The Low Carbon Manufacturing Programme 2025 Scorecard

December 2025

Low Carbon Manufacturing Programme Objectives

WWF-Hong Kong's Low Carbon Manufacturing Programme (LCMP) seeks to reduce the carbon emissions generated by manufacturing facilities. The LCMP also encourages companies to increase the transparency of their supply chain carbon emissions and uncover inefficiencies in their overall use of resources.

The achievements made by the LCMP contribute directly to WWF's global goals: To halve the footprint from consumption and production and halve greenhouse gas (GHG) emissions.

The LCMP also aligns with several United Nations Sustainable Development Goals:

Companies achieving LCMP labels in 2025 – Platinum

Factory Name	Location	Major Products	No. of Verifications
Platinum			
Chow Tai Fook Jewellery Culture Industrial Park (Wuhan) Co., Ltd.	Wuhan (China)	Jewellery	4
Mentholatum (China) Pharmaceuticals Co., Ltd.	Zhongshan (China)	Pharmaceuticals	3
Positec Technology (China) Co., Ltd.	Suzhou (China)	Power Tools	4

Companies achieving LCMP labels in 2025 – Gold

Factory Name	Location	Major Products	No. of Verifications
Gold			
Computime (Malaysia) SDN. BHD.	Malaysia	Smart electronic products	1
Crystal Martin Apparel Bangladesh Ltd.	Bangladesh	Ladies undergarments	3
Dongguan Shatin Lake Side Textiles Printing & Dyeing Co., Ltd.	Dongguan (China)	Printed & dyed fabrics	9
EC Precision Technology (Jiangsu) Corporation	Nantong (China)	Metal components	1
FWKK Vietnam Company Limited	Vietnam	Swim & yoga wear	1
Huicheng Tools Manufacture Co., Limited	Nanjing (China)	Saw blades	1
Huizhou Yiji Garment Accessories Co., Ltd.	Huizhou (China)	Garment accessories	3
Jiaxing Fuerte Machine Manufacture Co., Ltd.	Jiaxing (China)	Metal screw	1
Luceco Electrical (Jiaxing) Limited	Jiaxing (China)	LED lighting & wiring devices	7
Wing Ka Shing Knitwear Co., Ltd. of Dongguan	Dongguan (China)	Knitted products	2
Zhejiang Teso Hardware Manufacturing Corporation	Quzhou (China)	Metal accessories	2

Companies achieving LCMP labels in 2025 – Silver & Certified

Factory Name	Location	Major Products	No. of Verifications
Silver			
Airline Mechanical (Guangxi) Company Limited	Guangxi (China)	Power electronics	1
Dongguan Leroy Far East Knitwears Ltd.	Dongguan (China)	Sweaters	2
Grace Glory (Cambodia) Garment Ltd.	Cambodia	Swim & yoga wear	3
Guangdong Billion Union Textile Co., Ltd.	Qingyuan (China)	Printed & dyed fabrics	1
Kingdeer (Cambodia) Knitting Co., Ltd.	Cambodia	Cashmere products	4
Shenzhen Hong Tao Non-woven Fabric Co., Ltd.	Shenzhen (China)	Non-woven fabrics	8
Shenzhen Tianpin Button Manufacturing Limited	Shenzhen (China)	Jean buttons & rivets	2
Certified			
Haitan HB (Cambodia) Co., Ltd.	Cambodia	Pants, jeans & jackets	2

LCMP labels achieved in 2025 (by category)

LCMP label category				
No. of factories	**3**	**11**	**7**	**1**

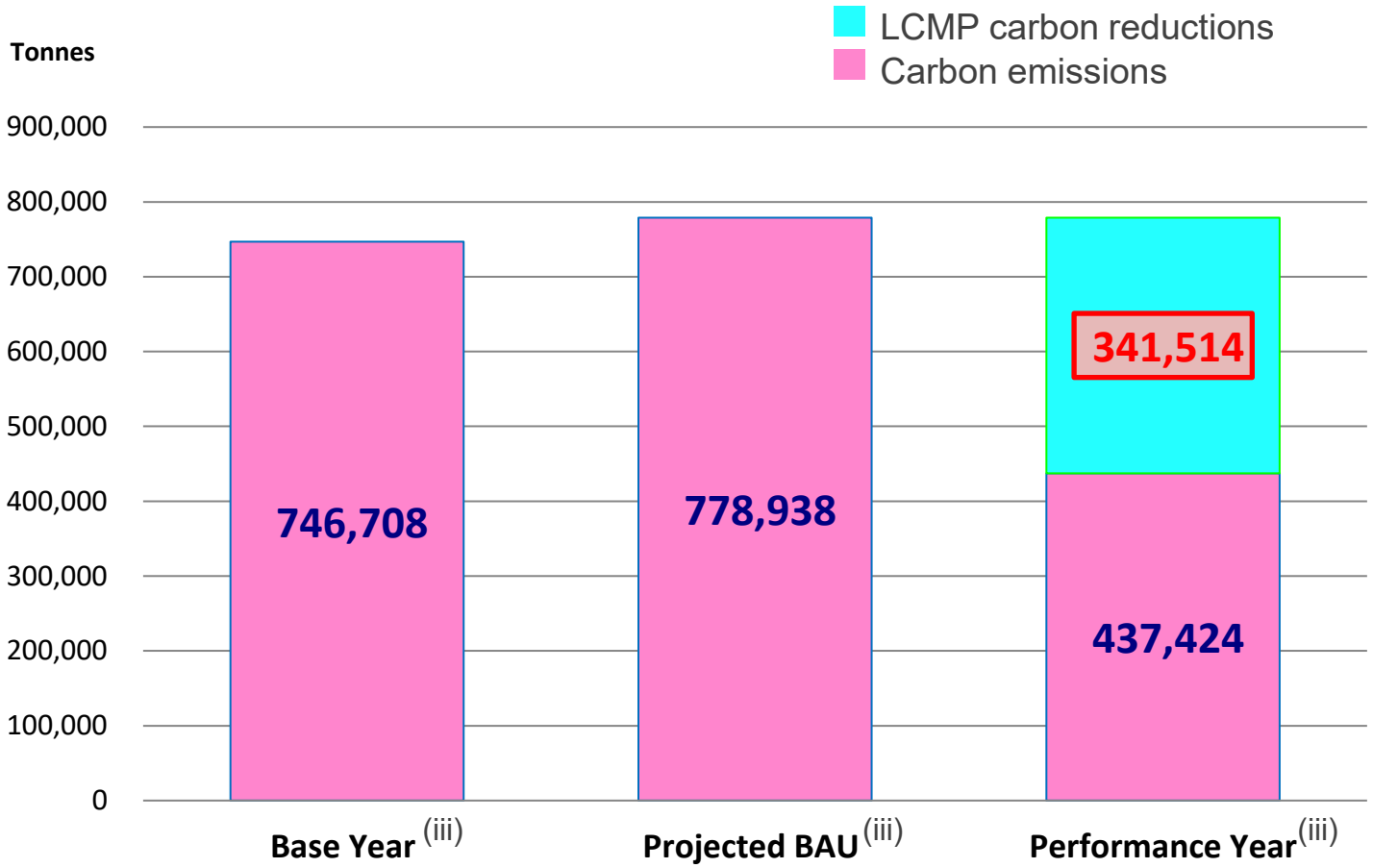
Carbon reduction achievements

Verification year	2024 - 2025
Number of LCMP-accredited companies[(i)]	41
Cumulative change in business volume (base year vs. performance year)	Collectively, these companies grew by 57%
Average annual percentage change in carbon intensity[(ii)] per company	-7%

(i) The LCMP requires companies to conduct verifications every two years. Carbon reduction achievements are therefore calculated and reported according to the data gathered over these two-year periods.
(ii) Carbon intensity is defined as carbon emissions divided by business volume.

Carbon reduction achievements

Carbon emissions performance of the 41 LCMP-accredited companies in 2024-25

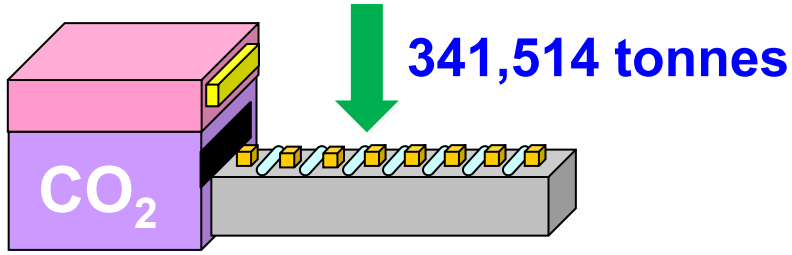


(iii) **Base year:** Setting a base year allows for meaningful and consistent comparisons of emissions over time. The base year is generally the earliest year in which verifiable emissions data are available. This figure can be either a single year or a multi-year average.

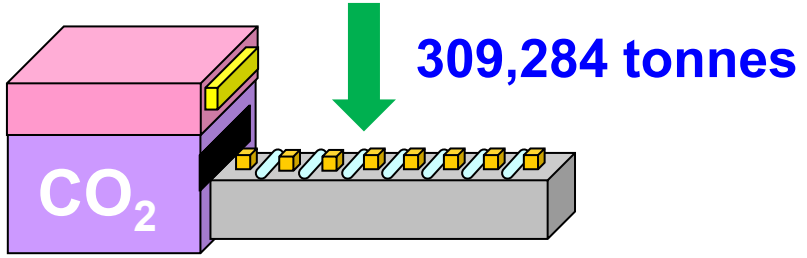
(iii) **BAU (business as usual):** Refers to the estimated greenhouse gas emissions that would be produced under a company's current business model without employing any carbon reduction measures. BAU scenarios are calculated as the carbon emissions (in tonnes) produced by a company in the base year, divided by the business volume of the base year, multiplied by the business volume of the performance year.

(iii) **Performance year:** The latest year for which verifiable emissions data are available after the date of verification. This figure can be either a single year or a multi-year average.

LCMP: Successfully decoupling business growth from greenhouse gas emissions



In 2024-25, after 41 companies implementing the LCMP, even though their businesses collectively grew by **57%**, they still avoided **341,514 tonnes** of carbon emissions when performance year data is compared to projected BAU scenarios, this is equivalent to **14,848,438** trees one year to absorb that amount of carbon emissions.

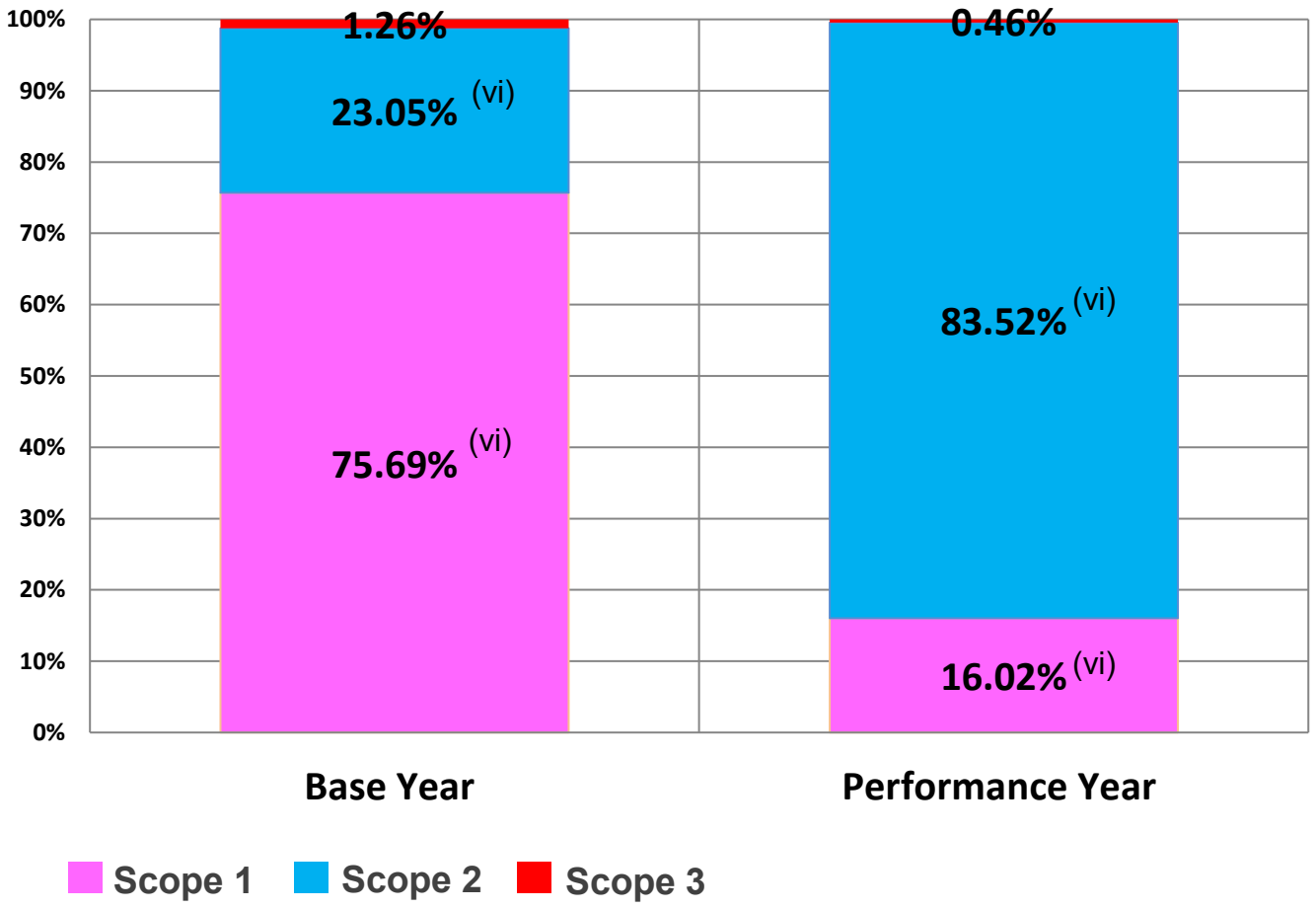


Together, the 41 LCMP companies produced an absolute reduction in carbon emissions of **309,284 tonnes**. Total emissions dropped from 746,708 tonnes in the base year to 437,424 tonnes in the performance year, with the businesses collectively growing 57% in the same period. To achieve these reductions, the companies adopted the high-efficiency and natural gas boilers(iv), improved the efficiency of their facilities and systems, optimised the operational parameters of their production facilities and management system, and utilised renewable energy.

(iv) One LCMP company adopted high efficiency “circulating fluidised bed boilers” to effectively reduce fuel consumption.

Distribution of carbon emissions by scope

Distribution of carbon emissions by scope (v) of 41 LCMP-accredited companies in 2024-25



(v) Carbon emissions by scope according to the Greenhouse Gas Protocol International standard:

Scope 1: Direct GHG emissions
Direct emissions from stationary or mobile combustion sources in or belonging to a factory or manufacturing facility. For example, fuel consumption by boilers or furnaces and emissions from company vehicles.

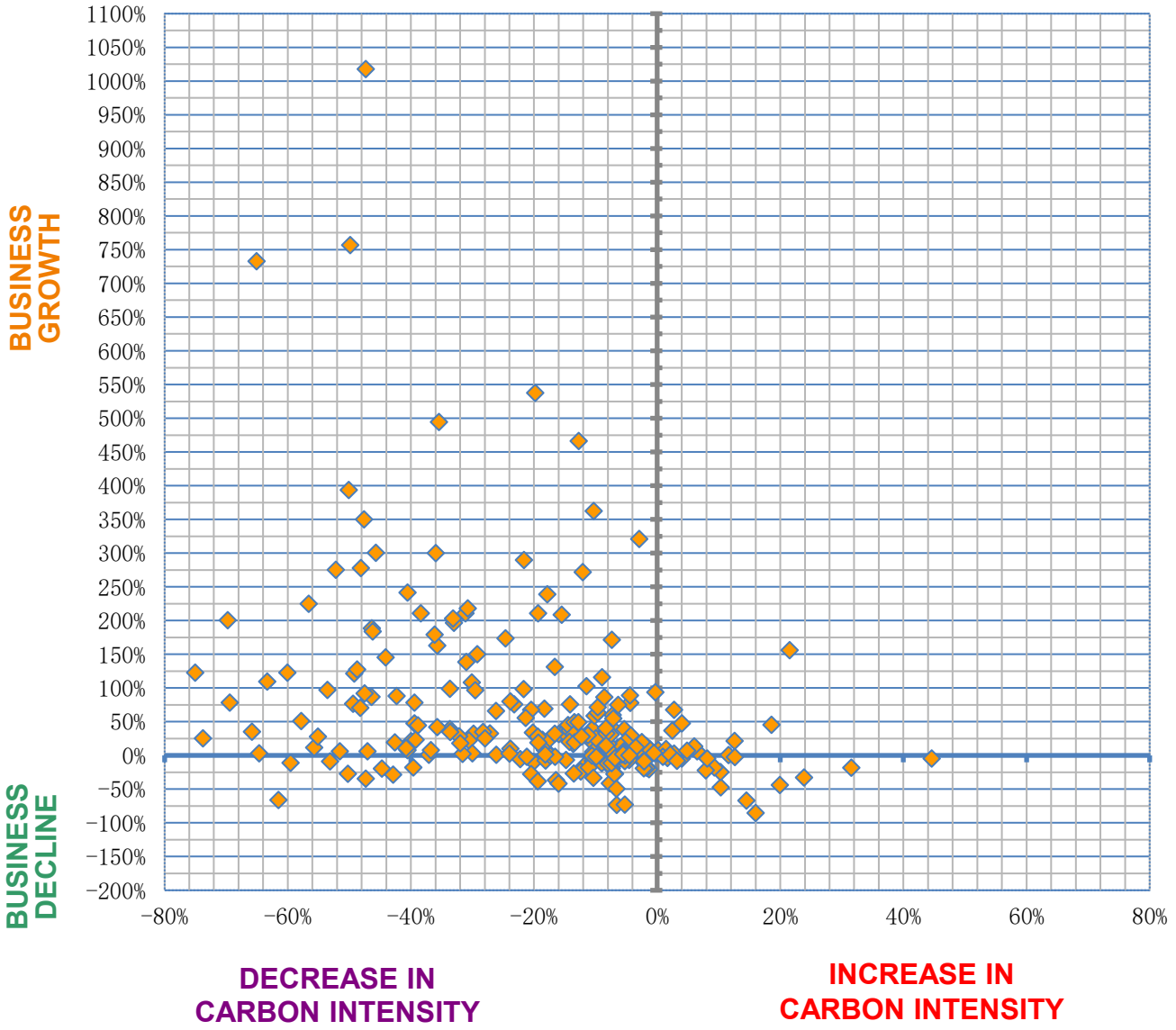
Scope 2: Indirect GHG emissions
Indirect emissions from the generation of purchased electricity, steam or heat. For example, the electricity consumed by a factory that is supplied by a local power grid.

Scope 3: Other indirect GHG emissions
Other indirect emissions may include, for example, emissions resulting from business travel in non-company-owned vehicles or third-party outsourced activities.

(vi Variations between the Scope 1 and Scope 2 carbon emissions in the base year and the performance year are mainly due to changes in the methods by which steam is generated – from the use of a business' own boiler in the base year to purchasing steam from a supplier in the performance year, for example.

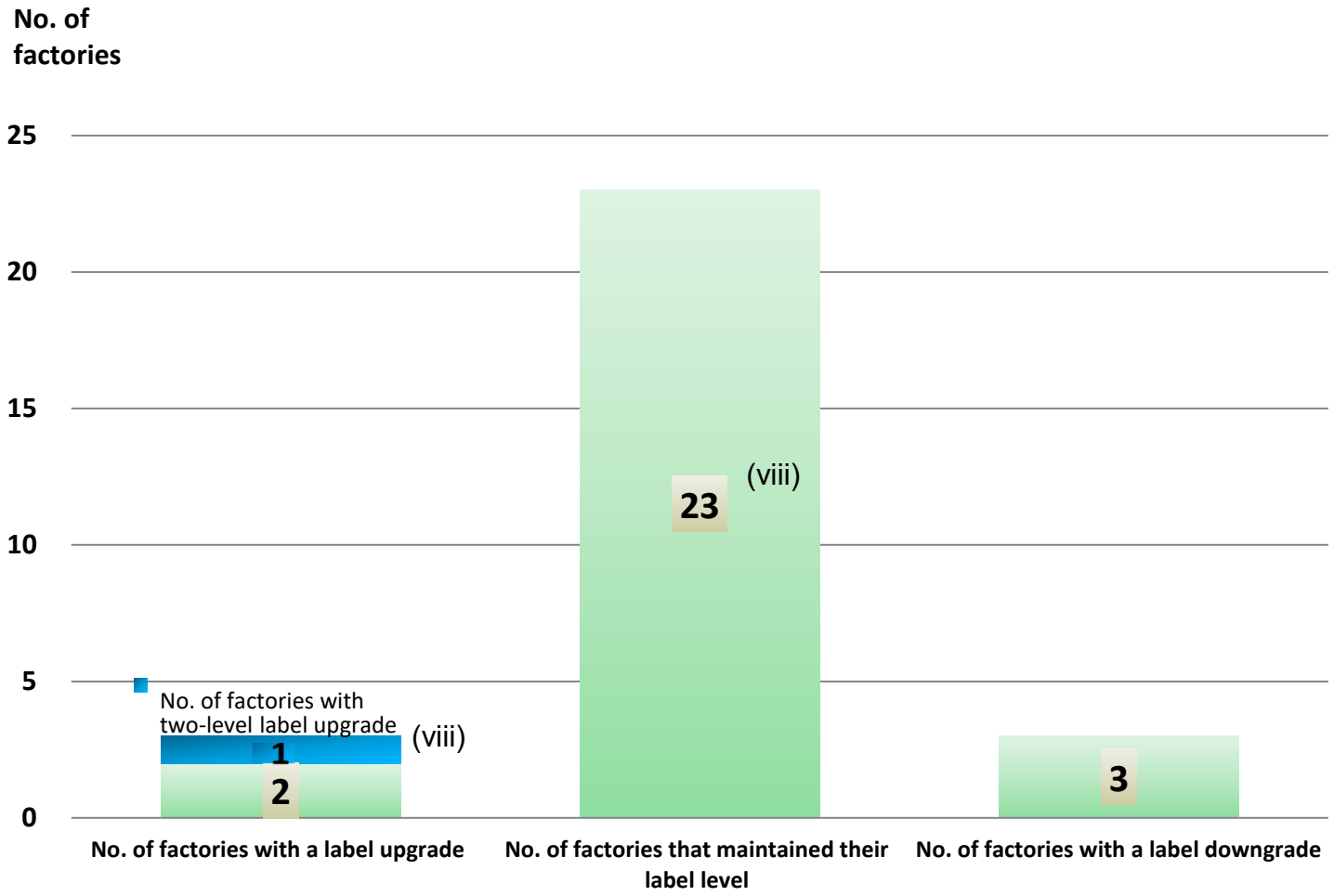
Carbon reduction and business growth

This scatter diagram illustrates the relationship between business growth and carbon intensity reduction at LCMP-accredited companies. The percentage change represents a comparison between the base year and the performance year. The diagram shows that **67%** of the data points lie in the upper left quadrant, representing a scenario of both business growth and decreased carbon intensity. A high percentage reduction in carbon intensity indicates improvements in electricity efficiency or resource usage – this increased efficiency can provide a competitive advantage, which may lead to further business growth.



Level changes in LCMP label tiers

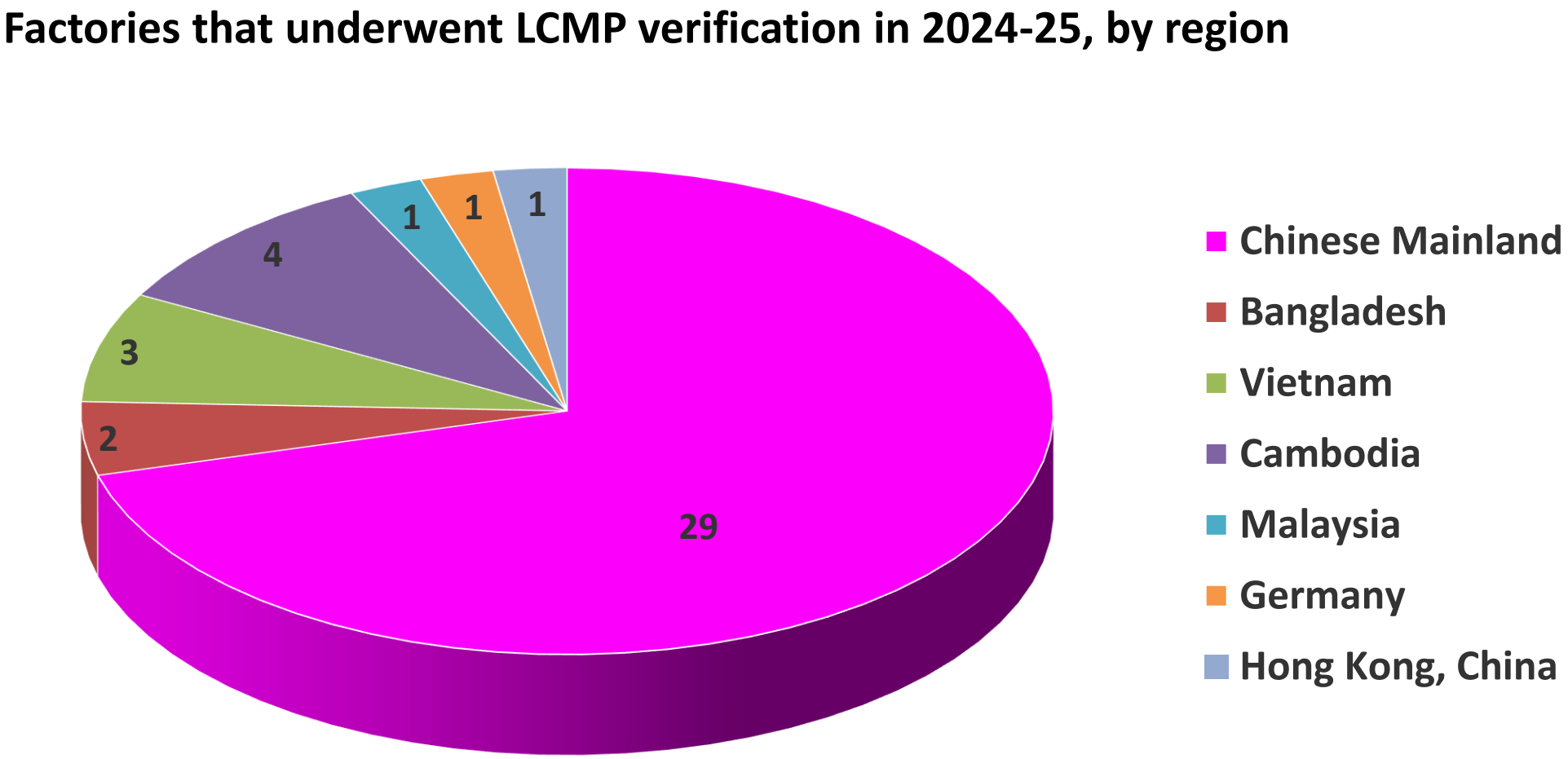
Label changes in LCMP label tiers in 29 LCMP-accredited companies (vii) during 2024-25



(vii) In 2024-2025, twenty-nine LCMP-accredited companies that underwent LCMP verification completed a minimum of two verifications. The remaining LCMP-accredited companies conducted their first LCMP verification, therefore no label level changes were noted.

(viii) In order for LCMP-accredited companies to upgrade or maintain their label level, they must improve their GHG management practices and energy efficiency figures.

Factories that underwent verification in 2024-25, by region



Background

Dongguan Shatin Lake Side Textiles Printing & Dyeing Co., Ltd. (Shatin Lake Side) began participating in the LCMP as a pilot company in 2009. Since 2011, they have received numerous LCMP Gold labels. During their 17 years with the LCMP, the factory has remained successful despite systemic societal changes, the effects of the pandemic and various economic ups and downs – this success is mostly due to their sustainable business philosophy.

Shatin Lake Side was established in December 1996 and specialises in the manufacture of printed and dyed fabrics which are exported to over 40 countries around the globe. A subsidiary factory of Fountain Set (Holdings) Limited, under the COFCO Corporation Ltd.'s Chinatex brand, Shatin Lake Side is Fountain Set's only textile and dyeing enterprise in the Greater Bay Area.

Mission and Targets

Shatin Lake Side follows Fountain Set's founding principles: diligence, frugality, sincerity, and integrity, and is focused on creating sustainable, high-quality products. The company's environmental protection policy mandates legal operations, clean production, public trust and harmony, and continuous improvement. This policy underpins their sustainability journey, with Shatin Lake Side working to reduce the environmental impacts of its business operations through a series of improvement measures that focus on a sustainable future.

In 2025, Shatin Lake Side set a target to reduce their carbon emissions to less than 1.3886 tonnes per RMB10,000 in turnover.

Management Environmental Statement

In 2009, Fountain Set established a Sustainable Development and Corporate Social Responsibility Committee. The committee's director, Mr Ruixue Zhang, is also the Vice President of Fountain Set and the General Manager of Shatin Lake Side. He is a firm believer in sustainability, noting that, "Global warming is producing large-scale impacts on the environment which are predicted to continue. Since our company is easily affected by physical risks and extreme weather, we must act responsibly by paying attention to environmental issues and promoting sustainable development and intelligence. We have changed our mindset from 'We must do this' to 'We want to do this'. While we are improving our market competitiveness and our ability to innovate, we also want to minimise our impacts on the environment."

Through the committee's leadership, Shatin Lake Side has implemented a series of successful green projects and plans to continue to implement carbon reduction projects and promote high-quality sustainable development long into the future.

The LCMP: Helping factories reduce carbon emissions

As an established factory and a long-term supporter of the LCMP, Shatin Lake Side understands that the LCMP's carbon accounting tool quantifies carbon emissions baselines and identifies high energy-usage sources of emissions. This helps companies visualise carbon data for use in their carbon reduction plans. The LCMP also shares best practice energy-saving cases from participating companies or markets – factories can learn from these and develop their own low-carbon manufacturing solutions. In fact, Shatin Lake Side was inspired in this way – they decided to apply an electricity-free cooling coating on the warehouse rooftop to reduce indoor temperatures. The LCMP's third-party verification and labelling system also incentivises factories to explore energy-saving solutions.

Shatin Lake Side employs various carbon reduction measures. The primary ones are:

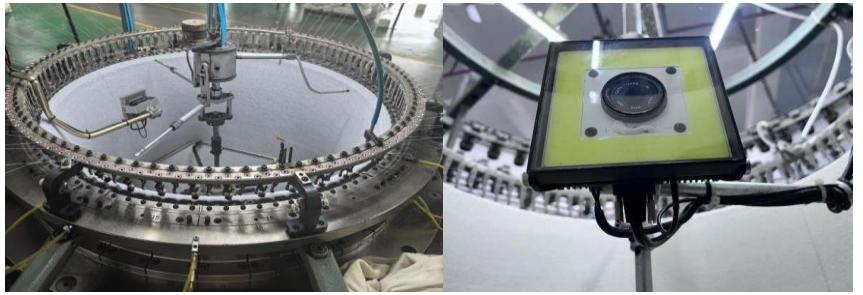
Equipment upgrades and renovations - Upgrades to motors and water pumps, automation and digitisation of equipment, installation of intelligent real-time tracking systems, and intelligent networking of air compressor systems.

Control panel of air compressor

Enhanced recycling and resource use – Implementing water recycling, improvements to medium-pressure steam system efficiency, upgrades to thermal insulation coatings in dyeing machines, application of an electricity-free cooling coating on the chemical warehouse rooftop.

Electricity-free cooling coating

Process and control optimisation – Optimisation and precise monitoring of production processes to improve product quality, controlling and substituting chemical dyes to improve efficiency and reduce consumption, installing AI-powered inspection machines to reduce substandard fabrics amount and workload.



AI fabric inspection system

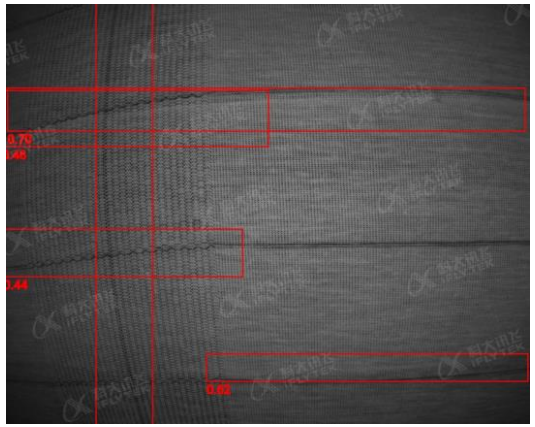
Renewable energy – Installed a 400KWp solar photovoltaic power generation system. This is expected to generate 503,000 kWh of electricity annually and reduce carbon emissions.

Photovoltaic solar system

Best practices

1. AI-powered fabric inspection for knitting machines

Shatin Lake Side adopted AI-based technology that detects fabric surface defects through AI image recognition. This replaces human inspection with AI algorithms, allowing for continuous defect monitoring in circular knitting machines. Through this real-time monitoring, machines can be quickly adjusted to improve quality. This has reduced substandard fabric production by over 70% and reduced broken knitting needles by more than 90%, while cutting the missed inspection rate to less than 2%. Annually, this saves 12,948 kWh of electricity used for repairs, cuts solid waste by 99,600 pounds and reduces carbon emissions by 7.52 tonnes.



Monitoring system (L)
Sample AI fabric inspection photo (R)

2. Intelligent air compressor system networking

Shatin Lake Side connected the air compressor and associated equipment – the dryer, air receiver and cooling tower's circulating water pump – to facilitate integrated operations and maintenance. This allows real-time tracking and immediate repair of any malfunctions, ensuring continuous and stable air supply to the workshops. The system also uses AI technology to optimise system operations through constant learning. This further reduces power consumption, cutting energy consumption by 23.96%, saving 732,084 kWh of electricity annually and lowering carbon emissions by 417.51 tonnes per year.

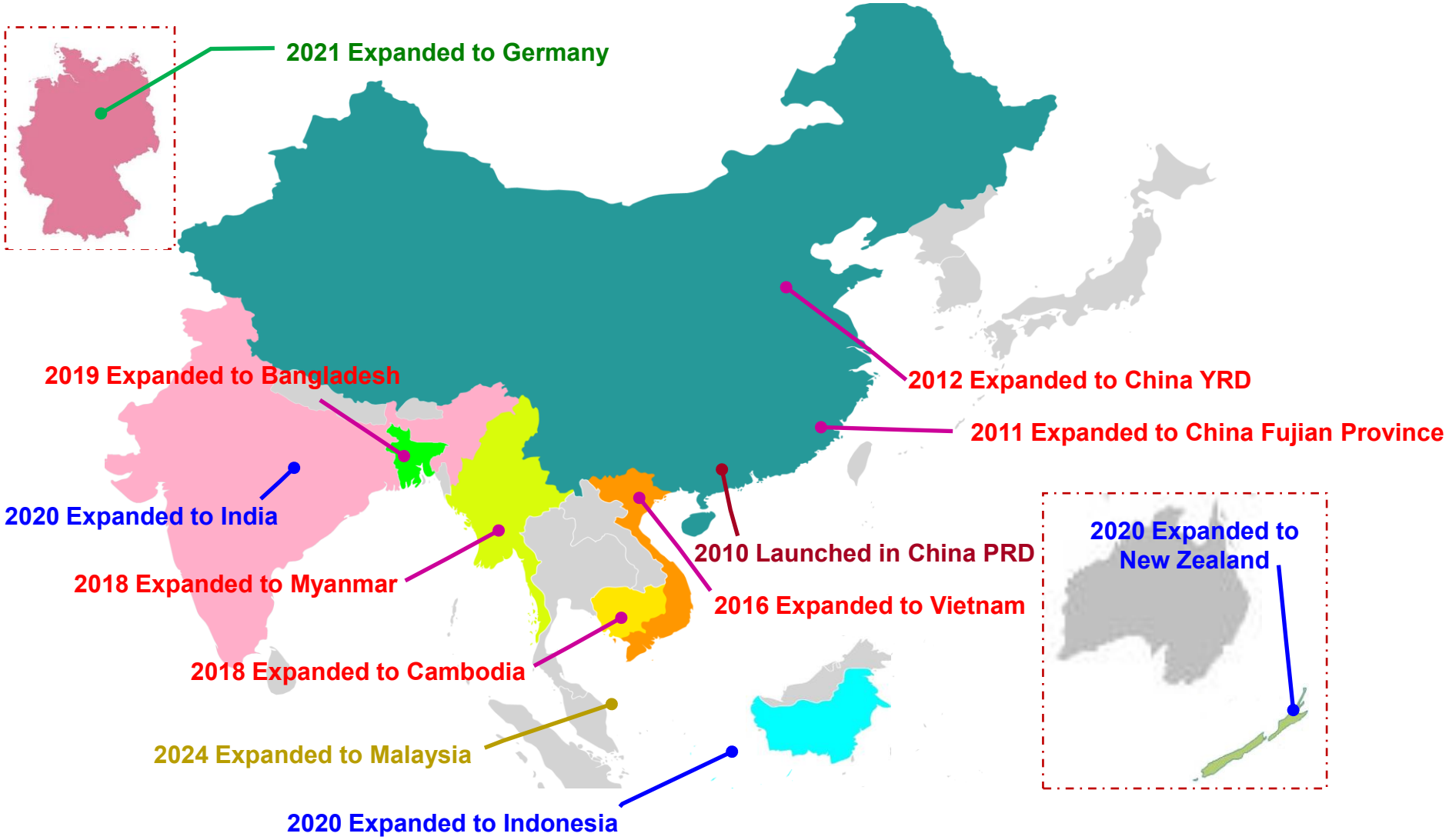
Air compressor network control system

3. Replacing conventional jet overflow dyeing machines with air flow dyeing machines

The new air flow dyeing machines have advanced computers for easier operations. They also are designed with a larger capacity, better capabilities and lower bath ratios. This improves production efficiency, reduces wastewater discharge and lowers water consumption by 61.17%, electricity consumption by 20% and steam consumption by 50%. Together, these features save about 552,000 kWh of electricity and 17,250 tonnes of steam annually, reducing carbon emissions by approximately 5,861 tonnes.

The new air flow dyeing machines

LCMP factories by location



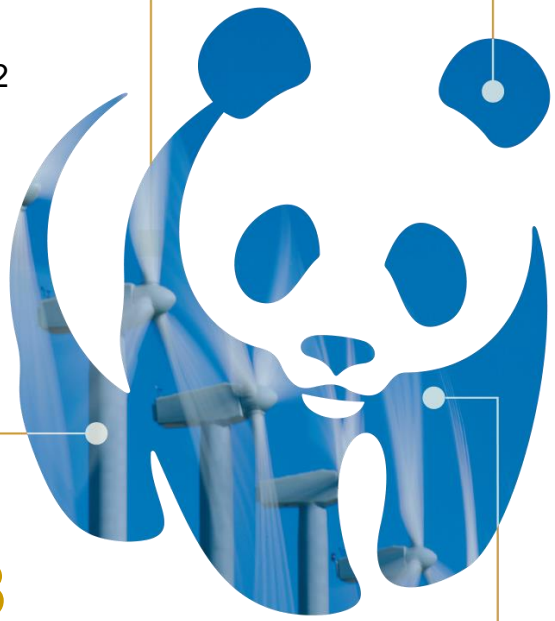
About the LCMP

341,514

Tonnes of carbon emissions that were avoided by 41 LCMP-accredited companies* in 2024-25 versus the business-as-usual scenario

155

Number of factories in the LCMP*: 143
Number of factories in the LCMP Starter*: 12



2010 & 2018

The LCMP was launched in 2010
The LCMP Starter was launched in 2018

-7%

Average annual percentage change in carbon intensity of the 41 LCMP-accredited companies in 2024-25

*As of 31 October 2025

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