SUSTAINABILITY

FOREWORD ANNE-LAURE DESCOURS, CSO

↗ **ANNE-LAURE DESCOURS**
CHIEF SOURCING OFFICER (CSO)

2022 allowed us to achieve several milestones in Climate Action, Circularity and Human Rights, as set in our Forever Better sustainability strategy and 10FOR25 targets:

We were able to produce 7 out of 10 products* according to our PUMA Sustainability Index, which means these products are made with more sustainable materials. In 2022, 100% of all leather, 99.8% of all cotton and 99% of all paper and carboard packaging used by PUMA were sourced in more sustainable versions such as, Leather Working Group certified leather, Better Cotton or FSC certified or recycled paper and carboard.

We also further increased our circularity efforts. Meanwhile over 50% of the polyester used for our apparel and accessories products comes from recycled materials, and we started to scale up the use of recycled cotton.

* Excluding products produced by PUMA Group company stichd. For further details on the reporting scope, please refer to Scope of the Report section.

With the RE:SUEDE project, we created a biodegradable experiment of our most iconic sneaker and with RE:JERSEY, we piloted a garment-to-garment recycling process of polyester clothing, in partnership with major football clubs like Manchester City, AC Milan, Borussia Dortmund and Olympique de Marseille.

To help fight climate change, we continued to source 100% renewable electricity for PUMA's own offices, stores and warehouses, either with renewable electricity tariffs or renewable energy attribute certificates. In addition, we invested over € 1.5 million to electrify our PUMA car fleet and saw the first ever electric truck starting operations for PUMA in the USA. This has helped us to reduce our own carbon emissions by 86% compared to our 2017 baseline. At supplier level, several factories started producing own renewable energy with large-scale rooftop solar PV installations or by transitioning boilers from fossil fuels to biomass.

On the social side, 160,000 factory workers were trained on sexual harassment at work, hitting our target three years ahead of schedule. As a long-term signatory to the Bangladesh International Accord on Building and Fire safety, we also signed the newly established Pakistan Accord and our PUMA employees contributed 43,000 hours of community engagement work around the globe.

Our engagement was recognized with top positions in several rankings and ratings last year, for example the Business of Fashion Sustainability Index, the Carbon Disclosure Project (CDP) or the Sustainability Leadership award from American Footwear News.

Despite these recognitions, we are fully aware that much remains to be done to make PUMA a truly sustainable company. For example, product-to-product recycling so far only exists at pilot scale, the wages paid in many sourcing countries still need to be increased to allow for a decent living and our goods are still transported from the manufacturing hubs to markets using fossil fuels.

We are convinced that many challenges we are facing today are systemic and need to be tackled at an industry level.

Therefore, we discussed the sustainability challenges and potential solutions with young activists, experts and industry peers, such as the CEO of Under Armor, during our first Conference of the People.

The feedback we received from Generation Z activists keeps me optimistic. We need to further strengthen our efforts and young generations not only accept that this needs to be done, but also demand their favorite brands to behave more sustainably.

There is only one Forever – Let's Make it Better.

HIGHLIGHTS OF 2022

During 2022 we continued to implement our Forever Better Sustainability Strategy and work towards our 10FOR25 sustainability targets. In addition, we further increased communication around Forever Better and launched more sustainable products.

Meanwhile **seven out of 10 PUMA products** globally are aligned with our definition of a more sustainable product, meaning they are made with a significant part of more sustainable materials, such as recycled cotton or recycled polyester, for example.

In the area of **Circularity**, we launched product takeback initiatives at selected stores of our major football club partners. At PUMA, we now operate takeback bins at our Headquarters Store in Germany as well as stores in the US, China/Hong Kong and Australia.

In terms of **Climate Action**, we continued to power our own offices, stores and warehouses with 100% green electricity and added 93 electric cars to our PUMA car fleet. We introduced the first ever electric truck at our logistics center in the US and agreed with our global logistics service provider, Maersk, to start using biofuels for the shipping of PUMA products. Our core suppliers increased their share of renewable energy to 11%.

In the area of **Human Rights**, the average payment is 13.4% above minimum wages for our core supplier Tier 1 factories. Our PUMA employees donated 43,000 working hours to community engagement work and we continued to send signals for diversity and inclusion, for example by increasing the percentage of women on our management board to 50% and by moving to genderless restrooms at our Headquarters.

We agreed to partner with the Fashion Pact and Textile Exchange on **Biodiversity**. To ensure for example, the leather used for PUMA products does not contribute in any way to deforestation, we monitor the traceability ratings of our tanneries. In the meantime, all the tanneries are certified by the Leather Working Group. For paper and carboard 99% are either FSC certified and/or recycled, also to avoid any linkages to deforestation.

AWARDS AND RECOGNITIONS

Our sustainability efforts were recognized in several external rankings and recognitions. In 2022 PUMA achieved the highest score on the Business of Fashion Sustainability Ranking, was ranked first among the fashion sector in the Platform Financials for Living Wages benchmark report and for the first time entered the CDP A List for Climate Leaders.

We achieved a leader status in the Textile Exchange Fiber Benchmark Report and the Brands to Zero program of the Zero Discharge of Hazardous Chemicals Foundation (ZDHC).

PUMA also topped the FTSE4Good sector ranking, received a triple A rating from sustainability ratings agency MSCI, a prime rating from ISS and was included in the Corporate Knights Global 100 Most Sustainable Companies list as lead for textiles and clothing. PUMA was ranked highest among all sports brands in the sector with the S&P Corporate Sustainability Assessment. At the end of the year, we received the Sustainability Leadership award from Footwear News America.

At the same time, we also received more critical feedback in reports issued by Stand Earth and the Changing Markets Foundation on the topics of growth and circularity, as well as the dependence on oil as a raw material for synthetic fibers and components. We take these critical remarks into consideration as we develop our sustainability strategy further.

PUMA'S FOREVER BETTER SUSTAINABILITY STRATEGY

PUMA's Code of Conduct and our vendor compliance program, which were introduced more than 20 years ago, are still the basis for any contractual relationship with manufacturers globally and remain the foundation of our responsible sourcing strategy and program.

Our Forever Better sustainability strategy is based on our 10FOR25 targets, which were introduced in 2019, following an extensive materiality analysis and stakeholder dialog.

As a result, we have identified 10 target areas to improve our sustainability performance: Human Rights, Climate Action, Circularity, Products, Water and Air, Biodiversity, Plastics and the Oceans, Chemicals, Health & Safety as well as Fair Income.

For each of these target areas, which reference the United Nations Sustainable Development Goals (SDG), we have defined a minimum of three concrete targets as well as key performance indicators to follow the progress we have made.

With our Forever Better sustainability strategy, we continue our path to fully integrate sustainability into all our core business functions. Sustainability targets are part of the bonus arrangements of every member of our global leadership team, from the CEO to Team Heads.

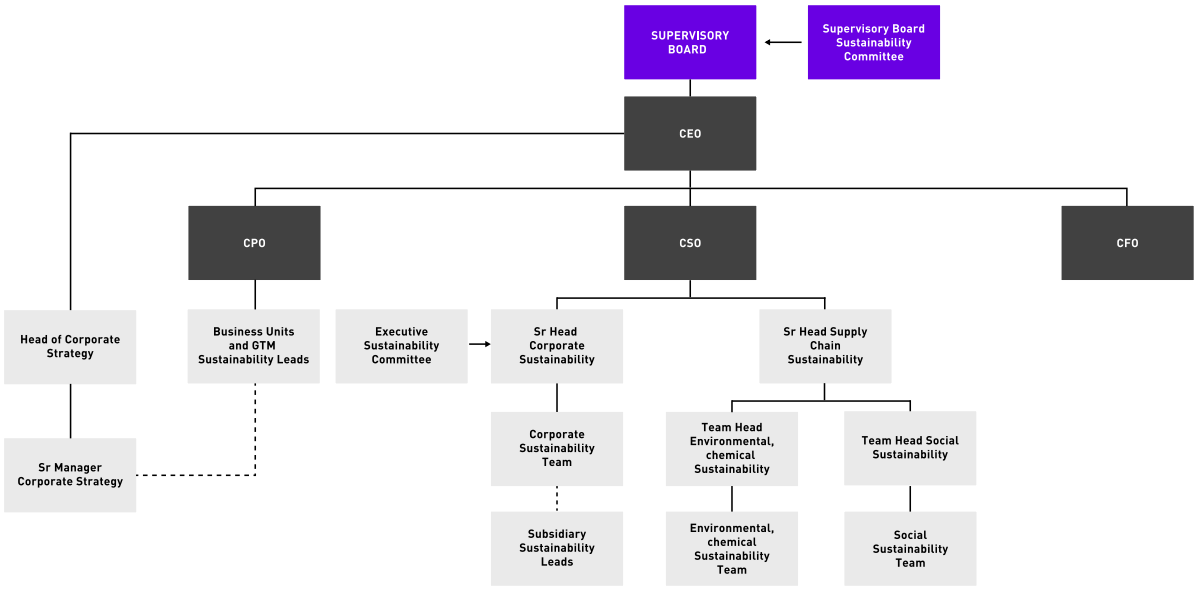
Sustainability and the communication of our efforts have also been integrated into the strategic priorities for PUMA.

SUSTAINABILITY ORGANIZATION AND GOVERNANCE STRUCTURE

PUMA's sustainability organization is structured and governed in multiple ways:

- At the Supervisory Board level, with a Sustainability Committee.
- At the Management Board level, with the responsibility for sustainability assigned to the Chief Sourcing Officer (CSO)
  - There were several Management Board meetings in 2022 with dedicated sustainability updates, on the sustainability target achievement status and more sustainable product initiatives, for example.
  - The PUMA CEO and CSO participated in our Conference of the People sustainability event focusing on collaboration, circularity and climate action. Other board members participated online.
  - Our CSO has a monthly meeting with the sustainability leads for corporate and supply chain sustainability. Topics include, for example, human rights, health and safety and chemical programs, as well as climate and water projects in the supply chain.
- At the Functional Heads level, with an Executive Sustainability Committee
  - The Executive Sustainability Committee comprises all Functional Heads of the company, such as the Global Directors for Retail, Logistic, Legal Affairs, etc. The committee met twice in 2022, and approved, for example, the Sustainability Bonus Targets.
- At the Product level, with a Cross-Functional Business Unit Call (monthly updates on PUMA's more sustainable product strategy and execution)
- At the Subsidiary level with nominated Sustainability Leads for each PUMA subsidiary (quarterly updates on PUMA sustainability strategy and performance, best practice sharing from individual subsidiaries)
- At the Sustainability Experts level, with a corporate sustainability department and a supply chain sustainability department, as well as a sustainability function in the strategy department.

↗ G.01 SUSTAINABILITY ORGANIZATION CHART

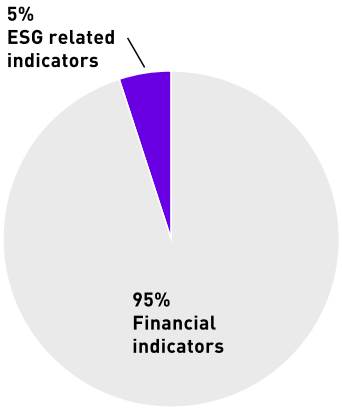


SUSTAINABILITY PERFORMANCE-RELATED REMUNERATION

At PUMA we link performance criteria in remuneration of all leaders globally to clear and defined sustainability targets. The variable annual performance bonus is based on the achievement of PUMA's Forever Better sustainability strategy targets.

All PUMA leaders globally, from CEO to Team Head level, have clearly defined sustainability targets as part of their annual performance bonus. These targets are aligned with PUMA's Forever Better sustainability strategy and focus on our 10FOR25 sustainability target areas, human rights, climate action, plastics and the oceans, health & safety. The targets cover 5% of the overall bonus.

↗ G.02 REMUNERATION CRITERIA BY WEIGHT



↗ T.01 2022 BONUS TARGETS

Area	Percentage of Bonus	Corporate & Subsidiaries Target	Sourcing & Supply Chain Target
Human Rights	1.25%	All PUMA employees are paid a living wage; 2 hours community engagement per FTE	No zero tolerance issues prevailing at year end; 100,000 workers trained on women's empowerment
Climate Action	1.25%	100% renewable electricity for PUMAs own entities Air freight ratio for transport of goods reduced by 10% compared to 2019	10% renewable energy for core suppliers
Health & Safety	1.25%	Zero fatal accidents; Injury rate below 0.5	Zero fatal accidents; injury rate below 0.5
Plastics and the Oceans	1.25%	Eliminate the usage of consumer-facing plastic bags from owned and operated stores by end of 2022; Increase percentage of recycled polyester used in apparel and accessories to at least 50%	Increase percentage of recycled polyester used in apparel and accessories to at least 50%

STAKEHOLDER OUTREACH

To ensure that the PUMA sustainability strategy covers the most relevant topics, we are using the process of a formal materiality analysis combined with stakeholder dialog and outreach.

Our stakeholder dialog includes active participation in several sustainability initiatives. In 2022 we became a member of econsense, a German partner of the World Business Council for Sustainable Development, and added Global Fashion Agenda, the organizer of main sustainability events in the fashion sector, to our list of key partnerships. Our overall investment in partnerships to accelerate and better use more sustainable materials amounts to over € 1 million.

↗ G.03 MATRIX OF KEY PARTNERSHIP INITIATIVES

Human Rights		Chemicals	Products	Climate Change		Health and Safety	Water and Air	Biodiversity	Plastics and the Oceans	Circularity	Fair Income
ILO Better Work (Bangladesh, Cambodia, Indonesia, Vietnam)	UN Global Compact Peer Learning Group (Germany)	Zero Discharge of Hazardous Chemical Foundation (ZDHC)	Textile Exchange	Fashion Industry Charter for Climate Action (UNFCCC)	German Corporation for International Cooperation (GIZ) (Vietnam, Bangladesh, Cambodia)	RMG Sustainability Council ACCORD (Bangladesh, Pakistan)	Zero Discharge of Hazardous Chemicals Foundation (ZDHC)	Fashion Pact	Fashion Pact	Global Fashion Agenda	Fair Labor Association (FLA)
Fair Labor Association (FLA)	Fair Factories Clearinghouse (FFC)	AFIRM Group	Better Cotton Initiative (BCI)	Carbon Disclosure Project (CDP)	World Wildlife Fund (WWF) (China)	ITC-ILO	Sustainable Apparel Coalition (SAC)	Forest Stewardship Council (FSC)	Textile Exchange	Textiles Exchange	Fair Wage Network
Social and Labor Convergence Program (SLCP)	Amader Kotha (Bangladesh)	Federation of European Sporting Goods Industry (FESI)	Leather Working Group	Stiftung Klima Wirtschaft (Germany)	World Resource Institute (WRI) (Mexico)		Institute of Public and Environmental Affairs (IPE) (China)	Canopy	Microfiber Consortium	Federation of the European Sporting Goods Industry (FESI)	
Industry Summit	MicroBenefits (China, Vietnam)	GOBlu	First Mile	International Finance Corporation (IFC) (Bangladesh)	Fashion Pact						
Better Buying	econsense (Germany)			Apparel Impact Institute (China, Taiwan, Vietnam)							

international national

AFIRM: Apparel and Footwear International RSL Management, BCI: Better Cotton Initiative, CDP: Carbon Disclosure Project, FESI: Federation of the European Sporting Industry, FFC: Fair Factories Clearinghouse, FSC: Forest Stewardship Council, FLA: Fair Labor Association, GIZ: German Corporation for International Cooperation, IFC: International Finance Corporation, ILO: International Labour Organization, IPE: Institute of Public and Environmental Affairs, ITC: International Training Center, RMG: Ready Made Garments, SAC: Sustainable Apparel Coalition, SLCP: Social and Labor Convergence Program, UNFCCC: United Nations Framework Convention Climate Change, WRI: World Resources Institute, WWF: World Wide Fund for Nature, ZDHC: Zero Discharge of Hazardous Chemicals Foundation

"PUMA continuously works to enact long-lasting impact for our collective future and is a valued member of Global Fashion Agenda's diverse ecosystem. In 2022, it was a pleasure to have PUMA exchange insights at both the Copenhagen and Singapore editions of Global Fashion Summit."

FEDERICA MARCHIONNI
Chief Executive Officer, Global Fashion Agenda

CONFERENCE OF THE PEOPLE

Our first PUMA stakeholder dialog dates back to 2003. Since then we have organized 15 in-person and one virtual stakeholder meetings.

As part of our ongoing stakeholder dialog, and to expand our communication with younger generations, we launched the first Conference of the People in September 2022. With a live event in London including 200 external guests that was streamed live to over 2,000 viewers around the globe, this format allowed us to have an open conversation about the most critical sustainability challenges, such as circularity and climate change with Generation Z representatives, as well as industry experts and peers during five discussion panels. The topics of the five main conversations were: Rethinking Waste, Material World, Eco-Anxiety, Wood for the Tees and working Forever Better together.

Our PUMA CEO and CSO were joined by the CEO of Under Armor, as well as actress Naomi Harris to critically reflect on these topics, but also listen to potential solutions.

A video recording of the event is still accessible here.

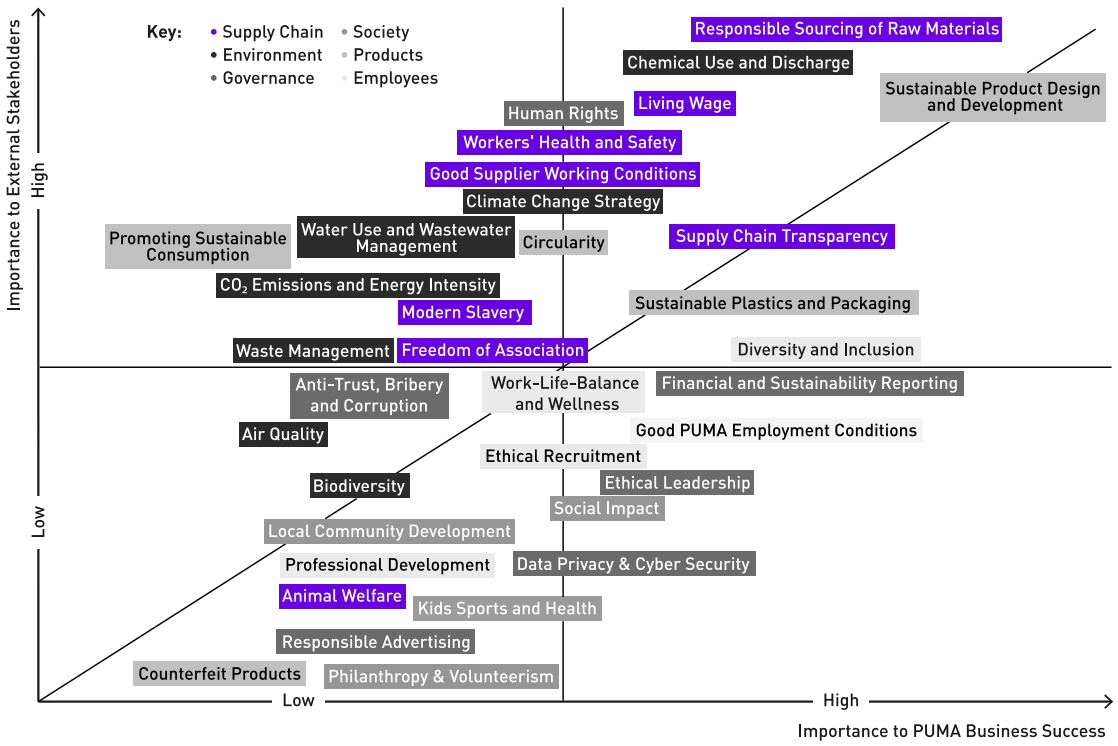
We took the feedback we received during Conference of the People to heart and decided to publish a consumer-facing version of our Annual Report's sustainability section and to engage with Gen Z ambassadors more frequently to include their feedback in our strategy and reporting.

Actress Naomi Harris in discussion with British TV presenter Ade Adeptian and sustainability activist Jack Harris during the first Conference of the People.

MOST MATERIAL ASPECTS

PUMA's last formal materiality analysis was performed in 2018 - 2019 with the help of expert consultancy BSR. The methodology, list of consulted stakeholders and results were reviewed and approved by PUMA's Managing Directors. Since then, we are using our frequent stakeholder dialog, our membership in various sustainability organizations as well as our participation in sustainability benchmarks and ratings as an indication on whether our strategy is still covering the most important aspects of our business. This has helped us, for example, to add stand-alone policies for human rights, the environment and ethical marketing in 2022 to our set of existing sustainability policies. After reviewing the EU Textiles Strategy as well as upcoming regulations, we are expanding our due diligence efforts deeper into our supply chain and have started to add new aspects such as logistics or products not used for sales (e.g. cars and office supplies). We have also adapted the way we communicate our sustainability efforts to consumers and younger generations. For 2023 we are planning a more formal update of the materiality analysis in accordance with the double materiality principle.

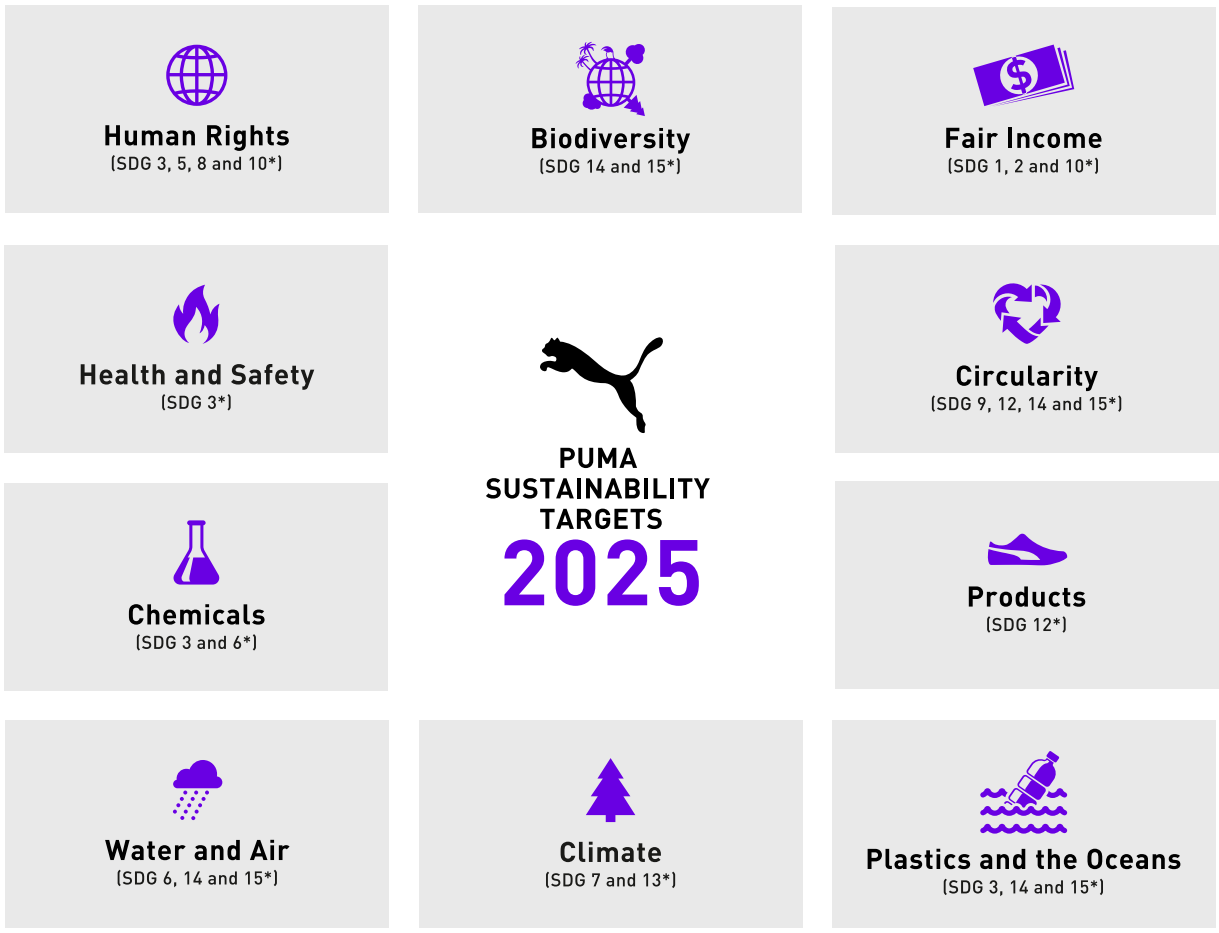
↗ G.04 MOST MATERIAL ASPECTS



Transfer of materiality results into 10FOR25 target areas:

IDENTIFIED MOST MATERIAL TOPIC	10FOR25 TARGET AREA
• Responsible Sourcing of Raw Materials	• Products
• Supply Chain Transparency	• Human Rights
• Good Supplier Working Conditions	• Human Rights
• Worker Health and Safety	• Health and Safety
• Living Wage	• Fair Income
• Chemical Use and Discharge	• Chemicals
• Climate Change Strategy	• Climate
• Sustainable Product Design and Development	• Products
• Sustainable Plastics and Packaging	• Plastics and the Oceans
• Circularity	• Circularity
• Human Rights	• Human Rights
• Diversity and Inclusion	• Human Rights

↗ G.05 PUMA'S 2025 SUSTAINABILITY TARGETS



* SDG: United Nations Sustainable Development Goals

↗ T.02 PUMA 10FOR25 SUSTAINABILITY TARGETS PERFORMANCE SUMMARY

○ Not started ◔ In progress ◑ On track ◉ Achieved

Target area	Targets for 2025	Performance 2022	Status
01 **Human Rights**	Target 1: Train 100,000 direct and indirect staff members on women's empowerment	168,037 factory workers and 2,077 PUMA employees trained	◉
	Target 2: Map subcontractors and Tier 2 suppliers for human rights risks	Tier 2 mapping completed 48 Tier 1 subcontractors mapped	◑
	Target 3: 25,000 hours of global community engagement per year	43,000 hours	◉
02 **Health and Safety**	Target 1: Zero fatal accidents (PUMA and suppliers)	Zero fatal accidents at PUMA Two fatal accidents at suppliers	◔
	Target 2: Reduce accident rate to 0.5 (PUMA and suppliers)	0.3 injury rate at PUMA suppliers 0.45 at PUMA	◉
	Target 3: Building safety policy operational in all high-risk countries	ACCORD Bangladesh: Progress rate 91% Signed ACCORD Pakistan Building safety assessments in 13 factories in Indonesia, India and Pakistan	◑

Target area	Targets for 2025	Performance 2022	Status
03 **Chemicals**	Target 1: Ensure 100% of PUMA products are safe to use	No product recall from the market	
	Target 2: Maintain RSL compliance rate above 90% (Target changed since 2020)	RSL compliance rate of 98.5%	
	Target 3: Reduce organic solvent usage to under 10 gr/pair	VOC index at 13.2 g/pair	
04 **Water and Air**	Target 1: 90% compliance with ZDHC Wastewater Guidelines	Conventional parameters: 98% Restricted chemicals: 99% Heavy metals: 99%	
	Target 2: 90% compliance with ZDHC Air Emissions Guidelines	Our core Tier 1 and Tier 2 follow local regulations	
	Target 3: 15% water reduction per pair or piece based on 2020 baseline	Textile: -5% Leather: -17% Apparel: -17% Footwear: -36%	

Target area	Targets for 2025	Performance 2022	Status
			Scope 1 and 2
05 **Climate**	Target 1: Align PUMA's climate target with 1.5 degrees global warming scenario	Applied to SBTi to approve new absolute GHG emission reduction: Scope 1 and 2 by 90%, Scope 3 by 33% in 2030	Scope 3
	Target 2: 100% renewable electricity for PUMA entities	100% renewable electricity used for PUMA entities (including RECs)	
	Target 3: 25% renewable energy for core suppliers	11% for Tier 1 (finished goods) 10.8% for Tier 2 (materials) (Including RECs)	
06 **Plastics and the Oceans**	Target 1: Eliminate plastic bags from owned and operated PUMA stores	48% reduction compared to 2021 (189 tons), 99 tons in 2022, no more plastic bags used starting 1st January 2023	
	Target 2: Support scientific research on microfibers	12 shedding tests conducted	
	Target 3: Research biodegradable plastics options for products	Launched RE:SUEDE as a test for biodegradability	
07 **Circularity**	Target 1: Establish takeback schemes in all major markets	Hong Kong takeback scheme ongoing since 2019; US takeback ongoing (footwear) Germany (HQ), Manchester City, AC Milan, Borussia Dortmund and Olympique de Marseille rolled out, Australia rolled out	
	Target 2: Reduce production waste to landfills by at least 50% compared to 2020	-48% waste to landfill per footwear pair +1% waste to landfill per apparel piece	
	Target 3: Develop recycled material options for cotton, leather and rubber	Recycled cotton and leather used in PUMA ReGen collection, recycled rubber used	

Target area	Targets for 2025	Performance 2022	Status
 08 **Products**	Target 1: Procure 100% cotton, polyester, leather and down from certified sources	99.8% cotton 70.4% polyester 100% leather 100% down	
	Target 2: Increase recycled polyester use to 75% (apparel & accessories)	51.5% recycled polyester for apparel and accessories	
	Target 3: 90% of apparel and accessories classified as more sustainable	79% apparel volume 46% accessories volume	
	90% of all footwear contains at least one more sustainable component	61% footwear volume	
 09 **Fair Income**	Target 1: Fair-wage assessments for the top five sourcing countries	4 out of 5 (Bangladesh, Cambodia, Indonesia, Vietnam)	
	Target 2: Effective and democratically elected worker representatives at all core suppliers	48% of core Tier 1 factories covered	
	Target 3: Ensure bank transfer payments for all core suppliers	99.3% core Tier 1 and Tier 2 suppliers use digital payment 99.7% of workers are paid digitally in core factories	
 10 **Biodiversity**	Target 1: Support setting up a biodiversity SBT	Sponsored a landscape analysis report	
	Target 2: Procure 100% cotton, leather, and viscose from certified sources	99.8% cotton 100% leather 97.2% viscose 100% down feathers	
	Target 3: Zero use of exotic skins or hides	New Animal Welfare Policy published	

REC: Renewable Energy Attribute Certificates, RSL: Restricted Substances List, SBT: Science-Based Target, SLCP: Social and Labor Convergence Program, Tier 1 (T1) suppliers: Supplier of finished goods, Tier 2 (T2) supplier: Supplier of materials or components, Tier 3 (T3) supplier: Supplier of yarn hides, etc., VOC: Volatile Organic Compound, ZDHC: Zero Discharge of Hazardous Chemicals

SCOPE OF THE REPORT

DATA COLLECTION

In this report we cover the PUMA Group. We have provided separate reports for PUMA SE and the PUMA Group within the Governance and our People sections only. Our materiality analysis and Environmental Profit and Loss (EP&L) clearly indicate that a major aspect of our impact originates in the manufacturing of materials and components, not in the assembly of finished goods. We collect data from our core suppliers of components and materials. Our materials data so far excludes the materials used by stichd (mainly socks and bodywear) and for Cobra Golf equipment, as these companies run their own sourcing. For social compliance data, stichd and Cobra Golf factories are included.

DATA SOURCES

To ensure a high level of transparency and promote the sharing of environmental and social data with our industry peers, we have chosen to use external databases, most of which are publicly accessible:

- The Open Supply Hub, an open-source map and database of global apparel facilities
- The Fair Factories Clearinghouse for sharing social audit data with other brands
- The wastewater platform from the Zero Discharge of Hazardous Chemicals Foundation (ZDHC) for sharing supplier data on wastewater testing (ClearStream reports)
  - The ZDHC Chemicals Gateway for the use of safe chemicals
  - ZDHC-approved chemical inventory platforms: BHive, CleanChain, E3
  - RSL database Green Arrow
  - The China-based NGO IPE for the publication of suppliers' environmental data
  - IPE's Green Supply Chain Map of environmental performance data of some of our core suppliers in China
  - The Higg Index Platform from the Sustainable Apparel Coalition
  - The Fair Labor Association (FLA) fair compensation dashboard to benchmark factory workers' income towards industry and/or living wage benchmark
  - Fair Wage Network database
  - ACCORD Bangladesh inspections database: The Bangladesh Accord on Fire and Building Safety in Bangladesh
  - Worker Complaints – third-party platforms: MicroBenefits CIQ, Labor Solution - WOVO, Amader Kotha.

Also, we use our own sustainability data collection tool to record social and environmental performance data from PUMA-owned and operated sites and from the core suppliers that manufacture our products.

DUE DILIGENCE AND RISK ASSESSMENT

PUMA conducts regular due diligence on human rights & labor, environmental and integrity risks (listed in T.03) for its own activities and across its supply chain as per the recommendations of the UN Guiding Principles for Business and Human Rights as well as the OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector, and other relevant responsible business conduct standards. We embed responsible business conduct in our own policies, training and management systems and identify actual and potential harms in our own operations and supply chain.

↗ T.03 HUMAN RIGHTS & LABOR, ENVIRONMENTAL AND INTEGRITY RISKS

Human Rights & Labor Risks	Environmental Risks	Integrity Risks
Child labor	Greenhouse gas (GHG) emissions	Bribery and corruption
Discrimination	Hazardous chemicals	
Forced labor	Water scarcity	
Occupational health and safety (e.g., worker-related injury and ill health)	Water pollution	
Violations of the right of workers to establish or join a trade union and to bargain collectively	Landuse change	
Non-compliance with minimum wage laws	Waste	
Wages do not meet basic needs of workers and their families	Air emissions	

Due diligence is an ongoing process, in which we can identify, mitigate, prevent risks and address their existing and potential adverse impacts (e.g. child labor, discrimination, hazardous chemicals, etc.).

As stated in the "Corporate Governance Statement", PUMA has a functioning Compliance Management System (CMS) to systematically prevent, detect and sanction violations in the areas of corruption, money laundering, conflicts of interest, antitrust law and fraud/embezzlement.

In response to the COVID-19 pandemic, the possibility of future crises and/or upcoming regulations, our vendors are recommended to conduct their due diligence. Our risk assessment process of potential harm to people (human rights & labor and environmental risks) includes:

- External sources: NGO reports, media, country indices and country regulation, PUMA partnerships with FLA, Better Work, Fashion Charter, ZDHC, AFIRM, etc. and stakeholder dialog
- Internal sources: PUMA social, chemical and environmental audit findings/data analysis, grievances received per country, supply chain risk mapping, number of factories in countries with high risk, per commodity, also including non-core factories, material processing and raw material extraction

We **prioritize** risks based on:

- Severity: Scale (how serious the impact is), scope (how many people are or will be affected) and irremediability
- The likelihood of risk occurring based on operating environment: conflict zone, weak governance; mismatch between local practices and international standards

Our mitigation measures include the factory monitoring program, grievance mechanism, supplier scorecard, business integration, goal-setting and internal and external reporting. The effectiveness of our measures is evaluated based on progress and compliance with our policies.

PUMA policies are published on our website, as well as our factory monitoring programs and standards defined in our Social, Environmental, Occupational Health and Safety and Chemical handbooks.

PUMA also adopted ELEVATE intelligence, or EiQ, a comprehensive suite of supply chain analytics, to:

- Assess our supply chain risks by geography, commodity and issue
- Complete a risk assessment for suppliers, factories and sites
- Manage risks that are material for each supplier, factory or site.

The 10FOR25 targets are linked directly to the four main sustainability-related risks identified in our due diligence process:

- Potential human rights violations or incidents in our supply chain (Tier 1 and Tier 2*)
- Potential incidents of environmental pollution in our supply chain (Tier 1 or Tier 2)
- Potential non-compliance with chemical regulations during production (Tier 1 or Tier 2)
- Negative effects of climate change (transition risks and physical risks)

The four main sustainability-related risks are reflected in the Risk Management System that PUMA has established to identify and manage material risks or risks that could pose a threat to the company's objectives at an early stage. The Risk Management function conducts formal interviews with selected risk owners (key function management responsible to identify and address the risks) on a semi-annual basis set to identify, evaluate and report risks. The risk owners of PUMA's sustainability department review risks within their area of responsibility and report the evaluation and the evolution of countermeasures implemented to mitigate or reduce the potential impact of sustainability-related risks to the Risk Management function.

To mitigate and prevent sustainability risks, PUMA has set the 10FOR25 targets and implemented a due diligence process. PUMA reports internally and publicly (through annual sustainability reports) on the following activities and progress toward our goals 10FOR25:

- Conduct regular complete and follow-up social audits based on International Labour Organization standards (including reaudits and capacity building projects) for all Tier 1* and Core Tier 2* suppliers.
- Monitor performance with factory environmental management system via Higg Index Facility Environmental Module (FEM), regular RSL testing (Restricted Substances List) of materials and products, input chemistry control via Manufacturing Restricted Substances List (MRSL) by ZDHC, output control via wastewater tests by independent and accredited laboratories.
- Follow the status of new regulation via industry associations such as Federation of the European Sporting Goods Industry (FESI), and key partners, a matrix listing PUMA's key partnership initiatives is maintained to track all relevant international and national sustainability organizations, and follow up on legal requirements (e.g. UK Modern Slavery Act, new German due diligence law) in a timely manner. Implementation of approval procedure for sustainable product claims.
- Actively conduct stakeholder dialog with NGOs and other expert organizations. Regular updates of PUMA policies and sustainability standards (e.g. Code of Conduct, handbooks). Set up functioning workers' hotline (included in Code of Conduct) and employees' hotline (included in Code of Ethics), enhance industry collaboration with competitors in terms of human rights and environmental performance measurement tools, standards, certifications (e.g. Facility Environmental Module, Social Labour Convergence Program, Material Restricted Substance List, Leather Working Group, Forest Stewardship Council). Regular Internal training (for example e-learning accessible via Workday).

* Tier 1 manufacturers of PUMA products; Tier 2 manufacturers of materials and components

Net risks as outlined in the CSR Directive Implementation Act (§315c in relation to §289c, section 3, number 3 German Commercial Code (HGB), were not identified in 2021.

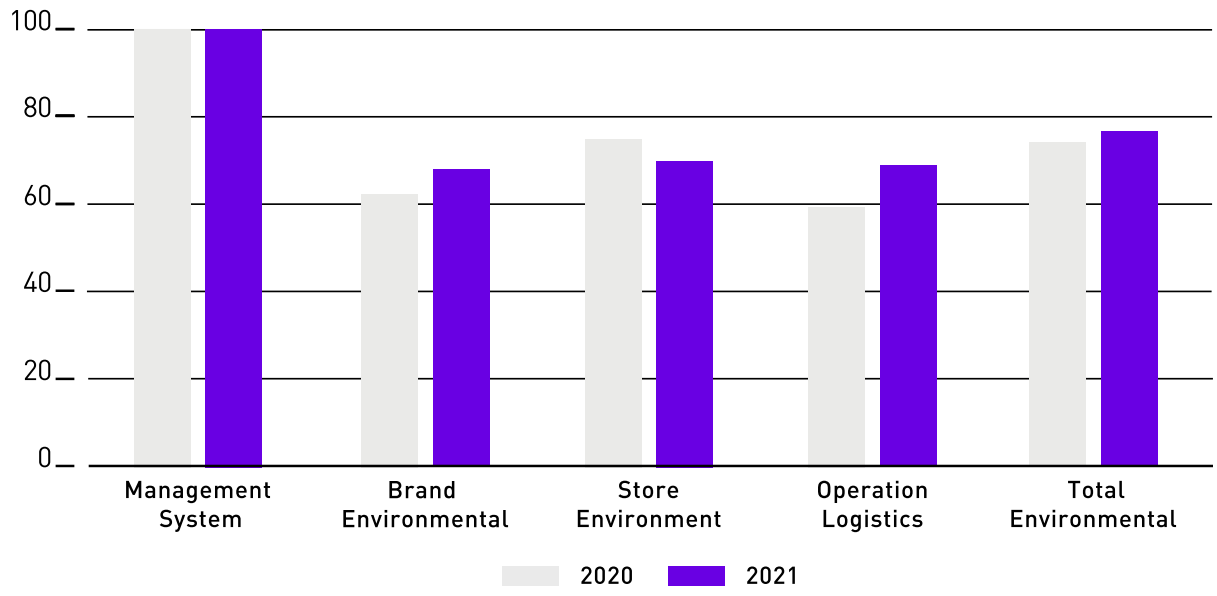
Further details on PUMA's overall risk management can be found in the Risk Management section.

PUMA'S PERFORMANCE IN BRAND AND RETAIL MODULE

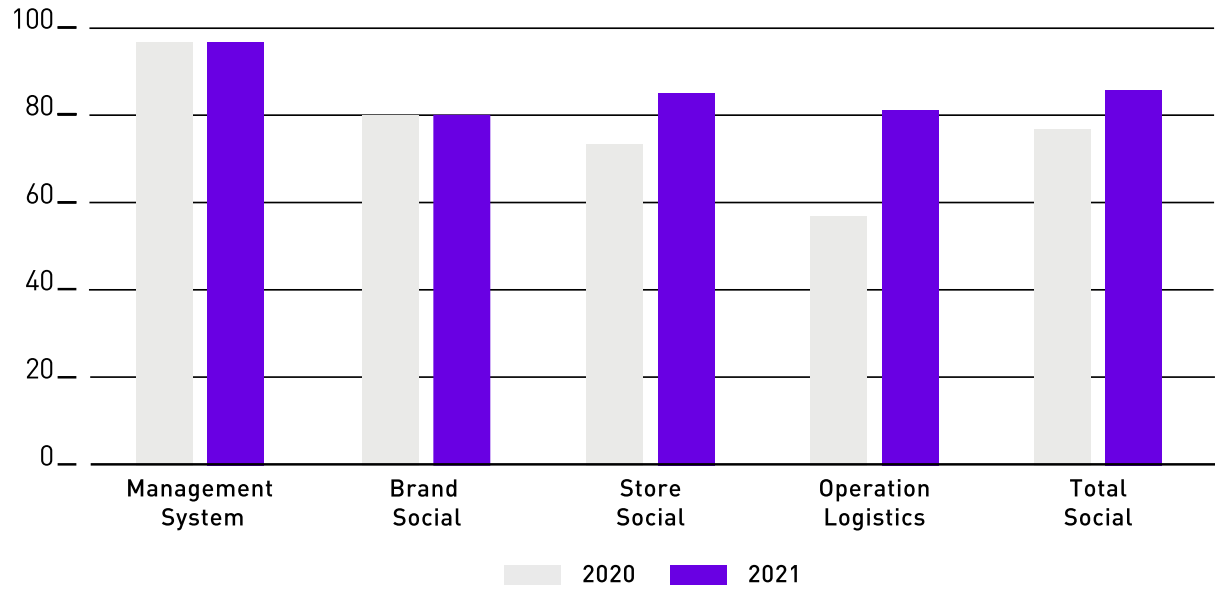
As part of our risk assessment and industry benchmarking, we use the Brand and Retailer Module (BRM) of the Sustainable Apparel Coalition. The Higg Brand & Retail Module (Higg BRM) guides brands and retailers on their sustainability journeys and identifies hotspots and opportunities for improvement along their global value chain. From more sustainable materials sourcing to a product's end of use, the Higg BRM assesses the life cycle stages for their sustainability coverage. Our Higg BRM scores are externally verified.

Our overall BRM environmental score increased from 74.3% in 2020 to 76.8% in 2021. The social score increased from 76.4% in 2020 to 85.4% in 2021. We significantly improved our social score for logistics and retail operations as well as our end of use score, although this score is still at a low level. Improvements include the payment of a living wage to all PUMA employees globally (including retail and logistics) as well as the introduction of several circularity initiatives, such as our RE:SUEDE and RE:JERSEY programs, swap shops at major offices as well as takeback boxes in selected stores across three continents.

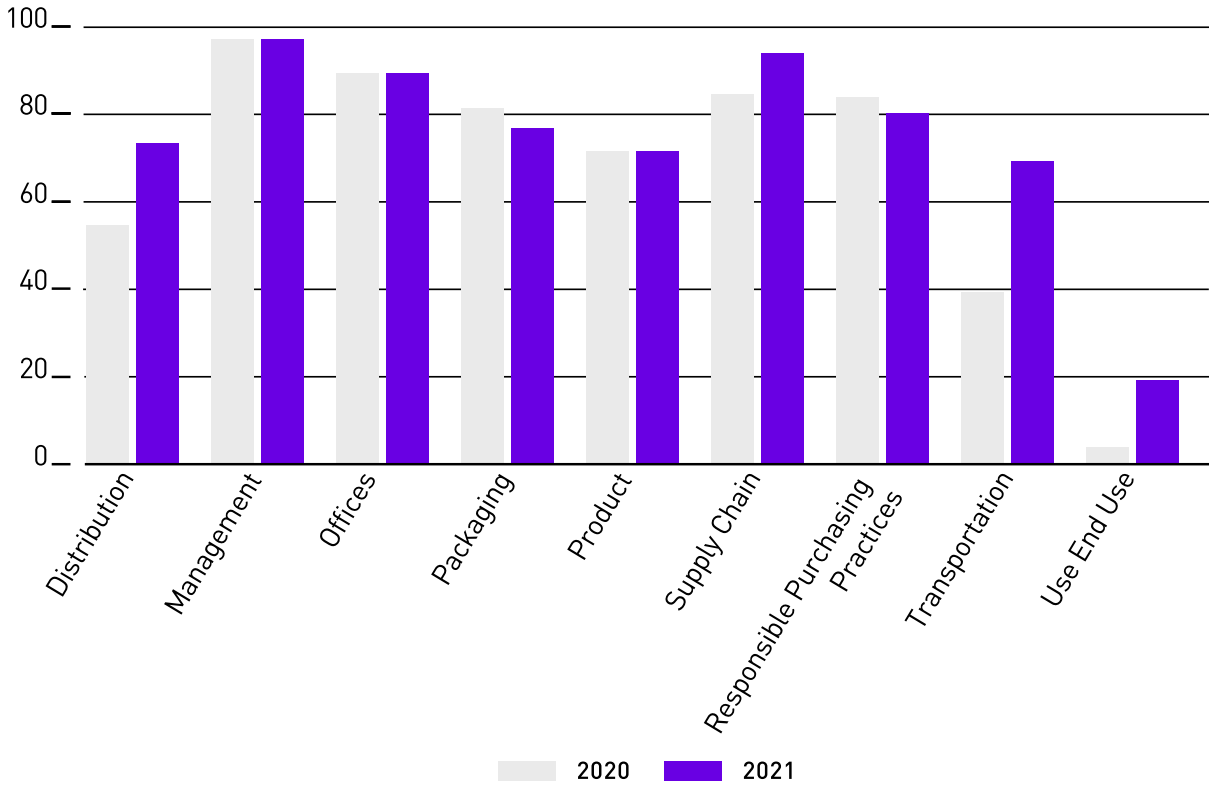
↗ G.06 2020-2021 PUMA BRM ENVIRONMENTAL VERIFIED SCORE



↗ G.07 2020-2021 PUMA BRM SOCIAL VERIFIED SCORE



↗ G.08 2020-2021 PUMA BRM LIFE CYCLE STAGE VERIFIED SCORE



HUMAN RIGHTS

Relates to United Nations Sustainable Development Goals 3, 5, 8 and 10

Target Description:
- Train 100,000 direct and indirect staff on women's empowerment
- Map subcontractors and Tier 2 suppliers
- 2 hours of community engagement per FTE globally per year

KPIs:
- Percentage of worker complaints resolved
- Number of factories with an A, B+, B-, C or D grade
- Number of Tier 2 suppliers and subcontractors included in our risk mapping
- Number of zero-tolerance issues prevailing at year end
- Number of employee hours spent on community engagement (KPI shared with Human Resources)
- Number of workers trained on women's empowerment

PUMA's sustainability policies are aligned with the United Nations' (UN) Declaration of Human Rights, the UN Guiding Principles (UNGPs) on Business and Human Rights, the International Labor Organization's Core Labor Conventions, and the ten principles of the UN Global Compact (UNGC). Observing human rights was part of our first Code of Conduct developed in 1993 and has guided our business ethics ever since. It has been the long-standing practice of PUMA to continuously and rigorously monitor our supply chain and conduct human rights due diligence on all our suppliers globally, including those in major production hubs such as Vietnam, Bangladesh and China.

HUMAN RIGHTS AT PUMA'S OWN ENTITIES

Guided by our Code of Ethics and Code of Conduct, PUMA's company culture of diversity and inclusion puts Human Rights at the center of everything we do.

All PUMA employees who feel that ethical standards in business may have been compromised can raise their voice. Various channels are in place to report any suspicions and/or observations related to modern slavery or other human rights aspects. In practice, all employees could address their request regarding apparent failure to their line manager. They may also raise the matter with staff representatives, the legal department, the internal audit department or via a toll-free external whistleblower platform available worldwide. Our Ethics Committees make sure that no action is taken against an employee who, in all good faith, reports a case of failure to comply with an ethical principle of the Code of Ethics, as a consequence of having reported the matter.

REFORM INITIATIVE

Besides implementing Human Rights and Labor Rights for our own employees, our colleagues are active in community engagement work and our Reform Program supports organizations like Women Win or Football versus Homophobia, who promote Human Rights in sport and work against discrimination in any form.

More on our Reform Initiative can be found here.

Come Together Cup in Nuremberg, Germany

COMMUNITY ENGAGEMENT

Our goal is to reach a total number of hours spent on community engagement equal to twice our annual average FTE (full-time equivalent). We encouraged all our employees around the world to participate and record projects and employee engagement on an online platform.

Our Community Engagement Program has continued to create a positive impact locally by supporting social, health and environmental causes, and we were able to donate 43,000 community hours in 2022.

For more information on PUMA's employee policies and philanthropic donations please refer to the Our People section of this report.

Community engagement: PUMA Philippines provides aid to those in need

HUMAN RIGHTS IN THE SUPPLY CHAIN

RESPONSIBLE PURCHASING PRACTICE POLICY

As a responsible business partner to our suppliers, we recognize that our own business practices, as well as our trading terms and conditions can have a significant impact on the organization at our suppliers' factories. The aim of this PUMA Responsible Sourcing Policy is to reduce potential negative impacts.

PUMA's responsible purchasing practice policy was developed in 2019, to create a framework for guiding decisions and maintaining consistency through key principles:

i. Only working with suppliers that signed a Manufacturing Agreement.
ii. Payments to suppliers are made on time and in full. We only deduct payments and impose penalties when it is lawful to do so.
iii. Price paid for product to include reasonable labor costs, such as overtime premium payments, social insurance payments and costs to comply with environmental standards.
iv. Open production capacity must be declared by the supplier based on standard work weeks as per the law of the relevant production country.
v. Seasonal production plans are allocated considering the negotiated capacity with the supplier.
vi. Sufficient production lead time must be provided.
vii. Suppliers may not subcontract production without authorization from PUMA. All subcontracting units should respect our Code of Conduct.

In 2022, 280 PUMA colleagues from development, sourcing and production joined Responsible Sourcing Practice training, the same topic also covered 1,145 supplier participants through virtual webinars. The training referred to the UN Guiding Principles on Business and Human Rights, to explain the link between the purchasing practices, potential impact on working conditions and risk of Human Rights violations.

In 2022, 31 staff members of the PUMA sustainability team and our licensees' team attended Better Work Purchasing Practices e-learning. This online course tracks a garment from inception to delivery. It provides an overview of global supply chain dynamics, sourcing modules and procurement, and highlights the impact of purchasing practices at each stage of the process. This interactive training is divided into eight modules, each consisting of an informational video and quiz for participants to check their understanding.

BETTER BUYING SURVEY

In 2022 we asked 30 strategic Tier 1 suppliers to participate in the Better Buying Survey and collected core suppliers' feedback on the implementation status of PUMA responsible purchasing practices. 9 accessories, 14 apparel and 7 footwear suppliers, representing 75% of our business volume and 67% of our business value. 28 suppliers responded (response rate: 93.3%).

Better Buying gathers data from suppliers to provide guidance to brands for improving purchasing practices, so suppliers can provide good working conditions and improve their environmental performance. Brands voluntarily invite their suppliers to participate.

Suppliers rate their brands anonymously according to the Five Principles of Responsible Purchasing which focus on the buyer purchasing practices that could have the biggest impact on suppliers' businesses:

1. VISIBILITY - Brands provide enough information about the planned business for suppliers to act
2. STABILITY - Brands give suppliers steady and predictable business across the year
3. TIME - Brands provide enough time for suppliers to complete all processes
4. FINANCIALS - Brands use fair financial practices with suppliers
5. SHARED RESPONSIBILITY - Brands play their part in improving supply chain social and environmental sustainability

We benchmarked our 28 suppliers' feedback with more than 700 suppliers' feedback to the 20 brands classified under sporting goods and discussed these results internally to set a clear focus area for improvement. We received the following feedback:

Visibility
Design and development can play a significant role in improving sustainability in supply chains. Choices made at this stage of the process have significant downstream financial, social and environmental impacts. While all our samples are based on a Tech Pack, we see opportunities in improving accuracy for accessories and footwear. We have an overall high sample hit rate and our suppliers recognize our effort in increasing the use of more sustainable materials, 3D sampling, industry certification and in setting target prices prior to product development. While 100% of our purchase orders are accurate for apparel, we see room for improvement in the accuracy of purchase orders for accessories and footwear to avoid an impact on shipping deadlines.

All our suppliers confirmed that we would provide them with a business forecast, enabling them to plan the workforce needed. We see the need to better communicate our overall forecasting and planning timelines and processes to our vendors and improve our in-season communication for some of our product divisions.

Stability
As a principle, we will not cancel orders and accommodate order placement to suppliers' difficulties such as lockdown period. In the case of order cancellation which remains less than 1% for PUMA, we always pay our suppliers for any liability associated to cancellation. Some of our suppliers reported that our company canceled orders. We will follow up on this.

Time
A large majority of our suppliers confirmed that we have an agreed time and action calendar for pre-production and production deadlines. We got feedback from our suppliers that PUMA missed some deadlines, we will further investigate, so we can guide our teams for improvement.

Financial
Most of our suppliers feel they have favorable terms through digital payment, the Forever Better Vendor Financing Program, PUMA paying for samples and bulk production in a timely manner.

The centralization of both the sourcing and procurement functions, along with the rollout of a cloud-based purchase order collaboration and payment platform, linking the sales subsidiaries, PUMA International Trading and the vendors, has enabled the digitization of the supply chain creating transparency, operational efficiency and reducing complexity. For example, all payments to vendors are automated and paper-free. We do not apply any late penalties to our vendors. We will strengthen our communication of payment terms to suppliers and refresh their knowledge on the Forever Better Vendor Financing Program. We also see opportunities to collaborate with our suppliers to increase their production efficiency (related to style allocation, volume, standardization of fabrics, labeling and packaging processes etc.).

Shared responsibility
All our suppliers reported that sustainability criteria are considered along with commercial concerns, 89% of our suppliers feel rewarded for their sustainability performance. Providing incentives for compliance and sustainability encourages suppliers to partner with our company by giving them a competitive advantage for working toward sustainability goals.

A large majority of our suppliers acknowledge our effort to enforce our sustainability standards and to reduce audit duplication at their factories, which helps them to gain clarity on their improvement actions.

FOREVER BETTER VENDOR FINANCING PROGRAM

We use our PUMA Forever Better Vendor Financing Program to incentivize suppliers, with a better scoring in our social and environmental compliance audits with lower interest rates. The program, established in 2016, allows suppliers with a good or very good compliance rating to benefit from PUMA's high credit rating and preferred interest rates. The program runs in partnership with IFC, BNP Paribas, HSBC and Standard Chartered Bank.

At the end of 2022, 71 vendors were registered users (compared to 60 at the end of 2021) and the financed volumes in the whole of 2022 increased to USD 800 million (+USD 157 million compared to 2021).

HUMAN RIGHTS RISK ASSESSMENT

In previous years we had conducted human rights risk assessments at the corporate and the supply chain level and communicated the results in our 2016 and 2017 Annual Reports. In 2021 we commissioned and completed a human rights risk assessment, focusing on forced labor management in the supply chain. The most salient risks to human rights are forced or bonded labor in our supply chain and, at the farm level, child labor.

SUPPLY CHAIN FORCED LABOR MANAGEMENT APPROACH REVIEW

In 2021 the supply chain services company ELEVATE supported PUMA by conducting an evaluation of its human rights risk assessment approach, with a specific focus on forced labor. The evaluation framework utilized drew on the expectations of the UN Guiding Principles for Business and Human Rights (UNGPs) with a specific focus on the risks of forced labor, based on the definition of forced labor specified in the ILO Forced Labour Convention, 1930 (No. 29) as, "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily". ELEVATE also utilized ILO's 11 indicators of forced labor in this analysis.

Policy Commitment and Embedding

As a result of the assessment, PUMA scores highly regarding policy commitment and internal alignment. ELEVATE recommended strengthening existing human rights-related policies to explicitly reference the ILO Forced Labour Convention, and all eleven forced labor indicators. We are in the process of developing an updated Human Rights Policy, which will include this as a specific element. We are also developing Human Rights e-learning to provide further guidance materials for internal teams on mitigating risks. In 2023 we will launch e-learning based on the PUMA social handbook for our suppliers, covering PUMA's social monitoring program and standards.

Forced Labour Due Diligence Procedures and Processes

As a response to ELEVATE's recommendation, we refreshed our risk assessment for supply chain and published it in this report. This includes both risk exposure and business leverage insights to prioritize suppliers.

PUMA reviewed the severity grading of audit findings linked to forced labor indication, this will then also increase escalation and prioritized investigation and remediation processes. We revised our social handbook and trained our suppliers and sourcing colleagues accordingly.

At the end of 2021 PUMA also adopted ELEVATE intelligence, or "EiQ", a comprehensive suite of supply chain analytics, to:

- Assess our supply chain risks by geography, commodity and issue
- Complete a risk assessment for suppliers, factories and sites
- Manage risks that are material to each supplier, factory or site.

In 2022 we uploaded 1,390 audit reports (2019 to 2021) in the EIQ tool. This tool shows the gross risks which are risks before mitigation measures, such as social security benefit, systematic excessive overtime, or

insufficient overtime wage. We evaluated the countermeasures that we have in place in the factories shown as high risks in this tool. All these factories go through regular audits, some are part of the ILO Better Work program. The majority are enrolled in our fair wage program and were provided with Working Hours Management and Root Causes Analysis training; we have also provided tailormade programs to increase the capability of factory and vendor staff to one factory. For the other factories, mainly Tier 2 suppliers, we plan to expand the Root Causes Analysis training to them in 2023, so they can introduce corrective action to resolve their audit findings by addressing the root cause. We see some countries with higher risks. In 2022 we allocated a full-time team member in India and in Cambodia and added more team members in China.

In our handbooks, we request our vendors to conduct due diligence. We facilitate our supplier training in due diligence through the International Labour Organization-International Training Center platform.

To increase transparency, we report on the most common audit findings, training, grievances and mitigation measures such as outcome focused KPIs (Key Performance Indicators) to track the effectiveness of our supplier programs.

While PUMA's hotline is accessible to civil society organizations and external stakeholders, we will review our stakeholder engagement methodology, especially civil society organizations stakeholders representing vulnerable groups, such as women, children and migrant workers.

We also extended the scope of our social monitoring programs to EMEA factories, high-risk countries' warehouses and to some non-core Tier 2 suppliers.

We translated our handbooks (PUMA factory monitoring standards and procedure for social, occupational health and safety, environment and chemical) into Chinese, Vietnamese and Spanish and created a video to explain the PUMA social handbook in three languages as well.

We will conduct regular reviews of the grievance mechanisms available to stakeholders, in line with the UN Guiding Principles effectiveness criteria. We will also review how stakeholder groups that are likely to use the grievance mechanism are engaged in the performance of the mechanism.

RUBBER MAPPING

An example of our supply chain due diligence efforts at farm level is the rubber mapping project in collaboration with the Fair Labor Association. In 2019 the Fair Labor Association partnered with the International Organization for Migration and three global footwear and three major sporting goods companies, which source shoes and sporting goods from Vietnam, including PUMA, on a project to map natural rubber. The project report was published in 2021.

The project had two primary objectives:

1. Map the natural rubber value chain in Vietnam to understand supply chain structure, worker demographics, the process of recruiting workers, and working conditions across the tiers of the natural rubber supply chain.

2. Inform participating companies about supply chain mapping through an action-based learning approach to help companies identify gaps in the internal supply chain management systems and understand internal and external practices that can streamline mapping in the future.

At the plantation and rubber farm level, the research team found a general lack of awareness of legal requirements and a lack of government labor inspections. The project highlighted the challenges to addressing labor issues in the rubber supply chain. Most industry stakeholders have not considered upstream supply chain mapping as a core operational activity. The scope of the supply chains, which often span borders, makes mapping a resource-intensive exercise that is a challenge for any single company to undertake, while collective approaches to mapping have not yet been developed.

This research was a first step toward mapping human rights and labor risks in the supply chain of natural rubber. This exploratory exercise has highlighted issues with working conditions at the rubber production level. The project developed an understanding of purchasing practices at different tiers, how the factories engaged with upstream suppliers evaluated the worker demographic at the facility level. Moving forward PUMA will continuously explore the opportunity to engage with stakeholders on lower tier monitoring.

WORKER SURVEY

PUMA operates multiple worker voice channels. The third-party worker engagement platforms cover 92 suppliers, 202,397 workers, which represents more than 80% of our Tier 1 and Tier 2 production volume in 2022. 21 non-strategic suppliers from Bangladesh and China also adopted one of these platforms in 2022. In 2020 PUMA launched the Worker Survey Program to get workers' feedback in eight countries on their satisfaction with the factory work environment via a mobile app survey. Workers score each survey question from 0 (the least satisfied) to 5 (the most satisfied).

In 2022 overall workers' satisfaction increased by 6% compared to 2020.

↗ T.04 WORKER SURVEY 2020 – 2022

Year	Number of factories	Number of workers	Satisfaction rate
2020	20	17,551	3.93
2021	48	13,557*	4.17
2022	68	21,526	4.17

The survey includes fair compensation, stress management, employee-employer relationship, grievance mechanism, dignity and respect, workers' engagement, working hours, health and safety and how friendly the work environment is. In the 2022 survey, all were scored between 3.96 (fair compensation) and 4.30 (friendly work environment).

Workers felt more satisfied than the previous year in the number of working hours, the grievance mechanism and stress management. We see more effort required on fair compensation and improving employee-employer relationships. We had one-on-one communication with all participating factories to understand their challenges and agreed on key priorities to improve in the coming year. On average, 49% of the agreed actions have been implemented.

WOMEN'S EMPOWERMENT

Training women on their rights and empowering them to advance their careers further is key to achieving gender equality, where both men and women have equal power and opportunities for education, healthcare, economic participation and personal development.

60% of workers producing PUMA goods are women and 49% of factory managerial positions at our core Tier 1 suppliers are filled by women. PUMA initiatives support suppliers in reviewing existing policies and practices or establishing new ones for women's empowerment. We believe that collaboration among the industry and with NGO experts in women's empowerment is key to avoid duplication and provide the right expertise.

* From 2021 we adopted Gallup methodology to define the sample of production workers of each factory based on 95 confidence level and 5 margin of error.

In 2021 PUMA cooperated with the International Center for Research on Women (ICRW) to run a Gender Equity Project in Indonesia, Vietnam, India and Bangladesh. The aim was to create holistic worker voice and employee engagement tools with the intention of addressing the challenges women face across supply chains and advancing their wellbeing.

PUMA factories used the Gender Equity Self-Diagnostic Tool to generate a snapshot of nine factories' gender equity policies and practices, identify opportunities for high-impact gender-specific initiatives, and help inform new priority action areas to promote gender equity, such as compensation and pay, or women's health and safety efforts to understand the condition of gender equity. By using this tool, suppliers can determine where there are opportunities to enhance gender integration through their policies and practices and then improve gender equity within their factories. They can identify actions they can take to open and strengthen women's pathways to leadership and operations.

In 2022 PUMA, together with ICRW and other brands, worked on improving the self-diagnostic tool. We also participated in the Worker Voice tool pilot: Worker survey to get workers' perspective on gender equity in the factory, in three factories which used the tool in 2021. We could compare factory management and employees' responses. In the three factories, factory management and employees consider workers' professional development as an area for improvement; workers are satisfied by Gender-Based Violence& Harassment (GBVH) and Health protection policies and practices in place in the three factories. Most positive responses are around workers' trust in response to GBVH reports. Pay and compensation as well as pay equity are areas where responses were not aligned: Management has invested in implementing policies, but workers do not view these as satisfactory. There could be a need for re-evaluation of wage structures and additional transparency around pay structures and policies. Workers are very satisfied to be paid digitally. Support & care for working parents with fewer policies and practices in place are where workers are less satisfied.

In 2021 we conducted a pilot, and the video from the **Better Work Course** related to the prevention of sexual harassment was uploaded to the Micro Benefit Platform from late 2021 in Vietnam. 175 employees in six factories completed the training online. In 2022 the Chinese e-learning course was developed and piloted from August that year. 7,896 employees in 22 factories completed the training online.

The **International Training Centre** (ITC) has been at the forefront of learning and training since 1964. As part of the International Labour Organization, it is dedicated to achieving decent work while exploring the frontiers of the future of work. To strengthen PUMA's commitment to promote Responsible Business Conduct (RBC), fundamental principles and rights at work, and occupational safety and health (OSH) throughout our operations and network of business partners, ITC-ILO created customized online training packages for our sustainability team. After completing courses (10 RBC modules plus 18 OSH modules) and successfully passing the technical exams with the ITC-ILO, PUMA Social Sustainability team members were certified by ITC-ILO as Trainers on RBC and OSH in 2021. The PUMA team is training and certifying the factory management team to deliver training to workers on RBC and OSH. One of the topics is harassment and violence at the workplace.

In 2021 we conducted a pilot to train 10 factory managerial staff, who extended the training to 570 workers, counting for more than 386 hours of training, at four factories in China, Bangladesh, Vietnam and Indonesia. In 2022 we trained 287 factory managerial staff in 114 factories, who extended the training to 159,503 workers, counting for 142,841 hours of training in 18 countries on harassment and violence at the workplace.

In 2022, 351 factory managerial team passed the ITC-ILO course (five RBC plus five OHS modules).

In 2023 we are aiming to expand the training to at least 16,000 workers so 180,000 workers would be trained.

SOCIAL COMPLIANCE

PUMA's Code of Conduct is an integral part of our supply contracts. All PUMA suppliers sign a legally binding "Declaration of Principles" to comply with the PUMA Code of Conduct. PUMA requires all vendors, their subcontractors and their suppliers to comply in full with this Code of Conduct.

Compliance with PUMA's Code of Conduct is verified through regular audits. The frequency of an audit is based on the factory grade (A grade re-audited after 24 months (about two years), B+ after 18 months (about one and a half years), B- after 12 months, C grade after six months, and warehouse grade (A, B+, B- grade re-audited after 24 months, C grade after 12 months, D after six months. For factories with D grade, including Better Work Factories, Zero Tolerance (ZT) issues need to be corrected between eight weeks and six months. New factories will not be authorized to produce PUMA products until the factory can be rated A or B.

Independent of the factory grade, all issues identified need to be remedied as part of a corrective-action plan.

Since 1999 all direct PUMA factories (Tier 1) have been frequently audited for compliance with ILO Core Conventions and basic environmental standards. Each year we collect between 300 and 500 audits or assessment reports issued through PUMA's compliance program, the ILO Better Work Program, our industry peers compliance programs, or by independent experts accredited by the Social and Labour Convergence Program (SLCP). We have also included our most relevant material and component suppliers (Tier 2) and key priority warehouses in our audit program. Through collaborative efforts with the sourcing team, we mapped more than 200 non-core Tier 2 suppliers. While one third use FEM (Facility Environmental Module) for other brands, only 13 have had a social audit. We converted these audit reports in our grading system. In May 2022 we reminded all suppliers that the use of undeclared sub-contractors is a Zero Tolerance issue, as per PUMA standards. We asked them to self-declare their Tier 1 subcontractors used for PUMA production. 48 Tier 1 subcontractors were declared, 10 had an audit report that we converted in the PUMA grading system.

In 2022, 392 Tier 1 and 112 Tier 2 suppliers, representing around 80% of our material and component sourcing volume, were audited. In early 2021 we selected 10 priority warehouses, four were audited in or before 2021, and six in 2022. In 2022 we collected 536 audit reports from 510 factories (392 Tier 1, 112 core Tier 2 and 6 warehouses) to safeguard workers' rights to more than half a million workers (630,585 workers). All PUMA suppliers are required to display our Code of Conduct in factories producing PUMA products, materials or components. It contains contact details of the PUMA sustainability team as a whistle-blower hotline. We share the number of grievances received and solved, as well as the most frequent type of grievances in this report.

Furthermore, PUMA is a member of the Fair Labor Association, which regularly audits and accredits PUMA's compliance program for compliance with the Fair Labor Association's Code of Conduct. It means that PUMA has the systems and procedures in place to successfully uphold fair labor standards throughout their supply chains and mitigate and remediate violations. PUMA, as an FLA member, has agreed to subject their supply chains to independent assessments and monitoring as part of an organizational commitment to upholding fair labor standards through transparency. FLA publishes the results of these assessments to encourage an open and honest dialogue about the conditions that workers face, ensure PUMA accountability, and help consumers make more informed decisions about the products they buy. PUMA, SE - Fair Labor Association

A comprehensive explanation of our compliance program for suppliers (including grievance mechanisms and case studies) can be found in our Sustainability Handbook for Social Standards. Our Social Handbook explains the procedure of factory monitoring programs (section 3) and our standards. This handbook is reviewed on a regular basis. Suppliers are trained on a regular basis on our standards and monitoring process.

PUMA discloses its factory list with the factory name, address, product category and headcount on PUMA's website and the Open Supply Hub platform.

Our audit starts with a briefing to the factory management and worker or union representatives on the PUMA standards, as well as the audit process and its scope. In 2022, 84% of audits conducted included a trade union representative or workers' representative during the audit's opening and closing meetings (when closing meetings take place during working hours of the factory).

We believe that interviews with workers, workers' representatives or union representatives are crucial for understanding workers' perspectives on workplace standards, factory atmosphere and protecting vulnerable workers from any work that is likely to cause moral harm. All interviews with workers are conducted on site during the audit (no offsite interview).

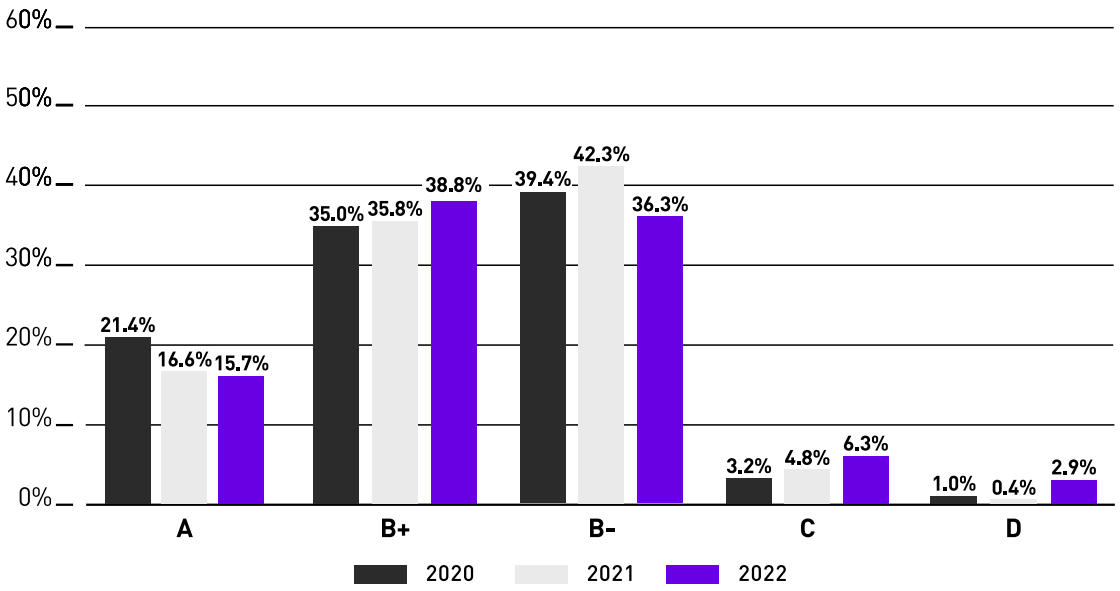
In 2022, 7.1% of our Tier 1 factories and 13.4% of Tier 2 failed to meet our requirements. If the factory in question is an active PUMA supplier, we work the factory management on improvement. A pass grade was awarded to 86% (six out of seven) of factories subjected to a second audit. In 2022, 16 new factories did not manage to sufficiently improve their performance and were removed from our active supplier factory base. Applicants that failed their first audits were not taken on as suppliers. To avoid duplication and prevent auditing fatigue, we increased the percentage of shared assessments to 59% from 54% in 2020. We will further increase our adoption of SLCP-based assessments to 280 factories in 2023. We believe that SLCP is an ideal tool for building long-term relationships with suppliers and supporting them to own their social and labor data. PUMA is a member of the ILO's Better Work Program and uses Better Work audit reports in lieu of the PUMA compliance program. PUMA also uses FLA accredited brand reports as well as some other brands' audit reports in lieu of the PUMA compliance program. We aim to use external reports converted to PUMA standards for up to 80% of our suppliers at the end of 2025.

↗ T.05 AUDIT RESULTS 2020 – 2022

	2022			2021			2020	
	T1	T2	Warehouse	T1	T2	Warehouse	T1	T2
A (Pass)	63	17		75	6		82	5
B+ (Pass)	157	41		144	23	2	116	26
B- (Pass)	144	39	2	155	46	1	125	35
C (Fail)	19	11	1	16	7		11	2
D (Fail)	9	4	3	2			4	0
Total active + inactive audited factories	392	112	6	392	82	3	338	68
Total active factories as of Dec 31st, 2022	516	128	10	445	99	6		
Number of employees	546,286	82,070	2,229					
Audit coverage %	76%	88%	60%	88%	83%	50%		
	510			477			406	
Pass/Fail %	93/7	87/13	33/67	95/5	91/9	100	96/4	97/3

We employ a team of compliance experts spread across all our major sourcing regions. They regularly visit and audit our core manufacturing partners. We also work with external compliance auditors and with the ILO's Better Work Program. Each PUMA supplier factory must undergo a regular compliance audit from six to 24 months based on their audit rating and all issues identified need to be remedied as part of a corrective action plan.

↗ G.09 AUDIT RESULTS 2020 – 2022



In 2022 the number of audited factories increased and 207 more factories were audited compared with 2021 as per our strategy to increase our local-for-local production and scale up our social monitoring program to non-core Tier 2 suppliers (13).

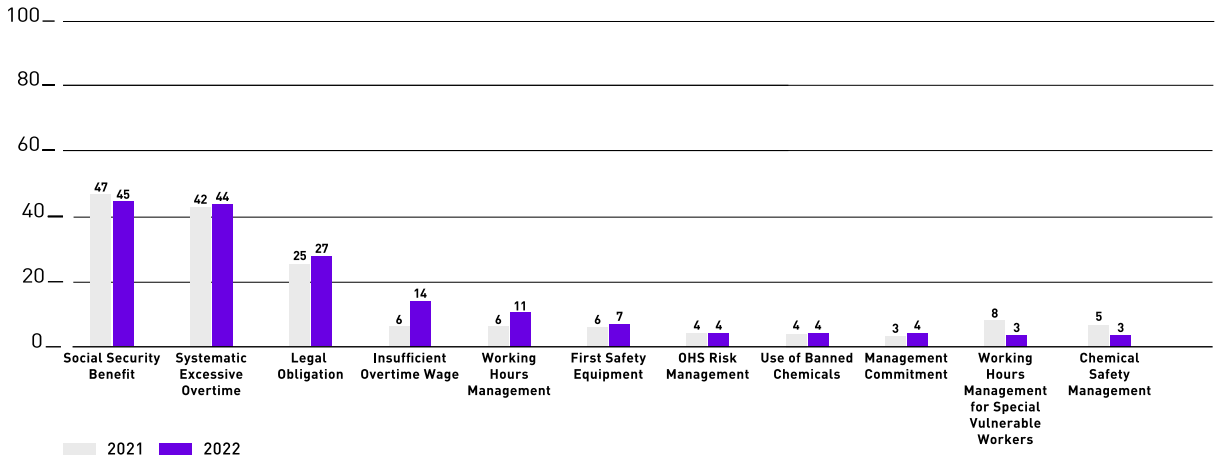
In total 53 factories failed the audit, (33 Tier 1, 16 Tier 2, 4 warehouses); 35 were new factories or factories not under our audit scope yet, such as warehouses or non-core Tier 2. 16 were deactivated due to low performance, 37 are still active, six were re-audited in 2022 and passed the audit. The others were rated C and had 6 months to improve, they will be re-audited in 2023 accordingly.

Out of the 15 factories graded D in 2022, only five were still active as of end of December 2022, as progress is on-going. None of these five D graded still active factories have Zero Tolerance issues.

Around 78% of factories active as of end of December 2022 were audited in 2022. Factories not audited in 2022 had an audit still valid in 2022 because of their grading or factories that could not be audited due to the lockdown enforcement in China or located in Ukraine.

69 factories were upgraded to A or B+ this year (48 Tier 1, 21 Tier 2), as a result of our follow-up and training programs.

↗ G.10 2021-2022 NUMBER OF MOST FREQUENT FINDINGS*



* Excluding converted reports and newly audited factories in 2022.

G.10 shows the 11 most frequent audit findings in 536 audit reports from 510 factories.

207 audits were initial assessments (meaning no audit was conducted previously) in 2022, 39% of the total number of audits performed in 2022, meaning that these suppliers are not yet familiar with our standards, which explains the increase in the number of violations. Furthermore, the number of audited factories and audits increased compared with 2021 (2022, 536 audits, in 2021, 508 audits) (in 2022, 510 audited factories, 2021, 477 audited factories).

Some newly audited factories have non-conformities on social security benefits and legal obligations, such as missing required sub-licenses, while other factories started to close this issue. 100% of workers are covered under social security among all our core Tier 1 suppliers, except in China where this is the case for 76% of workers.

Factories in which we detected transparency issues in 2021, have all remedied this issue, no transparency issues detected during 2022 remained open at the end of 2022.

Systemic overtime has remained a challenge, and in 2022 we conducted working hours management training to all Tier 1 factories and a root cause analysis workshop with selected core Tier 1 suppliers to explore opportunities for improvement. Factories' management reviewed and strengthened their policy and working hours monitoring system. They gained a deep understanding of how to conduct a root cause analysis. We could collect an action plan to address prioritized root causes of overtime hours. We will need to further follow up on progress on site in 2023, even though we have noticed a decrease in average overtime hours compared with 2021 from 8.3 to 7.7 hours at our core Tier 1 factories.

There were five audit findings on a potential risk of Freedom of Association breach in 2022, mainly related to the election process of unions or a worker representation committee. As of today, four remain open. We have deactivated one factory and won't be able to follow up on this issue any further. We will continue our engagement with the factory management to close the other cases.

PUMA is committed to respecting women's rights as per the Convention on the Elimination of Discrimination Against Women and expect suppliers to commit to and respect women's rights. In this context, we carefully monitor working conditions for pregnant women. Five audit findings related to pregnant workers, mainly about overtime and maternity leave, two of them are closed and three are still

being followed up. Our 2022 assessment showed that bathroom breaks were not being restricted for pregnant women.

There was no violation found on forced overtime or retaining workers' passports or other identity and personal documents. One audit finding was identified related to restricted freedom of movement and the factory was deactivated. We identified 15 violations regarding delayed payments, eight of them are closed, three factories were deactivated; we are still following up on the four pending findings for improvement.

11% of corrective actions pertaining to wages and/or overtime were implemented, and these issues were resolved in 2022. We expect more progress in 2023, since 40% of audits were conducted near the end of 2022. We noticed improvements in working hours management for especially vulnerable workers, transparency, on-time payment, chemical safety management, labor dialog management. As nearly 40% of the audits conducted in 2022 were initial assessments, reducing overtime and increasing social security coverage will remain a focus of our efforts. In 2023 we will provide e-learning on our social standards, which will help suppliers, especially those newly onboarded, to better understand our expectations.

Beyond auditing, we track social key performance indicators such as average payments vs. minimum wage payments, overtime hours or coverage by collective bargaining agreements. These data are reported under the Fair Income target.

Supplier Training

We also increased our engagement through capacity building activities. In 2022 PUMA provided training to core Tier 1 suppliers on how to conduct OHS risk assessments. We followed up on progress with an on-site visit by a third-party auditing company. Overall core Tier 1 factories had an injury rate of 0.3 in 2022, well below our target of less than 0.5. However, as each accident is one too much and suppliers' knowledge still needs to be further strengthened, we will keep our focus on OHS risk assessment training in 2023.

↗ T.06 SUPPLIER TRAINING

Meeting	Topics	Number of factories	Number of participants
Supplier Virtual Meetings	Sustainability updates, best practices sharing, etc.	Average. 496 per round (3 rounds)	Average. 1,160 per round (3 rounds)
Code of Ethics		473	1,090
Responsible purchasing			280 PUMA sourcing team members 31 PUMA sustainability and licensees' staffs
OHS Risk Assessment	Core Tier 1 suppliers on how to do OHS Risk Assessments	170	404
Working hours management	Principles and process to control working hours	387	950
Overtime root cause analysis	In depth review of root cause analysis methodology	75	240

Grievance Channels

We operate multiple worker voice channels to reach more than half a million workers. If workers are not satisfied with the responses offered by factories via their respective internal grievance system, we encourage the use of the PUMA hotline to raise complaints or request consultations. Phone numbers and e-mail addresses for this hotline are published on our Code of Conduct posters displayed at every audited factory globally. We also use WeChat, Zalo, Facebook, and other social media channels to connect with workers and have established more formalized compliance and human resources apps at selected core suppliers.

The third-party worker engagement platforms cover 92 factories (202,397 workers), which represents more than 80% of our production volume. In 2022 2,006 feedback were received through the MicroBenefits and the WOVO platforms in China, Indonesia, Pakistan, Philippines, Turkey, Cambodia and Vietnam, and the Amader Kotha Helpline in Bangladesh. Of the 2,006 messages, 14 cases were escalated to PUMA as the factory did not respond within the agreed timeline. PUMA engaged with the factory's management to address the workers' concerns. All other concerns not escalated to PUMA were handled and resolved directly by the factory management.

In 2022, 159 workers' concerns were raised through PUMA's hotline across seven countries. Together with our suppliers, our team was able to resolve 99% of them.

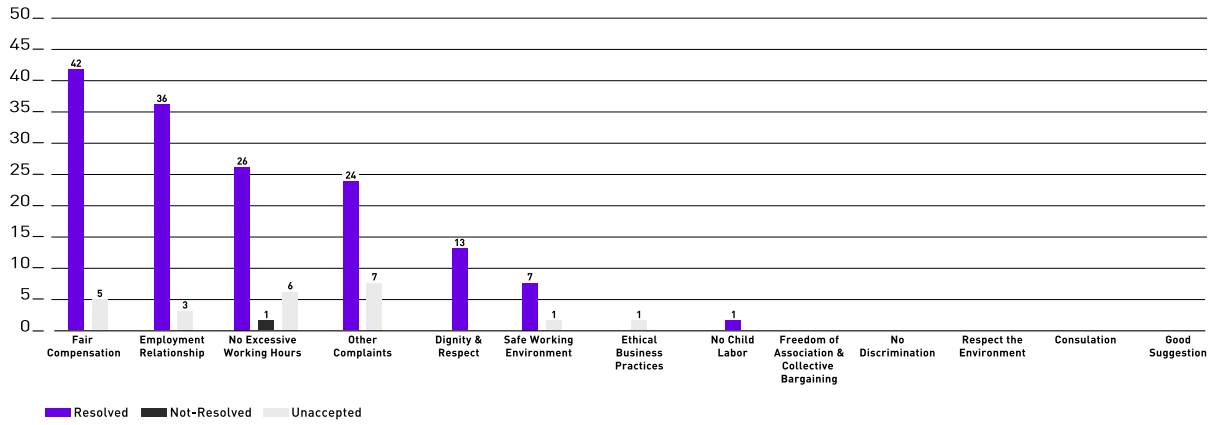
Only one issue remains unresolved as of the end of 2022. Since 2021 one worker has not yet received child support sponsored by the government of Vietnam, but documents were not submitted on time by factory HR management. The factory management and PUMA sustainability team will keep following this up.

We also received 13 third-party complaints from external organizations related to PUMA's manufacturing partners, seven have been resolved. The majority were about freedom of association, others about fair compensation, abusive practices and work environments. Five out of ten complaints about freedom of association were resolved in 2022, the union representatives were either reinstated or compensated in agreement with the unions involved. We are still following up on the six other cases.

↗ T.07 WORKERS' COMPLAINTS 2019 – 2022

Workers' complaints	2022	2021	2020	2019
Total received – external channels (third-party platforms)	**2,006**	**3,132**	**1,021**	
Total received – PUMA hotline	159	223	101	70
Total confirmed	1,877	3,168	984	61
Total received - PUMA hotline and escalated to PUMA via third-party platforms	173	262		
Resolved - PUMA hotline and escalated to PUMA via third-party platforms	172	261	983	61
Not resolved - PUMA hotline and escalated to PUMA via third-party platforms	1	1	1	0
Resolved (%)	**99.3%**	**99.6%**	**99.9%**	**100%**

↗ G.11 NUMBER OF MOST FREQUENT GRIEVANCES RAISED IN 2022 THROUGH PUMA HOTLINE AND THROUGH THIRD-PARTY PLATFORM ESCALATED TO PUMA



For PUMA's own hotline, employment relationship, fair compensation and excessive working hours are the most frequent concerns raised by workers in 2022.

Examples on how we handle grievances received:

In 2022 a group of workers complained through the PUMA hotline about a production manager's abusive behavior in a factory located in South Africa. PUMA's Sustainability Team and Sourcing Team convinced the factory management to collaborate with an independent third party to conduct an in-depth investigation and the production manager was enrolled in a leadership training program to prevent such behavior in future.

From any country, when workers complained about working during public holidays or overtime hours, PUMA engages with the factory management, so the production schedule was adjusted. Furthermore, PUMA provided training to these factories on working hours management, and a root cause analysis to prevent excessive overtime.

Most workers' concerns about wages and benefits are mainly due to their misunderstanding about wage and benefit calculations. We ask factories to proactively talk to and train workers on the calculation methods.

Cambodia
Early in 2021 we received three complaints from one of the local unions in Cambodia and one case is still pending. The allegations were about a potential breach of freedom of association rights. We worked to find the best solution related to these concerns, facilitating mediation meetings between worker representatives and factory management, partnering with Better Work Factory Cambodia and/or with other brands producing in the same factories.

In 2021 PUMA partnered with Better Factories Cambodia to provide a customized workshop for factory management, shop stewards and union representatives. 109 participants from 20 factories attended the training.

The training covered:

- Rights and obligations of employers, unions and worker representatives and workplace relations
- Employment contract termination, resignation, dismissal, retrenchment as per Cambodian labor law, and policies and procedures
- Compensation in case of employment contract termination

A survey conducted after the training shows that factories have increased their awareness about resignation, retrenchment, termination process and scenario.

In 2022 we received five issues concerning three Cambodian factories, about a potential breach of freedom of association rights (three out of five are resolved). We worked to find the best solution related to these concerns, facilitating mediation meetings between workers' representatives and factory management, partnering with Better Work Factories Cambodia and/or with other brands producing in the same factories. Two unresolved cases were received in late 2022 and we are still following up on them. In 2023 PUMA plans to work with Better Factory Cambodia to once again provide a customized workshop to factory management, shop stewards and union representatives.

↗ CASE STUDIES

Cambodia

In late October 2022, we were contacted by Voice of Democracy, a news outlet in Cambodia, which said that nine leaders and activists of Independent Trade Union Federation (INTUFE) at a Cambodia factory were terminated after union elections. The organization called on PUMA to intervene and ensure workers' rights and freedoms to organize the union were respected. PUMA played a role in organizing meetings with the factory and the union to start several close dialogs. The factory reached a mutual agreement with the nine workers. The factory's management has now joined the ILO's Better Factories Cambodia program and a program on industrial relations, both of which will help the management improve the social dialog at the factory.

Pakistan

In September 2022 we received an e-mail from UK-based media, asking for PUMA's comments on the allegations made by the female employees of a factory in Pakistan. It was alleged that the managers of the factory were leaking the contact details of young female workers to other male colleagues without their consent and these female workers received inappropriate messages. In addition, there were allegations about unpaid wages during the COVID-19 pandemic. An unannounced investigation by a third party immediately took place in the same month. The auditor concluded that no wages were deducted during the pandemic, but confirmed some inappropriate behavior towards three female workers occurred in July 2022. The factory has already acted and dismissed the concerned supervisor in August 2022. Female workers interviewed during the investigation confirmed such cases did not happen anymore. In October 2022 the factory management agreed to take further actions to prevent similar cases from happening in the future, such as limiting access to personal contact information of employees to HR personnel only. An anti-harassment committee headed by female HR personnel was formed. 100% of committee members were trained in handling grievance cases. 100% female as well as male employees were given awareness training on harassment and abuse, reporting channels and the consequences or penalties of violating the anti-harassment policy. Awareness sessions are continuing as planned and are recorded accordingly.

All issues identified during our auditing and hotline activities are classified as zero-tolerance issues (such as child labor or forced labor), critical issues or other issues in our handbook.

As the name implies, zero-tolerance issues lead to the immediate failure of an audit. If these issues are reported for a new factory, the factory will not be allowed to produce PUMA goods. Established suppliers must remedy all zero-tolerance issues immediately by conducting a root-cause analysis and implementing preventive measures to avoid the issue from reoccurring in the future. As a last resort, business relationships will be terminated if the factory fails to cooperate. Other issues are also followed up on by our compliance team.

During 2022 we identified 12 zero-tolerance issues and were able to remedy seven on workers' compensation in line with legal requirements, lack of transparency and illegal wastewater discharge. Five factories were deactivated in 2022. The increase in number is due to the increased number of factories audited in 2022.

↗ T.08 ZERO TOLERANCE ISSUES (ZTIS)

Country	2022	2021	2020
Bangladesh	3	2	4
Cambodia	1	2	0
India	3	0	0
Vietnam	2	0	0
Malaysia	1	0	0
Philippines	1	0	0
Spain	1	0	0
Total	**12**	**4**	**4**

"As a partner since 2013, PUMA has signed up to Better Work's vision of a more transparent, inclusive, and ethical industry. As a joint programme between the UN's International Labour Organization and the International Finance Corporation, a member of the World Bank Group, Better Work brings diverse groups together – governments, global brands, factory owners, and unions and workers – to improve working conditions in the garment industry and make the sector more competitive. Our business partners are a key part of this approach, which also includes evaluating their own purchasing practices and business behaviour for healthier supply chains. With Better Work, PUMA continues to support their supply chain by encouraging factory ownership and growth, strong worker-management dialogue and promoting decent working conditions."

ROOPA NAIR
Head of Operations, Better Work

FAIR INCOME

Target description:

- Make sure all PUMA employees are paid a living wage
- Carry out fair-wage assessments including mapping of a specific wage ladder for top five sourcing countries to help improve their wage levels and practices
- Ensure bank transfer payment to workers at all core suppliers by 2022
- Ensure effective and freely elected worker representation at all core Tier 1 suppliers through collaboration with other brands

Relates to United Nations Sustainable Development Goals 1, 2 and 10

KPIs:

- Percentage of average wages compared to minimum wage
- Percentage of workers with permanent contracts
- Percentage of workers with social insurance coverage
- Percentage of workers paid via bank transfer
- Percentage of factories with freely elected worker representation
- Percentage of factories with collective bargaining agreements
- Number of countries with fair wage assessments over the last five years

For the definition of fair wages, PUMA follows the requirements for compensation set out in the Code of Conduct published by FLA. The Fair Wage Network conducts wage assessments and evaluates the wage systems of selected factories across 12 dimensions, focusing on five major areas: Legal compliance, wage levels, wage adjustments, pay systems and social dialog and communication.

FAIR WAGES AT PUMA'S OWN ENTITIES

Increasing cost of living is an emerging risk for PUMA. During 2021 we purchased a license for the living wage database of the Fair Wage Network. In 2021 and 2022 we used this database to check the payment of a living wage to all PUMA employees globally. In 2022, our global leadership team implemented performance KPIs - tied to bonuses - related to ensuring PUMA employees earned a living wage. The results of this internal assessment show that globally all regular PUMA employees who are working full time are paid according to a living wage thresholds at regional/city level or above with regards to the Living Wage Adjusted Mean as defined by Fair Wage Network.

Please see Our People section for further details.

FAIR WAGES IN THE SUPPLY CHAIN

As part of our efforts to ensure fair wage practices at the factories of our suppliers, we have defined the failure to make a full payment of at least the minimum wage a zero-tolerance issue. This means that to be taken on as or to remain active PUMA suppliers, companies must pay minimum wages in full compliance with local regulations. Provisions around the payment of overtime hours and social insurance are also clearly articulated in PUMA's Code of Conduct and are scrutinized regularly based on our Compliance Audit

Program. The performances of PUMA's suppliers on other Fair Wage dimensions are also assessed through field work assessment surveys carried out by the Fair Wage Network.

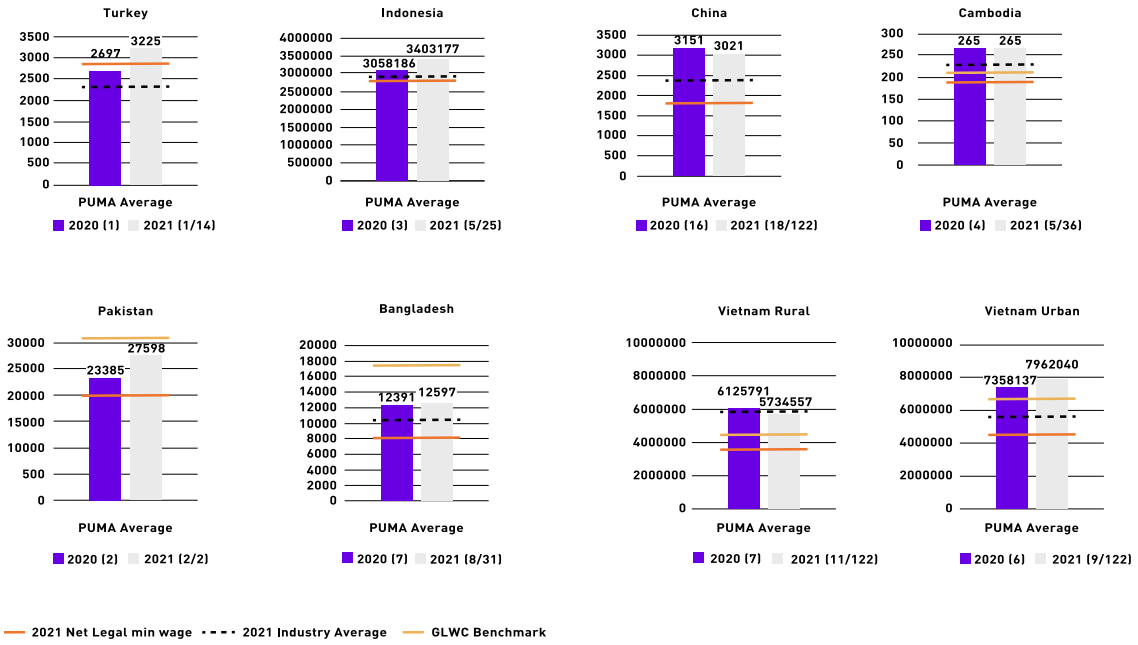
DIGITAL PAYMENT

In 2022, 99.3% of our core factories paid workers digitally, only one out of the 147 core factories have 717 employees who have not yet received their payment digitally. 238,314 employees are now paid digitally.

FAIR COMPENSATION DASHBOARD

At PUMA, we have collected wage data annually from our core Tier 1 factories for several years. We use this data to report S-KPIs (table T. 10). In 2021, we used the FLA's Fair Compensation Dashboard* to analyze 2020 wage data of 46 strategic Tier 1 suppliers and 2021 wage data of 59 in 2022. We use the Dashboard to compare aggregated and anonymized data from industry peers and, where available, against living wage benchmarks of the Global Living Wage Coalition (GLWC). For this purpose, the Anker Methodology** was used.

↗ G.12 FLA FAIR COMPENSATION DASHBOARD 2020 – 2021



* Industry average wage data from FLA Fair Compensation Dashboard from November 2020 and October 2021. Users of the FLA's Fair Compensation Dashboard have access to live anonymized monthly average net wage calculations based on all wage data uploaded per country and year. Averages are updated as wage data is uploaded into the dashboard.

** Anker's living wage methodology: Net Wage = Basic (Contracted) Wage + Cash Benefits + In-Kind Benefits – Mandatory Taxes and Legal Deductions. Payment of overtime is excluded.

The dashboard shows the results of our benchmarking for 59 core Tier 1 factories, in local currency, covering wages in 2021. This data covers approximately 75% of PUMA's global production volume.

All our strategic factories in Vietnam and Cambodia (except for two factories in VN), pay on average a living wage set by the Global Living Wages Coalition to workers. These 23 factories cover approximately 32% of PUMA's production volume and 32% of PUMA's global production value; 70,832 production workers work in these 23 factories.

Our strategic suppliers pay workers clearly above the industry average in all countries for which we have this benchmark.

Our suppliers in Indonesia fell short of the average industry payments in 2020. In 2021 we see an increase of workers' wages above the industry average up to 115% (89% in 2020) of the industry average.

Our suppliers in Pakistan reach 89% (83% in 2020) of the Global Living Wage Coalition Benchmark.

The payments in Bangladesh, despite being above industry average, fall well short of the Global Living Wage Coalition Benchmark and reached 70% of the Global Living Wage Coalition Benchmark (69% in 2020).

In Indonesia, China and Turkey, country-level GLWC benchmarks were not available in 2020 and 2021. In Turkey, the average wage increased by 19,6%, mainly due to the high inflation rate. Vietnam Rural fell by 6% due to the newly reported suppliers being in a lower minimum wage region.

In 2022 we conducted fair wage assessments with seven factories in Bangladesh, Pakistan and Vietnam, and worked on remediation in six factories in Bangladesh, Cambodia and Indonesia.

FAIR WAGE ASSESSMENT

We asked the Fair Wage Network (FWN) to conduct formal fair wage assessments at our core suppliers based in Bangladesh (2018), Cambodia (2019), Cambodia and Indonesia (2021), Bangladesh, Vietnam and Pakistan (2022) in total 21 factories. Out of these 21 factories, six factories obtained a Fair Wage Certificate. Meaning that among the 12 dimensions of fair wage, wage and overtime payment, communication, and social dialog, for example, each certified factory must receive at least 280 out of 400 points with no more than two dimensions below a 40% score.

It was positive that several factories had continued to strengthen some institutional elements, such as wage grids and schemes relating pay to performance. At the same time, similar developments were not always reported on social dialog, with workers' representatives not always involved in wage discussions, and with collective agreements being rarely signed at factory level, something that gives valuable information for follow-up and remediation in these specific factories, but also for our 10FOR25 sustainability targets to ensure our core Tier 1 factories will have freely elected workers' representatives.

Overall, workers' satisfaction with wages and working conditions was found to be relatively good, in average, with 95% workers being either 'fully' or 'partly' satisfied with their wages and 86% workers being either 'fully' or 'partly' satisfied with working conditions.

In 2022 a total of six factories (three in Bangladesh, one in Cambodia and two in Indonesia) which went through a Fair Wage assessment decided to implement a remediation phase with the support of Fair Wage Network.

The FWN team conducted training as part of such remediation process in October 2022 for the two factories' management and workers' representatives in Indonesia. A social dialog round was conducted in 2022, and an agreement between workers' representatives and the management was reached to implement a seniority bonus that was then approved by the Ministry of Labor.

In Bangladesh, a Fair Wage Implementation Committee was formed in each participating factory, consisting of two worker representatives and two management representatives, with the task to discuss and implement internally the different objectives and steps of the Fair Wage Remediation plan.

As a technical support to this remediation process in Bangladesh, two training sessions were conducted by the FWN for the implementation committee members. The first training in August 2022 was on possible improvements on pay systems and wage adjustment mechanisms and also the other Fair Wage dimensions while the second one in January 2023 focused on how to improve the Wage Grid and how to carry out regular Living Wage Survey to better capture workers' living conditions and eventual difficulties. Improvement areas were identified in a corrective action plan. Workers were trained to better understand the factory wage system. We witnessed concrete outcomes, such as more diversified pay systems, an improved dialog between workers and factory management on the topic of wages, even if workers' lack of basic literacy remains a challenge for them to fully understand the wages calculation. In 2023 a living wage survey will be conducted to analyze and determine how to make wages a competitive advantage. The factory wages grid and performance evaluation system will also be reviewed.

In Cambodia the Fair Wage remediation was launched in August 2022. The factory agreed on a remediation plan in October and formed the Fair Wage Committee in November. In 2023 the Fair Wage Network team will organize training programs and follow-ups to implement the remediation plan.

RECRUITMENT FEES

PUMA signed the Fair Labour Association/American Apparel and Footwear Association Commitment to Responsible Recruitment in 2018. Since then we have actively engaged with suppliers, industry peers as well as with the United Nation's International Organization for Migration with the objective to ensure that the labor rights of foreign and migrant workers are upheld in our supply chain.

We map on a yearly basis if our factories employ foreign migrant workers and if any recruitment fees were paid by workers and how much. We then engage with our sourcing leaders, supplier top management, and in some cases other brands this supplier produces for, to come up with an agreement on a timeline to pay migrant workers back. The back payment could in certain cases be made in different installments and not a lump sum to not disturb the factory as not all workers are entitled to this payment, and this could create misunderstandings amongst workers.

PUMA has used e-learning from the International Organization for Migration in employer guidelines. 79 factory representatives from 36 factories from Mauritius, China (Taiwan), South Korea, Thailand and Japan completed this 90 minute English course and were certified in October 2022. The training provided an overview on different migration corridors and economic sectors, from fashion through to electronics and food manufacturing and the risks faced by migrant workers throughout their labor migration journey and what they can do to mitigate and prevent those risks. The e-course provides practical guidance on how to establish sustainable practices to safeguard migrant workers' rights, human rights policies, due diligence processes and remediation systems, and supports businesses to involve migrant workers to create sustainable solutions. Through the efforts of multi-stakeholder engagements, factories paid back more than $ 100,000 to 255 foreign migrant workers, at six factories in Japan, South Korea, China (Taiwan) and Thailand.

In 2023 we will keep monitoring factories' recruitment practices, and set up training in collaboration with industry peers and the International Organization for Migration for Taiwanese suppliers who employ foreign migrants.

↗ CASE STUDY

Indonesia
Training on social dialog was conducted by the Fair Wage Network team in October 2022 for one apparel and one footwear factory as part of their fair wage remediation plan.

Social dialog took place at both factories and the wage structure was reviewed as the result of dialog with worker/union representatives. Both new wage structures have been approved by the Ministry of Labor and implemented. 53% of workers had around 0.5-1% increase on their basic wage.

China
We partnered with Timeline Consultancy, a China-based consultant. PUMA invited a Chinese apparel factory to implement a nine-month workplace dialog project since July 2018. The project aims to guide factory freely-elected worker representatives, and create a dialog mechanism between them, which eventually improves employee-employer relationships, workers' loyalty and productivity.

In 2022, 100% (217) workers' feedback was provided through worker representatives. Workers' turnover rate reduced from 3.84% in 2019 to 2.62% in 2022, production efficiency rose from 88% (2019) to 92% (2022), and the product qualification rate went up to 98.8% (2022) from 96.5% (2019).

Given the success of the project, the PUMA sustainability China team was trained by Timeline Consultancy in 2021, and we are then able to replicate the project to another five Chinese factories in 2022.

↗ T.09 FAIR INCOME TARGET STATUS

Sub-targets	2022	Baseline 2020	Target 2025
Digital payment (% of core Tier 1 and Tier 2 suppliers)	99.3%	90%	100%
% of workers that are receiving wage payments digitally	99.7%	*	100%
Percentage of core Tier 1 supplier facilities that have trade unions or freely-elected worker representation	48%	33%	100%
Fair wage assessments (Mapping of a specific wage ladder for top five sourcing countries)	4 out of 5	2 out of 5	5 out of 5

* No baseline in 2020

2022 PUMA PLWF REPORT: ADVANCED

The Platform Living Wage Financials (PLWF) is a coalition of 19 financial institutions that engage and encourage investee companies to enable living wages and incomes in their global supply chains. The 2021 PLWF report presents the annual assessments of investee companies on living wage and living income.

PUMA reached the advanced level for its work on fair income.

Most of our core suppliers pay basic wages that exceed minimum wage, 13.4% on average. When adding overtime and bonus payment, this figure increases to 71%. Nevertheless, the percentage of gross wages including overtime and bonuses above minimum wage decreased compared with 2022. Overtime working hours decreased on average 0.65 hours per week in 2022, which influenced overtime compensation. In addition, in-kind benefits such as dormitories provided to domestic migrant workers in China are no longer

included in wages based on the FLA definition update and therefore were excluded this year from the wage calculation.

100% of the workers are covered by social insurance in all countries except for China where 76% are covered. The total average coverage with social insurance increased from 95 to 97%.

This year, we report for the first time on women in managerial positions (49%). Overall, our core Tier 1 suppliers' social performance is steady. The worker turnover rate increases are mostly impacted by four Vietnam factories located in South Vietnam. The fourth wave of the COVID-19 pandemic broke out in Vietnam around the beginning of May 2021, with new fast-spreading and complicated variants developing in many provinces, especially in those with key economic zones. Southern Vietnam was seriously affected by social distancing regulations with production and business operations interrupted for approximately four months, from July to October 2021. However, after October 2021 when the COVID-19 situation was well-controlled, most factories re-started operations leading to massive recruitment.

The permanent worker percentage decreased slightly, mainly due to a large factory, which has opened a new workshop for another brand and recruited more than 1,000 employees in 2022. New workers are considered temporary during their probation period.

"PUMA started carrying out Fair Wage assessments among its suppliers in different markets already few years ago. Through this systematic process that included remediation activities it succeeded to increase the number of suppliers being certified as Fair Wage employers and thus to progressively increase the percentage of its supply chain concerned. This also brings coherence with PUMA's wage policy for its own employees."

DANIEL VAUGHAN-WHITEHEAD
Co-Founder and Chair, Fair Wage Network

↗ T.10 SOCIAL KPIS PUMA CORE TIER 1 FACTORIES 2019-2022

	SOUTH ASIA		SOUTHEAST ASIA					EMEA	2022	2021	2020	2019
KPI	**Bangladesh**	**Pakistan**	**China**	**Cambodia**	**Indonesia**	**Philippines**	**Vietnam**	**Turkey**	**Average**			
Gross wage paid above minimum wage excluding overtime and bonuses (%)	20.1	33.8	6.7	6.7	0.9	0.0	31.5	7.8	13.4	14.5	13.0	17.6
Gross wage paid above minimum wage including overtime and bonuses (%)	67.0	41.3	188.5	68.1	44	20.5	116.4	22.1	71.0	80.2	54.7	73.1
Workers covered by social insurance (%)	100.0	100.0	76.0	100.0	100.0	100.0	100.0	100.0	97.0	95.1	95.6	93.6
Overtime (hours per week)	11.1	0.5	17.2	7.6	6.6	6.6	7.5	4.2	7.7	8.3	5.4	7.1
Workers covered by a collective bargaining agreement (%)	0.0	0.0	95	40.0	40.0	0.0	100.0	0.0	34.4	37.2	26.9	25.4
Female managerial position (%) *	6.5	6.4	56.8	60.4	77.0	70.6	71.2	43.6	49.1			
Female workers (%)	41.5	8.9	61.9	82.8	87.5	64.0	75.4	58.3	60.0	59.5	58.8	59.4
Permanent workers (%)	100.0	100.0	31.5	51.1	93.5	74.1	43.2	100.0	74.2	75.5	74.4	69.1
Annual turnover rate (%)	43.5	24.0	53.6	42.2	21.4	19.5	50.7	29.9	35.6	34.0	29.9	38.2
Injury rate (%)	0.6	0.0	0.3	0.4	0.2	0.2	0.1	0.3	0.3	0.3	0.4	0.5
Number of suppliers	10	2	20	5	5	1	21	1	65	63	58	59

Data received from 65 PUMA core suppliers representing 77.1% of 2022 production volume, 80.4% of 2022 production value; reporting period for data collection: November 2021 – October 2022

* New KPI

HEALTH AND SAFETY

Target description:
- Zero fatal accidents
- Reduce accident rate to 0.5 at PUMA and at suppliers
- Building safety operational in high-risk countries*

Relates to United Nations Sustainable Development Goal 3

Examples of the 10FOR25 action plan:
- Expand building safety projects to include Indonesia
- Ensure professional risk assessments are conducted regularly

KPIs:
- Number of fatal accidents at Tier 1 and Core Tier 2 factories
- Average injury rate at PUMA
- Average injury rate at Core Tier 1 suppliers
- Number of factories subject to our Building Safety Assessment Program

Ensuring safe working conditions for our own employees and hundreds of thousands of indirect employees at our manufacturing partners is an ethical imperative, but also makes good business sense. In 2015 we set a target of zero fatal accidents and aimed to reduce the number of work-related accidents. In 2021 we revised our suppliers OHS handbook, requiring them to conduct an OHS risk assessment and we published the PUMA OHS policy for our own employees.

HEALTH & SAFETY AT PUMA'S OWN ENTITIES

At the headquarters level, we operate an occupational health and safety committee, which includes a specialized labor physician, a health and safety technician and employee representatives.

In 2022 we asked our larger subsidiaries to start their own health and safety committees at country level.

Since 2015 we have been able to record zero fatal accidents at our own entities. We also kept the lost time injury rate below 0.5 since 2019, meaning that per 100 full-time employees, less than 0.5 accidents were recorded.

In 2022 this target was supported by further rolling out our Occupational Health and Safety e-learning. Over 15,000 PUMA staff members participated in health and safety training to prevent injuries or work-related negative health effects.

In addition, we are offering sports facilities, canteens with balanced food and work-life balance courses at our major offices globally.

For more information on employee wellbeing please refer to the Our People section of this report.

* High risk countries are defined by building safety index which is based on instances of non-compliances associated with building approval, multi-tenants building, structural integrity, ventilation/ heating, and warehouse related.

HEALTH & SAFETY IN THE SUPPLY CHAIN

Apart from our ongoing auditing program that includes occupational health and safety assessments, we implement our Building Safety Assessment Program in countries where we identified risks. We also set up professional risk assessments at all our major manufacturing partners. Despite these preventive measures, in 2022 unfortunately two employee deaths resulted from work-related accidents in Bangladesh in two different factories. We will keep our focus on Occupational Health Safety accident prevention.

SUPPLIER TRAINING ON OHS RISK ASSESSMENT

In 2021 we updated our OHS Handbook to provide guidance on processes and tools for OHS risk assessment to the factory management and OHS person in charge. We trained our core Tier 2 factory management on how to perform an OHS risk assessment.

In 2022 OHS Risk Assessment Training was conducted for 404 participants from 170 core Tier 1 and Tier 2 factories, focusing on the importance of OHS risk assessments, main elements of such an assessment and PUMA's expectation on OHS management in general. Following the training, our suppliers conducted their own risk assessment. We followed up on progress with an on-site visit by a third-party auditing company. Overall core Tier 1 factories had an injury rate of 0.3 in 2022. However, suppliers' knowledge still needs to be further strengthened, so we will keep our focus on OHS risk assessment training in 2023.

BUILDING SAFETY ASSESSMENTS

From 2015 to the end of 2022, our Building Safety Assessment Program covered Bangladesh, India, Indonesia and Pakistan.

↗ T.11 BUILDING SAFETY ASSESSMENT PROGRAM

Country	Number of factories	Comments
Bangladesh	26	Part of our ongoing membership of the Bangladesh Accord
India	6	In partnership with AsiaInspection or Elevate
Indonesia	3	In partnership with AsiaInspection
Pakistan	4	In partnership with Elevate

A safe workplace is a top priority at PUMA and we continuously carry out building safety inspections among high-risk factories in our supply chain. In 2021 we were able to conduct the structural/fire/electrical safety inspection at three suppliers from Pakistan and India. Two of them have been assessed in the past; we saw improvements in electricity safety, however, structural safety findings increased due to the extended audit scope. In 2022 we conducted the structural/fire/electrical safety inspection at four suppliers in India. One of them was assessed in 2021 under the same criteria, and we saw improvements in electricity and fire safety. Another three were inspected more than five years ago, while the inspection criteria cannot be compared. Moving forward we will follow up with these factories on their remediation.

None of our suppliers have been involved in any structural building safety incidents or factory fires since 2015.

Our factories under the ACCORD program in Bangladesh have a completion rate (initial findings) of 91%, the same as the average rate of all factories that are under this program. Nine out of 26 ACCORD active

factories achieved 100% remediation of the initial findings. Another 9 factories achieved more than 90% remediation of the initial findings.

The three factories that were assessed in Indonesia are in the process of obtaining building safety certificates from the government. One factory has already obtained it.

ACCIDENTS

In 2022 we recorded two factory employee deaths resulting from work-related accidents in Bangladesh in two different factories.

One store loader dropped a 20 kg fabric bundle mistakenly through an emergency window, while a worker was walking underneath. The fabric bundle hit the side of the carton the worker was carrying, causing him to fall and sustain fatal injuries.

A worker from the maintenance department was electrocuted in the generator room causing him to fall and sustain fatal injuries.

Both factories paid the legal compensation to the worker's family. PUMA collaborated with Better Work Bangladesh for joint monitoring and regular follow up on the actions taken to prevent future occurrence of such accidents. We deeply regret these tragic accidents.

↗ T.12 INJURY RATES AT CORE SUPPLIERS

Country	2022	2021	2020	2019
Bangladesh	0.6	0.5	0.4	0.3
Cambodia	0.4	0.3	0.2	0.5
China	0.3	0.3	0.6	0.5
Indonesia	0.2	0.2	0.2	0.2
Vietnam	0.1	0.1	0.2	0.3
Average*	**0.3**	**0.3**	**0.4**	**0.5**
Fatal accidents**	**2**	**0**	**0**	**0**

* Average of the five countries included in this table. Global average injury rate for PUMA's core suppliers in 2022 was 0.3.
** Including non-core suppliers.

As we believe that the health and safety of the people working for PUMA and in PUMA production always come first, we will continue to work with our own entities and suppliers to avoid disease and accidents.

Early 2023, PUMA joined the Employment Injury Scheme (EIS) pilot in Bangaldesh, driven by German Development Agency (GIZ) and ILO.

In cases of work-related accidents, the EIS Pilot provides income replacements for the permanently disabled and the dependents of deceased workers, covering all factories contributing to the export-oriented ready-made garments (RMG) sector. This takes the form of periodical payments/pensions as top-ups for the lump-sum payments of the Central Fund, rendering the level of benefits compatible with ILO Convention No. 121. These payments are financed on a voluntary basis by international brands.

The EIS Pilot also includes a data-gathering and capacity-building component on occupational accidents, diseases and rehabilitation, based on a sample of approximately 150 representative factories. This will enable us to assess, based on reliable data, the feasibility, viability and cost efficiency of a comprehensive EIS in Bangladesh. The data-gathering and capacity-building component will thus ensure the affordability of employer contributions.

ENVIRONMENT

The purpose of our environmental efforts is to ensure that PUMA and its suppliers are in full environmental compliance and any negative impact on the environment is minimized. Over the last 10 years, PUMA did not incur any environmental violations or fines known to us. Ultimately, we are aiming for a positive environmental impact of PUMA and our supply chain on the environment.

ENVIRONMENTAL MANAGEMENT AT PUMA'S OWN ENTITIES

We conduct energy efficiency audits every four years at our own entities with the next audit cycle coming up in 2023. Compulsory in the European Union, these audits help us identify energy-saving opportunities at our offices, stores and warehouses and roll them out on a global basis.

In 2022 we went a step further and achieved an ISO 14001 Environmental Management certification for our headquarters and published a stand-alone environmental policy. We also compiled an environmental handbook specific to our own offices, stores and distribution centers, which was published in early 2023. We continued our global data collection and management for our own entities and set up a quarterly subsidiaries call to allow for peer learning and good practice sharing. These calls are also used to re-emphasize our sustainability strategy and goals with our PUMA countries worldwide.

The progress towards those goals is reported in the individual chapters of this report.

ENVIRONMENTAL MANAGEMENT IN THE SUPPLY CHAIN

As far as our suppliers are concerned, our PUMA compliance audits (detailed in the Human Rights section) contain a dedicated section on environmental and chemical compliance. For example, during each audit we inspect environmental permits, waste management, and effluent treatment plants.

PUMA has moved from individual brand chemical and environmental audits to the use of industry-wide tools, such as the Higg Index Facility Environmental Module (FEM) 3.0. PUMA requires an annual external verification of the self-assessment FEM modules. This external verification may be completed by approved verifiers from PUMA's internal team, other credited brands, or third-party organizations on the approved list from SAC. 100% of verification inspections are announced.

PUMA's Environmental Performance Rating System is based on the ratings developed from the factories' Higg FEM scores verified by SAC approved verifiers: A, B+, B-, C and D. The minimum passing grade from the environmental perspective is 40% (i.e., only A, B+ and B- ratings are passable) and C and D are failure ratings. This rating system was presented during supplier and sourcing team meetings in 2020 and was implemented gradually during 2022. Our environmental handbook has been updated accordingly. This rating system was included in our vendor supplier scorecard along with social and chemical ratings.

↗ T.13 NUMBER OF FACTORIES WITH FACILITY ENVIRONMENT MODULE (FEM) VERIFIED SCORE

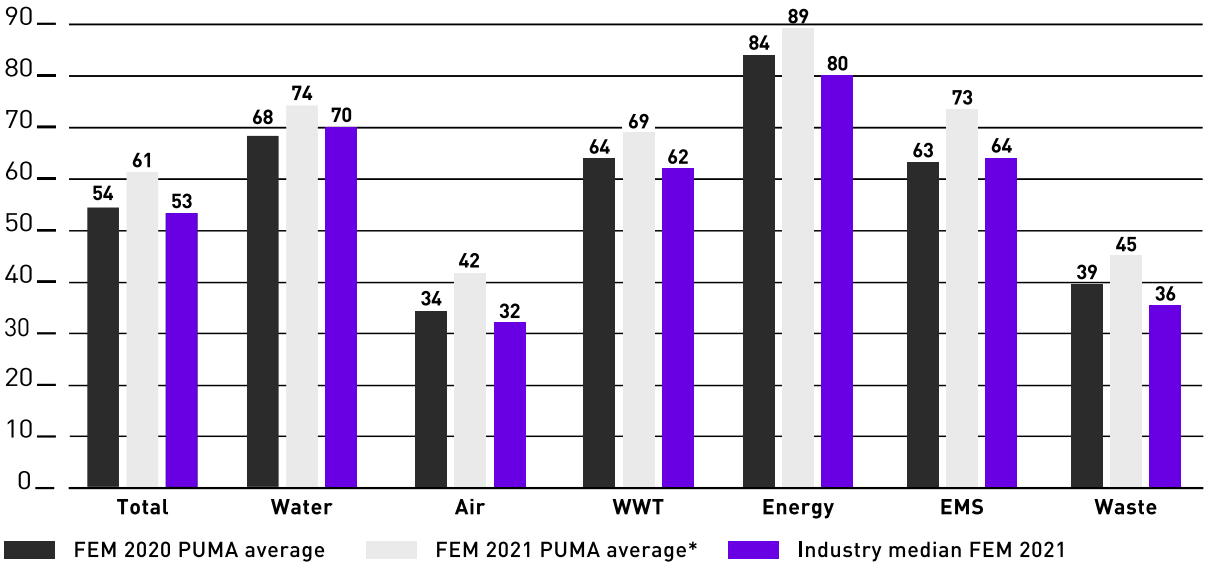
Number of factories with FEM verified score	2022			2021		
	Core T1	Core T2	Core L&P*	Core T1	Core T2	Core L&P*
A	8	10	2	5	3	1
B+	25	25	1	21	23	5
B-	30	22	7	27	24	4
C	2	8	2	12	17	1
D	0	0	0		2	1
Total	65	65	12	65	69	12
Number of factories		142**			146	

* L&P: Labeling and packaging

** Out of a total of 147 core factories targeted for FEM, 142 factories have completed verification

Further data on the environmental performance of PUMA and our suppliers can be found in the Climate and Environmental KPI sections.

↗ G.13 AGGREGATED VERIFIED FEM SCORE FOR PUMA FACTORIES BENCHMARKED WITH INDUSTRY



* Verification in 2022 is for FEM 2021; Verification in 2021 is for FEM 2020

FEM 2020 PUMA average: 146 factories

FEM 2021 PUMA average: 142 factories

Industry median FEM (5,889 factories): Filer used industry sector (Apparel, Footwear, Accessories includes handbags, jewelry, belts, and similar products) and Facility Type (Final Product Assembly, Printing, Product Dyeing and Laundering, Material Production including textile, rubber, foam, insulation, pliable materials)

The Higg FEM assesses:

- Environmental Management Systems
  - Energy use and greenhouse gas emissions
  - Water use
  - Wastewater
  - Emissions to air (if applicable)
  - Waste management
- Chemical Management (FEM chemical module is explained under the Chemical section of this report)

Since 2020, we have communicated to our core factories our expectation to improve their score by setting up annual goals and using our new grading system. In 2021 and 2022 we facilitated training sessions conducted by FEM experts. This training was compulsory for low-performance factories to attend and for those not familiar with this industry tool. Then we closely monitored to make sure the factories would complete the verification of their self-assessment in a timely manner.

During 2022 we organized customized training sessions by FEM experts. The training sessions focused on how to improve Higg FEM scores on low performing areas for each region, preferably in the local language. We also facilitated entry level training sessions for factories that are new to Higg FEM.

In 2022 we continued our journey with Higg FEM for our core Tier 1 and Tier 2 factories. Out of a total of 147 core factories targeted for FEM, 142 factories have completed verification of their FEM entries of 61%. Two core factories were not in scope since one factory relocated and did not have any 2021 data to complete its FEM. Another factory closed in September 2022.

We have set a target to achieve a 10% increase of the average verified score from 2021 (the goal was to reach 59% FEM score). We exceeded this target by achieving an average FEM score of 61%. It's not only the average score, but improvements are also visible in all the sections of Higg FEM as compared to last year. The PUMA average FEM score is higher than the industry median in each section.

As in 2021, we continued our close tracking of factories in 2022, to ensure the factories would complete their verifications in a timely manner. We saw the positive impact of our continued efforts to scale up cleaner production and renewable energy projects, climate action training, chemical projects, chemical management training and wastewater treatment training on the FEM scores of factories which had joined these programs. For 2023 we have communicated a goal of an average FEM score of 64% to core suppliers.

Overall, our core factories have a score above 60% on wastewater, water, greenhouse gases and energy, and environment management systems. This is aligned with our focus and work for many years – the highest score increase is in the setting of targets and improvement plans.

We see topics like chemicals, air and waste as a key focus. In 2021 we conducted a risk assessment for chemical and waste and identified actions to be taken in the coming years. PUMA, as one of the signatory brands under ZDHC, follows up closely on the development and the progress of ZDHC air emission standards and guidelines and will apply in the supply chain as applicable, once details are available.

In 2022, for the first time at PUMA, we rolled out FEM/Facility Environmental Foundation (FEP) to non-core factories in our top three sourcing countries (Vietnam, China and Bangladesh) and the factories which are participating in the PUMA Vendor Financing Program. The purpose is to create a supplier scorecard, not only for our core factories, but also for non-core factories. A total of 66 factories were selected, out of which 49 factories followed the FEM route, while 17 factories adopted the FEP route, which is a lighter version of FEM. Out of 49 FEM factories, 47 have completed verification and out of 17 FEP factories, 16 have completed verification. Notably, most of our non-core facilities that had a verified FEM achieved an A or B rating and only 1 factory recorded a D rating.

↗ T.14 SUPPLIER TRAINING

Meeting	Topics	Number of factories	Number of participants
Supplier virtual meetings	Sustainability updates, best practices sharing, etc.	Average 496 per round (3 rounds)	Average 1,160 per round (3 rounds)
Higg FEM training	For core factories to understand how to complete the Higg FEM module correctly	157	209
Sustainable material (TE, GRS/RCS training)	Guiding suppliers who produce products with recycled content for PUMA on how to apply relevant certificates	54	334
eKPI collection training	For core factories how to correctly fill in the environmental data	186	252

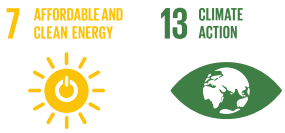
CLIMATE

Target description:
Existing science-based CO_2 emission target:

- Reduce greenhouse gas emissions from PUMA's own entities (Scope 1 and 2) by 35% by 2030 compared to the 2017 baseline (absolute reduction)
- Reduce emissions from PUMA's supply chain (Scope 3: Purchased goods and services) by 60% relative to sales
- New science-based CO_2 emissions target (submitted for approval by SBT coalition)

Additional 10FOR25 targets
- Align PUMA's CO_2 emissions target with a 1.5-degree scenario (that is, what is required to limit global warming to 1.5 degrees)
- Move 100% of PUMA's own entities to renewable electricity
- Expand the use of renewable energy at PUMA's core suppliers to 25%

Relates to United Nations Sustainable Development Goals 7 and 13



Examples of the 10FOR25 action plan:
- Work with industry peers on climate action through the Fashion Industry Charter for Climate Action and the Fashion Pact
- Join industry-level energy efficiency programs for suppliers in our top five sourcing regions
- Join industry-level programs for renewable energy in our top five sourcing regions
- Replace all coal-fired boilers at PUMA's core suppliers
- Reduce emissions from the transport of goods by transitioning to more carbon-efficient modes of transport
- Gradually transition to materials with a lower carbon footprint such as recycled polyester
- Switch all PUMA offices, stores and warehouses to renewable electricity tariffs or renewable energy attribute certificates
- Gradually move PUMA's fleet vehicles to alternative engines (electric or hydrogen)

KPIs:
- Direct CO_2 emissions from own entities (Scope 1*)
- Indirect CO_2 emissions from own entities (Scope 2*)
- Indirect CO_2 emissions from manufacturing, business travel and transport of goods (Scope 3*)
- Percentage of core suppliers covered by energy efficiency programs
- Percentage of core suppliers covered by renewable energy programs
- Percentage of core suppliers with coal-fired boilers (Tier 1 and Tier 2)

* The GHG Protocol Corporate Standard classifies a company's GHG emissions into three scopes:
- Scope 1: Direct GHG emissions from sources that are owned or controlled by the company (offices, stores, warehouses) e.g., office building heating, car fleet emissions.
- Scope 2: Indirect GHG emissions from the generation of purchased electricity, steam and heating/cooling consumed by the company
- Scope 3: All other indirect emissions not covered in Scope 2, such as extraction and production of purchased materials; transportation of purchased goods and use of sold products and services, business travel, employee commuting, etc.

During the UN Climate Conference in Paris in 2015, PUMA agreed to set a science-based CO_2 emissions target. In 2018 PUMA co-founded the Fashion Industry Charter for Climate Action, an industry-wide coalition which aims to align the fashion industry's emissions with the targets included in the Paris Agreement.

One year later, PUMA agreed and published its science-based emission target (SBT) with the SBT Coalition and joined the Fashion Pact, which also includes a climate action commitment.

During 2022 we revised our existing science-based greenhouse gas reduction target and aligned the target with a 1.5-degree scenario. We also published a net zero target for 2050 and added a 100% renewable electricity target to our SBT proposal since we already committed to net zero GHG emissions and 100% renewable electricity as part of our Fashion Industry Charter for Climate Action engagement. Our updated science-based target was developed in 2022 and formally submitted to the SBT Coalition in January 2023.

Old, approved science-based target (well below 2 degrees):
Sports company PUMA commits to reduce absolute Scope 1 and 2 GHG emissions 35% by 2030 from a 2017 baseline year. PUMA also commits to reduce Scope 3 GHG emissions from purchased goods and services 60% per million-euro sales by 2030 from a 2017 baseline year.

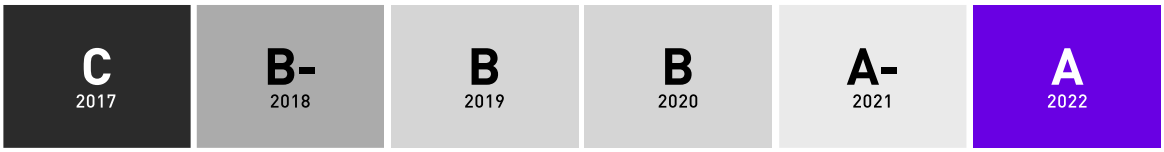
New, submitted science-based target (1.5 degrees):
Sports company PUMA commits to reduce absolute Scope 1 and Scope 2 GHG emissions 90% by 2030 from a 2017 baseline year. PUMA also commits to reduce absolute Scope 3 GHG emissions from purchased goods and services and upstream transportation 33% by 2030 from a 2017 baseline year*. PUMA SE commits to continue annually sourcing 100% renewable electricity for its own operations through 2030.

2022 PUMA CDP CLIMATE SCORE: A

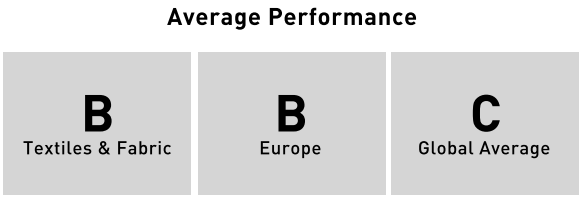
The Carbon Disclosure Project (CDP) is an investor-led coalition that ranks global companies and cities for their climate strategies and disclosure. PUMA has been a long-term participant in the CDP, and we make our answers to the CDP questionnaire publicly available via the CDP website. In 2022, for the first time in PUMA's history, we received an A score for our climate disclosure with CDP for the reporting year 2021.

* The target boundary includes land-related emissions and removals from bioenergy feedstocks

↗ G.14 PUMA CDP CLIMATE SCORES



↗ G.15 2021 CDP INDUSTRY AND GEOGRAPHICAL AVERAGE



PUMA's rating is better than the average performance of the sector (textile and fabric goods) with an average rating of B. The overall global average rating stands at C.

In 2022 we made significant improvements in value chain engagement, Scope 3 emissions, risk management processes and risk disclosure, leading to the highest possible rating of A. During 2021 our score increased compared with 2020 as a result of a host of initiatives taken, including facilitating climate training programs for our suppliers, the participation of our suppliers in industry-wide resource efficiency and renewable energy programs, participation in Higg FEM, the recalculation of Scope 3 emissions, in line with the greenhouse gas protocol, a 12% reduction in absolute Scope 3 emissions from purchased goods and services, life cycle assessments (LCA) of our products, the preparation of a climate roadmap for 2030 and a risk assessment.

The Taskforce for Climate Related Financial Disclosures (TCFD) is an international financial initiative, aiming at more transparency between companies and investors on climate related topics. Since the Carbon Disclosure questionnaire is aligned with the recommendations of TCFD, PUMA, with its A CDP rating, also reports on TCFD principles through its public answer to CDP. Further information on TCFD is given below.

For more information, please visit the PUMA sustainability website or the CDP website.

CLIMATE ROADMAP AND RISK ASSESSMENT

ROADMAP

In 2021 we developed a climate roadmap and conducted a risk assessment using our risk assessment methodology. We see a regulatory landscape with unfavorable policies for renewables in some countries as a high risk. Furthermore, unstable business in our industry overall can restrain suppliers from investing in technologies and upgrading their facilities with low carbon machinery.

Below are key focus areas for the coming years. Some actions were taken in 2021 and continued in 2022 and are reported in this report.

- **Raise awareness:** We see the need to increase internal awareness and have developed e-learning courses on climate action for our staff. We have already started to train 50 sourcing leaders. We will continue to conduct further basic GHG accounting for suppliers. We realized that suppliers need specific training to achieve the ambitious renewable energy targets and the challenges vary from region to region. We facilitated certain training programs in partnerships with industry experts depending on the need of the supplier to address the specific challenges in their regions. Our suppliers continued to attend German Development Agency (GIZ) Climate Training programs in 2022. We collaborated with other brands to nominate our suppliers in Vietnam for the tutor-assisted program.
- **Knowledge of impact:** In 2021 and 2022 we conducted LCAs* of our top five products. We also conducted a comparative LCA of the PUMA RE:SUEDE sneaker compared to our conventional SUEDE. We selected 20 core suppliers to set up science-based targets and developed climate target tools for the remaining core suppliers. Building on efforts in 2021 to set science-based target (SBT) for key suppliers, we conducted a climate investment survey for our top 20 suppliers based on sourcing volume and evaluated long-term business potential with them in alignment with our sourcing leaders.
- **Internal action:** We aligned our Scope 3 calculation with the GHG protocol. Higg FEM overall score and chemical scores are now integrated with the social scores for our vendor scorecard used by our sourcing leaders. We have progressed well to identify a superior data collection platform, which will help provide progress on our climate performance more frequently. We will keep our focus on increasing the use of recycled materials in our products and explore opportunities to use more biosynthetic materials. We submitted a proposal for our science-based targets to be aligned with a 1.5-degree scenario. We continue to enroll more factories in cleaner production programs and renewable energy programs. Out of 20 factories with coal-fired boilers, 14 have already completed feasibility studies to identify suitable alternatives, while four factories are in progress. We remain committed to phasing out coal from our core supply chain.
- **Collaboration and partnership:** We will keep our active engagement in the UN convened Fashion Industry Charter for Climate Action and the Fashion Pact to drive climate actions and influence policy makers for our suppliers to source renewable energy. In 2022 we joined the coal phase out working group under the Charter.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

Climate change has been a focus area for PUMA since the publication of the first Environmental Profit and Loss Account in 2011. As a long-term and A-ranked respondent of the investor-led CDP questionnaire and a founding member of the UN Fashion Industry Charter for Climate Action, PUMA has shown its commitment to combat climate change. Subsequently, we recognize the importance of disclosing climate-related risks and opportunities in line with the recommendations of the TCFD.

The success of our business over the long term will depend on the social and environmental sustainability of our operations, the resilience of our supply chain and our ability to manage the potential impact of climate change on our business model and performance.

Through the implementation of the recommendations set by the TCFD, we summarize the actions PUMA has taken to review its key climate-related risks and opportunities, and the potential impacts on its business and strategy.

* The two LCA results are reported under the Product section of this report.

GOVERNANCE

The PUMA Board of Management takes overall accountability for the management of all risks and opportunities, including climate change. PUMA's CEO is responsible for the overall oversight of the group's strategy, including the sustainability strategy. This includes climate-related targets as stated in PUMA's 10FOR25 sustainability targets. Besides the oversight of the CEO, PUMA's Chief Sourcing Officer (CSO) oversees all sustainability-related topics at PUMA, including climate change, at the management board level. Responsibilities of the CSO include approving new climate-related targets, strategies and initiatives. Sustainability falls into the scope of the CSO because the vast majority of the environmental impact of PUMA's activity is generated during the manufacturing of our products, which are sourced from independent third-party vendors. Therefore, to reduce our climate impact, our sustainability strategy needs to be driven through our supply chain into our vendors' factories and into the components we reference. The responsibility for these two activities is with the CSO.

The supervisory board sustainability committee is handling sustainability on a supervisory board level. The management board receives updates on sustainability-related matters quarterly, including those related to climate change. The CSO has a monthly meeting with the sustainability leads for corporate and supply chain sustainability in which climate and all other sustainability-related topics are governed. The executive sustainability committee meets twice a year to discuss and govern cross-functional sustainability-related topics, for example, the sustainability bonus targets. It is comprised of all functional heads of the company, such as the global directors for retail, logistics, legal affairs, etc. Sustainability on a product level is governed in a cross-functional business units call, where updates on PUMA's more sustainable product strategy are shared and discussed monthly. To engage with PUMA's worldwide subsidiaries on climate change and other sustainability-related topics, the corporate sustainability department organizes a quarterly call in which the nominated sustainability leads for each PUMA subsidiary take part.

All PUMA leaders globally – from CEO to Team Head level – have clearly defined sustainability targets as part of their annual performance bonus. These targets are aligned with PUMA's Forever Better Sustainability Strategy and focus on our 10FOR25 target areas, including climate change. Climate-related bonus targets include the sourcing of 100% renewable electricity as well as an annual reduction in air freight by 5% from a 2019 baseline. The targets cover 5% of the overall bonus, with climate-related targets accounting for 1.25%.

Our sustainability governance structure is referenced in Sustainability Organization and Governance Structure section.

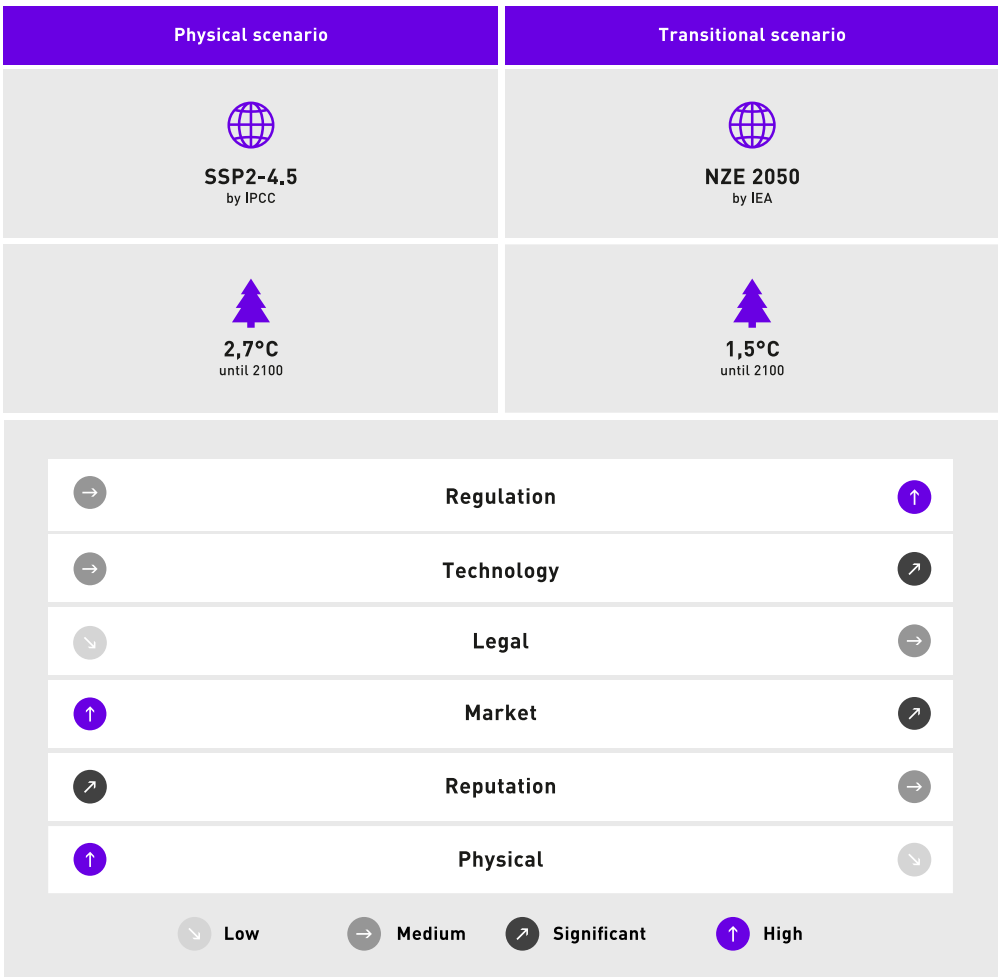
STRATEGY AND RISK MANAGEMENT

PUMA has analyzed risks and opportunities related to climate change for over 10 years and identified climate change as a material risk to PUMA during its last materiality analysis conducted in 2018. It has the potential to impact PUMA's business in the short (0-2 years), medium (2-5 years) and long term (5-10 years). The climate-related risks can be grouped into physical risks and transitional risks. Physical risks for PUMA include extreme weather events, such as flooding or heatwaves, or water scarcity, which can have an influence on raw material availability. Transitional risks include all risks related to the transition to a low-carbon economy, such as changing consumer preferences, policies and regulations, such as carbon taxes or rising energy prices.

The process for assessing, identifying and managing climate-related risks is the same for all principal risks and is described in the Risk Management section. All risks are monitored and reported regularly throughout the year by the risk owners, who are the managers of the functional areas and the managing directors of the subsidiaries. The risk owners are also responsible for the operational management of the identified risks. For example, climate risks in relation to manufacturing in the supply chain are managed by PUMA's supply chain sustainability team.

To identify the impact of potential climate-related risks, a scenario-based analysis of climate-related risks was commenced in 2022 (see G.16). The analysis is in line with TCFD recommendations by taking into consideration two different climate-related scenarios: First, to analyze transitional risks, the Net Zero Emissions by 2050 Scenario (NZE) developed by the IEA was considered. This scenario represents the development of a low-carbon economy in line with global warming of 2°C or lower. It was also used to develop our 1.5°C aligned science-based target, which was submitted at the beginning of 2023. Second, the impact of physical risks was assessed using the SSP2 – RCP4.5 scenario. This scenario relies on the Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs) published by the IPCC and reflects the development of greenhouse gas emissions under current government policies, resulting in warming of about 2.7°C by 2100 (per Climate Action Tracker). The different risk categories shown in G.16 are taken from our CDP 2022 response.

↗ G.16 SCENARIO-BASED RISK ANALYSIS ALIGNED WITH TCFD RECOMMENDATIONS



Climate-related risks and opportunities have influenced PUMA's strategy in multiple areas. The demand for more sustainable products has influenced our product portfolio and sourcing practices to shift towards recycled and/or certified materials. On the supply chain side, PUMA invests in supplier programs focused on energy efficiency and renewable energy to reduce the carbon footprint of its manufacturing process. PUMA investigates and invests further in more sustainable material options, such as biodegradable or recyclable materials. Additionally, PUMA operates its 'Circular Lab', under which it collaborates with innovation partners on different pilot projects, such as a garment-to-garment recycling process and a biodegradable shoe. Within its own operations, PUMA reduces its carbon footprint by sourcing 100% renewable electricity since 2020 and by gradually shifting its car fleet to low- and zero-emissions vehicles.

Climate-related issues also had an impact on PUMA's financial planning. Direct costs have been influenced by ESG-linked supplier financing programs that have been in place since 2016. The program provides access for PUMA suppliers to external financing resources with favorable financing conditions. Additionally, as part of the EU Taxonomy Regulations, PUMA is required to report on capital expenditures that lead to greenhouse gas reductions. PUMA's sales are currently not eligible under the EU Taxonomy Regulation due to the nature of PUMA business (sale of footwear and apparel). In 2022 PUMA identified investments in zero-emissions vehicles and infrastructure such as charging stations to be aligned with taxonomy criteria. The overall taxonomy-aligned investment amounts to EUR 372,460. Further information on EU Taxonomy can be found in the Reporting in Accordance with the EU Taxonomy Regulation section. Sustainability also influences PUMA's access to capital as it becomes an increasingly important topic for attracting equity and investors. In 2022 PUMA received an AAA rating from MSCI for its sustainability efforts and is listed in the FTSE4Good Index. Our investor relations and sustainability teams are in an ongoing dialog with investors on ESG topics. PUMA maintains a revolving credit facility and one promissory note, which are both linked to the achievements of five ESG targets as defined within our 10FOR25 ESG framework. The targets relate to the sourcing of renewable electricity (climate), sourcing of materials from certified sources (biodiversity), reduction of water consumption at core suppliers (water and air), elimination of plastic bags in stores (plastics and the oceans) and community engagement (human rights).

The results of our scenario analysis are used to ensure the necessary mitigating controls are in place, support PUMA's risk management activities and inform future business strategies. We will update our scenario modelling as more climate data becomes available and reframe the risks and opportunities to PUMA presented by climate change on a regular basis.

METRICS AND TARGETS

PUMA has been measuring and reporting environmental key indicators of its own operations and its T1 and T2 suppliers for many years, including energy consumption, carbon emissions, water consumption and waste management. These are part of the sustainability section of its annual report, which is published annually and reviewed by a third party.

PUMA aligns its reporting on climate-related metrics for recognized standards, including the GHG Protocol. In addition, our 10FOR25 sustainability targets include absolute carbon reductions, renewable energy procurement and manufacturing of more sustainable products. Further information on our environmental KPIs can be found in the Environmental Key Performance Data section.

Sourcing 100% renewable electricity for all PUMA entities from 2020 is one of the milestones of PUMA's climate change mitigation efforts. For its suppliers, PUMA has a target of sourcing 25% renewable energy by 2025 (2022: 11%). At the beginning of 2023 we submitted our updated near-term SBTs: Reducing absolute Scope 1 and 2 GHG emissions by 90% (market-based*) by 2030 and reducing absolute Scope 3 GHG emissions by 33% by 2030, both from a 2017 baseline year.

- Scope 1 and 2 targets focus on GHG emissions from our direct operations (including electricity and gas consumption at our stores, offices, internal manufacturing and distribution centers)
- Scope 3 targets relate to indirect GHG emissions in our extended supply chain and transportation of finished goods

By the end of 2022, PUMA has already reduced its combined Scope 1 and 2 emissions by 86%, and its Scope 3 emissions from purchased goods and services and transportation by 9%. Our efforts in sourcing more sustainable materials led to 99.8% cotton, 100% leather and 70.4% polyester from recycled or certified sources and 7 out of 10 products being more sustainable in line with our internal definition, as well as reduced our GHG emissions from materials by 32%.

* A market-based method reflects emissions from electricity that companies have purposefully chosen. It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

As part of the commitment to the UN convened Fashion Industry Charter for Climate Action, and according to PUMA's Environmental Handbook, PUMA declared its ambitions to meet a net zero 2050 goal. PUMA recognizes that meeting its climate-related targets is dependent on collective action and focus. Improving the market conditions for clean energy supply, such as the rate of installation of renewable electricity in many countries, reducing costs and the availability of purchase power agreements will help shift the rate of decarbonization at scale. PUMA believes it has a role in helping to shape the policy and regulation required and is working collaboratively with partners, suppliers and other organizations to achieve its ambition, including the United Nations Global Compact, the UN Fashion Industry Charter for Climate Action, the Fashion Pact and Stiftung Klimawirtschaft. PUMA also signed a joint letter to the Government of Cambodia asking for support to scale renewable energy in the country.

SCOPE 1 EMISSIONS

Our own direct CO_2 emissions (Scope 1) are mainly caused by emissions from our PUMA car fleet and airplane, as well as emissions from the heating of buildings.

We tackle the emissions from our car fleet by gradually transitioning to zero-emission vehicles in those countries where the charging infrastructure is mature enough to support the transition.

Starting in 2023 we will only allow electric vehicles as new additions to our car fleet in the region of Germany, Austria and Switzerland, which includes our Headquarters and 232 cars.

At the end of 2022, 191 out of 719 cars globally were already battery electric or hydrogen fuel cell cars.

We also significantly expanded the charging infrastructure at our headquarters and selected other offices and now have over 50 charging stations in operation, including 12 public charging stations at our headquarter stores that can be used by employees, business partners and customers free of charge.

For the heating of buildings, we use natural gas in 10% of buildings globally and plan to transition these buildings to biogas or other renewable heat sources over time. Many PUMA buildings globally already use (renewable) electricity for heating.

Overall we were able to reduce our Scope 1 GHG emissions by 19% between 2017 and 2022, and plan to reduce these emissions further by 2025.

SCOPE 2 EMISSIONS

PUMA's indirect GHG emissions (Scope 2) are caused by the electricity used for running our offices, stores and warehouses, including the charging of electric cars, as well as thermal energy used from district heating.

Since 2020, we have already moved all our offices, stores and warehouses to renewable electricity via green electricity tariffs or renewable energy attribute certificates. This has led to a significant reduction of our Scope 2 emissions (market-based). In addition, the closure of our stores in Russia, which were mostly heated by district heating, contributed further to the reduction of Scope 2 emissions. At our headquarters, which is by far the largest consumer of district heat among all PUMA entities, the district heat is created in co-generation with electricity and by using over 50% biogas. In total, we were able to reduce our Scope 2 emissions since 2017 by 98% (market-based).

Further actions to reduce PUMA's own greenhouse gas emissions include the use of energy-efficient heat pumps at our headquarters, frequent energy efficiency audits at our stores, a free public transport ticket for employees, job-bike-leasing, a meat-free Monday at canteens and tree-planting exercises as part of our community engagement program.

↗ T.15 SCOPE 1 AND SCOPE 2 CO_2e EMISSIONS FROM PUMA

CO_2e emissions[1-4] (absolute figures)	2022	2021	2020	2019	2018	2017	% change 2021/2022	% change 2017/2022
Scope 1 – direct CO_2e emissions fossil fuels	**6,206**	**4,456**	4,179	6,326	6,918	7,678	39%	-19%
Vehicle fleet	2,264	2,008	1,985	3,618	4,073	4,134	13%	-45%
Heating	1,536	2,039	2,194	2,708	2,845	3,545	-25%	-57%
Airplane*	2,405	410	689	2,359	1,156		487%	-
Scope 2 – indirect CO_2e emissions (location-based)**	**35,528**	**32,545**	29,839	40,986	43,366	40,029	9%	-11%
Scope 2 – indirect CO_2e emissions (market-based*)**	**643**	**1,458**	1,078	11,533	22,128	40,029	-56%	-98%
Electricity (location-based)	34,885	31,087	28,761	39,282	42,145	38,914	12%	-10%
Electricity (market-based)	0	0	0	9,828	20,907	38,914	-	-100%
District heating	643	1,458	1,078	1,705	1,221	1,115	-56%	-42%
Total Scope 1 and 2 (location-based)	**41,734**	**37,001**	34,018	47,312	50,284	47,707	13%	-13%
Total Scope 1 and 2 (market-based)	**6,849**	**5,914**	5,257	17,858	29,046	47,707	16%	-86%
Scope 1 and 2 relative to sales (t CO_2e per € million sales) (location-based)	4.9	5.4	6.5	8.6	10.8	11.5	-9%	-57%
Scope 1 and 2 relative to sales (t CO_2e per € million sales) (market-based)	0.8	0.8	1.0	3.2	6.2	11.5	-7%	-93%

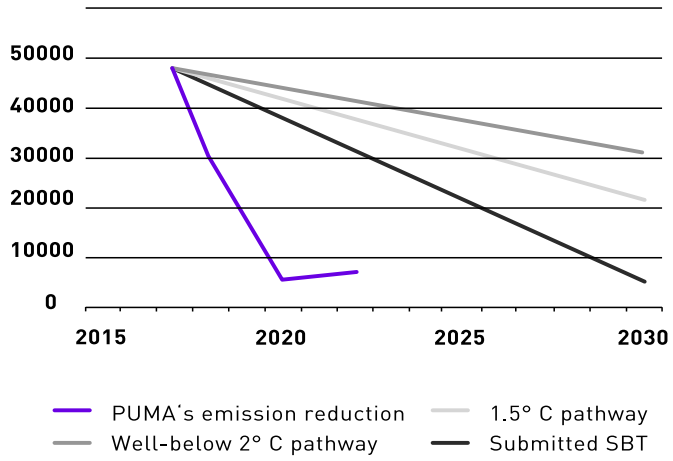
* In 2022, Scope 3 Upstream Leased Assets was restructured. Previously, this category included the emissions from PUMA Air Plane and well-to-tank emissions from PUMA Vehicle Fleet. Now, in line with GHG Protocol, emissions from PUMA Air Plane are included in Scope 1, well-to-tank emissions from PUMA Vehicle Fleet are included in Scope 3 Fuel- and energy-related activities and Scope 3 Upstream Leased assets includes the emissions from warehouses in PUMA's value chain that are operated by a third party.

** A location-based method reflects the average emissions intensity of grids on which energy consumption occurs.

*** A market-based method reflects emissions from electricity that companies have purposefully chosen. It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

1. PUMA's greenhouse gas reporting is in line with the GHG Protocol International Accounting Standard. Fugitive emissions (emissions from unintentional releases or leaks) are not included in Scope 1 emissions.
2. Methodological changes over the last three years have influenced results. In 2020 updated emission factors were applied and the consolidated structure changed due to full alignment with the GHG Protocol.
3. The consolidation scope follows the operational control approach, including PUMA-owned or operated offices, warehouses, stores and own industrial sites (Argentina).
4. PUMA applied emission factors from internationally recognized sources, such as the International Energy Agency (IEA) (2019) and DEFRA conversion factors (2020).

↗ G.17 AGREED EMISSION TARGETS (SCOPE 1 AND 2*) (T CO_2e) 2022



* Including renewable energy attribute certificates

SCOPE 3 EMISSIONS

↗ T.16 PUMA'S SCOPE 3 CO_2e EMISSIONS FROM SELECTED VALUE CHAIN ACTIVITIES

CO_2e emissions[1-4] (absolute figures)	2022	2021	2020	2019	2018	2017	% change 2021/2022	% change 2017/2022
Scope 3 – indirect CO_2e emissions from corporate value chain	**1,430,690**	**1,355,633**	**1,486,324**	**1,762,087**	**1,586,229**	**1,502,162**	**6%**	**-5%**
Purchased goods and services – Tier 1 suppliers	1,278,758	1,242,468	1,389,335	1,631,904	1,484,935	1,409,265	3%	-9%
Fuel- and energy-related activities*	4,220	3,700	3,463	3,712	5,569	7,433	14%	-43%
Upstream transportation and distribution	127,474	106,983	91,775	107,744	80,143	71,070	19%	79%
Inbound	99,724	85,622	67,842	98,386	74,182	64,076	16%	56%
Outbound**	27,750	21,361	23,933	9,358	5,961	6,994	30%	297%
Business travel (rail and air)	9,439	2,482	1,751	18,727	15,582	14,394	280%	-34%
Upstream leased assets*	10,799						-	-
Total Scope 1-3 (market-based)	**1,437,539**	**1,361,547**	**1,491,581**	**1,779,946**	**1,615,275**	**1,549,869**	**6%**	**-7%**
Annual sales PUMA (in € million)	8,465	6,805	5,234	5,502	4,648	4,136	24%	105%
Total Scope 1-3 relative to sales (t CO_2e per € million sales) (market-based)	169.8	200.1	285.0	323.5	347.5	374.7	-15%	-55%
Total Scope 3 relative to sales (t CO_2e per € million sales)	169.0	199.2	284.0	320.3	241.3	363.2	-15%	-53%

* In 2022, Scope 3 Upstream Leased Assets was restructured. Previously, this category included the emissions from PUMA Air Plane and well-to-tank emissions from PUMA Vehicle Fleet. Now, in line with GHG Protocol, emissions from PUMA Air Plane are included in Scope 1, well-to-tank emissions from PUMA Vehicle Fleet are included in Scope 3 Fuel- and energy-related activities and Scope 3 Upstream Leased assets includes the emissions from warehouses in PUMA's value chain that are operated by a third party.

** In 2020, upstream outbound values were adjusted to fully cover the e-commerce business and exclude B2B express volumes.

1. PUMA's greenhouse gas reporting is in line with the GHG Protocol International Accounting Standard. Fugitive emissions (emissions from unintentional releases or leaks) are not included in Scope 1 emissions.
2. Methodological changes over the last three years have influenced results. In 2020 updated emission factors were applied and the consolidated structure changed due to full alignment with the GHG Protocol.
3. The consolidation scope follows the operational control approach, including PUMA-owned or operated offices, warehouses, stores and own industrial sites (Argentina).
4. Outsourced Tier 1 production is accounted for in the Scope 3 emissions under purchased goods and services, covering CO_2 emissions from all three product divisions (Accessories, Apparel and Footwear).
5. PUMA applied emission factors from internationally recognized sources, such as the International Energy Agency (IEA) (2019) and DEFRA conversion factors (2020).
6. For sea freight transportation, PUMA follows the recommendation and new methodology of the Clean Cargo Working Group that has transitioned from the use of tank-to-wheel (TTW) CO_2 to well-to-wheel (WTW) CO_2-equivalent emission factors for all fuels.

GREENHOUSE GAS EMISSIONS FROM PURCHASED GOODS AND SERVICES

PUMA is determined to reduce its carbon emissions, water usage, waste and air pollution in its offices and in its supply chain. As far as sustainable materials are concerned, PUMA strives to use more sustainable key materials, such as cotton, polyester, leather and cardboard.

The purpose of PUMA's environmental efforts is to ensure that its suppliers are in full environmental compliance and any negative impact on the environment is reduced. Ultimately, our goal is to achieve a positive environmental impact. We ask all our core suppliers to complete the Facilities Environmental Module developed by the SAC.

As far as climate is concerned, PUMA's 10FOR25 action plan includes steps such as:

- Work with industry peers on climate action through the Fashion Industry Charter for Climate Action and the Fashion Pact.
- Join industry-level energy efficiency programs for suppliers in our top five sourcing regions.
- Join industry-level programs for renewable energy in our top five sourcing regions.
- Replace all coal-fired boilers at PUMA's core suppliers.
- Gradually transition to materials with a lower carbon footprint, such as recycled polyester.

To reduce the emissions from the production of our PUMA goods, we worked with our suppliers on several programs ranging from energy efficiency to installing on-site solar photovoltaic power plants to generate renewable energy.

Supplier Training and Program
In 2021 PUMA joined hands with other brands and key suppliers under the UN led Fashion Industry Charter for Climate Action to develop a standard training program on climate action for apparel and footwear suppliers in Asia, in partnership with GIZ. This online training program provides foundational knowledge to suppliers on global decarbonization efforts, GHG emissions accounting, climate target-setting methodology and solutions to reduce emissions and achieve these targets. The training is available in English and other local languages such as Khmer, Mandarin, Bengali and Vietnamese. We encouraged our suppliers to participate in this self-paced online training course available free of cost.

The online training provides foundational knowledge to suppliers on:

- Understanding global decarbonization efforts
- How to account for GHG emissions
- How to implement available energy solutions to reduce emissions

In 2022, 242 participants from 186 supplier factories completed this course and attempted the final exam. 98% of the participants successfully passed the exam and obtained the certificate from GIZ, with an average score of 75.7%.

In 2022 we nominated 568 participants from 18 core factories in Vietnam to join a tutor-assisted training program on GIZ in collaboration with VF Corporation and New Balance. 98% of participants obtained a certificate with an average score of 85% in the final exam.

In 2022 we provided customized climate training for each geographical area with a regional focus. The training programs include topics such as rooftop solar procurement, coal phase-out and purchase of I-RECs. A total of 417 participants from 243 factories participated in these training programs. This training session along with GIZ climate action training courses by our suppliers, helped to accelerate the implementation of rooftop solar projects, increase the purchase of renewable energy attribute certificates, provide higher take-up of feasibility studies for coal-fired boilers and initiate action for coal phase-out. We also saw better participation of our core suppliers in cleaner production and renewable energy projects. The details of the progress in these areas are described in this report.

↗ T.17 SUPPLIER TRAINING

Training topic	Country	Trainer	Number of factories	Number of participants
Rooftop solar procurement and mitigating associated contractual risks	Vietnam	Act Renewable	20	46
Rooftop solar procurement & legal framework	Cambodia/ Bangladesh/ Indonesia	Act Renewable	34	64
How to purchase renewable energy	China/Taiwan	Accenture & Envision Energy	59	92
Renewable energy pathway	China/Taiwan	Reset Carbon	67	117
Coal phase-out with biomass transition	Vietnam	Act Renewable	5	10
I-REC virtual workshop	Vietnam/ Cambodia	Monsoon Carbon	58	88

Furthermore, to improve the awareness level of employees, we have developed a foundational e-learning training module for all employees. This module is in the final stage of development and is expected to be rolled out in the first half of 2023.

In 2022 we expanded the participation of our Core Tier 1 and Tier 2 suppliers in cleaner production and renewable energy projects.

For the first time we launched the Clean by Design (CbD) Program in Indonesia and launched phase 2 of clean by design in the Vietnam and China-Taiwan region.

Our suppliers continue to implement the recommendations of the PaCT program in Bangladesh during this year.

In 2022 eight Tier 1 and three Tier 2 factories were enrolled in the Clean by Design Project in Indonesia, Vietnam, China and Taiwan. In addition to this, 12 Tier 1 and 15 Tier 2 factories participated in various rooftop solar projects.

The values below represent annual savings from completed and ongoing projects from 2019 until the end of 2022:

- GHG reduction: 85,931 tCO_2e per year
- Renewable energy: 186 MW of RE capacity (including offsite wind) added in 2021 and 2022
- Water saving: 2,327,067 m^3 per year
- Energy saving: 164,483 MWh per year

↗ T.18 SUPPLIER CLIMATE ACTION PROGRAMS

Cleaner production programs

Country	Program/partner	Scope	Number of factories	% sourcing volume (globally)
	Clean-by-Design(CbD)/aii	Energy and water efficiency	T1:1 T2: 11	
China-Taiwan	Low Carbon Manufacturing Program (LCMP)/WWF	Energy and water efficiency	T1: 9	
Bangladesh	Partnership for Cleaner Textile (PaCT)/IFC	Energy and water efficiency	T1: 7 T2: 4	
	Clean-by-Design(CbD)/aii, FABRIC/GIZ	Energy and water efficiency, coal phase-out	T1: 8 T2: 3	**2022** Tier 1 – 67% Tier 2 – 59%
	Mekong Sustainable Manufacturing Alliance (MSMA)	Energy and water efficiency	T1: 2 T2: 2	**Enrolled in 2023** Tier 1 – 74% Tier 2 – 75%
Vietnam	Greening Textile Program	Energy and water efficiency	T2: 2	
Indonesia	Clean-by-Design (CbD)/aii	Energy and water efficiency	T1: 3	
Mexico	Sustainable energy for all	Energy efficiency	T1: 2*	
Total			**T1: 30** **T2: 24**	

* Non-core factories

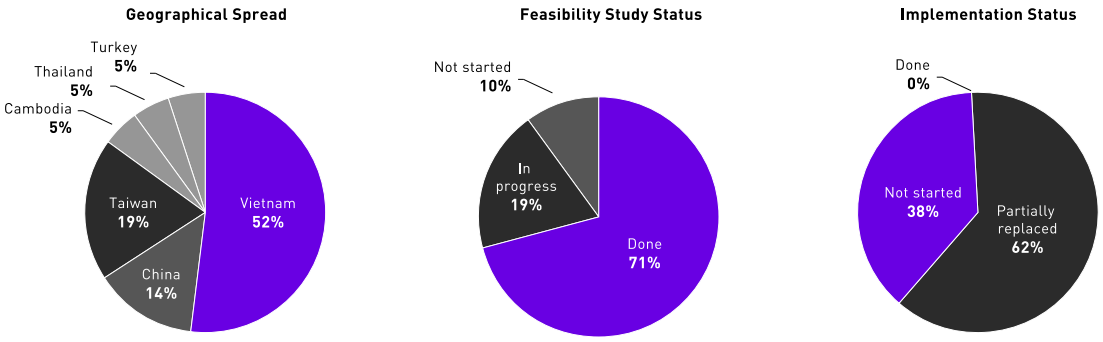
Renewable energy programs

Country	Program/partner	Scope	Number of factories	% sourcing volume (globally)
Vietnam	Project Development Program (PDP)/ GIZ	Rooftop solar	T1: 5 T2: 2	**2022** Tier 1 – 62% Tier 2 – 59% **Enrolled in 2023** Tier 1 – 76% Tier 2 – 75%
	Self-initiative by factories	Rooftop solar	T1: 5 T2: 8	
	Self-initiative by factories	IRIREC/DPPA pilot	T1: 4 T2: 3	
	Self-initiative by factories	Rooftop solar	T1: 7 T2: 14	
China-Taiwan		Offsite wind, DPPA, I-REC	T1: 3 T2: 9	
	Partnership for Cleaner Textile (PaCT)/IFC	Rooftop solar	T1: 2 T2: 3	
	Self-initiative by factories	Rooftop solar	T1: 3 T2: 2	
Bangladesh	Project Development Program (PDP)/ GIZ	Rooftop solar	T1: 4	
Indonesia	Clean-by-Design(CbD)/aii	Rooftop solar	T1: 3	
Pakistan	Project Development Program (PDP)/ GIZ	Rooftop solar	T1: 2	
Total			**T1: 38** **T2: 42**	

Coal-Fired Boiler Phase-Out

We are committed to phasing out coal-fired boilers from our supply chain, mainly from the core Tier 1 and Tier 2 suppliers, by 2025. In 2022 we mapped our core suppliers and found that 21 of them have coal-fired boilers.

↗ G.19 COAL-FIRED BOILER PHASE OUT STATUS



Out of these 21 factories with coal-fired boilers, 15 have already completed feasibility studies to identify suitable alternatives, while four factories are conducting such feasibility studies. Out of these 21 factories, 13 factories have started to partially replace coal.

In 2022 PUMA joined the Coal Phase Out Action Group under the UN's Fashion Charter, with an objective to collaborate with other brands to expedite the phase-out of coal in our supply chain. We included a coal-fired boiler question in our on-boarding checklist for new factories in July 2022, to avoid on-boarding new factories with coal-fired boilers.

In 2023 we plan to engage with the remaining six suppliers who have not yet completed the feasibility studies and the remaining eight factories, which have not yet initiated the transition. We also plan to continue tracking factories which are under transition.

Supplier Climate Targets

Science based targets are ambitious and difficult to achieve. Only large suppliers with capacity and top management commitment will be able to succeed. Those suppliers are identified through a readiness survey, climate investment study, long term business potential and in alignment with sourcing leaders. For the remaining suppliers, we plan to implement a simplified target setting system and hence a inhouse tool is developed for these suppliers.

During 2021 we developed two training modules for our core suppliers with the objective of driving climate target setting. One module focuses on the group of suppliers that need to establish science-based targets, and the other is aimed at the group of suppliers that need to establish climate targets based on a simplified tool developed in-house. To identify each group, we conducted a readiness level mapping of core Tier 1 and Tier 2 suppliers with a survey based on the following criteria:

- The supplier works with other brands having similar commitments on climate change.
- The supplier already has ambitious* climate change targets (but not SBT).
- The supplier did/does participate in a cleaner production program.

In continuation of efforts made in 2021 to SBT for key suppliers, we conducted a climate investment survey for our top 20 suppliers and evaluated long-term business potential with them in alignment with our sourcing leaders.

We identified 20 supplier groups, which represent 40-50% of our business volume, for which we will conduct a kick-off meeting to initiate the SBT process in Q1 2023. In this meeting we will briefly introduce the steps to be taken and address the queries and concerns of suppliers. Some of the suppliers, who have already started their journey, will share their experience and learnings.

The meeting will be attended by the senior management and sustainability heads of suppliers, PUMA sourcing leaders, and PUMA's sustainability team.

* Ambitious targets mean those that are in line with Paris agreement scenarios (1.5 degree).

↗ CASE STUDIES

The Shenzhou Group established its science-based carbon emissions reduction targets for its Scope 1 and 2 pursuant to "SBTi Criteria 4.2" in 2021. Therefore, the Worldon factory under Shenzhou in Vietnam started the Roof Top Solar project in June 2022. By October 2022, the Roof Top Solar panels were installed and started operation with full design capacity of 8MWp. The project was implemented in the OPEX module in which the investment is made by a service provider. The renewable electricity generated from the roof top solar system contributes to electricity consumption for the production process at the factory. The total annual renewable electricity generation accounts for 30% of the electricity used at the factory, which leads to greenhouse gas reduction potential of 9,649 tCO_2e per annum.

Far Eastern New Century (FENC) Corporation Kuan Yin Dyeing & Finishing Plant in Taiwan has replaced the conventional dyeing machines with 19 sets of low liquor ratio dyeing machines along with installation of a high-efficiency boiler. With a 2.1% decrease in yearly production volume and a 15% increase in grid electricity prices since summer 2022, the dyeing mill has managed to reduce absolute greenhouse gas emissions by 10%, which is approx. 1,800 tCO_2e. This is a 29% reduction in greenhouse gas intensity as compared to 2021. Their overall energy cost only increased 4.9%. Apart from the greenhouse gas reduction and cost control they have achieved a significant 11.5% reduction in water consumption as compared to 2021, which is an absolute saving of 54,000 m^3 of fresh water. This has resulted in less wastewater and hence less sludge from wastewater treatment plants. As a result of this, the mill has reduced 8% solid waste, which is around 84 tons per year.

Realizing the benefit of cooling water which has a high temperature (50-70 degrees Celsius) and is still good quality, our textile fabric suppliers have reused this water for dyeing and washing processes. For example, a fabric supplier located in Vietnam benefited from this initiative to save energy of 6,200 GJ/year as they require less energy to heat water in the dyeing process. Moreover, this initiative saves 3,800 m^3 of fresh water every year and the total financial savings are USD 19,000 per year.

The reduction of our Scope 3 emissions at the factory level is complemented by purchases of more sustainable (less carbon-intensive) raw materials. In 2022 we used 70.4% more sustainable polyester, out of which 48% was recycled polyester, 99.8% more sustainable cotton, mainly from the Better Cotton Initiative (BCI) and 100% leather from Leather Working Group medal-rated tanneries. In addition, 99.4% of our paper and cardboard packaging was recycled or FSC-certified paper. By 2025 we aim to use 75% recycled polyester and 100% recycled and/or certified paper and cardboard.

Carbon Footprint & Energy Use

In 2022, we continued our assessment of Scope 3 emissions that come from PUMA's indirect business activities, mainly in the supply chain in line with the Greenhouse Gas Protocol by lifecycle expert company, Sphera.

As in 2021, they conducted a comprehensive assessment of our supply chain emissions beyond Tier 1 manufacturing, including Tier 2 manufacturing of fabrics and components, estimated emissions from T3 suppliers and material production using emission factors from their LCA database known as GaBi database.

↗ T.19 PUMA'S SCOPE 3 CATEGORY-1 CO_2e EMISSIONS FROM SELECTED VALUE CHAIN ACTIVITIES

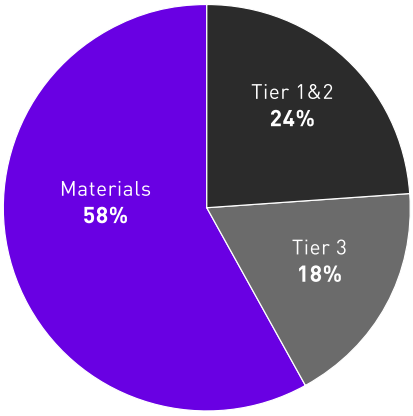
Scope 3 emissions (category -1)	2017 (baseline)	2021	2022	% change 2017/2021
Absolute GHG emissions (tCO_2 eq)	1,409,265	1,242,468	1,278,758	-9%

Note: Scope 3 category 1 estimation includes GHG emissions associated with goods and services purchased by PUMA from its suppliers related to PUMA products and associated packaging. This excludes emissions associated with other goods and services acquired by PUMA offices, stores and warehouses.

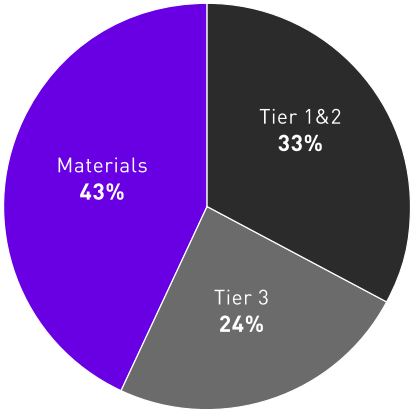
We can see that our absolute scope 3 emissions from the category, purchased goods and services have decreased by 9% from 2017 to 2022, while material consumption has increased by 27% during the same period. Due to energy efficiency improvements and the use of renewable electricity at factory level, as well as the usage of more sustainable materials, our absolute emissions have decreased while our business has grown by 105% as compared to the base year of 2017. Moreover, the initiatives taken by the factories towards the end of 2022 e.g., participation in cleaner production projects, installation of roof top solar etc. will reflect results in coming years. Scope 3, category-1 emissions mainly originate from two sources; the raw materials and the energy consumed by our core Tier 1, Tier 2 and Tier 3 (production of raw material) suppliers to produce finished materials and components as well as finished goods.

↗ G.20 GHG EMISSIONS BY SOURCES

Scope 3.1 Emissions (2017)



Scope 3.1 Emissions (2022)



Energy coming from renewable sources in the supply chain*

The share of renewable electricity sourcing by Tier 1 and Tier 2 suppliers has increased from 0.35% in 2017 to 16.2% in 2022 which marks a 4569% jump in renewable electricity sourcing. Looking at the Tiers in the value chain the share of renewable electricity has increased from 0.18% in 2017 to 4.9% in 2022 by Tier 1 suppliers, while it has increased from 0.74% to a significant 43.2% for Tier 2 suppliers during the same period including I-RECs.

↗ T.20 SHARE OF RENEWABLE ELECTRICITY AS COMPARED TO GRID ELECTRICITY

Scope 3 emissions (category -1)	2017 (baseline)	2021	2022	% change 2021/2022	% change 2017/2022
Total renewable electricity (kWh)	817,644	14,494,042	64,624,534	346%	7804%
Total grid electricity (kWh)	234,323,351	324,910,084	333,408,508	3%	42%
Share of renewable electricity	0.35%	4.3%	16.2%	280%	4569%
T-1 renewable electricity (kWh)	298,283	11,149,103	13,695,766	23%	4492%
T-1 grid electricity (kWh)	164,904,224	218,804,548	266,321,305	22%	62%
Share of renewable electricity (T-1)	0.18%	4.8%	4.9%	1%	2609%
T-2 renewable electricity (kWh)	519,361	3,344,939	50,928,768	1423%	9706%
T-2 grid electricity (kWh)	69,419,127	106,105,536	67,087,203	-37%	-3%
Share of renewable electricity (T-2)	0.74%	3.1%	43.2%	1312%	5711%

Note:
The total electricity does not include captive electricity generation from fossil fuels such as natural gas, diesel etc. The renewable energy includes I-REC certificates purchased by core leather, polyurethane, textile factories in 2021, but excludes renewable energy sourced by the Tier 2 core factories, e.g. packaging & labelling, trims, footwear bottom and knitted upper

Carbon footprint in the supply chain**

Looking further into the emissions from our supply chain, we see that absolute GHG emissions from Tier 1 and Tier 2 suppliers have been increasing by 23%.

Absolute GHG emissions from Tier 3 suppliers in 2022 have increased by 21%. A closer look at the data indicates that this increase in absolute emissions from Tier 3 suppliers is mainly due to a rise in the consumption of cotton and polyester during this period. Cotton and polyester together increased by 16% in 2022 as compared to 2017.

We see opportunities to further scale up cleaner production and renewable energy programs to more Tier 1 and Tier 2 suppliers, and also to launch them at some of the spinners (Tier 3).

* e.g. at manufacturing and processing facilities, fiber production level
** e.g. at manufacturing and processing facilities, textile production

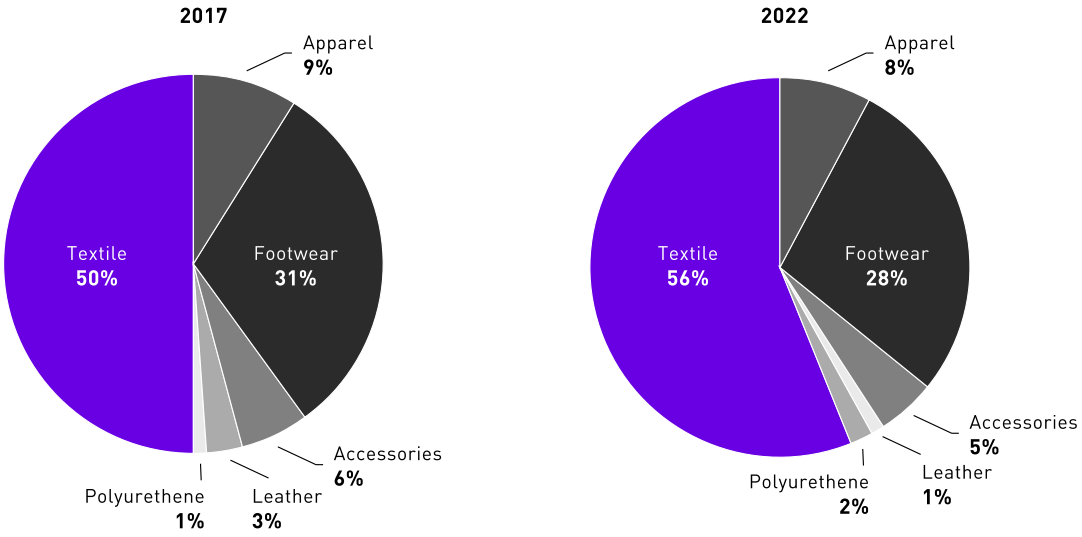
↗ T.21 GHG EMISSIONS BY SUPPLIERS

	2017 (baseline)	2021	2022	% change 2021/2022	% change 2017/2022
Absolute GHG emissions from Tier 1 and Tier 2 suppliers (t CO_2e)	345,361	358,508	423,762	18%	23%
Tier 3 suppliers (t CO_2e)	252,251	284,215	305,869	8%	21%

Note:
Tier 1 & Tier 2 emissions are estimated based on actual energy consumption collected from core Tier 1 and Tier 2 factories and extrapolated to cover all Tier 1 and Tier 2 supplier factories.
Tier 3 emissions are estimated by Sphera by using its GaBi database.

Drilling down into product divisions the absolute emissions are reduced by the leather tanneries by 66%.

↗ G.21 GHG CONTRIBUTION BY PRODUCT DIVISIONS



Note:
T1: Apparel, Footwear & Accessories factories
T2: Leather, textile, polyurethane factories

Carbon footprint at a raw material level

Absolute GHG emissions from raw material consumption were reduced by 32% as the total material consumption itself has increased by 27%. This is achieved due to our continuous endeavour to shift towards more sustainable materials. For example, more sustainable cotton (Better Cotton or recycled) and polyester (recycled, bluesign or OekoText-certified) increased from 40% and 47% respectively in 2017 to 99.8% and 70.4% respectively in 2022.

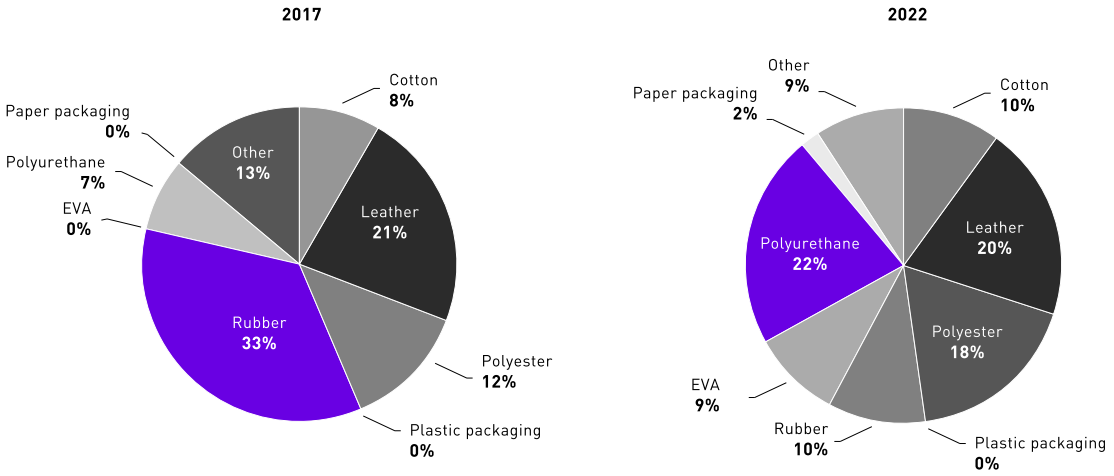
↗ T.22 GHG EMISSIONS FROM MATERIALS

	2017 (baseline)	2021	2022	% change 2021/2022	% change 2017/2022
Total raw materials (T)	158,509	187,101	200,514	7%	27%
GHG emission from materials (tCO_2e)	811,654	599,849	549,127	-8%	-32%

Assumptions: During the Scope 3 assessment, it was observed that the material data collection has improved over time and since 2021 we are able to capture the material data comprehensively. For example, for 2017 material data was not available for all types of materials and some material data were incomplete. In the absence of comprehensive raw material data for 2017, material data was extrapolated from 2020. Furthermore, we observed that the polyester consumption data for footwear was exceptionally high for 2020 and possibly erroneously overestimated. Therefore, the polyester data for footwear for 2017 and 2020 was extrapolated from 2019 data.

A breakdown analysis as shown in the chart below indicates that polyurethane (22%) contributes maximum followed by leather (20%) and polyester (18%). The emission share of rubber has significantly reduced from 33% in 2017 to 10% in 2022. The emission share of leather has marginally reduced from 21% to 20%. The analysis for 2022 indicates that we need to focus more on the sustainable alternatives for polyurethane and rubber (92% of the rubber we use is synthetic).

↗ G.22 GHG CONTRIBUTIONS BY MATERIALS



Note:
Other include acrylic, linen, lycra, metals, adhesives, etc.
Leather is natural leather while polyurethane is imitation leather, also known as synthetic leather.

GREENHOUSE GAS EMISSIONS FROM TRANSPORT OF GOODS

PUMA's Logistics Team has been working on reducing greenhouse gas emissions from transport of goods for several years. Key measures include the optimization of container loads, as well as reduction of airfreight to an absolute minimum. The airfreight reduction is also part of PUMA's annual bonus targets. Furthermore, PUMA is a member of the sustainable airfreight alliance.

2022 brought progress in several areas:

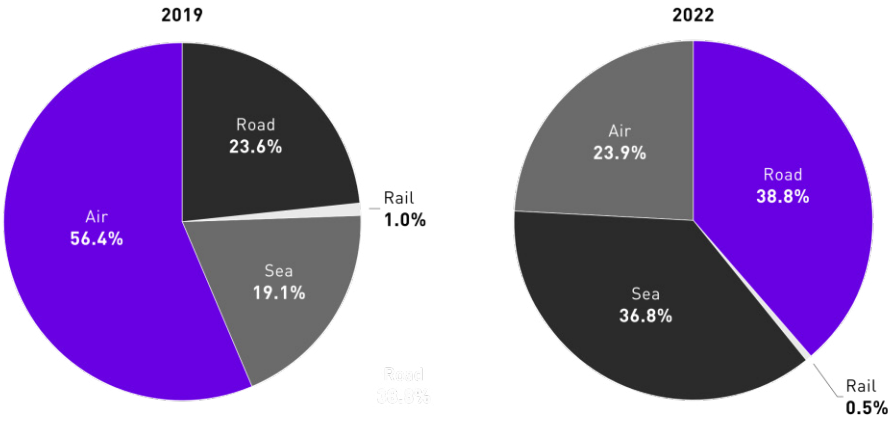
1. We managed to keep our airfreight ratio under 1%, meaning that less than 1% of all PUMA goods (by unit) are transported by air. This is a significant reduction compared to 2019 (before the COVID-19 pandemic) where the value was close to 3%.

2. Together with our main logistics service provider Maersk we agreed to pilot Maersk's green shipping concept using biofuels for shipments to the European market starting in 2023.

3. Our logistics team in the USA was able to introduce the first ever electric truck for the transport of PUMA goods between the port in Los Angeles and the warehouse in Torrance. We anticipate that more electric trucks will follow over the next years.

An electric truck operates at PUMA's warehouse in California, USA

↗ G.23 SHARE OF GHG EMISSIONS PER TRANSPORT MODE IN 2019 AND 2022



↗ T.23 GHG EMISSIONS PER TRANSPORT MODE 2019 - 2022

GHG emissions per transport mode	2022	2021	2020	2019
Road freight	48,345	38,815	30,256	24,522
Rail freight	675	3,153	1,783	1,013
Sea freight	45,891	44,698	31,667	19,830
Air freight	29,751	17,731	17,045	58,651

The graph and table above illustrate the relative reduction of airfreight compared to other modes of transport. Our airfreight reduction target helped us reduce the share of emissions from airfreight from 56.4% in 2019 to 23.9% in 2022.

"PUMA has been a long-term customer and partner of Maersk for the transport of goods and in the field of sustainability. In 2022, we piloted a first electric truck for the shipment of PUMA goods from port to warehouse in the United States and concluded an agreement to use biofuels starting 2023 for shipping lines from Asia to Europe. We are convinced that the decarbonization pathway plans of the apparel and footwear industry need to include emissions from transport of goods and stand ready to support our customers in tackling this challenge together."

VINCENT CLERC
CEO, A.P. Moller - Maersk

CHEMICALS

Target description:
- 100% of all PUMA products are safe to use
- Maintain RSL compliance rate above 90%
- Reduce organic solvent usage to under 10 gr/pair

Relates to Sustainable United Nations Development Goals 3 and 6

KPIs:
- Percentage of RSL compliance rate per product division
- Percentage of core suppliers with chemicals inventory and MRSL conformance report (ZDHC InCheck reports)
- Suppliers' chemical performance (verified FEM scores under chemical management section)
- VOCs used in footwear production (VOC index for shoes)

PUMA follows the precautionary principle and takes measures to prevent harm to human health and the environment from its products and operations.

All the materials used in PUMA products are subject to our Restricted Substance List (RSL) Testing Program to ensure compliance with global chemicals regulations. Rather than applying internal testing standards for our tests, we rely on the AFIRM Group's Product RSL and on the Manufacturing RSL developed by the Zero Discharge of Hazardous Chemicals Foundation (ZDHC).

In 2021 we changed our target from less than 1% RSL failure rate to maintain the RSL compliance rate above 90%, to allow for increased new material development and innovation, where each material is tested, and hence more failures can happen. In any case, no material with a failed RSL test can be used for PUMA products until the failure has been corrected and the material has successfully passed the test. In this way, we mitigate the risk of product-level RSL failures. We will still track our RSL failure rates to identify improvement opportunities and prevent such failures from occurring in the future.

At the manufacturing level, as part of our Zero Discharge of Hazardous Chemicals commitment we continued to ban the intentional use of priority chemical groups classified as particularly hazardous under ZDHC standards. This phase-out was supported by the widespread use of bluesign® and OEKO-TEX®-certified materials. While the use of most of these chemical groups was never intentional, poly- and per-fluorinated chemicals (PFCs) were used until 2017 for water repellent finishes on apparel and footwear products. In 2021 we started using Gore-Tex bluesign®-certified membranes and finishes again, which are either completely PFC-free or free from PFCs of environmental concern. In February 2017, Gore announced the "Goal and Roadmap for Eliminating PFCs of Environmental Concern (PFCEC)" from the lifecycle of its consumer fabric products following discussions with Greenpeace. Gore Fabrics Division is still fully committed to the PFCEC-free goals for its consumer products and is now on track to transition most of its portfolio by the end of 2025.

Our phase-out of hazardous substances is also reflected in the results of wastewater tests performed by our wet-processing suppliers. The tests show compliance levels of 98% among the 14 MRSL parameters listed in the ZDHC MRSL. Most parameters show compliance rates of 100% or close to 100%. Some MRSL

chemicals were still found in certain samples because we share production lines with other brands and retailers.

Please see Water and Air section for further details.

There is a total of 264 ZDHC Gateway accounts connected with PUMA. 49 are core Tier 1 and 76 core Tier 2 factories and the remaining are non-core factories. These factories are part of different ZDHC programs, depending on what applies to them: InCheck reports for MRSL conformance, ClearStream reports for wastewater conformance, and the Supplier To Zero program for chemical management.

CHEMICAL RISK ASSESSMENT AND NEXT STEPS

In 2021 we conducted a risk assessment using our risk assessment methodology. We used the Higg FEM chemical management score 2020 by our core suppliers and engaged with AFIRM and the ZDHC Foundation to review our risk assessment.

We see a high risk for upcoming regulatory requirements. We will keep our engagement with AFIRM and Federation of the European Sporting Industry (FESI) as a platform to engage with policy makers in different regions and countries such as the EU and the US, so standards are achievable by the industry, while protecting consumers, workers and the environment.

PUMA has had a long-lasting program to ensure compliance with industry standards. We also updated our chemical handbook and increased supplier training in 2021. These are the reasons why we see a low risk towards factory workers and communities' health and medium risk of product claims.

In 2022 we continued using the China IPE database to screen for any environmental violations by factories located in China producing PUMA products and materials. We also continued monitoring compliance with ZDHC wastewater guidelines, ZDHC MRSL, and Higg FEM chemical management.

We organized MRSL conformance training for PUMA Tier 1 and Tier 2 suppliers and invited chemical suppliers to strengthen their commitment to conformance.

The details of compliance with ZDHC wastewater guidelines, ZDHC MRSL, and Higg FEM chemical management are described in this report.

2022 PUMA BRANDS TO ZERO – ASPIRATIONAL LEVEL

We achieved 'Aspirational Level' in the 2022 ZDHC Brands to Zero Program, the highest category of success, by accelerating the implementation of sustainable chemical management across our value chain. This is a significant jump from "Foundational Level" in 2021. PUMA is recognized as ZDHC Leader to Zero in our industry, committed to ZDHC's goals as we continue to blaze the trail of innovation and best practices to protect consumers, workers and the environment.

The Brands to Zero Program comprises an integrated package of ZDHC guidelines, platforms and solutions that streamline and create a single common implementation approach. This eliminates duplicative efforts and supply chain complexity resulting in enhanced supplier engagement and consistent benchmarking of implementation performance.

In 2022 we made significant improvements in supply chain engagement, chemical management practices, ZDHC Gateway Chemical Module, and ZDHC Gateway Wastewater Module. The higher score came as a result of our strong commitment to enhancing the implementation performance of sustainable chemical management in our supply chain.

Based on the 2022 result of the Brand to Zero Assessment, we built up the vendor supplier scorecards along with social ratings to improve the business integration area. This vendor supplier scorecard was shared with the sourcing department at the end of 2022.

PUMA is included in the ZDHC's Detox Fashion Radar which promotes transparency and accountability within the fashion industry.

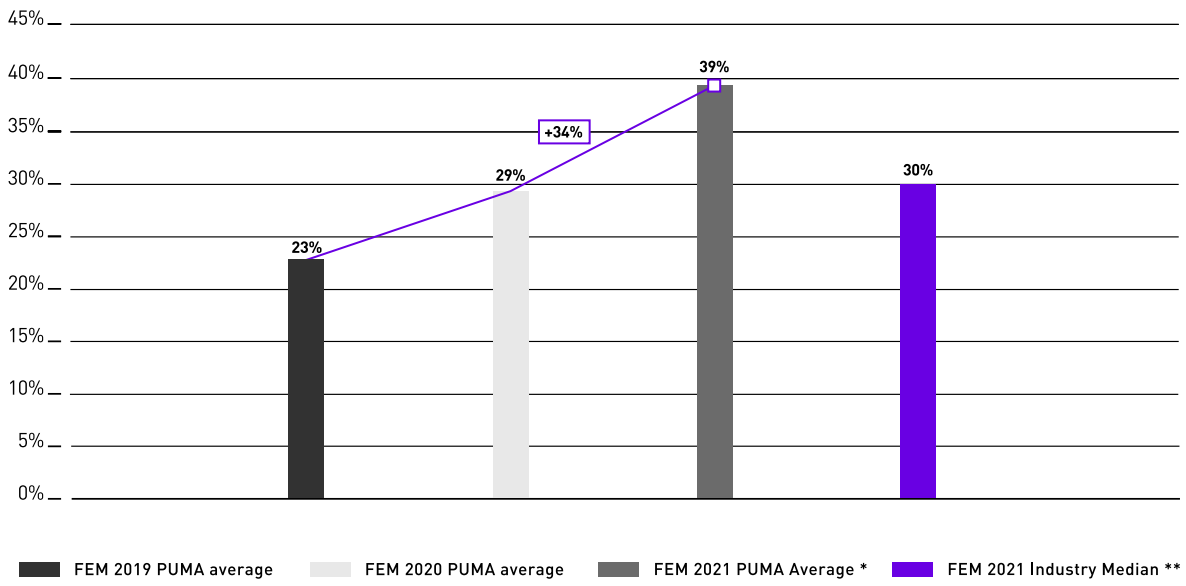
"As one of the founding members of the Roadmap to Zero Programme, PUMA has been instrumental in driving continuous improvement and collective impact. Their commitment to reducing greenhouse gas emissions, waste, and harmful chemicals in the apparel and footwear industry is commendable. Through their active participation, PUMA has demonstrated a strong leadership role in promoting sustainability and creating a more responsible future for the industry."

FRANK MICHEL
Executive Director, ZDHC Foundation

FEM CHEMICAL MODULE

PUMA has moved from individual brand chemical and environmental audits to the use of industry-wide tools, such as the Higg Index Facility Environmental Module (FEM) 3.0. PUMA requires an annual external verification of the self-assessment FEM modules (verification visits are announced). This external verification may be completed by approved verifiers from PUMA's internal team or other brands, or third-party organizations on the approved list from SAC. The FEM Chemical Management Section measures factory performance from inventory and purchasing, to production, storage and waste. PUMA's Chemical Performance Rating System is based on the ratings developed from the factories' verified Higg FEM scores under the chemical management section as verified by SAC-approved verifiers: A, B+, B-, C and D. The minimum passing grade from the Chemical perspective is 40% (i.e., only A, B+ and B- ratings are a passing score) and C and D are failure ratings. This rating system was presented during meetings of suppliers and sourcing teams in 2021 and was implemented gradually from 2022. Our chemical handbook has been updated accordingly. The rating system was included in vendor supplier scorecards along with social and environmental ratings.

↗ G.24 AGGREGATED VERIFIED FEM CHEMICAL SCORE FOR PUMA FACTORIES BENCHMARKED WITH INDUSTRY



* FEM 2020 PUMA average: 146 factories
FEM 2021 PUMA average: 142 factories

** Industry median FEM 2021 (5,889 factories): Filter used industry sector (Apparel, Footwear, Accessories include handbags, jewelry, belts and similar products) and Facility Type (Final Product Assembly, Printing, Product Dyeing and Laundering, Material Production including textile, rubber, foam, insulation, pliable materials)

* Out of 147 core factories, 142 completed FEM verification

In 2022 PUMA continued to use the Higg Facility Environmental Module (FEM), the industry tool, to measure chemical management performance through the Higg FEM Chemical Management Module, which tracks purchasing and inventory management, production, storage and waste locations. We communicated our expectation to our core factories that they improve their verified FEM Chemical Management score to 39%. In 2022, the average verified Chemical score among our factories was 39%, which means we have achieved our target.

The table shows the aggregated verified FEM2021 chemical module scores (median) for PUMA core factories with industry benchmarking. Compared to the industry, the verified FEM score overall for our factories is higher than the industry median score.

During 2022 we continued to engage with our PUMA core Tier 1 and Tier 2 factories in capacity-building activities and projects in chemical management, which are focused on how to improve Higg FEM Chemical Management scores for the factories with low performing scores. We worked together with industry expert groups such as ZDHC, AFIRM as well as ZDHC-approved laboratories to organize training webinars and develop training videos in local languages. PUMA also joined the Chemical Management Improvement Program (CMI) and the Program for Improvement of Environmental Performance of Factories (PIE) of GIZ in countries such as Vietnam and Bangladesh to improve the factory's Chemical Management Performance. The improvement in the MRSL conformance rate also contributed to an increase in the Chemical Management Score.

In 2023 we will continue to engage with our PUMA core Tier 1 and Tier 2 factories in capacity-building activities and projects in chemical management. We will organize customized training sessions by SAC-authorized trainers. The training sessions will continue to focus on how to improve the Higg FEM Chemical

Management score for the factory with low performance to support these factories to achieve 2023 goals with average FEM score of 46 for chemical management.

SUPPLIER TRAINING

A series of training sessions were conducted in 2022, covering chemical management in input, process and output phases, in collaboration with ZDHC, accredited third party laboratories and external consultants.

ZDHC SUPPLIER TO ZERO ASSESSMENT

In 2022 PUMA helped our core factories with low chemical management scores to participate in the ZDHC Supplier to Zero program, which contains a chemical management checklist to help factories identify opportunities to improve their chemical performance. A total of 58 core Tier 1 and core Tier 2 factories have completed the ZDHC Supplier to Zero assessment. Almost all of them completed their assessment at the end of 2022, so we will monitor their performance improvement in 2023.

CHEMICAL MANAGEMENT IMPROVEMENT (CMI) WITH GIZ

The training course combines self-study and class training with the trainer to develop knowledge of the factory chemicals in use. After completing the training course, the factories' management are requested to submit an action plan to improve chemical management. The PUMA sustainability team supported our vendors by reviewing and advising on the action plans.

We nominated 32 core supplier factories in Vietnam to join this program with on-site consultancy, out of which 31 core suppliers joined this project. 110 out of 118 participants who took part obtained a Certificate of Completion and a Certificate of Attendance (93%). 100% of factories are working on an action plan. 87% of factories received a Letter of Recognition with Higg FEM 2021 – their chemical scores have improved by 10%.

PROGRAM FOR IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE OF FACTORIES (PIE)

The PIE program is also an initiative by GIZ. In this program, the factories have worked to improve their environmental performance through capacity building and advisory services. The factories were also trained in the chemical management system. We nominated five supplier factories in Bangladesh to join this program. 12 participants from four factories obtained a Certificate of Completion. 100% of factories received a Certificate of Participation and improved their score by more than 50%, based on baselines and final assessment score.

↗ T.24 SUPPLIER TRAINING

Virtual training	Topics	Number of factories	Number of participants
Industry chemical management standards, guidelines and platforms (Jointly organized with ZDHC) Conducted 3 sessions in 2 different languages	ZDHC WW guidelines V 2.0 - Wastewater ClearStream Report ZDHC CMS Technical Industry Guide Supplier To Zero (Chemical Management) ZDHC MRSL ZDHC Gateway platform	125	363
MRSL (Jointly organized with an accredited third-party laboratory) Conducted 3 sessions in 3 different languages	ZDHC MRSL V2.0 and ZDHC MRSL Conformance Guidance (V1.1) How to improve ZDHC MRSL conformance rate indicated in InCheck Report.	124	212
RSL (Jointly organized with accredited third-party laboratory)	RSL standard and testing matrix update and implementation	Approx. 130	Approx. 203

In 2022 chemical management training sessions covered MRSL and factory chemical management (FEM). A total of six training sessions were conducted in five different languages. More than 240 factories and 570 participants were invited. More than 80% of participants were satisfied with the training arrangement and content. These training programs helped our suppliers improve their understanding on PUMA's and industry requirements. Training in various relevant standards, guidelines and tools helped them to improve the effectiveness of their Chemical Management System (CMS).

After the training, the core factories with low MRSL conformance rates developed an action plan to improve their performance. We received such action plans from 36 factories and set up their sessions to review their plans and facilitate their implementation.

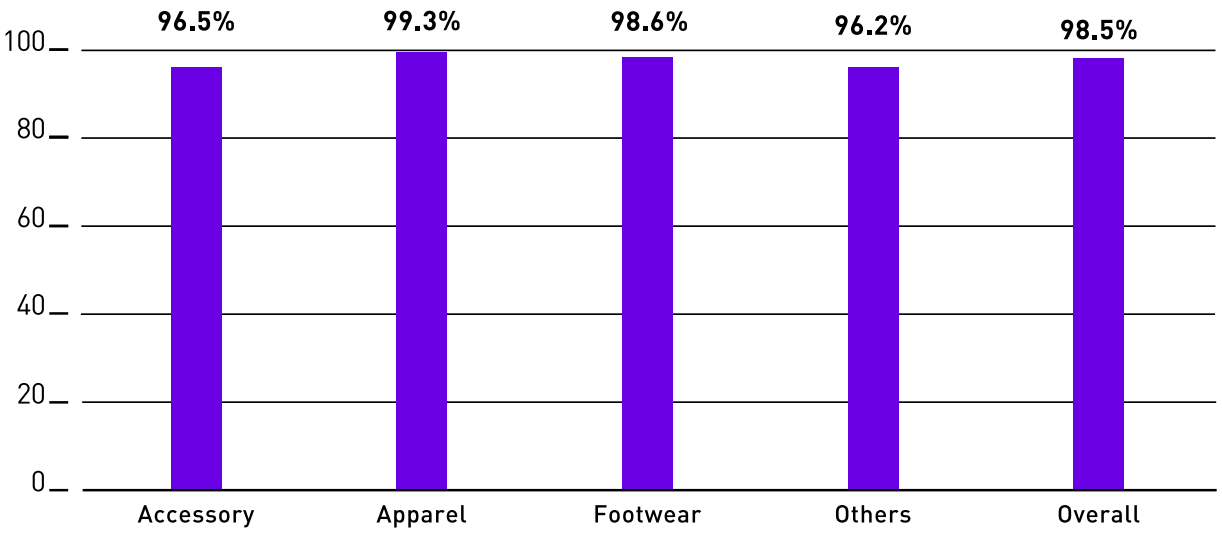
In addition, we also encouraged the suppliers' chemical management teams to attend in-depth training courses as part of the ZDHC Academy conducted by ZDHC-approved service providers.

Examples of the training courses that have been attended by PUMA suppliers were ZDHC Top 10 Issues & Best Practices as well as CMS and Technical Industry Guide (TIG) training.

RESTRICTED SUBSTANCE LIST (RSL)

In 2022 we received 7,851 RSL tests and material certification submissions with an overall RSL compliance rate maintained at above 98%. When materials fail an RSL test, they cannot be used for PUMA products until the failure has been corrected and they successfully pass the test. In this way, we mitigate the risk of product-level RSL failures.

↗ G.25 2022 RSL COMPLIANCE RATE BY DIVISION (%)



↗ T.25 RSL TEST STATISTICS 2019-2022

	2022		2021		2020		2019	
Product Division	**No. of test submission**	**Compliance rate (%)**	**No. of test submission**	**Compliance rate (%)**	**No. of test submission**	**Compliance rate (%)**	**No. of test submission**	**Compliance rate (%)**
Footwear	5,350	98.6%	5,847	98.8	5,117	99.3	4,668	99.2
Apparel	1,499	99.3%	1,467	99.0	1,318	98.9	1,239	99.1
Accessories	846	96.5%	737	94.4	878	96.8	639	96.2
Others	156	96.2%	133	97.7	152	91.4	59	100.0
Total	**7,851**	**98.5%**	**8,184**	**98.4**	**7,465**	**98.8**	**6,605**	**98.9**

RANDOM TESTING

Every year PUMA performs random RSL tests on high-risk materials of finished products. In 2022 we tested 227 materials in 29 finished products across footwear, apparel and accessories from different suppliers in different sourcing regions. The passing rate was 95%.

While all products met all legal requirements, we took actions for the RSL failures, such as material segregation, increased test frequency on materials before product manufacturing, and improved manufacturing processes at Tier 2 factories.

MANUFACTURING RESTRICTED SUBSTANCE LIST (MRSL)

Regarding MRSL conformance, we use ZDHC MRSL, an industry standard adopted by many brands/retailers at the supplier level, to verify the phase out of priority hazardous chemicals. Out of 147 core factories, 26 factories do not use chemicals during the manufacturing process and therefore are out of scope of the MRSL.

In 2022, 88 of our core factories used either BHive, CleanChain or E3 tools to account for MRSL implementation at factory level. This means that 90% of Tier 1 factories and 61% of Tier 2 factories under the scope of our MRSL program have an official InCheck Report, issued by ZDHC-approved solution providers to track MRSL compliance. These are the chemical management platforms to manage chemical inventory and generate Performance InCheck Reports, which provide a summary of the MRSL conformance of the factory's chemical inventory.

↗ T.26 MRSL STATUS*

	Number of factories		
	In MRSL scope	With Chemical Inventory List	With InCheck Report
Core T1	49	44	44
Core T2	72	50	44
Total	121	94	88

* The data is based on September/October/November InCheck Report

The BHive app uses OCR technology to allow manufacturing facilities to take smartphone photos of chemical product labels, generate a full and accurate chemical inventory and within seconds identify which chemical products meet MRSL requirements used by many brands and retailers. Facilities can then see which chemicals they should keep using and which they should phase out.

↗ CASE STUDIES

From March to August 2022, Kim Viet factory in Vietnam joined the Chemical Management Improvement (CMI) program by GIZ to improve chemical management performance. In this program they completed the training courses on the chemical management system through the guided online platform to master the chemical management system and practice in the factory, received a consultation from the Chemical Management Advisor and then made a Performance Improvement Plan. The Higg FEM 2021-verified chemical score improved by 112%, from 17 to 36, in comparison to the Higg FEM 2020-verified chemical score. PUMA's average Higg FEM 2021 score is 39, whereas the industry median is 30%.

In August 2022, Formosa Group made an action plan to improve MRSL conformance for three facilities in Taiwan, China and Vietnam. The factory analyzed the MRSL conformance rate (based on the March/April/May InCheck Report) to make a list of the top 14 non-conformance chemicals and target chemical suppliers accordingly. Formosa then worked with the suppliers of these chemicals and requested them to register a ZDHC account and submit the evidence of the chemicals conformance with ZDHC MRSL (at least level 1) on the ZDHC gateway. All three facilities achieved approximately 70% MRSL conformance.

With a baseline of 45% MRSL conformance rate in 2021, we set a goal of 60% MRSL conformance in 2022. We exceeded the 2022 goal with an average MRSL conformance rate of 68%. 58 out of 88 core factories now have an InCheck report achieving the target of 60% MRSL conformance. MRSL conformance is measured by weight.

In 2023 we will focus on the remaining core factories to receive an InCheck report. We will engage with PUMA core Tier 1 and Tier 2 factories in related capacity-building activities and implementation. We will organize customized training sessions by ZDHC, ZDHC approved third-party laboratories and focus on how to improve MRSL conformance for the factories with a low MRSL conformance rate. This will support the factories in achieving the 2023 MRSL conformance goal of 70%. In 2023 we plan to work with ZDHC-approved third-party verifiers to conduct on-site verification, which is an exercise conducted to establish the credibility of the chemical inventory list uploaded by a supplier and generate the verified Performance InCheck Reports.

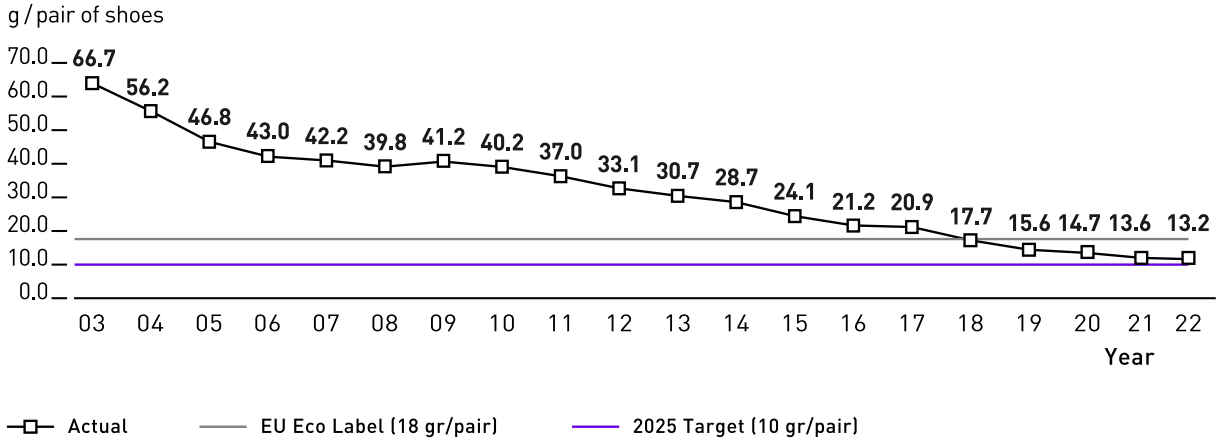
Besides using a chemical inventory to control input chemistry, we also use wastewater tests conducted by accredited independent laboratories to ensure no harmful chemicals are released through the wastewater of our manufacturer's facilities with wet processing. The results of these tests show a compliance rate of over 94% for each parameter, with most parameters scoring 99 or 100% compliance.

More details on wastewater testing are provided in the Water and Air section of this report.

VOLATILE ORGANIC COMPOUNDS

With much collaborative effort, we continue to edge closer towards our 2025 target of limiting VOC emissions to 10 g per pair of footwear produced. Although we faced certain supply chain difficulties in 2022, we have again managed to reduce our volatile organic compounds (VOC) and for 2022 we are reporting 13.2 g per pair. We remain confident to achieve our 2025 goal, through the increased use of water-based adhesives, as well as further innovations within our adhesive suppliers.

↗ G.26 VOC INDEX DEVELOPMENT OVER TIME*



* Since 2019 figure-based for core suppliers in alignment with the general reporting scope.

WATER AND AIR

Target description:

- Industry good practice for effluent treatment is met by 90% of core PUMA suppliers with wet-processing facilities
- Industry good practice for air emissions is met by 90% of core PUMA suppliers with significant emissions
- Reduce water consumption at PUMA core suppliers per pair or piece by 15% (based on 2020 baseline)

Relates to United Nations Sustainable Development Goals 6, 14 and 15

Examples of the 10FOR25 action plan:

- Ensure regular wastewater testing at relevant suppliers
- Ensure regular air-quality assessments at relevant suppliers
- Support the development of an industry-wide air quality standard

KPIs:

- Percentage of core suppliers meeting good practice standards for wastewater
- Percentage of core suppliers meeting good practice standards for air emissions
- Percentage of water saved per pair/piece

WATER ROADMAP AND RISK ASSESSMENT

In 2021 we developed a water roadmap and conducted a risk assessment using our risk assessment methodology.

In 2022 we added a water risk mapping for our own PUMA sites (offices, stores and logistic centers) globally. Using the WWF water risk filter, we identified 164 sites in areas of water scarcity. For the sites, we identified the water consumption and compared it to the water consumption of similar sites (offices, stores and warehouses separately assessed). We also published an environmental handbook for our own entities with recommendations for water-saving measures. During 2023 we will follow up with the identified sites and set a maximum water consumption target.

At our headquarters in Herzogenaurach, we collect rainwater on our property and use it in the office and the surrounding green area. This helps us reduce our freshwater consumption and water costs.

Most of the other PUMA operated sites globally are rented and both, rented as well as non rented, none of the sites do not use water for industrial processes. Therefore, our influence to reduce water consumption at our own sites is limited to using water-efficient kitchen equipment and sanitary facilities.

Water risk across PUMA's supply chain was assessed referring to the WWF water stewardship: Basin Risk and Operational Risk. Basin Risk was analyzed by the WWF Water Risk Filter. As for the Operational Risk, it was based on the water management in Higg FEM water management 2020 by our core suppliers. Those scoring under 50% were ranked as having a high level of operational risk.

According to the analysis from WRI Aqueduct and WWF Water Risk Filter, some of our core suppliers in China, Vietnam and Bangladesh have some risks, such as flooding, poor water quality or water depletion.

Below are key focus areas for the coming years. The actions below indicated are a continuation of the ones started in 2021.

- **Raise awareness:** We see the need to increase internal awareness and will develop e-learning courses on water for our staff. As a part of Higg FEM training, we have provided training to the suppliers on how to improve their score in the water and wastewater sections. The cleaner production programs such as Clean by Design (CbD) and PaCT provided support to suppliers to reduce water consumption for the selected core factories.
- **Knowledge of impact:** We conducted a life cycle assessment of our top five products. Two LCA results are reported under the product section of this report. Also, in 2022 we conducted a comparative LCA of our RE:SUEDE sneaker compared to the conventional SUEDE. LCA studies evaluated blue water consumption, which represents surface water and ground water consumption in different lifecycle stages of products. As a part of Higg FEM self-assessment the core suppliers and selected non-core suppliers have conducted water risk assessments by using either the WRI Aqueduct Tool or the WWF Water Risk Filter.

DETOX.Live is a public disclosure platform operated by ZDHC, which has integrated the global facilities of wastewater testing, completed as per ZDHC Wastewater Guidelines. We will use the DETOX.Live platform to check the wastewater performance of new factories to know whether they have already implemented the ZDHC wastewater guidelines in 2023. After uploading test data to the ZDHC Gateway Wastewater Module, the performance results are shown in three different color codes. Green means a facility has met requirements, red means the facility did not meet the requirements, orange means that while requirements are not met, corrective action was taken.

PUMA has also adopted ELEVATE intelligence, or "EiQ", a comprehensive suite of supply chain analytics, to:

- Assess our supply chain risks by geography, commodity and issue
- Complete a risk assessment for suppliers, factories and sites.
- Manage risks that are material for each supplier, factory or site.

We will prioritize core suppliers for further action by using the Water Risk Analysis tool.

- **Internal action:** We translated Higg FEM into a PUMA grading system to include our suppliers' environmental performance in our vendor scorecard used by our sourcing leaders in the future. We will strengthen water data by increasing data collection frequency. We will keep our focus on increasing the use of recycled materials in our products. We will continue to enroll more factories in cleaner production programs to improve their water efficiency. We asked our core suppliers to set their own water reduction targets. Our material and development team continued their efforts to launch products with a lower water footprint. We created a tool for internal decision-making which compares the environmental impact of alternative materials. Our suppliers improved their efforts to recycle treated wastewater, process optimization, rainwater collection etc. to reduce the water footprint in the supply chain. Some of the case studies on implementation by our suppliers are presented in this report.
- **Collaboration and partnership:** We will map further water governance in our key sourcing countries and conduct local key stakeholder mapping to explore opportunities for a collaborative approach. We continue to participate in industry-wide cleaner production projects, which include water efficiency measures, such as Clean by Design, the PaCT program in Bangladesh or water efficiency programs offered by the Fashion Pact.

MRSL WASTEWATER TESTING

Since 2015 we have increased the number of wastewater tests from 33 to 147 factories and in 2022 we received 283 wastewater tests. 94% of all factories with wet-processing facilities (156 factories have wet processes) have been covered by tests, and tests show that all these factories have at least 90% compliance with the ZDHC Wastewater Guidelines (foundational level). Out of 147 supplier factories, 104 are fully compliant with all ZDHC Wastewater Guideline requirements. When a wastewater test fails, we support factories to conduct a wastewater and sludge root cause analysis and create corrective actions, using the industry standard template. In 2022, we followed up with those factories who failed to fully comply with the wastewater guideline, and we received seven corrective action plans. We will continue to follow up through 2023 to obtain corrective action plans and we will evaluate further measures that need to be taken. We will also follow up on their implementation through wastewater testing in 2023. In 2022 we partnered with an accredited third-party laboratory to organize training on chemical management and wastewater conformance as well as a root cause analysis and corrective actions for non-conformance. Case studies of conventional parameter failures have been used in the training.

The overall compliance rate for each category is:

- Conventional wastewater parameters: 98%
- Heavy metals: 99%
- Restricted chemicals (MRSL): 99%

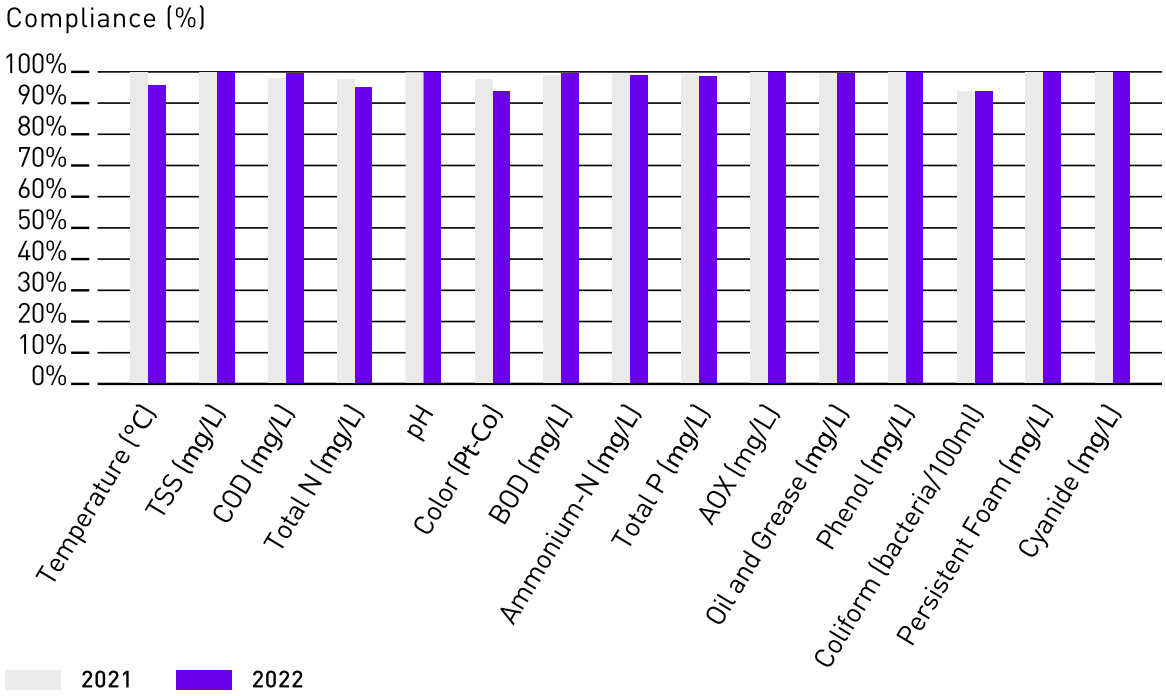
The overall compliance rate for heavy metals and restricted chemicals has increased by 1% in 2022 compared to 2021, while the compliance rate for conventional parameters has fallen by 1%. Nearly half of the factories that are in non-compliance with conventional parameters have recently joined the wastewater testing program. One third of these failures are related to the temperature of the wastewater.

143 out of 147 factories have a ZDHC ClearStream Report. ClearStream Report, an easy-to-read facility performance report of ZDHC wastewater conformance, is automatically generated on the ZDHC gateway platform. To obtain a ZDHC ClearStream report, the factories must conduct wastewater testing in accordance with ZDHC Wastewater Guidelines at one of ZDHC's accepted laboratories, and all test results must be uploaded to the ZDHC gateway platform.

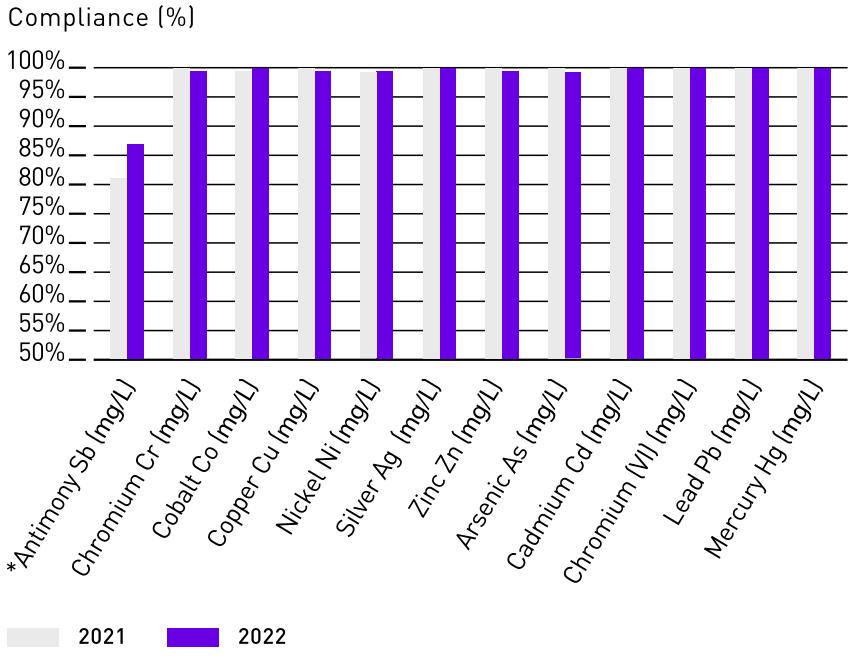
The test results confirm that priority hazardous chemicals have been phased out as planned. Regarding the conventional wastewater parameters that apply only to suppliers which discharge their wastewater directly into natural water bodies, in 2022 test results show 98% compliance with the ZDHC Wastewater Guidelines (foundational level). Six parameters hit a 100% compliance level. This means we have achieved our wastewater target for the 10FOR25 cycle. Nevertheless, we will continue to work with our suppliers to reach 100% compliance for all parameters.

In 2023 we will continue to engage with manufacturers of PUMA goods in our wastewater testing scope in capacity-building activities and implementation. We will organize customized training sessions by ZDHC and ZDHC-approved third-party laboratories, by focusing on updates of the ZDHC Wastewater Guidelines to version 2.1, root cause analyses, and corrective actions for non-conformance factories.

↗ G.27 SUPPLIER PERFORMANCE TO ZDHC WASTEWATER QUALITY GUIDELINE – CONVENTIONAL PARAMETERS



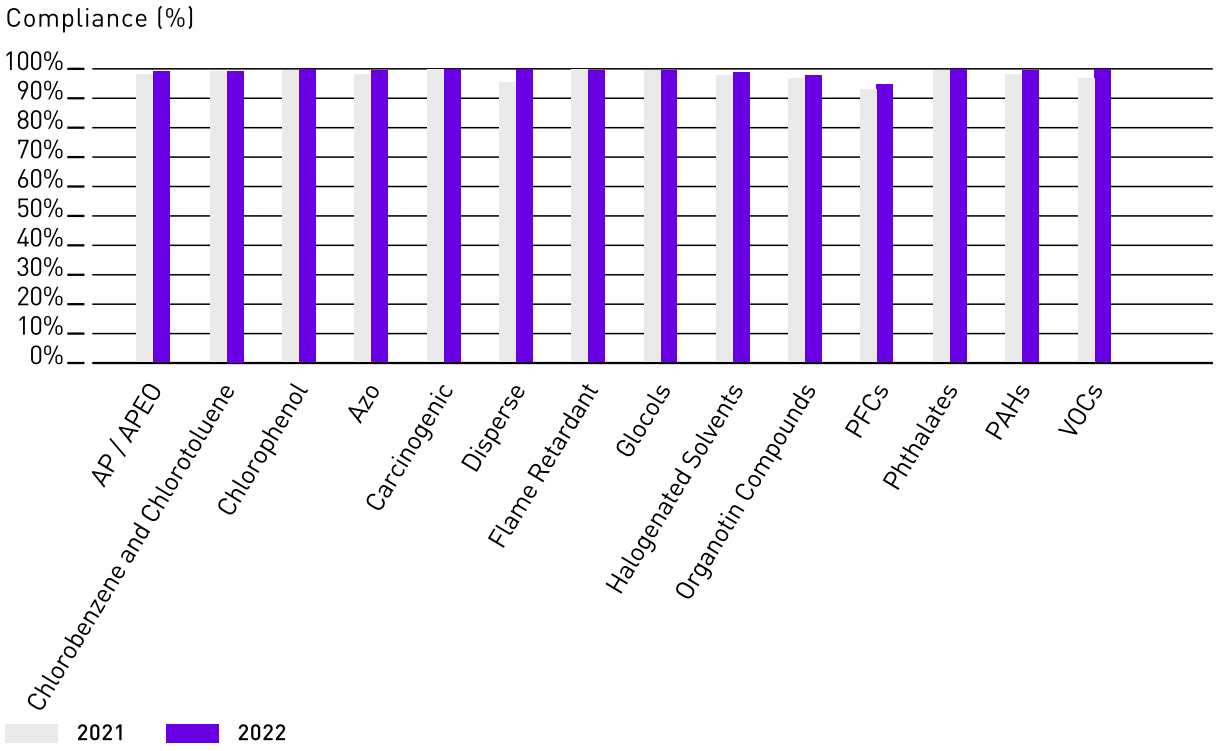
↗ G.28 SUPPLIER PERFORMANCE TO ZDHC WASTEWATER QUALITY GUIDELINE – HEAVY METALS



* Antimony is exempt for mills that produce or dye polyester fabric because the antimony is used as catalyst for polyester production and its natural to have antimony in the wastewater. This is acceptable as per ZDHC guideline.

For Heavy metals and restricted chemicals parameters, the test results also show over 90% compliance for each parameter with the ZDHC Wastewater Guidelines. This means we have achieved our wastewater target for 10FOR25 sustainability targets cycle. Nevertheless, we will continue to work with our suppliers to further improve the remaining non-compliance cases.

↗ G.29 SUPPLIER PERFORMANCE FOR ZDHC WASTEWATER QUALITY GUIDELINE – RESTRICTED CHEMICALS



SUPPLIER TRAINING

To help our suppliers better understand the requirements set by PUMA and the industry, we trained suppliers in standards, guidelines, tools as well as methodology for nonconformance investigation and remediation. Case studies of conventional parameter failures were used in the training.

↗ T.27 SUPPLIER TRAINING

Virtual training	Topics	Number of factories	Number of participants
ZDHC Wastewater and Root Cause Analysis & Corrective Actions Conducted six sessions in five different languages	ZDHC WW guidelines V 2.0 and implementation Root Cause Analysis & Corrective Actions for Non-conformance Wastewater	145	438

In 2022 we partnered with an accredited third-party laboratory to organize Wastewater Conformance Updates Training with a focus on chemical management. The training also included root cause analyses and region-specific corrective actions. Case studies of conventional parameter failures were used in the training.

A total of six training sessions were conducted in five different languages. More than 430 participants from 145 factories attended the training courses. More than 80% of participants were satisfied with the training arrangement and content.

The training helps the factories gain a better understanding of the updated ZDHC Wastewater Quality Guidelines, such as key updates and their relevant impact on their facility. It also explains when the new version will be implemented as well as how to do a wastewater root cause analysis and create corrective actions when there is a case of non-compliance.

After the training, the factories that have a case of non-compliance with the ZDHC Wastewater Quality Guidelines are required to do a wastewater root cause analysis and create corrective actions. We received seven corrective action plans from seven factories. We will follow up on their implementation with wastewater testing in 2023.

In addition, we also encouraged the suppliers' chemical management teams to attend in-depth training courses as part of the ZDHC Academy, which are conducted by ZDHC-approved service providers.

WATER SAVING

In 2022 we expanded the participation of our Core Tier 1 and Tier 2 suppliers in cleaner production programs to improve energy and water efficiency.

Below are the annual savings from completed and ongoing projects from 2019 until the end of 2022:

- Greenhouse gas reduction: 85,931 tCO_2e per year
- Renewable energy: 186 MWp of RE capacity (including offsite wind) added in 2021 and 2022
- Water saving: 2,327,067 m^3 per year
- Energy saving: 164,483 MWh per year

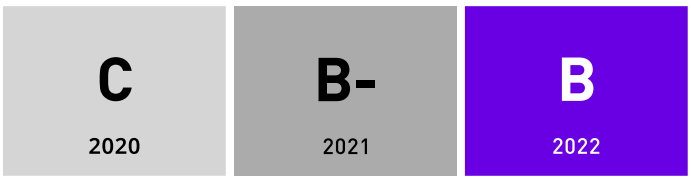
Apart from our consistent improvement on supply chain water efficiency, we have set a target of 15% water efficiency (water consumption reduction per unit of products manufactured) in 2025 compared to the 2020 baseline.

Since 2020 our core Tier 1 apparel suppliers have been able to reduce the amount of water per piece by 17% and core Tier 1 footwear suppliers reduced water per pair by 36%, thereby exceeding our 2025 target 3 years ahead of schedule.

Since 2020 our core Tier 2 textile suppliers have been able to reduce the amount of water per ton by around 5% and core Tier 2 leather suppliers reduced water per square meter by 17%. While our core leather suppliers also hit our water efficiency target ahead of schedule, we will continue to work with our textile suppliers to close the gap.

For further data on water consumption, please refer to the Environmental Key Performance Indicator section of this report.

↗ G.30 2022 PUMA CDP WATER SCORE



PUMA's CDP water score improved from B- in 2021 to B in 2022.

↗ CASE STUDY

In the water footprint reduction roadmap 2025, PUMA supply chains are an important part of this journey. Gain Lucky Vietnam is a fabric factory (under the Shenzhou group) that planned to install an in-house reverse osmosis (RO) membrane system with a designed capacity of 10,000 m^3/day to treat wastewater and recycle it in their production processes. The RO system (phase 1 ~5000 m^3/day) was installed in June 2022 and started trial operation in July 2022. This initiative has resulted in an estimated 12% annual reduction in freshwater consumption of the factory.

Being a Leather Working Group (LWG) Gold-rated and ISO 14001:2015-certified tannery in Vietnam, Hung Fu Leather has been working on improving its chemical & water use among other topics. In 2021 the factory needed 61.9 L water to produce 1 m^2 of finished leather. In 2022 the factory set up an automatic water supply system to accurately control water used in coloring. This, together with adjusting the coloring recipe has helped reduce annual water usage by 5-10%. In addition, from April 2021, around 10-20% of wastewater has been recycled back into production.

AIR EMISSIONS

In terms of air emissions, there are no significant air emissions to report from our own sites. We have outsourced all manufacturing to external manufacturing partners and at our largest sites globally we do not have any industrial processes which could create air emissions. The only exception is our own manufacturing site in Argentina, which is covered by our supply chain efforts listed below.

For our largest site, our global headquarters, we use district heating and heat pumps for heating, resulting in zero direct air emissions from the building. This fact was also confirmed during our ISO 14001 certification audit in 2022.

As the publication of the ZDHC Air Emission Guidelines has still not been finalized, we decided to internally monitor our core supply chain's legal compliance regarding air emissions.

We designed a set of questionnaires to gather the relevant air emission compliance information on top of our online data collection campaign for our core factories (Tier 1 and Tier 2)*.

The result shows that 100% of the core factories sampled were compliant with the local regulation for air emission in 2022. We have evaluated compliance to air emission regulation for 108 out of 147 core factories.

We will join a ZDHC pilot project on air emissions in 2023. As a part of this project, we are in the process of selecting factories in collaboration with other brands.

* This provision refers to local regulations, where samples are selected by the factories based on the requirements provided by the local environmental authorities.

PLASTICS AND THE OCEANS

Target description:

- Support initiative and scientific research on microfibers, work with core suppliers to reduce microfiber release
- Research biodegradable polyester for use in PUMA products
- Eliminate plastic bags from PUMA stores and review the impact of hangers and fixtures

Relates to United Nations Sustainable Development Goals 3, 14 and 15

KPIs:

- Tons of plastic bags used in PUMA stores
- Percentage of PUMA offices that have eliminated single-use plastic
- Percentage of plastic packaging recycled

↗ T.28 ELIMINATION OF SINGLE USE PLASTICS

Sub-targets	2020	2021	2022	Target 2025
Plastic consumer shopping bags (stores, tons)	400	189	99	0
Plastic consumer shopping bags recycled content (%)	80%	80%	80%	Zero plastic bags
Plastic hangers used in stores (stores, tons)	112	134	160	Switch to recycled content or wood
Plastic hangers with 100% recycled content (%)	51%	97%	99.9%	100%
Primary and transit* plastic packaging (tons)		557.7	2,297	Switch to recycled content or paper
Primary and transit plastic packaging with recycled content (%)		100%	99.6%	100%
Offices that have eliminated single-use plastic cups and cutlery (%)	0%	88%	91%	100%

* Transit packaging from factory to warehouse

Plastic pollution of our oceans is one of the most urgent challenges to sustainability of our time. As a company that uses polymers for most of its products, we have a special responsibility to work on this issue. Avoiding plastic pollution is one of the three pillars of the Fashion Pact, of which PUMA is a founding member. Also, several countries and regions have formed initiatives to ban certain types of single-use plastics or plastic bags.

Therefore, we have added Plastics and the Oceans to our 10FOR25 sustainability strategy as well as our sustainability bonus targets.

Plastic shopping bags and single-use plastics aggravate the problem of plastic pollution significantly. By eliminating them from our stores and office environment, we can set a positive example for our consumers and colleagues and at the same time reduce our use of plastics by several hundred tons per year.

In recent years we switched our shopping bags to FSC-certified paper bags or polyethylene bags with 80% recycled content. During 2020 our Retail division devised a detailed plan to completely phase out plastic bags from our owned and operated PUMA stores globally.

Our stores ordered 430 tons of consumer-facing polyethylene bags in 2019 and 400 tons in 2020. In 2021 our stores ordered 189 tons. Finally, in 2022 our stores ordered 99 tons of consumer-facing plastic bags. As of January 1st, 2023, we have replaced all polyethylene bags for consumer use with paper bags or durable multi-use bags for sale in our owned and operated PUMA stores.

At the same time, we switched other plastic items in our retail stores, such as hangers and shoe fixtures, to recycled polymers or FSC certified wood. We also started working on more environmentally friendly solutions for our B2B product packaging for apparel and accessories, which is also based on polyethylene bags. As a result of these efforts, we switched our transit packaging B2B plastic bags to 100% recycled content. In addition, we piloted transit bags made from paper in the USA. For 2023 we plan to roll out transit bags made from FSC-certified paper for selected, more sustainable products.

According to our zero plastic target for primary product plastic packaging, during 2021 we also switched most plastic primary packaging B2C to paper (we reported 245 tons of plastic primary packaging used in 2020). At our offices, we have challenged our catering partners and employees to avoid single-use plastics such as coffee cups, lids, stirring sticks, cutlery or straws. In 2021 already 88% of our offices globally have eliminated single use plastic cups and cutlery. This figure increased slightly to 91% in 2022.

On a product level we piloted a fully biodegradable version of our most iconic sneaker, the PUMA SUEDE. This pilot includes the use of a fully biodegradable outsole made from thermoplastic polyurethane (TPU).

For more information on RE:SUEDE, please refer to the Circularity section of this report.

MICROFIBERS

PUMA joined The Microfiber Consortium (TMC) as one of the signatory members to understand and address the environmental concerns for fiber fragments (microfiber) as generated from natural and synthetic clothing during manufacture and the consumer use phase in the industry.

Microfibers originating from synthetic fibers can have an environmental impact and are a challenge for the industry. With this, PUMA has put more focus on testing synthetic materials, such as polyester. In 2022 we continued with microfiber shedding tests, with 12 such tests conducted on selected 100% polyester fabrics as per TMC test method. The results indicate that the average filter change in mass (g) and mass percentage for the 12 fabrics tested by PUMA is lower as compared to the average on the TMC Microfiber Data Portal. Specifically, PUMA's average filter change in mass was 0.0030 g and 0.0460%, compared to the database average of 0.0036 g and 0.0489%, respectively.

We have received feedback from TMC regarding the shedding data, and we understand that analyzing it is complex and ongoing. So far, there isn't a clear trend showing which yarn or structure type sheds more among the signatories. TMC has requested more data entries, and we will continue to participate in and support this study as an industry.

PUMA worked in the TMC task team with other industry representatives to develop a guideline: 'Control of fiber fragmentation, within textile manufacturing wastewater'. The final draft is awaiting open consultation by different stakeholders, such as the ZDHC Foundation, prior to public release. PUMA will review the official version of the guideline upon release. PUMA has also participated in the development of

biodegradability reports on the available test methods and claims. This could support alignment within the industry.

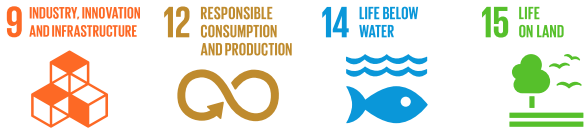
In September 2021, TMC released the 2030 roadmap. It laid down its commitment with clear accountable outputs - enabling signatories from across the industry to take meaningful, science-based, coordinated action on fiber fragmentation from natural and synthetic textiles. PUMA will continue to support the TMC roadmap and commitment, including building understanding by contributing to research data on fiber fragmentation, reducing fiber fragmentation by adopting mitigation actions once practically available from the industry, driving progress by participating in task teams and scaling global uptake.

CIRCULARITY

Target description:

- Set up or join product takeback schemes in major markets
- Reduce production waste to landfills by at least 50% (shared target)
- Develop recycled materials as alternatives to leather, rubber, cotton and polyurethane (shared targets)

Relates to United Nations Sustainable Development Goals 9, 12, 14 and 15



KPIs:

- Percentage of major markets with takeback scheme
- Amount of waste sent to landfills
- Percentage of recycled polyester, cotton, leather, rubber and polyurethane

We are aware that the linear business model currently applied in our industry is far from the ideal concept of a circular economy. The growing amount of textile waste sent to landfills is an emerging risk. Rethinking the way we produce and moving towards a more circular business model is one of the priorities of our sustainability strategy.

We begin our journey with product design. Building on our Circular Design training with Circular Economy, we rolled out an e-learning tool on circularity for the global PUMA colleagues. Based on the PUMA identity and our material toolboxes we identified circular design approaches around the longevity and cyclability of our products. The e-learning is covering our Circularity Policy, as well as our circular design guidelines.

CIRCULARITY INNOVATION AND COMMUNICATION

In 2021 we launched our PUMA Circular Lab, our platform to speak and learn about circularity together with our customers. The first project was the RE:SUEDE, an experiment for a biodegradable shoe, made with chrome-free Zeology Leather, hemp, cotton and a biodegradable TPE sole. It launched in 2022 with a first batch of 500 pairs. The shoes were worn for six months by participants and then sent back to PUMA. In December 2022 over 400 pairs of RE:SUEDEs were sent to an industrial composting facility in the Netherlands, where they were prepared for the composting trial happening in 2023. The composting results will be made public so that anyone interested in biodegradability can use our lessons learnt.

In apparel we developed a textile-to-textile recycling opportunity with partners in Europe called RE: JERSEY. The initiative enables the recycling of worn or unsellable polyester items (for example due to expired licensing contracts) through an innovative chemical recycling process into new textile items. We partnered with several PUMA teams for this project: Manchester United, AC Milan, Olympique de Marseille and Borussia Dortmund. We collect polyester products at the clubs' fan shops and our own PUMA Store in Herzogenaurach. These products are sorted, recycled, and turned into new football jerseys in Europe.

RE:JERSEY: Manchester City players wear recycled PUMA jerseys for warm-up

RECYCLED MATERIALS USAGE

We encourage all our suppliers to reuse and recycle the fabric waste they are creating for PUMA production, either through applications outside of our industry or ideally, by recycling offcuts into new polyester or cotton yarns.

We have set circularity targets, for example, scaling up the use of recycled polyester and cotton and using recycled alternatives to leather, rubber and polyurethane (PU), the materials we use most frequently after cotton and polyester. Our material toolboxes include recycled material options for all these materials. For recycling and recycled thermoplastic polyurethane (TPU), we have started a research project with a chemical company.

To communicate our use of recycled materials in our products, we launched our RE:COLLECTION in 2022. The collection is made with recycled cotton and recycled polyester. In parallel, we continued our First Mile collection made from recycled plastic bottles.

The percentage of recycled polyester increased for all product divisions from 14% in 2020 to 48% in 2022. The percentage of recycled cotton for our apparel products increased from 0.6% in 2020 to 3.6% in 2022, and for footwear it increased from 0.5% to 2.4%.

Around 57% of pre-consumer waste was either reused or recycled by our core Tier 1 suppliers and around 90% of waste was either reused or recycled by our core Tier 2 suppliers in 2022. 9% of textile and fabric waste was sent for incineration by core Tier 1 factories while core Tier 2 factories sent only 0.3% of waste for incineration.

Only 4.6% of manufacturing waste still ends up in landfills for apparel suppliers and 9.2% for footwear suppliers.

↗ T.29 PRE AND POST CONSUMER WASTE

Volume of recycled cotton, from production waste	1,335 tons
Volume of recycled polyester, from post & pre-consumer waste	24,509 tons
Volume of recycled nylon, from post-consumer waste	15 tons

	Core T1*	Core T2**
Quantity of pre-consumer waste generated annually	51,165 tons	216,796 tons
% of pre-consumer waste sent to reuse or recycling	56.9%	90.6%
% of textiles and fabric destroyed (sent to incineration)	9.2%	0.3%

* All core T1 supplier factories Apparel, Footwear & Accessories (65 factories)
** Core T2 supplier factories Leather, PU and Textiles (43 factories)

TAKEBACK SCHEMES

To demonstrate our responsibility as a producer and to secure options for more circular material streams in the future, we have set a target to join or offer takeback schemes in all our major markets by 2025.

During 2022 we introduced our footwear takeback scheme for Australia, complementing our existing takeback pilot schemes in Hong Kong, USA and the participant clubs of the RE:Fiber project. Our colleagues at PUMA North America continued to work with Soles for Souls and collected 600 kg of used shoes, an initiative where shoes can be donated for reuse in support of a charitable cause. Our colleagues in Australia were able to collect 2,749 kg of used products.

Since September 2019 PUMA customers in Hong Kong have the possibility to put their used sportswear to good use and support disadvantaged communities across the world, as we teamed up with the non-profit organization, Crossroads Foundation. Hong Kong customers can donate used garments of all brands at PUMA recycling bins, which have been set up in four selected stores. For every bag of clothing that is donated, customers receive a 20% discount voucher for their next purchase. 130 kg and 104 kg of garments were donated to the Cross Foundation in 2020 and 2021, respectively. In 2022 we delivered 264.5 kg of used garments.

In addition, our German takeback partner Soex/I:CO has received over 3,303 kg of textiles for recycling from PUMA and was able to recycle 2,860 kg of this amount, while the rest had to be incinerated with energy recovery.

SWOP SHOPS

SWOP shops are a free and local exchange where people can pass on things they no longer want, in exchange for something they need. It helps renewing a wardrobe without having to shop for something new. Products get a new chance to be worn again and it promotes sustainability in a fun way. In 2022 the third PUMA SWOP Shop was held in Hong Kong during a 5-day event to promote a "recycle and reuse" culture. It was a public event to swap clothes and accessories. More than 1,200 guests joined and more than 3,200 items were given (more than 2 items per guest). 55 boxes of garments were donated to two NGOs: Crossroads and Redress. Another SWOP Shop took place for the first time in our Headquarters in Germany for our own employees. Over 500 items were swapped and the remaining ones were donated to our employees' charity organization, Charity Cat.

SWOP Shop in Hong Kong

UNSELLABLE PRODUCTS

We are aware that given contractual restrictions, a certain number of unsold products must be occasionally discarded, for example when a license contract with a partner club expires. We have a process in place to ensure that this happens to PUMA products only in exceptional circumstances. Our production forecasts are as accurate as possible to actively prevent high product inventories and their intrinsic management costs. Unsold seasonal products will be placed through different channels until they are sold. Returned products which have not been worn will be placed on sale again. Returned products with small defects but in good condition are donated and only returned products which are very worn or severely damaged need to be discarded. No new products should be destroyed without the explicit demand of an expiring licensing partner and not as a solution for inventory management. We have created a reporting structure to identify with accuracy the quantity and reasons for such cases. In 2022, about 0.06% of the total number of articles produced in 2022 had to be discarded (globally). These products were sent to a recycling facility (where available) and in the countries where such recycling facilities do not exist, the products were shredded.

In 2022 PUMA Turkey opened an upcycling pop-up store, giving unwanted clothes another life and turning them into new garments with a new value, to tackle the problem that thousands of defective products otherwise would have gone to waste. To sell the items, the team opened a pop-up store at the Kanyon Mall in Istanbul to sell 3,000 items that were upcycled in collaboration with fashion designer, Custom Rebels. Following the positive reception of the pop-up store, a permanent shop was opened in Karaköy, one of the most popular districts in Istanbul.

Left: Pop-Up store is Kanyon Mall. Right: Karaköy store

WASTE ROADMAP AND RISK ASSESSMENT

In 2021 we developed a waste reduction roadmap and conducted a risk assessment.

The waste data published in our report not only includes material waste, they also include factory and office operation waste: cardboard, paper, plastic, light bulbs, etc. to ensure a comprehensive scope covered for the waste generated on production sites. We see plastics, chemicals, oil lubricant waste and e-waste as high risk. To prioritize these risks, we engaged with other brands and INSEE (a cement company that offers waste treatment services using co-processing technology in Vietnam, Cambodia, Bangladesh and Indonesia). To prioritize our actions, we analyzed waste data collected in 2020 and the Higg FEM waste management score of our core factories.

Below are key focus areas for the coming years. Some actions were taken in 2021 and are reported below.

- **Raise awareness:** As a part of Higg FEM training, we have provided training to the suppliers on how to improve their score in the waste section. The targets on reducing waste to landfill were communicated to the suppliers during the quarterly supplier meetings.
- **Knowledge of impact:** We conduct a life cycle assessment of our top five products, including end of life, two LCA results are reported under the Product section of this report. Some of our apparel suppliers have initiated recycling of pre-consumer cutting waste back into the spinning process. In 2022 we initiated a life cycle assessment to compare virgin cotton fabric with a 75/25 blend of virgin and recycled cotton.
- **Internal action:** We translated Higg FEM into the PUMA grading system to include our supplier environmental performance in our vendor scorecard used by our sourcing leaders. We improved waste data collected in 2021 and 2022 and will increase the data collection frequency. We require our core suppliers to set waste reduction targets. We will keep our focus on increasing the use of recycled

material in our products. In the last two years, i.e. during 2021 and 2022, we focused on better data collection on waste from supplier's facilities, and we observed that factories have started reporting comprehensive data on waste.

- **Collaboration and partnership:** We will map further waste governance in our key sourcing countries and conduct local key stakeholder mapping to explore opportunities for a collaborative approach. We participated in a project named CL2B Closed Loop 2 Balance in Vietnam. We are exploring collaboration on a recycling project. In 2022 we became a Global Fashion Agenda partner.

↗ CASE STUDY

Tong Hong Tannery is one of the largest split leather producers in the world with production bases in Vietnam, China & Indonesia. In Vietnam the factory has received a Leather Working Group (LWG) Gold Medal and been ISO 14001:2015-certified for its environmental management system. Their most recent and significant action toward sustainability is the establishment of a waste conversion plant in 2020 within the factory premises. The project when implemented at scale is expected to enable 100% recycling of split leather waste, which accounts for 60% of raw material input which is otherwise being end up totally in landfill. While 20% of this waste will be sent out for recycled split leather/suede products, the conversion plant is expected to recycle 80% of waste into gelatin. The latter then will be sent to another party as input material for adhesive production.

PRODUCTS

Target description:

- 90% of PUMA Apparel and Accessories products contain >50% more sustainable materials
- 90% of our Footwear contains at least one more sustainable component
- Increase use of recycled polyester (Apparel and Accessories) to 75% by 2025

Relates to United Nations Sustainable Development Goal 12

KPIs:

- Percentage of Apparel and Accessories with 50% more sustainable material
- Percentage of Footwear with at least one more sustainable component
- Percentage of recycled polyester used in Apparel and Accessories

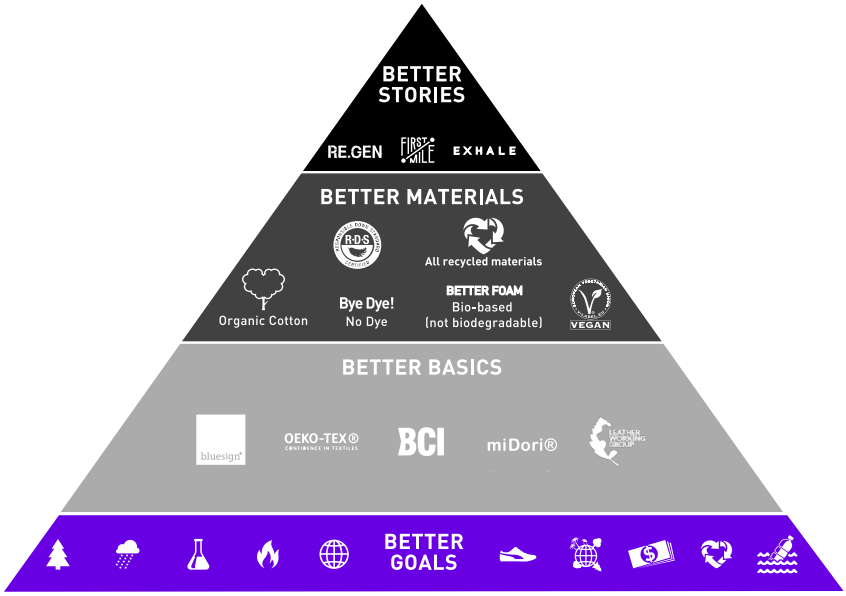
The PUMA Environmental Profit and Loss Account (EP&L) attributes more than 50% of our environmental impact to material and raw material production. Against this background, we have decided to prioritize the large-scale use of more sustainable raw materials. In our 10FOR25 strategy, we have set 100% targets for more sustainable raw materials such as cotton, polyester, leather and cardboard.

In addition to measuring the use of more sustainable materials, we also determine the percentage of more sustainable products, that is, products made with a significant proportion of more sustainable materials. As defined in our PUMA Sustainability Index, or S-Index, more sustainable apparel or accessories products contain at least 50% more sustainable materials by weight. For footwear, we currently measure sustainability by including one or more main components* made from more sustainable materials.

During 2021 we developed and rolled out an E-Learning toolkit on more sustainable products and our PUMA S-Index for the PUMA family. The training allows designers, developers and product managers to understand which materials qualify as more sustainable, how the PUMA S-Index is calculated, and which certifications need to be in place to externally communicate on a product level. The training was completed by over 1,300 PUMA colleagues in the last two years.

* Main component in the upper includes visible upper and its components, linings, sockliner and strobel as the only non-visible component. They can be made of textile, leather, synthetic (PU) or TPU. It excludes trims such us eyelets, laces, counters, decorations, etc. Main component in the bottom includes outsoles, midsoles and insoles. They can be made of Rubber, PU, TPU, EVA. It excludes trims and decorations.

↗ G.31 PUMA FOREVER BETTER PYRAMID



↗ T.30 MORE SUSTAINABLE PRODUCTS*

Product Category	Styles 2022	Volume 2022	Target 2025
Apparel with at least 50% more sustainable material	67%	79%	90%
Accessories with at least 50% more sustainable material	31%	46%	90%
Footwear with at least one more sustainable component	48%	61%	90%
Total	58%	68%	90%
Number of vegan styles	170 styles		

* Excluding products from stichd; for further details on the reporting scope please refer to Scope of the Report section.

Throughout 2022 we expanded our range of collections made from more sustainable materials. Highlights include RE:COLLECTION, a line of products from Sportstyle, Run & Train, Accessories and Motorsport, which are made from recycled cotton and recycled polyester. Depending on the style, RE:COLLECTION pieces contain between 20% and 100% recycled cotton and recycled polyester as well as cutting waste used to reinforce the uppers of RE:COLLECTION's lifestyle footwear. Other highlights include Downtown, a collection where we scale the use of recycled cotton, as well as a continuation of our PUMA x FIRST MILE collection, which includes performance products from Run & Train and high-performance football boots made from recycled polyester.

In the RE:COLLECTION sustainability takes centre stage with the use of recycled materials

PRODUCT LIFE CYCLE ASSESSMENT

At PUMA sustainability is central to all business strategies. As we want to make our products more sustainable, we continued the Life Cycle Assessment (LCA) studies of our product portfolios in 2022.

The outcomes of an LCA act as a quantifiable measure of our efforts towards embedding sustainability in our products by exploring ways to make our product value chains safer, cleaner and more sustainable. It also encourages innovation in our products and processes to meet increasing social and business expectations regarding sustainability and transparency.

LCA OF TWO PRODUCTS

This year we completed a screening LCA study for two of our top products, namely the Liga Jersey Core, an apparel T-Shirt and the Phase Backpack, an accessory product to map the environmental footprint of these products across their entire value chains (cradle to grave) as per ISO 14040 and 14044 standards. This assessment has helped us understand the hotspots in the value chain. It will also help to identify sustainable options in various phases, which can be further explored to improve the product's environmental footprint.

The products studied are:

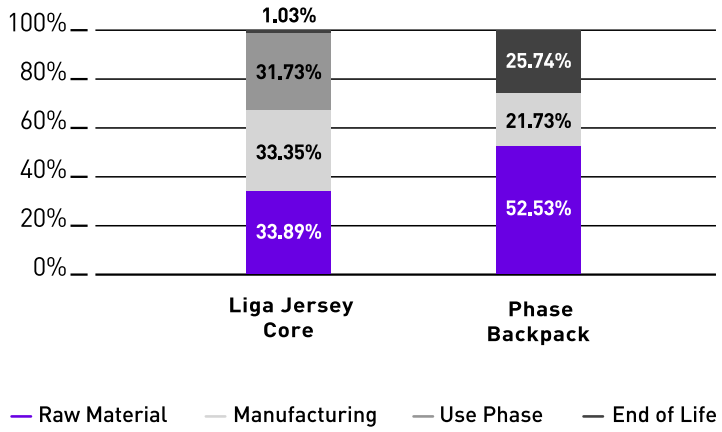
T Shirt - Liga Jersey Core, net weight 0.136 kg

Backpack - Phase Backpack, net weight 0.284 kg

Sphera, a leading consulting organization in the field of LCA, has conducted LCA studies to consider all elements of the life cycle, from the overall manufacturing including supply of material and energy carriers to the end of life, when analyzing the environmental performance of the products.

Results of the analysis can be summarized as follows:

↗ G.32 GLOBAL WARMING POTENTIAL



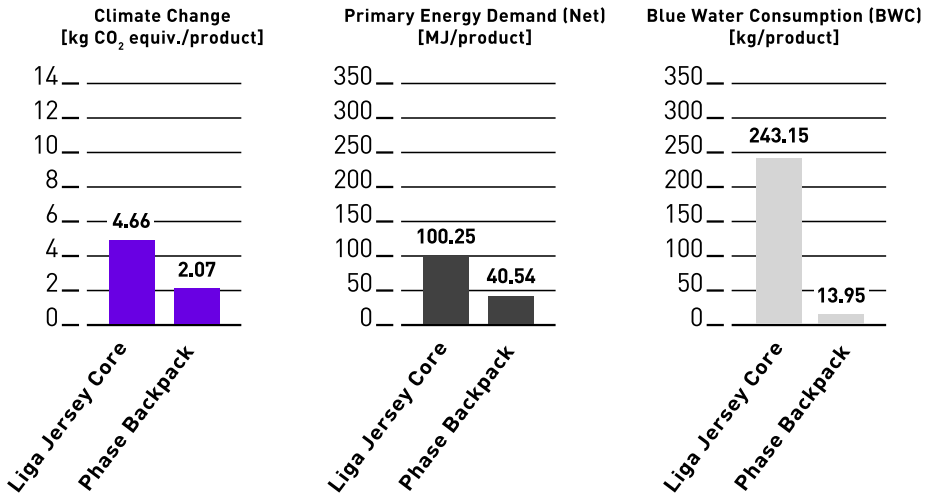
For the Liga Jersey Core shirt, the global warming potential (GWP) in kg CO_2e has been influenced by raw materials which include polyester fabric, chemicals etc. (33.89%), manufacturing energy (33.35%) and use phase (31.73%).

For the Phase Backpack, the global warming potential (GWP in kg CO_2e) has been influenced by materials which include body material, parts and component (52.53%), manufacturing energy (21.73%), and end of life (25.74%). Polyester and polyurethane are major contributing materials.

Backpacks usually don't require extensive cleaning during their lifetime, and hence the impact of the use phase is negligible. Therefore, the GHG emissions of the use phase from the backpack is not considered. However, in case of apparel products, the use phase contributes to about ~32% GWP impact, owing to energy consumption associated with washing and drying.

The end-of-life phase includes reuse, recycling, incineration and landfilling based on European scenarios, which contributes to GWP impacts of about ~1% for the T-shirt and ~26% for the backpack.

↗ G.33 PRODUCT ENVIRONMENTAL FOOTPRINT



* Primary energy is the energy that is harvested directly from natural resources: coal, oil, natural gas and uranium.
** Blue water is water that has been sourced from surface or groundwater resources and is either evaporated or incorporated into a product.

For the t-shirt the total global warming potential is 4.66 kg CO_2e. The total primary energy demand is 100.25 MJ with major contributions from the polyester fabric (43.37%), fabric manufacturing (11.75%) and use phase (30.98%). The total blue water consumption is 243.15 kg with major contributions from use phase (79.22%), and the remaining contribution from materials (mainly polyester), chemicals, electricity and fuel.

For the backpack the total global warming potential is 2.07 kg CO_2e. The total primary energy demand is 40.54 MJ with major contributions from materials, which include body material (50.36%), parts and component (26.68%) and manufacturing energy (18.03%). The total blue water consumption is 13.95 kg with major contributions from polyester (25%), natural rubber (11%) and manufacturing energy (44%).

The supply chain for apparel and backpack products is quite complex and vast, which involves multiple stages such as raw material extraction, processing, finishing, assembly, distribution, use and end of life. The LCA study is used as a lens to understand the value chain environmental impacts of our products.

PUMA now intends to use the outcomes of the study to increase internal awareness and improve the product environmental footprint by increasing the use of more sustainable materials (recycled or biosynthetic), improving resource efficiency, optimizing energy use, promoting renewable energy in the value chain, and enhancing the circularity of our products.

COMPARATIVE LCA: RE:SUEDE VS. CONVENTIONAL SUEDE

In 2022 PUMA engaged Sphera, Inc. to conduct a comparative Life Cycle Assessment (LCA) of the RE:SUEDE sneaker and the standard SUEDE model as per ISO 14040 and ISO 14044 requirements using the "cradle to grave" approach. The main objective of this study is to quantify the environmental impacts associated with production of the RE:SUEDE and the SUEDE using the LCA approach. A third-party critical review panel was commissioned to peer review the work and ensure compliance with the mentioned standards.

The products studied are:

Conventional SUEDE product, net weight 0.831 kg

RE:SUEDE sneaker, net weight 0.763 kg

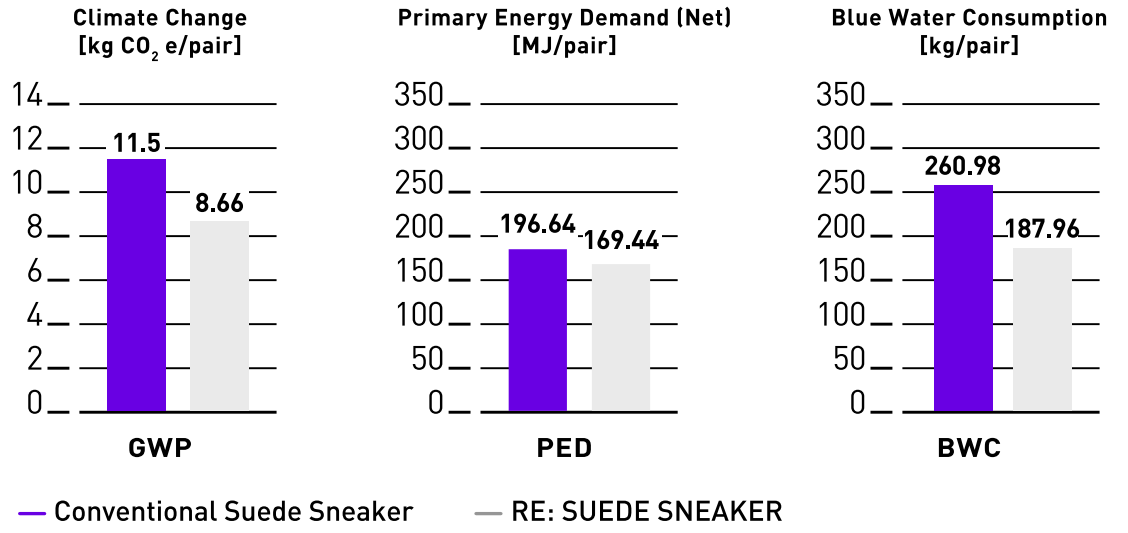
The scope of this study includes raw material sourcing and extraction, transport of raw materials to the sneaker manufacturing location, manufacturing of the sneaker product, product distribution and end of life (EoL) of product and packaging.

The LCA study indicates that the RE:SUEDE sneaker has a smaller carbon footprint (24.7% lower, excluding biogenic carbon) as compared to the conventional SUEDE sneaker. Although the end-of-life greenhouse gas emissions of RE:SUEDE are lower than conventional SUEDE because of higher biodegradability, they are not as significant as the GHG reduction due to the selection of raw materials, such as zeolite tanned suede leather, hemp fibers, biodegradable TPE and organic cotton.

The LCA Study also indicates that the water consumption per pair of RE:SUEDE is 28% lower as compared to conventional suede. Water consumption is lowered mainly using zeolite tanned suede leather.

Sneaker products usually don't require extensive cleaning during their lifetime, and hence the impact of the use phase is negligible. Therefore, the GHG emissions of the use phase for both sneakers are not considered.

↗ G.34 ENVIRONMENTAL FOOTPRINT CONVENTIONAL SUEDE AND RE:SUEDE



* Primary energy is the energy that is harvested directly from natural resources: coal, oil, natural gas and uranium.
** Blue water is water that has been sourced from surface or groundwater resources and is either evaporated or incorporated into a product.

End of life phase includes reuse, recycling, incineration and landfilling based on European scenarios, which contributes to about 0.23% to 0.78% in GWP impacts.

For the conventional SUEDE, the total global warming potential is 11.5 kg CO_2e. The total primary energy demand is 196.64 MJ with major contributions from materials (suede 41.25% and synthetic rubber 36.21%), and electricity (20%). The total blue water consumption is 260.98 kg with major contributions from materials (suede 47.56% and cotton 28.63%) and electricity (13%).

For RE:SUEDE the total global warming potential is 8.66 kg CO_2e. The total primary energy demand is 169.44 MJ with major contributions from materials (mainly zeolite tanned suede 33.73% and biodegradable TPE 29.16%), electricity (24%) and packaging (10%). The total blue water consumption is 187.96 kg with major contributions from materials (mainly zeolite tanned suede 58.26%, cotton 11.69% and electricity 18%).

PUMA now intends to use the outcomes of the study to communicate to our consumers on the environmental benefits of more sustainable products like RE:SUEDE and the development of variants of RE:SUEDE and similar products in the future. In 2023 we plan to conduct a follow up LCA with new variants of RE:SUEDE.

MATERIAL ORIGIN

Mapping and assessing risk and impact practices in the lower tiers of the supply chain helps us identify opportunities for improvement and be better integrated at a strategic level. We sourced around 37,000 tons of cotton in 2022. In order to reach our 100% targets for more sustainable cotton, we have required our suppliers to source only cotton from farms which are licensed or certified as having good farming and human rights standards, or recycled cotton. 99% of the cotton comes from Brazil, Australia, USA, Bangladesh and Ivory Coast.

In parallel, we work on improving the traceability of the leather we use through recording via traceability score of our leather manufacturers certified by the Leather Working Group. We sourced approximately 3,900 tons of bovine leather in 2022.The leather used in PUMA footwear comes from the USA (44%), Argentina (24.4%), China (13.2%) Australia (7.4%), France (4.4%), Uruguay (2.5%), Paraguay (1.9%), Italy (1.5%), Columbia (0.7%) and Brazil (0.3%).

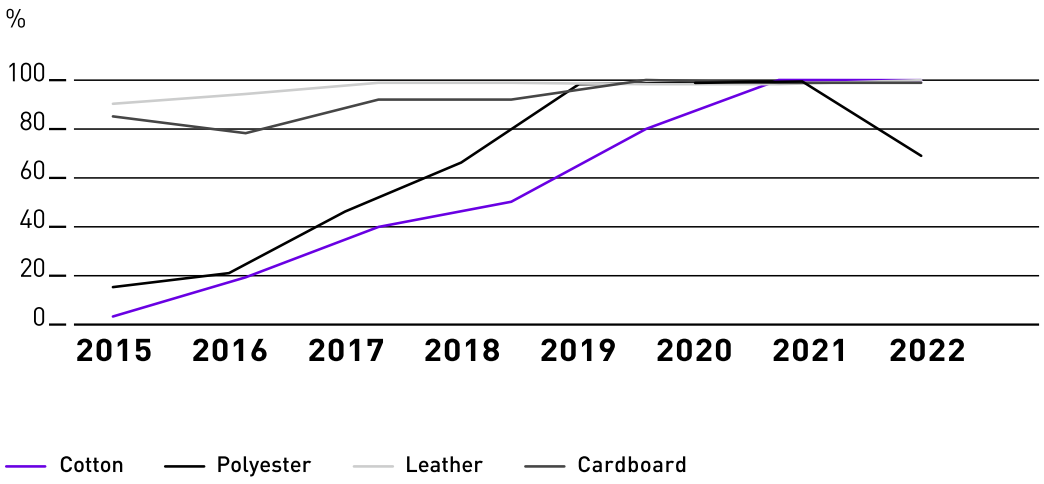
We monitor our LWG (Leather Working Group) medal-rated tanneries' traceability performance. Most suede tanneries work with agents and intermediaries besides direct tanneries to guarantee a stable sourcing supply. Suede is a byproduct of the full grain leather business. This creates a challenge to have full traceability. This explains why our suede leather LWG tanneries have a lower traceability performance than full grain LWG tanneries. We nevertheless aim to increase all our LWG medal-rated tanneries' traceability performance over time.

"Leather Working Group is encouraged by the progress that PUMA has made to reach their more sustainable materials targets and to achieve the milestone of sourcing all their leather from LWG certified sites. PUMA is an active and valued member of Leather Working Group with their participation in projects focused on developing traceability within the leather supply chain contributing to progress for the industry as a whole."

VANESSA BRAIN
Senior Traceability Manager, Leather Working Group

MATERIAL CONSUMPTION DATA

↗ G.35 MORE SUSTAINABLE MATERIALS DEVELOPMENT*



* Cotton & polyester including apparel and accessories material (including trims)

As in previous years, a significant percentage of our more sustainable materials can be attributed to more sustainable cotton either from the Better Cotton Initiative or recycled cotton, to more sustainable polyester either bluesign® or OEKO-TEX®-certified or recycled polyester, and more sustainable leather sourced from

Leather Working Group (LWG)-certified tanneries. In addition, we only use down feathers certified by the Responsible Down Standard, and 97% of our viscose is made by green shirt rated viscose suppliers with a proven track record on sustainability through the Hot button report from the NGO Canopy. Therefore, more than 79% of our apparel, 46% of accessories and 61% of footwear products are already classified as more sustainable products, in line with the definition in our PUMA Sustainability Index.

Coverage and calculation are more complex for footwear because all our shoes are made from several components. As main materials we use polyester, polyurethane, rubber, leather and nylon. In line with our earlier targets, we have achieved 100% coverage of leather sourced from LWG-certified tanneries.

In 2022, 99.8% of the cotton used came from a more sustainable source as well as 70% of our polyester.

We hardly used wool throughout 2022 (415 kg), thus we have not yet initiated Responsible Wool Standards, but we still aim to reach 100% certified wool in 2025.

↗ T.31 DEVELOPMENT OF MORE SUSTAINABLE MATERIAL USAGE*

	Apparel	Accessories	Footwear	Total
Cotton				
Conventional	0.02%	0.2%	93.7%	0.21%
Recycled	3.6%		2.4%	3.6%
Organic	0%	0%	0.1%	0.00%
Better Cotton	96.4%	99.8%	3%	96.2%
Polyester				
Conventional	8.7%	39.4%	59.4%	29.5%
Recycled	55.3%	26.7%	40.6%	47.6%
Bluesign	13.6%			7.5%
Oekotex	21.4%	33.9%		14.8%
Manmade Cellulosics				
Green Shirt-rated fiber producers**	72.9%			72.9%
Ecovero	24.3%			24.3%
Modal	1.8%			1.8%
Lyocell	1%			1%
Polyamide (nylon)				
Conventional	69.1%	100%	100%	86%
Bluesign	29.7%			13.4%
Recycled	1.1%			0.5%

	Apparel	Accessories	Footwear	Total
Leather				
LWG medal-rated tannery			100%	100%
Rubber				
Synthetic	12.9%		92.5%	92.5%
Natural	87.1%		5.5%	5.5%
Recycled			2%	2%
PU				
Conventional		100%	99.6%	99.6%
Recycled			0.2%	0.2%
Water-based			0.1%	0.1%
Down				
Certified RDS	100%			100%

* Figures include trims and exclude licensee production as well as production from stichd. For further details on the reporting scope, please refer to the Scope of the Report section.

** Green Shirt-rated fiber producers, as set by the annual Canopy Hot Button report, encourage existing fiber suppliers to commit to CanopyStyle and a Canopy Audit.

↗ T.32 MORE SUSTAINABLE MATERIALS BY PRODUCT DIVISION*

	2022	2025 target
Apparel		
More sustainable cotton	100%	100%
More sustainable polyester	90.3%	100%
More sustainable viscose	97.3%	100%
Accessories		
More sustainable cotton	99.8%	100%
More sustainable polyester	60.6%	100%
Footwear		
More sustainable cotton	6%	100%
More sustainable polyester	41%	100%
More sustainable leather	100%	100%
More sustainable PU	0.4%	NA
L&P paper/cardboard products**		
Recycled and/or FSC-certified	99.4%	100%

* Figures include trims and exclude licensee production as well as production from stichd. For further details on the reporting scope, please refer to the Scope of the Report section.
** Including outer cardboard boxes, which were excluded in previous years.

↗ T.33 NUMBER OF FACTORIES WITH CERTIFICATION

Number of factories certified	GRS/RCS	GOTS	OCS	RDS	LWG
Apparel & accessories T1 & T2	107	43	15	3	NA
Footwear T1 & T2	38			NA	NA
Leather tanneries					29 Gold 8 Silver 1 Bronze

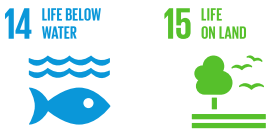
GRS: Global Recycling Standard; RCS: Recycled Content Standard; OCS: Organic Content Standard; GOTS: Global Organic Content Standard; RDS: Responsible Down Standard; LWG: Leather Working Group.

BIODIVERSITY

Target description:

- Support the industry in setting a science-based target for biodiversity
- 100% cotton, leather and down procured from certified sources (shared target)
- Zero use of exotic skins and hides

Relates to United Nations Sustainable Development Goals 14 and 15



In 2022 the world's biodiversity experts and politicians met in Montreal for the biodiversity COP 15 and agreed to conserve 30% of the world's land and oceans by 2030.

Consequently, we have dedicated one of our 10FOR25 sustainability targets to biodiversity. While most of PUMA's biodiversity impact is routed in the supply chain, we include biodiversity checks in our annual environmental data collection for our own offices, stores and warehouses around the globe.

These checks confirm that none of our PUMA sites are located within a protected area. We have identified one site in South Africa, as being located next to a protected area, which holds a rare species of the plant, Renosterveld Finbos. This site is an office location, and fenced off from the protected area, so that any negative impact on these plants can be excluded.

There are green roofs on our German headquarters, as well as our (outsourced) German central logistics center, which offer additional habitats for insects as well as wildflower meadows and beehives to allow for an active bee population at both sites.

↗ T.34 SUSTAINABLY SOURCED NATURAL MATERIALS*

Sub-targets	2022*	2021	Target 2025
Science-Based Target (SBT)	Fund Biodiversity Landscape Report	Joined Fashion Pact activities on biodiversity	SBT set
Cotton (BCI** and/or recycled)	99.8%	99%	100%
Leather (LWG-certified tanneries)	100%	99.9%	100%
Down (RDS-certified)	100%	100%	100%
Sustainably sourced viscose / MMCF	97%	38%	100%
Cardboard and paper (FSC and/or recycled)	99.4%***	99% (product packaging supply chain)	100%
Number of vegan styles	170	29	NA

* Including trims and excluding licensee production
** Better Cotton Initiative (BCI) principle: Biodiversity and Land Use is one of the seven Better Cotton Principles and Criteria. Management practices address identifying and mapping biodiversity resources, identifying and restoring degraded areas, enhancing populations of beneficial insects, ensuring crop rotation and protecting riparian areas.
*** Including outer cardboard

Many species, including plants, animals, bacteria and fungi are being threatened with extinction due to human activities such as deforestation, putting the earth's magnificent biodiversity at risk. Apparel supply chains are directly linked to soil degradation, conversion of natural ecosystems and waterway pollution.

Two thirds of apparel shoppers say that limiting the impact on climate change is now more important to them than before COVID-19.*

PUMA is a signatory of the Fashion Pact, a global initiative of companies in the fashion and textile industry (ready-to-wear, sport, lifestyle and luxury), all committed to a common core of key environmental goals in three areas mitigating global warming, restoring biodiversity and protecting the oceans.

Biodiversity loss and climate change are interdependent and mutually reinforcing. For example, protecting forests could help reduce greenhouse gas emissions. In turn, the rise of global temperatures increases the risk of species extinction. In 2019 PUMA published its science-based emissions target (SBT) with the SBT Coalition and joined the Fashion Pact. In 2022 this science-based emissions target was updated and aligned with a 1.5-degree climate pathway.

Please see the Climate section of this report for climate action and progress.

Most of the negative impact on biodiversity comes from three stages in the value chain – raw material production, material preparation and processing, and end of life.

To mitigate the risk of biodiversity loss due to the production process, we address environmental pollution risk through our targets and suppliers' program on climate, chemicals, water and air.

In 2021 we developed roadmaps for water and waste, which can be found in the Water and Air, Plastics and the Oceans sections of this report. In 2022 we developed a biodiversity roadmap using the Fashion Pact Biodiversity Strategy Tool Navigator that is in line with SBTN recommendations.

* Biodiversity: The next frontier in sustainable fashion – McKinsey.

BIODIVERSITY ROADMAP

Scope: Cotton, Leather, Rubber, Paper, MMCF, Synthetics, Wool

Below are key focus areas for the coming years. Some actions were taken in 2022 and are reported in this report.

- **Raise awareness:** We see the need to increase internal awareness and thus will be developing e-learning on biodiversity for our staff. We also see the need to increase the awareness of our consumers, either by reporting decreases in biodiversity loss in our Annual Report or exploring marketing campaigns to engage customers' awareness. We aim to keep a transparent disclosure to keep a strong relationship with stakeholders while informing on biodiversity actions. In 2022, PUMA sponsored a report as an opportunity to show collaboration and knowledge-sharing in biodiversity. Together with Textile Exchange, Conservation International and the Fashion Pact, the Biodiversity Landscape Analysis report aims to provide a common reference point on the topic of biodiversity in the textile industry, and to offer concrete pathways for brands and retailers to deepen their engagement. The report intends to support companies of all sizes and maturities in beginning or continuing their biodiversity journey and will be published in 2023.
- **Knowledge of impact:** We will explore traceability tools and conduct impact assessments, starting with leather and rubber in 2023. We collect material and packaging data consumption on an annual basis for the country of origin. For example, leather used in PUMA products originates to a small percentage from South America, where deforestation is occurring at a rapid pace. Our EP&L identifies our environmental impact distribution along our value chain, for example, land use change per country, material type and tier level. The estimation of the potential financial impact on land use was approximately € 150 million, from our 2022 EP&L.
- **Internal action:** We will define a KPI to be included in a supplier scorecard (environmental & chemical) and set biodiversity targets as well as traceability targets, starting with leather. We set goals to reach 100% cotton, leather, viscose, paper packaging and down procured from certified sources in 2025. Both cotton farming and cattle ranching require extensive land use and have been cited to reduce biodiversity, 99.8% of cotton used in PUMA products are BCI or recycled cotton. 100% of the leather used in our footwear is sourced from LWG medal rated tanneries. Leather traceability is a first step towards reducing deforestation. We monitor our LWG (Leather Working Group) medal-rated tanneries' traceability performance and have joined the LWG traceability working group. We partner with the NGO, Canopy, a Canadian non-profit organization with the mission to protect the world's forests, species and climate, and to help advance indigenous communities' rights. We aim to ensure our sourcing of man-made cellulosic materials (such as viscose) as well as paper and carboard, does not contribute to deforestation. 99.4% of our paper packaging is either recycled and/or FSC-certified. We commit to sourcing 100% of our viscose from suppliers committed to reducing the risk of sourcing from ancient and endangered forests. In 2022, 97% of viscose was sourced from Green Shirt-rated suppliers. We hardly used wool throughout 2022 (less than one ton), thus we have not yet initiated Responsible Wool Standards, but we still aim to reach 100% certified responsible wool in 2025.
- **Collaboration and partnership:** PUMA joined the Fashion Pact, a global coalition of companies in the fashion and textile industry that is committed to stopping global warming, restoring biodiversity and protecting the oceans. PUMA joined the Fashion Charter, committed to source 100% of priority materials as preferred materials by 2030 (material for which no natural ecosystems are converted or deforested). In 2021 we engaged with Canopy, who helped us develop our policy on forest protection. We also engaged with Canopy's initiatives: CanopyStyle and Pack4good. Through these initiatives we started investigating the next generation of raw materials with a focus on biobased materials, such as wheat straw, as a partial substitute for paper in our shopping paper bags.

In 2021 we published the PUMA biodiversity policy and animal welfare policy, to create a framework for our approach related to biodiversity and animal welfare. These policies are available for download on our website.

As part of the Fashion Pact, we commit to support the development of science-based targets on biodiversity.

"We congratulate PUMA for their active engagement in providing direction and guidance for the fashion industry to act for the preservation of biodiversity through the sponsoring of the Biodiversity Landscape Analysis. We strongly acknowledge their courageous leadership in moving ahead and developing a biodiversity roadmap in line with science-based target for nature recommendations. These are the critical first steps to understanding our impact as an industry and transforming companies' relationship with nature."

EVA VON ALVENSLEBEN
Executive Director and Secretary General, The Fashion Pact

To help the protection of endangered forests and species, PUMA commits not to use any wood or wood-derived fabrics made from ancient and endangered forests.

- PUMA engages as a supporting partner of the CanopyStyle initiative, aiming to source our viscose only from Green Shirt-rated suppliers.
- We commit to sourcing the leather used in PUMA products only from manufacturers who implement industry good practice standards of environmental management and traceability, such as the leather working group.
- We commit to sourcing all our paper and paper-based packaging from recycled sources and/or Forest Stewardship Council-certified sources. PUMA is engaging as a partner of Canopy's Pack4Good initiative to collectively reduce any risk of sourcing from ancient and endangered forests by 2022 and promoting next generation solutions.

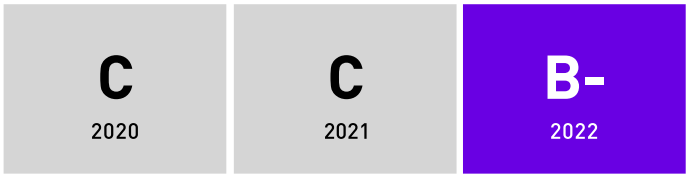
At PUMA we care for the welfare of animals. We do not accept the use of animal products which originate from animals which have been treated inhumanely. Therefore, we aim to implement high welfare and traceability standards and have published an Animal Welfare Policy. PUMA consults animal protection organizations on a regular basis to review our policy and actions. As a concrete action to support animal welfare, we will phase out the use of kangaroo leather during 2023.

"PUMA's willingness to do better for animals is shown through their continuous steps forward to improve their animal protection policies, including most recently to end their use of Kangaroo skin and joining the Fur Free Retailer Program. PUMA's progress is admirable, and we commend their team for their dedication to sustaining this positive journey."

ANNE WESSENDORF
Textile Campaigner and Corporate Manager, FOUR PAWS

PUMA CDP FOREST SCORE

↗ G.36 2022 PUMA CDP FOREST SCORE



PUMA's CDP Forestry score improved from C in 2021 to B- in 2022. PUMA's rating is better than the average performance of the sector (textile and fabric goods) with an average rating of C. The overall global average rating stands at C.

ENVIRONMENTAL KEY PERFORMANCE DATA

During 2021 we revisited the methodology of our PUMA Environmental Profit and Loss Account, or EP&L.

The methodology, which was developed in 2011 by PWC and Truecost, and later further refined by Kering with the help of PWC, mainly relies on material input and spend data.

During our review, we realized that many savings made by our Tier 1 and Tier 2 suppliers had not been captured by the EP&L methodology, and for some of our major materials used, such as Better Cotton, no specific EP&L emission factors have been developed.

Therefore, we decided to pause the publication of our EP&L for 2021 and rework the methodology to more accurately reflect our environmental performance in the future.

This work has now progressed, so that we are sharing our EP&L results in accordance with the new methodology for 2020, 2021 and 2022.

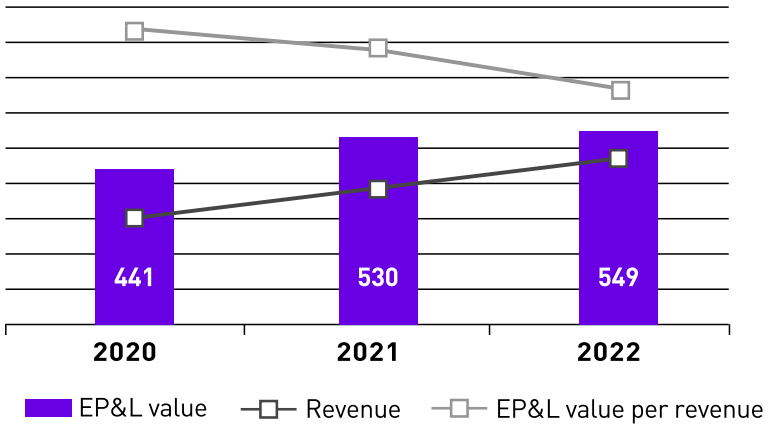
However, we are still in the process of fully aligning our EP&L methodology for Tiers 3 and 4 with internal and external standards. As a result, the table below differs from our Scope 3 emission calculation in the Climate section and also results in a high water value for Tier 3 due to some wet processing for leather and polyester being attributed to Tier 3.

We will further work on the alignment of methodologies to strengthen the EP&L as a valuable risk assessment and information tool.

↗ G.37 EP&L RESULTS 2022

			Tier 0 Own operations	Tier 1 Product manufacturing	Tier 2 Component manufacturing	Tier 3 Raw material processing	Tier 4 Raw material production
Total EP&L Value 2022: € 549 million	Air pollution	8%					
	GHG emission	28%					
	Land use	26%					
	Waste	2%					
	Water use	21%					
	Water pollution	14%					
	Total	100%	2%	6%	8%	28%	55%

↗ G.38 EP&L TREND 2020 – 2022



As in previous years, we are also reporting the underlying datasets as Environmental Key Performance Indicators in this chapter.

↗ T.35 E-KPIS - PAPER

Paper[1-4]	2022	2021	2020	2019	2018	2017	% change 2021/2022	% change 2017/2022
Paper and cardboard consumption PUMA (tons)*	**5,021**	**4,152**	**2,638**	**2,281**	**2,292**	**2,756**	**21%**	**82%**
Certified or recycled paper and cardboard consumption PUMA (tons)	4,393	3,306	1,848	1,818	1,120	2,025	33%	117%
Percentage of certified or recycled paper consumption (%)	87%	80%	70%	80%	49%	74%		
Paper and cardboard consumption from PUMA production (shoe boxes, hangtags) (tons)	**30,656**	**19,670****	**18,538**	**14,863**	**13,607**	**14,129**	**55.8%**	**116.8%**
Percentage of certified or recycled paper and cardboard consumption from PUMA production (%)	99%	88%**	99%	100%	98%	n/a		

* Including paper bags, office paper and cardboard consumption
** Including outer cardboard boxes
1 PUMA figures include PUMA owned or operated offices, warehouses and stores. Includes our own production sites in Argentina. All other production is outsourced to independent supplier factories, some warehouse operations are outsourced to independent logistics providers. Franchised stores are excluded.
2 PUMA production figures include Core T1 supplier factories, Apparel, Footwear & Accessories (62 factories) and Core T2 supplier factories, Leather, PU and Textiles (43 factories).
3 Data includes extrapolations or estimates where no real data could be provided.
4 Methodological changes over the last three years have influenced results.

↗ T.36 E-KPIS PUMA – ENERGY

Energy (MWh)[1-3]	2022	2021	2020	2019	2018	2017	% change 2021/2022	% change 2017/2022
Total energy from electricity	**75,269**	**67,866**	**61,365**	**61,499**	**66,512**	**64,119**	**11%**	**18%**
Non-renewable electricity consumption	0	0	0	12,683	29,766	52,508	-	-100%
Electricity consumption from renewable sources (green tariffs and on-site photovoltaics)	15,697	13,749	10,839	11,547	11,695	11,611	14%	35%
Percentage of renewable electricity consumption (excluding EACs)	21%	20%	18%	19%	18%	18%		
Electricity consumption guaranteed with EACs	59,572	54,117	50,526	37,269	25,051	0	10%	n/a
Percentage of renewable electricity consumption (including EACs)	100%	100%	100%	79%	55%	18%		
Total energy from non-renewable fuels (oil, natural gas, etc.)	7,541	10,006	10,739	10,975	11,724	14,430	-25%	-48%
Total energy from district heating	5,483	10,795	6,247	7,915	5,734	5,155	-49%	6%
Total energy consumption (PUMA own entities)	**88,293**	**88,666**	**78,350**	**80,389**	**83,970**	**83,704**	**0%**	**5%**

1 Figures include PUMA owned or operated offices, warehouses and stores. Includes our own production sites in Argentina. All other production is outsourced to independent supplier factories, some warehouse operations are outsourced to independent logistics providers. Franchised stores are excluded.
2 Data includes extrapolations or estimates where no real data could be provided.
3 Methodological changes over the last three years have influenced results.

↗ T.37 E-KPIS PUMA TIER 1 & TIER 2 PRODUCTION - ENERGY

Energy (MWh)[1]	2022	2021	2020	2019	2018	2017	% change 2020/2022
PUMA production (Tier 1)[2]							
Non-renewable energy consumption from PUMA production (Tier 1)	292,459	331,199	221,641	246,160	195,866	194,881	34.6%
Renewable energy consumption from PUMA production (Tier 1)	37,322	17,763	3,013			294	1,144%
Percentage of renewable energy consumption from PUMA production- including I-REC	11.3%	5%	1%			0.2%	731.1%
PUMA production (core Tier 2)[3]							
Non-renewable energy consumption from PUMA production (core Tier 2)	744,940	795,673	607,310			586,986	22.7%
Renewable energy consumption from PUMA production (core Tier 2)	90,333	39,317	3,393			524	2,562.7%
Percentage of renewable energy consumption from PUMA production- including I-REC	10.8%	5%	0.6%			0.1%	1,846.8%

1 Data includes extrapolations or estimations where no real data could be provided.
2 Core T1 supplier factories, Apparel, Footwear & Accessories (62 factories)
3 Core T2 supplier factories, Leather, PU and Textiles (43 factories).

In line with our 10FOR25 target to achieve 25% share renewable energy for core Tier 1 and Tier 2 suppliers, we have set a goal of 10% renewable energy share for 2022. The share of renewable energy consumption by Tier 1 suppliers increased from 5% in 2021 to 11.3% in 2022. This is mainly achieved due to participation of the core suppliers in renewable energy projects, followed by installation of rooftop solar facilities and purchase of energy attribute certificates by the core Tier 1 suppliers. Although the share of renewable energy for Core Tier 2 suppliers has marginally increased in 2022, PUMA has purchased energy attribute certificates on behalf of its Tier 2 suppliers located in Vietnam to achieve the renewable energy target of 10%.

↗ T.38 A E-KPIS PUMA – WASTE AND WATER

Waste and Water[1-3]	2022	2021	2020	2019	2018	2017	% change 2021/2022	% change 2017/2022
Total waste (tons)	**4,991**	**5,215**	**3,949***	**3,644***	**4,877**	**5,293**	**-4%**	**-6%**
Recycled waste (tons)	3,007	2,220	1,436*	1,603*	2,282	3,419	35%	-12%
Recycled waste (%)	60%	43%	36%	44%	47%	65%		
Total water (m³)	**147,227**	**116,829**	**96,569**	**89,676**	**95,291**	**106,397**	**26%**	**38%**
Public network consumption (m³)	143,332	116,829	96,569	89,676	95,291	106,397	23%	35%
Rainwater consumption (m³)	3,895							

* Waste data for PUMA's own entities in 2019 and 2020 recalculated due to underreporting in these years
1 Figures include PUMA owned or operated offices, warehouses and stores. Includes own production sites in Argentina. All other production is outsourced to independent supplier factories, some warehouse operations are outsourced to independent logistics providers. Franchised stores are excluded
2 Data includes extrapolations or estimations where no real data could be provided
3 Methodological changes over the last three years have influenced results

↗ T.38 B E-KPIS PUMA CORE TIER 1 & TIER 2 PRODUCTION – WASTE AND WATER

Waste and water[1]	2022	2021	2020	2019	2018	2017	% change 2020/2022
PUMA production (Tier 1)[2]							
Waste from PUMA production (Tier 1 suppliers, tons)	34,642	33,806	23,498	24,205	16,682	14,686	47.4%
Percentage production waste to landfills (Tier 1)	12.9%	10%	9%				36.3%
Water from PUMA production Tier 1 suppliers (k m³)	2,551	2,706	2,332	2,572	2,030	2,149	9.4%
PUMA production (core Tier 2)[3]							
Waste from PUMA production (core Tier 2 suppliers, tons)	19,025	8,689	5,968			17,138	218.8%
Percentage production waste to landfills (core Tier 2)	4.0%	9%	18%				-77.3%
Water from PUMA production (core Tier 2) (k m³)	5,956	5,769	4,796			280	24.2%

1 Data includes extrapolations or estimations where no real data could be provided.
2 Includes core T1 supplier factories, Apparel, Footwear & Accessories (62 factories).
3 Includes core T2 supplier factories, Leather, PU and Textiles (43 factories).

Though we did not have any goals for absolute reduction in waste generation and water consumption from our core suppliers, we continue to track them. We can see that there is a 47% increase in production waste for Tier 1 suppliers and 218% from Tier 2 suppliers from 2020. This is mainly due to the improvement in waste data captured by the suppliers. Certain waste such as residual ash from coal and biomass boilers that were not captured by the Tier 2 suppliers earlier are now included. We also added nine new core factories for textile, which have not yet been engaged in cleaner production programs. At the same time, the production volume has increased by 33% for textiles and 62% for synthetic leather.

Similarly, in 2022 absolute water consumption marginally increased by 9% for Tier 1 suppliers and the same increased by 24% for Tier 2 suppliers as compared to the baseline of 2020. This is mainly due to an increase in production volume. If we compare the KPIs, water per pair of shoes has been reduced by 36% and for apparel it has been reduced by 17% per piece of garment. Therefore, we achieved our goal of a 6% reduction in the water KPI from 2020. Similarly, for leather the water KPI has been reduced by 17% and for textile, it has been reduced by 4.7%. For textile, we are marginally short of achieving our 2022 goal and hence we are going to focus more on water reduction from textile factories in 2023 and in the coming years. Water recycling plants implemented in 2022 by some of the large textile suppliers will have an impact from 2023 onwards.

PRODUCT-RELATED E-KPIS

Since 2017 we have also measured the average environmental key performance indicators (E-KPIs) from textile and leather manufacturing (Tier 2) and apparel and footwear manufacturing (Tier 1).

In 2022 the greenhouse gas emission KPIs have been reduced across the product divisions except for textiles, where they have slightly increased by 1.6% as compared to 2020. CO_2 emissions per pair of shoes have been reduced by 5%, by 14% per piece of garment and by 14% per square meter of leather.

This is mainly achieved due to various climate actions initiated as described in this report. The participation of core suppliers in cleaner production and renewable energy programs, the installation of rooftop solar projects and the purchase of IRECs are the main contributors for these reductions achieved in greenhouse gas emissions.

↗ T.39 FOOTWEAR E-KPI RESULTS (T1)

Summary of supplier e-KPIs			Weights				Change	
Value	2022	2021	2020	2019	2018	2017	2020-2022	Number of suppliers
Energy/pair (kWh)	1.36	1.41	1.31	1.30	1.25	1.40	4%	21
CO_2/pair (kg)	0.70	0.68	0.74	0.96	0.93	1.00	-5%	21
Water/pair (l)	9.62	11.95	15.08	15.21	12.30	14.50	-36%	21
Waste/pair (g)	133.94	140.88	144.80	126.66	108.51	115.90	-8%	21
Waste to landfills/pair (g)	12.33	19	24				-48%	

↗ T.40 APPAREL E-KPI RESULTS (T1)

Summary of supplier e-KPIs			Weights				Change	
Value	2022	2021	2020	2019	2018	2017	2020-2022	Number of suppliers
Energy/piece (kWh)	0.52	0.55	0.56	0.57	0.57	0.72	-6%	26
CO_2/piece (kg)	0.19	0.20	0.22	0.24	0.26	0.31	-14%	26
Water/piece (l)	3.83	4.23	4.60	4.39	4.20	7.58	-17%	26
Waste/piece (g)	58.18	62.33	54.27	56.33	46.50	44.00	7%	26
Waste to landfills/piece (g)	2.66	2.4	2.6				1%	

↗ T.41 LEATHER E-KPI RESULTS (T2)

Summary of supplier e-KPIs			Weights				Change	
Value	2022	2021	2020	2019	2018	2017	2020-2022	Number of factories
Energy/m^2 (kWh)	7.5	6.5	7.0	8.2	8.7	9.1	7%	5
CO_2/m^2 (kg)	2.3	1.9	2.7	3.2	3.2	3.4	-14%	5
Water/m^2 (l)	56.9	60.9	68.3	74.7	90.2	91.8	-17%	5
Waste/m^2 (kg)	0.6	0.5	0.7	0.8	0.8	1.6	-12%	5

↗ T.42 TEXTILES E-KPI RESULTS (T2)

Summary of supplier e-KPIs			Weights				Change	
Value	2022	2021	2020	2019	2018	2017	2020-2022	Number of factories
Energy/t (kWh)	13,122.5	13,393.6	13,049.1	12,636.3	13,386.80	13,679.11	1%	34
CO_2/t (t)	4.54	4.58	4.47	4.37	4.45	4.45	1.6%	34
Water/t (m^3)	98.47	98.7	103.4	105.5	122.78	119.30	-4.7%	34
Waste/t (kg)	288.5	121.38	78.9	62.08	70.63	299.59	266%	34

REPORTING IN ACCORDANCE WITH THE EU TAXONOMY REGULATION

TAXONOMY OBJECTIVES

The Taxonomy Regulation (EU) 2020/852 (in the following "Taxonomy") entered into force on 22 June 2020. The purpose of this new regulation is to provide a definition for what constitutes a sustainable economic activity and to redirect capital flows into companies which are aligning their business models towards such sustainable economic activities. The focus of the Taxonomy lies on 6 environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainability and protection of water and marine resources
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems
- Transition to a circular economy

The Taxonomy has identified eligible economic activities that substantially contribute to each of these environmental objectives. Linked to these eligible activities are technical screening criteria that define whether the activity is considered sustainable or not (aligned).

The Delegated Regulation (EU) 2021/2178 as of July 6, 2021 on the climate objectives (climate change mitigation (Annex I) and climate change adaptation (Annex II)) (in the following "Climate Delegated Act"), was published in the Official Journal on December 9, 2021 and entered into force on January 1, 2022 ((EU) 2021/2139). Further delegated acts for the remaining objectives will be published at the earliest in 2023.

NEW DISCLOSURE REQUIREMENTS FOR NON-FINANCIAL UNDERTAKINGS

According to Articles 2 Climate Delegated Act and 8 of the Taxonomy any undertaking subject to the Non-Financial Reporting Directive (NFRD) must provide information on "environmentally sustainable" revenues, investments (capital expenditure) and operating expenses (opex).

According to Article 10 of the Climate Delegated Act for reports published from January 1, 2022 until December 31, 2022, non-financial undertakings shall only disclose the proportion of Taxonomy-eligible and Taxonomy non-eligible economic activities in their total turnover, capital and operational expenditure. Eligibility of activities implies that an activity is included in the Climate Delegated Act. Whether an activity is Taxonomy-eligible or not says nothing about the (un)sustainability of that activity. Being Taxonomy-eligible is merely an indication that a certain activity makes a substantial contribution to one of the six environmental objectives of the Taxonomy. From January 1, 2023, the disclosure shall also include information on taxonomy alignment, meaning that the economic activity in question fulfils the alignment criteria of the technical screening criteria Annex I and Annex II.

TAXONOMY-ELIGIBILITY OF PUMA'S ECONOMIC ACTIVITIES IN RESPECT OF CLIMATE CHANGE MITIGATION AND CLIMATE CHANGE ADAPTATION

The technical screening criteria in Annex I and Annex II of the Delegated Regulation (EU) 2021/2139 as of June 4, 2021 for the first two environmental objectives, namely climate change mitigation and climate change adaptation, do not list any business activities that are linked to the production and sale of footwear, apparel and accessories. This means that PUMA's business activities so far do not qualify as contributing substantially to climate change mitigation or climate change adaptation. Therefore, PUMA's business

activities in this regard are not considered Taxonomy-eligible (so far). Since PUMA does not have any economic activities related to nuclear power or power generation from gas, PUMA will not report the related standard forms from the delegated act (EU 2022/1214).

ELIGIBLE CAPITAL EXPENDITURE

PUMA understands that the Taxonomy and the Climate Delegated Act including its Annexes nonetheless asks non-financial undertakings with Taxonomy non-eligible economic activities to report on the part of the capital expenditure related to the purchase of output from taxonomy-aligned economic activities and individual measures enabling the target activities to become low-carbon or to lead to greenhouse gas reductions.

In this regard PUMA reviewed the so-called cross-cutting activities that are not directly related to PUMA's primary business activity and are not revenue-generating for PUMA but still are relevant to support PUMA's sustainability efforts. Taxonomy-eligible capital expenditure could be identified with regard to "Transport" and "Real Estate Activities".

The key figures are determined on the basis of Delegated Regulations (EU) 2020/852, 2021/2139 and 2021/2178 in conjunction with the accounting policies to be applied to the consolidated financial statements. In order to avoid double counting, expenditure has been allocated to only one economic activity.

In 2022 PUMA started operations in several newly rented buildings with high requirements on energy-efficiency, such as, for example:

- A new office space in Singapore,
- a new warehouse in Mexico,
- and leasing contracts for several stores in the United States.

The technical screening criteria of Annex I and II define a taxonomy-aligned investment in buildings only for those buildings that are ranked among the top 15% of their regional building stock in terms of Primary Energy Demand (PED).

Since there is no precise definition of these 15%, for example in terms of area covered or primary energy demand per m^2, and as the rental of buildings is not material to PUMA's business performance in terms of CO_2 emissions, we have decided to report the taxonomy-aligned investment in buildings for 2022 as zero.

This does not mean that PUMA is not investing in lowering CO_2 emissions from its own entities. As described in the Climate section of this report, our Scope 1 and 2 emissions have been reduced by 86% compared to our baseline in 2017, mainly through green electricity tariffs or renewable energy attribute certificates.

In 2022 PUMA also invested in 24 charging stations for electric cars, which do fall under the taxonomy alignment criteria for climate mitigation. The total investment in these charging stations was 79 TEUR.

As part of PUMA's 10FOR25 sustainability targets, PUMA is transitioning its car fleet to more sustainable transport vehicles. Therefore, in 2022 PUMA invested in the lease of 64 low or zero emission vehicles.

Unlike buildings, the technical screening criteria for CO_2 emissions for taxonomy alignments are clearly defined as below 50 g CO_2/km.

We can confirm that 64 cars added to our car fleet are taxonomy-aligned with the technical screening criteria in their CO_2 emission footprint, equaling an investment of 1,521 TEUR. Considering the do-no-significant harm criteria of tires for passenger cars, not all those cars can be considered as fully taxonomy-aligned, as many of the standard tires used for our new electric cars from Tesla, Volkswagen, Hyundai,

Mercedes and BMW do not fulfil the criteria for noise emissions and therefore the reported taxonomy aligned investment in vehicles for the year 2022 is 293 TEUR.

The total capital expenditure (IAS 16, 38 and IFRS 16) of the PUMA Group amounts to 669,382 TEUR for the financial year 2022. The eligible capital expenditure regarding "Transport" amounts to 5,427 TEUR and "Real Estate Activities" amounts to 376,996 TEUR. The Taxonomy-aligned capital expenditure from investment in low or zero emission cars and charging stations for electric cars was 372 TEUR.

ELIGIBLE OPERATIONAL EXPENDITURE

PUMA understands that the Taxonomy and the Climate Delegated Act including its Annexes nonetheless asks non-financial undertakings with Taxonomy non-eligible activities to report on the part of the operational expenditure related to the purchase of output from taxonomy-aligned economic activities and individual measures enabling the target activities to become low-carbon or to lead to greenhouse gas reductions.

Due to the nature of our business model, which is the design, development, marketing and sale of footwear, apparel and accessories, the eligible operational expenditure is not material in the context of the first two environmental objectives of the Taxonomy, therefore we report the numerator of our taxonomy-eligible operational expenditure as zero.

For the denominator, Article 2, Annex 1 Section 1.1.3.1. of the Climate Delegated Act asks for reporting on the total operational expenditure derived from the categories "research and development, building renovation measures, short-term lease, maintenance and repair and any other direct expenditures related to the day-to-day servicing of assets of property, plant and equipment by the undertaking or third party to whom activities are outsourced that are necessary to ensure the continued and effective functioning of such asset." The total operational expenditure from these categories amounts to 103.6 TEUR for the financial year 2022.

OUTLOOK

PUMA expects that its business activities will be defined to contribute significantly to the "Transition to a circular economy" objective. Therefore, we anticipate a more detailed Taxonomy reporting once the technical screening criteria for this objective have been finalized by the European Union.

Proportion of turnover from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2022

				Substantial contribution criteria							DNSH criteria ('Does Not Significantly Harm')									
Economic Activity	Code(s)	Absolute turnover	Proportion of turnover	Climate change mitigation	Climate change adaptation	water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Minimum safeguard	Taxonomy-aligned proportion of turnover, 2022	Taxonomy-aligned proportion of turnover, 2021	Category (enabling activity)	Category (transitional activity)
		Currency	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (Taxonomy-aligned)																				
No Taxonomy-aligned environmentally sustainable activities performed by PUMA		0	0	0	0					n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0		
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		0	0	0	0												0	0		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
No Taxonomy-eligible environmentally sustainable activities performed by PUMA		0	0																	
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		0	0														0	0		
Total (A.1 + A.2)		0	0														0	0		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
Turnover of Taxonomy-non-eligible activities (B)		8,465,061,000	100																	
(Total A+B)		8,465,061,000																		

Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2022

				Substantial contribution criteria							DNSH criteria ('Does Not Significantly Harm')									
Economic Activity	Code(s)	Absolute CapEx	Proportion of CapEx	Climate change mitigation	Climate change adaptation	water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Minimum safeguard	Taxonomy-aligned proportion of CapEx, 2022	Taxonomy-aligned proportion of CapEx, 2021	Category (enabling activity)	Category (transitional activity)
		Currency	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (Taxonomy-aligned)																				
Activity 1: Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings) (7.4)	F42, F43, M71	79,418	0.01	100	100					Y	n.a.	n.a.	n.a.	n.a.	n.a.	Y	0.01	0.01	E	
Activity 2: Transport by motorbikes, passenger cars and light commercial vehicles (6.5)	N77.11	293,042	0.04	100	100					Y	Y	n.a.	Y	Y	n.a.	Y	0.04	0.04	E	
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		372,460	0.06	100	100												0.06	0.05		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
Activity 1: Transport by motorbikes, passenger cars and light commercial vehicles (6.5)	N77.11	5,133,793	0.77																	
Activity 2: Acquisition and ownership of buildings (7.7)	L68	376,916,626	56.31																	
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		382,050,419	57.09														0	0		
Total (A.1 + A.2)		382,422,879	57.13														0	0		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
CapEx of Taxonomy-non-eligible activities (B)		286,959,194	42.87																	
(Total A+B)		669,382,074																		

Proportion of OpEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2022

				Substantial contribution criteria							DNSH criteria ('Does Not Significantly Harm')									
Economic Activity	Code(s)	Absolute OpEx	Proportion of OpEx	Climate change mitigation	Climate change adaptation	water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystem	Minimum safeguard	Taxonomy-aligned proportion of OpEx, 2022	Taxonomy-aligned proportion of OpEx, 2021	Category (enabling activity)	Category (transitional activity)
		Currency	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (Taxonomy-aligned)																				
No Taxonomy-aligned environmentally sustainable activities performed by PUMA		0	0	0	0					n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0		
OpEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		0	0	0	0												0	0		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
No Taxonomy-eligible environmentally sustainable activities performed by PUMA		0	0																	
OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		0	0														0	0		
Total (A.1 + A.2)		0	0														0	0		
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
OpEx of Taxonomy-non-eligible activities (B)		103,600,000	100																	
(Total A+B)		103,600,000																		

SUMMARY AND OUTLOOK

2022 saw several success stories for PUMA's sustainability performance. We were ranked first in the Business of Fashion Sustainability ranking, achieved the highest apparel and footwear score on the platform on living wage financials benchmarking and were added to the CDP A list of companies with leading climate disclosures. We also received a Sustainability Leadership Award from Footwear News America.

These achievements must be set in a context where the apparel and footwear industry is placed under increased scrutiny by civil society organizations and where the sustainability of the business model of fashion, with its inherent growth and abundance is questioned.

Against this background, we continued the execution of our Forever Better sustainability strategy and our 10FOR25 sustainability targets.

Many of these targets, which we set in 2019, are already achieved or close to being achieved. For example, nearly 100% of the cotton, leather and cardboard used for PUMA's products and packaging are now originating from preferred and more sustainable sources such as BCI cotton, LWG leather or FSC-certified paper. Nearly half of all polyester we use globally is now from recycled feedstocks.

We continue to source 100% renewable electricity for our own entities and have started the transition of our car fleet to electric cars at scale.

To decarbonize our logistics footprint, we saw the first ever electric truck operating for PUMA and agreed with our main logistics service provider to trial low-carbon shipments for sea freight from our major sourcing countries in Asia to Europe.

We also made some significant progress with the payment of living wages for our own employees and the employees at some of our suppliers, and recorded over 140,000 supplier and PUMA employees trained in women's empowerment.

On the other hand, we realized that our previous climate targets were not ambitious enough to support a 1.5-degree pathway and therefore set new climate targets.

For some major materials used for PUMA products, such as polyurethane, EVA or rubber, we are still at the beginning of the transition to more sustainable material versions, and the significant decarbonization efforts of our supply chain partners could not compensate the strong growth of PUMA in 2022. Consequently, we recorded an increase in Scope 3 emissions rather than the decrease required to support our new 1.5 degree-aligned target.

Another sad setback was the first fatal accidents at our manufacturing partners since several years. Despite a strong focus on health and safety from both PUMA and our suppliers, two employees of PUMA vendors lost their life in two tragic accidents.

We will use these accidents as a reminder to further strengthen our efforts to ensure a safe working environment for all employees manufacturing PUMA goods around the world and have decided to certify our own health and safety management system according to ISO 45001.

In terms of stakeholder outreach, we conducted our first ever Conference of the People and invited Generation Z representatives as well as industry peers to talk about their expectations for PUMA's sustainability journey.

During the conference we learned that our sustainability language is very technical and complex. Therefore, we will prepare a consumer-facing summary document of this sustainability section to convey the main messages to a wider audience.

Finally, we saw the launch of the RE:SUEDE and RE:JERSEY initiatives as first outcomes of our circularity lab. These products, although still not commercially available, showcase our vision for a more circular product portfolio in the future.

We know we still have a long way to go on our sustainability journey and we will continue to execute our sustainability strategy step by step.

For 2023 we plan a new materiality assessment, which will lead us into our 20th anniversary of our first stakeholder dialog in 2003. From there we will begin to shape our sustainability strategy beyond 2025 and towards 2030.

There is only one Forever – Let's Make it Better.

INDEX FOR COMBINED NON-FINANCIAL REPORT AND GRI CONTENT

This report constitutes a separate combined non-financial report in accordance with sections 289b to 289e and 315b, 315c in conjunction with 289c to 289e of the German Commercial Code (HGB). This consolidated combined non-financial report consists of the chapter "Sustainability" and the section "Culture" in the chapter "Our People" as well as the sections “Compliance Management System” and “Corporate Social Responsibility” in the chapter “Corporate Governance Statement in accordance with Section 289f and Section 315d HGB”. The reporting period covered is January 1, 2022 to December 31, 2022. No restatements of information have been made in this report. We have provided separate reports for PUMA SE and the PUMA Group within the “Our People” section only. Separate reporting of other sustainability data would not add any meaningful new information or value and would require significant additional resources, so we have omitted it here. Information about PUMA’s business model is set out in the Financial section of this Annual Report. We have not identified any most significant non-financial performance indicators according to §289c, section 3, number 5 of the German Commercial Code (HGB). PUMA engaged KPMG AG Wirtschaftsprüfungsgesellschaft to perform a “limited assurance” audit of the combined sustainability report with focus on accordance with the German CSR Implementation Act (CSR-RUG).

Since 2003 PUMA’s sustainability reports are based on the guidelines of the Global Reporting Initiative (GRI), which developed detailed and widely recognized standards on sustainability reporting. PUMA SE has reported with reference to the GRI Standards GRI 1: Foundation 2021. This option enables us to report on the impacts related to our economic, environmental, social and governance performance. It includes topics that are material to PUMA’s business and our key stakeholders, and that constitute our sustainability targets. These targets have been systematically developed in accordance with the feedback from PUMA’s stakeholders.

GENERAL DISCLOSURES

		Location	Pages
GRI 2: General Disclosures 2021	2-1 Organizational details	Commercial activities and organizational structure	184
	2-2 Entities included in the organization's sustainability reporting	Group of consolidated companies	266-270
	2-3 Reporting period, frequency and contact point	Index for combined non-financial report and GRI content, Imprint	168
	2-4 Restatements of information	Index for combined non-financial report and GRI content	168
	2-5 External assurance	Limited assurance report of the independent practitioner regarding the separate non-financial group report	175-177
	2-6 Activities, value chain and other business relationships	Commercial activities and organizational structure; Sourcing	184; 189
	2-7 Employees	Culture; Employees	19-23; 191-194
	2-9 Governance structure and composition	Description of the working practices of the management board and the supervisory board	226-228
	2-10 Nomination and selection of the highest governance body	Description of the working practices of the management board and the supervisory board	226-228
	2-11 Chair of the highest governance body	Description of the working practices of the management board and the supervisory board	226-228
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability organization and governance structure; Description of the working practices of the management board and the supervisory board	226-228
	2-13 Delegation of responsibility for managing impacts	Sustainability organization and governance structure	36-37
	2-14 Role of the highest governance body in sustainability reporting	Sustainability committee	11
	2-15 Conflicts of interest	Diversity concept for the supervisory board	230-231
	2-16 Communication of critical concerns	Risk and opportunity report	235-241
	2-17 Collective knowledge of the highest governance body	Compensation System https://about.puma.com/en/investor-relations/corporate-governance	
	2-19 Remuneration policies	Description of the working practices of the management board and the supervisory board	226-228
	2-20 Process to determine remuneration	Description of the working practices of the management board and the supervisory board Compensation System https://about.puma.com/en/investor-relations/corporate-governance	226-228

		Location	Pages
	2-21 Annual total compensation ratio	Description of the working practices of the management board and the supervisory board Compensation Report https://about.puma.com/en/investor-relations/corporate-governance	226-228
	2-22 Statement on sustainable development strategy	CEO Letter; Foreword	5-7; 31-32
	2-23 Policy commitments	https://about.puma.com/en/sustainability/codes-policies-and-handbooks	
	2-24 Embedding policy commitments	PUMA's Forever Better sustainability strategy; Human Rights	35; 53
	2-25 Processes to remediate negative impacts	Human Rights	57; 78-79; 123
	2-26 Mechanisms for seeking advice and raising concerns	Compliance management system	224-225
	2-28 Membership associations	Stakeholder outreach	38-39
	2-29 Approach to stakeholder engagement	Stakeholder outreach	38-39
	2-30 Collective bargaining agreements	Measures to achieve equal pay for women and men	365

MATERIAL TOPICS

		Location	Pages
GRI 3: Material Topics 2021	3-1 Process to determine material topics	Most material aspects	41-42
	3-2 List of material topics	Most material aspects	41-42

ANTI-CORRUPTION

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Relevant disclosures of corporate governance practices that are applied beyond the regulatory requirements	224-225
	205-2 Communication and training about anti-corruption policies and procedures	Relevant disclosures of corporate governance practices that are applied beyond the regulatory requirements	224-225

TAX

		Location	Pages
GRI 207: Tax 2019	207-1 Approach to tax	"WE PAY OUR FAIR SHARE" is the core principle the PUMA Group is taking into consideration for its global tax strategy. In this regard, PUMA fully commits to act in accordance with all international tax regulations and to fulfill any tax obligations arising from its business activities. All information regarding PUMA's tax approach can be found in the tax strategy (https://about.puma.com/en/investor-relations/corporate-governance, see Tax Strategy) As it is a general principle for PUMA to follow tax rules and to pay applicable taxes, taxes as such are not a material issue within the sustainability approach. Consequently, PUMA does not report in detail on the GRI Standard in this regard.	

MATERIALS

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Recycled material usage; Material origin	130; 142
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Recycled material usage; Material consumption data	130; 143-146
	301-2 Recycled input materials used	Recycled material usage	130

ENERGY

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Climate	87-91
GRI 302: Energy 2016	302-3 Energy intensity	Products	158-159

WATER AND EFFLUENTS

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Water and air	118-119
	303-2 Management of water discharge-related impacts	Water and air	120-123
	303-5 Water consumption	Products	157

BIODIVERSITY

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Biodiversity	147;149
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity	147

EMISSIONS

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Climate	87-91
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Climate	92; 93
	305-2 Energy indirect (Scope 2) GHG emissions	Climate	92; 93
	305-3 Other indirect (Scope 3) GHG emissions	Climate	95-96
	305-4 GHG emissions intensity	Climate	158-159
	305-5 Reduction of GHG emissions	Climate	92-96

WASTE

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Circularity	130
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	Products	131
	306-2 Management of significant waste-related impacts	Circularity	130

OCCUPATIONAL HEALTH AND SAFETY

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Our people occupational health and safety	24
	403-2 Hazard identification, risk assessment, and incident investigation	Our people occupational health and safety	24
	403-9 Work-related injuries	Our people occupational health and safety	24

DIVERSITY AND EQUAL OPPORTUNITY

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Relevant disclosures of corporate governance practices that are applied beyond the regulatory requirements	224-225
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Relevant disclosures of corporate governance practices that are applied beyond the regulatory requirements	224-225

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights in the supply chain	61
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Human Rights in the supply chain	64; 67; 76

FORCED OR COMPULSORY LABOR

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights in the supply chain	61-62
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Human Rights in the supply chain	76

SUPPLIER SOCIAL ASSESSMENT

		Location	Pages
GRI 3: Material Topics 2021	3-3 Management of material topics	Human Rights in the supply chain	61-62
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Human Rights in the supply chain	62-63
	414-2 Negative social impacts in the supply chain and actions taken	Human Rights in the supply chain	62-64

KPMG ASSURANCE STATEMENT

LIMITED ASSURANCE REPORT OF THE INDEPENDENT AUDITOR

To the PUMA SE, Herzogenaurach

We have performed a limited assurance engagement on the combined separate non-financial group report of PUMA SE, Herzogenaurach (hereinafter: "company"), which was combined with the non-financial report of the parent company for the period from January 1 to December 31, 2022 (hereinafter the "consolidated non-financial report"). This consolidated non-financial report consists of the chapter "Sustainability", the section "Culture" in the chapter "Our People" and the sections "Compliance Management System" and "Corporate Social Responsibility" in the chapter "Corporate Governance Statement in accordance with Section 289f and Section 315d HGB" of the Annual Report 2022 of PUMA SE, Herzogenaurach.

Not subject of our assurance engagement was the material audit of the external sources of documentation, interviews, case studies, expert opinions, Environmental Profit & Loss as well as checking the content of links to internet pages mentioned in the non-financial report (see Annex 1 to the assurance report).

RESPONSIBILITIES OF MANAGEMENT

Management of PUMA SE, Herzogenaurach, is responsible for the preparation of the consolidated non-financial report in accordance with Sections 315c in conjunction with 289c to 289e HGB and Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of June 18, 2020 on establishing a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder, as well as for making their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the delegated acts adopted thereunder as set out in section "Reporting in accordance with the EU taxonomy regulation" of the consolidated non-financial report.

This responsibility of the legal representatives of the company includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures of the group that are reasonable in the circumstances. Furthermore, management is responsible for such internal control as they consider necessary to enable the preparation of a consolidated non-financial report that is free from material misstatement, whether due to fraud (manipulation of the non-financial group report) or error.

The EU Taxonomy Regulation and the Delegated Acts issued thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, management has disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section "Reporting in accordance with the EU taxonomy regulation" of the consolidated non-financial report. They are responsible for the defensibility of this interpretation. Due to the immanent risk that indeterminate legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

INDEPENDENCE AND QUALITY ASSURANCE OF THE ASSURANCE PRACTITIONER

We have complied with the independence and quality assurance requirements set out in the national legal provisions and professional pronouncements, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the quality assurance standard of the Institute of Public Auditors in Germany (Institut der Wirtschafts¬prüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

RESPONSIBILITY OF THE ASSURANCE PRACTITIONER

Our responsibility is to express a conclusion with limited assurance on the consolidated non-financial report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the company's consolidated non-financial report, other than the external sources of documentation or expert opinions mentioned in the non-financial report, is not prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management disclosed in section "Reporting in accordance with the EU taxonomy regulation" of the consolidated non-financial report.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the assurance practitioner.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the Group's sustainability organisation and stakeholder engagement.
- Inquiries of management and relevant employees involved in the preparation of the consolidated non-financial report about the preparation process, about the internal control system related to this process, and about disclosures in the non-financial report.
- A risk analysis, including media research, to identify relevant information on PUMA SE's sustainability performance in the reporting period.
- Identification of likely risks of material misstatement in the consolidated non-financial report.
- Analytical procedures on selected disclosures in the consolidated non-financial report.
- Inquiries of management and relevant employees that are responsible for determining disclosures about concepts, due diligence processes, results and risks, performing internal control procedures and consolidating disclosures in the preparation of the consolidated non-financial report.
- Inspection of selected internal and external documents.
- Analytical procedures for the evaluation of data and of the trends of quantitative disclosures as reported at Group level by all sites.
- Evaluation of local data collection, validation and reporting processes as well as the reliability of reported data based on a sample taken at the site at five Vietnamese suppliers.
- Assessment of the overall presentation of the disclosures.
- Inquiries of Group level personnel in order to understand the processes for identifying relevant economic activities according to the EU Taxonomy Regulation.
- Evaluation of the process for the identification of taxonomy-eligible and taxonomy-aligned economic activities and the corresponding disclosures in the consolidated non-financial report.

In determining the disclosures in accordance with Article 8 of the EU Taxonomy Regulation, management is required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

ASSURANCE OPINION

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the consolidated non-financial report of PUMA SE, Herzogenaurach for the period from January 1 to December 31, 2022 has not been prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management as disclosed in section "Reporting in accordance with the EU taxonomy regulation" of the consolidated non-financial report.

We do not express an assurance opinion on the external sources of documentation, interviews, case studies, expert opinions, Environmental Profit & Loss as well as content of links to internet pages mentioned in the consolidated non-financial report (see Annex 1 to the assurance report).

RESTRICTION OF USE

This assurance report is solely addressed to the PUMA SE.

Our assignment for PUMA SE and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (German Public Auditors and Public Audit Firms) (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (Appendix 2). By reading and using the information contained in this assurance report, each recipient confirms having taken note of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the attached General Engagement Terms with respect to us.

Nuremberg, April 24, 2023

KPMG AG
Wirtschaftsprüfungsgesellschaft

Marc Stauder
Wirtschaftsprüfer
[German Public Auditor]

Klaus-Peter Käuffelin
Wirtschaftsprüfer
[German Public Auditor]