

LCANZ AGM 2023

LCANZ Life Cycle Association New Zealand



Agenda



AGM (14:30-15:30)

- 14:30 Welcome
- 14:35 Acceptance of previous minutes
- 14:40 President's report
- 14:50 Treasurer's report
- 15:00 BPWG Update
- 15:05 EPD Australasia Update
- 15:10 Mentoring Programme
- 15:15 Committee Elections
- 15:20 General Business
- 15:30 Close

Presentation and panel discussion (15:30-17:00)

- Dynamic LCA

Networking (17:00-18:00)

Acceptance of previous minutes

LCANZ Life Cycle Association New Zealand

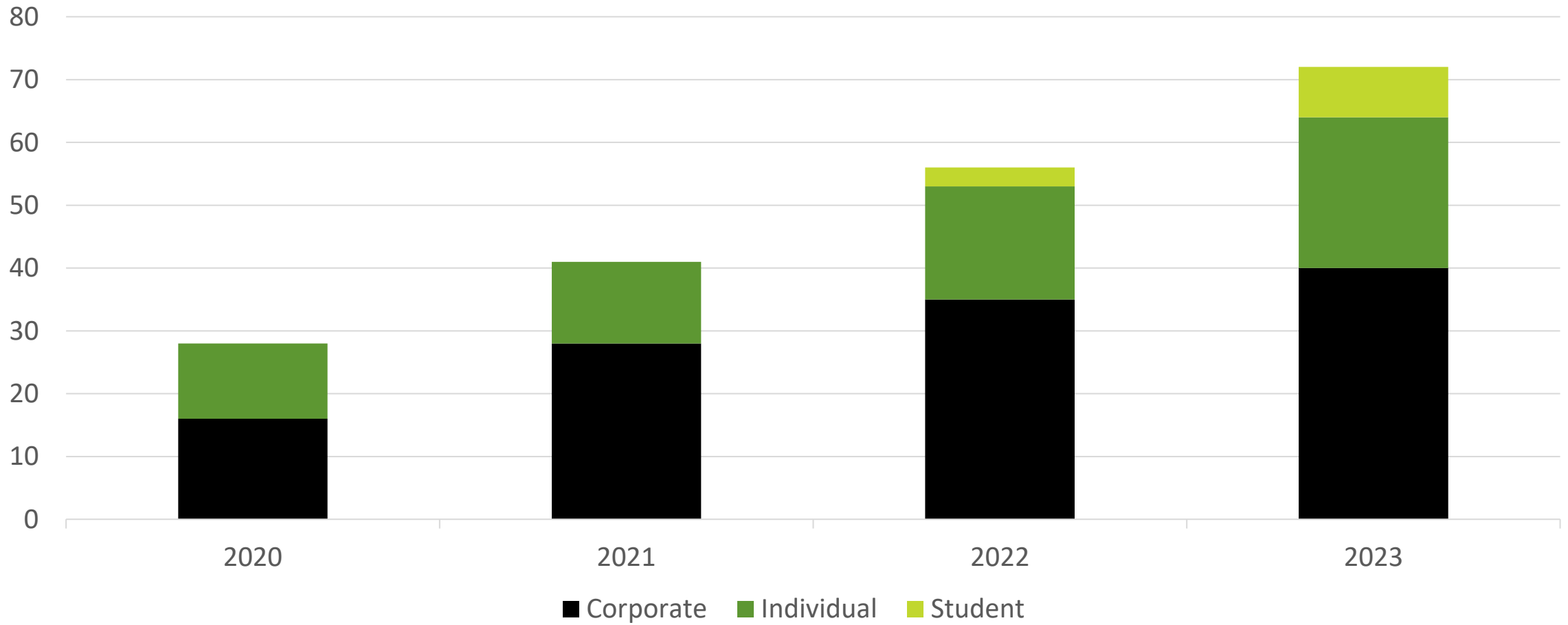
President's Report

Emily Townsend

LCANZ Life Cycle Association New Zealand



Growing Interest & Activity



Increased publication & communication



LCA of assessment of New Zealand-farmed King salmon

To understand the sustainability of New Zealand-farmed King salmon, Fisheries New Zealand, Aquaculture New Zealand and the New Zealand Salmon Farmers Association asked sustainability firm thinkstep-anz to carry out a Life Cycle Assessment (LCA) study with a focus on carbon.

Summary

- New Zealand-farmed salmon sold domestically has a lower carbon footprint than beef, lamb and cheese.
- It has a similar carbon footprint to eggs, poultry and other farmed fish protein and oysters. NZ mussels have a lower carbon footprint.
- Producing feed has the largest impact on salmon's carbon footprint.
- Exporting salmon by air significantly increases the total carbon footprint.

We compared the carbon footprint of NZ-farmed King salmon with other dietary proteins

Part 01: life cycle assessment
We first assessed the environmental impact of New Zealand-farmed King salmon over its life cycle.

Part 02: protein comparison
We then compared the impacts of producing farmed King salmon with other popular dietary proteins.

Part 03: ways to reduce impact
We identified what the New Zealand-farmed King salmon industry can do to reduce its environmental impacts.

75% of the world's King salmon is farmed in New Zealand

NZ\$372 million total revenue (estimated) for 2022

agresearch
thinkstep
vodafone

Carbon footprint of fish from the New Zealand Deepwater Trawl Fleet: A preliminary study

Andre Mazzetto and Stewart Ledgard
May 2023



Report for Deepwater Group (DWG)
RE450/2022/056

The environmental performance of New Zealand avocados
A lifecycle assessment

To understand the environmental performance of New Zealand avocados, the New Zealand avocado industry commissioned a Life Cycle Assessment (LCA). This is the first study of its kind for our local industry and an example of using science-based research to guide our work.

The New Zealand avocado sector is one of New Zealand's horticultural growth stories

- 1,800+ growers
- 4,500+ hectares of kiwifruit avocados
- 1,100+ export-registered orchards
- 10+ export markets
- Strong biosecurity

Growth in the past decade (2012 to 2022):

- +442% Export market value (to NZ\$1.6bn)
- +114% New Zealand market value (to NZ\$2.6bn)
- 1,200 hectares of gross field development

thinkstep
vodafone

The result: flexible working can have a smaller carbon footprint

The study found that the average New Zealand office worker who works one day a week from home will save 4.2 kg in carbon emissions per day, compared to commuting into the office every day.

1.2% Working from home one day a week saves on average 1.2% of a person's annual carbon footprint, or **4.2 KG CO₂e saved per remote worker per day.** That's the equivalent of 1.3 flights from Auckland to Wellington per year, or 738 kilometres by car*.

Where do the benefits come from?
The biggest difference comes from the avoided commute, and the further you drive, the bigger the saving. For example, workers who would otherwise use a car to drive five kilometres each way are very likely to reduce their carbon footprint by working from home. This is likely to apply to most office workers, according to Census 2018 data, as 78% of New Zealanders use a car to drive to work. For at least 57% of these this journey is longer than five kilometres each way. Fewer than 3% currently drive a hybrid/electric car.

Part-time, full impact
For a part-time remote worker who doesn't work full eight-hour days, the carbon savings can be even higher per hour worked. While the carbon footprint for working from home depends on the number of work hours, the impact from the commute stays the same.

Working in Tāmaki Makaurau?
If you live in Tāmaki Makaurau Auckland, you can likely shrink your carbon footprint more by working from home compared to other regions in the country. This is due to higher average commuting distances in Auckland.

1. Calculation based on New Zealand's Greenhouse Gas Inventory 1990-2019 Dispatch MfE
2. Calculation based on Measuring Emissions Factors Summary 2020 MfE

Life Cycle Assessment of working from home | June 2022

thinkstep
vodafone

48 NZ EPDs registered

37 NZ EPD companies

EPD Int Presentation

Summit 2023

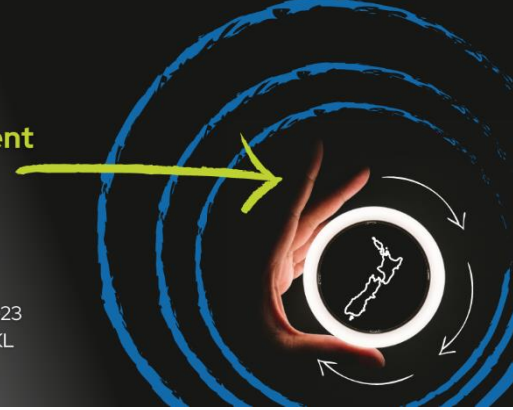


Enabling Circular
Economy Through
Life Cycle Assessment

Summit 2023



30th March 2023
1pm at GridAKL



ALCAS Conference



LCANZ representation:

- Emily Townsend – LCANZ Presidents' Address
- Sarah McLaren (Massey) – Nutritional LCA methods
- Shreyasi Majumdar (Massey) – LCA of foods using nutritional LCA method – NZ Avocados & Cheese
- Chanjief Chandrakumar (thinkstep-anz) – Understanding the role of renewable diesel in decarbonising NZ public transport
- John McArthur – EPD Australasia workshop

LCANZ Content



MEMBER PROFILE



Jessika Souza de Carvalho

RESEARCH TOPIC

PhD Research Title: 'Quantifying the design life and environmental impacts of downpipe treatment systems for removing dissolved metals from roof runoff'

My research interests include stormwater treatment, environmental protection, and Life Cycle Assessment (LCA), with research in civil and natural resources engineering. Investigating the lifespan and environmental impacts of downpipe treatment systems to remove dissolved metals from roof runoff. I completed a Masters in Environmental Science and Technology at the Federal University of ABC Brazil, on a project that also focused on sustainability and LCA. I also have industry experience in Brazil, working on the development of LCA and sustainability projects.



Jessika Souza de Carvalho, PhD Candidate, University of Canterbury, Department of Civil and Natural Resources Engineering.

Jessika originally got interested in LCA and Life Cycle Thinking (LCT) when she was completing her Bachelors degree in environmental engineering in Brazil 10 years ago. Her PhD research project supervisor is one of the Storminator project innovators, so this is a natural collaboration.

Video of University Department: [Youtube Link Here](#)

BENEFITS OF LCANZ MEMBERSHIP

Membership of LCANZ gives me peer networking opportunities and access to latest news on research projects, both NZ and international. I have worked on LCA projects in Brazil, and wish to build my New Zealand connections through LCANZ participation.



Storminator treatment system cabinet, and Storminator internal filter cartridges

PROJECT SUMMARY

I'm in my third year of a stormwater water quality research program, and am planning to finish in 2024. The 'Storminator' is a stormwater treatment system developed by University of Canterbury researchers, and is patented by the University. It's intended for commercial production in future. I'm investigating the performance of the Storminator for removing aluminium, zinc and copper from different metal roof types. This is to understand the effects of the metal roof type in the contaminant removal efficiency of the system.

The objective is to remove metals from roof water runoff prior to it reaching the stormwater network. This helps protect the aquatic ecosystem by reducing contaminants in waterways and for the protection of ecological species in the aquatic system. Contamination of waterways causes serious ecological damage.

Waste mussel shells from farmed mussels are used as the Storminator filter media. When used in crushed form, the system has a contaminant removal efficiency of up to 100%. This uses a large scale waste resource, of which half would otherwise be disposed of in landfill.



Crushed mussel shell filter media

The reason to use LCA in the development of the product is to identify the best materials, design, and source of materials for product manufacture, and to determine the lowest environmental impacts. The LCA study outcomes will identify what are the important focal points for carbon emissions and ecotoxicity impacts. A focal point will be plastics, in particular PVC, and this information can be used to compare environmental performance with other systems available.

Implementing circular economy in practice is a major part of my research project. The mussel shell filter media material use facilitates a high level of circularity. A full cradle-to-cradle LCA study life cycle analysis is being undertaken, from material extraction, manufacturing, use and end-of-life (EoL), leading to a full circular economy appraisal. Future Storminator marketing and promo collateral will highlight this advantage. It is too early to determine the actual EoL fate of the used mussel shell filter media, but use as a concrete aggregate is being considered as a possible application.

My preliminary results have been presented at the New Zealand Stormwater Conference, and at the Canterbury University waterways postgraduate conference.

Jessika Souza de Carvalho - Student Member

MEMBER PROFILE



Fletcher Building

LIFE CYCLE THINKING AT FLETCHER BUILDING

At Fletcher Building we recognise the importance of understanding the environmental impact of what we do. We use Life Cycle Thinking (LCT) and Life Cycle Assessment (LCA) to help us make the right decisions to improve our products and solutions.

LCT has been part of our strategy for many years. In 2019, we set the target to have LCAs for all the key products we manufacture principally through holding Environmental Product Declarations (EPD) for our products. These EPDs give transparent and robust information to our customers so they can make informed choices. The EPD information also helps us to find the hot-spots in our processes so we can make targeted improvement initiatives, and support our target to hold sustainability certifications for 75% of our revenue from products from our manufacturing businesses.

We have a near-term Science-based target to reduce carbon by 30% by 2030 (Scope 1 and 2), and net zero target by 2050 across all scopes. Reducing our operational and supply chain emissions will translate into lower embodied carbon in our products, which in turn will reduce the life-cycle carbon emissions of our customers projects.



Fletcher Building is a significant manufacturer, retailer, home builder and partner on major construction and infrastructure projects. Spanning the full value chain, we operate diversified businesses across our core markets of New Zealand and Australia, from resource extraction, product manufacturing and distribution through to property development and infrastructure construction. We employ 14,700 people in New Zealand, Australia, and the South Pacific.

BENEFITS OF LCANZ MEMBERSHIP

Our LCANZ membership gives us access to a network of like-minded members that want to apply LCT and use LCA as a robust tool for decision making.

The Summit, and the webinars that LCANZ organises show us tools and ways of thinking to continue to improve our practices, and we can show our stakeholders that we support a local organisation that is doing the right thing for NZ.

ENVIRONMENTAL IMPACTS OF CONCERN

Climate change and GHG emissions are a key focus area for us. We have detailed decarbonisation roadmaps for each of our divisions and key businesses. We also include climate change risk and adaptation within our wider business risk assessments and strategy. Other important areas of focus for us are waste reduction, moving our quarry business to net positive biodiversity by 2030, and increasing our focus on water reduction.

A key sustainability strategic goal is 'circular economy commitment across our businesses'. As a portfolio of businesses across the value chain, we are in a unique position to champion the circular economy and support others to take part. LCT and LCA are tools we can use to understand where our waste is generated and develop initiatives to avoid or minimise this waste.

The task of collating all the required data to do an LCA is challenging, and requires measuring all the manufacturing parameters needed. It can also be difficult to get sufficiently detailed information from suppliers. However, one of the reasons we support the move for more product manufacturers to complete LCAs is that this means more data will be available across the value chain, and this in turn will improve our customers ability to choose better products.



COMMUNICATING LCT AND LCA

LCAs give us robust and detailed technical information that allows us to develop clear and credible messaging without greenwashing. LCA and LCT knowledge is increasing in our sector, with architects and other building specifiers now asking for LCA documents such as EPDs as part of the information for their projects. We share our LCA documentation as part of our product communication with our customers.

Government initiatives like MBIE's Building for Climate Change (BfCC) program are helping to raise the profile of LCT and LCA in our sector. The next step is for the wider sector to better understand the concepts and to use them in all parts of the value chain. Education and training at all levels will be critical in the next few years.



Fletcher Building Ltd - Corporate Member
810 Great South Road, Penrose, Auckland 1061

Member logos – 2023-24



**INDIVIDUAL
MEMBER
2023-24**



**CORPORATE
MEMBER
2023-24**



**STUDENT
MEMBER
2023-24**

Thank you!



Joanne Duncan (Secretary)

John McArthur (Treasurer)

AJay Morris

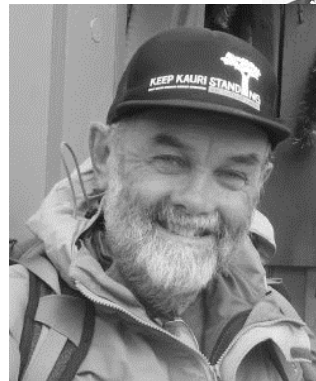
Barbara Nebel

Ferran de Miguel Mercader

Kelly McClean

Rahul Chopra

Shreyasi Mujumdar



Financial report FY 2023

John McArthur

LCANZ Life Cycle Association New Zealand



Statement of Financial Performance



For the year ended 31st May 2023

	Notes	2023	2022	2021
INCOME		\$	\$	\$
Subscriptions		16,327 *	13,760 *	14,300
Conference / Workshop income		3,040	0	3,595
LCACP Application fees	4.	232 *	225	0
Interest (incl RWT)		597	26	19
Tax Refund		8	0	5
Total Income		20,204	14,011	17,919

EXPENSES

Administrative services	5.	223	225	0
Website Development and Fees	6.	621	759	621
Conference / AGM / workshop expenses		6,864	0	2,120
Representation (& Strategic Development)		56	0	516
Communication / networking	7.	1,043	2,027	0
Bank Fees *	8.	145	103	75
RWT Tax		197	9	6
Tax Payment		0	74	0
Total Expenses		9,148	3,196	3,338

Net Surplus (Deficit)		11,056	10,815	14,581
-----------------------	--	--------	--------	--------

* Notes, Income includes credit card surcharge and Bank Fees include payment of that surcharge to Stripe for credit card services.

Statement of Movements in Equity



For the year ended 31st May 2023

		2023	2022	2021
		\$	\$	\$
EQUITY AT START OF THE YEAR		55,348	44,533	29,952
Net Surplus (Deficit)		11,056	10,815	14,581
EQUITY AT END OF THE YEAR		66,404	55,348	44,533

	Note	2023	2022	2021
CURRENT ASSETS		\$	\$	\$
Westpac cheque account		6,404	55,348	44,533
Westpac term deposit		60,000	0	0
Total Current Assets		66,404	55,348	44,533

Current Status



<u>At 11th September 2023</u>		
Bank cheque account		\$13,215
Bank term deposit		\$60,588
For 01/06/2023 – 31/05/2024		
Members invoiced:	73	\$17,350
Members paid up:	60	\$14,227
Members yet to pay:	13 (18%)	\$3,129

LCANZ Membership



<u>Category</u>	11 th September	31/05/2023	31/05/2022	31/05/2021
Corporate:	39	38	39	31
Corporate Associates	50	50	57	51
Individual:	25	25	22	15
Students	9	8	7	5
MailChimp circulation	257	257	235	221

Best Practice Working Group

LCANZ AGM Sept 2023

www.lcanz.org.nz

LCANZ Life Cycle Association New Zealand

Purpose



To provide best practice guidance for users of life cycle thinking in Aotearoa New Zealand

- BPWG undergoing a reset - wider representation sought from corporate, government, designers and LCA practitioner users
- Commitment - quarterly meetings to support agreed best practice guidance activities and consultation submission contribution
- Currently developing work plan – input from members welcome

About BPWG



A screenshot of the LCANZ website's 'Best Practices' page. The page has a light grey background and a grid of nine article cards. Each card has a title, a date, and a short summary. The top navigation bar includes 'Log in' and a search box. The breadcrumb trail reads 'You are here: Home / Best Practices'. The article titles include 'Submission to Climate Change Commission's Draft Advice consultation', 'Submission to MfE Consultation: Reducing the impact of plastic on our environment', 'Submission to MBIE Consultation: Building for Climate Change', 'Future work: Making Comparisons', 'In development: EPD101 white paper', 'Future work: NZ-specific life cycle inventory datasets', 'LCIA Recommended Indicators', 'LCT, LCA and transitioning to a Circular Economy white paper', and 'In development: Member Case Studies relevant to 'LCT, LCA and transitioning to a Circular Economy' white paper'.

Current working group members

- Kimberly Robertson, (co-chair)
- Kelly McClean (co-chair)
- Jeff Vickers
- Adam Schofield
- Joanne Duncan
- Gaya Gamage
- **New members**
- Nathan Palairt (Aurecon)
- Indika Herath (Post-Doc, Massey)
- Sachini Weerasinghe (PhD student, Massey)

Scoping – next 12 months



Priorities included

- Submissions input
- Research/white paper development
- LCACP – sub-committee representation (via Gaya)
- Educational/professional development pathways
- LCANZ expert review/support

LCACP update



Exam prerequisite update

- Practitioner prerequisites are now tougher, require a background in LCA through academia or work experience
- Fee structure has also changed, LCANZ members are same as the ACLCA members
- Exam is now online

<https://lcanz.org.nz/experts/certification/>

NZ Life Cycle Inventory



- Longstanding LCANZ identified issue
- How can LCANZ and the Best Practice group help progress this?
- Is a specific working group on this useful?
- Should LCANZ funding be used to facilitate?

Thank you!



Wider representation needed

Please reach out to Kimberly or Kelly if interested in contributing to BPWG as a corporate, academic, government or design user representative.

kimberly.robertson@thinkstep-anz.com

k.r.olatunji@gmail.com

EPD Australasia

John McArthur

LCANZ Life Cycle Association New Zealand

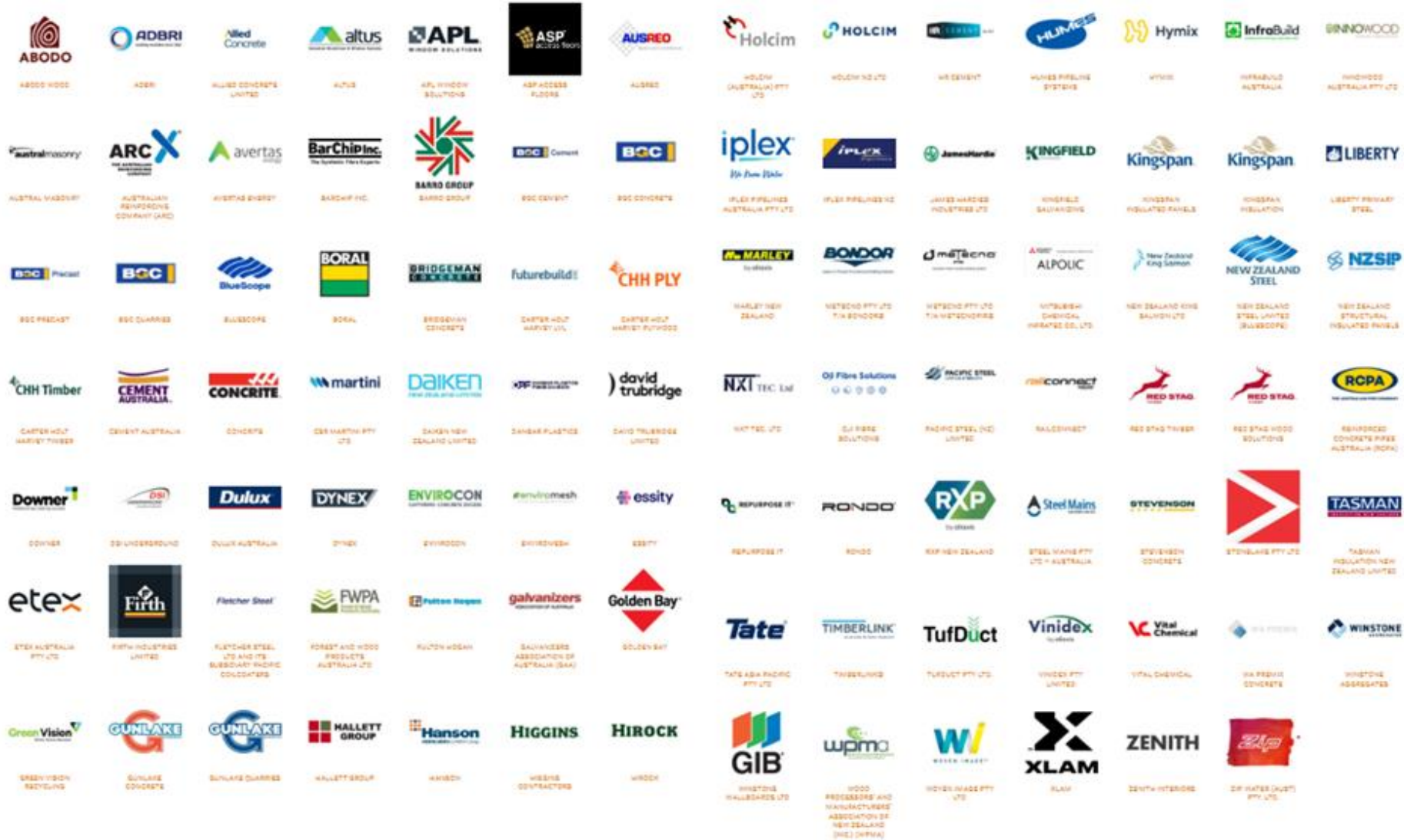


EPD Australasia Ltd



- Role: Programme operator (and publisher) of Environmental Product Declarations (EPDs)
- Ownership: 50/50 LCANZ and ALCAS
- Establishment: November 2014
- Governance and management:
 - Board of six Directors, 3 appointed by LCANZ, 3 by ALCAS
 - One Programme Manager (contract)
 - One Advocacy and Marketing Director (contract)
 - One Technical Advisor (contract)
 - Technical Advisory Group (TAG) (7 expert members)
- Licenced to International EPD System (Sweden)

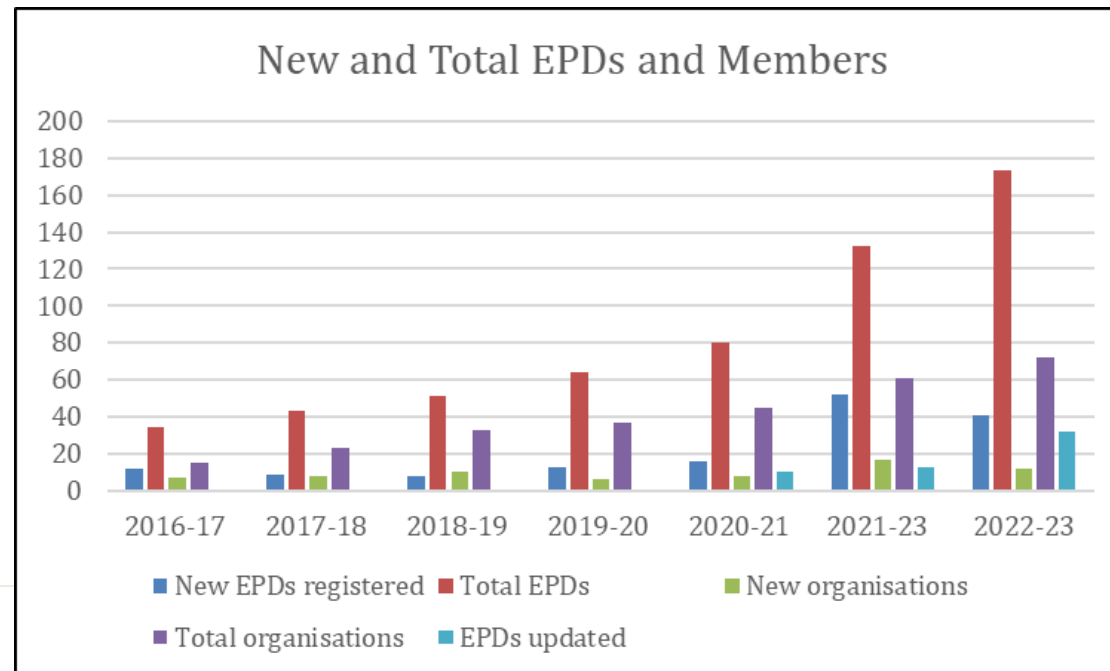
Members



EPD growth in Australasia



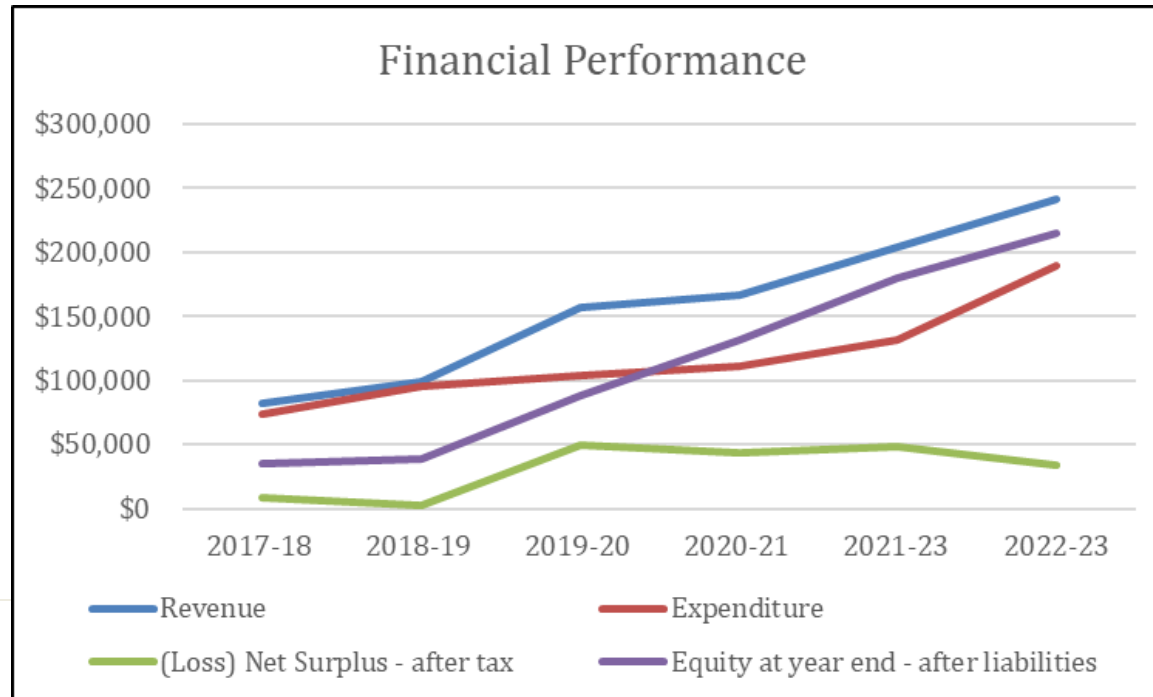
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Since 31/3
New EPDs registered	13	12	9	8	13	16	52	41	52
Total EPDs	22	34	43	51	64	80	132	173	221
New organisations	4	7	8	10	6	8	17	12	19
Total organisations	8	15	23	33	37	45	61	72	91
EPDs updated						10	13	32	



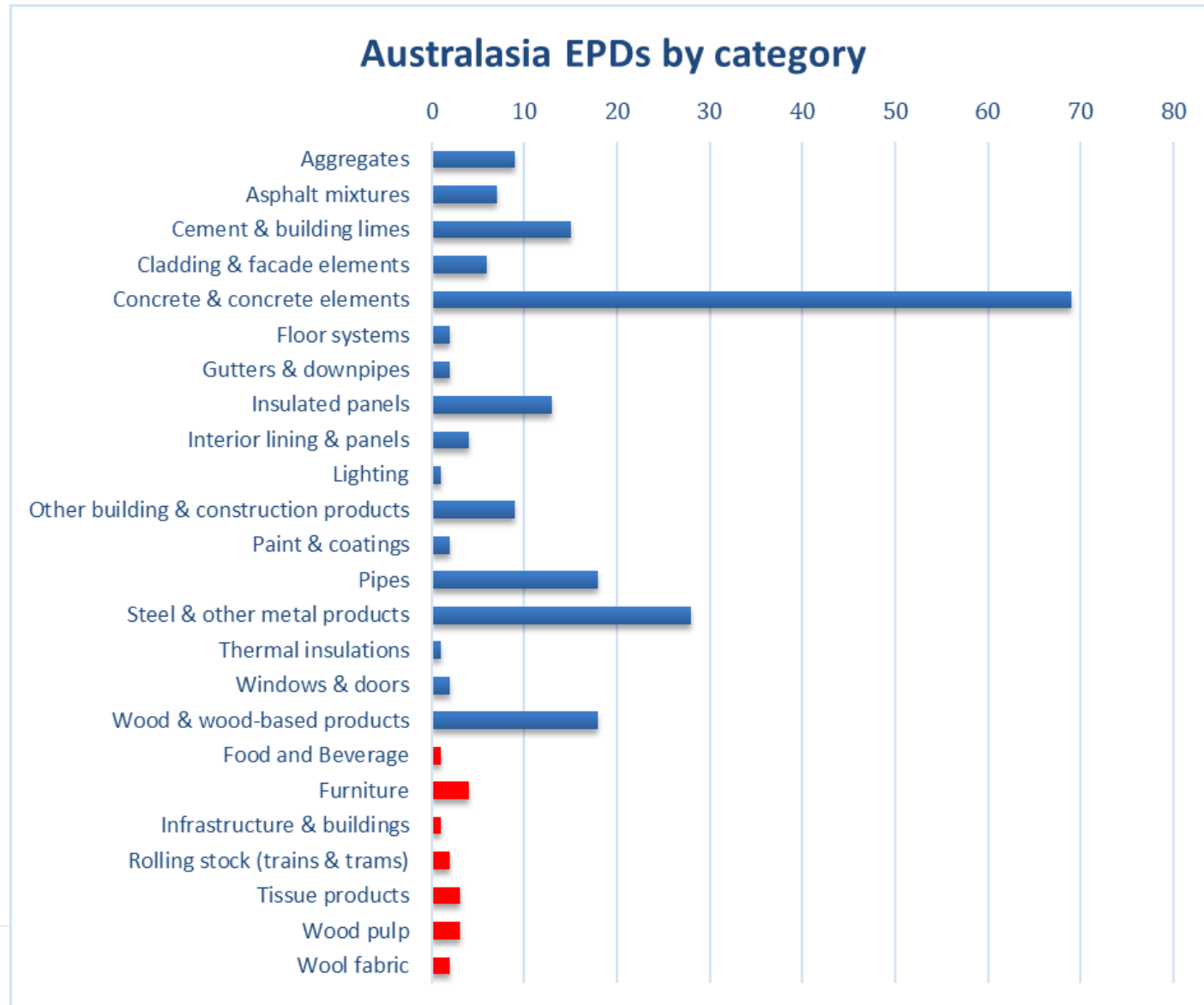
Financial performance



	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Revenue	\$75,129	\$82,781	\$98,824	\$157,485	\$166,528	\$204,002	\$241,927
Expenditure	\$77,950	\$74,081	\$95,761	\$103,439	\$110,569	\$132,029	\$189,423
(Loss) Net Surplus - after tax	(-\$2,821)	\$8,700	\$2,990	\$49,771	\$43,249	\$48,890	\$34,249
Equity at year end - after liabilities	\$26,795	\$35,495	\$38,485	\$88,256	\$131,505	\$180,395	\$214,644



What products?



The future: opportunities and issues



Spreading the message:

- Getting manufacturers of other industry groups to LCA => EPD their products. Appliances, food, clothing.

Digitisation: Think BIG DATA!

- Imagine dialling up the product selection for your project and getting an instantaneous evaluation of comparative environmental impacts.
- Transitioning from human eyes, human brains assessing PDF EPDs, to IT Apps reviewing EPD datasets to identify best products.
- The challenge of designing the database and human interfaces to suit the bulk of millions of EPDs.

Keeping pace with Europe, US, International:

- LCA and EPD tools, interface with BIM and other assembly apps.....

LCANZ Mentoring Programme

LCANZ Life Cycle Association New Zealand



LCANZ Mentoring Programme



Facilitates matching of mentors & mentees around LCA

Themes can include:

- Starting a career focusing on LCA
- Setting up an in-house LCA team
- Career development
- Post-graduate student support (high level only)

10 one-hour sessions over 10 months

LCANZ Role



Develop mentor criteria, provide list of mentors

Review and select mentee submissions

Facilitate matching process

Pay mentor (nominal fee per hour + free summit ticket)

Monitor effectiveness

Facilitate quarterly group discussions + LinkedIn group

Committee Elections

LCANZ Life Cycle Association New Zealand

A decorative graphic at the bottom of the slide. It features a white horizontal bar with two overlapping circles: a dark green circle on the left and a light green circle on the right. Below this bar are two horizontal bars: a dark green bar on the left and a light green bar on the right, extending from the circles.

Voting Results

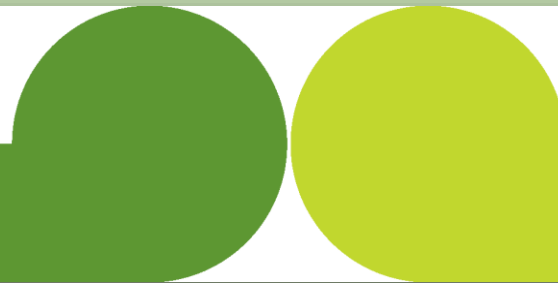


Our new and returned committee members are:

- Barbara Nebel
- Emily Townsend
- John McArthur
- Sateesh Kumar Pisini

General Business

LCANZ Life Cycle Association New Zealand



AGM Close

LCANZ Life Cycle Association New Zealand

A decorative graphic at the bottom of the slide. It features two overlapping circles: a dark green one on the left and a light green one on the right. Below these circles are two horizontal bars: a dark green bar on the left and a light green bar on the right, which appear to be connected to the circles above.

Thank you!

LCANZ Life Cycle Association New Zealand

