



GREENHOUSE Gas Emissions

INVENTORY REPORT

For the year ended 31 March 2023

OVERVIEW

In 2020, Zespri announced a set of targets for reducing greenhouse gas (GHG) emissions across its supply chain. These are:

We will work with our partners to be climate positive by 2035, achieving two key targets along the way

- *Zespri corporate will be carbon neutral by 2025*
- *We will support our global supply chain to become carbon positive to retailers by 2030*

This document provides a summary of Zespri's GHG emissions inventory for the financial year ended 31 March 2023 (FY23). It has been prepared in accordance with the ISO 14064-1: 2018 Greenhouse gases – organisational quantification and reporting standard, sections 6.2 (Selection of quantification approach) and 6.3 (Calculation of GHG Emissions and Removals).

A Limited Assurance opinion has been provided by KPMG over the GHG emissions reported in this document.

Organisational BOUNDARIES

To determine the organisational boundaries of its GHG emissions reporting, Zespri applies a financial control consolidation approach, as defined by the ISO 14064-1 Standard. This approach was selected as it aligns with the organisational boundaries in place for Zespri's financial accounting.

Zespri Group Limited is the ultimate holding company for the Zespri Group of companies. All subsidiaries are wholly owned by Zespri interests and have been included in Zespri's organisational GHG reporting boundary.

The Group's subsidiaries are involved in exporting, importing, selling, marketing, investing, researching, and management of New Zealand grown and Non-New Zealand-grown kiwifruit.

A list of Zespri Group subsidiaries is provided in Appendix 2. As at 31 March 2023, Zespri had a total of 2 global office facilities under its financial control (appendix 1).

EXCLUSIONS

The Kiwifruit Breeding Centre is a joint venture operation between Plant & Food Research and Zespri. Zespri has a 50% participating interest in this jointly controlled operation.

The GHG emissions associated with Kiwifruit Breeding Centre's operations have been measured for the FY23 reporting year and are less than 1% of total corporate emissions. On this basis we exclude KBC emissions in line with our materiality threshold of 5% of total reported emissions.

Reporting BOUNDARIES

As per the reporting Standard, Zespri's emissions are divided into direct and indirect emissions sources.

Direct emissions (category 1) originate from Zespri owned or controlled sources, and include emissions associated with fuel used in Zespri's company vehicles.

Indirect emissions, which include category 2 emissions from imported energy (such as electricity), and category 3 emissions from transportation, are generated as a result of Zespri's activities yet occur at sources owned or controlled by another entity.

The GHG emissions sources reported by Zespri are further defined in the following sections as either Zespri corporate or Industry emissions.





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BASE YEAR & CHANGES TO HISTORIC DATA

Zespri's base year for tracking progress against its climate change targets and milestones is the financial year ended 31 March 2020 (FY20). Zespri will recalculate its historic reported emissions if any changes occur that have a cumulative impact of 10% or more on Zespri's corporate or industry emissions inventories. The types of changes that may have a significant impact on Zespri's reported emissions and trigger the need for a emissions recalculation include: structural changes in

reporting or organisational boundaries, changes in calculation methodology, emissions factors changes, or the discovery of a significant error, or a number of cumulative errors, that are collectively significant.

Any changes less than 10% are assessed on a case-by-case basis, and may be updated at Zespri's discretion, especially if it would otherwise compromise the consistency and relevance of the

Zespri CORPORATE

Zespri's corporate emissions are defined as the direct and indirect emissions associated with Zespri's immediate business activities (table 1). The first milestone of Zespri's carbon mitigation target is for the corporate operation to be carbon neutral by 2025. This includes Zespri's category 1, 2 and 3 emissions.

Emissions category	Emission Source	tCO ₂ -e			
		FY23	FY22	FY21	FY20
Category 1	Vehicle fuel	300	200	100	300
Category 2	Office electricity (Location based)	300	300	300	300
	Office electricity (market based)*	200			
Category 3	Air Travel	4,100	500	300	7,800
	Taxis & staff mileage	100	100	100	200
Total Zespri Corporate emissions		4,700 **	1,100	800	8,600

Table 1. Zespri Corporate Emissions

*For the FY23 reporting period, Zespri used 100% renewable, Toitū climate positive certified electricity, generated from wind, hydro and solar at its Mount Maunganui head office. To account for this, the Zespri's total corporate emissions includes the market-based figure for office electricity, rather than the location-based figure.

In FY23, Zespri's staff corporate emissions increased significantly compared to the previous year, however these remain ~45% below the FY20 pre-covid baseline. The rise was driven by increased air travel, due to an increase in staff travelling on long-haul international flights to reconnect with colleagues, consumers and the global industry after COVID-19 restrictions.

To keep future staff travel in alignment with our emissions goals, we will continue to manage travel budgets and policy.

Zespri's office electricity emissions remain consistent at ~300 tonnes of carbon per year. Zespri's Mount Maunganui head office is now supplied with 100 percent renewable, Toitū climate positive certified electricity, generated from wind, hydro and solar.





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Industry EMISSIONS

Zespri's industry carbon mitigation milestone is to be carbon positive to its retailers by 2030. Industry emissions are defined as the indirect emission sources associated with Zespri's supply chain operations from orchard to consumer.

In 2019, Zespri measured the cradle-to-grave emissions of its NZ fruit using the PAS2050 product life-cycle methodology.

Zespri's total supply chain emissions account for ~2kg of CO₂-e emissions per kg of fruit consumed. For further details, refer to www.zespri.com/en-NZ/sustainability-carbon-footprint.

SHIPPING EMISSIONS

Shipping is Zespri's most material industry emissions source, and a key focus in our efforts to drive emissions reductions. Zespri ships kiwifruit from New Zealand via both Zespri chartered shipping vessels, and shared container shipping services.

The reported emissions include both outbound (laden) and inbound (ballast) shipping legs and relate primarily to the fuel combusted to power the shipping vessels.

In FY23, Zespri's shipping emissions from New Zealand-sourced fruit reduced by ~14% compared to the previous year. While ~9% of this was driven by a reduction in the total number of trays shipped, the remainder was due to the increase in charter vessel utilisation, where additional containers were loaded above deck on each vessel.

We recognise the importance of working with our global shipping partners to address increasing global shipping emissions. Over the last year, we have established a groundbreaking Green shipping partnership with one of Zespri's shipping suppliers. The partnership is a global first between an exporter and a shipping provider and is taking a longterm approach, working on the changes in fuel types and shipping infrastructure needed to decarbonise.

Industry Emission source	Unit	FY23	FY22	FY21	FY20
Shipping	t CO ₂ -e	384,300	443,800	374,300	315,900
	kg CO ₂ -e per kg of fruit shipped	0.7	0.7	0.7	0.6
	kg CO ₂ -e per Tray of Equivalent (TE)	2.3	2.5	2.3	2.1

Table 2. Zespri shipping emissions from New Zealand sourced fruit.





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Data COLLECTION & QUANTIFICATION

The table below provides details on the calculation methods, data sources, assumptions and estimates, and emission factors applied to each emission source in quantifying the greenhouse gas emissions reported by Zespri.

Scope	Emission source	Calculation method	Data Sources	Assumptions and estimates	Emission factor reference	
Corporate emissions						
Scope 1	Vehicle Fuel	Emissions generated by company vehicle fleet (petrol and diesel internal combustion engines).	Fuel-based method.	<ul style="list-style-type: none"> Purchased fuel records stored in Zespri financial accounting system. 	<ul style="list-style-type: none"> Average location-based fuel costs have been applied to total invoice spend where units (L) of fuel purchased is unavailable. Petrol is used as default fuel type if not otherwise specified. 	<ul style="list-style-type: none"> New Zealand Ministry for the Environment, 2022.
Scope 2	Office electricity	Emissions from purchased grid electricity consumed at office locations under Zespri's financial control.	Location-based method: emissions based on the average emissions intensity of electricity in the grid region where each facility is located.	<ul style="list-style-type: none"> Invoices from electricity retailers stored in Zespri financial accounting system. Supplier Certificate of Climate Positive Energy. 	<ul style="list-style-type: none"> Average kWh usage per employee is applied at Zespri office locations where actual kWh usage data is unavailable. 	<ul style="list-style-type: none"> New Zealand Ministry for the Environment, 2022. International Energy Agency (IEA), 2021. New Zealand Energy Certificate System, 2022.
			Market-based method: emissions based on relevant contractual instruments for purchasing electricity from low-carbon sources.			
Scope 3	Air travel	Emissions generated by Zespri employees using Aeroplanes for work related travel.	Distance-based method.	<ul style="list-style-type: none"> Air travel booking records provided by Zespri travel management suppliers. 	<ul style="list-style-type: none"> Average distance (p.km) per spend (NZD) has been applied to relevant supplier invoices where detailed flight data is unavailable. Where seat class is not identified, relevant average passenger emission factors are applied. 	<ul style="list-style-type: none"> New Zealand Ministry for the Environment, 2022
	Staff mileage	Emissions generated by Zespri employees using privately owned vehicles for work-related travel.	Distance-based method.	<ul style="list-style-type: none"> Employee expense claims stored in Zespri financial accounting system. 	<ul style="list-style-type: none"> n/a 	<ul style="list-style-type: none"> New Zealand Ministry for the Environment, 2022.
	Taxis	Emissions generated by Zespri employees using taxis for work-related travel.	Spend-based method.	<ul style="list-style-type: none"> Employee expense claims stored in Zespri financial accounting system. 	<ul style="list-style-type: none"> n/a 	<ul style="list-style-type: none"> New Zealand Ministry for the Environment, 2022.
Industry emissions						
Scope 3	Shipping	Emissions generated from exporting New Zealand sourced fruit via Zespri chartered shipping vessels, and shared container shipping services.	Fuel-based method, including outbound (laden) and inbound (ballast) shipping legs.	<ul style="list-style-type: none"> Zespri shipping information management systems. Supplier shipping route distances and transit times. Supplier vessel capacity and fuel consumption rates. 	<ul style="list-style-type: none"> Ballast leg fuel consumption rates have been applied to account for the greenhouse gas emissions associated with empty containers and charter vessels being repositioned to NZ for the purposes of exporting kiwifruit. 	<ul style="list-style-type: none"> International Maritime Organisation, 2020. Smart Freight Center GLEC Framework for Logistics Emissions Methodologies, 2019.



ZESPRI GREENHOUSE GAS EMISSIONS INVENTORY REPORT APPENDIX

Appendix 1. Zespri office locations as at 31 March 2023

Country	Office Location(s)
Belgium	Zeebrugge, Antwerp
China	Shanghai, Beijing
France	Paris, Dax
Italy	Bologna, Aprilia, Milano, Cisterna
Japan	Tokyo, Kobe, Fukuoka
New Zealand	Mt Maunganui, Te Puke, Katikati
Singapore	Singapore
South Korea	Seoul
Spain	Madrid
Taiwan	Taipei
South Korea	Jeju
United States of America	California

Appendix 2 – Zespri Group Companies included in organisational GHG reporting boundaries as at 31 March 2023

Subsidiary	Incorporated
Zespri Global Supply Holding Company Limited	New Zealand
Zespri Innovation Company Limited	New Zealand
Zespri International (Asia) Limited	New Zealand
Zespri International Limited	New Zealand
Zespri New Zealand Limited	New Zealand
Zespri International (Australia) Pty Limited	Australia
Zespri International (Europe) N.V.	Belgium
Zespri Service Centre N.V.	Belgium
Zespri Fruit Consultoria (Brasil) Ltda	Brazil
Shaanxi Zespri Fresh Produce Company Limited	China
Zespri Fruit Industry (Shanghai) Co. Ltd	China
Zespri Fruit (Shanghai) Co Limited	China
Zespri Fresh Produce France S.A.R.L.	France
Zespri International France E.U.R.L.	France
Zespri International Germany GmbH	Germany
Zespri International (India) Pvt Ltd	India
Zespri Fresh Produce Italy S.r.l.	Italy
Zespri International Italy S.r.l.	Italy
Zespri Fresh Produce (Japan) K.K.	Japan
Zespri International (Japan) K.K.	Japan
Zespri International (Malaysia) Sdn. Bhd	Malaysia
Zespri Fresh Produce (Korea) Co. Limited	South Korea
Zespri International (Korea) Co. Limited	South Korea
Zespri International (Singapore) Pte Limited	Singapore
Zespri International Iberica SL	Spain
Zespri International Nordic AB	Sweden
Zespri International (United Kingdom) Limited	United Kingdom
New Zealand Kiwi Holdings Inc.	United States of America
Zespri International (Vietnam) Company Limited	Vietnam
Zespri International (Switzerland) AG	Switzerland





Independent Limited Assurance Report to the Directors of Zespri Group Limited (the 'Company')

Conclusion

Our limited assurance conclusion has been formed on the basis of the matters outlined in this report.

Based on our limited assurance engagement, which is not a reasonable assurance engagement or an audit, nothing has come to our attention that would lead us to believe that the greenhouse gas emissions from Zespri's Industry Shipping Emissions from New Zealand-sourced fruit and the Corporate greenhouse gas emissions in the Zespri Group Limited Green House Gas Statement ('the selected emissions') have not, in all material respects, been prepared in accordance with ISO 14064-1: 2018 Greenhouse gases – organisational quantification and reporting standard sections 6.2 (Selection of quantification approach) and 6.3 (Calculation of GHG Emissions and Removals) for the period 1 April 2022 to 31 March 2023.

Information subject to assurance

We have performed an engagement to provide limited assurance in relation to the greenhouse gas emissions from Zespri's Industry Shipping Emissions from New Zealand sourced fruit and the Corporate greenhouse gas emissions included within the Zespri Group Limited Green House Gas Statement for the period 1 April 2022 to 31 March 2023.

Criteria

The criteria used as the basis of reporting is ISO 14064-1: 2018 Greenhouse gases – organisational quantification and reporting standard sections 6.2 (Selection of quantification approach) and 6.3 (Calculation of GHG Emissions and Removals). As a result, this report may not be suitable for another purpose.

Standards we followed

We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements (New Zealand) 3000 (Revised) *Assurance Engagements other than audits or reviews of historical financial information*. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion. In accordance with that standard we have:

- assessed the suitability of the circumstances of Zespri Group Limited's use of the criteria as the basis for preparation of the selected emissions;
- used our professional judgement to assess the risks of material misstatement and plan and perform the engagement to obtain limited assurance that the selected emissions are free from material misstatement, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express a conclusion on the effectiveness of these controls;
- evaluated the overall presentation of the selected emissions; and
- ensured that the engagement team possess the appropriate knowledge, skills and professional competencies.



How to interpret limited assurance and material misstatement

In a limited assurance engagement, the assurance practitioner performs procedures, primarily consisting of discussion and enquiries of management observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. The procedures selected depend on our judgement, including identifying areas where the risk of material misstatement with 14064-1: 2018 Greenhouse gases – organisational quantification and reporting standard sections 6.2 (Selection of quantification approach) and 6.3 (Calculation of GHG Emissions and Removals) is likely to arise.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Misstatements, including omissions, within the selected emissions, are considered material if, individually or in the aggregate, they could be reasonably expected to influence the relevant decisions of the intended users taken on the basis of the selected emissions included within the Zespri Group Limited Green House Gas Statement.

Restriction of distribution and use

Our report is made solely for the Zespri Group Limited. Our assurance work has been undertaken so that we might state to the Zespri Group Limited those matters we are required to state to them in the assurance report and for no other purpose. No other third party is intended to rely on our report.

Our report should not be regarded as suitable to be used or relied on by any third parties other than Zespri Group Limited for any purpose or in any context. Any other party who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk.

To the fullest extent permitted by law, none of KPMG, any entities directly or indirectly controlled by KPMG, or any of their respective members of employees accept or assume any responsibility and deny all liability to any party other than Zespri Group Limited for our work, for this independent limited assurance report, and/or for the conclusions we have reached.

Management's responsibility for the selected emissions

Management of the Company are responsible for the preparation of the selected emissions in accordance with the criteria, which management have determined to meet the needs of the Company. This responsibility includes the design, implementation and maintenance of such internal control as management determine is relevant to enable the preparation of the selected emissions that is free from material misstatement whether due to fraud or error.

Our responsibility

Our responsibility is to express a limited assurance conclusion to the Company on whether anything has come to our attention that the selected emissions have not, in all material respects, been prepared in accordance with the criteria for the period 1 April 2022 to 31 March 2023.

Our independence and quality control

We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 *International Code of Ethics for Assurance Practitioners (Including International Independence Standards)* (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 (Amended) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



Our firm has also provided other services to the Company and its subsidiaries in relation to audit of the statutory financial statements, other assurance services, agreed upon procedure engagements, taxation consulting and compliance services and climate change consulting services. Subject to certain restrictions, partners and employees of our firm may also deal with the group on normal terms within the ordinary course of trading activities of the business of the Company and its subsidiaries. These matters have not impaired our independence as assurance providers for this engagement. The firm has no other relationship with, or interest in, the Company.

A handwritten version of the KPMG logo in blue ink, consisting of the letters 'KPMG' in a casual, slightly slanted font.

KPMG
Auckland

3 July 2023