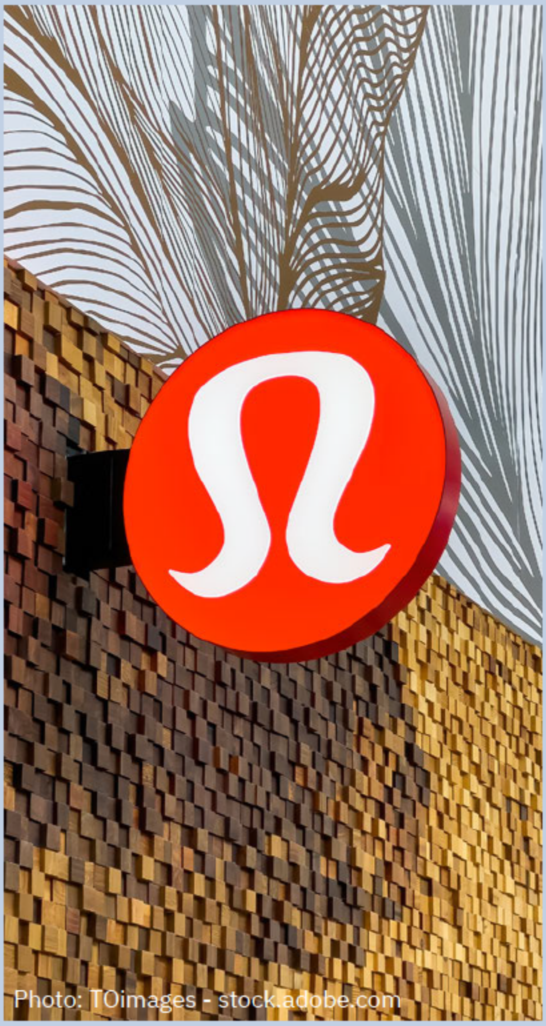
ACTION SPEAKS LOUDER

APRIL 2024

‘Be Planet?’ Toxic pollution and fossil fuel reliance in lululemon’s supply chain

ASL

Contents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1 Introduction

1.1 Why lululemon?

Lululemon Athletica (henceforth referred to as 'lululemon') is a global athletic apparel retailer with over 38,000 employees and 710 stores across 22 countries worldwide.[1]

The brand claims to be purpose-driven, with three pillars of sustainability: Be Human, Be Well, and Be Planet. This approach is intended to address critical social and environmental issues by identifying goals, commitments, and opportunities that support the business to be a responsible industry leader, and to do what's right.[2]

Under the 'Be Planet' section of its website, lululemon claims:

> *'Our products and actions avoid environmental harm and contribute to restoring a healthy planet.'*

However, the findings of this investigation tell a different story. Our research exposes the impacts of fossil fuel reliance at lululemon's supplier sites and surrounding areas, including coal being burned at factories to dye and process fabrics for lululemon's products, and local communities being negatively affected by air and water pollution.

1.2 Purpose of research

lululemon claims to be purpose-driven, with three pillars of sustainability: Be Human, Be Well and Be Planet. Photo: Michael Moloney - stock.adobe.com

As part of Action Speaks Louder's campaign[3] urging lululemon to strengthen its commitments to switch from dangerous fossil fuels to clean renewable energy, the purpose of this research is to investigate some of lululemon's most important suppliers to better understand how fossil-powered textile production is impacting the environment and the people who depend on it.

The green transition must also be a just transition. Therefore, we do not name and shame individual suppliers when referring to their environmental performance, and we do not recommend that lululemon terminate supplier relationships based on these findings. Instead, we encourage lululemon to invest in and work collaboratively with their suppliers on a long-term basis to improve environmental outcomes. Supplier-led organizations have made recommendations on how fashion brands can support their suppliers to decarbonize in an equitable manner,[4] and provided suggestions for financing models to enable fair access to finance for effective supplier decarbonization.[5]

As an influential global brand that generated $9.6 billion USD of revenue in 2023,[6] lululemon has the resources to accelerate true climate action by setting an industry-leading target of 100% wind and solar power in their supply chain by 2030 while supporting its supply chain in this transition. In doing so, lululemon also has the power to help accelerate climate action across the countries it operates in and send a strong signal for the entire fashion industry to join them.

1.3 Research methodology

Lululemon's greenhouse gas emissions reached over 1.2 million metric tonnes of cO_2e (carbon dioxide equivalent) in 2022 — an increase of almost 65% since 2020. 99.7% of these emissions were in Scope 3, with 26.8% coming from manufacturing.[7]

FIGURE 1: LULULEMON'S CARBON FOOTPRINT

1A: lululemon's emissions in tCO_2e (2020-2022)

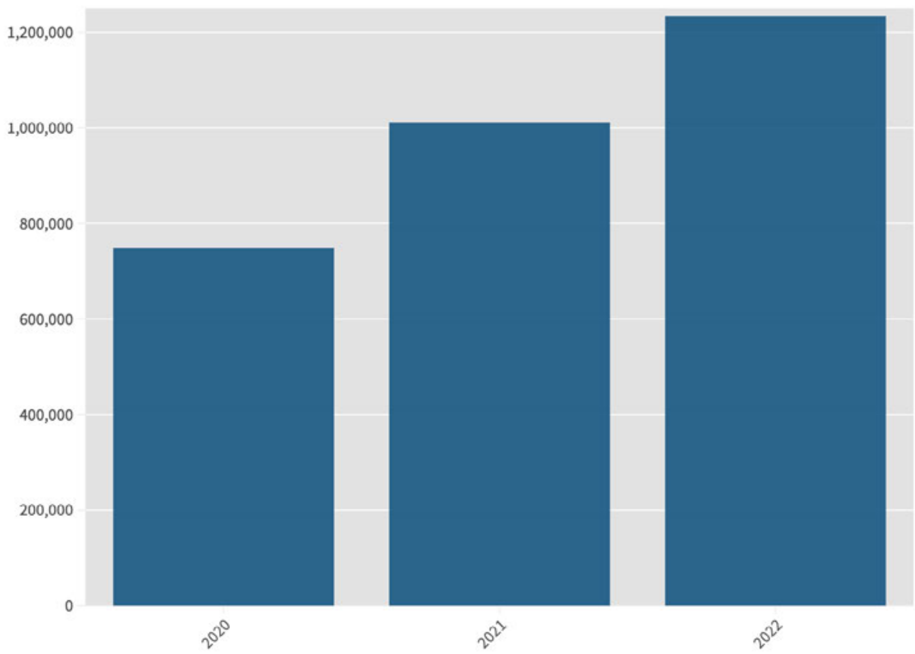
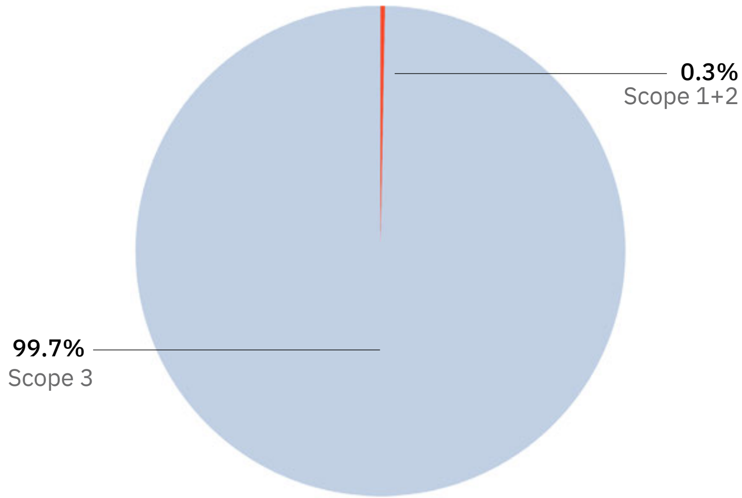
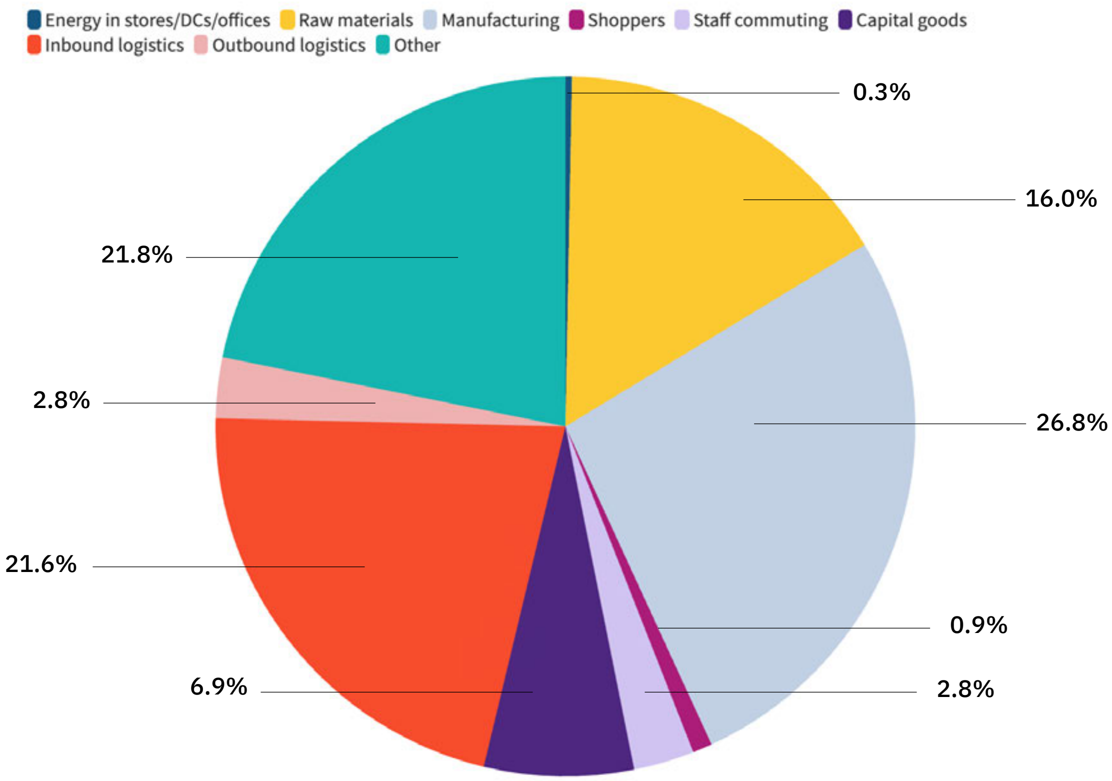


Figure 1 data source: lululemon 2022 impact report

1B: lululemon's emissions by scope in 2022



1C: lululemon's carbon footprint in 2022



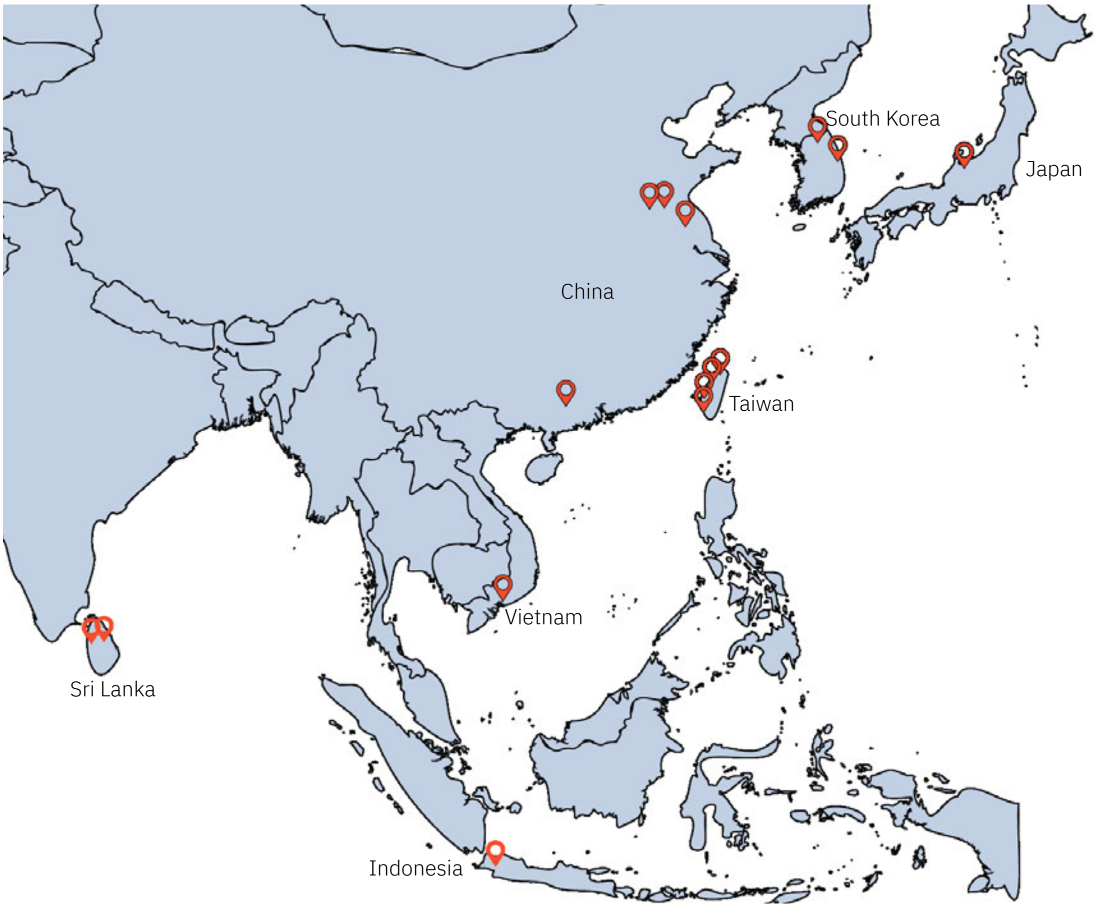
The majority of supply chain emissions in the fashion industry are associated with textile production at Tier 2 (the dyeing and processing of materials),[8] which for lululemon, is primarily located in South and Southeast Asia. To identify lululemon's Tier 2 suppliers, we used the brand's 2023 supplier list[9] and verified locations using Google Maps and Open Supply Hub.

This research was conducted across six months from September 2023 to February 2024.

The first stage of the process included conducting desk-based research that used publicly available data to analyze the climate commitments and environmental performance of 27 Tier 2 suppliers in China, Taiwan, Vietnam, Indonesia, Japan, South Korea, and Sri Lanka, which represent 100% of direct Tier 2 suppliers according to lululemon's 2023 public supplier list.[10] Neither lululemon nor its suppliers publicly disclose information about the volume or proportion of orders specifically made for lululemon at each factory.

Exterior view of a textile factory supplying lululemon in Taiwan

FIGURE 2: MAP OF LULULEMON SUPPLIER REGIONS



The second stage of research included conducting field visits to 14 selected supplier sites in Taiwan, Vietnam, Indonesia, and Sri Lanka in order to make observations, collect photos and videos, conduct water pollution tests, and survey local residents. 13 of the 27 factories were excluded from the field visits due to security, accessibility, and scheduling factors. Therefore, the field research does not represent a complete picture of lululemon's supply chain, although reasonable efforts have been taken to ensure a fair geographic spread that represents over half of lululemon's total textile suppliers, according to its most recently published supplier list.

2 Summary of key findings

2.1 lululemon suppliers have set climate targets, but they're not on track to meet them

Lululemon has not publicly committed to a time-bound renewable energy target for their supply chain *or* an absolute emissions reduction target for scope 3. Although lululemon indicates it is making efforts to increase energy efficiency and phase out carbon-intensive processes in the supply chain, the company does not provide specific details on how it incentivizes, engages with, and provides support for its suppliers to implement these measures.[11]

Exterior view of a textile factory supplying lululemon in Taiwan

The problem with this strategy becomes clear when we look at the gap between targets and actual environmental performance at some of lululemon's key supplier sites, shown in Figure 3.1. Our research shows that several suppliers have set an emissions reduction target, with some also setting targets related to coal phaseout, energy efficiency, and renewable energy. However, as shown in Figure 3.2, most of these suppliers (11 of 13) have increased emissions, made limited progress in reducing emissions, or do not provide sufficient detail about their progress against emissions reduction targets to judge progress. For example, one company that operates factories in Taiwan and China (Company H) increased its emissions by 7.9% between 2021 and 2022, despite its goal to reduce emissions by 50% by 2030.

Fossil fuels notably feature in the energy mix of all of lululemon's Tier 2 suppliers that have disclosed energy consumption data, despite some efforts toward transitioning to renewables by installing onsite solar panels, as shown in Figure 3.3. For example, at a company that operates factories in Taiwan and Vietnam (Company B), just 0.6% of energy consumption is from solar power, while the majority of energy comes from gas.

Coal is used as an energy source for at least five of lululemon's Tier 2 suppliers, despite lululemon's commitment to phase out coal by 2030 through the UN Fashion Industry Charter for Climate Action,[12] and its claim to have collected coal phase-out commitment letters and action plans from suppliers with coal boilers.[13] For example, Company A consumed 8,431 tonnes of coal in 2022 — an increase of 9.7% since 2021, while at Company C, coal consumption made up more than 58% of total energy demand in 2022, as shown in Figure 3.3.

Lululemon claims to encourage its suppliers to reduce climate impacts, for example through a Vendor Environmental Manual[14] that provides guidance on energy consumption and other environmental issues. However, from the data reported by its suppliers (Figures 3.2 and 3.3), there appears to be a lack of coordinated effort to provide financial and technical support for suppliers to accelerate the transition to renewable energy in time to meet 2030 climate targets. This mobilization of resources could be advanced by lululemon setting a public-facing, time-bound target for 100% renewable energy in its supply chain, backed up by a credible strategy to consult and engage with suppliers to accelerate this transition.

Further environmental analysis of lululemon's supply chain, based on trade export data from Vietnam and Sri Lanka, was recently conducted by Stand.earth. Their analysis of the climate targets of some of lululemon's largest tier 1 and 2 suppliers aligns closely with our findings that lululemon is failing to support its suppliers to set and meet climate targets ambitious enough to reduce the brand's significant scope 3 emissions. [15]

2.2 There are multiple violations of environmental regulations in lululemon's supply chain

Wastewater discharged from a textile factory supplying lululemon in Taiwan, [left] daytime and [right] nighttime.

According to its Vendor Code of Ethics, compliance to which is a condition to maintain a business relationship with lululemon, lululemon requires its suppliers to comply with local environmental regulations and implement environmental policies and procedures to mitigate negative impacts in terms of energy, air emissions, waste, water and hazardous materials.[16] However, there are records of local environmental regulation violations and significant fines issued across multiple Tier 2 suppliers in lululemon's network, including repeated violations at several of the same supplier sites, as shown in Figure 3.5.

This could indicate a lack of due diligence on the part of lululemon to ensure its supply chain reflects its commitment to avoiding environmental harm and contributing to restoring a healthy planet.[17] It could also indicate that local environmental regulations alone may not be sufficient to control the adverse environmental impacts of textile production. Therefore, lululemon should take responsibility for implementing additional due diligence measures to prevent, mitigate, and remediate environmental harms.

Our research found that Taiwan is a hotspot for records of fines issued for environmental violations related to air pollution, water pollution, and waste treatment. As shown in Figure 3.5, across 10 factories, 56 separate cases of penalties were identified since 2017, including 27 air pollution violations, 12 water pollution violations, and 17 waste treatment violations. These cases resulted in total fines of $12,674,200 TWD ($402,911 USD). The biggest sources were two specific factories (C1 and F1) that represented 37 different cases between them, 27 of which were violations of Taiwan's Air Pollution Control and Water Pollution Control Acts.

2.3 At some of lululemon's supplier sites, communities are impacted by air pollution and toxic wastewater

Social and environmental issues are intersectional, therefore alongside collecting quantitative data, our research incorporates interviews with local communities, including residents living within 3km from factory sites.

For example, in Sri Lanka, several people expressed concern over smoky, polluted air with unpleasant smells and colored bubbles in the river that they believe may be caused by factory emissions or chemical discharge. Some local residents suggested that improvements needed to be made at the factory to address increasing air, water, and solid waste pollution, which impacts their ability to use local river water to drink and bathe.

Wastewater flowing into river at a textile factory supplying lululemon in Indonesia

Additionally, researchers observed the visual impacts of air and water pollution at several supplier sites and collected photo and video evidence where possible. These images presented issues such as dark grey smoke being emitted from chimneys, what appeared to be piles of coal being shovelled into boilers, and visually polluted water being discharged from wastewater pipes into rivers. For example, in Indonesia, thick grey wastewater flows with white foam were observed on the Sabi River at a location where local residents access the waterway.

Lululemon claims: ‘We partner with our suppliers to create safe, healthy, and equitable environments that support the wellbeing of the people who make our products.’[18] However, researchers identified signs of air and water pollution affecting the wellbeing of local residents close to lululemon’s factory sites, some of which are located within larger industrial zones

2.4 Tests show evidence of water pollution elevated above safe levels near factories supplying lululemon

Wastewater discharge area at a textile factory supplying lululemon in Taiwan

Dyeing and processing (Tier 2) is the most energy-intensive stage of the supply chain due to requirements for large amounts of hot water and steam, which are commonly produced by burning coal.[19] Coal burning produces air pollutants such as VOCs (volatile organic compounds), nitrogen oxides, sulfur dioxide and particulate matter.[20]

Synthetic chemicals are also used at this stage in order to formulate a wide range of colors and process fabrics with finishes such as waterproofing and crease resistance. These chemicals can include hazardous substances with human health impacts, such as AZO dyes, PFAS (polyfluorinated substances), PFCs (Perfluorocarbons), formaldehyde, chromium, phthalates, and more.[21]

In order to better understand how lululemon’s textile production is impacting local ecosystems through the dyeing and finishing process, we collected water samples to test for common pollutants near six factories in Sri Lanka, Indonesia, and Taiwan. At three different sites, levels of several common pollutants were found to be elevated above regulatory standards. For example, at wastewater outlets linked to factories A1 and A2 in Sri Lanka, levels of sulfates, which may be linked to textile dyeing processes, were almost four times higher than the maximum regulatory limit, as shown in Figures 5.2.1 and 5.2.2.

While findings from these lab tests represent a small sample of total supplier sites (due to various factors affecting the accessibility of testing processes), further testing should be conducted across all Tier 2 suppliers in order to monitor pollution levels in the future. Overall, the results can be combined with evidence from the desk-based research in Section 3 to formulate a more complete picture of the environmental impacts in Tier 2 of lululemon's supply chain.

There are various interventions that could be made at these supplier sites with support from lululemon, for example, simple onsite energy efficiency and resource management.[22] Changes to dyeing and finishing techniques, such as dope dyeing, digital printing, laser pre-treatment and finishing, dry processing, and waterless dyeing technology, could also contribute to reducing pollution.[23] lululemon claims to be currently assessing the potential for emerging technology solutions, including clean electrification and evolved thermal processes, however a lack of detail is disclosed on implementation and impact at Tier 2.[24]

3 Supplier environmental data

3.1 Methodology

This research focuses on 27 factories supplying textiles to lululemon in seven countries in Asia: Mainland China, Indonesia, Sri Lanka, Taiwan, Vietnam, Japan, and South Korea. These factories represent 100% of lululemon's Tier 2 factories disclosed in the brand's 2023 supplier list,[25] the majority of which are in Taiwan, China, and Vietnam.[26]

Among the list of 27 factories selected for this research, most are not directly owned and operated, but instead are a subsidiary of a larger parent company. Since parent companies disclose information at a group level that affects their subsidiaries, the analysis hereafter focuses on 13 total companies.

The company and factory names have been anonymized for the purposes of this report, in order to focus on lululemon's responsibility to engage with and provide support for its entire supply chain.

FIGURE 3.1: LIST OF COMPANIES INCLUDED IN RESEARCH

Country (headquarters)	Parent Company	Factories
China	A	- A1* (Sri Lanka) - A2* (Sri Lanka) - A3* (China)
Taiwan	B	- B1 (Taiwan) - B2* (Taiwan) - B3* (Vietnam)
Taiwan	C	- C1* (Taiwan)
Japan	D	- D1 (China) - D2 (Vietnam) - D3 (Vietnam) - D4 (Japan)
Taiwan	E	- E1* (Vietnam) - E2 (China)
China	F	- F1** (Taiwan)
Indonesia	G	- G1* (Indonesia)
Taiwan	H	- H1* (Taiwan) - H2 (China) - H3 (China)
Taiwan	I	- I1* (Taiwan) - I2 (Taiwan) - I3* (Taiwan)
Taiwan	J	- J1* (Taiwan) - J2* (Taiwan)
China	K	- K1 (China) - K2 (China)
South Korea	L	- L1 (South Korea)
South Korea	M	- M1 (South Korea)

* These 14 factories were included in the field visits (section 4)
** Data was anavailable for parent company F, therefore factory-level data has been used (F1)

In order to analyse the environmental disclosures of the 13 companies, we used publicly available data such as reports published by the companies, information from company websites, articles from local and international news websites, reports published by NGOs (non-governmental organisations), academic papers, open source map data, and information from governmental entities.

It should be noted that there was a lack of transparency regarding the environmental commitments and practices of many of the companies. For example, four companies did not report on greenhouse gas emissions, six companies did not report on energy consumption, and eight companies did not report on air pollution. In many cases, historical data is also incomplete, making it difficult to judge progress over time.

All references for the supplier environmental data can be found in the appendix.

3.2 Greenhouse gas emissions

FIGURE 3.2: SELF-REPORTED EMISSIONS DATA AND EMISSIONS REDUCTION TARGETS

- At least 50% of target achieved (green)
- Limited progress towards target (yellow)
- No progress or insufficient data (red)

Company	Scope 1 emissions reduction target	Scope 1 baseline emissions (tCO2e)	2020	2021	2022	Progress against target
A	65% reduction per unit of production by 2030	2018: 34,661	+54%	+108%	+139%	(red)
B	30% reduction by 2025	2017: 101,952	-6%	+4.2%	-1.5%	(yellow)
C	26.3% reduction by 2027	2019: 445,431	-14%	-22%	-37%	(green)

D	50% reduction by 2030	2013: 2,520,000	+19%	+30%	+21%	
E	20% reduction by 2025, 40% reduction by 2030, net zero by 2050	2020: 2,432,000	No data	-3%	-14%	
F1*	15% reduction by 2023, 25% reduction by 2025, net zero by 2050	2020: 125,306	No data	-10.6%	+4.2%	
G	No data	No data	No data	No data	No data	
H	50% reduction by 2030, net zero by 2050	2014: 77,296	-12%	-6.8%	+7.9%	
I	24% reduction by 2030	2020: No data	No data	No data	19,559 tCO2e	
J	15% intensity-based reduction by 2025; net zero by 2050	2018: No data	No data	No data	19,527 tCO2e	
K	No data	No data	No data	No data	No data	
L	No data	No data	No data	No data	No data	
M	No data	No data	No data	No data	No data	

* Data was anavailable for parent company F, therefore factory-level data has been used (F1)

3.3 Energy consumption

Please note, the energy mix of electricity (ie. fossil fuels vs. renewables) is not specified for any of the companies that report energy consumption from electricity. However, notably, the electricity grid mix of all seven countries where factories are located is dominated by fossil fuels, mostly coal.[27]

FIGURE 3.3: SELF-REPORTED DATA ON ENERGY CONSUMPTION AND ENERGY TARGETS

- Green: At least 50% of target achieved
- Yellow: Limited progress towards target
- Red: No progress or insufficient data

Company	Energy consumption targets/ measures	2022 total energy consumption (GJ)	2022 energy mix	2022 renewable energy use	2022 coal consumption	Progress against target
A	N/A	2,810,167.2	- Electricity 25%** - Coal 1.3% - Unspecified mix of gas and steam	12,225.6/GJ solar power generated	8,431 tonnes/ 247,092 GJ	Red
B	- 10% renewable energy use in Taiwan by 2025 - 15% renewable energy use in overseas factories by 2025	1,029,816.2	- Gas 40% - Steam 35% - Electricity 23%	Solar power generated 0.6% of energy consumption	No use of coal since 2020	Red
C	- Reduction of coal use - Utilization of self-produced renewable energy	2,889,094	- Coal 64% - Electricity 18% - Natural gas 12%	11,843 GJ renewable energy consumed (0.41% of total demand)	1,692,366 GJ	Yellow
D	- Increase of renewable energy - Electrification of mobility - A circular economy - Recycling and waste reduction	61,300,000	No data	300,000 GJ renewable energy consumed (0.49% of total demand)	No data	Red

E	- Increase installed capacity of renewable energy to 400 GWH by 2030 - Improve energy efficiency - Adopt low carbon fuel alternatives	21,168,000	- Electricity 28.9% - Gas 35% - Coal 30%	Solar power provided 1.9% of energy consumption. Biofuel provided 317 GJ (0.0015%) of energy.	6,547,000 GJ	
F1*	- Build solar power - Replace coal boilers with biomass fuels - Energy saving machines	1,453,193.8	- Coal 54% - Electricity 31%	Biofuel provided 1% of energy consumption.	814,738.1 GJ	
G	No data	No data	No data	No data	No data	
H	- Replacement of coal boiler by natural gas - Energy saving machines	276,399.7	- Electricity 87% - Gas 12%	No data	22,349.35 tonnes	
I	No data	No data	No data	No data	No data	
J	20% reduction of energy consumption by 2025	No data	Unspecified mix of gas, electricity, steam and LPG (liquified petroleum gas)	Solar power provided 2,760GJ of energy.	No data	
K	No data	No data	No data	No data	No data	

L	No data	No data	No data	No data	No data	
M	No data	No data	No data	No data	No data	

* Data was unavailable for parent company F, therefore factory-level data has been used (F1)

3.4 Air pollution

Smoke from chimneys during day time; [right] and night [left] at a textile factory supplying lululemon in Taiwan.

FIGURE 3.4: SELF-REPORTED AIR POLLUTION DATA

Company	Air pollutant	2020 (metric tons CO2e)	2021 (metric tons CO2e)	2022 (metric tons CO2e)
A	No data	No data	No data	No data
B	NOx	8,945.39	22,107.38	16,656.12
	SOx	6,912.71	9,524.53	3,568.81
	VOCs	14,101.48	6,982.48	21,978.16
	Particulate Matter	10,332.21	6,117.39	11,531.43
C	No data	No data	No data	No data

D	NOx	1,020.70	1,372.90	1,746.7
	SOx	1,404.70	1,111.30	425.1
	VOCs	557.8	485.9	743.5
	Particulate Matter	133.3	207.4	443.5
E	NOx	682	742	655
	SOx	372	349	351
	VOCs	504	502	464
	Particulate Matter	75	75	84
F1	NOx	29.6	33.81	20.61
	SOx	18.56	14.03	44.18
	VOCs	59.6	83.74	85.13
	Particulate Matter	8.98	8.21	3.51
G	No data	No data	No data	No data
H	NOx	25,925.78	29,887.32	34,790.78
	SOx	19,306.45	31,999.61	27,110.45
	VOCs	5,866.60	6,531.99	6,531.18
	Particulate Matter	5,857.10	7,400.76	9,731.19
I	No data	No data	No data	No data
J	No data	No data	No data	No data
K	No data	No data	No data	No data
L	No data	No data	No data	No data
M	No data	No data	No data	No data

* Data was unavailable for parent company F, therefore factory-level data has been used (F1)

The air pollutants NOx, SOx, VOCs, and PM can be produced from burning coal.[28] Coal is consumed by at least five of the suppliers featured in this report, as seen in Figure 3.3.

According to self-reported data, levels of VOCs (volatile organic compounds) increased at companies B, D, and F1 between 2021-2022. Exposure to VOCs may have adverse health effects such as damage to the liver, kidney, and central nervous system.[29] At companies D and H, levels of NOx (nitrogen oxides) increased from 2021-2022. This is significant because of the impacts of NO2 on the human respiratory system and adverse environmental effects such as acid rain and nutrient pollution.[30]

Meanwhile, at companies B, D, E, and H, levels of PM (particulate matter) increased from 2021-2022. Inhaling PM can cause serious health problems such as decreased lung function, asthma, and other respiratory problems, as well as haze and reduced visibility in the environment.[31] Finally, at companies E and F1, levels of SOx (sulfur oxides) increased between 2021 and 2022. Exposure to sulfur dioxide can have negative respiratory and cardiovascular effects and impact the environment by damaging plants and trees.[32]

3.5 Environmental regulation penalties

FIGURE 3.5: RECORDS OF ENVIRONMENTAL REGULATION PENALTIES FROM GOVERNMENT DATA

Please note that data on environmental regulation penalties is listed per factory, not per parent company, due to the location-specific nature of the violations. The time period for the violations identified is January 2017 - December 2023.

Factory name	Total		Air pollution		Water pollution		Waste treatment/ disposal	
	Penalties	Fines/TWD	Penalties	Fines/TWD	Penalties	Fines/TWD	Penalties	Fines/TWD
B1	0	0	0	0	0	0	0	0
B2	1	100,000	1	100,000	0	0	0	0
C1	16	2,302,000	4	690,000	6	1,462,000	6	150,000
F1	21	2,534,200	17	2,515,000	0	0	4	19,200
H1	4	642,000	0	0	2	600,000	2	42,000
I1	0	0	0	0	0	0	0	0
I2	3	6,164,000	0	0	3	6,164,000	0	0
I3	5	786,000	4	780,000	0	0	1	6,000

J1	4	40,000	0	0	1	10,000	3	30,000
J2	2	106,000	1	100,000	0	0	1	6,000

Some notable examples of these environmental penalties, gathered from the environmental pollution monitoring tool Thaubing Footprint Project,[33] include:

- Factory F1 was fined NT$ 750,000 on 1st June 2022 for violating the Air Pollution Control Act, Article 32, as a result of a cloth warehouse catching fire due to failure to manage flammable materials and failure to install pollution collection and treatment equipment on site.
- Factory I3 violated the Air Pollution Control Act four times in 2022 alone and paid a total of NT$ 780,000 in fines due to issues such as failure to manage pollution control equipment and failure to dedicate personnel to air pollution prevention.
- Factory I2 was fined NT$ 3,666,000 on 17th October 2017 for violating the Water Pollution Control Act, Articles 7 and 28, due to waste sewage flowing out into nearby Fan Ya Ditch, resulting in elevated levels of biochemical oxygen demand, chemical oxygen demand, and zinc in the water.
- Factory H1 was fined NT$ 168,000 on 5th September 2019 for violations of the Water Pollution Control Act, Article 7, and Effluent Standards, Article 2, because lab analysis of sampled wastewater showed elevated levels of chemical and biochemical oxygen demand and suspended solids. On 21st April 2020, the company was fined NT$ 432,000 again for further violations of the Water Pollution Control Act, suggesting issues were not immediately remediated after the first fine, however, more recent results may indicate later remediation, as discussed in Section 5.4.

3.6 Waste and water

Due to limited access to public data, this report does not include in-depth analysis of the companies' policies and processes relating to waste disposal and water consumption. However, two interesting findings are worth noting.

Wastewater discharge area at a textile factory supplying lululemon in Taiwan

1. Waste incineration is practiced among six of the supplier companies that provide waste disposal information, while one company reported thermal treatment of waste (Company C). This is concerning due to a recent report from The Cambodian League for the Promotion and Defense of Human Rights, which

exposes the health risks of burning textile waste from the fashion industry.[34]

Additionally, three suppliers report sending textile waste to landfills, an issue which The Or Foundation reports can cause extensive social and environmental harm in regions that receive an excess of exported textile waste. [35]At least six of the companies also have records of violating environmental regulations on waste treatment and disposal, as shown in Figure 3.5. For example, Company J1 was fined on 3 separate occasions for its failure to properly treat waste, including cotton scraps, waste fabric, and plastic threads and pellets.

2. Secondly, most of the companies that provide water consumption and disposal information report water consumption increasing over time, and rates of water reuse/recycling are extremely low. Meanwhile, self-reported water pollution data, which was only available from factory A3, shows an increase from 2019-2021 in levels of pollutants such as ammonia nitrogen, sulfide, chromium, and aniline.

As discussed in section 2.4, textile processing is highly intensive in terms of water consumption and water pollution and therefore validates our recommendation for lululemon to focus its attention on supporting Tier 2 suppliers to reduce environmental impacts by, for example, installing more efficient textile processing machinery rather than boilers powered by burning fossil fuels. Fashion for Good estimates that switching from wet to dry processes for textile coloration could use up to 93% less energy, 99% less water, and 90% fewer chemicals, and ultimately reduce the global warming potential of the dyeing process by up to 70%.[36]

3.7 Conclusions

As the lack of progress toward climate targets in Figures 3.2 and 3.3 suggests, the majority of suppliers do not appear to have implemented effective decarbonization strategies and fail to show sufficient progress toward the reduction of greenhouse gas emissions, energy consumption, and air pollution. This brings into doubt lululemon's ability to reduce Scope 3 emissions sufficiently to meet its commitment to reach net zero by 2050[37] if trends continue. As suppliers' emissions increase, lululemon's scope 3 emissions will continue to increase too as its business rapidly grows, with plans to generate $12.5 billion in 2026 - double its 2021 revenue of $6.25 billion.[38]

Only four out of 13 companies were found to have declared a target to achieve net zero emissions by 2050, while only two companies promised to halve emissions by 2030 (Figure 3.2), in alignment with IPCC recommendations for climate change mitigation.[39] What's more, while lululemon claims to require all suppliers to comply with applicable environmental laws and regulations,[40] we identified a total of 56 recent cases (Figure 3.5) of fines imposed by the environmental authority against lululemon's Tier 2 factories between 2017-2023.

Fossil fuels remain the main source of energy for all the companies, and despite lululemon's target to phase out all coal by 2030 at the latest,[41] two of its suppliers rely on coal for over half of their total energy consumption (Figure 3.3). Accordingly, levels of air pollutants linked to burning coal and other fossil fuels increased between 2021-2022 in at least five suppliers. Meanwhile, seven suppliers reported using renewable energy, such as solar power, but this represented a tiny fraction of total energy demand - a maximum of 1.9% (Figure 3.3). At two suppliers, unspecified sources of biofuel are being used as a form of energy (Figure 3.3), despite widespread concerns about the risks of environmental harm from biomass extraction and burning.[42]

As an $8.1billion dollar brand, lululemon must take responsibility for reducing fossil fuels and increasing renewable energy in its supply chain to combat skyrocketing emissions and harmful pollution. Photo: Heorshe - stock.adobe.com

Lululemon must take responsibility for addressing fossil fuel consumption in its supply chain to combat soaring emissions

Significant progress has been made on emissions, pollution, and energy consumption at one supplier in particular, Company C in Taiwan, where 2022 emissions were 37% lower than in 2019 (Figure 3.2). This could be a result of the company meeting its commitments to reduce coal use and produce onsite renewable energy (Figure 3.3). There is no data available on the role of lululemon in supporting the implementation of these efforts. Accordingly, similar initiatives should be scaled up across all Tier 2 suppliers with financial and technical support from lululemon in order to impact the brand's scope 3 emissions reductions.

Overall, our research shows a pattern of failure from lululemon to address environmental impacts at the supply chain level. Despite years of sustainability-led marketing under the banner of its 'Be Planet' slogan, indicators are still heading in the wrong direction. As a business that generated almost $10 billion USD in 2023,[43] lululemon must take responsibility for addressing fossil fuel consumption in its supply chain to combat soaring emissions and harmful pollution. As such, an ambitious new approach is needed, backed up by a sound financial strategy that enables all Tier 2 suppliers to access finance for decarbonization.

4 Field visits

4.1 Methodology

In order to develop a more detailed picture of the environmental impacts in lululemon's supply chain, we visited 14 factories from September to December 2023: nine in Taiwan, two in Vietnam, two in Sri Lanka, and one in Indonesia. These factories were selected from the list in Figure 3.1, due to location accessibility and security factors.

During the field visits, photos and videos were taken of the buildings and surrounding areas to highlight specific points related to air and water pollution, such as chimneys and sewage outlet points. We also conducted interviews with local residents at six factory sites, which were selected due to location accessibility and security factors, and the availability of local partner organizations.

Please note that it was only possible to make external observations of the factory sites or industrial areas because permission was not granted to enter the factories. Due to local restrictions, high-resolution images were only produced at a small selection of sites, and therefore these images have been used to illustrate this report to represent key issues observed in multiple locations. Further images and videos are available upon request.

Wastewater discharge area at a textile factory supplying lululemon in Taiwan

Dead fish in a river close to wastewater discharge site at a textile factory supplying lululemon in Taiwan

4.2 Observations

The observations of the field visits resulted in three key findings.

Firstly, although lululemon does not disclose energy consumption data for its supply chain,[44] research from Stand.earth found that in 2020, approximately 48% of the electricity used by lululemon's factories in Vietnam, Cambodia, and China came from burning coal, and only 5% came from renewable energy.[45]

Unfortunately, onsite coal burning for thermal heat generation is a common practice in the fashion sector due to the relatively low price and plentiful supply of coal. At one factory in Taiwan (H1), researchers observed a large pile of a black, rock-like substance, assumed to be coal. During a second visit at nighttime, an employee was observed operating a forklift to transport the coal into a large boiler, and afterwards, smoke was seen rising up from the chimney installed in the same building where the boiler is installed. The parent company of this factory reported consuming 22,349.35 tonnes of coal in 2022, despite reporting that coal-powered boilers have been replaced by natural gas (see Figure 3.3).

At the same factory, an LNG (liquified natural gas) tank was also observed, which aligns with the company's reported reliance on gas for 12% of energy consumption.

LNG tank outside a textile factory supplying lululemon in Taiwan

Pile of coal being stored outside a textile factory supplying lululemon in Taiwan

Secondly, dark grey smoke was observed from chimneys at several factory sites in Taiwan, Vietnam, Sri Lanka, and Indonesia. Researchers observed a strong, unpleasant smell of burning fuel close to these chimneys. The exact source of the smoke could not be verified, although these factories report consumption of coal and gas (see Figure 3.3).

Coal is of particular concern because of its global warming potential — it is the world's most carbon-intensive fossil fuel[46]— but also because of its outsized impact on air pollution. One study found approximately 20,000 premature deaths per year in Southeast Asia, a region where lululemon's factories are concentrated, are caused by air pollution as a direct impact of emissions from burning coal, predicted to increase to almost 70,000 deaths by 2030.[47]

Coal transportation from storage to industrial boilers at a textile factory supplying lululemon in Taiwan

Nonetheless, factories continue to burn coal onsite and/or source electricity from coal-heavy national grids. However, as a signatory to the UN Fashion Industry Charter for Climate Action's coal phaseout commitment,[48] lululemon has an obligation to invest in clean alternatives to coal across its global supply chain.

Finally, at several wastewater points identified as connected to relevant factory sites or industrial zones in all four countries, researchers observed water that was grey, brown, or green in color with bubbles, white froth, or steam.

Unpleasant chemical smells were also observed, with researchers reporting feelings of nausea after spending time at the site. In order to investigate the contents of this wastewater, water pollution tests were conducted at three factory sites, as detailed in Section 5.

Smoke from chimneys at two different textile factories supplying lululemon in Taiwan

4.3 Interviews

Across six factory sites in Taiwan, Vietnam, Sri Lanka, and Indonesia, a total of 29 local residents of various ages and genders were engaged in short, semi-structured interviews (maximum 30 minutes per person) in order to further investigate how the operations of the factories impact the local environment. Interviewees were selected at random and gave verbal consent to be interviewed for the purposes of this report.

All interviews were conducted in the local language with translation support provided by local partner organizations. Some answers and/or personal details were not recorded where permission was not granted by interviewees, or have been redacted from this report to protect identities and safeguard employee safety.

More details of the interviews can be found in the appendix.

Several people living near the factory sites complained of the negative social and environmental impacts of air and water pollution. For example, residents living near Factory E1 confirmed that the factory emits a bad smell every day and it gets worse during rainfall and at night. Additionally, residents living near Factory B3 shared that they cannot drink or use the water because of its odor and viscosity.

Three residents living near A2 had previously reported the factory's water pollution to the local authorities but did not see any improvements being made. Meanwhile, at A1, one local resident remarked that before the factory was established, the environment was cleaner; now they observe increased pollution and changes in the river's appearance.

> **If something is happening to the water quality of the river, factory emissions coincide with that.**
>
> - A resident living approximately 2km from factory A1

While it cannot be concluded with certainty that the experiences of the residents are directly linked to specific factories supplying lululemon, particularly in cases where the factories are located in larger industrial zones with other factories nearby, it is clear that despite lululemon's mission to promote physical and emotional health and wellbeing amongst its customers,[49] this privilege is not necessarily enjoyed by the communities living close to its Tier 2 production sites.

5 Test results

5.1 Key findings

To further investigate the impacts of lululemon's textile production on the environment, water quality tests were conducted at one factory in Indonesia, two factories in Sri Lanka, and three factories in Taiwan.

Common pollutants relevant to textile production processes include suspended and dissolved Solids, which may include dyes and pigments, heavy metals and organic compounds, and other byproducts from dyeing, fixing, and finishing such as iron, chromium, ammonia, sulfates, and chlorides, which can be toxic to human health when found in high concentrations. These substances can pollute rivers if not properly treated by textile production facilities before disposal as wastewater. [50]

Test results from samples collected close to three factory sites in Indonesia and Sri Lanka showed evidence of several pollutants exceeding the governmental regulatory limits, including dissolved and suspended solids, iron, copper, ammonia, sulfate, phosphate, and chemical oxygen demand and color indicators.

It cannot be concluded with certainty that these elevated water pollution levels were directly caused by the factories due to the nature of this research being conducted without access to internal factory systems. However, by referring to the additional evidence collected through photographs of the factory sites, interviews with local people, and data from sustainability reports and government records, particularly in relation to repeated violations of water pollution regulations, it is reasonable to assume that water may be polluted with harmful chemical byproducts from dyeing and finishing processes in parts of lululemon's textile supply chain.

5.2 Sri Lanka test results

In Sri Lanka, researchers tested water at factories A1 and A2. For each factory, three water samples were taken from three points in December 2023: one near the wastewater outlet identified as likely to be coming directly from the factory and two at points in the Maha Oya River upstream and downstream of the industrial zone. SGS, a specialist laboratory in Sri Lanka, analyzed the samples in January 2024.

The tests were carried out with assistance from a local organization, Environmental Foundation (Guarantee) Limited, and the methodology adhered to standards outlined by the SGS.[51] Testing was carried out in the field by sampling at key sites identified through satellite imagery, using portable water testing equipment and sterile sample storage. The findings were compared to SGS standards to assess the likelihood of abnormal or elevated pollution levels. More information on standards can also be found in Sri Lanka's National Environmental Act.[52]

According to results from tests at both A1 and A2, levels of Total Dissolved Solids, Chemical Oxygen Demand, Sulphate, and Fecal Coliforms were 2-10 times higher than the government regulatory limit. Total Suspended Solids and Iron from the samples taken close to factory A1 also exceeded the government regulatory limit.

FIGURE 5.2.1: COMPANY A1 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
A1	L1: Upstream from the factory site L2: Wastewater outlet L3: Downstream from the factory site	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Total Dissolved Solids	L1: 69 L2: 44 L3: 89	10 (max)
Total Suspended Solids	L1: No data L2: 23 L3: No data	10 (max)
Chloride	L1: 9 L2: 3 L3: 7	0-5 (max)

Factory	Sample locations	
A1	L1: Upstream from the factory site L2: Wastewater outlet L3: Downstream from the factory site	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Dissolved Phosphate	L1: 0.10 L2: 0.11 L3: 0.11	0
Sulfate	L1: 8.8 L2: 19 L3: 16	0-5 (max)
Iron	L1: 0.27 L2: 9.6 L3: 6.3	0-5 (max)
Chemical Oxygen Demand	L1: No data L2: 75 L3: 14	10
Anionic Surfactants	L1: No data L2: 0.12 L3: No data	0
Faecal Coliforms in 100ml	L1: No data L2: 7 L3: 5	0

* 'No data' refers to the laboratory being unable to detect a result

FIGURE 5.2.2: COMPANY A2 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
A2	L1: Upstream from the factory site L2: Wastewater outlet L3: Downstream from the factory site	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Total Dissolved Solids	L1: 79 L2: 109 L3: 141	10 (max)
Total Suspended Solids	L1: 2 L2: 3 L3: 13	10 (max)
Chloride	L1: 10 L2: 14 L3: 18	0-5 (max)
Dissolved Phosphate	L1: No data L2: 0.08 L3: 0.09	0
Sulfate	L1: 12 L2: 17 L3: 19	0-5 (max)
Iron	L1: 0.68 L2: 0.81 L3: 1.0	0-5 (max)
Chemical Oxygen Demand	L1: No data L2: 17 L3: 17	10
Anionic Surfactants	L1: No data L2: No data L3: 0.11	0
Faecal Coliforms in 100ml	L1: 7 L2: 22 L3: 5	0

* 'No data' refers to the laboratory being unable to detect a result

5.3 Indonesia test results

In Indonesia, researchers tested water close to factory G1 in November 2023. The water was sampled at three sites: a sewage outlet identified as coming directly from the factory and from the Sabi River, both downstream and upstream of the sewage site. The samples were delivered to the SGS WLN laboratory in Bogor, Indonesia, which analyzed the samples, in November 2023.

The tests were carried out with assistance from the local organization ECOTON (Ecological Observation and Wetland Conservation), and the methodology adhered to recommendations from the Indonesian government.[53] Testing was carried out in the field by sampling at key sites identified through satellite imagery, using portable water testing equipment and sterile sample storage. The findings have been compared to Indonesia's National River Quality Standards 2021[54] in accordance with Regulation 22 Appendix VI, to assess the likelihood of abnormal or elevated pollution levels.

The test results show that Total Dissolved Solids, Sulfate, Unionized Sulfide, Ammonia, Chemical Oxygen Demand, Biological Oxygen Demand, Total Phenol, Faecal Coliforms and Total Coliform levels were 2-10 times higher than the government regulatory limit.

FIGURE 5.3: COMPANY G1 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
G1	L1: Upstream from the factory site L2: Wastewater outlet L3: Downstream from the factory site	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Color	L1: 22 L2: 81 L3: 20	50
Total Dissolved Solids	L1: 411 L2: 1430 L3: 425	1000
Total Suspended Solids	L1: 54 L2: 41 L3: 23	50
Sulfate	L1: 101 L2: 553 L3: 83	300

Unionized Sulfide	L1: 0.048 L2: 0.99 L3: 0.049	0.002
Ammonia	L1: 5.37 L2: 4.90 L3: 5.82	0.2
Chemical Oxygen Demand	L1: 39 L2: 165 L3: 38	25
Biohemical Oxygen Demand	L1: 18 L2: 41 L3: 17	3
Surfactants	L1: 1.48 L2: 0.18 L3: 0.89	0.2
Total Phenol	L1: 0.021 L2: 0.021 L3: <0.001	0.005
Fecal Coliforms in 100ml	L1: 24200 L2: 8160 L3: >24200	1000
Total Coliform	L1: >24200 L2: >24200 L3: >24200	5000
Zinc-Dissolved (Zn)	L1: 0.061 L2: 0.037 L3: 0.091	0.05
Copper-Dissolved (Cu)	L1: 0.005 L2: 0.028 L3: 0.004	0.02

5.4 Taiwan test results

In Taiwan, water samples were taken in January 2024 at the wastewater outlets identified as belonging to factories C1, H1, and I1. Samples were delivered to the Hsing Ya Environmental Technology Co. laboratory to be tested and analyzed in February 2024.

The tests were carried out with assistance from the local organization Changhua Environment

Protection Unit, and the methodology adhered to guidance from Taiwan's Environmental Protection Agency.[55] Testing was carried out in the field by sampling at key sites identified through satellite imagery, using portable water testing equipment and sterile sample storage. The findings have been compared to effluent standards under regulations from Taiwan's Ministry of Environment[56] to assess the likelihood of abnormal or elevated pollution levels.

The results rule out the possibility of water pollution at these wastewater outlets exceeding the governmental standard. However, it is worth noting that while the levels detected do not exceed Taiwan's national standards, pollution indicators such as Chemical Oxygen Demand exceed the Sri Lanka and Indonesia standards at all three factories. Textile-related chemicals are known to increase chemical oxygen demand, which can present a threat to plant life and the broader food chain. [57]

Additionally, pollution levels may vary at different points in the river upstream and downstream of the wastewater outlets, and may also vary at different times of day depending on factory operations, and in different weather conditions such as after heavy rainfall. Therefore, further monitoring is recommended in order to test additional samples and assess pollution levels that may affect local communities.

As shown in Figure 3.5, there are records of multiple violations of local environmental regulations at Factory H1, two of which were related to elevated levels of Chemical Oxygen Demand, Biochemical Oxygen Demand, and Suspended Solids. The results of our tests at Factory H1 suggest these pollutants have now been controlled by addressing issues with wastewater treatment since the fines were paid in 2019 and 2020. Still, further monitoring is recommended to ensure repeated water pollution violations do not reoccur.

FIGURE 5.4.1: COMPANY C1 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
C1	Wastewater outlet	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Suspended Solids	22.6	30
Chemical Oxygen Demand	51.8	160

Factory	Sample locations	
C1	Wastewater outlet	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Biological Oxygen Demand	21.1	30
ADMI (Color)	37	400
MBAS (Methylene blue active substance)	0.55	10
Total Chromium	No data	2
Copper	No data	3
Zinc	0.02	5
Nicket	No data	1
Hexavalent Chromium	<0.01	0.5

* ’No data’ refers to the laboratory being unable to detect a result

FIGURE 5.4.2: COMPANY H1 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
H1	Wastewater outlet	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Suspended Solids	3.2	30
Chemical Oxygen Demand	106	160
Biological Oxygen Demand	27.1	30
ADMI (Color)	40	400
MBAS (Methylene blue active substance)	0.49	10
Total Chromium	No data	2
Copper	No data	3
Zinc	No data	5
Nickel	No data	1
Hexavalent chromium	<0.1	0.5

* 'No data' refers to the laboratory being unable to detect a result

FIGURE 5.4.3: COMPANY I1 WATER POLLUTION TEST RESULTS

Factory	Sample locations	
I1	Wastewater outlet	
Test	**Result (mg/L)**	**Government regulatory limit or standard (mg/L)**
Suspended Solids	16.5	30
Chemical Oxygen Demand	93.8	160
Biological Oxygen Demand	25.2	30
ADMI (Color)	60	400
MBAS (Methylene blue active substance)	1.34	10
Total Chromium	No data	2
Copper	No data	3
Zinc	No data	5
Nickel	No data	1
Hexavalent chromium	No data	0.5

* 'No data' refers to the laboratory being unable to detect a result

6 Conclusion and recommendations

In this investigation of greenhouse gas emissions, fossil fuel consumption, and other environmental impacts within lululemon's supply chain, it can be concluded that there is significant room for improvement in the brands' approach to sustainability. The scope 3 emissions of lululemon have significantly increased year on year - in fact they have *doubled* since the brand deployed its 'Be Planet' slogan.[58]

This trend of increasing greenhouse gas emissions and fossil fuel consumption, including coal at some factories, is reflected at the individual supplier level across some of lululemon's most important sourcing countries. Because the majority of lululemon's emissions are associated with manufacturing,[59] lululemon must support suppliers to reduce their emissions in order to get on track to meet its own climate targets.

lululemon must support Tier 2 suppliers to reduce their emissions in order to get on track to meet its own climate targets.

> ***"Our products and actions help lead our industry toward a climate-stable future where nature and people thrive."[60]***

If lululemon truly wants to contribute to this vision and fulfill its long-term promise to achieve net zero emissions by 2050,[61] acceleration is needed in terms of transitioning away from fossil fuel-powered manufacturing and resource-intensive processes, and towards decarbonization solutions such as onsite solar installations and thermal storage, offsite renewable energy procurement, electrification of thermal processes, innovation in dyeing and processing technologies, and energy efficiency measures.

Lululemon achieved a 69% reduction in scope 1 and 2 emissions[62] between 2020 and 2022 because of its investment in renewable energy for stores, offices, and warehouse facilities. But the emissions from lululemon's owned and operated facilities account for just 0.3% of its total emissions in 2022,[63] compared to 99.7% in the supply chain.

Meanwhile, supply chain emissions are projected to continue rising as the brand grows,[64] and uptake of renewable electricity amongst Tier 1 and 2 suppliers remains low at only 15%. [65]

Clearly, more active engagement with suppliers is necessary in order to target the biggest sources of emissions, such as coal-powered boilers, and to help facilitate greater access to cleaner alternatives by providing financial and technical support, including working with local governments to advocate for a regulatory environment that enables acceleration of this green transition. Additionally, lululemon must conduct more thorough due diligence in its supply chain in order to safeguard the wellbeing of workers, communities, and ecosystems that may be impacted by adverse environmental effects from the manufacturing of its products.

It is worth noting that several other brands and retailers, particularly in the activewear sector, also manufacture at the same Tier 2 suppliers included in this research. For example, according to data from Open Supply Hub,[66] lululemon shares factories C1 and E1 with both Nike and Adidas. Therefore, it is important for lululemon to collaborate with other brands that share their suppliers in order to share the costs of decarbonization and optimize the potential impact of various interventions.

A recent report from Transformers Foundation[67] describes suppliers facing barriers to meeting climate targets dictated by their customers and instead recommends collective approaches to climate action that work collaboratively to solve location-specific feasibility challenges. To tackle this, the report recommends brands invest in a 'shared climate fund' with equity-based solutions designed to decrease risk for suppliers, and suggests that brands should be required to report on their investments in supply chain decarbonization as a percentage of total revenue.

There are some established examples of brands, suppliers, and financial institutions collaborating on funding supplier decarbonization, for example H&M Group's Green Fashion Initiative,[68] the Renewable Energy Initiative funded by H&M Group and Bestseller,[69] and the Carbon Reduction Project piloted by Mammut, Amer Sports, Helly Hansen, and others as part of the European Outdoor Group.[70] As a positive start, lululemon has contributed to the Apparel Impact Institute's Fashion Climate Fund alongside Target, PVH, and H&M Group.[71] However, at the time of writing, details on how its funded solutions will be implemented into lululemon's supply chain are not available.

Overall, as a company that promotes health and wellbeing,[72] lululemon must live up to its values by investing in the reduction of fossil fuel consumption, air and water pollution, and greenhouse gas emissions in its supply chain, in order to protect communities affected by its textile production and contribute to the global effort to mitigate catastrophic climate change. Accordingly, we recommend that:

6.1 lululemon must disclose more information about its supply chain including energy consumption and fuel mix

According to demands from global advocacy group Fashion Revolution,[73] all major fashion brands must disclose where their clothes were made, how many were produced, and their environmental impacts. This should include disclosing location-based emissions accounting along with details on energy consumption, fuel mix, and renewable energy procurement across supply chains, broken down by geography.

This level of transparency would allow for a deeper understanding of lululemon's reliance on fossil fuels, and provide a clearer picture of the hotspots where action is needed most. In Section 3 of this report, environmental data, including types and amounts of energy consumption over time, are listed for some of lululemon's Tier 2 suppliers, but the level of detail is limited, and its scope applies to all brands sourcing from those suppliers. Thus, data should also be collected and reported by lululemon at a disaggregated level.

lululemon's climate targets must be accompanied by a credible decarbonisation strategy and climate transition plan. Photo: George Becker- pexels.com

The findings of this research also suggest that lululemon's current 'Vendor Environmental Manual'[74] is not effective in enabling Tier 2 suppliers to address greenhouse gas emissions, fossil fuel consumption, and pollution. Therefore, as a first step, lululemon needs to publicly disclose the contents of the manual and explain how they make requirements or incentivize suppliers for environmental good practice, and how they support suppliers to rectify environmental issues when they arise. More transparency on how they consult with suppliers and co-create solutions through the brand's 'Global Vendor Environmental Council'[75] is also required for accountability on lululemon's supplier engagement strategy.

6.2 lululemon must set a supply chain renewable energy target and absolute emissions reduction target

Currently, lululemon has set a 2030 target to reduce scope 3 emissions from purchased goods and services and upstream transportation and distribution, by 60% per unit of value added over the same time period.[76] However, intensity-based targets can allow absolute emissions to increase as production volumes and revenues grow, therefore lululemon must set a target for absolute emissions reductions in the supply chain, which should be at least 43% by 2030 in order to align with recommendations from IPCC (Intergovernmental Panel on Climate Change).[77]

Setting a target for 100% renewable energy is also crucial for lululemon's climate strategy to be deemed ambitious enough to fully phase out fossil fuels and ultimately, reach net zero emissions by 2050. While 100% renewable energy in lululemon's supply chain may not be possible *today*, setting medium-term and interim targets is important because it mobilizes resources internally towards investing in existing and innovative solutions, and facilitates targeted climate policy advocacy that promotes high-quality wind and solar energy capacity in sourcing countries.

Of course, targets alone are not enough. This is why lululemon's climate targets must be accompanied by a credible decarbonization strategy and climate transition plan, with details on renewable energy procurement, timelines and locations for interventions, and the amount of financial investment allocated to decarbonization. According to NewClimate Institute, while lululemon presents some promising measures to increase renewables in the supply chain, such as plans to phase out coal boilers and explore opportunities for onsite solar, more detailed information is needed to understand the scale and potential impact of these interventions.[78] Further recommendations for what constitutes a credible climate transition plan and guide can be found in the 'Integrity Matters' report from the UN's High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities.[79]

Climate targets and decarbonisation plans mean nothing if not backed up with significant financial support. Photo: bilanol - stock.adobe.com

6.3 lululemon must provide financial and technical support to enable suppliers to invest in the green transition

Overall, climate targets and decarbonization plans mean nothing if not backed up with significant financial support. This is important because suppliers bear the burden of decarbonization costs in order to meet the demands of their customers' sustainability agendas, often in regions without access to a clean or reliable electricity grid, a lack of regulation that enables corporate PPAs (power purchase agreements), or where burning gas or biomass is the only perceived affordable alternative to coal for thermal heat. [80]

This problem is compounded by irresponsible purchasing practices that are commonplace amongst major fashion brands, such as short-term or prematurely broken contracts, last-minute order cancellations, late payments, and constant demands for quicker delivery and lower prices,[81] leaving suppliers financially insecure and unlikely to take risks on long-term investments in decarbonization.

This challenging environment does not mean that climate action should be dropped from the priority list, but rather it presents an opportunity to transform brand-supplier relationships. To address this, lululemon must explain how exactly it will consult and engage with its suppliers to support a just and equitable transition to renewable energy. Beyond just stating that it is: 'committed to reducing manufacturing emissions by accelerating the use of renewable energy in the supply chain through partnering with suppliers,'[82] lululemon should disclose the monetary value committed to decarbonization, ideally expressed in terms of percentage of annual revenue, and specific mechanisms for how suppliers may access finance, such as grants, sustainability premiums, shared funds, and sustainability-linked loans and bonds.

Additionally, technical support should be provided after consultation with suppliers and workers to identify their needs in relation to issues such as emissions accounting, energy efficiency measures, equipment installation and maintenance, fuel sourcing, pollution treatment solutions, and renewable energy procurement.

Because of the significant environmental issues highlighted in this report, lululemon could also consider incorporating resilience and adaptation, not just mitigation, into its climate investment plan in order to prevent - not just remedy - environmental harm, and help address the disproportionate climate impacts experienced by vulnerable regions and communities,[83] which include garment and textile workers in South and Southeast Asia.[84] According to Remake's Fashion Accountability Report,[85] major brands such as lululemon must recognize garment and textile workers as crucial partners in the clean energy transition, who need to be supported to help manage the effects of climate change.

Exterior of a textile factory supplying lululemon in Taiwan

Call to action

For more information about lululemon’s climate record and to take action to demand acceleration of lululemon’s climate action plan, join our campaign:

FIND OUT MORE

Appendix

APPENDIX: LULULEMON

Credits

Research by **Kinam Kim**
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With thanks to: Stand.earth, Greenpeace East Asia, Green Citizens’ Action Alliance, Changhua Environment Protection Bureau, Vietnam Zero Waste Alliance, ECOTON and Environmental Foundation (Guarantee) Limited.

Disclaimer

This research was conducted in accordance with national and international laws and regulations. No trespassing or other illegal activity occurred while gathering information on field visits, and all data collected in desk-based research was gathered from publicly available sources.

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Please contact action@speakslouder.org for any questions, corrections or concerns.

End notes

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