Fonterra Sustainability Report 2023

Pūrongo Toitūtanga Te Mātāpuna

Kate & Mohi,
Bay of Plenty

About this report

This report covers the activities of Fonterra Co-operative Group Limited and of joint ventures under Fonterra's management control. It covers the year commencing 1 August 2022 and ending 31 July 2023 – 'FY23'. It is one supporting document to the Annual Review 2023, forming an integrated suite of reports published on 21 September 2023. The Board has reviewed and approved the publication of this report.

www/fonterra.com/annualreview2023

In certain sections throughout the report, we have included data relating to periods prior to FY23 where such data is relevant to, or useful context for the reader. Where we have done so, we have made it clear which year(s) the data relates to.

This is our seventh sustainability performance report (our first was in 2017) and we intend to continue this type of reporting on an annual basis. This report has been prepared with reference to the Global Reporting Initiative (GRI) Standards : (see page 102 for an index of disclosures).

Seeking independent assurance is part of the standard practice for development and release of this report. This is the seventh year Bureau Veritas has been engaged to provide assurance of the report. This provides assurance that the report complies with GRI Standards and provides an accurate and fair representation of Fonterra's sustainability performance. Refer to the Assurance Statement on page SR-105.

Te Mātāpuna reflects our name, Fonterra, to spring from the earth.

COVER
Mohi,
Bay of Plenty

Contents

Welcome to our Sustainability Report for FY23.

This Sustainability Report is one of a series of supplementary reports to the Fonterra Annual Review. In it we provide stakeholders with information about our policies, targets and actions taken in FY23 in the broad areas of people and culture, nature and working together. Included in the appendices is detail on our performance data.

We know the importance of understanding stakeholder perspectives, so we'd appreciate your feedback on this report and our performance.

Please email us at sustainability@fonterra.com

OUR 2023 SUITE OF REPORTS

Annual Review 2023
(Referenced as **AR**)

Financial Statements 2023
(Referenced as **FS**)

Business Performance Report 2023
(Referenced as **BP**)

Sustainability Report 2023
(Referenced as **SR**)

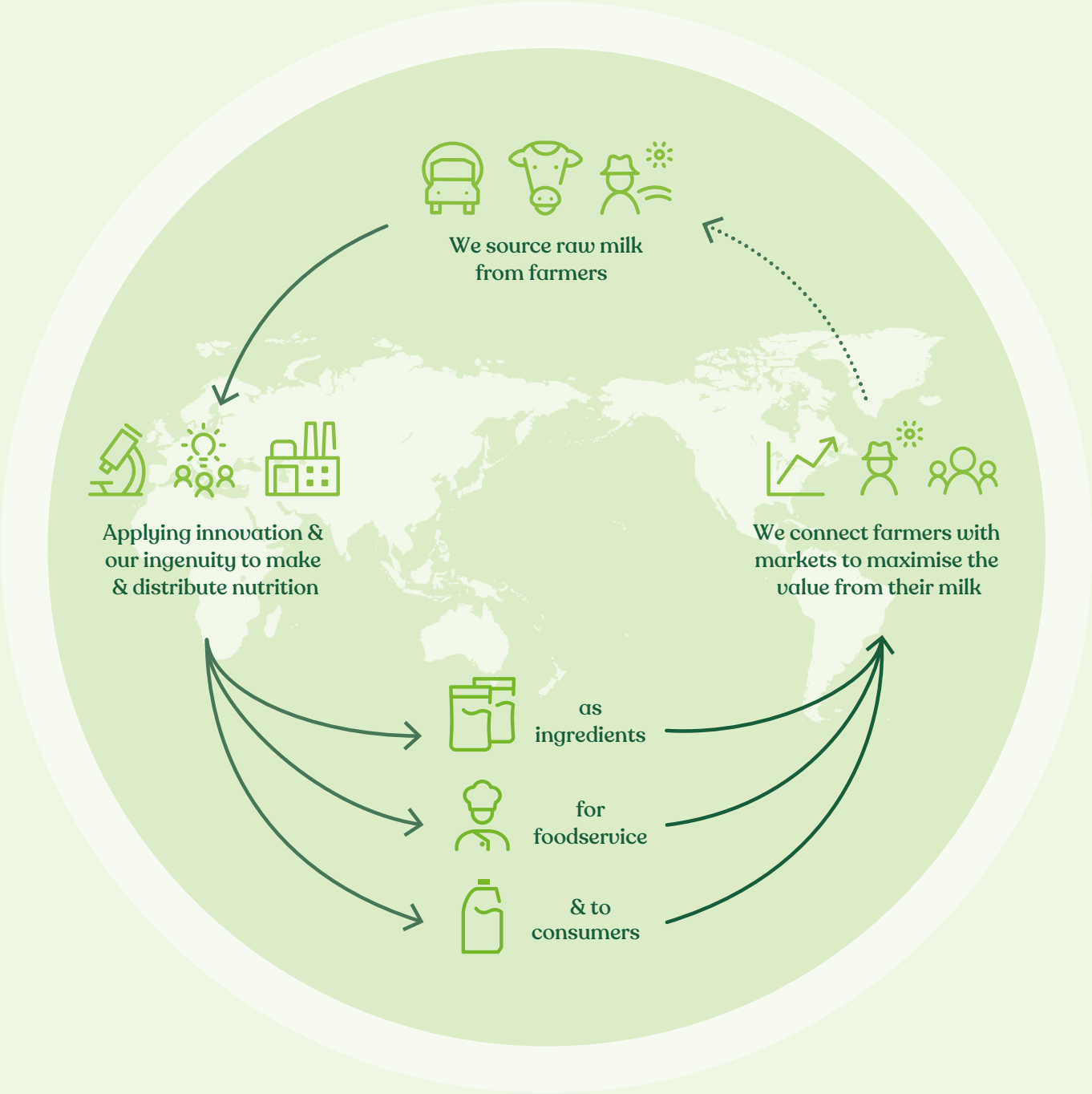
Governance & Statutory Disclosures 2023
(Referenced as **G&S**)

Modern Slavery Statement 2023
(Referenced as **MS**)

Farmgate Milk Price Statement 2023
(Referenced as **MP**)

OUR REPORTS ARE AVAILABLE FROM **FONTERRA.COM/NZ/EN/INVESTORS.HTML**

How we create value



Governance & Risk

We recognise the critical role governance plays in the success of our Co-operative so we are committed to achieving the highest standards with a focus that promotes:

- the interests of our key stakeholders including farmer shareholders, unit holders, debt investors, employees, customers, governments and the communities we operate within
- transparency and meaningful engagement with stakeholders
- effective risk management and compliance

Resources we rely on (our inputs)

People & Culture	Approximately 18,000 skilled and motivated employees led by a board and management team with diverse skills and experience 20,000+ dedicated farmers and farm workers Thousands more people in our supply chain
Nature	4 million milking cows grazing on 1.5 million hectares of pastoral land Some fertiliser, irrigated water and supplementary animal nutrition Energy (27.5PJ) and freshwater (48.7 million cubic metres) for our manufacturing sites
Relationships	With farmers, governments and regulators, unions, employees, customers, iwi and communities
Intellectual Capital	Our know-how, systems and intellectual property Our strong global brands 232 granted patents across 25 families of patents
Assets & Infrastructure	Our portfolio of property, plant and equipment including right-of-use assets ($6,343 million total net book value) 500+ milk collection tankers 45 manufacturing sites
Financial	A strong financial base, capital from our farmer shareholders, unit holders and debt ($12,774 million average capital employed)

Our progress

	Core Indicators[1]	Target[2]	FY20	FY21	FY22	FY23 [Target]	FY24 Target		Page
People & culture	Total recordable injury frequency rate (TRIFR) per million work hours	Less than 5	5.8	5.7	6.7	8.6	–	🔴	See 73
	Serious Harm	Zero Harm	10	9	8	5	–		See 73
	Gender diversity (Band 12+)[3]	40:40:20	–	–	37.6%	39.5%	40%	🟢	See 74
Nature	Reduction in absolute Scope 1 & 2 GHG emissions from FY18 baseline[5]	50% reduction by 2030[4]	3.5% reduction on FY18	6.5% reduction on FY18	11.3% reduction on FY18	14.1% reduction on FY18 [10.6%]	15.6% Reduction on FY18	🟢	See 78
	Farm Environment Plans (FEPs) (NZ)	100% by 2025	34%	53%	71%	85% [84%]	92%	🟢	See 74
	Water Improvement Plans in place at manufacturing sites	100% by 2024	–	–	–	44% [37.5%]	100%	🟢	See 74
Relationships	Share of New Zealand milk collected (% kgMS of New Zealand milk collected for season ending 31st May)	–	80%	79.0%	79.1%	79.0% [80%]	79.0%	🟢	BP-08
Intellectual Capital	EBIT from NZ value-add business ($ million)	–	–	616	307	466 [388]	–	🟢	
Assets & Infrastructure	Cost of quality (% of cost of goods sold)	–	–	0.45%	0.44%	0.34% [0.35%]	–	🟢	BP-41
Financial	New Zealand Farmgate Milk Price (per kgMS)	–	$7.14	$7.54	$9.30	$8.22 [$8.50 - $10.00]	–	🟠	BP-29
	Return on capital	7% – 8% by end FY24 9% – 10% by end FY30	6.6%	6.6%	6.8%	~12.4% [7.0% to 7.5%]	8.0% to 9.0%	🟢	BP-16

1 All targets are global unless stated otherwise (e.g. NZ).
2 All targets are by the end of the year stated.
3 For FY23 onwards our indicator changed to consider representation in Band 12+, see page 74.
4 For FY24 onwards our indicator changes from a 30% reduction to 50% reduction on FY18 baseline emissions.
5 Minor restatement of prior years see page 98.

FY23 progress is evaluated against stated targets:

- 🟢 Progressing well or target achieved
- 🟠 Progressing but not as strongly as we'd like
- 🔴 Not progressing well or original timeline significantly delayed

Responding to what's important

Engaging with our stakeholders

Taking into account the views and perspectives of our stakeholders, and building relationships, is critical to the long-term success of our Co-operative.

We consider our stakeholders to be those individuals or entities that are significantly impacted by our products and the activities required to source, make and distribute these or whose actions affect our ability to deliver our strategy see (see AR-02).

Determining what's important

Using a combination of the relative importance to our stakeholder groups and the significance of our impacts, in 2021 we refreshed our list of most material topics.

We reaffirmed this list in late 2022 through an internal review to understand relative impacts and emerging topics. In recognition of the high interrelationship between biodiversity and soil health as a result of the review we have combined them into one topic.

Our material topics list is used to help us prioritise areas for improvements and the importance of disclosure in this report.

The table on the right lists the most important topics, in order, and identifies where we cover our response in our reporting. For further details on the process and findings see page 99.

Topic	Contribution to UN SDGs	Reporting on our response
Ensuring the **food safety and quality** of the products we deliver.	Zero Hunger (2.1)	See food safety and quality on page 24
Adapting to the effects of climate change, while mitigating our impacts.	Climate change (13.1)	See climate change on page 28
Using **water** responsibly, including water quality, availability and disposal.	Clean water and sanitation (6.3, 6.4,6.6) Life below water (14.1)	See land and water on page 42
Protecting the **health and safety of people at work,** including their wellbeing.	Good health and wellbeing (3.9) Decent work and economic growth (8.8)	See health, safety and wellbeing on page 16
Protecting **animal health and welfare** within our supply chain, including caring for our cows and responsible use of antibiotics.		See animal wellbeing on page 38
Supporting the livelihood of thousands of people through meaningful **employment and sustainable income creation**, including the milk price for our farmer owners.	No poverty (1.2)	See investing in people on page 10 See employee data on page 83
Protecting and enhancing biodiversity and the underlying ecosystem services we rely upon such as soil health and the impact of deforestation.	Zero hunger (2.4) Life on land (15.1, 15.2) Clean water and sanitation (6.3, 6.6)	See land and water on page 42 See working with vendors on page 68 See working with farmers on page 57
Contributing to **nutrition and health** through the products and information we deliver, including reducing obesity and under-nutrition.	Zero hunger (2.1, 2.2) Good health & wellbeing (3.1,3.2,3.4)	See nutrition and health on page 20
Maintaining ethical business practices is fundamental to the way we work, including anti-corruption and fair competition.		See ethical business practices on page 63
Using **responsible procurement** to influence environmental, social and economic performance along our supply chain.	No poverty (1.2) Gender equality (5.5) Decent work & economic growth (8.7,8.8) Climate change (13.1)	See working with farmers on page 57 See working with vendors on page 68
Protecting the **employment rights and working conditions** of our people, including diversity and inclusion, women's empowerment and learning and development.	Gender equality (5.5) Decent work & economic growth (8.5)	See investing in people on page 10
Minimising **post-consumption waste**, including product packaging and food waste.	Responsible consumption & production (12.3, 12.5)	See packaging and waste on page 51

Our Sustainability Advisory Panel

The Fonterra Sustainability Advisory Panel was established in 2018. The Panel is comprised of external experts to come together at least twice each year with Fonterra representatives.

The Panel have the role to:

- review and provide feedback and advice to the Fonterra Management Team (FMT), and from time to time the Fonterra Board and relevant sub-committees, on Fonterra's strategy, targets and initiatives as they relate to economic, social and environmental sustainability;
- provide credible, independent expertise and guidance to the FMT to improve performance and outcomes in relation to sustainability;
- present to the FMT on advice and/or issues and opportunities that relate to sustainability and affect Fonterra.

The following were members of the Panel in FY23 – Read their full biographies online

Dr Gail Tipa

Paul Gilding

Until December 2023

Lou Sanson

Corrigan Sowman

Dr J Morgan Williams QSO

Message from the chair

The Sustainability Advisory Panel has continued to provide support for the Fonterra Board and Management in the update and development of Fonterra's long-term climate targets, aligning with international reporting standards.

Technology solutions have been a significant part of the Panel agenda as have challenges with water quality and the development of catchment strategies which will aid the movement towards effective nature-based solutions in time.

Our independent Sustainability Advisory Panel has acted as a 'critical friend' to the company again this year, bringing fresh perspectives and challenges to assist the Fonterra Board and management team on their climate change journey. The 'voice of the global customer' has again been heard powerfully as various initiatives have been put in place to respond to their requirements.

Finally, this will be my last message as Sustainability Panel Chair. After four very eventful, productive and enjoyable years, I step down this month in favour of incoming Chair, Rachel Taulelei. Morgan Williams is also stepping down. We all welcome Rachel as the incoming Chair and thank Morgan for his service. I feel confident that our excellent Panel (Corrigan Sowman, Gail Tipa and Lou Sanson), under Rachel's leadership, will continue to provide thoughtful support and guidance to the Fonterra Board and Management in years ahead.

Bridget Coates

Chair, Fonterra Sustainability Panel

People & culture

39.5%
female representation in senior leadership roles

100%
of our manufacturing sites are certified to a leading food safety management system

5
serious harm is reduced but our focus remains on achieving zero harm

97.1%
continued improvement in the formulation of our everyday and advanced nutrition products to meet our independently endorsed nutritional guidelines

In this section

Jack, Auckland

Investing in people

Our long-term success depends on the skill and commitment of our people, so investing in them is vital. We are committed to creating a culture where we care about each other, encourage different views and perspectives and treat each other with respect.

We are focused on building an inclusive workforce where diversity flourishes and teams can achieve their highest performance. This involves the ongoing development of our employees to help them respond to the ever-changing nature of work.

Our approach

Our Code of Business Conduct and global policies, including ethical behaviour and diversity and inclusion, set clear expectations for how our people need to act and behave. These policies are supported by local guidance to reflect relevant regulations and norms.

As part of our customer-led operating model, understanding and connecting with local markets is vital to our success. By hiring and developing local talent, we contribute towards the shared success of our Co-operative and the countries where we operate. Our remuneration framework for salaried staff includes base salary, benefits (KiwiSaver, superannuation and insurance where applicable), and variable remuneration (incentives). The amounts we pay to our employees are benchmarked against comparable companies in relevant markets, using information obtained from independent remuneration consultants.

Throughout the world, we are committed to identifying and unlocking our people's potential by developing capability, leadership and talent through coaching, learning, and regular feedback. We respect and support everyone's uniqueness, regardless of sexual orientation, gender identity or gender expression and recognise that diversity contributes to a stronger, more successful and sustainable Co-operative.

We fund an independently administered whistle-blowing hotline (The Way We Work Hotline) facilitated by Deloitte. It's available to all employees globally to raise concerns about behaviour not aligned with our Code of Business Conduct, and we provide an Employee Assistance Programme (EAP) where employees can seek advice and counselling.

Fonterra has a long-standing agreement with the International Union of Food and the New Zealand Dairy Workers Union that recognises our commitment to the Conventions of the International Labour Organisation for all Fonterra employees and is built into our Code of Business Conduct. In New Zealand, 61% of all full-time equivalent Fonterra employees are covered by collective bargaining agreements, and we have union agreements and relationships in many other markets.

This section covers all people who we employ directly around the world.

For information on how we are working with and supporting our supplying farmers see AR-30 and SR-57.

Culture & Values

A good culture helps us to successfully deliver our strategy which helps us provide the best returns back to our farmer shareholders. We believe a workplace culture that is driven by our purpose and values helps our people to be highly engaged, work together effectively, and channel their effort to the right things, so they can do their best work for the Co-operative.

We are applying the learnings from the Culturing for High Performance programme (see our FY22 Sustainability Report), and simplifying it into meaningful actions that support our values. As well as continuing to enhance our people programmes, we have begun work to further connect our people to our values and provide clear expectations for how we work together.

Orla & Rajiv, Auckland

What we've been doing

Diversity, equity & inclusion

We believe diversity, equity and inclusion (DEI) are integral to the success of our Co-operative. We are committed to bringing the principles of belonging (whanaungatanga), care (manaakitanga), inspiration (whakaohooho) and empowerment (kaitiakitanga) to life throughout our organisation.

We are nurturing an organisational culture and leadership approach where inclusive teams are embedded in our behaviour and are a natural way of operating. We encourage different views and perspectives to bring out the best in people. This requires an integrated approach where our DEI culturing and leadership initiatives align and complement each other.

In FY22 we updated our gender target to 40:40:20 representation in global senior leadership[1]. 40:40:20 refers to 40% female, 40% male, 20% of any gender. The 20% provides the flexibility of female, male, non-binary or open. We aim to achieve this by the end of FY24.

Female representation in global senior leadership increased from 37.6% to 39.5%. This year two women were internally promoted to the Fonterra Management Team ('FMT') early in FY23 and were joined by a third woman in June (in the acting role of Chief Operating Officer), bringing the proportion of women on the FMT to 50%.

We provide learning opportunities for our staff to grow their awareness and understanding of DEI. In FY23, we launched a new e-learning module understanding diversity, equity and inclusion and in support of our recruitment process our people can complete an e-learning programme on unconscious bias and mitigating bias.

Demonstrating our commitment to gender equity, we retained GenderTick™ accreditation[2] and achieved an advanced status for the first time since 2018. We are also members of the Pride Pledge which provides access to additional rainbow training and resources to help us improve inclusion of our LGBTQI+ staff.

Fonterra's parental leave cover for New Zealand employees offers extra care for primary carers who have been employed for at least 12 months. We top up their government parental leave payments to 100% of base salary or wages for 26 weeks; accrue their annual leave at 100% for the duration of their parental leave; and provide a one-off KiwiSaver employer contribution upon return to work, covering contributions that would have been made during their unpaid parental leave. We continue to support secondary careers who have been employed for at least 12 months with two weeks paid leave. In FY23, 173 females and 13 males took parental leave as primary caregiver, and one female and 148 males took parental leave as secondary caregiver.

'Good Chats' are a monthly internal DEI initiative to discuss cultural celebrations, wellbeing and raise awareness of different topics. We held 11 Good Chats this year, covering neurodiversity, Te Wiki o Te Reo Māori (Māori Language week), World Mental Health Day,

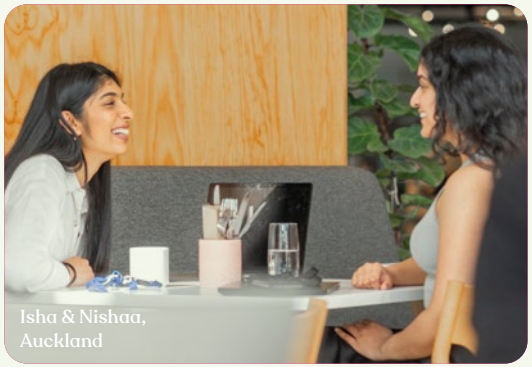
1 Senior leadership for this metric is defined by Band 12+.

2 The GenderTick™ is as an external accreditation programme across six key indicators: equal pay, leadership representation, flexible work and leave, gender safe workplaces, supporting the menopausal transiton and gender inclusive culture.

Dwali, Men's Health Month, Lunar New Year, Pride, International Women's Day, Ramadan, Dairy Women's Network Awards and Matariki (Māori New Year).

We have been exploring alternative ways to express our intent and track progress towards ethnic diversity, starting with our Māori workforce, as the indigenous people of Aotearoa New Zealand (see Māori strategy on page 15). This year, primarily due to increased voluntary disclosure of ethnicity information, ethnic representation in senior leadership improved from 15% to 16%.

We partner with Tupu Toa and First Foundation to provide opportunities for rangatahi (young people) to experience success. Tupu Toa (to grow and flourish) is an external organisation for businesses to employ Māori and Pasifika tertiary students as interns. First Foundation is about transformational change for Māori, Pasifika and ethnic rangatahi and their families through a hand-up to finish secondary school, through to University and work experience. This year, we awarded three scholarships to rangatahi who will be part of the FBNZ Takanini whanau (team).



Isha & Nishaa, Auckland

Learning & development at Fonterra

At Fonterra, we are investing in our collective future. Growing our workforce capability will help us to deliver our long-term strategy. Our investment in learning and development goes beyond traditional training programmes. Included in the range we are proud to offer, are New Zealand Qualifications Authority (NZQA) accredited learning opportunities ranging from NZQA Levels 3 to 9. In a typical year, Fonterra has more people gaining post-16 qualifications than the average New Zealand secondary school. In addition to our functional and technical development programmes, we also invest in developing leaders and the teams they lead.

We have been committed to investing in people for some time and in 2019 we signed the Aotearoa New Zealand Skills Pledge. This pledge is to double the on-the-job training and reskilling hours in New Zealand by 2025, from a 2020 baseline. The Skills Pledge aligns with our focus on building the right capabilities, preparing employees for their roles today and the future in New Zealand and globally, and significantly contributing to building the capability of New Zealand as a whole.

In the past year, our New Zealand employees spent more than 430,356 hours upskilling, an increase of 59% on FY20, and an average of 32 hours per learner[1]. This is a decrease of 14% on the upskilling hours recorded for FY22, which included additional hours due to the completion of training that was previously delayed by COVID-19.

Externally accredited vocational learning programmes for operations

Since 2019, we have had sustained growth in our apprenticeship and traineeship programme numbers. At the end of FY23 we had 69 apprentices and 25 energy centre trainees on programme, with four apprentices and two energy centre trainees completing their qualifications and moving into full time roles.

For our New Zealand manufacturing sites and distribution centres, DAIRYCRAFT is our 18-month programme allowing employees to develop relevant technical skills and gain NZQA recognised qualifications[2]. This year, 135 employees completed NZQA Level 3 and a further 26 completed NZQA Level 4. Since DAIRYCRAFT's inception in 2015, more than 1,260 of our employees have completed the programme. Our FY24 focus is to broaden the programme by introducing new learning streams for our employees such as engineering for the dairy sector. We will also be exploring how DAIRYCRAFT can be deployed in other areas of our business.

FY23 saw 53 employees enrolled in the two-year NZQA Level 6 Dairy Diploma qualification. In this course our people developed deeper technical knowledge across dairy microbiology, food safety, dairy engineering and dairy chemistry.

For the Milk Collection part of our New Zealand operations, the Tētēkura programme brings less experienced drivers in to the Co-operative. We invest in their growth and development by taking them through a 10.5 week programme covering classroom and on-the-job training along with support from assessors and driver trainers. Participants need to hold a minimum of a Class 4 licence and on the programe they will gain their full Class 5 licence (enabling them to transport liquids in double tankers).

Our FY23 season saw 12 Tētēkura learners progress successfully through the programme. The FY24 national plan is to integrate another 47 into our recruitment pipeline.

1 These figures cover New Zealand based employees only. The reporting systems for training elsewhere in the world currently do not allow us to report globally in a consistent manner.

2 The DAIRYCRAFT training is recognised by the New Zealand Qualifications Authority (NZQA)

Internally delivered courses

Looking beyond the vocational programmes, we also invest in our leaders growing function-specific capability and create the team culture and engagement that makes Fonterra an attractive place to work.

Our Leadership Essentials Programme (LEP) is about developing our current and future frontline leaders. To date, over 950 employees have completed the programme globally, with 400 of those completing in FY23. Pre- and post-programme surveys show a lift in performance across all 16 leadership capabilities measured, and 93% of participants say they've improved their performance and feel inspired to continue taking action after completing the programme.

In April 2023, we launched our Enterprise Leaders Programme (ELP) for 57 of our most senior leaders in our Level 3 population. The overall intent of the programme is to build the leadership capability required to deliver our Long-Term Strategy. ELP is a year-long immersive programme that combines assessment, face-to-face forums, virtual learning labs, coaching and projects.

In FY23, deployment of our High-Performance Teams (HPT) programme continued where teams focused on practical skills helping leaders to enhance their effectiveness together with their teams. In FY23, 63 teams completed 5,460 hours developing their skills across core communication and ways of working topics through this HPT programme.

The Employment Relations (ER) team has delivered a wide range of manager capability training sessions in FY23, totalling approximately 26,400 learning hours, with 550 employees attending a total of 48 hours of training. The team has also delivered targeted ER on-line and in-person training sessions on topics such as the implementation of E-Road cameras as a safety feature in the Co-operative's milk tankers and our refreshed Alcohol and Other Drugs policy.

In Farm Source, this year we launched Kura Hokohoko — our retail training academy, which won Silver in the global Brandon Hall Excellence Awards. In addition, the feedback and level of participation was positive.

Early careers (Graduate Programmes)

Our graduate talent pipeline is a key part of our workforce planning for business-critical roles.

During FY23, our 53rd annual Fonterra Graduate Technical Programme (FGTP) cohort was onboarded with a complement of 16, one of which is funded by the Singapore office to increase the technical capability in our offshore markets. The FGTP programme is unique, being the only New Zealand graduate programme to include a Masters in Dairy Science and Technology (NZQA Level 9). During the year we also onboarded a cohort of 21 Business Graduates, making our full complement across the two intakes of the Business Graduate two-year programme to 38 people.

In order to ensure our key talent pipeline remains robust and supports our long-term aspirations, we refreshed our Graduate Strategy. Upcoming changes include the addition of an offshore rotation for the FGTP programme from 2024 and the development of a new Global Graduate programme launching in 2025. Leveraging development opportunities for our graduates across our global footprint helps to maintain our attractiveness for the top graduates, building end-to-end value chain awareness and providing opportunities for offshore candidates with relevant degrees.

For those specialist graduates on the engineering stream, we support their ongoing professional development through our Technical Excellence's Professional Engineering Programme. Graduates are partnered with a chartered engineer who is a Fonterra employee and provides mentorship to support the graduate gain their professional engineering chartership. By increasing our chartered employee base, we are expanding our expert technical knowledge to deliver future focused engineering solutions to complex, and in some cases, country-leading projects.

Closing our gender pay gap

We believe that after considering factors such as tenure, qualification levels or experience there should be no gender pay gap for any employees.

This is a complex topic and cannot be accurately summarised by a single aggregated number. Instead, we believe transparency is important, providing a breakdown of the gender pay gap by geographies and job categories.[1]

Closing the gender pay gap remains a key priority. This year, we have introduced an additional gender pay parity methodology for salaried positions, facilitating improved internal tracking and the identification of focus areas for long-term gender pay plans. This methodology compares positions on a "like-for-like" basis within each job category and country—removing the impact of changes in gender representation and currency. For example, a ratio of 1 shows no pay gap where above 1 is in favour of females and below 1 is in favour of males.

When looking at the gender pay gap overall, the ratio of female to male base salary has remained the same this year at 0.93 on a median basis and 1.02 on a mean basis. This result continues to be influenced by factors such as the different proportions of men and women in higher and lower paid levels around the world. The impact of the sale of the Chilean Soprole business is also a factor and illustrates the importance of reporting different geographies.

Considering job categories globally, Manager and Waged categories remain largely unchanged; for Senior Leaders the gap has narrowed significantly but remains in favour of males; and for Professionals the gap has widened in favour of females.

In New Zealand, the gap on a median basis has narrowed to 0.96 which is equivalent to a 4.1% pay gap and continues to compare very favourably with the most recent national statistic of 8.6% for the June Quarter 2023.

Applying the additional methodology, when we look at like-for-like positions the median gender pay parity overall for salaried positions is 0.97 at the end of FY23. This is a 3% gap on a median basis in favour of males.

Gender pay gap by job category

	GENDER PAY GAP - MEDIAN	GENDER PAY PARITY GAP - MEDIAN[2]
Senior Leaders	0.92 -> 0.97 ↓↑	1.00
Manager	0.95 -> 0.97 ↓↑	0.97
Professionals	1.08 -> 1.17 ↑↓	0.98
Waged	0.84 -> 0.82 ↑↓	–

Gender pay gap by location

	GENDER PAY GAP - MEDIAN	GENDER PAY PARITY GAP - MEDIAN[2]
New Zealand	0.95 -> 0.96 ↓↑	0.97
Australia	1.02 -> 0.95 ↑↓	0.97
Brazil	0.84-> 0.80 ↑↓	–
Greater China	1.09 -> 1.04 ↓↑	1.00

Gap narrowed ↓↑ Gap widened ↑↓ Gap same =

1 Where a breakdown of information represents a small number of employees we omit this detail to protect the privacy of individuals.
2 Salaried employees only.

Non-discrimination

Through our independently administered whistle-blowing hotline (see The Way We Work Hotline AR-08), three disclosures were made this year relating to discrimination, including harassment. Following investigations, one was substantiated (resulting in disciplinary action being taken) and two were unsubstantiated. Once a matter has been raised, the incident is reviewed to determine if a formal investigation is deemed necessary. If an investigation determines that an incident has been substantiated, remedial action is taken (whether formal or informal, dependent on the circumstances) by a relevant manager, with support from an appropriately qualified Fonterra representative. Relevant senior stakeholders are informed of the action taken to see that the action is appropriate, in the circumstances, as the issues arise. Reporting to the Board on substantiated incidents also takes place.

In addition to concerns raised through The Way We Work Hotline, some discrimination and other employment issues are raised with local human resource or management teams every year. These are reviewed and, where appropriate, formally investigated in a similar manner as above. In New Zealand, 12 formal complaints were raised that included allegations of discrimination or harassment. In so far as these related to alleged discrimination or harassment, five were substantiated (resulting in disciplinary processes), five were unsubstantiated, and two remain active matters. At the reporting date last year, one complaint in New Zealand remained under investigation. That complaint was subsequently found to be unsubstantiated. In respect of other countries, three complaints were raised in Australia. Of these, two were substantiated (resulting in disciplinary processes) and one was unsubstantiated. No complaints of discrimination or discrimination-related concerns were reported in other countries.

Our Māori strategy – Haea te ata (To draw a new day)

In Aotearoa New Zealand, Māori are our indigenous peoples who have a spiritual connection between people and the land – the wellbeing of one sustains the wellbeing of the other. It's a spirit we share together as New Zealanders, and with many cultures around the globe, that connects and unifies us all.

Within this spirit, Haea te Ata, is our Māori strategy to weave Te Ao Māori (Māori world view) through the Co-operative in an inclusive and authentic way: Tāngata (connecting all with Te AoMāori), Taiao (embedding balance of the natural environment and our business), Tuakiri (enhancing our provenance, products and services).

This year, our Matakahi Māori (Māori strategy team) carried out Project Puna, a project to understand and improve experiences for and representation of Māori staff across our Aotearoa New Zealand workforce. The review included 230 one-on-one interviews with 194 staff who identify as Māori and 38 senior leaders, a tailored online survey completed by 205 people, eight discussions with external bodies (including Unions), a thorough desktop review of Fonterra's people policies and processes and a review of relevant Aotearoa New Zealand literature on addressing historic and modern inequities.

Insights from Project Puna were grouped into four themes: low cultural intelligence in leadership; limited Māori in leadership; majority designed people frameworks; and cultural identity and load. The Fonterra Management Team have endorsed an action plan to address the review insights, starting with creating cultural connections for all our people.

The Matakahi Māori team continued to support all farmer shareholders and secured its first Memorandum of Understanding ('MOU') between a South Island manufacturing site (Takaka) and Manawhenua ki Mohua. Manawhenua Ki Mohua are an iwi (tribal authority) mandated organisation representing Ngāti Tama, Ngāti Rārua and Te Ātiawa within the area defined as the Golden Bay catchment and Kahurangi National Park area, at the top of the South Island of Aotearoa New Zealand. We have now secured seven MOUs between our manufacturing sites and iwi (tribal authorities) nationwide. These MOUs are essentially 'heads of agreement' formalising a partnership between Fonterra and mana whenua when it comes to how we will engage with and support each other on agreed matters of mutual interest.

To continue momentum and increase engagement, starting at our Kauri site, we implemented a new and more inclusive engagement approach between manufacturing sites and tangata whenua (indigenous, Māori people) to empower our sites and employees to engage directly.

In July 2023, we held Co-operative wide Matariki celebrations. Matariki is the appearance of a cluster of stars and marks the start of the Māori New Year. It is a time for celebration and reflection across Aotearoa New Zealand.

What's next

We will continue looking to improve our gender diversity, including pursuing our 40:40:20 goal for senior leadership, and also implement a number of actions and initiatives that were identified in Project Puna to support our Māori employees, so that we are more diverse and connected to our heritage.

We will continue our team-based development with a refreshed and enhanced focus on the High-Performance Teams skill building.

We will be launching our Senior Leaders Programme engaging around 200 leaders across the business in FY24.

Arekatera, Auckland

Crawford Street Distribution Centre

Health, safety & wellbeing

Our ambition is for all our people to return home safely every day, everywhere.

Our approach

Fonterra operates a global health and safety management system and continuously improving health, safety,and wellbeing is fundamental to our business.

The Fonterra Global Health, Safety and Wellbeing Policy defines our commitment to providing a safe and healthy work environment where our employees, contractors and visitors can return home from work safely every day, everywhere. Implementation of, and compliance with, the policy is overseen by our Chief Executive Officer.

We are committed to delivering on our health, safety and wellbeing commitments through:

- People who believe harm is avoidable and support a safe and healthy work environment.
- Processes that always prioritise safe work practices, proactively identifying and managing exposure to risk to support our business activities to comply with all statutory and legal requirements specific to the regions in which we operate.
- Plant and equipment that considers design, operation, management and maintenance that creates a safe and healthy work environment.

Accountability for performance extends from the Board of Directors, through the Fonterra Management Team, to individual managers, front-line employees and contractors working on Fonterra sites.

We monitor our performance using a number of preventative and reactive, lead and lag indicators. These include injury rates and findings from self-assurance, internal audits and event investigations. We use this information to seek improvements, identifying and controlling risk from credible hazards and maintaining a strong safety culture with regular training and employee engagement.

What we've been doing

Supporting the wellbeing of employees & their whānau

This year we continued with our GoodYarn programme and grew our network of 'Good Sorts'. We now have 190 volunteer employees who have been trained as mental health 'first aiders' and provide initial support to other employees. We also ran 135 'GoodYarn'[1] workshops to raise awareness of mental wellbeing and the available support. Further to this we made the benefits of the GoodYarn programme more widely accessible by translating it into Arabic, Urdu, Chinese, and Amharic.

Complementing the GoodYarn programme, is our internal podcast series on healthy minds. This is backed by an easy-to-understand healthy minds meter and access to healthy minds first aiders.

Our Employee Assistance Programme (EAP) is a professional and confidential service, paid for by Fonterra, that helps employees when they are experiencing difficulties. We recognised that the EAP offer might be helpful to our supplying farmers, so in 2022 we opened up this opportunity for farmers too.

Through our 'Better You' digital platform we provide wellbeing tools and resources for our employees and whānau. By completing a questionnaire covering ten healthy habits, including healthy eating, sleeping, exercise and mental health, the participant receives an overall 'wellbeing score' along with access to material and activities that can help them make improvements to their wellbeing.

The platform also allows us to run global team challenges designed to promote improved health and wellbeing by providing valuable information and encouraging the adoption of new behaviours through teamwork and competition. We ran three global challenges this year, including our Hauora (wellness) themed Moove It Challenge, Road Safety Week Campaign and Ready to Recharge. Overall, 11,124 employees participated across the three challenges this year.

1 GoodYarn is an evidence-based, peer-delivered, mental health literacy programme for workplaces that enables people to talk about mental health. See www.goodyarn.org/

Improving workplace safety

We have continued to improve workplace safety through proactive risk assessment, building team capability, simplifying policy and extending support programmes.

This year, we have seen an increase in the recordable injury frequency rate. To improve focus on reducing this and seeking to make sure everyone returns home safe every day we have appointed a Director of Health Safety and Wellbeing. Previously this role was combined with the portfolio of safety, quality and regulatory.

We are simplifying our Health and Safety management system, increasing our focus on keeping safe at work. We started with our operations in New Zealand, which are now part of a new Global Integrated Management system (see page 26). We also completed the global deployment of the first stage of the digital ecosystem. This change will simplify the management of food safety and quality, health and safety risks and incidents by significantly reducing the number of operating systems, improving data management, visibility and insights.

This year, while implementing the standardised management of change and incident management modules we took the opportunity to refresh our contractor safety management system. This enhanced capability allows our teams to view contractor safety performance by site, regionally and nationally, supporting our ability to select and work with contractors who have the best safety performance. Planning has begun to move our health and safety risk management, auditing and inspection and permit to work onto the same digital platform in the coming years.

Recognising that fellow employees who are impaired at work by alcohol or other drugs increases the risk of accidents and injuries, we have also reviewed our related policies and procedures, consulted on the improvements and are now rolling these out in New Zealand.

Following stringent document and site verification audits by the Malaysia Occupational Safety and Health Awards (MSOSH) panel of qualified auditors this year, our local operations were recognised through a Gold Merit win.

Improving critical risk management

Our extensive manufacturing operations and technological applications carry inherent risks that could reasonably lead to serious harm or environmental impact.

Termed a Major Incident (MI), we anticipate and manage these rare outcomes through our Process Safety Management System (PSMS). The PSMS seeks first to eliminate or minimise hazards in advance of a credible major incident, and then minimise their consequence to reasonably practicable levels.

In the current year of process safety integration, we are pleased to report that we have now closed over 5,000 recommendations from process safety assessments at more than 35 facilities globally. We have identified over 1,220 Safety Critical Elements (SCEs), instituted 589 shared assurance maintenance strategies, 391 critical maintenance instructions, and invested more than $70 million in capital this year to significantly reduce hazardous chemical volumes and implemented or remediated safety controls to advance our aspiration of zero serious harm.

We met our ongoing Rail Safety Case commitments completing all scheduled rail safety assessments and hosting a New Zealand wide industry siding operator forum at our Darfield site. We continued to advance our risk assessment methodologies. Our dust safety re-assessment programme continues to re-baseline our understanding of dryer safety controls, and we have developed a suitable radiation safety assessment methodology seeking to advance risk management for our x-ray machinery.

This ongoing work has been a real team effort, involving numerous people and partner organisations. It was pleasing to have this acknowledged in November 2022 by being awarded the annual Australasia IChemE Safety Centre Process Safety Award in collaboration with Beca. This recognition is external validation of our ongoing commitment to integrating process safety principles across our manufacturing facilities.

Key:

PSMS: Process Safety Management System
MoC: Management of Change
SOP: Standard Operating Procedures

Regulatory compliance

With designated major hazard facilities and an asset-intensive manufacturing footprint, Fonterra will, from time-to-time, receive regulatory notices. We seek to work collaboratively with all of our regulators to support risk management, and we approach each occurrence as an opportunity for improvement.

There have been no health and safety prosecutions in connection with Fonterra's operations since 2014, and during FY23, we did not receive any prohibition notice enforcements.

This year, we received notice from WorkSafe that our Tirau site is no longer considered a Major Hazard Facility (MHF). At Whareroa, our one remaining MHF site, we invested ~$60million to reduce our use of liquified ammonia. We are currently commissioning three new heat pump systems which will reticulate chilled water and significantly reduce the risk associated with older equipment.

2022 IChemE Process Safety Award Winning Ammonia Decanting System

Our performance

Zero

work related fatalities

5 ↓

Number of serious harm injuries

328 ↑

Number of recordable injuries

What's next

We will continue to improve our proactive risk management approach, focusing on the actions that come from our investigations into actual or potential high-severity incidents, eliminating root causes, and moving towards doing work that is safe rather than doing safety work.

We will also continue to improve and apply our PSMS and safety critical element assurances.

We will continue to grow the maturity of our mental health and wellbeing programmes as we work to further integrate our Health, Safety and Wellbeing strategy across the Co-operative.

We will also continue to evolve our integrated digital platform, which will include an electronic permit to work system and integrate other assurance processes such as risk management and auditing.

Nutrition & health

Good nutrition is essential for people to lead healthy and fulfilling lives.

People eat for enjoyment and the nutrients needed to fuel growth, development, health and wellbeing. Milk and dairy products are a unique and valuable source of essential nutrients with proven benefits to support health outcomes across all life stages and, as a naturally nutritious product, we see dairy as an important part of the sustainable food systems of the future.

The July 2023 United Nations report on food security and nutrition highlights undernourishment continues to be of concern globally. To achieve the Sustainable Development Goals to end hunger, food insecurity and all forms of malnutrition, sound nutrition is essential. There is a clear call to action by governments, civil society and business to increase the supply of nutritious and safe foods that constitute a healthy diet and shift consumption towards them.

Unhealthy diets and poor nutrition are among the top risk factors for non-communicable diseases (those that do not transmit from person to person) such as heart attacks, strokes, certain cancers, and type II diabetes. We continue to see malnutrition from micronutrient deficiencies across both developing and developed countries.

Milk and dairy products provide a meaningful contribution to our nutrition status and health outcomes, with high quality protein and a wide range of vitamins and minerals for relatively low calories, which makes it both nutrient-rich and nutrient dense. The proteins found in milk and dairy products are high quality because they contain all the essential amino acids, in the right amounts, that are both easy to digest and in proportions that meet human needs. Many nutrients that milk provides are also in an easily absorbed form.

As a food company, we recognise the valuable role nutrient-rich milk and dairy products can play in addressing deficiencies in diets and improving people's health and wellbeing across the globe. This section covers our approach to nutrition and its contribution to health and wellbeing.

Our Nutrition Expert Panel:
Nikki Hart, Dr Manny Noakes and Julian Mellentin

Our approach

The Fonterra Global Nutrition Policy sets out our overarching commitments including delivering science-based nutrition and health benefits, products tailored to specific nutritional needs and marketing these responsibly.

Supporting the policy is our Nutrition Standard which outlines how we operate regarding nutrition with detailed Nutrition Guidelines that define the nutrition criteria and principles for the composition and marketing of our consumer products and ingredients.

The New Zealand Nutrition Foundation has independently reviewed and endorsed our Nutrition Guidelines as evidence-based, founded in robust nutritional science and reflecting international directives on nutrition and health. These guidelines complement national food standards and regulations, as well as our own educational and advocacy activities to raise awareness of the value of dairy nutrition in healthy, balanced diets.

We seek to promote our products responsibly and take particular care when marketing to vulnerable populations. No matter the stage of life of our consumers, we are committed to promoting responsible consumption of our products in line with national dietary guidelines. Our commitment is demonstrated in our Marketing to Children Standard which sets out the nutrition criteria and requirements that our products must meet in order to be marketed to children. These have been set to align with international marketing to children policies, such as the World Health Organisation (WHO) set of recommendations on the marketing of foods and non-alcoholic beverages to children and the EU Pledge, as well as local regulations and advertising standards from across our markets.

We support and promote the aim and intent of the International Code for the Marketing of Breast Milk Substitutes. The WHO recommends six months of exclusive breast feeding and continued breast feeding, with suitable nutritious complementary feeding, up to two years of age and beyond. We are committed to complying with the relevant industry codes and legislation in all countries where our products formulated for infants and young children are sold.

Internally, our Global Nutrition Council, which is comprised of senior leaders is responsible for governing our nutrition policy, standards and guidelines and overseeing the nutrition performance of our portfolio.

This year, we launched our Nutrition Expert Panel with a purpose to provide external nutrition expertise to support and guide our nutrition strategy – to be our critical friend. The external experts on the Panel bring a wealth of expertise and experience from a range of different areas that brings credibility as we leverage our sustainable dairy nutrition credentials. Panel members are: Nikki Hart, Dr Manny Noakes and Julian Mellentin.

What we've been doing

Improving the nutritional profile of our consumer products

We are continuing to improve the composition of our consumer products, taking into consideration the levels of dairy protein and calcium, while also minimising the addition of free sugars, refined carbohydrates, non-nutritive sweeteners, sodium and saturated fat. Our Nutrition Guidelines also reflect our support for the global public health objective to reduce the intake of industrially produced trans fats from partially hydrogenated oils, and state our commitment to not use industrial trans fat ingredients in our products.

Our target is for 100% of our everyday consumer products, such as milk, cheese, yoghurt and fortified milk powders, to comply with our independently endorsed nutrition guidelines by 2025. This year, on a volume sold basis, we improved from 87.7% to 97.1 %. Now we have achieved more than 90% of these products meeting the guideline, our aim is to stay above this level as we progress towards our target of 100%.

Delivering Essential Nutrients

We have already completed research and development work that has delivered evidence that allows us to position products around health benefits, including the areas of muscle health and sarcopenia (age-related loss of muscle mass), mobility, malnutrition, and digestive health.

In early 2023, we launched our innovative new product Anlene™ Total 10 in a number of our South-East Asia markets, including the Philippines, Singapore, Indonesia, Malaysia Thailand and Vietnam.

Aptly named Anlene™ Total 10, for the ten essential benefits delivered in every glass, this scientifically developed formula is made with Fonterra's unique whey protein isolate (WPI) and milk protein concentrate (MPC) to deliver a high protein solution that is naturally lower in lactose. Anlene™ Total 10 has 27 nutrients in the right amounts, to make sure the consumer is getting the nutrition needed alongside a healthy diet to support active and healthy lives.

Adding to the Anlene™ Gold stable of products

Like many countries in the world, China is facing the challenge of an ageing population. Good nutrition plays a vital role in helping the ageing population live more healthily and to help decrease age-related health issues. Studies such as Luliano et al on the effects of dietary sources of calcium and protein on hip fractures in adults in residential care, indicate that milk and dairy products have an important role to play.[1]

Following our FY22 launch of Anlene™ Gold Plus in China to help support the digestion and immunity of the older population, in January 2023 we launched Anlene Gold™ Milk Powder for 50+. This product supports bone health through the high-quality protein it contains, and its bundle of vitamins and minerals including vitamin A, vitamin D, vitamin C, vitamins B2 and B12, calcium, magnesium, and zinc. It is targeted to adults over the age of 50.

1 luliano S. et al. Effect of dietary sources of calcium and protein on hip fractures and falls in older adults in residential care: cluster randomised controlled trial. BMJ 2021;375:2364 | doi: 10.1136/bmj.n2364

Investing in new food technologies & sources of nutrition

Dairy offers a unique source of nutrition, which is recognised by governments and health experts around the world as having an important role to play in maintaining a healthy, balanced diet.

We believe there will continue to be demand for natural dairy goodness, especially our pasture-based dairy nutrition from New Zealand. At the same time, we are committed to remaining at the forefront of innovation and science and want to continuously position ourselves to meet the needs of our customers and consumers. To this end, Fonterra is exploring the potential of emerging food technologies and the role they can play alongside our core dairy products. Earlier this year Fonterra together with Dutch company Royal DSM established Vivici BV a start-up company focussed on the use of precision fermentation to produce dairy-like proteins.

Compliance with regulations

In the past year, we received no fines or market bans for breaches of marketing regulations. None of our products are banned from sale in any country.

Anmum™ Materna Lite

Anmum™ was first launched in 1996 in Singapore and Malaysia as a maternal product for pregnant mothers. Specially formulated in response to independent research, it provides essential nutrients that are important during pregnancy.

This research indicated pregnant mothers could help safeguard their child against neural tube defects (such as spina bifida) by consuming folic acid before conception and in the early stages of pregnancy. From launching pregnancy milk in Asia to expanding into the paediatrics range in Malaysia and Greater China, the brand and its products continue to grow as we seek to offer consumers the best range of products to meet their needs.

During pregnancy, the mother's body requires a higher amount of certain macro- and micro-nutrients than usual, and healthy weight gain is to be expected. However, recent research by UNICEF found that Indonesia has the highest maternal overweight rate among six other countries in Southeast Asia[1]. This year, in response to this issue, we launched Anmum™ Materna Lite in Indonesia, the Philippines and Thailand to support pregnant women in accessing the nutrition their bodies require without the excess calories.

This fortified low-fat milk supports pregnancy nutrition for both mother and fetus by delivering a bundle of nutrients including energy, protein, folic acid, iodine, zinc, calcium, and dietary fibre. It is also Indonesia's first low-fat pregnancy milk. It has 99 kcal per glass, is low in fat and has no added sugars.

Anmum™ Materna Lite provides mothers with the pregnancy nutrition they need.

[1] UNICEF Southeast Asia Regional Report. Maternal Nutrition and Complementary Feeding (2021) www.unicef.org/eap/reports/maternal-nutrition-and-complementary-feeding

Our performance

97.1%

of our everyday and advanced nutrition products meet our independently endorsed nutritional guidelines.

What's next

We will continue to improve the nutritional value of our consumer branded products, minimising added sugars and salt and eliminating industrially produced trans fats.

We will continue to invest in research and development and new innovations for our entire product range.

We plan to run a nutrition summit to educate our employees on the dairy nutrition fundamentals, with both internal and external experts.

We will continue to work with our Nutrition Expert Panel to help shape how we communicate internally and externally on all aspects of sustainable dairy nutrition.

Viray,
Auckland

Food safety & quality

Safe food. Safe people.
World class quality.
It's our promise.

Our approach

At Fonterra, food safety and quality (FSQ) are everyone's responsibility – from our farms all the way to our customers around the world.

Accountability extends from the Board of Directors, through the Fonterra Management Team, to individual managers, front-line employees, contractors working on Fonterra sites and providers of goods and services.

To encourage consistency of approach and continuous improvement, the Global Safety, Quality and Regulatory (GSQR) organisation and operating model, including the FSQ Council, is embedded across Fonterra.

Our FSQ System means that, wherever we are in the world, we have a clear, consistent framework to deliver safe, quality products and services. It consists of four key components: our Food Safety Policy, business unit requirements, partner requirements, and our food safety and quality behaviours.

All our food products are assessed for health and food safety impacts prior to initial launch and on an ongoing basis. This includes detailed processes for new product development, manufacturing and product sampling and testing, including shelf-life studies. To evaluate our performance, manufacturing sites are subject to an internal audit programme and regular scrutiny through third-party audits by regulators, key account customers and certification bodies. Any areas identified as needing improvement are acted upon.

We are guided on best practice by multiple international food safety and quality standards, and 100% of our manufacturing sites are independently certified to a leading food safety management system (e.g. FSSC22000, BRC).

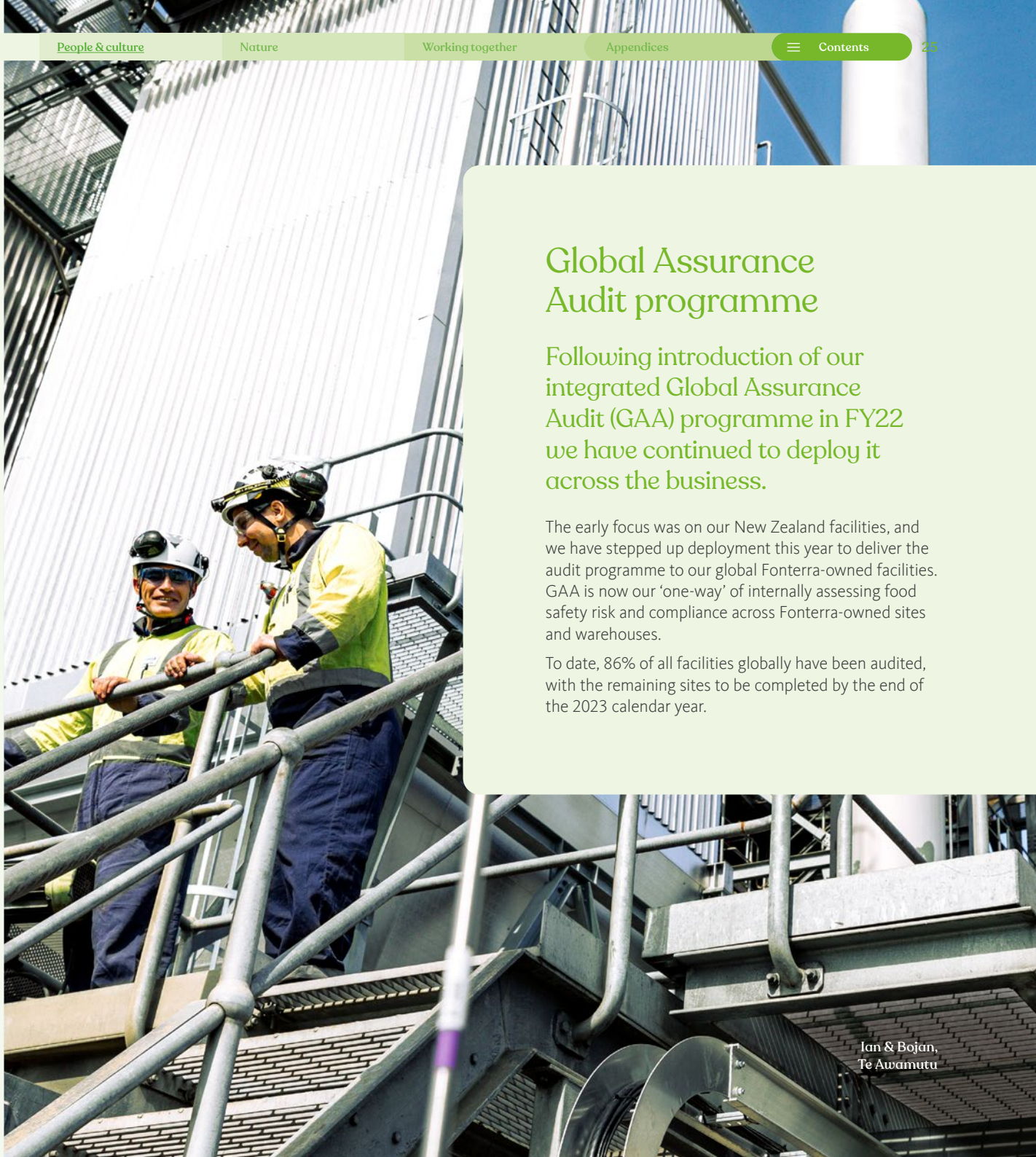
What we've been doing

Safety culture & capability

Building FSQ as a core part of our culture continues to be a focus. Global regulatory and customer requirements increasingly place importance on FSQ standards and culture. We believe our continued focus and actions put us in a good place, but we know there is still more to do.

This year, we have put more attention on measuring our FSQ culture. Having seen positive results from the first business units using our new FSQ culture survey tool, we are now extending coverage to more of our global business units and will continue with the roll out into next year. The culture survey provides our sites with information about how they are tracking against an international FSQ culture maturity model and where they can focus improvement activities. To support this, we have also embedded culture into our internal quality assurance auditing process.

Capability is a core part of building our safety culture and we continue to develop the influencing skills of our safety professionals and to improve our operational safety training to support better safety outcomes.



Ian & Bojan, Te Awamutu

Global Assurance Audit programme

Following introduction of our integrated Global Assurance Audit (GAA) programme in FY22 we have continued to deploy it across the business.

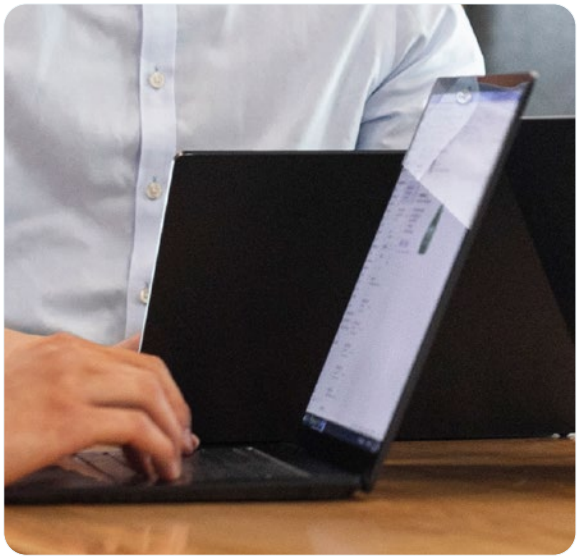
The early focus was on our New Zealand facilities, and we have stepped up deployment this year to deliver the audit programme to our global Fonterra-owned facilities. GAA is now our 'one-way' of internally assessing food safety risk and compliance across Fonterra-owned sites and warehouses.

To date, 86% of all facilities globally have been audited, with the remaining sites to be completed by the end of the 2023 calendar year.

A single digital platform

We began the roll out of integrating food safety, quality and health and safety systems to one digital platform.

This helps us draw deeper insights into our performance and identify opportunities for improvement, simplification and risk reduction. We are taking a staged approach to deployment. For our New Zealand operations we have integrated the management of change, incident management and contractor safety management modules. For our Australian sites we have deployed management of change and incident management modules. Deployment to the rest of our global sites continues.



Influencing our supply chain

Global FSQ vendor management and factory permit to work are planned for deployment in 2024. Further modules are being scoped for development, including audit and inspection, shared learnings and compliance monitoring.

With COVID-19 travel restrictions lifted, this year we rolled out a new auditing approach for our new and existing vendors and third-party manufacturers (TPMs). This begins with an initial assessment to determine the food safety risk of vendors and therefore the subsequent auditing approach. We then determine if a full physical audit, a hybrid physical/remote audit, fully remote audit or desktop assessment are required. We have completed screening for over 600 vendors and have a clear plan on the audit and assurance requirements for these vendors (see page 68).

Physical audits have commenced again but the post-COVID environment we now operate in has changed. As we progressively catch up on any audit backlog resulting from COVID restrictions, we are concentrating our efforts on undertaking physical audits as we believe these are of the highest importance.

We continue to set the expectation that our vendors and TPM should progress towards achieving leading FSQ standards and independent certification. Such independent assurance reduces the audit burden for all parties while ensuring leading standards are being met.

1 For the remaining 3% of our global manufacturing plants, all have some electronic trace capability within their own local systems and some manual steps are required to complete the analysis.

Our performance

Zero

During the year, there were no consumer recalls of product for safety reasons and no legal or regulatory non-compliances related to FSQ.

100%

of our manufacturing sites are certified to a leading food safety management system (e.g. FSSC22000 or BRC)

97%[1]

of our global manufacturing plants have 100% electronic traceability from the farm vat or milk collection centre to the first sale to the customer, meaning we can track the origins of nearly any product within minutes.

What's next

We expect to maintain our certification to leading food safety management systems, including FSSC22000.

We will continue to use the lessons we have learned to broaden our influence in the supply chain through our global assurance audit programme.

We will continue the development and deployment of our global digital platform for FSQ and health and safety.

We will continue to review opportunities for further automation in milk collection, manufacturing and distribution to improve the efficiency and reliability of data collection to give us even more real-time access to information.

Nature

By working together to care for nature we are seeking to achieve a healthy environment for farming and society.

Tiakina te whenua i tēnei rā, hei oranga tangata mō ngā rā e heke mai nei.

Caring for the land today, so that the land cares for us tomorrow.

85%

of our farmer owners in New Zealand have a Farm Environment Plan tailored to their specific farm, on the way to 100% by 2025

14.1%

reduction in our greenhouse gas emissions (Scope 1 & 2) since FY18, on the way to 50% by 2030

44%

of our manufacturing sites have bespoke water improvement plans, on the way to 100% by 2024

85%

of our farmer owners in New Zealand have an Animal Wellbeing Plan prepared with their vet

In this section

Roberts Farm, Taranaki

Climate change

We support a just transition to a resilient, low-emissions economy and are committed to leading the transition to a net-zero GHG emissions future for dairy nutrition.

Maunsell Farm, Waiuku

Global food production accounts for 20-30% of global GHG emissions with dairy accounting for 2-3% of global GHG emissions. However, dairy delivers a significant amount of the world's total nutrients, including 12% of protein, 24% of vitamin B2 and 49% of calcium.

Pre-farmgate, the Greenhouse Gas (GHG) emissions associated with dairy products mostly come from the methane cows produce. Total farm-related activities account for about 86% of Fonterra's reported GHG emissions. The carbon footprint of New Zealand's on-farm milk supply is already one of the lowest in the world. We are committed to helping reduce this further and leading the transition to a low-carbon future.

Milk is highly nutritious but very perishable, and our natural pasture-based farming means the volumes produced are highly seasonal. Pasteurising milk and drying it into powders adds significant value to raw milk, producing safe, long-life nutrition that is efficient to store and transport, but it does require significant amounts of reliable energy. Currently, a lot of that energy comes from fossil fuels, and our manufacturing activities account for about 13% of our reported emissions.

Despite being located a long way from many of our markets, our efficient transportation of finished goods, primarily by ocean freight, means only about 1% of our reported emissions are associated with distribution to destination countries. The world needs a global approach to achieve a sustainable food system meaning emissions-efficient nutrition from countries such as New Zealand play an important role.

New Zealand has introduced mandatory climate risk disclosures from FY24 onwards. The requirements align with the Task force on Climate-related Disclosures and cover governance, strategy, risk and metrics and targets. Fonterra is currently preparing to meet these reporting requirements.

This section covers our impact on; and our response to; climate change across our supply chain.

Our Approach

In July 2023 we announced the uplift of our decarbonisation ambition with a new Scope 1 & 2 emissions reduction target of a 50% absolute reduction by 2030, from a 2018 baseline. This is an increase on our previous target of a 30% reduction by 2030 from the same baseline.

This commitment reflects the latest science, and we are in the process of submitting this new target to SBTi for accreditation. Strengthening our emissions reduction target supports our ambition to be net zero by 2050. Earlier this year, we signalled our intent to set an on-farm emissions target. Since then we have engaged with farmers about the need for this target, what it may look like and how we will work together to achieve it (see AR-33).

For on-farm, we regularly commission carbon lifecycle assessments (see page 30). In New Zealand, we provide farm-specific GHG reports so farmers can understand their current performance and prioritise improvements. Our Farm Environment Planning service includes a GHG emissions module (see page 31), and we are investigating a wide range of potential breakthrough technologies to help reduce on-farm GHG emissions (see page 33).

For our manufacturing operations, our approach is to use less and emit less. Improving energy efficiency not only uses less energy, it also reduces emissions, reduces costs and will help with our transition to lower carbon energy sources. We also emit less by continuing to transition to lower carbon energy sources (see page 34).

For distribution, our approach is to partner with transport organisations and other import/exporters to continuously improve resilience and efficiency and to pursue low-carbon options for heavy goods transportation (see page 36).

Fonterra
Te Awamutu

What we've been doing

Understanding our on-farm emissions

To understand the full carbon life cycle of the milk we collect in different regions of the world, we regularly commission analysis by AgResearch, an independent New Zealand Government research agency.

The approach considers the full life cycle from feed production (including purchased supplementary feed) to the milk leaving the farm and is aligned with internationally recognised methodologies and tools (see page 91). We use this information to estimate our absolute GHG emissions related to farming (see graphs on page 37), to identify opportunities for further reduction and to support related-service offerings to customers.

GHG accounting is an evolving science, and there are frequent updates to method details and factors to be used, as well as changes in underlying base data and assumptions. Changes to international and local guidelines are investigated each time we commission an update of the footprint. In 2022, a consensus of an appropriate science-based methodology to account for carbon removal through sequestration was reached, however we are yet to adopt this within our lifecycle assessment approach.[1] When changes to methodology occur and are material, we transparently re-baseline and back-calculate our footprint so our progress can be assessed on a like-for-like basis, using the latest available science, as is the case this year.

In New Zealand, for the 2021/22 milk season, the estimated cradle-to-farm-gate carbon intensity, including land use change (LUC) and peat soils, is 1.03 kilograms of carbon dioxide equivalent per kilogram of fat-and-protein-corrected milk (kg CO_2-e/kg FPCM). Excluding land use change and peat soils this is 0.86 kg CO_2-e/kg FPCM. While these results appear to be the same as those reported for 2020/21 season in FY22, underlying allocations and methodology changes exist. By using a like-for-like basis the 2020/21 milk season would now reflect an emissions intensity of 1.02 kg CO_2-e/kg FPCM including LUC and peat. Updates include the impact from increased use and the variety of bought-in feed during the season, and an amendment to the GHG global warming potential of methane to be calculated dependent on fossil or non-fossil sources (see Data Reporting Notes page 91).

While our farmers have been making gains in on-farm efficiency, the total on-farm emissions intensity has remained relatively flat since 2010 (accounting for land use changes and increases in brought-in supplementary feeds).

Our most recent assessments for other regions are: Australia 2017/18 season at 0.97 kg CO_2-e/kg FPCM; China 2016/17 season at 1.44 kg CO_2-e/kg FPCM; Soprole our recently divested subsidiary in Northern Chile 2017/18 season at 1.33 CO_2-e/kg FPCM; and Prolesur our recently divested subsidiary in Southern Chile 2017/18 season at 2.32 CO_2-e/kg FPCM.[2]

During May 2023 the Australian dairy industry published an updated GHG lifecycle assessment, reflecting an Australian wide emissions intensity for the 2020/21 dairy season of 0.91 CO_2-e/kg FPCM.[3] Adjusting for the Fonterra Australia milk pool and IPCC AR6 methodology this indicates an intensity of 0.88 CO_2-e/kg FPCM. Due to the timing of the publication analysis of these results is ongoing, our footprint calculations this year are based on the earlier lifecycle assessment (0.97 CO_2-e/kg FPCM).

1 International Dairy Federation. (2022). C-Sequ LCA guidelines for calculating carbon sequestration in cattle production systems (Bulletin of the IDF n° 519/2022). https://doi.org/10.56169/WMRP7985

2 While we have adjusted the non-New Zealand results to align all on IPCC AR6 (see Data Reporting Notes on page 91), they have not been updated in the same way as the New Zealand result to reflect the latest global and national inventory methods and assumptions. This year we have corrected a publication error in the 2022 Sustainability Report where Soprole and Prolesur were misprinted as 1.45 and 1.34 kg CO2-e/kg FPCM respectively.

3 Christie, K. (2023). Towards carbon neutrality for the Australian dairy industry (Tasmanian Institute of Agriculture, 31 May 2023).

Working with our farmers to reduce on-farm emissions

In October, we issued Farm Insight Reports in New Zealand, including a farm-specific GHG Report. The GHG emissions estimate is based on a combination of primary data, collected from the farmers annually, and secondary data as used for our national lifecycle assessment.

For farmers, understanding the emissions produced on their farm and how they are performing relative to their peers, is a key step to identifying and prioritising improvement opportunities. Each report has a breakdown of the estimated GHG emissions by source that enables the contribution of the various sources to be understood. The report also shows the GHG emissions calculated from previous seasons, to identify progress over time. In October 2023, we will issue farmers with this reporting for the fourth time.

In addition to the Farm Insights Reports, the Farm Environment Plans (FEP) we are currently delivering (see page 46) contain a specific GHG emissions module. FEPs are created in consultation with one of our Sustainable Dairy Advisors who visits the farm and can provide farmers with additional guidance. We're working towards all our supplying farmers in New Zealand having a FEP by 2025.

The calculation method, contents and processes we use for both the GHG reports and FEPs have been independently assessed and accepted by the He Waka Eke Noa steering group (see below) as meeting the requirements for the New Zealand Climate Change Response Act milestones.

This year, we published our booklet on our approach to on-farm emissions, which we will update regularly to reflect the changing landscape. We continue to work with farmers to support their understanding of on-farm emissions and how we can work together to maintain our competitive advantage of producing some of the most emissions efficient dairy in the world.

In the short-term, the main improvements farmers can deliver will continue to come from adopting good management practices on farm. These include being efficient with feed and fertiliser, having the correct number of cows for the specific areas of land, improving animal husbandry and genetics, and maintaining good animal health. There are also opportunities to optimise pasture quality and use of supplements to meet feed demand, use alternative forages to reduce protein in the cow's diet, improve manure storage and spreading and reduce on-farm energy use.

Over the past four years in Aotearoa New Zealand, we have been supporting the He Waka Eke Noa partnership to find practical ways to help farmers with emission reductions. The partnership, involving representatives from across the Government, primary sector and Māori has been progressing a range of climate-related actions. In 2022, the partnership provided advice to the New Zealand Government on a framework for managing agricultural emissions which included how farmers could be charged for the emissions arising from agriculture. The recommendations take a split-gas approach with an overall levy calculated based on the methane and nitrous oxide produced, with deductions made for approved emission reducing actions and sequestration by above ground vegetation. The Government has endorsed the use of a split gas levy to be adopted with a phased implementation period from quarter four of 2024 onwards.

In 2022, Fonterra Australia adopted a similar FEP framework for Australian supplying farms (see page 46). This includes a GHG module, specific to the Australian farming conditions and practices. To date, around a third of farmers supplying Fonterra in Australia now have a FEP in place.

Continued productivity gains, the adoption of good management practices on-farm and the sharing of best practice offers opportunities to make further footprint reductions in the coming

Blair, Billie & Penelope, Hawkes Bay

years. However, new innovations from investment in research and development will be required to meet targeted emission budgets.

Working in partnership

This year, Fonterra and Nestlé announced a partnership designed to help reduce New Zealand's on-farm emissions, including a New Zealand first – a drive to develop a commercially viable net zero carbon farm. Dairy Trust Taranaki is a co-partner in the five-year project that will examine all aspects of the farm operations to reduce carbon. The short-term aim is to reduce emissions by 30% by mid-2027 and the ten-year ambition is to reach net zero carbon emissions.

Dairy Trust Taranaki will work with Fonterra and industry partners to reduce total emissions on the farm, including methane. Successful solutions will need to be good for the cow, good for milk as well as economically viable and practical for farmers to implement. Lessons learned will be shared through open days with farmers who can then adopt the techniques and technologies most appropriate for their own farms.

Since the announcement, Dairy Trust Taranaki has had good engagement with many stakeholders and is continuing to engage with farmers regularly on progress through open days.

GHG farmer support pilot programme

The partnership between Fonterra and Nestlé also encompasses the launch of a GHG farmer support pilot programme. This multi-year project will see enrolled Fonterra supplying farms receive additional support to implement changes aimed at lowering on-farm emissions. Examples of potential solutions include improved management of feed and pasture and enhanced milk production efficiency. This opt-in pilot started this year with around 50 farms, and the initial indication is that the farmers appreciate the increased focus and support from our Sustainable Dairying Advisors and that more detailed information on their farm's footprint is allowing them to better identify opportunities to improve. This programme will continue to be scaled-up over the next three years.

For any game-changing solution to be successful, it needs to be scalable and to be:

- Good for the environment (GHG reduction)
- Good for the farmer (practical & cost-effective)
- Good for the cow (her health & performance)
- Good for the milk (composition & food safety)

Game-changing solutions for methane

Since the beginning of the Industrial Revolution, coal, oil and gas have fuelled the economic development and advancement of many nations. At the same time, according to the United Nations, these fossil fuels have been the largest contributor to global climate change, accounting for over 75% of global greenhouse gas emissions. While studies show that methane emissions from livestock have made a less significant contribution (roughly 12-14% of anthropogenic warming to date) we recognise that reductions in this area can play an important role in the overall solution.

We are currently working with partners and other stakeholders on a wide range of potential solutions to help reduce the biological emissions for dairy farmers and the wider global agricultural sector. Our aim is to lead the transition to low-carbon dairy, which will help our customers further reduce the footprint of their products too.

We are dealing with a complex system with an animal at its centre, this animal has a rumen to process what it eats, and in the rumen there is a complex microbial ecosystem. Not all research and development will deliver a successful solution, and there is unlikely to be only one.

For New Zealand farmers to meet expectations for methane reduction by 2030 and 2050, significant investment is required from both Government and industry in research and development to create practical steps that farmers can take. Achieving this type of change at the scale and within relatively short timeframes will require collaboration.

Collaborative research

AgriZero^{NZ}

Formally launched at the New Zealand national Fieldays this year, AgriZero^{NZ} is a world-first investment fund established between the New Zealand Government and major agribusiness companies. It has been established to undertake targeted investments and action to accelerate the development, commercialisation, and adoption of effective technology solutions to reduce biogenic methane and nitrous oxide emissions. This will help to ensure New Zealand pasture-based farmers have equitable access to affordable and effective tools and technology to reduce their agricultural emissions, while maintaining efficiency, production and profitability.

Fonterra will contribute up to $50 million over the next three years to a total investment pool of around $172 million which will be invested over the next four years. This year, AgriZero^{NZ} has committed to investing in a methane measurement facility to be constructed at the Massey University dairy research farm and will house twelve new cattle respiration chambers and associated infrastructure. Other investments include Ruminant Biotech, a New Zealand-based start-up that is developing a slow-release, biodgradable methane-inhibiting bolus for livestock, and in continuing research underway in New Zealand towards developing a methane vaccine and methane inhibitor for use in livestock. (see AR-34)

Ehara täku toa i te toa takitahi, engari he toa takitini

My strength is not as an individual, but as a collective

AgriZero^{NZ}

Natural methane inhibitors from red seaweed

The Fonterra red seaweed trial has continued into its third season at Annandale Farm in Tasmania. Red seaweed was added to cows' feed at conservative inclusion rates over many weeks. Raw milk from the farm was collected for processing into finished products including pasteurised milk and cheese. The milk samples were identical in taste and residues to the control samples from a different farm where red seaweed is not used. Cheese from both farms is still undergoing maturation and results are expected before the end of 2023. External to Fonterra there were also significant red seaweed trials undertaken at the Ellinbank dairy research facility in Australia[1].

Kowbucha™ natural cultures and fermentations

Fonterra scientists have identified a beneficial impact on feed efficiency and methane emissions from feeding selected probiotics from our extensive dairy culture collection (Kowbucha™) to dairy calves, with the benefits extending through their first year of life. To ensure efficacy and repeatability of these benefits under a range of real farming conditions, Fonterra is leading an ongoing research programme with partners AgResearch, Massey University and DairyNZ. The work is still in the research and development phase, with the intention of providing evidence to secure approval for the use of Kowbucha™ in New Zealand. (see AR-34)

1 The Ellinbank results were published and available here. https://doi.org/10.1016/j.anifeedsci.2023.115579

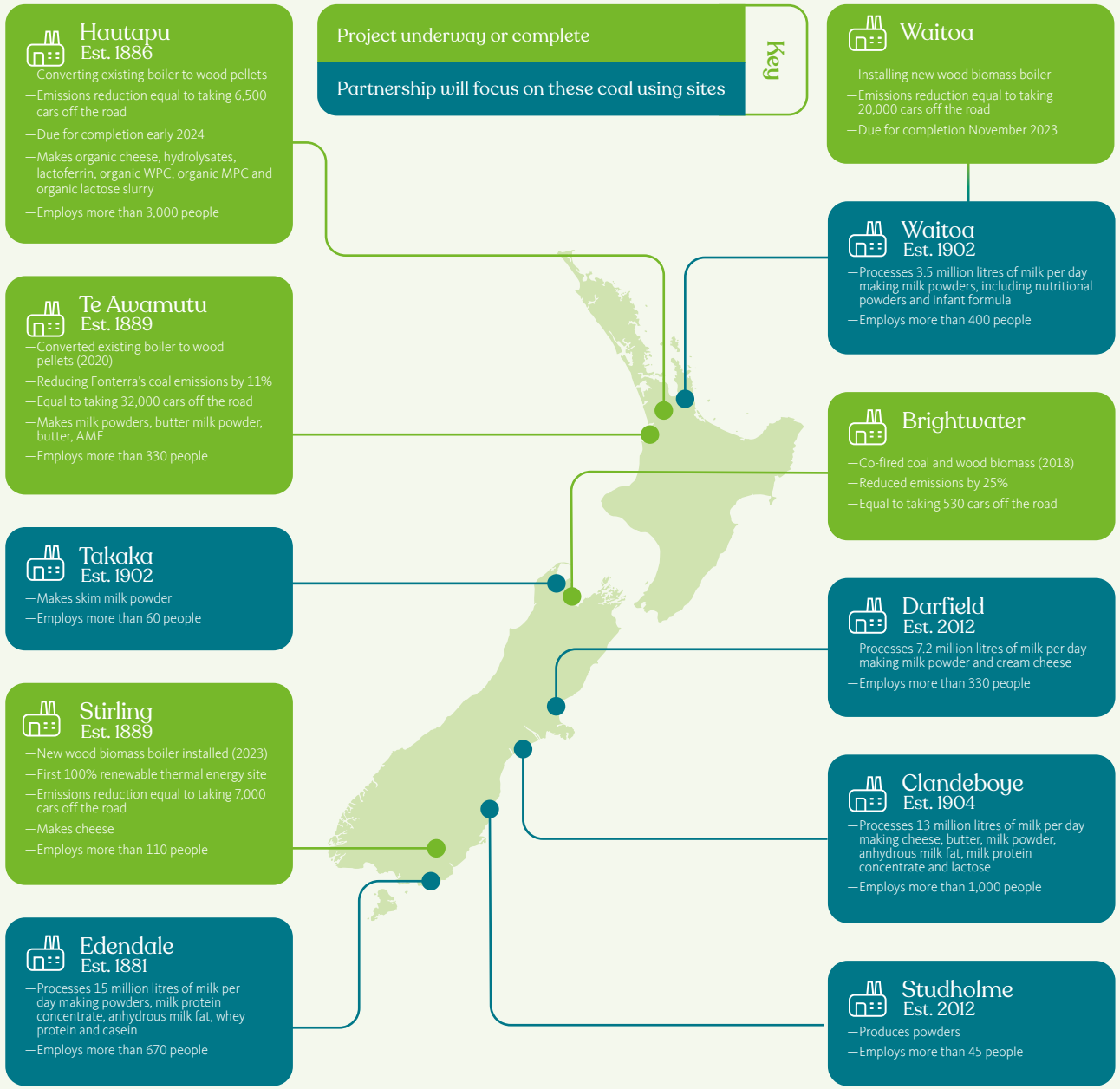
Decarbonising our manufacturing operations

Achieving the uplift in our decarbonisation ambition will require us to continue with our energy efficiency improvements and fuel switching to renewable energy sources across our milk collection fleet and manufacturing sites, focusing on the sites where we still have some reliance on coal.

To do this, we are forecasting an investment of $790 million, including a New Zealand Government contribution of up to $90 million through the Government Investment in Decarbonising Industry (GIDI) fund. The addition of Government funding enables us to lift our 2030 ambition to reduce Scope 1&2 emissions to 50% (from a 2018 baseline) and optimise our process to exit coal by 2037.

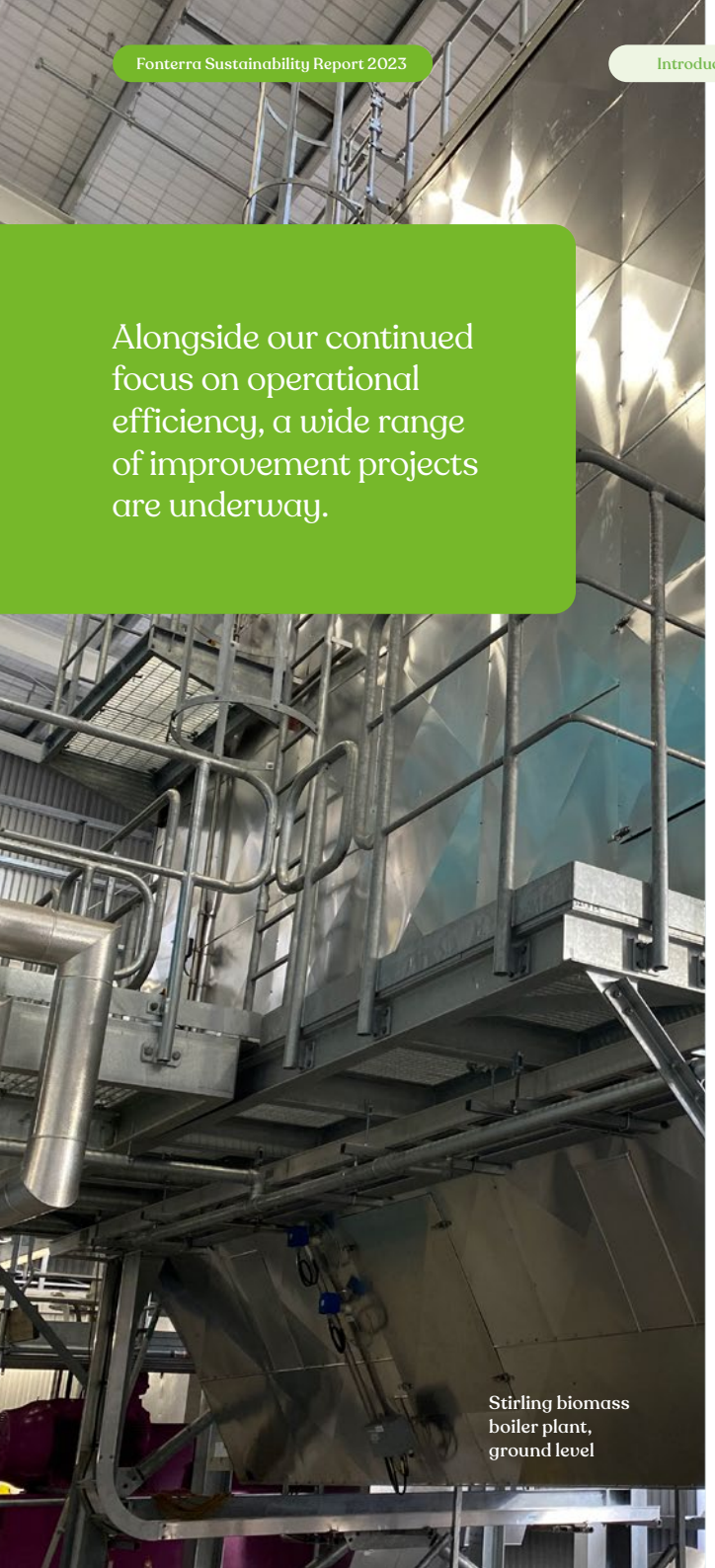
Our goal is to transition the seven[1] sites that still use coal to renewable energy by 2037, with the majority of coal transitioned by 2030. We continue to evaluate new technologies and supply options to continuously improve our plans but the rate at which we can transition off coal is paced by upstream fuel supply development, New Zealand's capacity for large simultaneous infrastructure investment and the sequencing of outages during brief winter shutdown periods at our sites.

In addition to our work to get out of coal as highlighted here, we have a number of other decarbonisation projects already underway, which will contribute towards meeting our target of a 50% reduction in Scope 1&2 emissions by 2030 (from a 2018 baseline).



1 Initially Fonterra had 10 sites in NZ that used coal. Te Awamutu transitioned to wood pellets in 2020. Stirling transitioned to wood biomass in FY23. Following operations at Brightwater changing from a milk powder plant to a milk transfer site that site has stopped using coal. There is currently a project underway at Hautapu to transition to wood pellets.

* processing figures are for peak capacity



Alongside our continued focus on operational efficiency, a wide range of improvement projects are underway.

Stirling biomass boiler plant, ground level

During FY22, we retired ageing and inefficient evaporator assets and reduced the amount of steam required at our **Whareroa** site. We also installed new equipment to enable more recovered heat for preheating in our casein pasteuriser. These two projects combined, delivered a reduction in emissions of about 5,500 tCO_2-e in FY23. The project to install two heat pumps as part of the refrigeration upgrade was started in FY22 and continued this year. These heat pumps are each rated at 3.5 MW, and we believe it will be one of the largest heat pump installations in New Zealand. This project is expected to reduce our annual energy use by 120,000 GJ (33 million kWh) per year and our GHG emissions by about 9,100 tCO_2-e per year.

This year we also took steps to replace one of the three coal boilers at our **Waitoa** factory in the Waikato with a wood biomass boiler. We expect the new boiler to begin commissioning in late 2023. It is expected to reduce the site's annual carbon emissions by at least 48,000 tCO_2-e.

The new wood biomass boiler at our **Stirling** site fired up for the first time in April this year, marking the next steps on the site's transition to be totally reliant on renewable energy for its process heat. Changing this boiler is expected to reduce annual carbon emissions by 18,500 tCO_2-e per year. This project also delivers our first 100% renewable thermal energy site.

Also in April, we announced our plans to convert the coal boilers at our **Hautapu** site to wood pellets and to install a heat pump at our milk processing site in **Palmerston North**. Both projects have received support from the GIDI Process Heat Contestable Fund[1]. Once complete in early 2024 the Hautapu site's carbon emissions are anticipated to reduce by 15,785 tCO_2-e per year. The heat pump at the Palmerston North site will convert wasted heat from the refrigeration system into a heat source. This will reduce the amount of natural gas needed for process heat. The site will also generate additional heat via a solar thermal plant.

1 Fonterra is receiving up to $2.5million in co-funding from the GIDI fund to complete the work at Hautapu and $425,000 for the Palmerston North site project.

Tātou – working with others

In 2022 we successfully trialled a new organic and long-life battery, at our Te Rapa farm, storing electricity produced by the farm's solar panels to increase the use of power from solar and provide an energy back-up (see our 2022 Sustainability Report). Some of our manufacturing sites are impacted by power quality events that can lead to product waste and long shut down times, and we believe this battery technology could help minimise the impact from such events. So, this year we have been trialling the PolyJoule battery at our **Waitoa** UHT site to demonstrate the benefits of minimising the impact of power quality events. We believe this is the world's first industrial scale organic battery.

Seeking further opportunities and innovations to support our decarbonisation, this year we entered into two significant memorandums of understanding. One is with MAN-Energy Solutions, to assess how a steam heat pump could be integrated into one of our dairy sites. Using these heat pumps could result in a reduction of 60,000 tCO_2-e annually by using electricity instead of coal to power milk dryers. The other MOU is with local energy provider and another coal user in New Zealand, Genesis Energy. Together we are exploring options for local biomass supply to support our transition out of coal. Options under investigation include black (steam exploded or torrified) pellets.

Continuing to electrify our transport

In New Zealand, GHG emissions from road transport are one of the fastest growing sources, making the transition to electric vehicles an important part of Fonterra's decarbonisation journey.

Since 2022 our aim has been to transition more than 300 light vehicles (about one third of our light vehicle fleet) to be electric vehicles (EVs). This is backed by a policy requiring all light vehicles that can be electric to be transitioned when they are next replaced. However, due to ongoing supply chain disruptions, we have extended the date to achieve this milestone from the end of 2023 to the end of 2024. This year, we received our 100th EV and expanded our network of EV charging stations to 25 of our sites in New Zealand.

With our heavy transport fleet, our focus has been on investing in practical ways to reduce our GHG emissions through efficiencies. For example, training helps our drivers improve fuel efficiency and sophisticated software systems help plan and execute our milk collection activities to minimise the distance travelled. We have also invested in our tanker fleet to adopt the latest technology in terms of efficiency and lower emissions.

Coverage of reporting

This year, we undertook a rescreening exercise for our Scope 3 emissions to identify any significant changes in previously excluded items and opportunities to improve the coverage of our reporting. As a result of this exercise, we have obtained additional data of sufficient accuracy to improve the completeness of our reporting. We now estimate that our reported Scope 3 emissions represent more than 95% of our total Scope 3 emissions (see page 93).

Milk-E

With the support of funding from EECA[7], we have been trialling our first fully electric milk tanker in New Zealand to better understand the viability of electric transport in a rural setting. Milk-E, is based at our Waitoa manufacturing site and completed its first run in November 2022. Milk-E can carry 25,700 litres of milk within the truck and trailer and can travel 140km on a full charge. It operates within a 60km radius of the Waitoa site.

The battery takes just over two hours to charge and a battery swap system has been developed so that the tanker does not sit idle. The battery can be swapped out in six minutes.

7 EECA – Energy Efficient and Conservation Agency.

Our performance

14.1 % ↓

reduction in Scope 1 & 2 GHG emissions since FY18. Well on way to 50% by 2030.

3.3%

improvement in energy efficiency compared to FY18, down to 7.57GJ/tonne of finished goods.

What's next

We will continue to use farm-specific GHG emission reports and Farm Environment Plans to help our farmers understand their on-farm footprint and prioritise improvements.

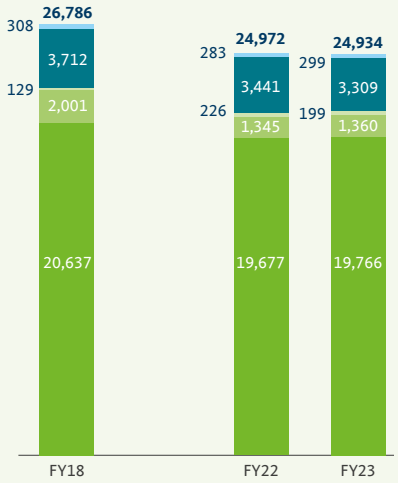
We will continue to focus on energy efficiency with the aim of delivering direct emission reductions, cost savings and help prepare for the transition to low-carbon energy sources.

We will continue to develop and deliver our decarbonisation plan, with our Waitoa site installing a wood biomass boiler in FY24 and Hautapu converting its coal boilers to use wood pellets.

We are currently assessing wood biomass, electrification, and heat pump technology at our Clandeboye and Edendale sites.

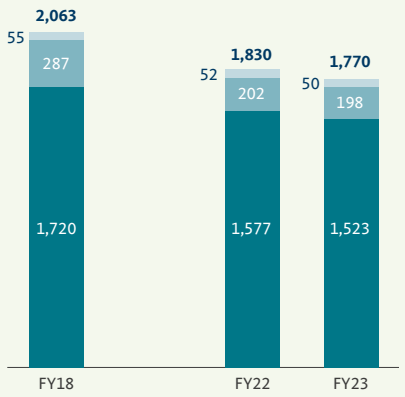
We will be trialling the use of black pellets at our Studholme site.

Total GHG emissions by value chain segment ('000 tCO_2-e)



Farming (New Zealand)
Farming (Australia)
Farming (Rest of the World)
Manufacturing
Distribution & other

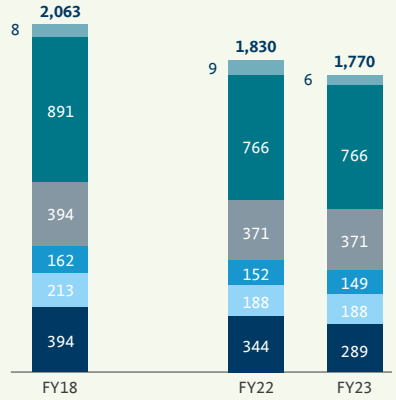
Manufacturing GHG emissions by geography ('000 tCO_2-e)



Scope 1 & 2 by geography

New Zealand
Rest of the World
Australia

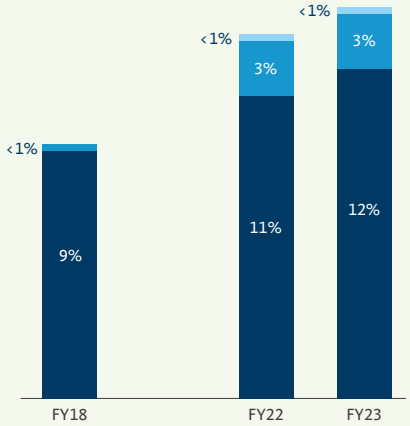
Manufacturing GHG emissions by source ('000 tCO_2-e)



Scope 1 & 2 by emissions source

Electricity
Purchased steam
Liquid fossil fuel
Natural gas
Coal
Non-energy (e.g. packing CO_2 refrigerants)

Use of renewable energy in manufacturing (% of total energy use)



Electricity
Biofuels
Purchased steam from renewable fuels

Adding the individual numbers together may not add up to the totals due to rounding.

The CO_2 emissions from biofuels are not shown as protocol excludes them from the total. Biofuel emissions in FY23 increased slightly to 81,416 tCO_2-e from 73,345 tCO_2-e, due to higher production volumes. The wood products we use for energy production are sourced from FSC-certified forests.

The data presented is adjusted for acquisition and divestments so that underlining performance can be assessed on a like-for-like basis. For detailed information on the scope, methodology and assumptions used in reporting these emissions, including restatements of prior years, see Data Reporting Notes page SR-88.

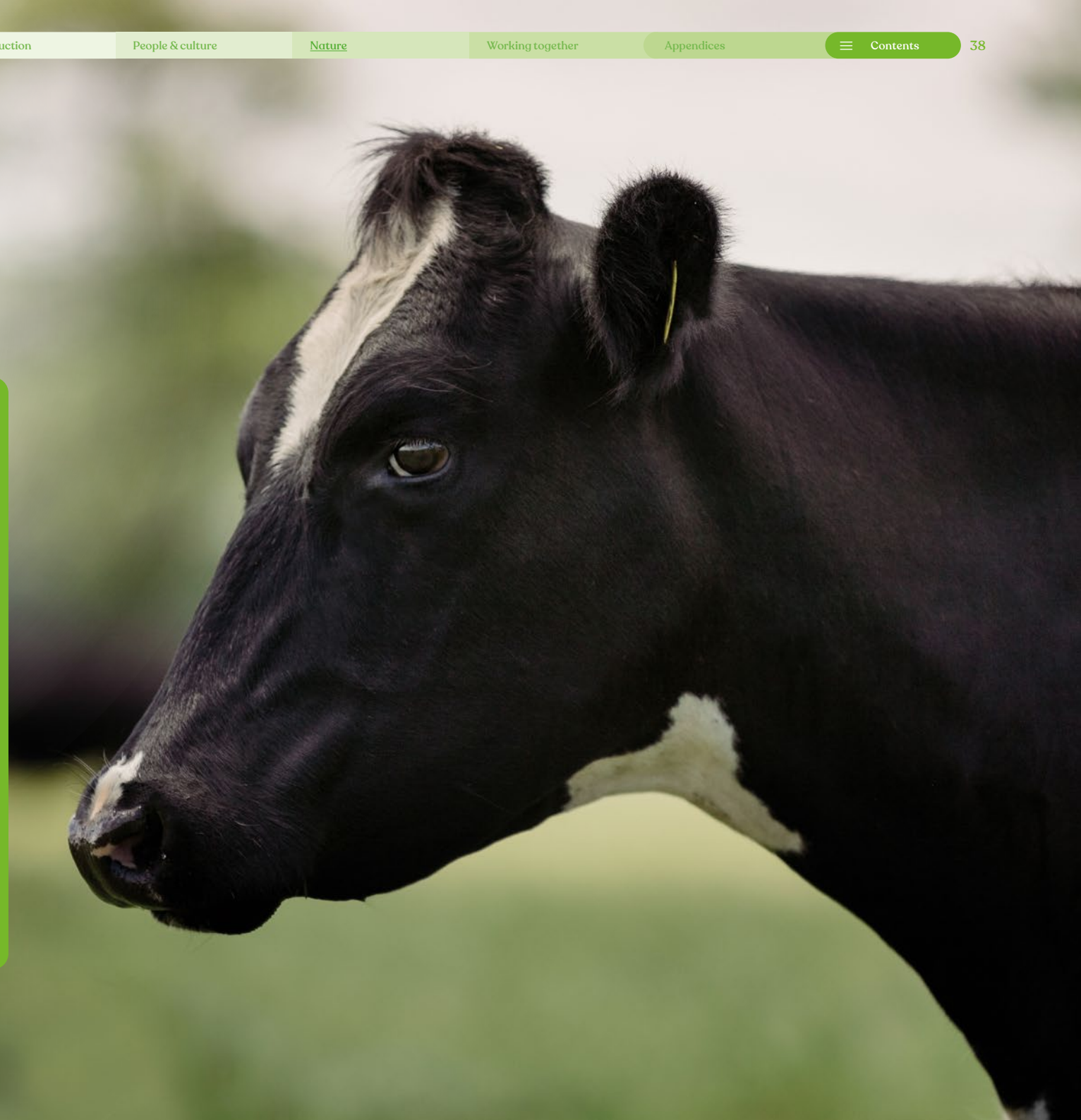
Animal wellbeing

We want all animals to be valued and treated with respect and care throughout their lives.

Cows are at the heart of every dairy farm, and their wellbeing is of paramount importance to us. Having healthy cows is not only good for the cow, it also leads to more efficient production of high quality milk and taking a proactive approach is better for the farmer too. It's also important for our customers who are increasingly interested in where their food comes from and how it is produced.

We also want farm environments to be free from infectious diseases and pests that can affect animal, plant and human health.

This section covers animal wellbeing and biosecurity for farms we manage and farms that supply us with raw milk around the world.



Maunsell Farm,
Waiuku

Our approach

Fonterra farmers are required to uphold high standards of animal wellbeing and comply fully with the latest regulations and codes of welfare. These requirements are set out in the Fonterra Farmers' Terms of Supply and are guided by our overarching Global Animal Wellbeing and Biosecurity Policy and supporting standards.

We are guided by globally recognised standards set by the World Organisation for Animal Health. We partner with farmers to continuously improve animal wellbeing outcomes, implement practices that provide positive experiences as described by the Five Domains[1], and eliminate practices that contravene the Five Freedoms.

We work with industry bodies and training organisations so farmers have access to high-quality information and tools that support best practice and facilitate access to training where required. We work with industry partners such as meat processors, transport companies and regulators so that best practice controls are in place.

The development of strategy, policy and standards for the global management of farm animal wellbeing is the responsibility of Fonterra's General Manager On-Farm Excellence – Animals. The management and implementation of Fonterra's animal wellbeing policies and strategies are undertaken at a local level, supported by our centralised Veterinary and Animals team.

Globally, our international audit and compliance team assesses animal wellbeing as part of its milk sourcing audits in all markets outside of New Zealand where we collect milk. This enables us to identify any issues and recommend improvements to farmers. Many markets also have local veterinary and milk quality support teams to manage this work. See Working with farmers on page 57.

1 The Five Domains recognise that both positive and negative experiences in each of the four physical domains (nutrition, environment, health, behaviour) contribute to the overall mental state of an animal.

Ruby, Southland

What we've been doing

Animal Wellbeing Plans

The increased adoption of Animal Wellbeing Plans (AWPs) is our main approach for further embedding the Five Domains model of animal wellbeing and helping farmers demonstrate leading levels of animal care.

We know that farmers with a focus on animal wellbeing and a good relationship with their vet will usually achieve better outcomes for their animals. Therefore, each AWP must be developed with, and signed-off by, a registered vet every season. Ultimately, we want to see these on every farm that supplies milk to Fonterra, but our initial focus is New Zealand, where the percentage of farms with an established AWP increased from 76% to 85% this season.

Developing and implementing an AWP with a vet is one of the minimum criteria for a farm to achieve recognition within The Co-operative Difference framework which is linked with increased payments to farmers (see page 57). To qualify, each AWP plan must include a number of key elements which have been identified and prioritised in collaboration with the New Zealand Veterinary Association and DairyNZ. These minimum elements include rates of mastitis and lameness, care of calves, mortality, body condition scoring, prudent use of antibiotics, mitigation options for heat stress and other extreme weather events, and consideration of genetic improvement strategies to enhance animal wellbeing outcomes.

Providing insights and training

Farms supplying us milk in New Zealand receive a Farm Insights Report, which includes key animal wellbeing metrics, including somatic cell count, milking efficiency, mastitis rates, lameness and the potential impact of heat stress. In each case, the report provides the farmer with detailed information on the performance of their specific farm relative to regional and national benchmarks and the potential benefits associated with making certain improvement actions.

A key focus in the 2022/23 season has been working to ensure that our New Zealand farmers understand the impact and opportunity the different areas highlighted in the annual Farm Insights Reports have at an individual farm level. These conversations are aiming to tie together three key areas that focus on productivity, profitability and sustainability and how they interact with the three main sections of the report: Milk, Animals and Environment.

We have developed several new tools and services to aid farmers in realising the potential opportunities identified in their Farm Insights Report. These tools and services vary, in some cases the we provide on-farm support and advice directly to farmers while in others we utilise existing networks to link farmers to external expertise. As the visability and understanding of these reports grows throughout the industry, we are seeing more and more external companies use them to help provide advice and expertise to support our farmers.

Cared for cows

By analysing data we already collect for other purposes, such as food safety, quality, and compliance, Fonterra looks for unusual patterns that could indicate a farm at risk of animal welfare compromise. These farms are proactively visited and offered support, even if no animal welfare risk is identified at the time. Increasing use of monitoring technology on farms should allow us to access novel ways of monitoring animal wellbeing in the future.

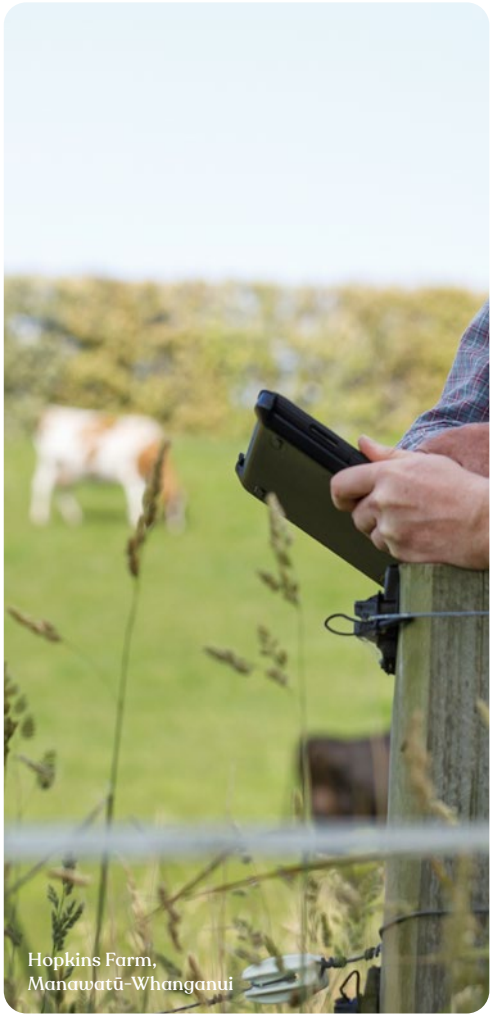
Managing the risk of travel on biosecurity

In 2020, Fonterra became a founding member of The Biosecurity Business Pledge, a partnership developed by New Zealand businesses and Biosecurity New Zealand, to take a proactive approach to biosecurity (for more information see 2021 Sustainability Report).

Improving policies and standards

As part of our process of continuous improvement we regularly review our policies and standards. In 2021 we updated our Animal Wellbeing and Biosecurity Policy and our Animal Wellbeing Standard, taking a more process-driven and outcome-based approach. We also changed the term used from 'animal welfare' to 'animal wellbeing' and included reference to the Five Domains model in addition to the existing reference to the Five Freedoms. The Policy and Standard apply globally to our business, and informs all decision making in relation to all the animals within our supply chain.

Consumers here in New Zealand and around the world are increasingly looking for more assurances about the quality of life experienced by the animals who produce their food. Therefore, in addition to the refresh of our Policy and Standards, we have introduced a new clause within the Terms of Supply for New Zealand farmers which means calves can only be euthanised on-farm when there are humane reasons for doing so. Fonterra places a strong emphasis on calf wellbeing and a big part of this is all dairy calves having a useful life. Many heifer calves are raised as replacement cows to join the milking herd when they are about two years old. Caring for these calves from the day they are born, not only leads to good animal wellbeing outcomes, but also leads to increases in life expectancy and productivity which reduces the overall environmental footprint of the milk produced. From 1 June 2023, our terms require that farmers supplying us with milk in New Zealand must direct all their non-replacement calves into a value stream, either beef, veal or pet food. In New Zealand, about 30% of beef finishing animals are already born in the dairy sector, but we know that in parts of New Zealand, the value stream options are currently limited. To help improve this, we're collaborating with the wider industry, investing in R&D and exploring long-term solutions such as dairy-beef partnerships.



Hopkins Farm,
Manawatū-Whanganui

Our performance

85%

of farms in New Zealand with an Animal Wellbeing Plan established with their vet this year.

What's next

Our dedicated team will continue to work with farmers, veterinarians, and regulators to support strong biosecurity and on-farm practices that are good for animal wellbeing outcomes.

In line with our focus on animal wellbeing on farm, we will be reviewing our New Zealand codes on animal transportation.

We will continue to improve the quality of the Farm Insights Reports that we provide to farmers in New Zealand to help them prioritise improvements on farm.

Land & water

Healthy freshwater, soil and ecosystems are essential to the long-term success of farmers' businesses, the Co-operative, and communities.

Kaitiakitanga (how we care for our environment) is critical to safeguard opportunities for future generations. We believe this regenerative mindset must become embedded through our global value chain. As part of this, we are committed to working proactively with local stakeholders on catchment-wide solutions.

This section covers our impact on land and water from the manufacturing operations we manage globally and the farms from which we collect milk.

Mohi,
Bay of Plenty

Our approach

When our manufacturing sites withdraw water from the environment to use and subsequently discharge wastewater, this can impact a resource we share with others. We are committed to playing our part to improve the environment and maintain water security for our communities and operations.

Limestone Downs, Waikato

Recognising the importance of effective water stewardship, we take a collaborative planning approach, assessing the health of sourcing and receiving environments as a key outcome for ongoing and long-term improvements. Recovering water from milk when we make powder products means that most sites discharge more water than they take in. By improving processes and adopting new technologies, we aim to further reduce water use and improve wastewater treatment (see page 44). Our management of risk also considers the potential adverse impacts of business activities on biodiversity and ecosystems, seeking to improve environmental outcomes.

We support farmers to prepare for and meet increasing regulatory requirements, identify environmental impact risks and prioritise improvement actions specific to their situation (see page 46). This includes encouraging and supporting the adoption of recognised good farming practices related to water, soil health and biodiversity, including the exclusion of stock from waterways, riparian management, nutrient management and land management that minimises soil disturbance.

We also recognise that we can achieve more by working with others, so we have a strong focus on partnerships at local, regional and national levels. Our Living Water Partnership with the New Zealand Department of Conservation and our Sustainable Catchments partnerships (see page 47) help our farmers accelerate land, water and biodiversity action on-farm and also bring farmers, iwi, communities, councils and scientists together to plan and implement collective action.

What we've been doing

Improving water stewardship at our manufacturing sites

We recognise the importance of water to our business and communities and continue to maintain a strong focus on using water responsibly. We continue to work toward our numeric targets for water reduction and wastewater treatment and we are progressing substantially to deliver on an approximately $550 million investment in our wastewater treatment plants. As water stewards, we are committed to playing our part to improve the environment and maintain water security for our communities and operations.

Water Improvement Plans

This year, we began a significant piece of work developing bespoke water improvement plans which capture our opportunities to provide the best water stewardship at a manufacturing site level. Water Improvement Plans for 20 sites have been successfully completed with each plan assessing water availability, water use and wastewater quality in a long-term integrated manner. Our goal is to develop plans for all Fonterra manufacturing sites by the end of FY24. Through this process we establish how each manufacturing site can operate in a resilient, efficient and unconstrained manner into the future while supporting water security for our wider communities and catchments. These plans better position Fonterra in the changing regulatory environment in New Zealand.

Adrian & Ben, Northland

Using less water

We continue to work towards our broad water reduction target to reduce absolute water use across manufacturing sites by 15% by 2030 from a FY18 baseline. This year, we continued to prioritise our efforts to improve water efficiency throughout our Fonterra operations with a particular focus in areas where we see growing pressure on water. We remain on track to deliver our target with a 6.7% reduction in absolute water use compared to our baseline. That means we are using about three billion litres less water each year at these sites when compared to FY18.

To achieve this, a number of large water reduction projects were implemented in FY23, while projects implemented in FY22 continue to deliver significant water savings. One of the key initiatives in FY23 was water optimisation at Reporoa, which will reduce water use by approximately 70,000m³ per season.

At our Edendale site we've been working on a project that will enable us to use even more of the water we take out of the milk when we dry it. From FY24 onwards we'll be looking to reuse up to 750,000m³/year by recovering evaporator condensate from powder dryer activities such as clean-in-place processes.

Improving water quality

We continue to work towards our target of at least 80% of manufacturing sites treating wastewater to leading standards by 2030.

Our continued commitment to leading in the area of wastewater design has led us to a novel partnership approach in New Zealand. This approach brings together New Zealand's top consultants, civil contractors, designers and industry experts into one cohort with the aim of bringing innovative thinking and optimised learning opportunities to our strategy.

This year, Fonterra has made substantial progress towards upgrading our wastewater treatment plants, creating resilient assets for decades to come.

At Clandeboye, we are investing approximately $15m in a unique wastewater treatment process using an anoxic biological reactor specifically designed to reduce nitrates prior to discharge. This innovative process, researched and trialled by Fonterra experts, is a novel approach demonstrating advances in nutrient removal and delivers significant cost savings.

At Te Awamutu, our now completed $52m wastewater treatment plant upgrade produces a very high quality of discharged water, with almost non-detectable levels of some key parameters, including biological oxygen demand (cBOD5).

We are commissioning the Tirau wastewater treatment plant upgrade to improve the quality of discharged wastewater. It includes an anoxic tank with upgraded aerobic pond systems, clarifier, alum dosing and tertiary filtration for phosphorus removal and UV disinfection.

We are currently progressing designs for new wastewater treatment systems at our Hautapu and Edgecumbe sites. At Kapuni, we are trialling an innovative phosphorus removal approach by modifying the standard dissolved air flotation process.

Investing in innovation

We actively support academic research. This year, we continued providing support for researchers including the Sustainable Resource Recovery Postgraduate Programme of the University of Auckland's Engineering Faculty. The work encompasses a wide range of activities but is focused on the removal and recovery of key pollutants, such as urea and phosphorus.

Dilieka Weerakoon (PhD student) from Sri Lanka – far left
Iin Parlina (PhD student) from Indonesia – second from left
Sonal Badi (Masters student) from India – third from left
Mozhgan Keyvani (Masters student) from Iran – middle background
Associate Professor Saeid Baroutian, Chemical and Material Engineering, University of Auckland – far right

Prioritising on-farm improvements

Helping farmers understand their current areas of strength and opportunities for improvement is a priority for us. It is where we can add value to farmers, our customers and communities.

In New Zealand, our team of 48 Sustainable Dairy Advisors (SDA) are working with our farmer owners to establish and maintain Farm Environment Plans (FEPs). Each FEP is unique and requires a physical visit to each farm to capture the specific environmental characteristics, assess current activities against industry-defined Good Farming Practices (GFP) and agree prioritised improvement actions with the farmer.

This year, we delivered more new FEPs than planned, increasing coverage from 71% to 85% of supplying farms in New Zealand as we work towards all farmers having FEPs by 2025. In addition to establishing new FEPs, our team of SDAs were also revisiting farms with existing FEPs to re-assess them against the latest framework and to confirm progress on improvement actions. While the impacts of Cyclone Gabrielle hampered progress in some regions more progress was made in others to maintain the momentum.

The need for updates to our FEP framework and process is assessed on an annual basis, and to date, additional modules have been added nearly every year since we launched the service in 2018. Our goal is for farmers to remain a step ahead of future regulations and the requirements of our customers. The regulatory requirements vary between different regions in New Zealand, and in all cases the requirements of a Fonterra FEP go beyond these. In most cases, each GFP is higher than the local regulatory requirement, but where the local requirement is higher, the farm is assessed against that.

Topics currently covered in the FEP include water, soil health, biodiversity, GHG emissions, mahinga kai (the value of natural resources) and whakapapa (recognising the people and their connection to the land over multiple generations). For the farms with irrigation systems (about 18%), our FEPs also build on regulatory requirements for metering and support irrigation efficiency improvements.

We recently undertook a project with Dr Gail Tipa (from our Sustainability Advisory Panel see page 8) to critique our FEP modules through a cultural lens, bringing indigenous knowledge and a unique sustainability perspective. Alongside her report, SDAs from each region attended a workshop with Dr Tipa on 'Recognising the cultural and environmental outcomes sought by Tangata Whenua in FEPs'. By overlaying iwi environmental plans and considering proposed regulatory changes, the aim is to further improve our FEP service for our Māori shareholders. In addition, we recognise Tangata Whenua input into localised catchment context to guide cultural values and outcomes in the farm planning process.

This year, we have been engaging with the New Zealand Ministry for Primary Industries, Ministry for the Environment and regional councils to enable the significant progress Fonterra has made in delivering FEPs to support compliance with upcoming regulations on freshwater farm plans.

In New Zealand, farmers complete an annual Farm Dairy Records update, which is a key input for the Farm Insights Reports we provide them. This combines information on nitrogen risk, milk quality, GHG emissions and animal wellbeing, providing the farmer with detailed information on their performance relative to the average farm in their region and nationally. It also identifies the potential financial benefits that could be achieved by making specific improvements.

Building on the FEP framework and delivery service developed for New Zealand, our Farm Source team in Australia has tailored the New Zealand FEP framework and delivery service to the specific needs of the Australian farming environment. At the end of FY23 more than 30% of Fonterra supplying farmers in Australia had a tailored FEP for their farm. Each farm selects the most suitable modules for their circumstances. Selections could include GHG emissions, nutrients, animal welfare, effluent management or water efficiency. This year we developed a new module on the topic of biosecurity. It will be included in FEPs delivered in FY24 and beyond.

FEPs provide an opportunity for our supplying farms to have clear options for improving farm management and outcomes. Our aim is to increase the number of supplying farms in Australia with a FEP in FY24, as we work towards all New Zealand farmers having a plan by 2025.

Durham Farm, Northland


Libby & Matt, Canterbury

Sustainable catchments

To achieve sustainable water catchments where we operate, we know we can achieve more by working with others.

Our aspiration is to put nature at the heart of a regenerative food production system and help reverse the decline of New Zealand's natural resources by partnering with others to solve local and global environmental issues.

Established in 2013, our Living Water partnership with the New Zealand Department of Conservation is working with farmers, scientists, councils, mana whenua and local communities in five catchments across 35,000 hectares. The goal is to identify game-changing and scalable solutions that show dairying and freshwater can thrive together. This work is focused on innovation and demonstration of what is possible. To date, we have initiated 44 trials of different tools and solutions, and 17 solutions have been scaled or used by others (for more information on the Living Water partnership, see page 60). Of those Fonterra farmers operating in the five catchments, 98% have engaged with the partnership, (up from 90% in FY22) and, 50% are implementing freshwater improvement actions that go beyond regulatory requirements (no change from FY22).

Beyond the five Living Water catchments we are supporting farmer and community action in other catchments across New Zealand. Working alongside local stakeholders such as regional councils, the Department of Conservation, iwi, farming leaders, scientists and other industry members in catchments across New Zealand, our aim is to build on existing community efforts, helping them achieve their priorities and nurturing the national movement on catchment restoration through our Hapori Programme (see page AR-20).

We are also supporting several catchment level and national initiatives intended to deliver transformational change. This year, we significantly progressed a partnership with Te Rūnanga o Ngāi Tahu, Murihiku Rūnanga and Land Information New Zealand to Reimagine the Mataura River.

National

Farming with Native Biodiversity

In late 2021 we joined forces with the New Zealand Landcare Trust, Silver Fern Farms, the New Zealand Biological Heritage National Science Challenge and the Ministry for Primary Industries to co-design and pilot biodiversity resources and support services for farmers. The aim of the two-year partnership was to develop the prototype of a national programme that would ultimately upskill and support farmers and farm advisors to enhance native biodiversity on their farms. This pilot is now complete, and recommendations are being formulated for central government and industry.

Northland

We are a key delivery partner for the Kaipara Moana Remediation Programme that is focused on collaboratively restoring the health and mauri of Kaipara Moana, including an ambitious target of reducing sediment into the harbour by 50% between 2020 and 2030. Our partnership has enabled the acceleration of Farm Environment Plan development and the implementation of sediment reduction activities on-farm. Since August 2021, the partnership has delivered a total of 203 Farm Environment Plans covering 38,087 hectares. Remediation projects on-farm have involved commitment to, or completion of 169km of fencing and the planting of 50,000 natives.

Hawkes Bay

We have continued our partnership with Hawkes Bay Regional Council focusing on the many benefits that arise through wetland restoration, with this only growing in focus post Cyclone Gabriel. There is anecdotal evidence that the Tukipo constructed wetland we co-funded in FY21 helped to protect surrounding productive land from the worst of the flooding, allowing farming and growing operations to resume earlier than other areas.

Waikato

We have provided additional funding support this year towards the restoration of the Mangapiko Stream, as part of the wider Maungatautari to Pirongia Ecological Corridor project. This funding to Apakura Rūnanga Trust will allow them to undertake additional riparian planting on the Mangakopara Farm Block to improve water quality and native biodiversity habitat, and support iwi connections to the awa (river). We also have part-funded a coordinator for the Piako Catchment Forum and partnered with Fish & Game New Zealand and Manaaki Whenua – Landcare Research to extend a constructed wetland on a dairy farm in the Whangamaire Stream catchment near Taupiri maunga (mountain) in the Waikato. The wetland has been designed to reduce the impact of agricultural land use upstream and improve wildlife habitat.

Constructed wetland in the Whangamaire Stream catchment

Bay of Plenty

We have partnered with the Bay of Plenty Regional Council over the past three years to support collaborative community projects to restore and protect wetlands and whitebait habitats within the Pongakawa catchment and Waihi estuary. This year our support allowed the Regional Council, Ngāti Whakahemoto and the New Zealand Department of Conservation to re-batter and plant a 500m stretch of the Pongakawa canal to reduce erosion and improve connection to new whitebait spawning habitat near the estuary.

Pongakawa canal restoration

Taranaki

We are continuing our support for the South Taranaki District Council Wetland Reserve at Rawhitiroa with Forest and Bird, Ngāti Tupaea, and the local community. The restoration project involves fencing, the creation of wetland habitat, a walking track and an outdoor classroom space. This year the focus has been on finishing the construction of the ponds and walking track and planting a nursery crop to add diversity and reconstruct the type of native vegetation that would have existed historically.

South Taranaki District Council Wetland Reserve restoration at Rawhitiroa

Marlborough

Our funding support for the Ruapaka Wetland Restoration project has seen significant weed control activities take place this year. Ruapaka Wetland is deeply significant for Ngāti Kuia as it is a place where their tūpuna (ancestors) gathered kai (food) including tuna (eels) and kōura (freshwater crayfish). The restoration mahi (work) helps support Ngāti Kuia aspirations for te taiao (the environment) as well as for their people, with Ngāti Kuia horticulture crews doing follow-up planting work after completing a Level 3 Certificate in Horticulture and using the seedlings being grown at Ngāti Kuia nursery at Titiraukawa.

Canterbury

We have partnered with Opihi College and other members of the community to develop a constructed wetland on the northern boundary of the school. As well as reducing sediment loads and increasing biodiversity, the wetland will be a key teaching and student engagement tool. We have also provided funding to support the Sir Charles Creek restoration project to assist with achieving iwi and community water quality and biodiversity goals for the Wainono Lagoon catchment.

Southland

We supported a water quality improvement initiative that will help prevent contaminants impacting the internationally significant Waituna Lagoon wetland system. Our funding has helped install a series of three on-farm sediment traps to capture sediment from adjacent paddocks and tile drains, preventing it entering the Jordan Creek and Lagoon. An area of approximately 3000m^2 around the sediment traps has also been planted with native species to increase on-farm and catchment biodiversity.

Sediment traps and planting

Anna & Kerry, Canterbury

Our performance

85%
of our farmer owners in New Zealand now have tailored Farm Environment Plans

44%
of our manufacturing sites have bespoke water improvement plans in place

6.7%
reduction in water use at our manufacturing sites since FY18

What's next

We will continue to support our New Zealand farmer owners as they establish Farm Environment Plans, focusing on the specific priorities for their farm.

We will use this approach to drive improvements that positively impact greenhouse gas emissions, water quality, water use, soil health and biodiversity.

We will continue to improve water stewardship at our manufacturing sites, and roll out bespoke Water Improvement Plans covering both water usage and treatment of wastewater.

We will take part in the Aotearoa Circle bootcamp on the Taskforce on Nature-related Financial Disclosures (TNFD) and look to apply the framework through an Aotearoa New Zealand lens.

Ngahere,
Hamilton

Packaging & waste

Packaging is vital for delivering safe and quality nutrition. It is also a large part of our direct and indirect waste.

The packaging we use is an important part of our Food Safety and Quality system and allows us to deliver the high-quality dairy products our customers and consumers expect. Understanding the source, make-up, quality and functionality of the different packaging types and materials we use is critical to protecting the nutrition we produce.

We want to play our part with a Fonterra sustainable packaging journey, which means considering what happens to our packaging once the nutrition inside has been consumed.

This section covers the packaging we use to protect and transport our finished goods from the sites we directly manage and the third-party sites we use. Most of our finished goods are bulk ingredients for use by business customers, though we also produce packaged goods for foodservice and consumers. This section also covers the solid waste from sites we directly manage, including manufacturing sites, offices, retail stores and farms.

Our approach

We want to maximise the nutritional value delivered from every drop of milk by minimising food loss across our supply chain, keeping our food safe and of high quality from the farm to the consumer. This helps us deliver the maximum return to farmers while delivering better outcomes for people, communities, and the environment.

Our Global Environmental Policy and supporting standards require all our sites to manage hazardous substances responsibly, maximise manufacturing yield, reduce waste, improve the packaging on Fonterra-branded products so that they are reusable, recyclable, or compostable, and collaborate with others to enable greater access to waste collection and recycling services.

What we've been doing

Sustainable Packaging Programme

Our sustainable packaging programme continues to make good progress. Firm plans are in place with all our global business units, and along with our Research and Development Centre activity, the transition to recycle-ready packaging is being delivered. We are forecasting that we will achieve greater than 95% recycle-ready packaging by the end of 2025.

Using globally accepted recyclability definitions and sales volumes for the 12 months ending July 2023, on a total tonnage of packaging basis, 91% of our packaging is now recycle-ready, up from 89% last year. This leaves 9% that is classified as unsuitable for recycling (e.g. foil-based sachets) that we will continue to focus on reducing.

Our global packaging programme doesn't stop at recycle-ready packaging. We continue to analyse our portfolio to identify where we can make further, meaningful improvements to the packaging we use to protect our products. Our overarching objective is to protect the food we make while conserving packaging resources and reducing waste.

This year, we have continued to collaborate with industry partners to drive innovation and optimise packaging design. We have also been working with others to improve access to recycling collection and reprocessing infrastructure in the markets where we operate.

In looking at solutions we continue to be committed to zero deforestation across our primary deforestation linked commodities (see page 70). This year we commenced a review of our fibre suppliers for appropriate third-party certification.

To take us through to 2030, our sustainable packaging focus is on the four Rs of:

Reduce

Reduce unnecessary plastic and optimise what we must use to keep products safe

Recover

Raise awareness on how packaging should be disposed of by increasing on pack guidance and supporting the development of soft plastic collection and recycling

Redesign

Deploy a fully recycle-ready portfolio and continue to enhance the design of beverage cartons to improve circularity

Rethink

Explore the development of high performing and efficient dairy packaging systems including at-scale reuse and refill systems

Improving our packaging

As we continue to identify new recycle-ready materials, we are also identifying opportunities to improve existing packaging formats.

Fonterra Brands Australia has redesigned its Mainland On the Go™ Lunch range. Changing to a recycle-ready PET tray and removing the cardboard sleeve on each unit will save an estimated 47 tonnes of paperboard annually. These changes provided the additional benefit of increasing the number of units that can be packed into each shipping carton, to reduce corrugated board by 10 tonnes per year and increase transport efficiency.

Over the past year, we have been working with one of our packaging suppliers, Amcor, to develop a new recycle-ready film to use on our consumer and foodservice cream cheese blocks. This new film is based on Amcor's award-winning AmPrima™ technology and has been modified to meet Fonterra's operational requirements. The new film is ready for recycling in the [4] polyethylene stream, which improves opportunities for our customers to recycle in markets where soft plastic recycling infrastructure exists. Our new cream cheese film is the first commercialisation of the AmPrima™ technology in Australasia and will start to be deployed from October 2023, replacing approximately 72.3 tonnes of plastic that is not suitable for recycling.

Reducing plastic waste

To have confidence that our products have not being tampered with along their supply chain journey, we apply security seals to the many forms of transport we use. Products are mainly transported in containers via road, rail and sea.
Until recently these security tags were made with a mix of plastic and metal components, meaning that they couldn't be recycled after use.

For movements within New Zealand our Distribution Centre (NZDC) network has recently completed the roll out of a fully Polypropylene (PP) security seal. These seals are now fully recyclable with collection points in all Fonterra New Zealand distribution centres to direct them into the recycling stream.

We have redesigned the security seals to reduce waste. Previously tags came in strips of ten, all with the same serial number. This meant if we didn't need all ten tags those that were unused went to landfill. The new design comes in a selection of configurations to reduce wastage. We estimate that following full implementation in late 2023 this change will divert approximately 13 tonnes of tags from landfill.

Collaborating to improve recycling

To achieve reusable, recyclable or compostable packaging requires a direct focus on the materials we use. It also requires collaboration and engagement with others to align on preferred materials, influence the product users and accelerate delivery of suitable infrastructure.

To support the development of waste infrastructure Fonterra Sri Lanka has partnered with INSEE Ecocycle to promote sustainable waste practices. Under this partnership, and in collaboration with five local government authorities, non-biodegradable plastic found in municipal solid waste channels is diverted away from landfill to provide energy and which can be a substitute for oil-based fuels. Over time we will explore this material going to higher value uses. With the support of Fonterra, INSEE Ecocycle is also raising awareness among the local council workers regarding the correct segregation of plastic materials.

This year, Fonterra Brands Malaysia has partnered with the Penang Green Council (PGC) and Resource Recycling Systems (RRS) on a feasibility study to establish a pilot collection scheme for soft plastic packaging in Penang. The study is evaluating current recycling systems, consumer behaviours and available recycling infrastructure in Penang. The aim is to provide data to support the creation of meaningful change by developing a recycling model, which if successful, could be a blueprint for the country's packaging and recycling challenges.

In New Zealand, Fonterra operates a network of 65 Farm Source™ stores retailing farm supplies. This year, we have extended our existing partnership with AgRecovery to introduce facilities across all our stores to collect low density polyethylene bags used for seed, feed and fertiliser. AgRecovery recycle the used bags into plastic pellets, which are used by others to create new products. We believe that by providing collection facilities across our Farm Source™ network it makes it easier for our farmers to access this recycling service. This year we saw a 75% increase on the prior year in AgRecovery collection through our stores.

Fonterra Crawford Street

Working together to reduce solid waste

This year, we continued reducing solid waste sent to landfill, down 13% from last year and down more than 45% from our baseline of FY19.

This covers the solid waste from sites we directly manage, including manufacturing sites, offices, retail stores and Fonterra-owned farms.

This year, in New Zealand, as part of our sustained focus on waste reduction and integration of recycling infrastructure across the Farm Source™ network of stores, we have reduced retail waste to landfill by 54% in comparison to last year.

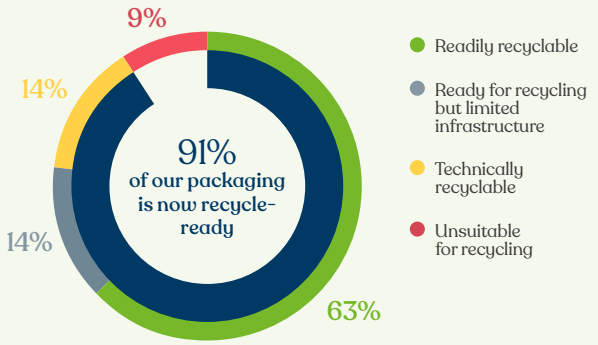
At our Reporoa manufacturing site in New Zealand a collective effort has yielded site-wide waste reduction results, with solid waste almost halved between FY22 and FY23. At times we have product that does not meet our exacting food safety quality standards and is not suitable to divert to stock food. We are now diverting this from a potential landfill waste stream and processing it through a local company's anaerobic biodigester to make heat, electricity and a bio-fertiliser. Other waste reduction activities at this site include recycling any worn or damaged tanker mudflaps and placing smaller volume items like waste slipsheets into appropriate recycling streams.

These site-wide outcomes can be attributed to a culture uplift, where sustainability improvement discussions have been seamlessly integrated with daily health, safety, and quality conversations. Across multiple departments and levels, sustainability metrics have driven positive change, complemented by the establishment of sustainability champions who fuel transformation on the factory floor.

In Australia, since 2019 we have reduced the amount of waste sent to landfill by 39% , through a combination of reducing waste and diverting materials from landfill to more beneficial uses. In partnership with APR we have introduced a new recycling programme across our manufacturing sites, which will enable these locations to recycle relatively clean soft plastics.

While we still aspire to achieve 'zero waste' from our sites globally, we no longer have a specific deadline. We have already made significant progress in this area, with our current intensity being about 2.1kg of solid waste per tonne of product. Aligned with waste management principles, we will continue to seek year-on-year improvements and eliminate the sources of waste. We will focus on making products to specification to avoid food waste, work with vendors to prevent non-recyclable materials coming onto our sites and partner with others to increase the range of materials that can be economically recovered.

Our performance



What's next

We will continue to seek year-on-year reductions in the solid waste we send to landfill from all our operational sites.

We will continue to move our global packaging portfolio to be recycle-ready and collaborate in markets to improve the viability of recycling.

We will continue to share advice and case studies with vendors to help influence the packaging profile of more products that go onto farms in New Zealand.

We will review our packaging portfolio to identify and close any gaps in the certified sourcing of our fibre-based packaging.

We will perform feasibility studies on various projects aligned to our four identified 2030 focus areas and establish enabling research and development work programmes where required.

Working together

We are working together to deliver a sustainable business.

Nā tō rourou, nā taku rourou ka ora ai te iwi.

With your contribution and my contribution, we'll all thrive together.

84%

of internal audits completed across our global business included an assessment of the risks related to corruption

$12.2 billion

returned to farmers in New Zealand through the Farmgate Milk Price

7,139

farms in New Zealand achieved a recognition level in The Co-operative Difference framework, up from

Gold

EcoVadis Medal awarded in 2023 placing Fonterra among the top 5% of companies assessed by EcoVadis

In this section

Barlass Farm, Canterbury

Working with farmers

Farmers are the heart of our Co-operative and we add value to their milk and businesses by supporting continued innovation.

This enables the expectations of our customers and communities to be met.

We have made a strategic choice to focus on New Zealand milk and about 90% of the milk we collect comes from our farmer owners in New Zealand. We also collect milk in other countries, such as Australia, to help meet the needs of our customers and generate the most value from our New Zealand milk (see AR-04).

In this section, we explain how we work with farmers to encourage and support the continuous improvement of good farming practices on farms supplying milk directly to our manufacturing sites.

The Co-operative Difference

We have farmer engagement and support programmes in every country where we collect milk. These help us build relationships with farmers, set expectations and support them to improve their farming practices. This is especially important for our farmer owners in New Zealand and why we launched The Co-operative Difference in FY19.

The Co-operative Difference framework provides a clear signal to farmers about what needs to happen on-farm so we can meet our customer's needs both today and into the future. It pulls the best of what we do into five focus areas: Milk, People and Community, Environment, Animals and Co-operative and Prosperity.

So that we meet those needs today we set clear standards and audit processes with our farmer owners. We can never afford to compromise on matters such as regulatory compliance, producing safe, high-quality milk and looking after people, animals and the environment.

The Co-operative Difference payment recognises farmers who are making improvements in prioritised areas. By meeting specific on-farm targets for the season there are three levels of achievement possible and we use the analogy of a journey climbing up a mountain. Te Pūtake represents the start, Te Puku represents the mid-point, and Te Tihi represents the summit.

In the 2022/2023 season, farms are eligible for a payment of up to 10 cents per kg of milk solids, with 7 cents for reaching Te Pūtake and a further 3 cents for reaching Te Puku. Reaching Te Tihi is about celebrating the farmer leaders in the Co-operative through recognition and is not linked to payments.

The specific criteria for Te Pūtake this season included: accurate and timely completion of annual Farm Dairy Records; completing a DairyNZ Workplace 360 assessment and achieving 100% on the foundational level; having an Animal Wellbeing Plan (see page 40); having a Farm Environment Plan (see page 46) and achieving certain key standards related to topics such as nitrogen surplus, dairy shed effluent, on-farm plastics, farm-grown feed and winter management.

Te Puku builds upon the achievement of Te Pūtake and is all about milk quality. It requires the milk supplied to achieve the excellence level for at least 30 days during the season and then, all milk that met this standard during the season attracts the extra payment of 3 cents per kg of milk solids.

Te Tihi builds upon the achievement of Te Puku and provides additional non-financial recognition for those farms delivering 'excellent' quality milk for at least 90% of their season.

This year, farmers took significant action with more than 83% of farms achieving The Co-operative Difference payment at some level. This outstanding level of participation is an encouraging indication that farmers are willing to step-up and make changes on farm in a way that is meaningful for customers. With more farmers achieving Te Pūtake, we're able to give assurances around the sustainability credentials of our high-quality New Zealand milk.

The Co-operative Difference

718

Achieved – Te Tihi

"the summit of the mountain"

5,038

Achieved – Te Puku

"the mid-point" 3c/kgMS on all qualifying milk

1,383

Achieved – Te Pūtake

"the start of the journey"
7c/kgMS on all milk supplied

Setting expectations for supplying farms

Our Fonterra Farmers' Terms of Supply set the expectations for farmers when it comes to people, the environment, animal health and welfare, and food safety and quality.

The Fonterra Farm Dairy Standard and The Dairy Material, Collection and Storage Standards are part of our Global Integrated Management System and set out the minimum requirements that all farmers must meet. It applies to all farmers, collection points, co-operative vats and chilling centres supplying raw milk to Fonterra around the world, and forms the basis for our on-farm audits.

Through a combination of our own employees and third parties, we regularly assess farms supplying us:

- In New Zealand, in addition to regular visits by our team, every supplying farm is visited each year by an independent farm assessor. The assessor validates the accuracy of the data submitted to the Co-operative and verifies the farmers' Co-operative Difference achievements at this time. This year, 17% of farms were placed into our performance management process at some point during the season to support on-farm change. Milk collection suspension notices were issued for nine farms in New Zealand this year: seven related to milk quality, one related to animal wellbeing and effluent and one related to environmental management[1].
- In Australia, farms are visited multiple times each year by our employees, and independent assessments are scheduled based on prior compliance levels. Every farm is assessed at least once every two years. In FY23, 55% of farmers were assessed, and 8% of the assessed farms were referred for follow-up and resolution.
- In Latin America, each farm is assessed by a combination of our employees, and third parties. In addition, our New Zealand-based Global Assurance team audits a random selection of farms once every three years. This was disrupted by COVID-19 related travel restrictions but has resumed in FY23[2].
- In China, the one farm under our direct control prior to its sale in April 2023, was subject to assessment by a combination of our own employees and third parties. In addition, it was subject to assessments by our New Zealand based Global Assurance team and Internal Audit team. This has been disrupted by COVID-19 related travel restrictions but resumed in FY23. The sale of Hangu China farm finalises Fonterra's exit of China farms[3].

Where we find mandatory requirements are not being met, our On-Farm Advisors develop an action plan with the farmer, including target completion dates. We may also suspend the collection of milk until we are satisfied that all minimum requirements are being met and that any actions required to avoid a repeat of the issue have been completed.

Farms we manage

We only have a very small number of farms around the world under our management control. In New Zealand, we manage 30 farms that neighbour our manufacturing sites, including 10 that have dairy herds.

We use these farms to manage excess water and nutrients from our manufacturing operations. The water and nutrients improve soil health and support pasture growth, which then allows us to grow and supply supplementary animal feeds for our farmers.

In April of this year we sold the one remaining farm we operated in China.

1 The data presented reflects the New Zealand 2022/23 milking season, which runs from 1 June 2022 to 31 May 2023.
2 In March 2023 we completed the sale of the Chilean Soprole business. DPA Brazil currently held for sale.
3 In April 2023 we completed the sale the Hangu Farm in China.

What's next

We are continuing to build capability in our New Zealand Farm Source field team around on- farm efficiency to support our farmers around what options they have to become more efficient based on their stage of the farming journey.

Working in partnership

We know we can achieve more and have a greater positive impact when we partner with others.

This section covers some of the partnerships we have been progressing this year.

See also
Working with farmers — page SR-57
Working with vendors — page SR-68
Doing Good Together — page AR-15

Sustainable Nutrition Initiative®

Sustainably nourishing an increasing global population without exceeding the capacity of the planet is a major challenge for society, and there are many narratives on how this should be done.

Fonterra is supporting the Sustainable Nutrition Initiative (SNi®), which is creating a better understanding of the food system and identifying practical opportunities to sustainably feed the global population with the nutrients required.

We must thoroughly understand the problems to be solved before embarking on changes that will be difficult and slow to introduce, and extremely challenging to reverse if we get them wrong. The global food system of the future will be shaped by the shifts in thinking that we make today. The SNi® helps provide context to support this thinking and helps to guide decisions.

The current impacts of the pandemic, conflict and climate-related issues on the supply and trade in food and associated nutrients has emphasised the importance of a global approach to food security.

The DELTA Model® has been created by the SNi® to generate a wide range of possible scenarios and explore what improvements to the global food system might be possible and practical. Using the DELTA Model® to explore global food supply, flows, consumption and losses highlights facts that may differ from some current thinking. The food system is already plant-based, and from the perspective of production, consumption and waste, animal-sources of food are not as inefficient as previously thought. There is also strong evidence that to provide the global population with the nutrition it needs, a plant-based and animal-optimised food system is required.

This year, the SNi® team have begun work on a new dietary optimisation tool that will be available to all. It will allow the role of dairy to be explored in a dietary context, considering its nutritional, environmental and cost characteristics. The team have also been involved in modelling of international nutrient trade, identifying that almost all New Zealand's export partners have national calcium deficiencies, alongside other micronutrients. An open access tool will soon be released to visualise these flows and the most important contributing food items.

In terms of advocacy and international engagement, Prof Warren McNabb continues his role on the Scientific Advisory Committee for the FAO project on the contribution of livestock to food security, sustainable food systems, nutrition and healthy diets, and has also taken up a role representing New Zealand on the World Farmers' Organisation (WFO) Scientific Council. Dr Nick Smith has joined the Thought Leaders Group for Te Puna Whakaaronui, New Zealand's Food and Fibre Sector Think Tank hosted by MPI. The DELTA Model® has been used in Master's level teaching over the last year at the University of Otago, Monash University (Australia), Wageningen University & Research (Netherlands), University of Lincoln (UK), and University of Padua (Italy).

For more information please visit the SNi® website

www.sustainablenutritioninitiative.com.

Living Water

Living Water is a partnership between Fonterra and the New Zealand Department of Conservation, two large organisations with different skill sets and purposes, who saw the potential value of working together.

Caring for Aotearoa New Zealand's ecosystems and species is critical to New Zealand's economic success and that of the agricultural sector in the future, and it needs to happen across all landscapes, not just on conservation land.

Through a gradual process over time, it is estimated that about 10% of New Zealand's land area has been artificially drained to make lowland areas productive for agriculture. This has modified the natural water network, and these drains can often now be the last refuge for native freshwater species in productive landscapes.

Established in 2013, the partnership is focused on five catchments (see map on page 61) to identify game-changing and scalable solutions that show dairying and freshwater can thrive together.

After 10 years in partnership, there is much to celebrate, including:

- The inclusion of a specific Biodiversity module in the farm-specific Farm Environment Plans that Fonterra uses with farmers (see page 46)
- 98% of farms supplying milk to Fonterra in Living Water catchments now have FEPs, up 8% on 2022
- 17 identified solutions have been scaled or are being used by others
- 8 potential game-changing approaches have been trialled
- 200,000 native plants and trees have been planted in Living Water catchments
- Tangible improvements to instream habitats for native fish have been achieved
- 50% of our farmer shareholders located in Living Water catchments are implementing freshwater improvement actions over and above regulatory requirements.

Our early work trialling biodiversity assessments on farm led to the recently completed Farming with Native Biodiversity pilot. This resulted in developing resources that were made available nationally to support farmers and farm advisors to identify, enhance and restore biodiversity on farm. We've also shared our work on ecosystem services and sediment detention bunds with the Kaipara Moana Remediation programme, which is looking to reduce sediment reaching the ecologically sensitive and significant Kaipara Harbour by 50% between 2020 and 2030.

There are also valuable lessons learned that can be used to inform not only our own future work but also the work of others. Some of these include:

- Working at the farm scale alone will not fix the challenges faced. We need to 'reimagine' our productive landscapes for a more-resilient future and design with nature rather than squeeze nature in around farming.
- Aspects of the natural landscape can influence water quality outcomes more than farm management practices, so using the new science of physiographics (natural landscape attributes and processes) for improved catchment and farm planning will be beneficial.
- It's important to use all the available knowledge – indigenous, western science and farmers – and use the right solution in the right place for the right purpose.
- Farmers are smart business people who look to maximise their return on investment – we can support them to implement changes that provide multiple benefits for climate, water, soil, biodiversity, ecosystem function, and long-term farm and business resilience.

Living Water has built a strong working relationship and mutual respect between DOC and Fonterra. We've learned a lot that we look forward to taking beyond the ten-year partnership.

Living Water example projects

Key
- National projects
- Catchment scale projects
- Farm scale projects
- Completed
- In progress

National projects

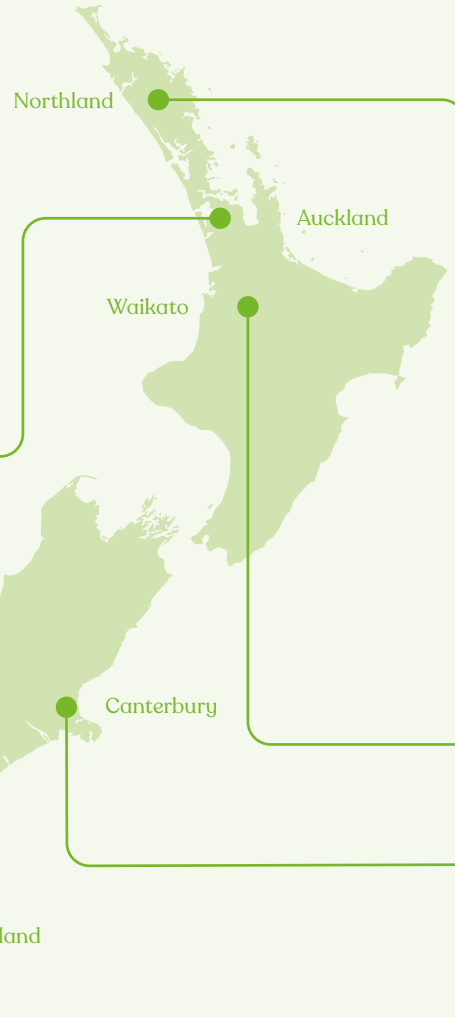
- LandscapeDNA
- Fish passage remediation project
- Farming with Native Biodiversity
- Fonterra FEP App

Waituna Lagoon/ Te pūroto o Waituna,
–
▲ Contaminant intervention approach

- ▲ Physiographics
- ● Fine Particle Fertiliser Application
- Instream habitat additions

Pūkorokoro-Miranda, Hauraki
–
▲ Catchment condition survey

- ▲ CAPTure catchment prioritisation



Lake Ruatuna, Waikato
–
▲ Water Primrose

- ● Trees on farm

Wairua River/ Te awa o Wairua, Northland/ Te Tai Tokerau
–
● Low cost constructed wetland

- ▲ Detention bunds
- ▲ Catchment condition survey

Ararira-LII River/ Te awa o Āraiara,
–
Instream habitat additions

- ▲ Drainage network redesign
- Economic value of lowland drainage restorations

External initiatives & membership of associations

Fonterra is a supporter of the following voluntary initiatives:	
Initiative	**Date adopted**
CDP	2015
Science Based Targets initiative	2020
Dairy Sustainability Framework	2013
New Zealand Climate Leaders Coalition	2017
Rainbow Tick	2019
Global Food Safety Initiative (AUS/NZ forum)	2019
TupuToa	2018
New Zealand Plastic Packaging Declaration	2019
The Australian Packaging Convenant	2011

Fonterra is a member of the following organisations:

International Dairy Federation

Global Dairy Platform

Dairy Companies Association of New Zealand

Diversity Works New Zealand

Sustainable Agriculture Initiative Platform

Roundtable for Sustainable Palm Oil

Business New Zealand

Sustainable Business Council

Sustainable Business Network

Pride Pledge

The Aoteroa Circle

Dairy Womens' Network

Bioenergy Association of New Zealand (BANZ)

LandscapeDNA

Ethical business practices

We earn trust by acting ethically and living our values every day.

Holli & Jess,
Hawkes Bay

Our Purpose

Our Co-operative,
Empowering people,
To create goodness,
for generations.

You, me, us together,
Tātou, tātou.

Our Values

Co-operative spirit

Do what's right

Make it happen

Challenge boundaries

Our approach

So that we live up to the intent of our Purpose, the experiences and interactions that farmers, our customers, business partners and communities have with our people must foster trust and credibility.

The Board, Co-operative Council and Management of Fonterra consider that strong governance plays a critical role in the success of our Co-operative and are committed to achieving the highest standard of corporate governance, representation and leadership (for details, see G&S-08).

Our Group Legal and Compliance Policy requires all of Fonterra's business units to clearly assign roles and responsibilities for compliance, with all applicable laws and regulations applying to our operations. We are committed to embedding compliance with all applicable laws, regulations and Fonterra Global Policies into our operations and creating a culture of compliance, including appropriate monitoring, assurance, reporting and continuous improvement.

Fonterra's Code of Business Conduct, The Way We Work, outlines our expectations across a wide range of internal and external operating practices. It is made available in a range of languages to employees and our stakeholders.

We are committed to operating in a manner that builds trust and lasting relationships through behaving with honesty, integrity and transparency. We seek to protect the reputation of our business by implementing robust practices in the areas of actual or potential conflict of interest, gifts and corporate hospitality, bribery and corruption, and the disclosure of fraudulent and unlawful activity.

We require our people to complete training on our global policy framework, which includes our global policies, standards and supporting documents.

For more information on our Code of ethics see G&S-08.

Orla & Kate, Auckland

Our performance

Legal compliance

We have not identified any material incidents of non-compliance with laws and regulations in the social and economic area in the past year. There were also no fines or non-financial sanctions related to anti-competitive behaviour, anti-trust, and monopoly practices over this period.

Fonterra is currently a defendant in climate change litigation commenced by Mr Mike Smith, a Māori climate change representative, which was commenced in the Auckland High Court. Fonterra is a co-defendant, along with six other major New Zealand corporates. In basic terms, Mr Smith is claiming that the defendants undertake or enable activities that release greenhouse gases into the atmosphere that have contributed to climate change, and that Mr Smith has, or will in the future, suffer losses as a result of climate change. Fonterra and the other defendants are vigorously defending these proceedings. Following an application by the defendants, the High Court struck out two of Mr Smith's three specific claims. A High Court claim can be struck out if the High Court determines the claim is not reasonably arguable in law. The decision of the High Court was then appealed by Mr Smith in the Court of Appeal (Fonterra and the other defendants cross-appealed the decision of the High Court not to strike out the remaining claim). The Court of Appeal ruled in favour of the defendants and struck out all three claims. Mr Smith has been granted leave to appeal the decision of the Court of Appeal to the Supreme Court and this was heard on 15-17 August 2022. The parties are awaiting the Supreme Court's judgement.

It is expected that the judgment in the appeal will be issued by the Supreme Court by the end of 2023. If the Supreme Court decides one or more of Mr Smith's claims should not be struck out as being legally untenable, litigation will then proceed to a full trial in the High Court where Mr Smith will be required to fully argue his claims and present supporting evidence. The Supreme Court decision will not determine any liability as that would be determined through the full High Court trial. Fonterra will continue to vigorously defend the claims made by Mr Smith.

For further details on environmental compliance, see page 67; for health and safety compliance, see page 19; for product marketing compliance, see page 22.

Anti-corruption

Each year our Internal Audit team assess all Fonterra businesses for the risk of potential fraud. This risk assessment helps determine the priorities for audits across our global business.

During FY23, 84% of the internal audits completed across our global business included an assessment of the risks related to corruption. Particular areas of focus include segregation of duties, delegated authorities, procurement practices, and sensitive inventory management. Within the coverage of these audits, five manufacturing sites where we have management control were subject to an anti-corruption check.

Internal Audit was referred to investigate one potential corruption/fraud case identified through our whistle-blowing hotline in FY23. It involved one of our entities in Southeast Asia, and individuals were accused of unethical behaviour with respect to conflicts of interest and bribery. Investigations did not substantiate the claims, no further action was taken.

In addition to the case identified through our whistle-blowing hotline, three further cases in one of our entities in Southeast Asia were investigated for unethical behaviour with respect to corruption and asset misappropriation. The investigations did not substantiate the claims, no further action was taken.

A full-time employee in New Zealand was investigated for unethical behaviour with respect to a non-disclosed interest in a competitor business. The investigation substantiated the conflict of interest and the employee was dismissed.

Responsible political behaviour

Fonterra does not allow corporate contributions of any kind to a candidate or political party in connection with political elections. No political contributions were made by Fonterra in the past year. We do not offer money or anything of material value to government officials, parties or candidates for the purposes of influencing the acts or decisions of officials.

Principled approach to tax

Fonterra has a clear set of principles that guide how we manage our tax obligations in New Zealand and around the world. We pay our fair share of tax in all jurisdictions. We are transparent and work with tax authorities so we can continue to act responsibly.

In New Zealand, co-operatives are treated differently to corporates under tax law. Rather than being taxed directly, Fonterra passes our income on to our farmer shareholders, who pay the tax at their level.

Fonterra Centre, Auckland

Environmental Management for our manufacturing operations

Our Global Environmental Policy defines our approach to the management of all environmental aspects relevant to our activities including, but not limited to, water, climate and energy, waste and pollution prevention across our global value chain.

This includes assessing and managing environmental risks, taking a precautionary approach to decision-making to prevent damage to the environment or human health where there is uncertainty and implementing best-practice environmental management systems. We set aspirations, objectives and targets that drive environmental performance and continue to work towards these.

We expect our people to demonstrate a commitment to environmental management, including in their strategic planning and the way they run the business, such as developing innovative approaches for managing and restoring the environment.

All sites have a manager specifically responsible for environmental compliance. At most sites, this is a dedicated Environmental Manager, and they are often supported by a site Environmental Management team. Their focus is on managing site-wide environmental performance and compliance with local environmental requirements.

Manufacturing sites where we do not have operational control are excluded from our performance reporting.

Independent evaluation & certification of sites

Our manufacturing sites are subject to regular internal and third-party audits. Internal audits are conducted by staff independent of the site and are used to identify areas for improvement. Third-party audits give regulatory authorities and our customers independent assessments of our performance.

For example, independent audits against the Sedex Member Ethical Trade Audit (SMETA) standard for labour, environment, health and safety and business practices are required by some of our customers. Other customers require us to undertake an annual assessment by EcoVadis. This year, we retained a Gold rating.

Other third-party audits are part of the independent certification of site Environmental Management Systems (EMS) to international standards, such as ISO14001:2015. Independent certification to ISO14001, or an equivalent such as EnviroMark Diamond, provides a third-party evaluation of the performance of our EMS. Globally, 73% of our manufacturing sites are certified to this level or equivalent.

Environmental compliance

We draw on international guidelines and national or local regulation to identify priority substances of concern and establish acceptable limits for operating. We have identified clean-in-place chemicals, refrigerants and contaminated wastewater as our substances of concern.

During FY23, we received no abatement notices for non-compliance with environmental laws or regulations.

At one of our manufacturing sites in Palmerston North we experienced some non-compliances where pre-treatment on-site did not meet trade waste agreement levels with the city council. Over the year we incurred a total of $7,140 in penalty charges.

One significant spill occurred recently at our Edendale site, when approximately 1,200m^3 of water measuring below the consented pH level was discharged into a river. An investigation is ongoing.

Where an event occurs we take action to improve processes and minimise the risk of further non-compliances.

Working with vendors

We work across our supply chain to achieve alignment with our sustainability commitments and goals.

This means promoting the adoption of responsible practices within our supply chain and working to source goods and services produced in an environmentally and socially responsible way.

By far the largest single input to our business is raw milk, collected directly from farmers. For more information on how we work with our farmers, in New Zealand and around the world, see page 57.

This section covers the way we work with vendors in our non-milk supply chain. Our procurement team is also supporting the vendor selection and engagements to deliver our decarbonisation (see page 34), wastewater improvement (see page 44), forest products (see page 70) and sustainable packaging (see page 51) programmes.

Kylie, Blair, Penelope & Billie, Hawkes Bay

Our approach

Our Global Procurement Policy and Procurement Standard set out our requirements for the procurement of non-milk goods and services, including capital projects.

We are committed to purchasing decisions that set us up for a sustainable future. These requirements apply to all purchasing, and for significant items our specialist procurement team must be involved in the purchasing decisions and ongoing management of the vendors.

The Global Policy is owned by the Chief Operating Officer and approved by the Board of Directors. Business Unit managers are accountable for ensuring the Global Standard is fully implemented across the organisation. Business Unit procurement leads are accountable for guiding and approving major procurement activities, ensuring procurement control activities are operating effectively and addressing any actual or potential non-compliant behaviours. All employees are responsible for complying with the standard.

Vendors are assessed against a range of criteria such as regulatory compliance, food safety and quality, health and safety, cyber security, environmental performance and working conditions. We carry out assessments during initial selection and on an ongoing basis. Part of our on-boarding for a new vendors includes a risk assessment. If a vendor is identified as a potential risk additional assessments are required before we move forward, including consulting our internal risk pillar owner and subject matter experts. Suppliers of any material or services that may impact our sustainability commitments must first be approved by the Sustainability team.

The Fonterra Supplier Sustainability Code of Practice sets our expectations of vendors including upholding standards related to ethical business conduct, human rights, workplace health and safety, fair working conditions, and environmental protection.

What we've been doing

Rolling out our framework to improve management of vendors.

Globally we engage with more than 10,000 vendors, and we are reliant on them to deliver our objectives.

Sustainability is one of the key pillars considered when we refresh our category strategies and a standing item on the agenda in our vendor meetings for providers of ingredients, packaging and engineering categories.

In 2022 we designed a vendor vetting and engagement framework, enabled by an online portal, to help us better understand and manage the risks associated with our vendors. Our framework, supported by an online portal and a robust business process, enables us to assess and manage our vendors in a more efficient and consistent way, both during initial selection and on a proactive ongoing basis.

For our employees, our procurement processes are being simplified and standardised, which is supported by new technology and targeted training. As a result, we can comprehensively cover the broad range of topics that need to be considered and focus on the most relevant and highest risk topics for each vendor. The topics covered include regulatory compliance, food safety and quality, health and safety, cyber security, environmental performance and working conditions.

For our vendors, the goal is to provide them with easy-to-use systems that support a transparent assessment with clear requirements and good management processes throughout the entire engagement lifecycle.

Following introduction of the portal in July 2022, we continue to progress its roll out. To date, more than 600 vendors have been assessed representing a range of categories, services and vendor size.

A new Fonterra Procurement page was made live on our website in July 2023 to provide our global vendors with easy-to-access information on our processes, links to terms of supply and user guides for vendors to participate in our sourcing events.

www.fonterra.com/nz/en/campaign/vendors.html

Forest products

Protection of forests and other natural ecosystems is critical for maintaining biodiversity, mitigating, and adapting to the impacts of climate change, and sustaining livelihoods.

The forest and agriculture products that Fonterra sources – including palm, soy, paper, and bioenergy – can pose risks for deforestation and human rights violations. Fonterra is committed to eliminating deforestation and the conversion of all other natural ecosystems across our operations and supply chains.

We first launched our Palm Product Standard in 2016, and this year we replaced the Standard with a wider Forest and Agriculture Products Standard to reflect updates to internationally recognised standards and principles and widening our commitment to zero deforestation across our value chain.

With the launch of the revised standard, Fonterra commits to no deforestation across its primary deforestation-linked commodities, with a target date of December 31, 2025. This includes our existing commitment where we are driving towards 100% certified segregated supply of palm oil. We have been considering the risk of deforestation more widely in our supply chain for several years, and this year completed our sixth response to CDP on Forests.

We have been a member of the Roundtable for Sustainable Palm Oil (RSPO) since 2010, and since 2015, all our palm oil purchases have been certified through one of the RSPO supply chain models. During the 2022 calendar year, we purchased 24,676 tonnes of palm-related products as an ingredient, up 20% on 2021, aligning with purchasing volumes in 2020. Volumes were up in most regions, and this has contributed to reduced progress towards our target of 100% RSPO certified segregated supply this year. For the 2022 calendar year, 67% of our purchasing was RSPO certified to at least segregated supply level and 25% was certified as mass balance.

By volume, 97% of all palm oil being purchased by our New Zealand business and 100% of all palm oil being purchased by our Australian business is certified as segregated supply. It is purchasing for our operations in Saudi Arabia and Indonesia where sourcing segregated supply is most challenging. We remain committed to achieving certified segregated supply and have implemented an internal exemption process to provide greater rigor for non-conformances against our Standard. This has made non-conformances visible to leadership and has contributed to several changes in sourcing which should show through our 2023 calendar year reporting. We are increasing our efforts to positively influence the sustainable production of palm within our supply chains and will continue to work with suppliers of direct and indirect palm oil ingredients to work towards 100% certified segregated supply.

Palm oil is a versatile, functional fat that can be blended with dairy ingredients to make a wide range of products with the potential to make New Zealand-sourced nutrition available to more consumers at affordable price points in some markets.

Palm kernel expeller (PKE) is a by-product of the palm crop, originally treated as waste, and now used as an effective supplementary feed for animals, including dairy cows in New Zealand. Our farmers are aware of the need to source this responsibly, and we test milk received to detect if the expected low use of PKE is being exceeded. We believe our focus on influencing primary palm production is the best way to deliver sustainably produced PKE.

Our performance

67% ↓

of purchased palm oil is now certified as at least 'segregated supply' from credible organisations.

What's next

Using our online portal, we will continue to expand our assessment of, and engagement with vendors, globally to better understand their practices and manage risks in their supply chains.

We will continue to roll out our updated Sustainability Code of Practice, working with vendors so our expectations are understood, and priority risks are being managed.

We will implement our updated Agriculture and Forest Products Standard, driving harder towards 100% certified segregated supply and introducing supply chain audits.

Appendices

In this section

Our contribution to United Nations Sustainable Development Goals

Fonterra supports the United Nations Sustainable Development Goals (SDGs), and we are committed to playing our part, by working collaboratively to deliver change at scale.

The Dairy Declaration of Rotterdam[1], recognises the SDGs as the overarching framework for achieving sustainable development to 2030 and the critical contribution the dairy sector will play.

We understand that the SDGs and their underlying targets can help us refine our sustainability approach, not only to reduce risks, but also to identify opportunities for growth that contribute positively to their achievement.

We have analysed our business activities, material topics and value chain against the SDGs and their underlying 169 targets. Here we identify the specific goals where we can make the most material contribution, the objectives we have prioritised for specific indicators and provide a link to related coverage in our reporting this year.

The dairy sector's global approach to sustainable development is represented by the Dairy Sustainability Framework (DSF). Fonterra is a founding and implementing member of the DSF. We are committed to addressing all 11 DSF criteria within our supply chain, through a process of continuous improvement prioritised in conjunction with the findings of our materiality assessment. Whenever we refresh our materiality assessment, we ensure that the 11 DSF criteria plus human rights and deforestation are always considered as potential topics in the process.

For more information, see:

www.dairysustainabilityframework.org
www.saiplatform.org/sdp/

1 A joint declaration of the UN Food and Agriculture Organisation and the International Dairy Federation signed in 2016.

SDG	OUR CONTRIBUTION	INDICATORS	RELATED COVERAGE
NO POVERTY	Create positive employment opportunities along our value chain	1.2	See Investing in people on page 10 See Working with farmers on page 57
ZERO HUNGER	Provide access to safe, affordable nutrition	2.1	See Food, safety and quality on page 24
	Address malnutrition through products tailored to specific health needs	2.2	See Nutrition and health on page 20
	Lift dairy productivity to meet growing nutritional needs in a sustainable way	2.4	See Working with farmers on page 57
GOOD HEALTH & WELLBEING	Responsibly provide products to support wellbeing of people, including mothers and infants	3.1 3.2	See Nutrition and health on page 20
	Continue to improve the nutritional profile of our products	3.4	See Nutrition and health on page 20 See Health, safety and wellbeing on page 16
	Promote healthy and informed consumer choices		
	Provide a safe working environment	3.9	See Health, safety and wellbeing on page 16
GENDER EQUALITY	Provide equal participation and opportunities for women in the workforce	5.5	See Diversity and inclusion on page 11 See Closing our gender pay gap on page 14
CLEAN WATER & SANITATION LIFE BELOW WATER	Reduce the impact of farming and manufacturing on water quality and ecosystems	6.3 14.1 15.1 15.2	See Improving water stewardship on page 44 See Improving wastewater treatment on page 45 See Prioritising on-farm improvements on page 46 See Working with farmers on page 57
	Improve water efficiency, especially in areas of constrained supply	6.4	See Using less water on page 44
LIFE ON LAND	Protect and restore freshwater ecosystems	6.6	See Prioritising on-farm improvements on page 46 See Sustainable catchments on page 47
DECENT WORK & ECONOMIC GROWTH	Provide positive and inclusive employment for all groups	8.5	See Learning and development on page 12 See Diversity and inclusion on page 11
	Address labour and human rights issues in our supply chain	8.7 8.8	See Working with vendors on page 68 See our Modern Slavery Statement.
	Provide a safe and secure working environment	8.8	See Health, safety and wellbeing page 16
RESPONSIBLE CONSUMPTION & PRODUCTION	Reduce food waste throughout our supply chain	12.3	See Packaging and waste on page 51
	Reduce waste generation through our operations and product packaging	12.5	See Packaging and waste on page 51
CLIMATE CHANGE	Support farmers to build resilience to climate change	13.1	See Prioritising on-farm improvements on page 46
	Reduced emissions across our supply chain		See Climate change on page 28

Our performance

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
People - Nutrition and health								
Percentage of everyday and advanced nutrition products that meet endorsed nutritional guidelines[1] Fonterra consumer branded products (Global)	100% by 2025	–	86.5%	87.7%	97.1%	We are continuing to improve the formulation of our consumer products. In 2022, we developed an online system which makes it easier for us to analyse and track our progress. This system has been implemented for our global business units but excludes those businesses that were held for sale in 2023. On a volume sold basis, we improved from 87.7% to 97.1%. Having achieved more than 90% of our everyday and advanced nutrition products meeting our independently endorsed nutritional guidelines, our aim is to keep above the 90% threshold as we progress to our target of 100%. Our nutrition guidelines, as endorsed by the New Zealand Nutritional Foundation are publicly available on our web site.	●	SR-21
People - Health safety and wellbeing								
Work-related fatalities (employees, contractors, on-site public)	Zero harm	0	0	1	0	Tragically, last year we reported a tanker driver passing away in April 2022, when his tanker left the road in Canterbury and rolled into a paddock. This incident is now under-consideration by the New Zealand Coroner.		
Number of serious harm injuries[2] (employees, contractors, on-site public)	Zero harm	10	9	8	5	We have achieved a further reduction in the number of serious harm injuries this year. Our goal remains to eliminate serious harm so we will continue to seek further improvements. Three of these incidents were associated with slip, trips and falls, two were related to incidents of catches in machinery.		SR-17
Number of recordable injuries (employees – work-related)		247	230	258	328	While TRI has increased in FY23, we believe this indicates improved reporting 328 injuries required medical treatment, restricted work duties or time away from work. Manual handling (23%) and slips, trips and falls (20%) continue to be the main cause of recordable injuries. This is the highest number for several years so we will continue to seek further improvements in both rate and severity.		SR-17
Total recordable injury frequency rate (TRIFR per million work hours) (employees – work-related)	Less than 5	5.8	5.7	6.7	8.6	This year, we have seen an increase in recordable injury rate. Slips, trips and falls, as well as manual handling incidents continue to contribute to more than 40% of our injuries. The total hours worked covered by this injury rate was 37.9 million hours.	●	SR-17

FY23 progress is evaluated against stated targets: ● Progressing well or target achieved. ● Progressing but not as strongly as we'd like. ● Not progressing well or original timeline significantly delayed.

1 Assessment of products is based on protein, calcium and added sugars. Everyday nutrition products are intended to deliver a daily source of dairy nutrition. Advanced nutrition products provide a source of dairy nutrition and are fortified for advanced nutrition and health benefits.
2 Serious harm injuries are injuries that cause temporary or permanent loss of body function and include those to/involving both employees and contractors.

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
People – Investing in people								
Training skills hours (NZ)	Double by 2025 from FY20 baseline	270,355	346,417	501,879	430,356	We have delivered fewer hours this year, decreasing the hours of skills training by 14.9% compared to FY22, with the average hours per learner being 31.6 hours. The reduction this year is largely due to the timing of course completions. In addition to skills-related training there were an additional 224,390 hours of onboarding and compliance learning in New Zealand, covering things such as safety and environmental management.		SR-12
Gender diversity (Band 12+)	40:40:20	–	–	37.6%	39.5%	Our new goal for 2023 onward is 40:40:20, which we believe sends a positive signal on the direction we want to go. 40:40:20 refers to 40% female, 40% male, 20% of any gender. The 20% introduces the flexibility of female, male or non-binary gender. This year we also extended the range of senior leadership covered by the goal to Bands 12+.		SR-11
Nature – Land and water, on-farm								
Farms with Farm Environment Plans in New Zealand	100% by 2025	34%	53%	71%	85%	Our goal for FY23 was to reach 84% and this has been exceeded.		SR-46
Farms with Farm Environment Plans in Australia		–	–	13%	31%	This is the second year we have supported the farmers supplying us milk in Australia to develop FEPs.		SR-46
Nature – Land and water, manufacturing								
Water Improvement Plans in place at manufacturing sites	100% by end FY24	–	–	–	44%	This year we set a new target to establish integrated water improvement plans covering both water usage and treatment of wastewater for all our manufacturing sites. We are well on the way to achieving our FY24 target.		SR-44
Reduction in absolute water use across manufacturing sites by 2030	15% reduction by 2030 from a FY18 base year				6.7% Better than FY18	This year we broadened our water reduction target to reduce absolute water use across manufacturing sites from a FY18 base year. We anticipate year-on-year performance variability as water demand fluctuates due to various factors, including milk volumes, product mix, recycled water availability, and project activity (eg. FSQ aspects when commissioning new production lines). We expect to see a downward trend over time as water-reduction projects are realised. Performance is adjusted to account for acquisitions and divestments (see Data Reporting Notes on page SR-98).		SR-44

FY23 progress is evaluated against stated targets: Progressing well or target achieved. Progressing but not as strongly as we'd like. Not progressing well or original timeline significantly delayed.

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
Improvement in water efficiency (water used per cubic metre of milk processed)		3.4% Better than FY18	3.0% Better than FY18	2.9% Better than FY18	0.1% Worse than FY18	While our priority is on reducing our absolute water use at sites, a focus on water-efficiency at all sites is an important aspect of water stewardship. This year saw a drop in our water intensity performance indicators, this was mostly due to a shift to manufacturing products which use more water within their processes. For these underlying performance indicators, prior years have been adjusted to account for acquisitions and divestments over time.		
Improvement in water efficiency (water used per tonne finished goods)		6.8% Better than FY18	6.3% Better than FY18	7.0% Better than FY18	4.7% Better than FY18			
Percentage of Manufacturing sites treating wastewater to leading industry standards	>80% of sites by 2030 (global)		57%	60%	60%	Recognising that stakeholders have different views and values when it comes to improving water quality, we believe that a leading industry approach to wastewater quality requires a truly collaborative approach. We judge our success based on a combination of internal guidelines and satisfying the expectations of key stakeholders at a catchment level. We are progressing our investments to upgrade wastewater treatment facilities and expect to see progress as these substantial projects are commissioned. Performance is adjusted to account for acquisitions and divestments (see Data Reporting Notes on page SR-98).	●	SR-45
Water withdrawal by source overall - Volume ('000 m^3)								
Freshwater (≤1,000 mg/L Total Dissolved Solids)	Surface water (water that occurs naturally on the Earth's surface)	24,918	25,726	23,664	23,619	Includes rainwater harvesting at our Indonesian site.		
	Ground water (water that is in an underground formation)	14,835	14,489	14,074	14,684			
	Seawater (sea or ocean)	0	0	0	0			
	Produced water (through the extraction, processing or use of any raw material)	0	0	0	0			
	Third party water (municipal water supplies or other public or private water utilities)	7,159	7,015	7,415	7,612			
Total withdrawal from freshwater		**46,912**	**47,230**	**45,153**	**45,915**			

FY23 progress is evaluated against stated targets: ● Progressing well or target achieved. ● Progressing but not as strongly as we'd like. ● Not progressing well or original timeline significantly delayed.

INDICATOR		TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY	PAGE
Other water (>1,000 mg/L Total Dissolved Solids)	Surface water		0	0	0	0		
	Ground water		2,127	1,996	1,992	1,270		
	Seawater		0	0	0	0		
	Produced water		11,236	11,913	12,345	12,009	Water is extracted from milk during some processing. The volume is a conservative estimate of produced water, for sites where discharge volumes exceed withdrawal.	
	Third-party water		1,330	1,536	1,448	1,538		
Total withdrawal from other water			**14,693**	**15,445**	**15,785**	**14,818**		
Grand Total			**61,605**	**62,675**	**60,939**	**60,733**		
Water discharge by destination overall - Volume ('000 m^3)								
Freshwater (≤1,000 mg/L Total Dissolved Solids)	Surface water		19,178	19,676	18,507	17,817		
	Ground water		4,200	3,767	3,686	3,313		
	Seawater		0	0	0	0		
	Third-party water (total)		1,446	1,536	1,871	1,486		
	Third-party water – for use by other parties		0	0	502	551	By agreement, or for emergency community support, we provide some water to third parties. These are small volumes and not easy to isolate. From FY22, we began reporting where data is reliable, other volumes are deemed immaterial.	
Total discharged to freshwater			**24,823**	**24,978**	**24,064**	**22,616**		
Other water (>1,000 mg/L Total Dissolved Solids)	Surface water		5,961	5,974	5,704	6,927		
	Ground water		12,250	12,896	11,879	11,467		
	Seawater		12,936	13,265	13,962	14,456		
	Third-party water (total)		3,780	3,854	3,789	4,051		
	Third-party water - for use by other parties		0	0	0	0		
Total discharged to other water			**34,928**	**35,989**	**35,333**	**36,901**		
Grand Total			**59,751**	**60,967**	**59,398**	**59,517**		

FY23 progress is evaluated against stated targets: Progressing well or target achieved. Progressing but not as strongly as we'd like. Not progressing well or original timeline significantly delayed.

INDICATOR		TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY	PAGE
Water discharge overall – Quality (COD[1] mg/L)								
Surface water			69	59	58	63		
Ground water			1,183	1,084	1,110	1,109		
Seawater			2,062	2,264	1,947	1,886		
Third-party water			1,703	1,531	1,755	1,846		
Water withdrawal by source from areas with water stress - Volume ('000 m^3)								
Freshwater (≤1,000 mg/L Total Dissolved Solids)	Surface water		0	0	0	0		
	Ground water		0	0	0	0		
	Seawater		0	0	0	0		
	Produced water		0	0	0	0		
	Third-party water		582	582	526	505		
Total withdrawal from freshwater			**582**	**582**	**526**	**505**		
Other water (>1,000 mg/L Total Dissolved Solids)	Surface water		0	0	0	0		
	Ground water		1,996	1,862	1,857	1,157		
	Seawater		0	0	0	0		
	Produced water		125	117	103	114		
	Third-party water		1,330	1,536	1,448	1,538		
Total withdrawal from other water			**3,451**	**3,514**	**3,409**	**2,809**		
Total sourced from areas with water stress			**4,033**	**4,097**	**3,935**	**3,314**		

FY23 progress is evaluated against stated targets: Progressing well or target achieved. Progressing but not as strongly as we'd like. Not progressing well or original timeline significantly delayed.

1 Chemical Oxygen Demand – an indicator of water quality measuring chemicals in water that can be oxidized.

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
Water discharge by destination to areas with water stress - Volume ('000 m^3)								
Discharged as freshwater (≤1,000 mg/L Total Dissolved Solids)		1,422	1,495	1,342	913			
Discharged as other water (>1,000 mg/L Total Dissolved Solids)		2,012	2,211	2,058	2,122			
Total discharged to areas with water stress		**3,434**	**3,706**	**3,400**	**3,035**			
Water consumption - Volume ('000 m^3)								
Total consumption from all areas		1,854	1,707	1,541	1,216			
Total consumption from areas with water stress		599	391	535	279			
Change in water storage		5	(30)	20	11			
Nature – Climate change								
Reduction in absolute Scope 1 & 2 emissions	30% reduction by 2030 from FY18 baseline (Global)	3.5% reduction from FY18	6.5% reduction from FY18	11.3% reduction from FY18	14.1% reduction from FY18	For the second year in a row, progress against our target has been much better than planned and significantly exceeded target. A combination of increased volumes of low emission products such as UHT and Lactose and a reduced proportion of high energy products from coal-reliant sites has positively contributed to this result. Additionally, several countries have experienced reductions associated with grid electricity emissions, driven by increased energy production from renewable sources. In July 23 we uplifted our Scope 1 & 2 reduction target to 50% by 2030 from FY18 baseline (Global). We are in the process of seeking validation from SBTi for this uplift. All prior years have been restated slightly (see Data Reporting Notes on page SR-98).	●	SR-29
Net change in GHG emissions from dairy farming since 14/15 (NZ) (Pre-farm gate tCO_2-e)	Neutral to 2030	554,955 reduction on 14/15 (2.6%)	753,070 reduction on 14/15 (3.6%)	1,364,690 reduction on 14/15 (6.5%)	1,274,954 reduction on 14/15 (6.1%)	Our estimated absolute GHG emissions remain well below the baseline season. Emissions intensity on-farm for 21/22 season (including LUC) is 2.1% higher than the 14/15 baseline. The significant decrease from FY21 to FY22 is based on decreased milk volume, in FY23 milk volumes partially recovered which correspondingly led to increased emissions year-on-year. The lifecycle assessment for 21/22 is the most recent available and is applied to both the 21/22 and 22/23 seasons. All prior years have been restated to reflect the latest available lifecycle assessment (see Data Reporting Notes on page SR-91).		

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INDICATOR		TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY	PAGE
Total energy used by manufacturing								
Fuel consumption	Energy (PJ)		19.5	19.3	18.8	18.6		
	Renewable energy (%)		0%	5%	4%	5%		
Steam consumption	Energy (PJ)		4.0	4.1	3.8	3.9		
	Renewable energy (%)		6%	6%	8%	6%		
Electricity consumption	Energy (PJ)		5.0	5.1	5.1	5.0		
	Renewable energy (%)		55%	56%	59%	64%		
Energy used	Energy (PJ)		**28.6**	**28.6**	**27.7**	**27.5**		
Renewable energy (%)	%		**11%**	**14%**	**15%**	**16%**		
Global consolidated emissions ('000 tCO_2-e)								
Scope 1	On-farm		241	175	37	31	All prior years have been restated to reflect the latest available on-farm lifecycle assessment, reporting elements introduced (most significant are additions to Scope 3 manufacturing and distribution), and other minor updates (see Data Reporting Notes on page SR-90).	
	Manufacturing		1,469	1,372	1,332	1,316		
	Distribution and other		0	0	0	0		
Total Scope 1			**1,710**	**1,547**	**1,369**	**1,347**	Emissions include those associated with business units for the period they fall under Fonterra's ownership and management control.	
Scope 2	On-farm		53	36	5	3		
	Manufacturing		580	617	560	496		
	Distribution and other		0	0	0	0		
Total Scope 2			**634**	**652**	**565**	**500**		
Scope 3	On-farm		23,111	22,928	22,336	22,138		
	Manufacturing		1,639	1,659	1,611	1,539		
	Distribution		283	297	281	292		
	Other		8	3	3	7		
Total Scope 3			**25,041**	**24,887**	**24,230**	**23,976**		
Total Scope 1, 2 & 3	On-farm		23,405	23,139	23,378	22,172		
	Manufacturing		3,689	3,647	3,503	3,352		
	Distribution		283	297	281	292		
	Other		8	3	3	7		
Total Scope 1, 2 & 3			27,385	27,086	26,164	25,823		

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INDICATOR		TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY	PAGE
GHG Inventory ('000 tCO_2-e)								
Scope 1	Direct emissions from owned/controlled operations		1,710	1,547	1,369	1,347	For full details of our scope coverage, please refer to the Data Reporting Notes on page SR-94. All prior years have been re-stated to reflect the latest available on-farm lifecycle assessment, reporting elements introduced (most significant are additions to Scope 3 manufacturing and distribution) and other minor updates (see Data Reporting Notes on page SR-90). Emissions include those associated with business units for the period they fall under Fonterra's ownership and management control.	
Scope 2	Indirect emissions from the use of purchased electricity, steam, heating, and cooling		634	652	565	500		
Total Scope 1 & 2 (Absolute)			**2,343**	**2,200**	**1,934**	**1,847**		
Scope 3, Category 1	Purchased goods and services		24,605	24,430	23,797	23,534		
Scope 3, Category 3	Fuel- and energy-related activities (not included in scope 1 or scope 2)		145	157	150	143		
Scope 3, Category 4	Upstream transportation and distribution		283	297	281	292		
Scope 3, Category 6	Business travel		8	3	3	7		
Total Scope 3			**25,041**	**24,887**	**24,230**	**23,976**		
Total Scope 1, 2 & 3			**27,385**	**27,086**	**26,164**	**25,823**		
Global consolidated emissions intensity								
Scope 1 & 2	Emissions intensity by finished goods ('000 tCO_2-e/t)		0.59	0.55	0.49	0.49	All prior years have been restated to reflect the latest available on-farm lifecycle assessment, reporting elements introduced (most significant are additions to Scope 3 manufacturing and distribution), and other minor updates (see Data Reporting Notes on page SR- 90). Emissions include those associated with business units for the period they fall under Fonterra's ownership and management control.	
	Emissions intensity by revenue (tCO_2-e /million NZ$)		112	104	83	71		
Scope 1, 2 & 3	Emissions intensity by finished goods ('000 tCO_2-e/t)		6.9	6.8	6.7	6.8		
	Emissions intensity by revenue (tCO_2-e /million NZ$)		1,306	1,282	1,117	991		

FY23 progress is evaluated against stated targets: Progressing well or target achieved. Progressing but not as strongly as we'd like. Not progressing well or original timeline significantly delayed.

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
Nature– Packaging								
Recycle-ready packaging		87%	87%	89%	91%	Using globally accepted definitions on a total tonnage of packaging basis, 91% of our packaging is now recycle-ready[1], up from 89% last year. Improvements are due to a combination of factors including divestment of Chile business and demonstrating alignment of some packaging formats with collection pathways, such as milk powder bulk bags, aluminum closures and steel aerosol cans for whipped cream. We have also now commercialized some of our packaging material change projects, such as for 20kg cream cheese, which is now packed in material which is ready for recycling in the [4] LDPE stream. This leaves 9% that is currently unsuitable for recycling (e.g. foil based sachets). This is where we are focusing our efforts and we forecast we will achieve greater than 95% recycle-ready packaging by end of 2025.		SR-52
Reusable, recyclable or compostable packaging	100% by 2025	50%	58%	56%	63%	Using globally accepted definitions on a total tonnage of packaging basis, 63% of our packaging is now readily recyclable, up from 56% last year. This has primarily been driven by our divestment of Chile business, which has skewed our packaging mix more heavily towards industrial ingredients which have more recyclable packaging formats. We are continuing to collaborate and seek to influence others to improve the provision of recycling infrastructure. Making progress on this aspiration relies not only on progress under our direct control (see recycle-ready packaging above) but also on the actions of others (e.g. provision of infrastructure within countries). Like many other food manufacturers, we will continue to make material changes, collaborate and seek to influence others around the world. Currently, achieving 100% by 2025 seems unlikely to be fully achieved but, we remain committed to the intent		SR-52
Nature – Solid waste								
Solid waste sent to landfill (tonnes)	Zero waste	16,577 A 7% reduction since FY19	12,833 A 28% reduction since FY19	11,994 A 33% reduction since FY19	9,620 A 46% reduction since FY19	We will continue to seek year-on-year improvements with a focus on making products to specification to avoid food waste, working with vendors to prevent non-recyclable materials coming onto our sites and partnering with others to increase the range of materials that can be economically recovered. Significant progress has been made by our Chilean operations while under our ownership and management control. Accounting for acquisitions and divestments, our waste to landfill has reduced by 29% since FY19.		SR-55

FY22 progress is evaluated against stated targets: Progressing well or target achieved. Progressing but not as strongly as we'd like. Not progressing well or original timeline significantly delayed.

1 This applies to all primary and secondary packaging for Fonterra-owned brands. Tertiary packaging is also included in the assessment but, due to data availability issues, we have continued to use the same baseline data as reported in FY20 (this represents less than 10% of total packaging tonnage).

INDICATOR	TARGET	PERFORMANCE FY20	FY21	FY22	FY23	COMMENTARY		PAGE
Nature – Animal wellbeing								
Farms with an Animal Wellbeing Plan established with their vet (New Zealand)	100% by end 2024	50%	53%	76%	85%	Our original target was to achieve 100% of New Zealand supplying farms to have an Animal Wellbeing Plan by the end of FY25. We have brought the target date forward to the end of FY24. A large increase was achieved again this year, as The Co-operative Difference framework (see page SR-58) included having an Animal Wellbeing Plan as one of the criteria to receive a differentiated payment.	●	SR-40
Somatic cell count average (mean) ('000 cells/ml)		**2019/20**	**2020/21**	**2021/22**	**2022/23**			
New Zealand		171	170	173	172	Somatic cell count (SCC) is not only an indicator of milk quality, a low SCC also gives an indication of good animal husbandry. The FY23 SCC has been adjusted for divestments. Calculated on a like-for-like basis the FY22 global weighted average would be 174 ('000 cells/ml). Therefore, the overall global result is stable this year and remains well below the European Union import/export standard of 400,000 cells/ml, which is a widely quoted standard. We will continue to work towards lower counts.		
Australia		172	173	178	182			
China		160	167	327	–			
Chile		317	309	280	–			
Brazil		395	342	335	469			
Sri Lanka		662	629	625	574			
Global weighted average (by volume)		**175**	**175**	**177**	**174**			
Relationships – Working with vendors								
Palm products		**CY 2019**	**CY 2020**	**CY 2021**	**CY2022**			
Sourcing 'segregated supply' palm oil from credible organisations.	100% Standard compliance	55%	71%	74%	67%	All palm products we purchase are RSPO certified; this year 67% of purchases were through segregated supply, 25% by mass balance and the remaining 7% via RSPO credits. By volume, 97% of all direct palm oil being purchased by our New Zealand business and 100% of all direct palm oil being purchased by our Australian business is certified as 'segregated supply' from sustainable sources. It is purchasing for our operations in Saudi Arabia and Indonesia where sourcing remains most challenging. We are committed to achieving certified segregated supply for all palm-related purchases within the scope of our Forest and Agriculture Products Standard.	●	SR-70

FY23 progress is evaluated against stated targets: ● Progressing well or target achieved. ● Progressing but not as strongly as we'd like. ● Not progressing well or original timeline significantly delayed.

Employee Data[1]

Full-time equivalent employees by region

Global Employee Numbers	FTE (Permanent & Fixed-term) FY21(#)	FY22(#)	FY23(#)
New Zealand	11,881	11,992	12,149
Australia	1,427	1,437	1,534
Greater China	753	773	672
Brazil	1,306	1,274	1,328
Chile	1,570	1,707	–
Rest of Asia	1,914	1,902	1,809
Rest of World	503	523	501
Total employees	**19,354**	**19,608**	**17,993**

Employment type by gender

Employment type by gender		Percentage per Employment Type FY21 (%)	FY22 (%)	FY23 (%)
Male	Full-time	99.4%	99.3%	99.1%
	Part-time	0.6%	0.7%	0.9%
Female	Full-time	95.9%	96.1%	95.9%
	Part-time	4.1%	3.9%	4.1%
Gender diverse	Full-time	100.0%	100.0%	100.0%
	Part-time	0.0%	0.0%	0.0%
Undeclared or unknown	Full-time	100.0%	100.0%	100.0%
	Part-time	0.0%	0.0%	0.0%

Employment contract by region

Contract Type by Region		Percentage per Employment Type FY21 (%)	FY22 (%)	FY23 (%)
New Zealand	Permanent	97.1%	97.7%	97.6%
	Fixed-term	2.9%	2.3%	2.4%
Australia	Permanent	94.8%	96.0%	96.6%
	Fixed-term	5.2%	4.0%	3.4%
Greater China	Permanent	99.1%	99.2%	98.5%
	Fixed-term	0.9%	0.8%	1.5%
Brazil	Permanent	100.0%	100.0%	100.0%
	Fixed-term	0.0%	0.0%	0.0%
Chile	Permanent	100.0%	100.0%	0.0%
	Fixed-term	0.0%	0.0%	0.0%
Rest of Asia	Permanent	89.0%	89.3%	93.0%
	Fixed-term	11.0%	10.7%	7.0%
Rest of World	Permanent	89.5%	89.1%	92.6%
	Fixed-term	10.5%	10.9%	7.4%

Full-time equivalent employees by employment contract by gender

Contract Type by Gender		Percentage per Contract Type and Gender FY21 (%)	FY22 (%)	FY23 (%)
Male	Permanent	96.8%	97.3%	97.3%
	Fixed-term	3.2%	2.7%	2.7%
Female	Permanent	95.6%	96.1%	96.8%
	Fixed-term	4.4%	3.9%	3.2%
Gender diverse	Permanent	100.0%	100.0%	100.0%
	Fixed-term	0.0%	0.0%	0.0%
Undeclared or unknown	Permanent	100.0%	100.0%	100.0%
	Fixed-term	0.0%	0.0%	0.0%

1 Some percentages shown in tables may not sum to 100% due to rounding.

Employee Data

Diversity of governance bodies and employees by age

		Percentage by Age Range		
	Age	FY21 (%)	FY22 (%)	FY23 (%)
All employees	<30	13%	13%	13%
	30-50	56%	55%	54%
	>50	28%	28%	30%
	Unknown	3%	3%	3%
Fonterra Management Team (FMT)	<30	0%	0%	0%
	30-50	75%	38%	40%
	>50	25%	63%	60%
	Unknown	0%	0%	0%
Fonterra Board	<30	0%	0%	0%
	30-50	9%	0%	0%
	>50	91%	100%	100%
	Unknown	0%	0%	0%

Diversity of employee categories by age

		Percentage by Age Range		
	Age	FY21 (%)	FY22 (%)	FY23 (%)
Senior Leaders	<30	0%	0%	0%
	30-50	57%	60%	60%
	>50	38%	36%	36%
	Unknown	5%	4%	4%
Managers	<30	6%	5%	4%
	30-50	66%	68%	67%
	>50	25%	23%	26%
	Unknown	3%	3%	3%
Supervisory & Professional	<30	18%	18%	18%
	30-50	58%	61%	61%
	>50	21%	19%	19%
	Unknown	3%	3%	3%
Operators, Techs, Drivers, Farm Workers	<30	14%	14%	15%
	30-50	47%	49%	47%
	>50	36%	34%	36%
	Unknown	3%	3%	3%

Diversity of governance bodies and employees by gender

		Percentage by Gender		
	Gender	FY21 (%)	FY22 (%)	FY23 (%)
All employees	Male	72%	71%	68%
	Female	28%	29%	32%
	Gender diverse	0%	0%	0%
	Undeclared	0%	0%	0%
Fonterra Management Team (FMT)	Male	75%	75%	50%
	Female	25%	25%	50%
Fonterra Board	Male	64%	64%	64%
	Female	36%	36%	36%

Diversity of governance bodies and employees by gender

		Percentage by Gender		
	Gender	FY21 (%)	FY22 (%)	FY23 (%)
Senior Leaders	Male	68%	64%	64%
	Female	32%	35%	35%
Managers	Male	62%	60%	58%
	Female	38%	40%	42%
Supervisory & Professional	Male	50%	49%	47%
	Female	50%	51%	53%
Operators, Techs, Drivers, Farm Workers	Male	83%	82%	81%
	Female	17%	18%	19%

Employee Data

New hires and leavers by age and gender

	New hires by Age and Gender						Leavers by Age and Gender					
	FY21 (# / %)		FY22 (# / %)		FY23 (# / %)		FY21 (# / %)		FY22 (# / %)		FY23 (# / %)	
Aged <30	501	31.6%	626	31.6%	486	26.3%	314	17.3%	417	18.8%	321	16.2%
Aged 30-50	893	56.3%	1,052	53.2%	934	50.6%	917	50.5%	1,119	50.5%	690	34.8%
Age 50 +	169	10.7%	234	11.8%	219	11.9%	495	27.2%	606	27.4%	181	9.1%
Age unknown	22	1.4%	66	3.3%	207	11.2%	91	5.0%	72	3.3%	792	39.9%
Male	1,005	63.4%	1,222	61.8%	1,057	57.3%	1,194	65.7%	1,440	65.0%	1,241	62.6%
Female	579	36.5%	756	38.2%	789	42.7%	623	34.3%	771	34.8%	743	37.4%
Gender undeclared or unknown	1	0.1%	0	0.0%	0	0.0%	0	0.0%	3	0.1%	0	0.0%
Total new employees	**1,585**	**9.0%**	**1,978**	**10.7%**	**1,846**	**10.9%**	**1,817**	**10.3%**	**2,214**	**11.9%**	**1,984**	**11.7%**

New hires and leavers by regions

	New hires by Region						Leavers by Region					
	FY21 (# / %)		FY22 (# / %)		FY23 (# / %)		FY21 (# / %)		FY22 (# / %)		FY23 (# / %)	
New Zealand	866	54.6%	1,133	57.3%	1,231	66.7%	1,050	57.8%	1,431	64.6%	1,340	67.5%
Australia	251	15.8%	161	8.1%	204	11.1%	120	6.6%	178	8.0%	150	7.6%
Greater China	180	11.4%	134	6.8%	108	5.9%	234	12.9%	114	5.1%	104	5.2%
Brazil[1]	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Chile	94	5.9%	310	15.7%	52	2.8%	119	6.5%	242	10.9%	103	5.2%
Rest of Asia	153	9.7%	180	9.1%	200	10.8%	243	13.4%	191	8.6%	215	10.8%
Rest of World	41	2.6%	60	3.0%	51	2.8%	51	2.8%	58	2.6%	72	3.6%
Overall	**1,585**	**9.0%**	**1,978**	**10.7%**	**1,846**	**10.9%**	**1,817**	**10.3%**	**2,214**	**11.9%**	**1,984**	**11.7%**

1 Our JV in Brazil is excluded from new hires and leavers analysis.

Employee Data

Turnover by reason

	Number and Percentage Turn over by Reason					
Reason	FY21 (# / %)		FY22 (# / %)		FY23 (# / %)	
Voluntary	1,168	6.6%	1,610	8.7%	1,492	8.8%
Involuntary	389	2.2%	346	1.9%	244	1.4%
Other (Contract end, Legal Retirement, or deceased)	260	1.5%	258	1.4%	248	1.5%
Total Turnover Rate	**1,817**	**10.3%**	**2,214**	**11.9%**	**1,984**	**11.7%**

Hiring from local communities

	Percentage of Senior Management		
Global employees	FY21	FY22	FY23
New Zealand	100%	100%	92%
Australia	92%	92%	91%
Brazil	100%	100%	100%
Chile	100%	100%	-
Greater China	89%	89%	88%

Employee Data

Gender pay gap by country and by employee category – basic salary

Region	Employee Category	Mean			Median		
		FY21	FY22	FY23	FY21	FY22	FY23
New Zealand	Senior Leaders	0.85	0.81	0.89	0.93	0.90	0.99
	Managers	0.96	0.96	0.97	0.96	0.94	0.96
	Supervisory & Professional	0.90	0.92	0.91	0.87	0.88	0.89
	Operators, Techs, Drivers, Farm Workers	0.84	0.85	0.86	0.85	0.85	0.85
	Overall	**0.97**	**0.96**	**0.98**	**0.96**	**0.95**	**0.96**
Australia	Senior Leaders	0.98	0.97	1.06	0.78	0.86	0.93
	Managers	0.98	1.02	1.00	0.96	0.99	0.94
	Supervisory & Professional	0.85	0.91	0.88	0.86	0.84	0.87
	Operators, Techs, Drivers, Farm Workers	0.80	0.81	0.81	0.78	0.78	0.70
	Overall	**0.99**	**1.03**	**0.99**	**0.97**	**1.02**	**0.95**
Greater China	Senior Leaders	1.03	1.20	1.19	1.17	1.43	1.45
	Managers	1.04	1.05	1.01	1.11	1.06	1.06
	Supervisory & Professional	1.03	1.02	1.02	1.03	0.99	1.00
	Operators, Techs, Drivers, Farm Workers	1.05	1.13	–	1.09	1.09	–
	Overall	**0.89**	**0.97**	**0.92**	**0.97**	**1.09**	**1.04**
Brazil	Senior Leaders[1]	–	–	–	–	–	–
	Managers	1.03	1.01	1.00	1.08	0.94	0.94
	Supervisory & Professional	1.04	1.06	1.09	0.98	0.99	1.06
	Operators, Techs, Drivers, Farm Workers	0.89	0.85	0.83	0.95	0.85	0.67
	Overall	**1.11**	**0.96**	**0.90**	**0.96**	**0.84**	**0.80**
Rest of Asia	**Overall**	**1.84**	**1.97**	**1.81**	**4.10**	**4.40**	**3.94**
Rest of the World	**Overall**	**1.38**	**1.30**	**1.41**	**1.89**	**1.86**	**1.88**
Global	Senior Leaders	0.90	0.88	0.97	0.94	0.91	0.97
	Managers	0.97	0.97	0.98	0.96	0.95	0.97
	Supervisory & Professional	1.05	1.07	1.12	1.10	1.12	1.17
	Operators, Techs, Drivers, Farm Workers	0.89	0.87	0.81	0.83	0.83	0.82
	Overall	**1.07**	**1.07**	**1.02**	**0.93**	**0.93**	**0.93**

1 Where a breakdown of information represents a small number of employees, we omit this detail to protect the privacy of individuals.

Data reporting notes

This section provides supporting guidance on the scope, definitions and approach used for the people and environmental data presented in this report.

In general, reporting covers the activities of Fonterra Co-operative Group Limited and joint ventures under Fonterra's management control (see FS–60 for further details of subsidiaries). The following sections identify the specific exceptions where data availability prevents this.

People Data Reporting

Scope

Our employee data is drawn from our global SAP-based employee data systems, primarily our MY Fonterra system, and from remuneration systems where required.

Numbers are generally reported for all fixed-term and permanent employees on a full-time equivalent (FTE) basis.

Gender pay gap is on headcount basis with pay compared on an FTE basis.

Turnover and new hires cover permanent employees on a headcount basis but exclude employees in our Brazilian joint venture.

There are no significant seasonal variations in the employee data reported. Casual staff contracted by Fonterra are excluded from these figures as this represents only a very small proportion of the regular workforce. Employees on leave of absence are also excluded.

An assessment has been completed of the scope of potential workers who are not employed by Fonterra, but whose work may be controlled by the organisation across categories such as contractors and third-party consultants. This has been excluded from these figures due to the small numbers and limited data available.

All analysis, other than turnover and new hires, is at 31st July 2023.

Definitions

TERM	DEFINITION
Significant locations of operation	Countries where more than 5% of our employees are located. Some items are reported for significant locations of operation only.
Employee categories	Our organisation has a banded approach to remuneration based on business roles.
–Senior Leaders	Bands 14 and above
–Managers	Bands 10-13
–Supervisory & Professional	Bands 3[1]-9
–Operators, Techs, Drivers, Farm Workers	Waged or equivalent workforce
Locally hired employees	Citizens or permanent residents of the given country.

1 Threshold varies according to country.

Environmental Data Reporting

Hiring from local communities

To support the recruitment of senior management roles, we run talent forums across the different disciplines.

One of the aspects assessed when appointing senior management roles into countries where we have significant operations, is the composition of employees from local communities versus employees on international assignments. We recognise the value of a high representation from local communities but balance that with the opportunity for talent development from other countries. We review the composition and effectiveness of senior management teams on a regular basis.

'Senior Management' is defined as the most senior employee working in a country plus all direct reports to the senior manager but excluding employees working in a different country and non-management staff (e.g. Personal Assistants, Technical Assistants, other admin staff). The CEO and members of the Fonterra Management Team, who have regional responsibilities are excluded. For New Zealand, this means the multiple New Zealand-based managers reporting to the CEO and their direct reports are assessed.

New employee hires and employee turnover

The analysis of new employee hires and turnover is used to inform decision-making within our People and Culture team. For example, for diversity and inclusion, statistics are used on a 12-month rolling basis to assess implications to the make-up of the organisation and the achievement of specific targets.

During FY23 we completed the sale of the Chilean Soprole business and Hangu China farm. Due to the large number of employees they have been excluded from the turnover analysis.

Reporting Period

The primary reporting period is for the Financial Year 2023 (FY23), 1 August 2022 – 31 July 2023.

To align with Australian regulatory reporting (NGERS), Australian data is reported for period 1 July 2022 – 30 June 2023.

Common principles

Baseline years

For our Scope 1 and Scope 2 emissions reduction target that we uplifted this year from a 30% to a 50% reduction by 2030, our baseline year is FY18 (1 August 2017 – 31 July 2018).

For our water reduction target of 15% by 2030, our baseline year is FY18 (1 August 2017 – 31 July 2018), to align with our emissions reduction target.

Data collection & aggregation

Wherever possible, data is sourced from a verifiable source. For energy, this is usually records from supplier invoicing. For water, this is from supplier invoicing where relevant, or from metering used to satisfy environmental resource permits. Data is aggregated and analysed via Excel.

Missing or delayed data

Where measured data is normally available for a given item in a given region, but it is not available for a given time period (e.g. one particular month), it is estimated based on the specific circumstances.

Where there is uncertainty about fuel sources and emissions factors, a conservative approach has been taken. For example, where a site purchases steam from a third party that generally uses biomass but relies on LPG as the back-up energy source, we have assumed that 20% of the input energy comes from the LPG.

If the data subsequently becomes available, the estimated value will be replaced with the actual and totals recalculated. If this difference is significant, prior year data will be restated in the next public reporting period.

Finished goods

Where an output from any factory is then subject to secondary processing, we only count the finished goods once for intensity purposes.

Recalculation Policy

Our policy is to recalculate base year and reported data from subsequent years, when any of the following situations arise:

- There are significant changes to our reporting boundaries, including as a result of acquisitions or divestments or when new or more reliable sources of information are identified.
- There are significant changes to a calculation methodology, including life cycle assessments or emission factors.
- We identify a significant error, or a number of errors that are collectively significant.

In these situations, the threshold for significance is when the estimated change in reported emissions for the given year represents more than 5%. When a restatement is applicable, we may also take the opportunity to update other less significant data for completeness and accuracy.

Any such recalculation will be indicated in reporting by appropriate footnotes and a description in the "Restatement of prior years" section.


Barnes Farm, Southland

Methodologies

Greenhouse gas (GHG) emissions

Scope

For our GHG reporting we have chosen to report on Scope 1 and 2 where we have operational control. For Scope 3 emissions, we have reported key categories. Excluded categories are explained on page 94). Farms supplying milk to us account for the largest portion of our emissions and fall within our sphere of influence, so we believe it is important to report these under Scope 3 emissions.

Fonterra directly operates a small number of farms in New Zealand and until April 2023 operated one farm in China, which has now been sold. For these farms, we have adopted the same approach as for other farms but allocated the emissions to Scope 1 and 2 where required.

Our GHG reporting applies the principles of the GHG Protocol. We also report our GHG emissions via the Carbon Disclosure Project (CDP), with our first submission completed in 2015.

Under Scope 1, refrigerant losses are included for New Zealand and Australia; carbon dioxide for packaging is included for New Zealand. The data for Scope 1 and 2 emissions associated with small offices around the world is immaterial and excluded.

All electricity emissions are reported using a location-based approach. Due to difficulty obtaining accurate residual emission factors from the energy suppliers we have opted not to publicly report a market-based approach. We have one manufacturing site in Europe which purchases a portion of their energy as certified zero-emission electricity, and estimate a reduction of less than 1% using a market-based approach.

Energy

Our use of energy dominates our Scope 1 and Scope 2 reporting. These figures include energy used by our manufacturing sites, main research centre, large corporate sites and our own milk collection transport fleet in New Zealand and Australia. It excludes energy used by some smaller offices and support facilities which are considered immaterial.

Energy used on the farms where we have operational control is excluded from our energy reporting because it is immaterial to our overall energy usage. The associated emissions from this energy use are already captured in our on-farm GHG emissions reporting based on the full lifecycle analysis.

Energy is sourced from electricity, purchased steam and purchased fuels. Fuels used include coal, natural gas, diesel, liquid petroleum gas (LPG), furnace oil, petrol and biofuels. Coal and natural gas are primarily used for process heating while liquid fossil fuels are primarily used for vehicles.

Based on the proportion of renewables used to generate the electricity and steam we purchase, and including the biofuels we directly use, we estimate that 16% of our total energy used in manufacturing comes from renewable sources.

Our ability to generate electricity through solar is increasing year-on-year around the world. Our Farm Source Retail Stores generated excess electricity from their solar PV installations. The total sold during FY23 was 516 GJ.

We are unable to report energy used for heating separate to that used for cooling but heating dominates our energy use.

On farm

For on-farm information, the estimated emissions are reported using a lifecycle analysis (LCA) methodology, which considers the full on-farm carbon lifecycle, from 'cradle-to-farm gate' and provides an estimated kgCO_2-e/kg fat-and-protein-corrected milk (FPCM) factor for the given country. For each country where we collect milk, the total quantity of milk collected during the financial year is multiplied by the most recently available factor.

The extent of analysis required to complete an LCA means these cannot be completed for the current season within the reporting timetable. We complete an analysis for New Zealand milk each year because it dominates our on-farm emissions. For other countries we do this less frequently.

For this report, the most recently available LCA results are as follows: 2021/22 season for New Zealand; 2017/18 for Australia and Chile; and 2016/17 for our China farms.

For New Zealand LCA, we commissioned AgResearch to complete this analysis based on regional data from DairyNZ/LIC statistics, a DairyNZ DairyBase survey of 413 farms and Fonterra milk production data. Fonterra farm data was used to account for peatland GHG emissions as sensitivity analysis found the NZ-average data increased the dLUC allocation by an additional 11%.

For Australia LCA, this has been calculated based on data drawn from the 17/18 Dairy Farm Monitor Project Annual reports for Tasmania and Victoria. The data are reported for Tasmania and for all three Victorian dairy regions (Northern Victoria, South-west Victoria and Gippsland) which covers Fonterra's Australian milk pool.

For our China farms, we commissioned AgResearch to complete this analysis based on detailed data for all seven farms from our farm management systems. Only one of these farms remained under our operational control for a proportion of FY23 and we continue to apply the average footprint from the analysis.

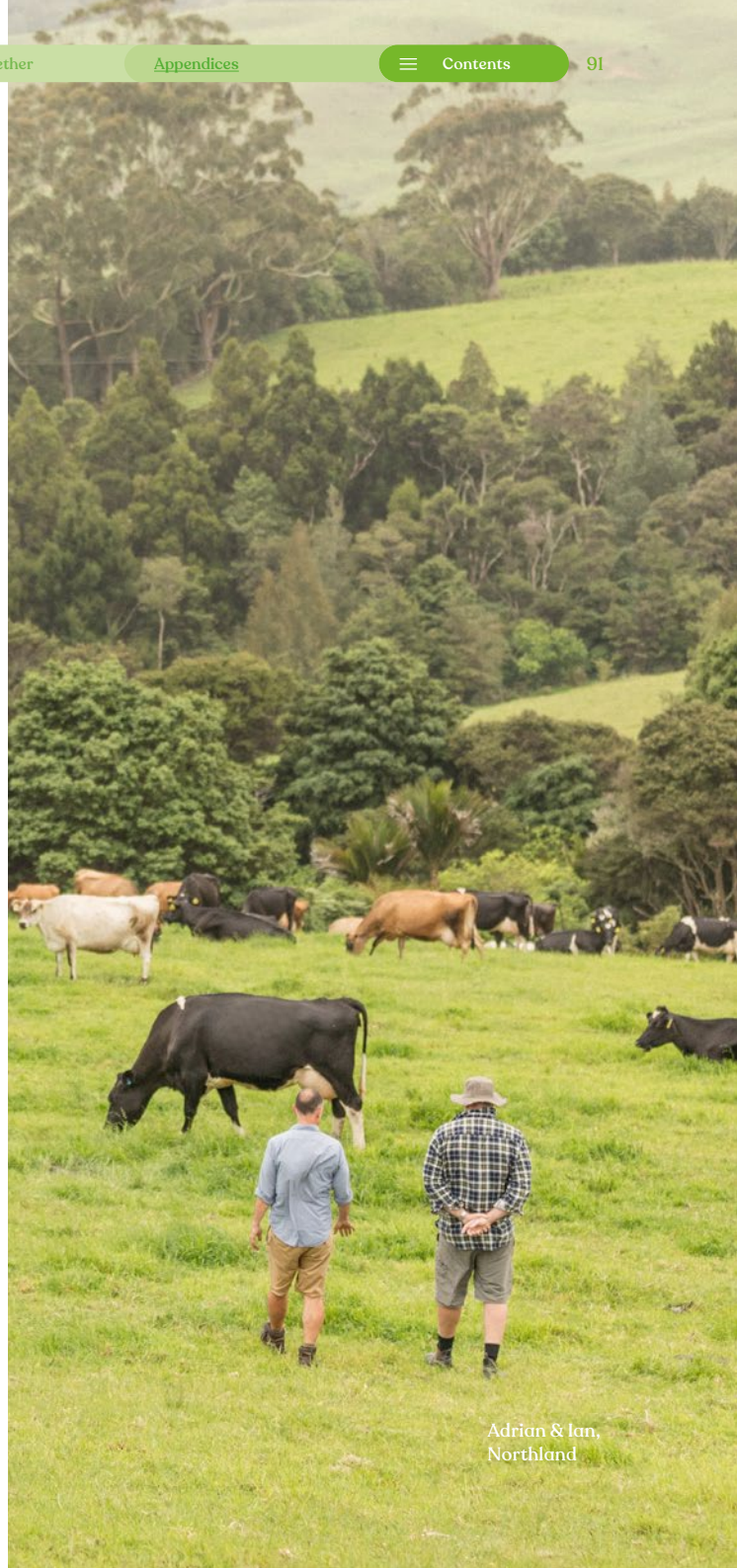
For Chile LCA, we commissioned AgResearch to complete this analysis based on data from a sample of farms from the northern region supplying Soprole and the southern region supplying Prolesur.

For the smaller milk volumes purchased in Brazil and Venezuela we have used the average of the two lifecycle factors determined for Chile.

For the very small volumes sourced in Sri Lanka, the emission factor has been taken as the average for South Asia in 2015 from the UN FAO/GDP GHG emissions fact sheet.

The main methodology used is common across all LCA and conforms to IDF (2015) and LEAP (2015) guidelines. It considers Methane (CH_4), Nitrous oxide (N_2O) and Carbon dioxide (CO_2) arising from feed sources, animals, fertilisers, energy and land use change. For supplying farms, emissions are split between the milk and meat co-products, with only the milk component being counted. For the few farms that we manage, full emissions are allocated here. The LCA methodology includes emissions related to all on-farm activities and emissions related to supplementary feed, including emissions related to overseas production for PKE.

We have adopted IPCC AR6, with GWP factors of CO_2 = 1; N_2O = 273 and fossil CH_4 = 29.8 and biogenic CH_4 = 27. This means that our reported figures for New Zealand may be higher than figures reported in other publications that consider a New Zealand inventory only which still uses IPCC AR4 or AR5. For the older LCA results which had used an earlier version of IPCC, we have recalculated the overall footprint using the component gases so that all farm-related LCAs make use of IPCC AR6.



Adrian & Ian, Northland

The sources of the default factors were as follows:

CATEGORY	SOURCE	COMMENTS
Energy contents	International Energy Agency (IEA) "Energy Statistics Manual"	Electricity use has been converted to energy terms at 0.0036 GJ per kWh while fuel use has been converted on a gross calorific, or higher heating value, basis[1].
Electricity emission factors	Carbon Footprint Ltd, collated data from global sources	For FY23 data, these factors are applied as tabulated by country for the 2021 or 2022 calendar year, as this was the most recent complete set available. These factors are used for less than 5% of the electricity used and relate to less than 1% of manufacturing emissions. 2023_07_international_factors_release_10.xlsx
Electricity emission factors	IEA "Emission Factors (2019 edition)"	For prior years or where no other reliable data is available these factors have be applied as default values. They are as tabulated by country for the 2017 calendar year. These factors are used for less than 5% of the electricity used and relate to less than 1% of manufacturing emissions in a given year.
Fuels emission factors	UK Government GHG Conversion Factors for Company Reporting	These factors have been used for freight-related emissions calculations as a proxy in cases where more specific factors could not be identified. These factors are used for less than 5% of off-farm Scope 3 related emissions.
Energy/Fuels emission factors	Greenhouse Gas (GHG) tools library	This GHG library of information is utilised for default emission factors where no other reliable data is available. Emission_Factors_from_Cross_Sector_Tools_March_2017.xlsx

The sources used for the percentage of renewable energy in grid electricity were as follows:

COUNTRY	SOURCE
New Zealand	Ministry of Business, Innovation & Employment, Quarterly electricity generation and consumption.
Australia	Australian Energy Statistics 2022, Table O9: Australian electricity generation, by fuel type, for year ended 30 June 2023.
Other	International Renewable Energy Agency "Renewable Energy Statistics 2023"
Other	World Bank Data: Renewawble electricity output (% of total electricity output) for years prior to FY22.

1 Many countries report energy use in net calorific value (lower heating value) terms where the latent heat available in the water formed during combustion is excluded from the available energy. Typically, the gross values are about 5% higher than net values for solid and liquid fuels and up to 10% higher for gaseous fuels.

Manufacturing

For countries where energy contents and emission factors are well understood and supported by local regulations and/or reporting guidelines, the local factors have been applied. In other countries, if officially sanctioned factors are available, we have used them, otherwise internationally accepted default factors have been applied.

For thermal energy, the convention in New Zealand and Australia is to report energy totals in gross terms (higher heating value). Therefore, for consistency, we have adopted this approach for reporting across all countries.

The emission factors used for fuels and electricity apply a mix of IPCC Assessment Report AR4 and AR5 global warming potentials (GWPs) depending on the approach taken by reporting authorities in the respective countries. For manufacturing emissions the difference that occurs from using AR4 versus AR5 factors is immaterial.

Hydrofluorocarbons (HFCs) have been considered with AR5 global warming potential factors. Perfluorinated compounds (PFCs) and sulphur hexafluoride are not used or generated.

Susan & Ben,
Auckland

Scope 3 Emissions

Refer to Our Performance on page SR-80 for the data we are reporting in Scope 3 broken down by categories.

This year, we undertook a re-screening exercise for our Scope 3 emissions as part of our preparation to submit our emission reduction target to the Science Based Target initiative. No significant changes were identified. We have obtained additional data of sufficient accuracy to improve the completeness of our reporting. We now estimate that our reported Scope 3 emissions represent more than 95% of our total Scope 3 emissions. The remaining 5% of emissions are not considered materially relevant to the reported inventory or the information necessary for decision-making purposes.

NAME	DETAILS
Category 1 – Purchased goods and services	*Inclusions:* This includes emissions related to purchasing raw milk from all supplying farms in New Zealand, Australia, Latin America and Sri Lanka. Farms supplying milk to us account for the largest portion of our emissions. Estimated emissions are calculated based on the quantity of milk purchased in each country and an emission factor for the given country, determined by assessments of the full carbon lifecycle from 'cradle-to-farm gate'. For all regions except Latin America, emissions are also included for purchased dairy products (for resale or as ingredients), non-dairy ingredients, packaging and sub-contracted manufacture. Emissions from purchased dairy products are calculated based on tonnes purchased by product type and applying an emissions factor for the product type as if that purchased product was source and manufactured in New Zealand. This uses the Fonterra Ingredients Carbon Footprint tool as audited by Toitū Envirocare under an ISO14067 standard to meet their carbonreduce certification. Emissions from purchased non-dairy ingredients are estimated based on expenditure grouped to align with appropriate emission factors from the US EPA Supply Chain Factors Dataset v1.2 . Emissions from purchased packaging are estimated based on purchased volumes of individual packaging elements from Fonterra records and emission factors from the Packaging Impact Quick Evaluation Tool. The tool uses a methodology consistent with ISO14067 and the emissions factors include end-of-life disposal emissions with any recycling credited as a 50:50 allocation. The full analysis for packaging was completed for the 12 months ending 30 Jun 2022. It is a complex process that cannot be repeated annually. Emissions are extrapolated for each financial year based on the tonnes of finished product. Emissions from subcontracted manufacture relate to the third party processing of milk and semi-finished product for Fonterra where the on-farm emissions and emissions from any pre-processing have already been captured elsewhere in our reporting. The emissions are estimated based on expenditure and an emission factor from the US EPA Supply Chain Factors Dataset v1.2. *Exclusions:* For our operations in Latin America, all emissions associated with the purchasing of goods and services which are not related to raw milk are excluded. For all other operations, emissions associated with the purchasing of goods and services which are not related to raw milk, dairy products, non-dairy ingredients, packaging or sub-contracted manufacturing and distribution are excluded (e.g. items retailed through Farm Source stores, consulting services and cleaning chemicals). This year, screening using an expenditure-based approach and US EEIO emissions factors, estimated that the emissions excluded from this category were about 1% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 2 – Capital goods	This year, screening was undertaken based on a breakdown of capital goods spend and aligned emissions factors from US EEIO. The related emissions are estimated at less than 0.5% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.

NAME	DETAILS
Category 3 – Fuel and energy related activities not included in Scope 1 or Scope 2	*Inclusions:* For fuel and energy used in New Zealand and Australia, the reported emissions in this category include indirect emissions attributable to the extraction, production and transportation/distribution to the location of fuel use. This covers fuel burned to generate electricity, as well as gas and electricity distribution losses. The emissions are calculated using purchased quantities from supplier invoices and reports, and emissions factors from the NZ Ministry of the Environment guidance 2023, the Australian Government's NGERs factors, the NZ Emission Trading Scheme (for opencast mining) and the UK Government GHG Conversion Factors for Company Reporting workbook. For coal, which is only used in New Zealand, an allowance has been also included for energy use in the actual mining operation at 2% of the coal energy. Wood biofuel, which is only used in New Zealand, is almost all purchased in the form of pellets created from forestry by-product. Emissions from transportation to site are calculated based on tonnes purchased, distance moved and emissions factor for mode of transport. Fuel-related emissions to produce the pellets have been calculated using the WTT factor from the UK Government GHG Conversion Factors for Company Reporting workbook. This is likely to be slightly over-stated and will be updated when a more accurate local factor is available. *Exclusions:* For countries other than New Zealand and Australia, fuel and energy related activities not included in Scope 1 or Scope 2 are excluded from our reporting. This year, screening was undertaken based on the total energy used by these countries and the average fuel and energy related activities for New Zealand and Australia. The excluded emissions are estimated at less than 0.04% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 4 – Upstream transportation & distribution	*Inclusions:* Emissions arising from the transportation of raw milk (our primary ingredients) from farm to factory is undertaken by our own fleet of milk tankers in New Zealand and Australia and the related emissions are included in Scope 1 reporting. The emissions reported here relate to in-bound and out-bound transportation and distribution services that are purchased by Fonterra. All international ocean and coastal freight under the control of our shipping partner Kotahi has been reported. This includes product exports from New Zealand, Australia, Europe and North America to the final destination port. We also report additional ocean freight from New Zealand by our consumer branded business and coastal freight in Australia. We make minimum use of air freight but data has been collected and reported for air freight arising from New Zealand and Australia. Emissions are also reported for product movements by land (road and rail) within New Zealand, Australia, Europe, North America and China. GHG emissions for ocean freight are provided by the shipping partners based on the Global Logistics Emissions Council (GLEC) Framework, using the globally accepted and endorsed Clean Cargo Working Groups (CCWG) methodology. For road, rail and air freight, emissions are calculated using actual tonne-kms and regional freight emission factors. Where an appropriate regional freight emissions factor is not available, the corresponding factor from the Ministry for the Environment guidance 2023 has been used. *Exclusions:* Data for in-country product transfers and distribution to port emissions for countries other than those listed in the inclusions above is unreliable. The excluded emissions (based on manufacturing volumes) are estimated to be less than 0.05% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.

NAME	DETAILS
Category 5 – Waste & wastewater	This year, screening was undertaken for both waste and wastewater. The majority of our solid waste to landfill is a by-product of manufacturing, including packaging and personal protective equipment that cannot be reused or recycled. Emissions were estimated based on the tonnage of mixed solid waste going to landfill and the national average landfill emissions factor from the NZ Ministry for the Environment Guidance 2023. For wastewater treatment, the energy used by the wastewater treatment facilities at our manufacturing sites is included in our Scope 2 reporting. GHG emissions (methane and nitrous oxide) from wastewater treatment by external parties were estimated based on the volume of wastewater and the domestic wastewater emissions factor from the NZ Ministry for the Environment Guidance 2023. Combined, the excluded emissions are estimated at less than 0.03% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 6 – Business travel	Data has been collected and reported for business-related air travel, rental car, and hotel accommodation. This GHG emissions data has been provided by our nominated travel agents.
Category 7 – Employee commuting	This year, screening was undertaken based on all employees commuting a daily round trip of 40km, individually by private petrol vehicle. The related emissions are estimated at less than 0.2% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 8 – Upstream leased assets	The only assets which Fonterra leases that are not already reported in our Scope 1 and 2 emissions are smaller properties around the world used for purposes such as sales offices and demonstration kitchens. This year, screening was undertaken using floor areas from records of leases and average building emission loads from a recent United Nations Environmental Programme report. The related emissions are estimated at less than 0.02% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 9 – Downstream transportation & distribution Category 10 – Processing of sold products Category 11 – Use of sold products Category 12 – End-of-life treatment of sold products	The majority of products sold by Fonterra are intermediate products, with many potential downstream applications and Fonterra is therefore unable to reasonably calculate the downstream emissions associated with the various end uses of the intermediate product. As per the guidance contained in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Fonterra is therefore able to exclude the set of downstream emission categories dependent on products sold from its reporting. This year, screening was undertaken based on full Life Cycle Assessments completed for liquid milk consumer products sold in New Zealand and consumer butter sold in the USA, some additional public footprint data, and then scaled to annual production volumes. The emissions from the excluded downstream transportation and distribution, processing, use and end-of-life treatment of sold products is estimated to represent less than 2.5% of Fonterra's total Scope 3 emissions.
Category 13 – Downstream leased assets	Fonterra leases two properties to third parties which are used for manufacturing purposes. Based on the nature of the lessor's activities, the emissions associated with these are estimated at less than 0.02% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 14 – Franchises	Fonterra has a small number of franchisees in New Zealand to distribute products locally. Fonterra purchases the electricity for product storage by the franchisees and the associated emissions are accounted for our under our Scope 2 reporting. This year, screening was undertaken for their transportation emissions based on the distance travelled by a sample of franchisees and extrapolated. The related emissions are estimated at less than 0.01% of Fonterra's total Scope 3 emissions and are therefore considered immaterial.
Category 15 – Investments	Nearly all equity investments held by Fonterra fall under our management control and therefore the emissions are reported in our Scope 1 and 2 reporting. Emissions associated with the remaining equity investments are considered immaterial.

Water use and discharge

Scope

We report water use and wastewater discharge globally for the manufacturing sites where we have operational control. The data is reported using an inventory method, and separates out identifiable volumes which we provide to third parties for their use under our consent or other agreements.

We have a target to achieve a 15 percent reduction in water withdrawal associated with our manufacturing operations by 2030. For this target we exclude volumes recorded as non-essential use, specifically, rainwater harvested by our Indonesian factory (for gardening and other external purposes) and water provided to third parties under agreement.

A small number of water withdrawal and discharge locations are excluded from our reporting. We have assessed each of these individually and the associated volumes and potential impacts are considered immaterial. In total, these locations are estimated to account for less than 1% of our total water volumes.

We also report our water data via the Carbon Disclosure Project (CDP), with our first submission completed in 2020.

Water discharge by destination

We do not discharge any volumes of wastewater directly to groundwater. Under regulatory conditions we irrigate some wastewater in Australia and New Zealand to land. Given the options available to meet GRI reporting guidelines we use groundwater as the closest match to irrigation to land.

Water quality – Total Dissolved Solids

Total Dissolved Solids (TDS) is a standard indicator of water quality globally. A representative or median result is used to categorise the quality of a water source or wastewater discharge, as 'fresh' (≤ 1,000mg/L TDS) or 'other' (>1,000 mg/L) for the purposes of reporting.

Most of our manufacturing sites are in New Zealand where TDS is not commonly used as a measure of water quality. In FY22, we commenced a TDS surveillance testing programme to improve the accuracy of the categorisation of our water sources and discharges. For locations where TDS data is unavailable, alternative information has been assessed by internal subject matter experts to estimate water source and wastewater discharge quality. For example, representative conductivity (EC) measurements can be converted using a correlation ratio derived from research for fresh water or typical dairy effluent to estimate a TDS equivalent.

The correlation ratios we have used are: k = 0.55 for freshwater and k = 0.64 for dairy effluent.

Equation: TDS (mg/l) = Correlation ratio (k) * EC (µS/cm)

Water quality – Chemical oxygen demand

Chemical oxygen demand (COD) is a common water quality measure in the dairy industry and used by many of our manufacturing sites. We have therefore chosen to report on discharge water quality using COD.

Where biological oxygen demand (BOD) results are used rather than COD, we have converted the BOD results to COD using a conversion factor derived from research into typical compositions for wastewater from dairy manufacturing sites (COD = BOD/0.6).

Water quality sampling frequency varies between sites and destination of wastewater but is in line with the requirements of relevant regulations or permits. At some sites it is tested internally to a procedure approved by the relevant authority while at other sites it is analysed by external laboratories.

Aggregation of global wastewater quality data

For each site outlet, the overall COD result for the reporting period is calculated as an average from the individual test results for that outlet. The average is generally calculated as a median but in some cases a mean is used.

To aggregate these into global results per discharge destination, a weighted average is calculated based on the volume discharged for each overall COD result.

If a facility provides a volume but is unable to provide the matching COD or BOD, that volume has been excluded from the global aggregation calculation.

Water in areas of water stress

Using the Aqueduct water risk atlas[1] we have identified four of our manufacturing facilities as being in areas considered under current water stress. Our threshold recognises baseline water stress, where the current indication is high or extremely high. When prioritising actions, we also consider factors such as water quality and regulatory or reputational risk.

Water Storage

Water storage facilities are one method for improved water management. By collecting water when it is plentiful, it can be stored for future use during dryer periods. The data reported (see page SR-78) reflects the change in significant storage facilities, such as lagoons, at the end of the reporting year. The impact of precipitation and evaporation is not accounted for.

1 Aqueduct is a peer reviewed global water risk mapping tool provided by the World Resources Institute (WRI) www.wri.org/data/aqueduct-water-risk-atlas

Data changes

Acquisitions and Divestments

During FY23 we divested our Chilean Soprole business and one remaining farm in China, both of which have been within scope of our environmental reporting in prior years. The environmental data from these businesses remains included in our reporting for FY23 for the time that the businesses were under our operational control (detailed in the table below).

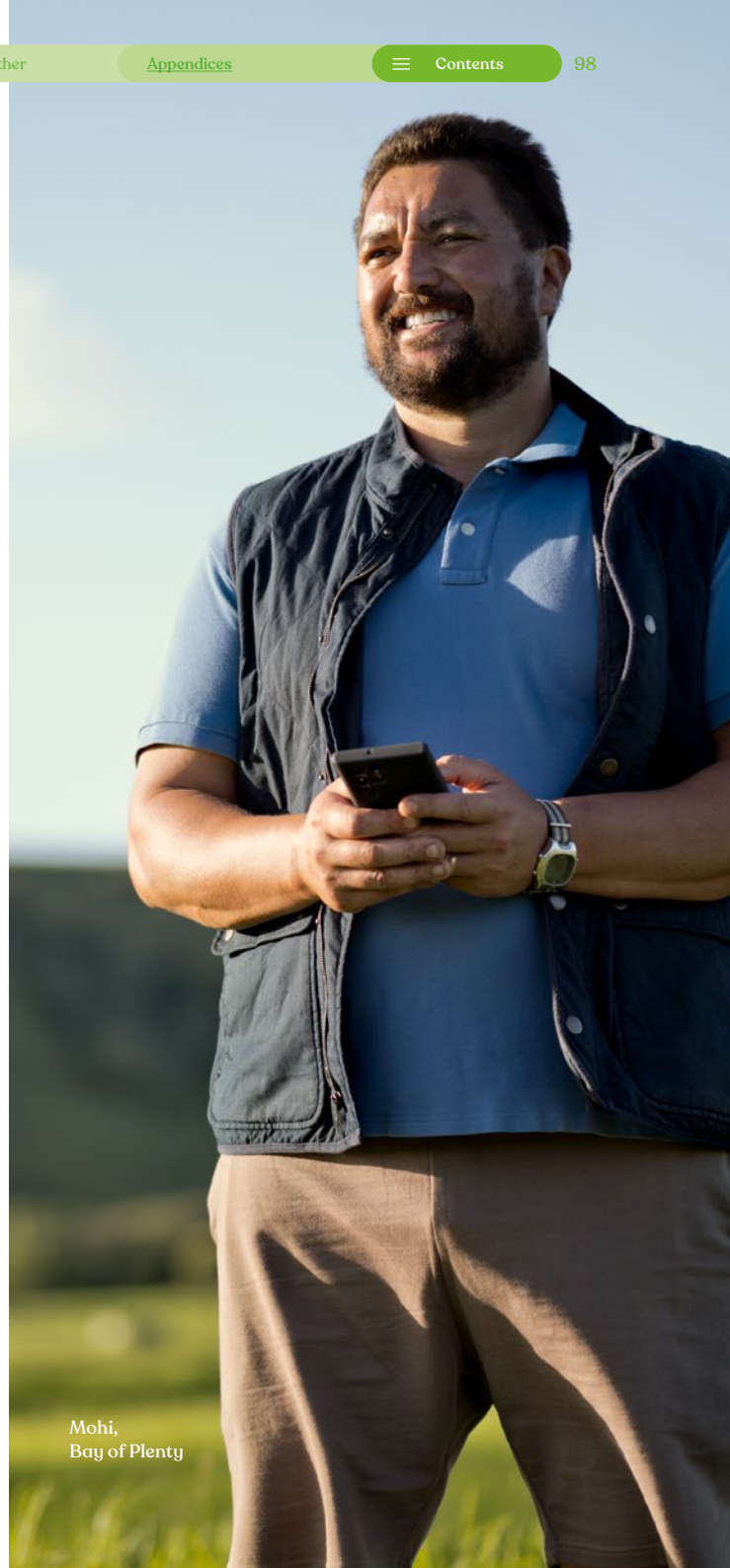
For reporting progress against targets, we have adopted the approach recommended by the GHG Protocol. This means that, where the target depends on a baseline value in a given financial year, we have adjusted the baseline value and all subsequent years to reflect acquisition and divestment of the businesses and reported progress on a like-for-like basis (i.e. as if we had never owned that business or always owned the business).

BUSINESS	DATA
Soprole (divestment)	31/03/2023
Hangu China farm (divestment)	09/04/2023

Restatements of prior year results

Scope 3 emissions on-farm have been restated for all years since the 14/15 season to reflect the findings of the latest LCA assessment for milk sourced in New Zealand during the 2021/2022 season (see page SR-28). This latest LCA adopted the latest IPCC AR6 GWP factors (splitting methane GWP into fossil and non-fossil factors) so for consistency, all on-farm LCAs have been recalculated to use IPCC AR6 (see page SR-91). The LCA changes were also applied to the small number of farms where we have operational control leading to a restatement of Scope 1 and 2 emissions. At the same time we recategorised the emissions associated with land use change on our Fonterra owned farms in prior years from Scope 3 to Scope 1. The combined impact of these changes has meant a decrease of approximately 1% for on farm emissions in any given season.

Scope 3 emissions for prior years have also been expanded to include elements not previously calculated. The additional data includes emissions allocated to Scope 3, Categories 1, 3 and 4. Please refer to the Scope 3 reporting notes in this section of the report for further details. This improvement in data quality results in an increase of approximately 1.7M tCO_2-e across all years. We now estimate that our reported Scope 3 emissions represent more than 95% of our total Scope 3 emissions.



Mohi,
Bay of Plenty

Stakeholder engagement & materiality assessment

Determining what's important

In FY21, we refreshed our materiality assessment. Starting from the results of previous assessments, we identified potential topics of importance based on industry guidance and reports, customer reports and emerging issues derived from risk assessments and media coverage.

This long list of topics was assessed and clustered into a set of topics at a common level of granularity for further analysis.

The relative importance of the topics to our stakeholder groups was determined by a combination of specific surveying, findings of specific engagement workshops and interviewing owners of existing relationships. We engaged directly with more than 400 individual stakeholders, who in turn represented many more from their respective stakeholder group. The findings for each stakeholder group were combined into an overall ordered list of importance, treating all stakeholder groups on an equal basis.

We also assessed the significance of our impact on society for each topic by considering the positive and negative impact of our activities against five criteria: the extent of our impact (i.e. local, regional, global), the severity of our impact, the duration of our impact, Fonterra's ability to influence this impact and the likelihood of the impact occurring.

Using the combination of importance to stakeholders and the significance of our impact, we generated an order list of topics that was discussed with our Sustainability Advisory Panel and approved by the Fonterra Management team.

The final findings were also reviewed with and supported by external stakeholders, including dairy sector representatives in New Zealand and Australia and a sustainable business organisation.

We reaffirmed this list in late 2022 through an internal review to understand relative impacts and emerging topics. The outcome of this assessment was considered and agreed by the Board. In recognition of the high interrelationship between biodiversity and soil health as a result of the review we have combined them into one topic closer to the top of the list. This change in position indicates the required additional focus to ensure we are meeting expectations and driving positive outcomes in relation to this topic.

This materiality assessment process was conducted by Sustainability Professionals from the Fonterra Sustainability Team with prior experience of conducting materiality assessments, dairy farming, and product manufacturing, with the reaffirmation process being conducted alongside Fonterra's Strategy and Optimisation team.

Material topics

Topic	Scope	Stakeholder groups that raised the topic most strongly	Our Response
Ensuring the **food safety and quality** of the products we deliver.	All food products we sell, including ingredients, foodservice and consumer products.	All except Iwi and NGOs.	See Food safety and quality on page SR-24 See Working with farmers on page SR-57
Adapting to the effects of **climate change**, while mitigating our impacts.	Our contribution to climate change from the activities in our value chain, including sourcing, farming, manufacturing and distribution; and the potential impact on those activities arising from predicted climate change.	All	See Climate change on page SR-28
Using **water** responsibly, including water quality, availability and disposal.	The water used by, and the potential impact on water quality arising from, our manufacturing sites and the farms which supply us with milk.	All except Investors and Vendors	See Land and water on page SR-42
Protecting the **health and safety of people at work**, including their wellbeing.	The health and safety of employees and contractors working at Fonterra sites and visitors to those sites. The wellbeing of our employees and farmers. Influencing the health and safety at work on supplying farms and the other businesses which provide us with goods and services.	Employees Iwi Vendors	See Health, safety and wellbeing on page SR-16
Protecting **animal health and welfare** within our supply chain, including caring for our cows and responsible use of antibiotics	All dairy animals on farms directly or indirectly supplying fresh milk to Fonterra.	Customers Consumers Employees	See Animal wellbeing on page SR-38
Supporting the livelihood of thousands of people through meaningful **employment and sustainable income creation**, including the milk price for our farmers	Local economies in the locations where we operate and source milk, goods and services from, including our impact on the national New Zealand economy.	Farmers Government Iwi	See Investing in people on page SR-10 See Employee data on page SR-83
Protecting and enhancing biodiversity and the underlying ecosystem services we rely upon such as soil health and the impact of deforestation	The direct impact of our operations and influencing best-practice on our supplying farms, and the indirect impact through procurement of goods, including procurement of animal feed by our farmers.	Governments Farmers NGOs	See Land and water on page 42 See Working with vendors on page SR-68

Material topics

Topic	Scope	Stakeholder groups that raised the topic most strongly	Our Response
Contributing to **nutrition and health** through the products and information we deliver, including obesity and under-nutrition	The nutritional profile, impact and accessibility of our products, and our role in promoting healthy, balanced diets.	Investors	See Nutrition and health on page SR-20
Maintaining **ethical business practices** fundamental to the way we work, including anti-corruption and fair competition	All activities undertaken by, or on behalf of, Fonterra, in all markets.	Vendors Iwi	See Ethical business practices on page SR-63
Using **responsible procurement** to influence environmental, social and economic performance along our supply chain	All direct procurement of goods and services.	Iwi	See Working with farmers on page SR-57 Working with vendors on page SR-68
Protecting the **employment rights** and working conditions of our people, including diversity and inclusion, women's empowerment, and learning and development.	All Fonterra permanent and temporary employees, and those working at our sites	Customers and consumers	See Investing in people on page SR-10
Minimising **post-consumption waste**, including product packaging and food waste.	All Fonterra consumer branded products and packaging of ingredients products	No stakeholder group raised this particularly highly.	See Packaging and waste on page SR-51

For reporting, we have focussed our disclosure on those topics that rated medium or above for importance to stakeholders or significance of impact. The table above lists these topics, in order, and where we cover our response in this report. For each topic, we have assessed and defined the scope of our impact and identified which stakeholder groups raised the topic most strongly.

Protecting the **human rights** of individuals impacted by our business actions, including modern slavery, did not make the materiality threshold for inclusion in this report but we recognise our responsibility to care for the human rights of people directly or indirectly impacted by our operations and decisions. Rather than manage human rights as a standalone topic, our approach is to embed our respect of human rights across our range of policies and standards including our Code of Business Conduct, See page G&S-08. This means our main activities are already covered in our reporting: see Investing in people page SR-10, Health, safety and wellbeing page SR-16, Working with vendors page SR-68 and our Modern Slavery Statement.

GRI Content Index

STATEMENT OF USE	Fonterra Co-operative Group Ltd has reported the information cited in this GRI content index for the period 1 August 2022 to 31 July 2023 with reference to the GRI Standards.
GRI 1 USED	GRI 1: Foundation 2021

GRI Standard	Disclosure	Location	
GRI 2: General Disclosures 2021	2-1 Organizational details	Fonterra Co-operative Group Limited. Ownership and Headquarters. See SR-107 About us. See AR-04	X[1]
	2-2 Entities included in the organization's sustainability reporting	Financial Statements. See FS-60 Data reporting notes. See SR-88	X
	2-3 Reporting period, frequency and contact point	About this report. See SR-02 sustainability@fonterra.com	X
	2-4 Restatements of information	Our performance. See SR-73 Data reporting notes. See SR-88	X
	2-5 External assurance	About this report. See SR-02 Assurance statement. See SR-106	X
	2-6 Activities, value chain and other business relationships	How we create value. See AR-11 Creating value for stakeholders. See AR-12	X
	2-7 Employees	Employee data. See SR-83	X
	2-9 Governance structure and composition	Principle 2: Board composition & performance. See G&S-10 Principle 3: Board committees. See G&S-13	X
	2-10 Nomination and selection of the highest governance body	Principle 2: Board composition & performance. See G&S-10	X
	2-11 Chair of the highest governance body	Principle 2: Board composition & performance. See G&S-10	X
	2-12 Role of the highest governance body in overseeing the management of impacts	Principle 3: Board committees. See G&S-13	X
	2-13 Delegation of responsibility for managing impacts	Principle 3: Board committees. See G&S-13	X
	2-14 Role of the highest governance body in sustainability reporting	About this report. See SR-02 Principle 4: Reporting & disclosure. See G&S-18	X
	2-15 Conflicts of interest	Ethical business practices. See SR-64 Principle 1: Ethical standards. See G&S-08	X

GRI Standard	Disclosure	Location	
GRI 2: General Disclosures 2021 (continued)	2-16 Communication of critical concerns	Ethical business practices. See SR-64 Principle 1: Ethical standards. See G&S-08	X
	2-17 Collective knowledge of the highest governance body	Principle 2: Board composition & performance. G&S-10	X
	2-18 Evaluation of the performance of the highest governance body	Principle 2: Board composition & performance. G&S-10	X
	2-19 Remuneration policies	Investing in people. See SR-02 Remuneration report. G&S-26	X
	2-20 Process to determine remuneration	Remuneration report. See G&S-26	X
	2-22 Statement on sustainable development strategy	Our three strategic choices. See AR-02	X
	2-23 Policy commitments	Refer to each material topic in this report. See our Modern Slavery Statement. MS-11 See policies on our website	X
	2-24 Embedding policy commitments	People and culture. See SR-10 Nature. See SR-27 Working together. See SR-56	X
	2-25 Processes to remediate negative impacts	Non-discrimination. See SR-14 Ethical business. See SR-64 Effective reporting and monitoring of grievance mechanisms. See MS-13	X
	2-26 Mechanisms for seeking advice and raising concerns	Principle 1: Ethical standards. See G&S-08 Ethical business. See SR-64	X
	2-27 Compliance with laws and regulations	Health safety and wellbeing. See SR-19 Nutrition and health. See SR-22 Ethical business practices. See SR-64	X
	2-28 Membership associations	Memberships. See SR-62	X
	2-29 Approach to stakeholder engagement	Creating value for stakeholders. See AR-12 Stakeholder engagement and materiality assessment. See SR-99	X
	2-30 Collective bargaining agreements	Investing in people. See SR-10	X

1 X - Within scope of assurance.

GRI Standard	Disclosure	Location	
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Stakeholder engagement and materiality assessment. See SR-99	X
	3-2 List of material topics	Responding to what's important. See SR-07	X
	3-3 Management of material topics	Refer to each material topic within this report.	X
Economic Topic Disclosures			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	About us. See AR-04 Doing good together. See AR-15 Remuneration. See G&S-26	
GRI 202: Market Presence 2016	202-2 Proportion of Senior Management hired from the local community	Employee data. See SR-83	X
GRI 205: Anti-corruption 2016	205-3 Confirmed incidents of corruption and actions taken	Anti-corruption. See SR-65	X
GRI 206: Anti-competitive Behaviour 2016	206-1 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Legal compliance. See SR-65	X
Environmental Topic Disclosures			
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Our performance. See SR-79	X
	302-3 Energy intensity	Our performance. See SR-36	X
	302-4 Reduction in energy consumption	Our performance. See SR-79	X
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	Land and water. See SR-42	
	303-2 Management of water discharge-related impacts	Improving water stewardship. See SR-44	
	303-3 Water withdrawal	Our performance. See SR-75	X
	303-4 Water discharge	Our performance. See SR-76	X
	303-5 Water consumption	Our performance. See SR-78	X
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Our performance. See SR-79	X
	305-2 Energy indirect (Scope 2) GHG emissions	Our performance. See SR-79	X
	305-3 Other indirect (Scope 3) GHG emissions	Our performance. See SR-79	X
	305-4 GHG emissions intensity	Our performance. See SR-80	X
GRI 308: Supplier Environmental Assessment 2016	308-2 Negative environmental impacts in the supply chain and actions taken	Working with farmers. See SR-57	X

GRI Standard	Disclosure	Location	
Social Topic Disclosures			
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Employee data. See SR-83	X
	401-3 Parental leave	Diversity, equity and inclusion. See SR-11	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Health, safety and wellbeing. See SR-16	
	403-2 Hazard identification, risk assessment, and incident investigation	Health, safety and wellbeing. See SR-16	
	403-3 Occupational health services	Health, safety and wellbeing. See SR-16	
	403-4 Worker participation, consultation, and communication on occupational health and safety	Health, safety and wellbeing. See SR-16	
	403-5 Worker training on occupational health and safety	Health, safety and wellbeing. See SR-16	
	403-6 Promotion of worker health	Health, safety and wellbeing. See SR-16	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Health, safety and wellbeing. See SR-16	
	403-8 Workers covered by an occupational health and safety management system	Health, safety and wellbeing. See SR-16	
	403-9 Work-related injuries	Health, safety and wellbeing. See SR-16	
GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	Learning and development at Fonterra. See SR-12 Supporting the wellbeing of employees and their whānau. See SR-17	
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Employee data. See SR-83 Diversity, equity and inclusion. See SR-11	X
	405-2 Ratio of basic salary and remuneration of women to men	Gender pay ratio. See SR-14	X
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Non-discrimination. See SR-14	X
GRI 415: Public Policy 2016	415-1 Political contributions	Responsible political behaviour. See SR-66	
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Food safety and quality. See SR-24	X

SASB Content Index

While we do not claim alignment with SASB Reporting Standards, the following index is provided as alternative approach to finding common disclosures associated with the SASB Food & Beverage – Meat, Poultry & Dairy Standard.

REF	Topic Title	Reference
FB-MP-000.A	Location of operations	About us. See page AR-04
FB-MP-110a.1	Gross global Scope 1 emissions.	Our performance. See page SR-79
FB-MP-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Climate change. See page SR-28 Our performance. See page SR-78
FB-MP-130a.1	(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable	Climate change. See page SR-28 Our performance. See page SR-79
FB-MP-140a.1	(1) Total water withdrawn, (2) Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Land and water. See page SR-42 Our performance. See page SR-78
FB-MP-140a.3	Number of incidents of non-compliance with water quality permits, standards, and regulations	Environmental compliance. See page SR-67
FB-MP-160a.3.	Animal protein production from confined animal feeding operations	None
FB-MP-250a.2.	Percentage of supplier facilities certified to a Global Food Safety Initiative (GFSI) food safety certification program	Food, safety and quality. See page SR-26
FB-MP-250a.3.	(1) Number of recalls issued (2) Total weight of products recalled	Food, safety and quality. See page SR-26
FB-MP-250a.4.	Discussion of markets that ban imports of the entity's products	Nutrition and health. See page SR-22
FB-MP-320a.1.	(1) Total recordable incident rate (TRIR) (2) Fatality rate	Health, safety and wellbeing. See page SR-19

Assurance statement

INDEPENDENT ASSURANCE STATEMENT

To: The Stakeholders of Fonterra Co-operative Group Limited

Introduction and Objectives of Work

Bureau Veritas New-Zealand Ltd ("Bureau Veritas") was engaged by Fonterra Co-operative Group Limited ("Fonterra") to undertake a limited assurance engagement on selected subject matter information ("the Information") presented in the Fonterra 2023 Sustainability Report ("the Report"). This Assurance Statement applies to the related information included within the scope of assurance described below.

Scope of Limited Assurance

The scope of assurance consisted of a review of the disclosures made by Fonterra within the Report and the associated underlying systems, processes, and performance applicable to the sites and operations under which Fonterra has operational control for the period of 1st August 2022 to 31st July 2023.

The complete list of assured disclosures is referred to within the GRI Index of the Report.

Our assurance engagement does not extend to any other information included in the Report or information in respect of earlier periods.

Limited Assurance Conclusion

On the basis of our procedures as described under "Methodology" and the evidence we have obtained, we provide limited assurance that nothing has come to our attention:
- to indicate that the statements reviewed within the scope of our assurance engagement are inaccurate and the information included therein is not fairly stated.
- that causes us to believe that the information, within the scope of our assurance engagement, is not prepared, in all material respects, in accordance with the criteria indicated under "Understanding how Fonterra has Prepared the Information".

It is our opinion that Fonterra has established systems for the collection, aggregation and analysis of relevant information and quantitative data.

Understanding how Fonterra has prepared the Information

The Report was prepared with reference to the GRI Standards including appropriate considerations of the reporting principles and additional requirements as listed in GRI 1: Foundation 2021.

Fonterra's Responsibilities

Management of Fonterra was responsible for:
- Selecting and establishing suitable criteria for preparing the Report and information subject to our limited assurance;
- Preparing the information in accordance with the criteria; and
- Designing, implementing and maintaining internal controls over information relevant to the preparation of the Report that is free from material misstatement, whether due to fraud or error.

Our Responsibilities

Bureau Veritas was responsible for:
- Planning and performing the engagement to obtain limited assurance about whether the information included within the scope of assurance is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our conclusion.

Bureau Veritas was not involved in the drafting of the Report and our independence has not been compromised.

Assurance statement

Methodology

Our limited assurance engagement was performed in accordance with International Standard on Assurance Engagements 3000 (Revised) *Assurance Engagements other than Audits or Reviews of Historical Financial Information* issued by the International Auditing and Assurance Standards Board, and informed by Bureau Veritas' standard procedures and guidelines for external verification of sustainability reports.

Our work was planned and executed in a manner designed to produce a limited level of assurance and to provide a sound basis for our conclusions. We undertook the following activities:

- Review of the suitability of the criteria used as the basis for preparing the information subject to assurance;
- Interviews and follow-up communication with relevant individuals;
- Review of documentary evidence produced by Fonterra representatives;
- Audit of performance data and factual information including source verification; and
- Review of Fonterra's processes for identification, aggregation and analysis of relevant information, report content and performance data.

Limitations and Exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined reporting period;
- Statements of commitment to, or intention to undertake future actions by Fonterra;
- Statements of position, opinion, belief and/or aspiration by Fonterra;
- Financial data audited by an external third party; and
- Other sites and/or activities not included in the scope.

This independent assurance statement should not be relied upon to detect all errors, omissions or misstatements that may exist within the Report.

Statement of independence, impartiality and competence

Bureau Veritas is a global leader in Testing, Inspection and Certification ("TIC") services. The Group's mission is to reduce its clients' risks, improve their performance and help them innovate to meet the challenges of quality, health, safety, hygiene, environmental protection and social responsibility. Leveraging its renowned expertise, as well as its impartiality, integrity and independence, Bureau Veritas has helped build trust between companies, public authorities and consumers for almost 200 years.

Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among its personnel in their day to day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the assurance team has a business relationship with Fonterra, its Directors or Managers beyond that required of this assignment. We have conducted this assurance engagement independently and there has been no conflict of interest.

The assurance team was selected based on its extensive Industry Sector knowledge and experience in conducting independent verification, validation and assurance of Environmental Social and Governance (ESG) information and associated systems and processes.

Jeremy Leu
General Manager – Certification Pacific

18th September 2023
Bureau Veritas New Zealand Ltd

Registered office

Fonterra Co-operative Group Limited
109 Fanshawe Street
Auckland Central
Auckland 1010
New Zealand

Headquarters

Fonterra Centre
109 Fanshawe Street
Auckland Central
Auckland 1010
New Zealand

Fonterra Co-operative Group Limited
Private Bag 92032
Auckland 1010
New Zealand

Phone +64 9 374 9000

Email: sustainability@fonterra.com

Ownership

Fonterra Co-operative Group Limited is a New Zealand dairy co-operative company and its farmer shareholders are the suppliers of milk to Fonterra in New Zealand. Farmer shareholders are required to hold a number of shares in Fonterra linked to the amount of milk they supply to the Co-operative each season. Sharemilkers, contract milkers and farm lessors of a farm supplying Fonterra are also able to join and hold Fonterra shares as 'associated shareholders'. There is the ability for farmer shareholders who have ceased supplying milk to Fonterra to transfer shares to 'permitted transferees', being their relatives and related parties. The exercise of the powers of Fonterra's shareholders is governed by the Companies Act 1993, the Co-operative Companies Act 1996, and Fonterra's constitution.

Disclaimer

This report contains some forward-looking statements, targets and projections relating to Fonterra Co-operative Group Limited (Fonterra) and its subsidiaries (the Fonterra Group) that are based on the beliefs of the Fonterra Group's management as well as assumptions made by and information currently available to the Fonterra Group's management.

There can be no certainty of outcome in relation to the matters to which the forward-looking statements, targets and projections relate. These forward-looking statements, targets and projections involve known and unknown risks, uncertainties, assumptions and other important factors that could cause the actual outcomes to be materially different from the events or results expressed or implied by such statements, targets and projections. Those risks, uncertainties, assumptions and other important factors are not all within the control of the Fonterra Group and cannot be predicted by the Fonterra Group.

While all reasonable care has been taken in the preparation of this report, none of Fonterra or any of its respective subsidiaries, affiliates and associated companies (or any of their respective officers, employees or agents) (Relevant Persons) makes any representation, assurance or guarantee as to the accuracy or completeness of any information in this report or likelihood of fulfilment of any forward-looking statement, target or projection or any outcomes expressed or implied in any forward-looking statement, target or projection. The forward-looking statements, targets and projections in this report reflect views held only at the date of this report. None of the forward-looking statements, targets or projections in this report shall be construed as profit or revenue forecasts.

Accordingly, no-one should place reliance on any forward-looking statements, targets or projections in this report. All forward-looking statements, targets and projections in this report are qualified by reference to the cautionary statements set forth in this section.

Statements about past performance are not necessarily indicative of future performance. Except as required by applicable law or any applicable Listing Rules, the Relevant Persons disclaim any obligation or undertaking to update any information in this report.

This report does not constitute investment advice, or an inducement, recommendation or offer to buy or sell any securities in Fonterra or the Fonterra Shareholders' Fund.

Non-GAAP measures

Fonterra uses several non-GAAP measures when discussing financial performance. These measures include normalised profit after tax, normalised EBIT, EBIT, normalised earnings per share, normalisation adjustments and total Group measures. Total Group measures present the combined financial performance of the Group's continuing and discontinued operations. Non-GAAP financial measures are not defined or specified by NZ IFRS.

Management believes that these measures provide useful information as they provide valuable insight on the underlying performance of the business. They are used internally to evaluate the underlying performance of business units and to analyse trends.

These measures are not uniformly defined or utilised by all companies. Accordingly, these measures may not be comparable with similarly titled measures used by other companies. Non-GAAP financial measures should not be viewed in isolation nor considered as a substitute for measures reported in accordance with NZ IFRS. Non-GAAP measures are not subject to audit unless they are included in Fonterra's audited Financial Statements.

Please refer to the Non-GAAP Measures section in Fonterra's 2023 Annual Review for further information about non-GAAP measures used by Fonterra, including reconciliations back to NZ IFRS measures. Definitions of non-GAAP measures used by Fonterra can be found in the glossary included within Fonterra's Business Performance Report.

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Fonterra Sustainability Report 2023
Pūrongo Toitūtanga Te Mātāpuna

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