficiency and reduction of material, resource and energy use</li></ul>
<i>Goal 4. Enhance stakeholder information and corporate reputation through public reporting</i>
<ul style="list-style-type: none"><li>• Improve corporate reputation and accountability through public disclosure</li><li>• Meet needs of stakeholders (e.g. investors, customers, civil society, governments), enhance stakeholder reputation and improve stakeholder relationships through public disclosure of GHG emissions, progress toward GHG targets and demonstration of environmental stewardship</li><li>• Participate in government and NGO led GHG reporting Management programs to disclose GHG related information</li></ul>

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<sup>1</sup> The Greenhouse Gas Protocol (2005). A Corporate Accounting and Reporting Standard, World Resource Institute, World Business Council for Sustainable Development.

<sup>2</sup> <http://www.ghgprotocol.org/standards/scope-3-standard>

## ISO 14064

ISO 14064 is an international standard against which GHG emissions reports are voluntarily verified.

ISO 14064 has been prepared in three parts:

- ISO 14064, part 1

This details the principles and requirements for designing, developing, managing and reporting organization level GHG inventories. It includes requirements for determining boundaries, quantifying emissions and removals, and identifying specific company actions or activities aimed at improving GHG management. It also includes requirements and guidance on quality management of the GHG inventory, reporting, internal auditing and the organization's responsibilities for verification.

- ISO 14064, part 2

This focuses on GHG projects or project based activities specifically designed to reduce GHG emissions or increase GHG removals. It includes principles and requirements for determining project baseline scenarios and for monitoring, quantifying and reporting project performance relative to that baseline and provides the basis for GHG projects to be validated and verified.

- ISO 14064, part 3

This part of ISO 14064 provides principles, requirements and guidance for those conducting GHG information validation and verification. It describes a process for providing assurance to intended users that an organisation's or project's GHG assertions are complete, accurate, consistent, transparent and without material discrepancies.

### Benefits of ISO 14064

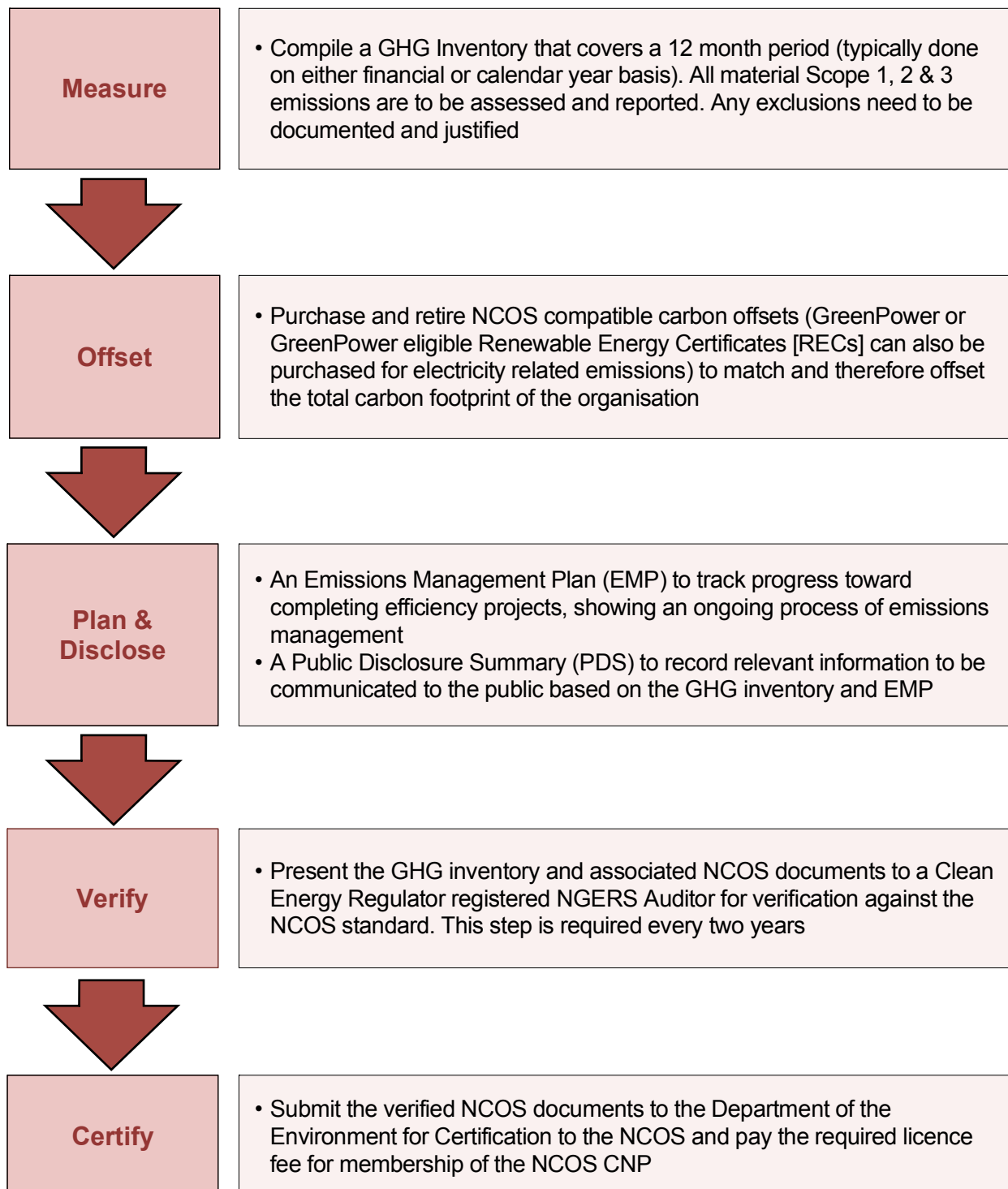
- Show commitment - prove commitment to being a more environmentally sustainable organisation to stakeholders, by reducing carbon emissions and having those reductions independently verified and validated.
- Internal improvements - develop robust internal mechanisms for quantifying and reporting GHG emissions
- Trust - the standard will assist with the preparation of legitimate GHG assertions, claims and reports which can be used to build trust with stakeholders.
- Robust systems - To implement robust systems for the monitoring and reporting of GHG emissions
- Future proofing - it will facilitate the development and implementation of GHG management strategies and plans for the future.
- Monitoring - it will provide the ability to track performance and progress in the reduction of GHG emissions and/or the increase in GHG removals.
- Credibility - To enhance the credibility, consistency and transparency of GHG quantification, monitoring and reporting to any interested parties.

## NCOS

The Australian Federal Government released the National Carbon Offset Scheme (NCOS) in 2010. The standard provides guidance in regard to carbon neutral claims and allows for the Australian operations of organisations or products to be certified as carbon neutral.

The NCOS provides a benchmark for consumers and businesses to assess claims of carbon neutrality as well as the credibility of carbon offset products sold in the voluntary market.

For an organisation to be certified as carbon neutral under the NCOS Carbon Neutral Program (CNP), there are a number of steps:



## **Benefits of NCOS**

The NCOS is Australia's only government supported carbon neutral scheme and therefore has more credibility than carbon neutral schemes promoted by other Australian operators.

- The NCOS carbon neutral certification process has rigour built into it as a result of the requirements to report on all scope 1, 2 & 3 emissions in line with the Greenhouse Gas Protocol (see above) thereby forcing organisations to go for best practice in the way they calculate their carbon footprint.
- The requirement to have the documents verified by a registered NGERS Auditor means that an expert in carbon accounting completes the audit process.
- The NCOS also ensures that only high quality carbon offsets can be used for claims of carbon neutrality thus the confidence that real abatement is being secured is much higher for offsetting organisations and their stakeholders.

### **Note:**

The NCOS and Carbon Neutral Program are currently going through a review process to ensure that they are aligned with broader government policy and that they continue to meet consumer and business needs efficiently and effectively. The review is being conducted by the Department of the Environment in consultation with key stakeholders and the public (<http://www.environment.gov.au/climate-change/carbon-neutral/ncos/review>).

## Reporting Scope 3 Emissions

### Reportable Scope 3 Emissions

The National Carbon Offset Standard (NCOS), the only government-endorsed carbon neutral certification in Australia, states that organisations must consider calculation of scope 3 (indirect) emissions that fall within their defined boundary, as this will enable them to identify opportunities for emission reduction activities.

The NCOS follows the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (also referred to as Scope 3 Standard) to identify significant scope 3 emissions, and the use of NGERs to calculate these emissions where practicable.

According to the NCOS, organisations should account for all scope 3 emissions where feasible, and should follow the accounting and reporting principles (relevance, completeness, accuracy, consistency and transparency) when considering which categories of scope 3 emissions to include in their inventory. The NCOS states that scope 3 emissions sources are relevant in the following circumstances:

- a) the scope 3 emissions from a particular source are likely to be large relative to the organisation's scope 1 and scope 2 emissions;
- b) the scope 3 emissions from a particular source contribute to the organisation's greenhouse gas risk exposure;
- c) the scope 3 emissions from a particular source are deemed relevant by key stakeholders;
- d) the organisation has the potential to influence the reduction of scope 3 emissions from a particular source; or
- e) the scope 3 emissions are from outsourced activities previously performed in-house or activities outsourced by the reporting company that are typically performed in-house by other companies in the reporting organisation's sector.

Nevertheless, the NCOS accepts several situations in which it may not be necessary or practicable to account for scope 3 emissions:

- a) the emissions are likely to be negligible (relative to other scope 3 emissions);
- b) determining the emissions is not currently possible given available technology;
- c) determining the emissions will be very costly relative to their likely significance; or
- d) there is insufficient data.

Where organisations exclude scope 3 activities from their inventory, this must be disclosed and justified. However, an organisation must not exclude any scope 3 activities that would compromise the overall integrity of the reported inventory, although no definition is provided for this.

As mentioned above, the NCOS is currently going through a review process that might help clarify some of the imprecision of the standard (e.g., what 'large relative to scopes 1&2' means; whether 'insufficient data' refers to data that has not been collected yet or to data that cannot be collected; what would compromise the integrity of the inventory, etc.)



## Scope 3 Categories

The NCOS refers to 15 categories for scope 3 emission sources, following the Scope 3 Standard. The 15 categories are as follows:

### Upstream emissions

#### *Category 1: Purchased goods and services*

This category includes all upstream (i.e., cradle-to-gate) emissions of the organisation's tier 1 suppliers<sup>3</sup> from the extraction, production and transportation of goods (tangible products) and services (intangible products) purchased or acquired by the organisation in the reporting year, except those included in categories 2 to 8. [Note: see category 4 for emissions from transportation between tier 1 suppliers and the organisation]

##### **Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Medium to High**

Examples: paper and other stationery, outsourced printing services, communications (couriers/postage, telephones, internet), marketing, food procurement (catering), etc.

#### *Category 2: Capital goods*

Capital goods are final products (goods and services that are consumed by the end user in their current form, without further processing, transformation, or inclusion in another product) that have an extended life and are used by the organisation to manufacture a product, provide a service, or sell, store, and deliver merchandise. Examples of capital goods include equipment, machinery, buildings, facilities, and vehicles.

This category includes all upstream (i.e., cradle-to-gate) emissions from the extraction, production and transportation of capital goods purchased or acquired by the organisation in the reporting year.

##### **Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: High**

Examples: building stock, fleet vehicles, computers and other electronic equipment, etc.

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<sup>3</sup> A supplier who provides products directly to an organisation without dealing with a middleman or other suppliers

### **Category 3: Fuel- and energy-related emissions (not in scope 1 or 2)**

This category includes emissions related to the extraction, production, and transportation of fuels and energy purchased or acquired by the reporting organisation in the reporting year that are not included in scope 1 or scope 2. This category includes:

- a) Emissions from extraction, production, and transportation of purchased fuels
- b) Emissions from extraction, production, and transportation of fuels consumed in the generation of purchased electricity, steam, heating, and cooling
- c) Transmission and distribution (T&D) losses (generation of electricity, steam, heating and cooling that is consumed (i.e., lost) in a T&D system)
- d) Generation of electricity, steam, heating, and cooling that is purchased by the reporting organisation and sold to end users) – reported by utility company or energy retailer only

#### **Relevance to Tertiary Education**

- **Materiality: Medium**
- **Complexity of Data Collation: Low**
- **Complexity of Calculation: Low**

Examples: transport and non-transport fuels (petrol, diesel, LPG), natural gas and electricity.

### **Category 4: Upstream transportation and distribution**

This category includes emissions from the transportation and distribution of products (excluding fuel and energy products) purchased or acquired by the organisation in vehicles and facilities not owned or operated by the organisation, as well as other transportation and distribution services purchased by the organisation (including both inbound and outbound logistics), including:

- a) Transportation and distribution of products purchased by the organisation between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company)
- b) Transportation and distribution services purchased by the organisation, including inbound logistics, outbound logistics (e.g., of sold products), and transportation and distribution between an organisation's own facilities (in vehicles and facilities not owned or controlled by the reporting company)

#### **Relevance to Tertiary Education**

- **Materiality: Medium**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Medium to High**

Examples: Freight contractors, couriers, third party transport providers.

### **Category 5: Waste generated in operations**

This category includes emissions from third-party disposal and treatment of waste (e.g., disposal in landfill, recovery from recycling, incineration, composting) generated in the organisation's owned or controlled operations, including both solid waste and wastewater. It is considered as upstream because waste management services are purchased by the organisation. Organisations may optionally include emissions from transportation of waste.

#### **Relevance to Tertiary Education**

- **Materiality: Medium**
- **Complexity of Data Collation: Low**
- **Complexity of Calculation: Low**

Examples: Waste to landfill from facilities, Green Waste from grounds management.

### **Category 6: Business travel**

This category includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars (taxis, rental cars or employee-owned vehicles).

Organisations may optionally include emissions from business travellers staying in hotels.

#### **Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Medium to High**

Examples: Academic staff travelling overseas to attend conferences.

### **Category 7: Employee commuting**

This category includes emissions from the transportation of employees between their homes and their worksites. Employee commuting is categorised as an upstream emission because it is a service that enables organisation operations, similar to purchased or acquired goods and services.

Organisations may include emissions from teleworking (i.e., employees working remotely) in this category. [Note: Student commuting can be included in category 9]

#### **Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Medium to High**

Examples: Staff travel to and from work.

### **Category 8: Upstream leased assets**

This category includes emissions from the operation of assets that are leased by the organisation and not already included in the scope 1 or scope 2 inventories (includes leased vehicles operated by the organisation). This is only applicable to organisations that operate leased assets (i.e., lessees).

#### **Relevance to Tertiary Education**

- **Materiality: Medium**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Low**

Examples: Electricity or gas use in leased buildings, fuel use in leased vehicles, etc.

## **Downstream emissions**

### **Category 9: Downstream transportation and distribution**

This category includes emissions from transportation and distribution of products sold by the organisation between the organisation's operations and the end consumer (if not paid for by the organisation), including retail and storage, in vehicles and facilities not owned or controlled by the organisation.

#### **Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: High**

Examples: Student travel to and from campus.

### **Category 10: Processing of sold products**

This category includes emissions from processing of intermediate products sold by third parties (e.g., manufacturers) subsequent to sale by the organisation. Intermediate products are products that require further processing, transformation, or inclusion in another product before use, and therefore result in emissions from processing subsequent to sale by the organisation and before use by the end consumer. Emissions from processing should be allocated to the intermediate product.

#### **Relevance to Tertiary Education: Nil**

### **Category 11: Use of sold products**

This category includes emissions from the use of goods and services sold by the reporting company in the reporting year. This category includes the total expected lifetime emissions from all relevant sold products.

**Relevance to Tertiary Education: Nil**

***Category 12: End-of-life treatment of sold products***

This category includes emissions from the waste disposal and treatment of products sold by the organisation at the end of their life.

**Relevance to Tertiary Education: Nil**

***Category 13: Downstream leased assets***

This category includes emissions from the operation of assets that are owned by the organisation (acting as lessor) and leased to other entities that are not already included in scope 1 or scope 2. Leased assets may be included in an organisation's scope 1 or 2 inventory depending on the type of lease and the consolidation approach the organisation uses to define its organisational boundaries.

**Relevance to Tertiary Education**

- **Materiality: Medium**
- **Complexity of Data Collation: Medium to High**
- **Complexity of Calculation: Low**

Examples: Electricity or gas use in owned buildings that have been leased out.

***Category 14: Franchises***

This category includes emissions from the operation of franchises not included in scope 1 or scope 2. A franchise is a business operating under a license to sell or distribute another company's goods or services within a certain location.

**Relevance to Tertiary Education: Nil**

***Category 15: Investments***

This category includes scope 3 emissions associated with the organisation's investments (including equity and debt investments and project finance), not already included in scope 1 or 2. This category is applicable to investors (i.e., companies that make an investment with the objective of making a profit) and companies that provide financial services.

**Relevance to Tertiary Education**

- **Materiality: High**
- **Complexity of Data Collation: High**
- **Complexity of Calculation: High**

Examples: Emissions embodied by investments or equity holdings.

## Conclusion

The first step in compiling an inventory of scope 3 emissions is to identify which standard is best suited to the purpose. Each of the three standards highlighted above have associated benefits and drawbacks. Selection of a standard to follow will depend on how it aligns with the organisation's goals and strategies for reaching them.

There are 15 categories of possible scope 3 emission sources and not all of these are relevant to the tertiary education sector. Some of those that will require more effort than others to document, both in terms of extracting the relevant information and performing the required calculations. However each is achievable given sufficient will and resources.

There are many challenges faced by tertiary education providers currently. Funding restrictions and stakeholder demands for improved services mean that more needs to be done with less.

Compiling detailed inventories of the GHG emissions for which they are directly and indirectly responsible is the first step for universities, colleges and TAFEs to be able to demonstrate they are showing leadership in taking action toward mitigating their impact on climate change while at the same time identifying inefficiencies in their supply chain. Measuring and reporting on a comprehensive scope of GHG emissions, setting clear targets and communicating these widely can also have a positive impact on staff and student retention as well as community relations. Furthermore, by engaging with suppliers, contractors and other third parties to measure their impacts, awareness is raised around the importance of dealing with the increase of carbon emissions and lessening reliance on fossil fuels.

These actions should be an integral part of the tertiary education sector's ongoing commitment to promoting knowledge and inter-generational equity.

## Next Steps

The reporting of scope 3 carbon emissions is voluntary at the moment and different tertiary education institutions (both higher and further education) are currently reporting or making claims on reduction of carbon emissions based on different scope 3 emission sources.

It is important to achieve a consensus on what scope 3 emissions are material to the tertiary education sector, and the discussion should involve sharing of expertise among tertiary education organisations. Reaching an agreement on common material scope 3 emissions will benefit tertiary education institutions by guiding sustainability reporting, backing up claims of carbon emissions reduction in the future, and allowing cross-institutional assessment. It is also important to note that an agreed list of material scope 3 emissions would have to be reviewed on a regular basis, as these may change through time.

A group of delegates from several universities has expressed their interest in initiating discussions. Some informal conversations have occurred, and a collaborative space has been created online (with limited participation), but we are still very far from achieving a consensus, and much needs still to be done.

If you are interested in contributing to the discussion, please contact Carmen Primo ([Carmen.Primo@utas.edu.au](mailto:Carmen.Primo@utas.edu.au)), Sustainability Officer at the University of Tasmania.