GRAIN TRADE AUSTRALIA

MARSDEN JACOB ASSOCIATES

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A Marsden Jacob Report

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1.1 International and national obligations and policies

1.1.1 International

The United Nations Framework Convention on Climate Change (UNFCCC) is a 1992 international treaty that provides a framework for international cooperation to combat climate change by limiting average global temperature increases and resulting climate changes. There are now 197 Parties[1] to the Convention including Australia. In 1997, countries concluded negotiations to strengthen the treaty by adopting the Kyoto Protocol. The Kyoto Protocol legally bound developed country Parties to greenhouse gas (GHG) emission reduction targets. The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began in 2013 and ended in 2020.

In 2015, the Paris Agreement was adopted to accelerate and intensify emission reduction commitments with the aim of keeping the global temperature rise this century to at least below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius. The Paris Agreement works on a 5-year cycle of increasingly ambitious emission reduction commitments by countries. In 2020, countries submitted their first plans for climate action known as nationally determined contributions (NDCs). In their NDCs, countries communicate actions they will take to reduce their GHG emissions to reach the goals of the Paris Agreement. In 2025, countries will be required to submit enhanced commitments on national emission reduction targets and actions.

Neither the UNFCCC nor the Paris Agreement place any specific obligations on business and industry. However, the Paris Agreement encourages industry stakeholders to scale up their efforts and support actions to reduce emissions and to register actions in the Non-State Actor Zone for Climate Action platform (NAZCA)[2].

Moreover, by placing obligations on Parties to the Convention, the UNFCCC and Paris Agreement have helped to drive national policies, some of which place legislated or voluntary obligations on businesses, including emissions monitoring and reporting obligations in many developed countries.

1.1.2 Australia

As a Party to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, Australia has made commitments to:

- reduce its greenhouse gas emissions in line with its NDC;
- track progress towards its NDC; and

[1] Parties are countries that have signed and ratified the Convention.
[2] United Nations, 2015. *Paris Agreement*, Section V, Paragraph 117.

- report each year on Australia's greenhouse gas emissions.

Australia's NDC was initially set at a target of 26-28% below 2005 emission levels by 2030, with a longer-term target of net zero emissions by 2050. In a recent communication to the UNFCCC secretariat, the Australian Government indicated that its NDC target for 2030 has been increased to 43% below 2005 emissions by 2030[3]. This target is an economy-wide emissions reduction commitment, covering all sectors and all gases included in Australia's national inventory[4]. The communication also includes an 'aspiration' that state and territory government and industry commitments will yield even greater emission reductions.

The communication sets out new policy commitments by the Australian government including application of new standardised and internationally aligned reporting requirements for climate risks and opportunities for large businesses. At the time of writing, it seems unlikely that these reporting requirements will impact on most GTA members, except for those already subject to reporting requirements under the National Greenhouse and Energy Reporting (NGER) scheme (see section 1.2.2).

Tracking progress and reporting on national, state and industry emissions is undertaken through Australia's National Greenhouse Accounts. These are published in National Inventory Reports, which are submitted annually to the UNFCCC.

1.2 Industry standards

1.2.1 International

There are no mandatory standards in place internationally that require businesses to monitor or report on their greenhouse gas emissions. However, there are a number of voluntary standards and guidelines that enable companies to voluntarily monitor and report publicly on their emissions. The rationale for these voluntary standards is the companies adopting them can reduce future compliance risks or gain a strategic advantage through identifying new opportunities or demonstrating good corporate citizenship. Two of these voluntary standards and guidelines are worth noting.

The GHG Protocol Corporate Accounting and Reporting Standard

The Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard[5] has been developed by the World Business Council for Sustainable Development and World Resources Institute. It provides guidance for companies and other organisations preparing a GHG emissions inventory. It was designed with the following objectives in mind:

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[3] Australian Government, 2022. *Australia's Nationally Determined Contribution: Communication 2022*, Commonwealth of Australia, June 2022.

[4] Sectors are: Electricity; Stationary energy; Transport; Fugitive emissions; Industrial processes; Agriculture; Waste; and Land use, land use change and forestry (LULUCF). Gases include: Carbon dioxide (CO_2); Methane (CH4); Nitrous oxide (N_2O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); Sulphur hexafluoride (SF_6); and Nitrogen trifluoride (NF_3). Emissions of all greenhouse gases are now typically presented in CO_2 equivalent terms ($CO_{2\text{-}e}$).

[5] EBCSD, WRI, 2004. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, Revised Edition. https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

- To help companies prepare a GHG inventory that represents a true and fair account of their emissions through the use of standardised approaches and principles.
- To simplify and reduce the costs of compiling a GHG inventory.
- To provide business with information that can be used to build an effective strategy to manage and reduce their GHG emissions.
- To increase consistency and transparency in GHG accounting and reporting among various companies.

The standard focuses on accounting and reporting of emissions but does not require emissions information to be reported to any government or organisation.

An important aspect of the standard involves specifying three types or 'scopes' of direct and indirect emissions for accounting and reporting purposes:

- **Scope 1** emissions are direct GHG emissions that occur from sources that are either owned or controlled by the company, for example emissions from combustion in owned or controlled vehicles.
- **Scope 2** emissions are indirect GHG emissions from the generation of purchased electricity consumed by the company.
- **Scope 3** emissions are indirect GHG emissions that are a consequence of the activities of the company but occur from sources not owned or controlled by the company. They include upstream and downstream emissions associated with the extraction and production of purchased materials, transportation of purchased fuels, and use of other products or services.

The standard is accompanied by tools that assist companies to calculate their emissions from different emission sectors (e.g., transport) and for some specific emission intensive industries (e.g., cement). The tools are unlikely to be suitable for use by GTA members being either too high level or too resource intensive to apply.

Guidance from the Taskforce on Climate-Related Financial Disclosures (TCFD)

The Taskforce on Climate-Related Financial Disclosures (TCFD) was established in 2015 by G20 Finance Ministers and Central Banks through the Financial Stability Board[6] to improve and increase reporting of climate-related financial information. The Task Force was tasked with developing voluntary and consistent climate related financial disclosures that would help investors, lenders and insurance underwriters to understand the financial risks and opportunities of climate-change. Although the financial disclosure recommendations of the TCFD were developed for use by financial organisations, its recommendations and subsequent guidelines are also focussed on 'high exposure' sectors, that is, non-financial sectors and industries that have a high likelihood of being impacted financially by climate change and climate change response.

[6] The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system.

The transport sector (including rail transport and trucking services) is one of the four high exposure sectors targeted by the TCFD recommendations and guidelines[7]. The Task Force has developed guidance for these non-financial groups to provide relevant companies with background and information to consider when developing disclosures consistent with the Task Force's recommendations[8,9]. Disclosure of information recommended in guidance for the transport industry includes developing metrics on[10]:

- regional and activity breakdown of GHG emissions (e.g., t/$CO_{2\text{-}e}$)
- emissions intensity of products or services (e.g., t$CO_{2\text{-}e}$/tonne transported)
- total fuel consumed (e.g., GJ, kL);
- percentage of renewables in fuel consumed; and
- average fleet fuel economy and emissions intensity (e.g., L/km, t$CO_{2\text{-}e}$/km).

Disclosure information also covers metrics around financial risks (such as the impacts of climate-change on costs of operations) plus disclosure of information on governance, strategy and risk management in relation to climate-related impacts.

There are a number of channels via which companies can now publicly report on their GHG emissions consistent with recommendations of the TCFD including, for example, the Carbon Disclosure Project (CDP)[11]. A recent TCFD status report indicates that there are now at least 125 Australian 'supporters' of the TCFD[12]. Unsurprisingly, many of these are financial institutions and support by financial institutions for the TCFD coincides with release by the Australian Prudential Regulation Authority (APRA) of a practice guide on climate change financial risks (see following section).

1.2.2 Australia

Legislated requirements

At present in Australia, the only legislated obligation on companies' monitoring and reporting GHG emissions is through the National Greenhouse and Energy Reporting (NGER) scheme, which is administered by the Clean Energy Regulator under the *National Greenhouse and Energy Reporting Act 2007*. Under the Act, any business that exceeds a minimum threshold level of scope 1 and scope 2 emissions or production of consumption of energy, either at the facility level or corporate level, must annually report its emissions and energy via an online Emissions and Energy Reporting System.

Facility thresholds are:

- 25,000 tonnes or more of greenhouse gases ($CO_{2\text{-}e}$) (scope 1 and scope 2 emissions)

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7 The other sectors are energy, agriculture and construction (materials and buildings)

8 TCFD, 2017. *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures* (2017 annex). https://assets.bbhub.io/company/sites/60/2020/10/FINAL-TCFD-Annex-Amended-121517.pdf

9 TCFD, 2021. *Guidance on Metrics, Targets, and Transition Plans. https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf*

10 Note, this is a summary list. For a more complete list see above.

11 https://www.cdp.net/en

12 https://assets.bbhub.io/company/sites/60/2022/05/TCFD_Overview_Booklet_Digital.pdf

- production of 100 terajoules (TJ) or more of energy, or
- consumption of 100 TJ or more of energy.

Corporate group thresholds are:

- 50,000 tonnes or more of greenhouse gases ($CO_{2\text{-}e}$) (scope 1 and scope 2 emissions)
- production of 200 TJ or more of energy, or
- consumption of 200 TJ or more of energy.

If any of these thresholds are exceeded, NGER obligations are triggered.

Our understanding is that, at present, only a small number of GTA members exceed one of more of these thresholds.

Australian Standards

AS 14064.1 2006 is a standard administered through Standards Australia that specifies principles and requirements at the organisation level for the quantification and reporting of GHG emissions and removals. The standard is identical to the International Standard of the same name[13]. The international Standard, when first developed, drew heavily on the WBCSD GHG Protocol Corporate Accounting and Reporting Standard, discussed earlier.

As detailed in the introduction to the standard, the benefits to an organisation of becoming compliant with AS 14064 include:

- facilitating corporate risk management and strategic planning;
- potential to participate in GHG markets (buying and selling of carbon credits), which often requires compliance with the standard; and
- facilitating regulatory reporting.

However, organisations which choose to become compliant with AS 14064.1 will be expected to meet quite stringent requirements for the design, development, reporting and verification of their emissions inventory. To assist with these requirements, the standard provides organisations with guidelines and a set of tools to help them with this task.

Organisations that sign up to AS 14064.1 can also choose to sign up to AS 14064.2 (which focusses on quantifying and monitoring activities through projects designed to reduce an organisation's emissions) and AS 14064.3 (which focusses on verification of project-based emission reductions).

GTA members considering signing up to AS 14064 (either 14064.1 alone or all parts) will need to weigh up the time and costs that achieving and maintaining compliance with standard will entail against the benefits that being a compliant organisation might bring.

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[13] The International Standard has since been updated – ISO 14064.1-2018. The Australian Standard is in the process of being updated. A new international standard, specifically focused on transport emissions – ISO 14063 – is currently in development.

Other voluntary guidelines

There are no voluntary standards or guidelines in Australia at present that are specifically focussed on monitoring and reporting of GHG emissions associated with transport operations. The Transport and Infrastructure Council and Australian Government Department of Industry, Regional Development and Cities has published guidelines on assessing environmental parameter values for transport projects[14]. Assessing and valuing carbon emissions is an important element of the guidelines, but the guidelines are primarily focussed on transport at the project infrastructure phase rather than operational aspects.

As previously noted, in late 2021, the Australian Prudential Regulation Authority (APRA) released a prudential practice guide on climate change financial risks[15]. The guide is designed to assist banks, insurers and superannuation trustees to manage the financial risks of climate change. The guide imposes no new regulatory requirements or obligations but will instead assist APRA-regulated entities to manage climate-related risks and opportunities within their existing risk management and governance practices. The guide is designed to be consistent with the TCFD and, as such, when following the guide Australian financial institutions will be expected to consider risks to high exposure sectors such as transport.

1.3 Grain transport GHG emissions

Comprehensive data on GHG emissions associated with the movement of grain in Australia are not available at present. National inventory data only provides a breakdown to the sectoral level. An examination of sectoral data, however, provides some insights into the current and potential future significance of emissions associated with grain transport. Figure 1 provides an overview of Australia's GHG emissions. In 2020, Australia's total emissions were just under 500 million tonnes. Electricity supply was responsible for about 33% of this total, followed by mining (19%), agriculture (16%), manufacturing (11%) and residential (11%). Commercial transport, which includes grain transport, was responsible for about 30 million tonnes or 6% of emissions. Figure 2 provides a more detailed breakdown of commercial transport emissions. Road freight was responsible for about 45% of commercial transport emissions followed by air transport (22%), storage (20%) and rail (13%).

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[14] ATAP Steering Committee Secretariat, 2020. *Australian Transport Assessment and Planning Guidelines: PV5: Environmental Parameter Values*, Commonwealth Department of Infrastructure, Regional Development and Cities, November 2020. https://www.atap.gov.au/parameter-values/road-transport/5-vehicle-operating-cost-voc-models

[15] APRA is an independent statutory authority that regulates institutions across banking, insurance and superannuation.

Figure 1: Australia's greenhouse gas emissions by economic sector, 2005-2020 (Mt CO_{2-e})

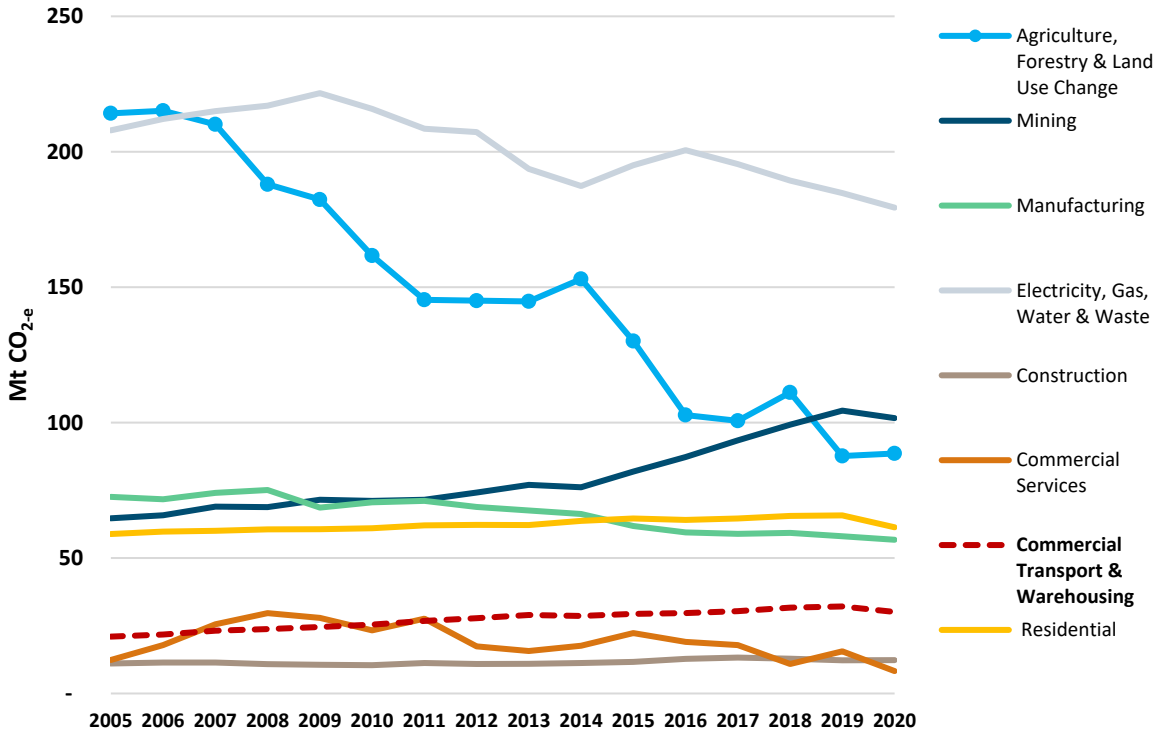
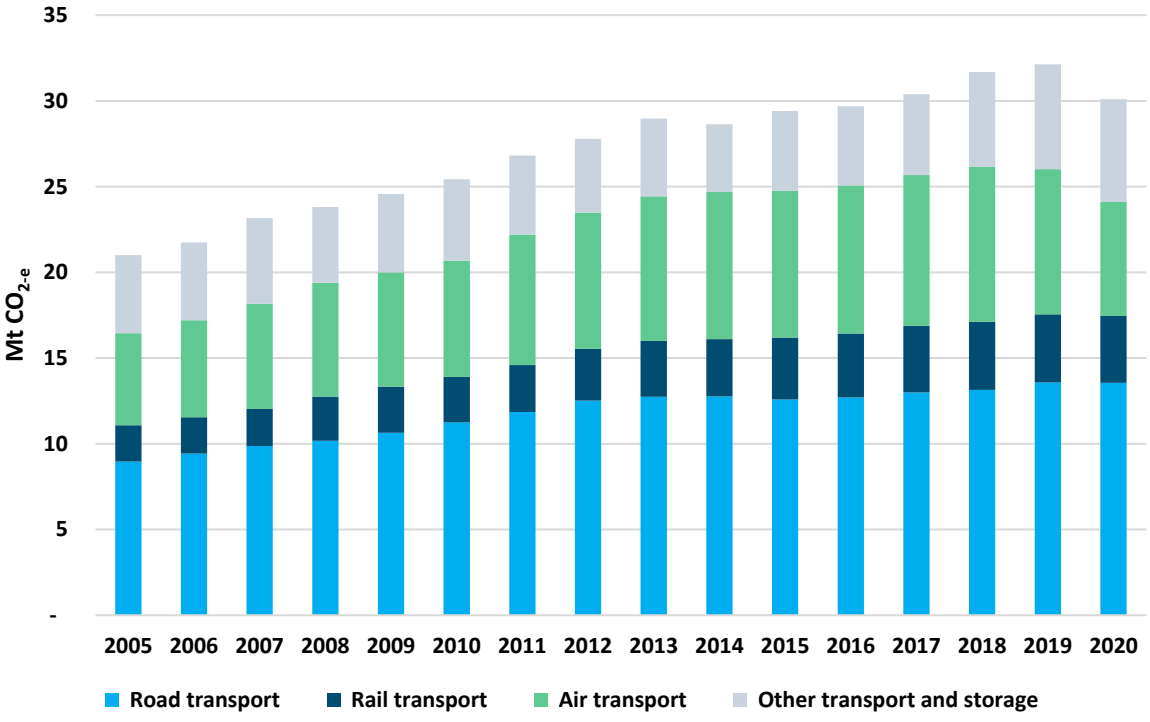


Figure 2: Commercial transport greenhouse gas emissions by mode, 2005-2020 (Mt CO_{2-e})



ABS data reveals that cereal grains are responsible for about 6% of road freight movement in Australia (expressed in total tonne-kilometres)[16]. Applying this percentage and similar percentages

[16] ABS catalogue 9223.0 - Road Freight Movements, Australia

for rail freight and storage to total commercial freight emission estimates provided in Figure 2 indicates that grain transport and storage could be responsible for approximately 0.25% to 0.55% of Australia's total emissions or about 1.4 to 3.0 million tonnes.

It is important to note that this estimate is very preliminary. Nevertheless, at an industry level this amount is not insignificant. Moreover, consideration of total emissions from grain transport in a given year, does not provide a full picture of the importance of tracking those emissions. As shown in both Figure 1 and Figure 2, commercial transport emissions are experiencing steady growth, increasing by over 50% between 2005 and 2019[17]. This continued growth means that freight transport emissions, including emissions associated with grain transport, are likely to figure prominently in future emissions policy considerations by Australian governments.

1.4 Conclusions: directions for GTA members

There are now in place significant drivers internationally and nationally for businesses to monitor and report on the GHG emissions associated with their operations. Those drivers are likely to intensify in coming years as national governments, including the Australian Government, strengthen their commitments under the UNFCCC and Paris Agreement.

In part linked to these policy drivers, commercial and business organisations are placing increasing emphasis on the monitoring and reporting of GHG emissions, especially emissions of high exposure sectors and industries such as freight transport.

Although the transport of grain in Australia might only be responsible for about 0.4% of Australia's total GHG emissions at present, the potential for growth in these emissions in the future, combined with government and business organisation priorities, means that there is a strong rationale for GTA members to start to monitor their greenhouse gas emissions. Due to the potential difficulties with monitoring all GHG emissions (scope 1, 2 and 3), monitoring in the first instance should focus on scope 1 transport emissions. Consideration should be given to extending monitoring to include other scope 1, scope 2 and scope 3 emissions in the future, especially if GTA want to consider becoming AS 14064 compliant.

[17] The drop in emissions in 2020 is likely to have been a temporary blip linked to Covid.

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