

G-STAR RAW RESPONSIBILITY

# RAW RESPONSIBILITY

G-STAR RAW SUSTAINABILITY REPORT 2022

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# HOW TO USE THIS REPORT

This report reflects G-Star RAW's performance on key sustainability priorities and our implementation of due diligence within our value chain. Due diligence, as defined by the Organization for Economic Cooperation and Development (OECD), is the process enterprises should carry out to identify, prevent, mitigate, and take accountability for actual and potential adverse impacts in their value chain.

G-Star's sustainability priorities are linked to key impact areas that were determined through a risk assessment that is based on the methodology of the OECD. The risk assessment is a key part of our due diligence process and guides us in forming and strengthening our Sustainability Strategy and priorities.

This report focuses on the sustainability progress made in 2022, the planned actions for 2023, and our long-term goals and ambitions for 2025 and 2030. In addition to this report, the following documents, which outline G-Star's policies, guidelines, and actions, are also part of our (reporting on) due diligence.

## Sustainable Supply Chain Handbook

This [Handbook](#) explains our due diligence process that identifies (potential) risks and includes G-Star RAW's Compliance Policy, a detailed supply chain explanation, our sustainability monitoring tools and process, our supplier onboarding process, and our Supplier Development Program.

## Sustainability Milestones Overview:

This [document](#) shows our sustainability journey since 2006.

## Transparency Tools:

- [Manufacturing Map](#) – This tool shows all direct suppliers with whom G-Star has had a business relationship for over 2 years.
- [Responsible Materials Ranking](#) – This tool scales our fibers from sustainable to not sustainable.

## G-Star RAW's Policies:

- [G-Star Supplier Code of Conduct](#)
  - [Social & Labour Guidelines](#)
  - [Environmental Guidelines](#)
- [G-Star RAW Materials Policy & Animal Welfare Policy](#)
- [Modern Slavery Act](#)

All downloads can be found [here](#).

Explore our [RAW Responsibility webpage](#) to find out more about up-to-date actions regarding our Sustainability Strategy.

If any comments or questions arise after reading this report or related G-Star documents, please contact us at [cr@g-star.com](mailto:cr@g-star.com) or at: G-Star RAW C.V.

Attn.: Sustainability (CR) Department  
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The Netherlands

## Acronyms

ACT	Action, Collaboration, Transformation
FWF	Fair Wear Foundation
Higg BRM	Higg Brand & Retail Module
Higg FEM	Higg Facility Environmental Module
Higg FSLM	Higg Facility Social & Labor Module
LWI	Living Wage Indicator
MRSL	Manufacturing Restricted Substances List
OCA	Organic Cotton Accelerator
OECD	Organisation for Economic Cooperation and Development
SAC	Sustainable Apparel Coalition
SDGs	Sustainable Development Goals
SLCP	Social & Labor Convergence Program
ZDHC	Zero Discharge of Hazardous Chemicals

# LETTER FROM THE CEO

Reflecting on 2022, it has been a turbulent year marked by another series of COVID lockdowns in the first few months, and even more so by the war in Ukraine. Our thoughts have been and still are with all individuals affected by this ongoing violent tragedy. Nonetheless our responsibilities remain and are even emphasized by such events, so despite the context we were able to prioritize and further build on improving our impact, both on people and planet.

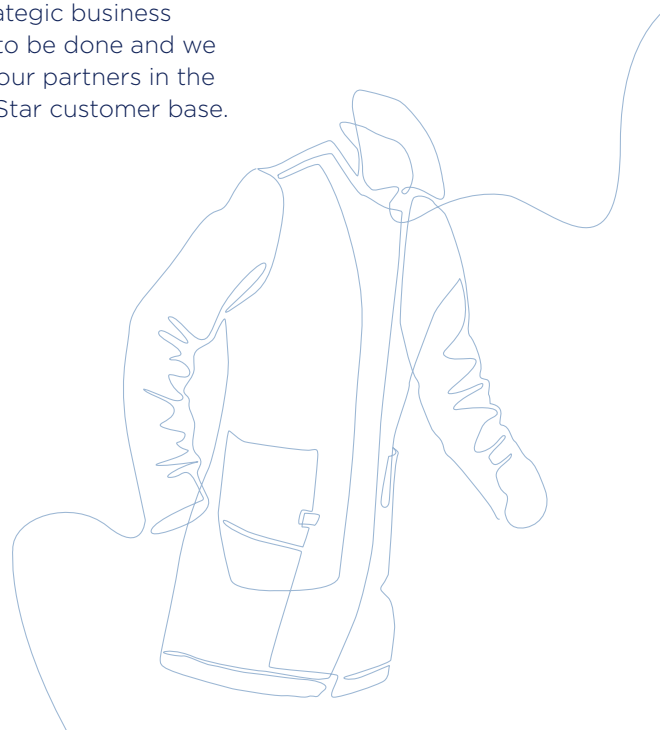
Our starting point for progress is always in close collaboration with our partners in the supply chain, to innovate and improve together, both in working conditions and actual garment-making.

Circularity is one of the ongoing big themes that we continuously aim to implement deeper within our entire value chain. To ensure that circularity is fully embedded in our design processes, we invited Circular Economy to host a 2 day workshop for our Product and Sustainability teams, supporting the teams in defining the G-Star circularity roadmap for the years to come, further growing our share of responsible materials, and our share of Cradle to Cradle certified® fabrics and styles year on year. We were able to scale and accelerate our Certified Tailors program to 3 additional countries and our Return Your Denim initiative to 7 additional countries. Simultaneously, we continued to improve the quality and durability of our products, resulting in a collection with a lifetime Warranty. We also started investigating options to launch a second-hand platform within G-Star.com and are excited to share that we will be launching this in the Summer of 2023.

On the topic of climate, we are happy to share we were able to significantly reduce our GHG emissions in 2022 with 15% in Scope 1 and 2 location-based and 10% in Scope 3 from a 2021 baseline (verified by Carbon Footprint Ltd.'s). We have also submitted official Science Based Targets, committing ourselves to an ambitious reduction plan for which we have prepared several scenario's.

To establish ongoing progress on both social and environmental topics, we continue to deeply embed sustainability into our overall strategic business priorities for the years to come. There is still so much work to be done and we are looking forward to taking the next steps, together with our partners in the supply chain, our industry peers, and of course our loyal G-Star customer base.

**Rob Schilder**





# RAW RESPONSIBILITY



# RAW RESPONSIBILITY

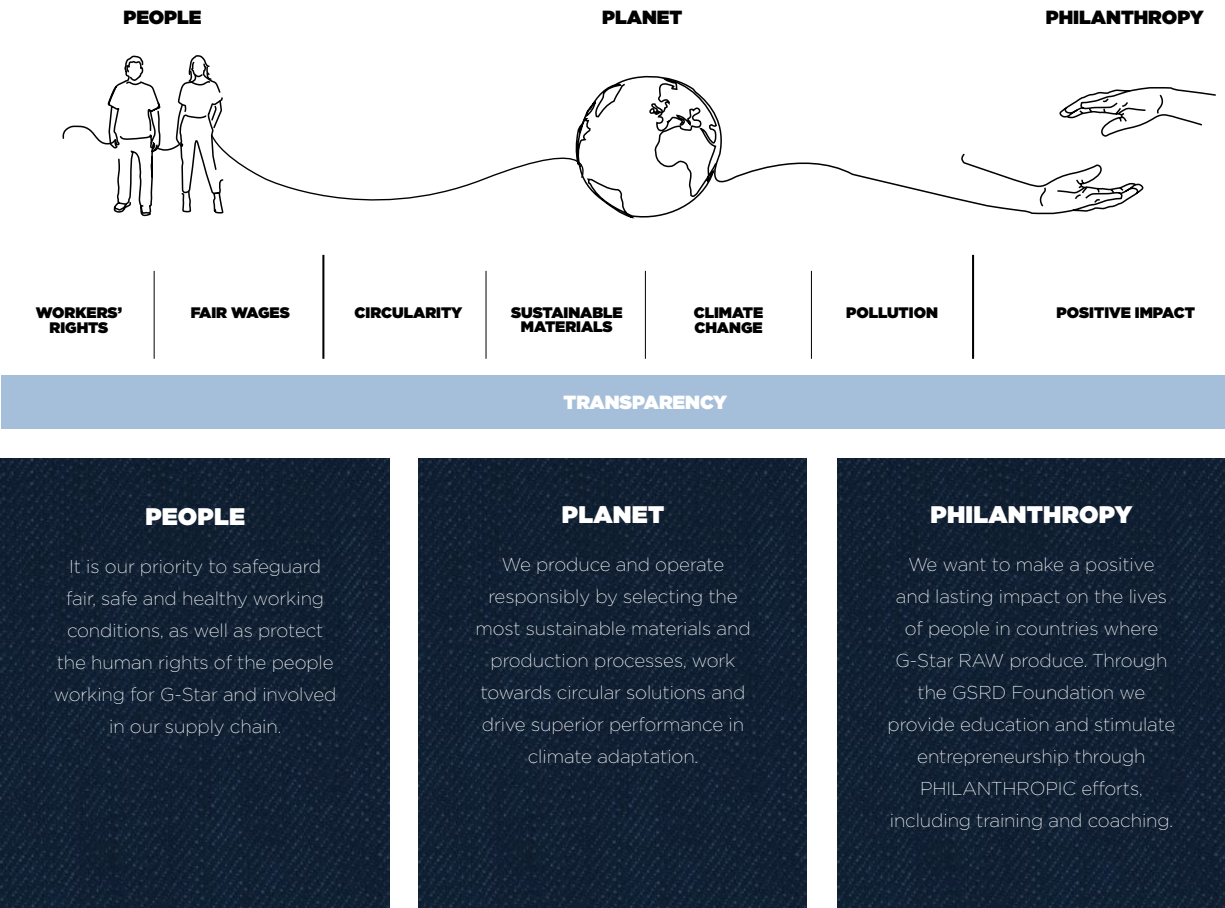
### About G-Star RAW

Since 1989, G-Star RAW has pushed the boundaries of denim design, manifesting its vision of the future by introducing “luxury denim” for the streets through pioneering styles. Hardcore Denim is the philosophy that expresses the brand’s obsession with denim; the cloth, the craft and, the history. It pushes G-Star to invent, explore and take craftsmanship to another level. Down to the smallest detail and with a strong belief that there is no limit to what denim can do. With innovation, sustainability and creativity at its core, the brand pursues to define the next generation of denim with respect for people and the planet.

### About RAW Responsibility

Sustainability is key to how we operate at G-Star RAW. It is a process of continuous improvement in both the social and environmental impact of our products and operations. We have been embedding sustainability in the core of our business since 2006. Take a look at our [Sustainability Milestones Overview](#) to see some of the highlights throughout that ongoing journey.

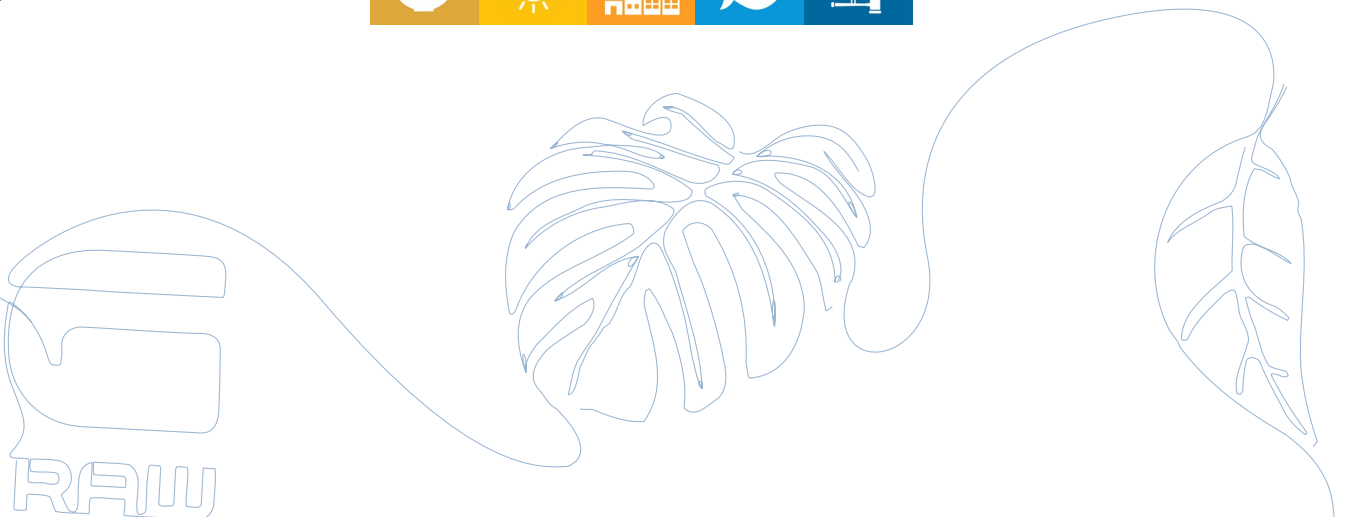
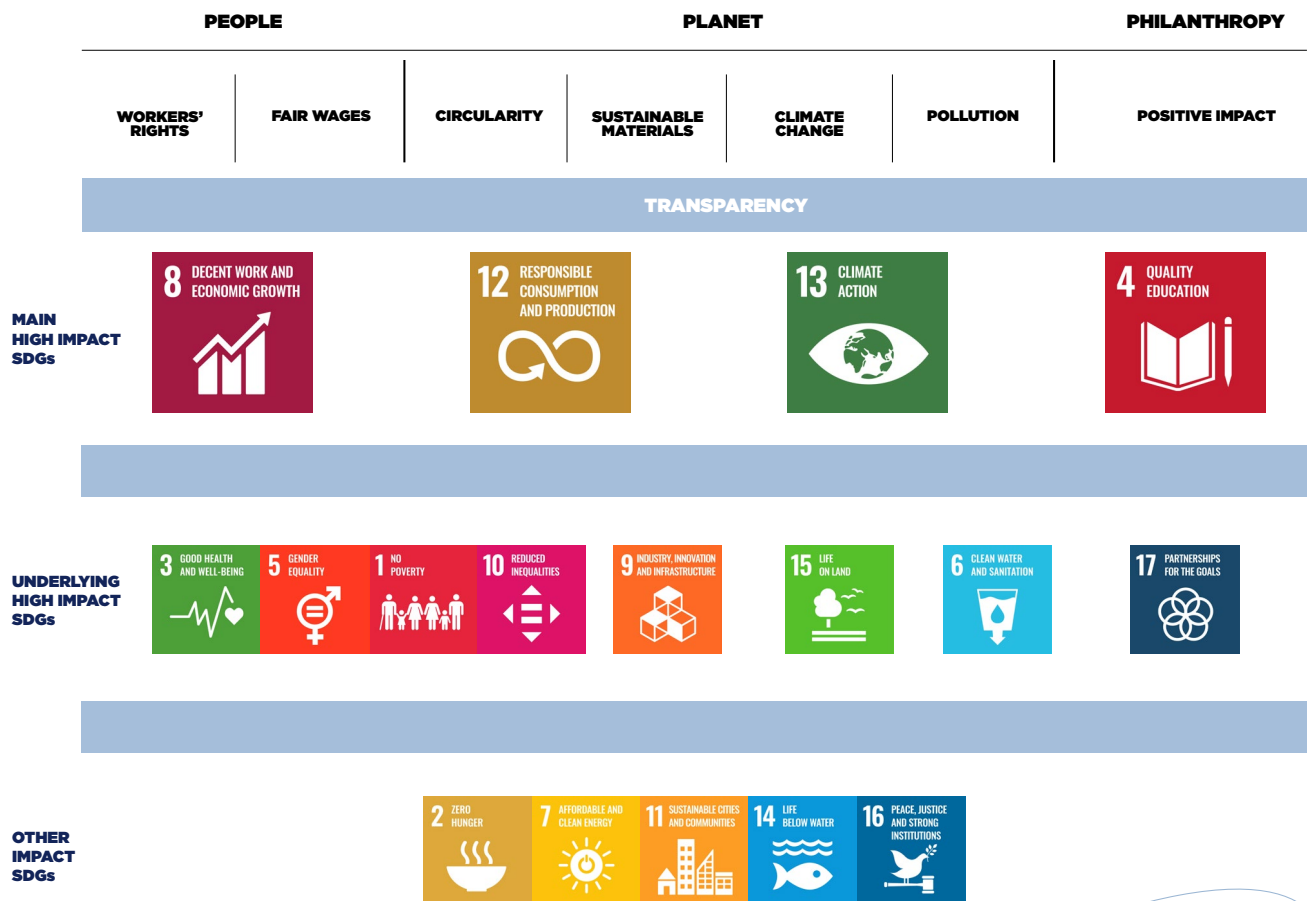
We find it important to take responsibility by constantly improving the impact we have on PEOPLE and PLANET, as well as give back to the communities in the countries where we produce. That is why we divide our efforts into three pillars: **PEOPLE, PLANET** and **PHILANTHROPY**. These three pillars represent the core of our Sustainability Strategy.



# SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) are a unified set of goals to address sustainability issues simultaneously, through a global and inclusive approach. G-Star recognizes that businesses, along with governments and civil society, play a crucial role in reaching the SDGs. G-Star therefore

aligned its strategy with the 17 SDGs and defined 4 high impact goals that are most closely linked to our core operations and value chain. Next to that, 7 high impact SDGs are identified that relate to the 4 main high impact SDGs. Our operations are indirectly linked to the final 6 SDGs.



# TRANSPARENCY

To deliver on our strategy, we enable external stakeholders to hold us accountable when it comes to assessing our data-backed sustainability performance. This includes transparent reporting.

We started reporting on sustainability in 2013 and since 2018 we have reported using the Higg Brand and Retail Module (BRM) from the Sustainable Apparel Coalition (SAC). This is a global sustainability measurement performance tool in the apparel and footwear sector.

Besides reporting through the Higg BRM, we also publish an annual Sustainability Report. G-Star's 2019 Sustainability Report was our first report that integrated the [OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector](#) and its risk assessment methodology. Our 2021 Sustainability Report presented our updated Sustainability Strategy including our long-term goals and ambitions based on our extended risk assessment. Our 2022 Sustainability Report reflects on our achievements in 2022 and projects our actions for 2023.

## Higg Brand & Retail Module (Higg BRM)

G-Star completes the Higg Brand & Retail Module (BRM) on an annual basis. Our Sustainability Strategy translates the key Higg BRM topics into actions and goals to improve our sustainability performance over time.

2022 is the third consecutive year we have completed the Higg BRM. It is a self-assessment questionnaire made up of 530 questions to evaluate environmental, social and labor performance across G-Star's management systems, stores, brands, operations and logistics. The assessment is also verified by an external 3rd party (TUV Rheinland), where documental evidence is analyzed and G-Star employees from different departments are personally interviewed.

Our total score consists of 2 separate scores that represent the overall points achieved across the entire questionnaire for all environmental and social questions. In 2022, G-Star significantly improved its score compared to the previous year.

Overall Environmental  
score:

**70.1%**

Overall Social  
score:

**88.1%**





# TRANSPARENCY CONTINUED

The Section Scores show the total points that we received per section of the questionnaire based on the combination of our environmental and social performance. The sections consider the following: Management systems, Brand, Stores, and Operations & Logistics.

Management system	
Environmental 100%	Social 100%
Brand	
Environmental 75.5%	Social 88.6%
Stores	
Environmental 50%	Social 84.6%
Operations & logistics	
Environmental 54.8%	Social 79.2%

The Higg BRM verification process granted us an even better understanding of the efforts we need to take to improve our Higg BRM sustainability performance. We have engaged with all relevant departments about the 2022 Higg BRM performance and determined which topics to prioritize for improvement. In 2023 the Higg BRM question set will be entirely new with a bigger focus on business's due diligence of practices, programs, and policies.

## Risk Assessment

Over the past year, we have implemented and strengthened our updated Sustainability Strategy and further built upon the OECD risk assessment that was first included in the Sustainability Report of 2021. We did this with the help of industry partners, stakeholders and external resources. We performed our social and environmental risk assessment based on the risk categories identified by the OECD.

Our risk assessment identifies both the likelihood and the severity of potential or actual risks within

our value chain. Based on all the information we collected through different resources, we determined which risks are most salient in our supply chain. The outcome forms the base of our sustainability strategy moving forward. Our risk assessment can be found in Appendix A.

## Manufacturing Map

Providing oversight of the supply chain is part of our commitment to the apparel sector. 7 years ago, we made our Manufacturing Map public – so anyone can trace the origin of a G-Star RAW product, now covering approximately 95% of our production volume (this differs per season) and showing all Tier 1 suppliers that we have been working with for over 2 years. In addition to the map, we publish further details on our direct suppliers, their sub-factories, processing facilities and nominated fabric mills in our [Manufacturing List](#). This is also available on the Open Supply Hub, an open source tool that maps garment factories worldwide.

## Responsible Materials Ranking

The G-Star RAW [Responsible Materials Ranking](#) gives consumers full insight into each fiber used in the main fabric of a G-Star garment. It indicates the environmental impact of the fibers, according to existing industry standards. By doing so, we allow consumers to decide for themselves whether a specific garment matches their individual sustainability standards. More information regarding the Responsible Materials Ranking can be found in the chapter [PLANET](#).

## RAW Responsibility webpage

Our [RAW Responsibility webpage](#) is a reflection of our commitment to PEOPLE, PLANET and PHILANTHROPY. It is updated regularly and provides consumers with information on all our sustainability initiatives that are part of our ongoing RAW Responsibility journey.

# IN 2022...

...about

**95%**

of the materials we used were

**organic, recycled, biobased, compostable,  
or sourced through the Better Cotton Initiative**

(mass balance principle)

...we added an independent complaint system to another Tier 1 factory in India in collaboration with the Fair Wear Foundation. This has enhanced

**access to remedy for  
4,294 garment workers**

...we submitted our climate targets to Science Based Targets Initiative for official validation and reduced our emissions compared to our 2021 baseline.

**Scope 1 and 2 reduced  
by 15%; Scope 3  
reduced by 10%**

...we offered lifetime warranty, expanded the

**Certified Tailors  
repair program**

across 4 countries and launched our

**Return Your Old Denim**

initiative in 75 European stores

...our Higg BRM has been third-party verified and we scored an average of

**88.1%**

for our overall Social Score and

**70.1%**

for our Environmental Score

...our DETOX program included 107 factories under the ZDHC scope, with an average

**conformance of 77% against the ZDHC  
Wastewater Guideline parameters**

...we introduced

**73 Cradle to Cradle  
certified® products,**

as well as 89 products with  
Cradle to Cradle certified® fabric.

...we carried out a

**Living Wage  
Gap Analysis**

for the second year running and extended this beyond Tier 1 Suppliers. This has helped us to monitor wage gap data.



# SUSTAINABILITY STRATEGY



# SUSTAINABILITY STRATEGY

Our long-term focus within our RAW Responsibility strategy includes key sustainability priorities specified in goals for 2025 and 2030. These are commitments built on many foundations, such as our risk assessment covering the different phases of our value chain as well as the data we collected working with different

industry partners and tools. For example, the Higg Index tools of the SAC and the programs of Zero Discharge of Hazardous Chemicals (ZDHC), have ensured that we can measure and track impact, and scale our strategy across our value chain. This Sustainability Report reflects our annual progress and achievements.

## Goals & Ambitions

People	Priority	Goal 2025 / 2030
Workers' Rights	Elevate and improve fair, safe and healthy working conditions in G-Star's supply chain.	Strengthen workers voice by offering a complaints system including fair terms, anonymous accessibility, process for complaints handling and capacity building to workers in at least 30% of production countries.
Fair Wages	Collaborate industry wide through 'ACT on Living Wages' to improve wages at both industry and country level.	Realize healthy, safe and fair working conditions for all workers in G-Stars supply chain.
	Ensure that G-Star's purchasing practices enable the payment of fair wages.	Realize effective wage management systems that classify jobs according to skill level and pay workers according to their competence in strategic factories in Bangladesh.
	Support suppliers to implement effective wage management systems that classify jobs according to skill level and pay workers according to their competence.	Actively support ACT to realize 2 country and/or industry wide wage improvements with the end goal to decrease the wage gap between paid wage and living wage.
Planet	Priority	Goal 2025 / 2030
Circularity	Design for durability and recycling to extend the life of G-Star's products and offer solutions for re-use, remake or recycling.	Ensure 20% of G-Star's collection is made with Cradle to Cradle Certified® fabrics.
		Ensure 1.000.000 jeans repaired, reused or recycled.
Sustainable Materials	Increase the use of sustainable materials by partnering with innovative suppliers and initiatives that transform and/or innovate conventional and virgin materials.	Ensure 75% of the materials in our collections are regenerative, recycled, organic, bio-based and/or compostable.
Climate Change	Reduce GHG emission by switching to renewable energy, using more sustainable materials and increasing the use of low energy-intensive production methods.	Ensure 100% of the materials in our collections are regenerative, recycled, organic, bio-based and/or compostable.
		Reduce 15% of GHG emissions (base year 2021). Reduce 42% of GHG emissions (base year 2021).
Pollution	Ensure the continuous ban of hazardous chemicals in G-Star's supply chain.	Achieve 100% low impact chemical applications (Cradle-to-Cradle approved chemicals and/or ZDHC level 2 & 3 chemicals) in G-Star's products.
Transparency	Priority	Goal 2025 / 2030
	Report on G-Star's sustainability performance through a verified industry benchmark (Higg Brand & Retail Module).	Achieve full product transparency on fibers, lower impact production processes, certifications, recyclability and manufacturing unit on all G-Star RAW products.
	Offer full product transparency on lower impact fibers and production processes, certifications, recyclability and manufacturing units through a developed claims framework.	Achieve 100% traceability, up to the raw materials that were used.

# SUSTAINABILITY STRATEGY CONTINUED

## Policies

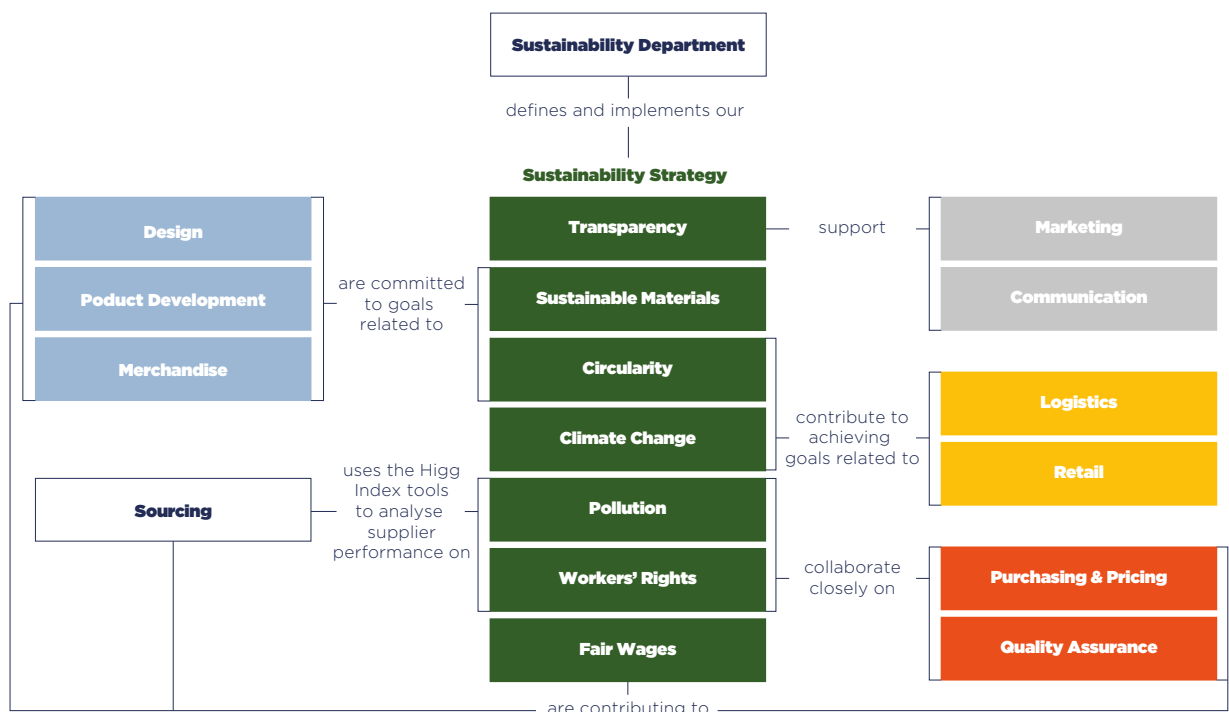
At the base of our Sustainability Strategy we have multiple policy documents to uphold our RAW Responsibility. We developed the [G-Star RAW Supplier Code of Conduct](#) representing all standards on Social and Environmental, Safety and Health (S&ESH) regulations, to ensure that G-Star products are made under fair and safe circumstances. Additional to our Code of Conduct, we also have [Social & Labour Guidelines](#) and [Environmental Guidelines](#). An overview of all policy document can be found [here](#).

We continuously monitor and collaborate with our suppliers and external industry experts, to uphold these standards and improve where needed. How we do that is explained in our [Sustainable Supply Chain Handbook](#).

## Governance

Our Sustainability Department implements G-Star's Sustainability Strategy within and beyond our own operations. The team specializes in social and environmental sustainability across the supply chain and has a presence in the Netherlands and Asia. It is their responsibility to define and implement the Sustainability Strategy by integrating the sustainability work throughout our own organization. The departments that

help manifest our Sustainability Strategy include Design, Product Development, Merchandise, Purchasing & Pricing, Quality Assurance, Sourcing, Logistics, Marketing, and Communications. Sustainability is an integral part of our overall business strategy. Our Sustainability Strategy is translated into team and individual goals across the abovementioned departments; the figure below shows how we work collaboratively to bring our Sustainability Strategy together.

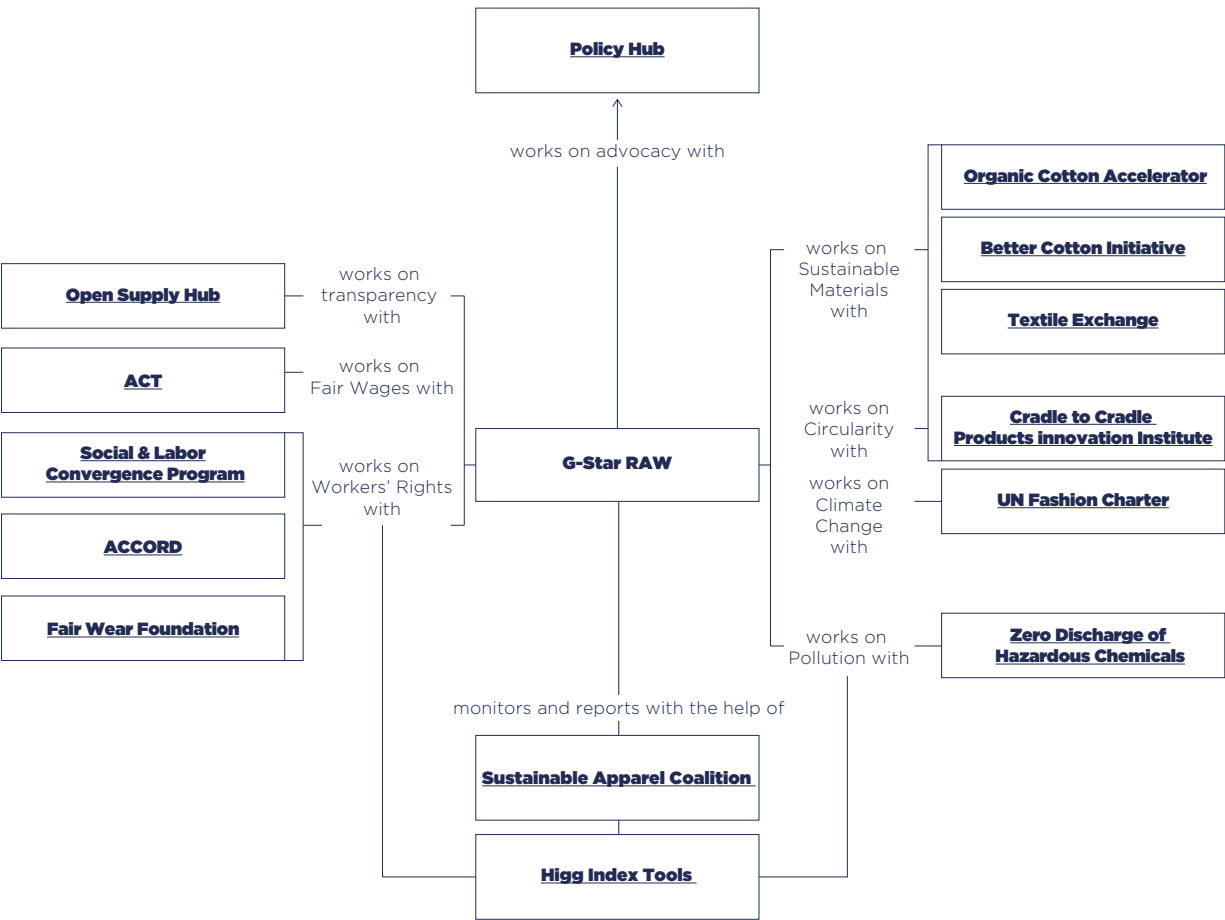


# PARTNERSHIPS

G-Star collaborates with a number of stakeholders to help define and develop our sustainability strategy. The overview

below demonstrates how these partners and stakeholders are involved at a strategic level.

Partnerships overview







# PEOPLE



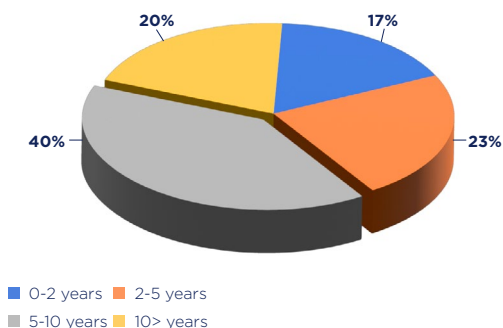
# PEOPLE

When it comes to the [PEOPLE](#) in our supply chain, our key focus is on safeguarding fair, safe and healthy working conditions, as well as protecting human rights. We engage in key industry partnerships and make use of tools such as the Higg Index Facility Social & Labor Module (Higg FSLM) to monitor working conditions. We have a clear understanding of the social risks in our supply chain and assess the risks following the guidance of OECD. Within our supply chain we focus on our [Workers' Rights](#) and [Fair Wages](#) programs.

## Safeguarding Workers' Rights

To improve fair, safe and healthy working conditions in our supply chain, we work closely with our suppliers and have built trustworthy and long-term relationships with them. We deliberately work with a small and durable supply chain to ensure continuity in our sustainability initiatives. Our [Manufacturing Map](#) details the Tier 1 suppliers have been working with for 2 years or more, and offers background information such as the type of product produced and number of male and female workers.

**Supplier Relationship Length (Tier 1)**



Although human rights are protected by various national and international laws, they can be restricted in certain situations. We strive for all workers across our supply chain to have these rights respected. The United Nations Universal

Declaration of Human Rights sets out these rights as a common standard of achievements for all people and all nations. We used these and other related resources as the basis for our [Supplier Code of Conduct](#) and our practices.

Our social framework includes supplier development tools to support direct suppliers consistently in applying high labor standards based on our Supplier Code of Conduct.

This framework consists of:

- Use of the Social and Labor Convergence Program (SLCP)
- Higg FSLM
- Development and implementation of a complaint system
- Supplier trainings

## Social and Labor Convergence Program (SLCP)

G-Star RAW has been a signatory of the [SLCP](#) since 2016. The mission of this project is to eliminate audit fatigue and enable data comparison. Their Converged Assessment Framework (CAF) is a tool to capture accurate data regarding working conditions in facilities. The CAF has been implemented in our supply chain since 2019 as a supplier data collection tool and it has replaced our own internal assessment as well as our request for other third-party audit standards.

To use the CAF suppliers need to register their facilities in the SLCP Gateway and perform a self-assessment. This self-assessment is verified with the help of the SLCP verification methodology. Once the facility has checked and approved the verification outcomes, they can upload their assessment to the SLCP Gateway. G-Star as well as other brands can then access the data through the SLCP Gateway, which makes it easy and efficient for suppliers to share facility data. This data directly informs our Higg Facility Social & Labor Module (FSLM), which we use to monitor our supplier's performance.

# PEOPLE CONTINUED

## Higg Facility Social & Labor Module (FSLM)

We apply the Higg FSLM as a measuring and performance improvement tool for our supply chain partners. Supplier data is collected through the SLCP Gateway as can be seen below. In our [Sustainable Supply Chain Handbook](#) we explain how the information from the Higg FSLM is analyzed and used to monitor our suppliers.

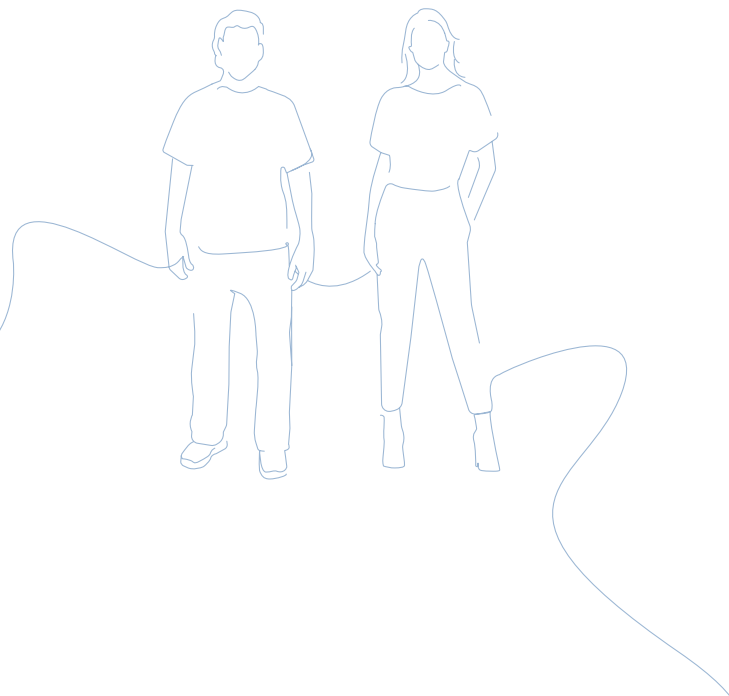
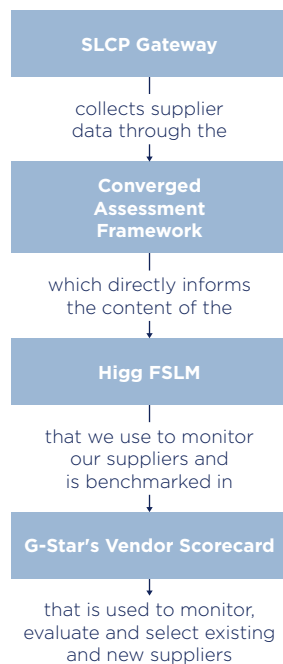
### In the Higg FSLM the following topics are assessed:

- Recruitment and Hiring
- Working Hours
- Wages and Benefits
- Employee Treatment
- Employee Involvement
- Health & Safety
- Termination
- Managements Systems
- Empowering People and Communities

G-Star began using Higg FSLM in our supply chain in 2019. As a first step, we focused on encouraging tier 1 suppliers to complete a self-assessment. Now, we expect Tier 1 and Tier 2 factories to complete both the self-assessment and a verified FSLM.

- 74% of Tier 1 production volume came from factories that have completed a verified FSLM assessment in 2022.
- 64% of Tier 2 production volume came from factories that have completed a verified FSLM assessment in 2022.
- The average verified FSLM score across both tiers was 77.8%, 3.4% higher versus the previous year's 74.4%.

Our goal in 2023 will be to ensure the verified FSLM is completed by Tier 1 factories making up at least 82% of production volume, and Tier 2 factories representing 72% of business volume. This is also in line with the SAC's membership requirements on business volume.





# PEOPLE CONTINUED

## Fair Wear's Complaints Mechanism

In 2021 we carried out a risk assessment that identified the need for a proper grievance mechanism to remediate worker issues. As a result, we made a [public commitment](#) to improve our complaint systems towards global independency and confidentiality by 2025 to strengthen worker voices in our supply chain. To support this, we joined an industry level cooperation program developed by the Fair Wear Foundation (FWF) to increase grievance mechanisms in our supply chain.

The goal of this program is to enhance access to remedy for garment workers and learn about the remediation processes. The project was initially launched in collaboration with 3 G-Star suppliers in India and positively, the factories linked to these suppliers now have the Fair Wear Complaints Mechanism implemented or, are in the process of embedding it. Read more about that program [here](#). As a result, they will all have access to Fair Wear helplines to address labor rights violations if required.

In 2022, G-Star began discussing the Fair Wear Complaints Mechanism with suppliers in Vietnam and Turkey. This is in support of our ambition to expand the project to at least 1 additional sourcing country in 2023.

## Working towards Fair Wages

Based on our risk assessment, one of the most important steps to improve fair working conditions is through fair wages. Although a minimum wage is the lowest wage permitted by law in any given country, this does not always suffice for a basic standard of living. To improve this within our supply chain we joined ACT on Living Wages in 2019, performed our own Wage Gap Analysis in 2021 and made a [public commitment](#) towards an industry wide agreement on regional living wages and to support implementation in our production countries. In 2022, we continued this analysis to help monitor wage gap data.

## ACT on Living Wages

[ACT](#) is an agreement between 22 global brands and retailers and the IndustriALL Global Union, a global trade union fighting for better working conditions and trade union rights around the world. It aims to achieve a [living wage](#) for all textile workers through collective bargaining at an industry level. By joining, we have committed to [purchasing practices](#) with our suppliers that will ensure fair terms of payment, full coverage of wage increases, better forecasting and planning, training and responsible exit strategies. With sector common indicators, the ACT accountability and monitoring framework helps us measure progress towards more equal supplier partnerships.

## Purchasing practices

Purchasing practices are an important part of interaction between brands and their suppliers. The way that we buy from and work with our suppliers can have an impact on the working conditions at their factories. Therefore, we work on improving our purchasing practices through improving our planning and forecasting as much as possible with the help of ACT.

In 2021 we rolled out the ACT Purchasing Practices Self-Assessment (PPSA) Survey with internal team members, as well as the Purchasing Practices Assessment (PPA) Survey suppliers. The purpose of these surveys is to analyze our purchasing practices from our own perspective as well as from our suppliers' perspectives. Questions in this survey are related to key topics such as sourcing practices, forecasting and capacity planning, price negotiation, changes to order, re-orders and sampling. Priority topics that require improvement were selected if (1) they received a low score from both our suppliers and G-Star employees, (2) our suppliers ranked G-Star's performance lower than the industry average, or (3) the topic received a high percentage of "Don't know" as an answer from either our suppliers or own employees. According to ACT a low score and a high number of "Don't know" indicate that action is required in the form of training and

# PEOPLE CONTINUED

implementation of process improvements.

The results of both surveys were used to identify the key purchasing practices topics that should be improved. In 2023 the PPSA and PPA will be renewed. Due to the outcome of the 2021 survey we developed a Vendor Scorecard.

Read more about the content and methodology of the PPA and PPSA surveys and their global results [here](#).

## Vendor Scorecard

In collaboration with Product Development, Purchasing, Sourcing, Sustainability and Quality the vendor scorecard was developed. This objective of our scorecard is to monitor, evaluate and incentivize suppliers to improve their practices. It also acts as a tool to support our teams in selecting existing and new suppliers.

The vendors are scored based on indicators such as research & development, cost effectiveness, speed, quality, delivery time and social and environmental benchmarks. These benchmarks are based on the programs and tools explained in the PEOPLE and PLANET chapters.

### Social Benchmark

- Higg verified FSLM data and/or third-party audit score
- HR management system
- Active independent union

### Environmental Benchmark

- DETOX Input report
- DETOX Process report
- DETOX Output report
- Higg verified FEM data
- Science Based Targets
- Zero direct coal used
- Uses renewable energy sources
- Uses recycled water in processes

## Living Wage Gap Analysis

In 2022, we performed our second Living Wage Gap Analysis for Tier 1 CMT and processing suppliers. This helped us to understand the gap between set living wage per production country or region, and the average wage our suppliers pay to workers.

To understand the living wage we used the Living Wage Indicator (LWI) and for applicable countries, the Global Living Wage Coalition Benchmark (GLWCB). For the average wage per supplier, we analyzed salaries across 43 factories representing 95.6% of our production volume from December 2021 to November 2022. Management salaries and overtime hours was excluded from the data, whereas worker benefits were included. Alongside this, we compared the minimum wage per country.

Based on our 2022 analysis, we can conclude that all G-Star's suppliers are paying above the minimum wage however, there is still a gap between the average and estimated living wage. We strive to close this gap via advocacy, freezing of labor costs, improvements to wage management systems and education. To support this, we will carry out the Living Wage Gap Analysis again in 2023 and compare the results to the previous year which, will inform our Vendor Scorecard. Once up-to-date, G-Star can support suppliers to improve wage management systems.

# REFLECTIONS ON 2022

Strategic Topic	2022 Action & Goals	2022 Highlights & Progress	2023 Actions & Goals
Workers' Rights	<p>Adopt Higg FSLM self-assessments for Tier 1 CMT suppliers that represent 80% of business volume.</p> <p>Adopt Higg FSLM verified assessments for Tier 1 CMT suppliers that represent 60% of business volume.</p> <p>Adopt Higg FSLM self-assessments for Tier 2 suppliers that represent 50% of business volume.</p> <p>Adopt Higg verified FSLM assessments for Tier 2 suppliers that represent 30% of business volume.</p> <p>Evaluate the functionality of the Fair Wear complaint mechanism in Tier 1 factories within India. Additionally, explore the possibilities to expand to 1 more key sourcing country.</p> <p>Participate in the Textile in Transition: Boosting Transparency and Farmer Livelihoods in Organic Cotton Supply Chains multi-stakeholder project, initiated by Organic Cotton Accelerator.</p>	<p>Adopted Higg FSLM self-assessments for Tier 1 CMT suppliers that represented 82% of business volume.</p> <p>Adopted Higg verified FSLM assessments for Tier 1 CMT suppliers that represent 74% of business volume.</p> <p>Adopted Higg self-assessments for Tier 2 suppliers that represent 72% of business volume.</p> <p>Adopted Higg verified FSLM assessments for Tier 2 suppliers that represent 64% of Tier 2 business volume.</p> <p>Expanded the existing Fair Wear mechanism to 1 more factory in India, and kicked-off the process to roll-out the initiative in Vietnam and Turkey, 2 key sourcing countries.</p> <p>Started participation in the Textile in Transition: Boosting Transparency and Farmer Livelihoods in Organic Cotton Supply Chains.</p>	<p>Adopt Higg FSLM self-assessments for Tier 1 CMT suppliers that represent 90% of business volume.</p> <p>Adopt Higg FSLM verified assessments for Tier 1 CMT suppliers that represent 82% of business volume.</p> <p>Adopt Higg FSLM self-assessments at Tier 2 suppliers that represent 89% of business volume.</p> <p>Adopt Higg FSLM verified assessments for Tier 2 suppliers that represent 72% of business volume.</p> <p>Roll out the Fair Wear Complaints mechanism in at least 1 additional country.</p> <p>Participate in the Textile in Transition: Boosting Transparency and Farmer Livelihoods in Organic Cotton Supply Chains multi-stakeholder project initiated by Organic Cotton Accelerator.</p>

## Fair Wages

<p>Update the Living Wage Gap with new data from suppliers as well as new data from the LWI and GLWCB, and add an additional methodology.</p> <p>Develop communication guidelines on wage gap in factories support wage transparency.</p> <p>Disclose the percentage of workers that receive payments digitally. Explore approaches to increase digital payment.</p>	<p>The 2022 Living Wage Gap Analysis covered data from 95.6% of suppliers.</p> <p>A meeting took place in Dhaka with our Bangladeshi suppliers, the purpose was find a common approach for wage increase.</p> <p>84% of workers received wages digitally.</p>	<p>Cover 100% of Tier 1 factories in our Living Wage Gap Analysis.</p> <p>Support remaining factories to roll out digital payments in 2023.</p>
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# PLANET





# PLANET

G-Star RAW takes responsibility for any potential environmental impact on our [PLANET](#) across all stages of our value chain. We consider everything from the choice of raw materials and fibers to responsible fabric and garment production and logistics, from our own operations, all the way through to consumer care and end-of-life of the product. That is why [Circularity](#) is at the base of all our Planet pillars and our Product Life Cycle. If we want to be here as a denim brand in the future, we need to design in ‘closed loops’ today. By this, we mean using only [Responsible Materials](#), eliminating [Pollution](#) and decreasing our impact on [Climate Change](#).

## Responsible Materials

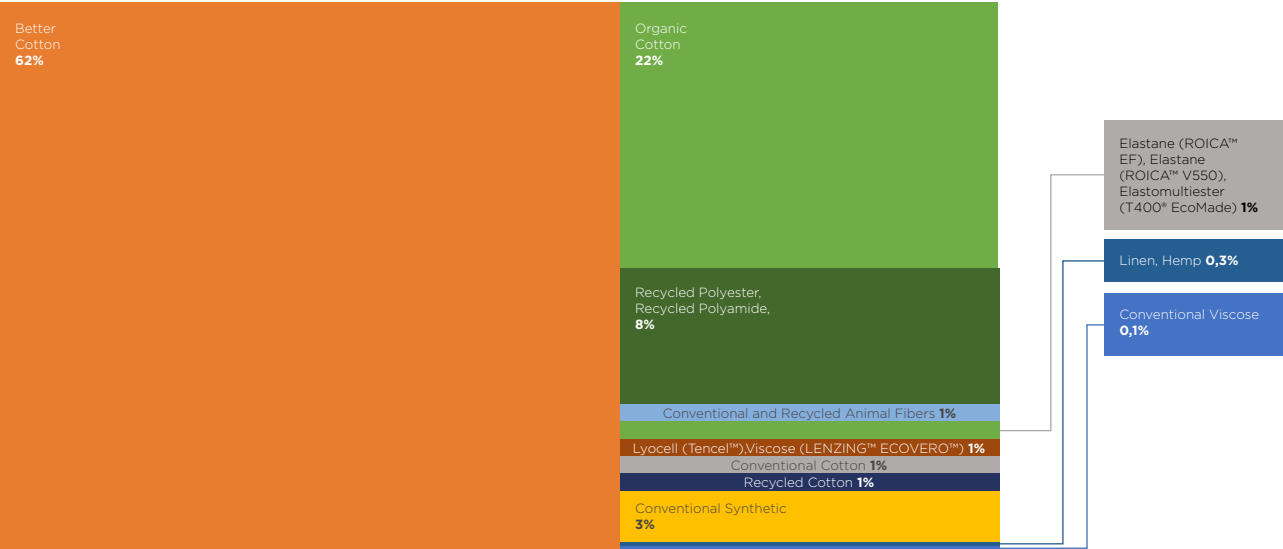
We are committed to ensuring that all raw materials used in our products are grown and manufactured in a responsible way that preserves resources and respects human and animal rights. Since we are a denim brand, around 86% of the raw material we use is cotton, a crop that has historically been associated with high water and pesticide use. Around 0.92% of our material mix is conventional cotton, the rest is either organic, recycled, regenerative or sourced through the Better Cotton Initiative (BCI) via a mass balance

## G-Star Product Life Cycle



system. The remaining 14% of our material mix includes 50% polyester and 50% of other materials such as man-made cellulosic fibers, elastane and animal fibers. Below provides a breakdown of our complete material mix.

## Breakdown of materials used for G-Star RAW products

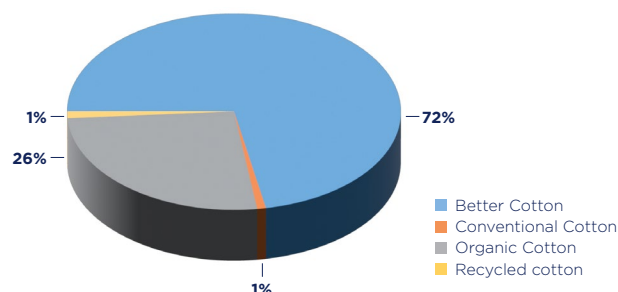


# PLANET CONTINUED

## A Closer Look at Key Materials

### Cotton

Cotton makes up around 86% of our complete material mix. 26% of this is organic cotton and 72% is sourced via the Better Cotton Initiative which, G-Star is a partner. By investing in this we are supporting the Better Cotton Initiative's mission to help cotton communities survive and thrive, while protecting and restoring the environment.



The Better Cotton Initiative applies a mass balance system, which means that the cotton is mixed with conventional cotton in a complex supply chain. The end product may therefore not actually contain Better Cotton. Throughout the years, BCI sourced cotton has been an important first step for G-Star to move away from conventional cotton and towards more sustainable cotton sourcing practices. However, in our new responsible materials goals we do not consider BCI sourced cotton as a sustainable material nor do we include it in our Responsible Materials Ranking. This is because BCI's system currently is not designed to support full traceability, as demonstrated

with cotton sourced via Cotton Brazil. This is technically traceable because each bale carries a tracking code including information such as the farm, ginning plant through to HVI testing however, BCI's technological infrastructure is not set-up to provide this level of detail yet.

In 2021 BCI announced plans to develop a physical traceability solution in response to a growing need for greater transparency. G-Star will continue to stay abreast of this project whilst working to increase the volume of recycled, organic and regenerative cotton in our material mix.

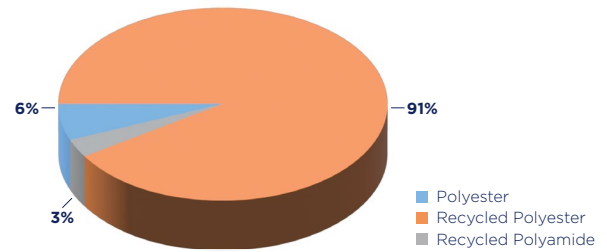
To invigorate our responsible materials goals we signed Textile Exchange's 2025 [Sustainable Cotton Challenge](#) in 2020 and its 2025 [Recycled Polyester Challenge](#) in 2021. We also partnered with the Organic Cotton Accelerator (OCA) in 2021. This is a global platform that supports farmers in their transition to organic cotton cultivation. We participate in their multi-stakeholder project Textile in Transition: Boosting Transparency and Farmer Livelihoods in Organic Cotton Supply Chains that aims to build a fair, environmentally friendly and economically viable organic cotton supply chain. The project is developed and funded by Netherlands Enterprise Agency Fund for Responsible Business (FVO) and involves a partnership with 2 other brands: Bestseller and Essenza Home. In 2023 we will explore the use of organic cotton and organic cotton in transition via OCA and hope to develop products for our 2024 collection.

In 2023 we will apply for brand-level certification to the Organic Cotton Standard (OCS) and the Global Recycled Standard. OCS aims to expand organic agricultural production whilst GRS strives to increase the use of recycled materials and includes social and environmental processing requirements as well as chemical restrictions; these certifications will enable G-Star to make on-product claims that are verified by a reputable third party.

# PLANET CONTINUED

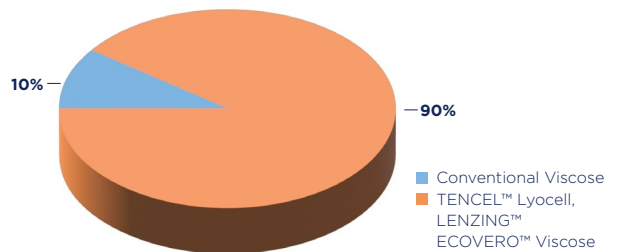
## Polyester

In 2022, polyester made up 8% of our total material mix. We are proud that 94% of this is recycled polyester or polyamide with the remaining 6% still conventional. We recognize that we must explore fiber-to-fiber recycled materials moving forward and overall, reduce our use of synthetics.



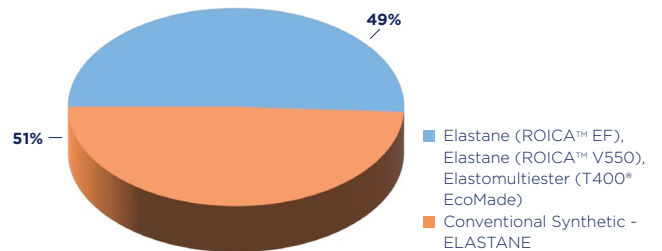
## Viscose

In 2022, Viscose made up 1% of our total material mix. TENCEL™ Lyocell fibers and LENZING™ ECOVERO™ Viscose fibers made up 90% of this. In the coming years we plan to phase out conventional viscose altogether.



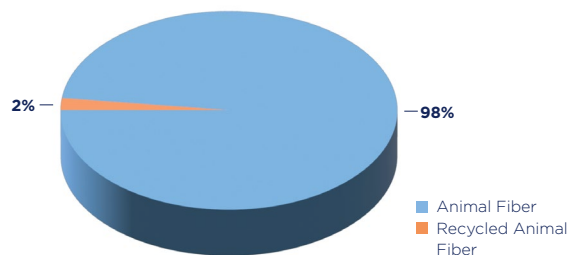
## Elastane

Elastane makes up 2% of our total material mix and is used to improve comfort, shape and fit. Over half of this is still conventional however we are growing our use of more responsible alternatives, for instance 46% of the Elastane used in 2022 was T400® EcoMade, which contains 50% recycled PET content.



## Animal Derived Fibers

1% of G-Star's products were made using animal derived fibers in 2022. Whilst these make up a relatively small proportion of our materials, we have an [Animal Welfare Policy](#) in place to help ensure these fibers come from safe and ethical sources. As a minimum, all leather factories must be Leather Working Group certified to a bronze, silver or gold level. Positively, we work with 2 leather suppliers that both hold Gold level LWG certificates. In the future, we aim to phase out the use of virgin animal derived fibers across G-Star products.



# PLANET CONTINUED

### Responsible Material Goals

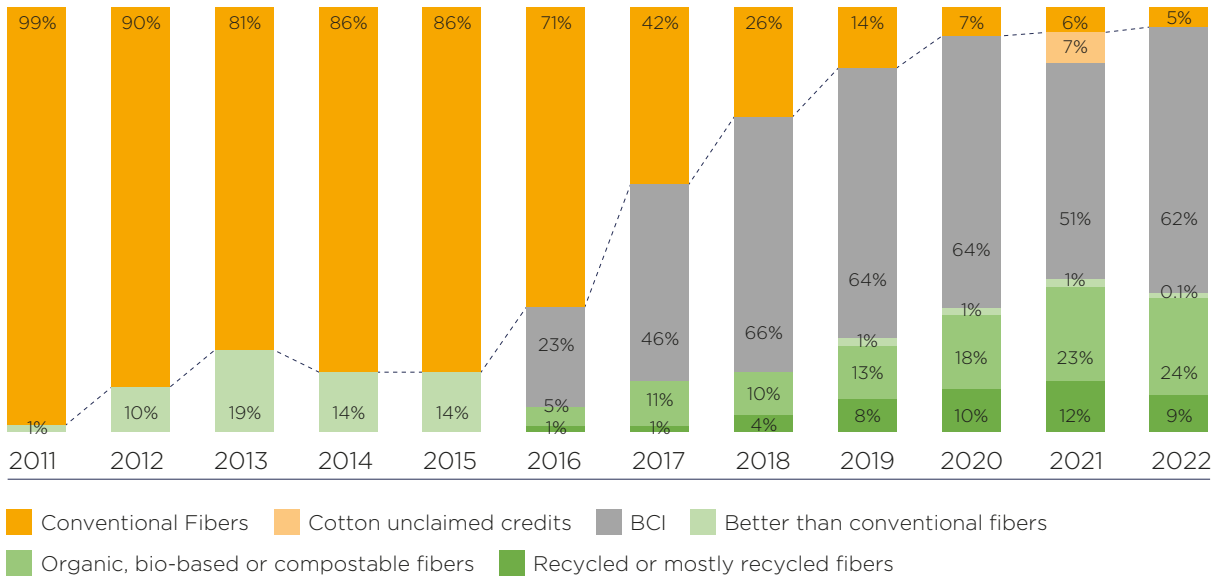
After reaching our materials goals in 2020, we set new targets that are part of our Sustainability Strategy moving forward. These are broken down below and are also reflected in our Responsible Materials Ranking.

**Goal 2025**  
75% of our collection will be made of regenerative, recycled and/or organic/bio-based materials.

**Goal 2030**  
100% of our collection will be made of regenerative, recycled and/or organic/bio-based materials.

Currently, 33% of our materials are either recycled and/or organic/bio-based /compostable materials. We consider materials that fall into this scope to be more responsible. The remaining 67% of our materials consist of BCI sourced cotton sourced via a mass balance system, better than conventional, and conventional materials.

Breakdown of use of sustainable materials over the years

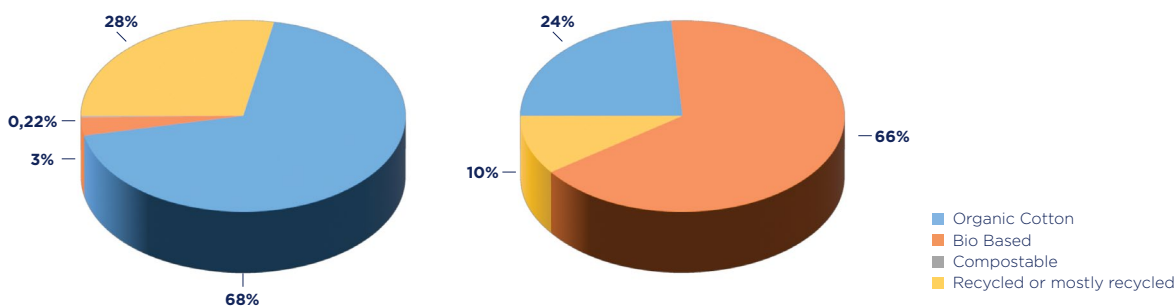




# PLANET CONTINUED

Including Better Cotton, 95% of the materials used were recycled and/or organic/bio-based/compostable.

### Responsible Material Breakdown incl. BCI



### Responsible Materials Ranking

To guide us in our sustainable materials journey we have been using a Responsible Materials Ranking since 2019, listing all the fibers we use and indicating their environmental impact, according to existing industry standards. In order to rank the fibers, we first categorized all fibers we use, as well as the ones we specifically choose not to use. To guarantee the most objective and up-to-date ranking tool, the categorization of the fibers is completely based on existing industry tools and scoring mechanisms. We included the classification of CanopyStyle’s annual Hot Button Ranking, the rigorous standards of the Cradle to Cradle Products Innovation Institute, Higg Materials Sustainability Index (Higg MSI) and the Preferred Material Benchmark by Textile Exchange. We stay abreast of developments across material benchmarks and update the ranking to reflect best-practice.

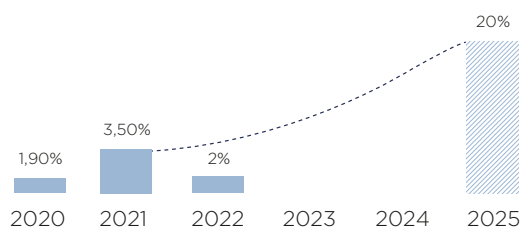
# PLANET CONTINUED

## Cradle to Cradle Certified™ innovations

The Cradle to Cradle Products Innovation Institute helps us to design in closed loops. Their certification process is the only one in the world designed for a circular product economy and it requires unparalleled levels of transparency across the supply chain.

G-Star has committed to ensuring 20% of our collection contains Cradle to Cradle Certified® fabrics by 2025. In 2022, just 2% of all G-Star products sold were made with Cradle to Cradle Certified® fabrics because we focused on using up existing Cradle to Cradle Certified® fabrics from 2021. In 2023, we will significantly build on this volume by developing a number of new Cradle Certified® fabrics. G-Star recognizes the need to actively involve suppliers as part of the Cradle to Cradle roadmap and collaboration will improve our sourcing options throughout the supply chain. In 2021, we communicated our Cradle to Cradle target with suppliers and since, 2 suppliers in Bangladesh have started the process of becoming certified.

### Products made with Cradle to Cradle Certified™ fabrics



## Circularity Goals

### Goal 2025

20% of our collection will be made with Cradle-to-Cradle Certified® fabrics.

### Goal 2030

Design for durability and recycling to extend life of 1 million pairs of jeans by offering solutions for re-use, remake or recycling by 2030.

By increasing our use of Cradle to Cradle Certified® fabrics, we continue to increase our use of clean chemistry as well. Part of this strategy also includes the use of specific sustainable dyes, such as EarthColors® by Archroma and Recycrom, throughout our collections.

Read more about our Cradle to Cradle Certified® journey [here](#).

## Packaging

Packaging is an inevitable and important part of shipping products from one place to another without damaging them. However, packaging requires additional resources, often in the form of plastics. Our focus for 2023 will be to transition all packaging to 100% recycled.

### Polybags

In 2020, we started testing if we could swap virgin plastic polybags with polybags made from recycled polyethylene (PE) to decrease our use of virgin resources and therefore lower our impact on the environment.

In 2022, all our suppliers used polybags made from 100% recycled content. We also started using smaller and thinner polybags for most product groups, beneficial as these require less material.

To encourage the responsible reuse of packaging, products ordered via G-Star.com are first unpacked in our Amsterdam-based warehouse so that polybags can be disposed of correctly and placed in the recycling bin.

# PLANET CONTINUED

## Mailing Bags

In 2022 we introduced paper mailing bags for e-commerce deliveries outside of the Netherlands as a replacement for boxes, reducing the weight of shipping. This will be rolled out across all destinations in 2023.

## Climate Neutral Delivery

Besides scoping our emissions, we are already implementing more climate-friendly solutions to reduce our emissions. One example is via our bike delivery service in collaboration with Fietskoerier which operates in the largest Dutch cities, such as Amsterdam. This made up 4% of all delivery transportation in 2022. Next to that, our standard delivery option with DHL Parcel in the Netherlands has also become more responsible. DHL Parcel has extended its electrical fleet and launched a carbon offset program called GoGreen.

- In 2022, 47% of international e-commerce parcels shipped to customers were carbon neutral through offsetting.
- In 2022, 100% of parcels delivered to customers in the Netherlands were carbon neutral through offsetting.

Through DHL's GoGreen offset program we contribute to climate protection projects related to water, energy efficiency, biogas, and biomass in different countries around the world. Read more about those projects [here](#).

## Closing the loop

G-Star has committed to ensuring 1 million pairs of jeans to be repaired, reused or recycled by 2030. In 2022, we continued to design products for durability and educate customers on how to [wear and care](#) for their garments. We recognize that our product's life cycle does not only focus on the supply chain and garment use but also, its end of life phase for which, we take responsibility and ask our customers to do the same. In support of this, we launched 2 programs in 2021 that aim to extend the life of our products, as well as ensure responsible end of life.

## Certified Tailors Program

Our [Certified Tailors program](#) aims to extend the lifetime of our jeans by offering free repairs on G-Star denim via G-Star Certified Tailors. This initiative was first launched in 2021 across 5 cities in the Netherlands and in 2022 was extended to Germany, Belgium, and South Africa following its success. We work with tailors that have been trained to become G-Star denim experts, teaching them all about denim, our stitching, 3D designs, and the fit and fabrics.

## Return your old denim

In 2021 we re-initiated a product takeback service during a pilot across 2 stores in the Netherlands. This included our outlet in Roermond and our mono-brand store in Rotterdam. In 2022 we extended this program to 7 countries including Belgium, France, Germany and Austria. As a result, 97 stores (both retail and outlets) received an RYD box. To encourage our customers to return their denim, G-Star offers a discount on a new pair of jeans. In 2023, we will explore long-term solutions for recycling or repurposing the jeans we collected.





# PLANET CONTINUED

## Eliminating Pollution

Minimizing pollution and eliminating all hazardous chemicals have been a major priority for us since signing the DETOX Commitment with Greenpeace in 2013. Through the DETOX Commitment we committed to ban the use of hazardous chemicals from our products and production processes in our supply chain. To monitor the performance of our suppliers, G-Star has been running its Supplier DETOX Program since 2018. We require all suppliers to improve their performance on input, process and output areas of chemical management within the facilities used to produce our products.

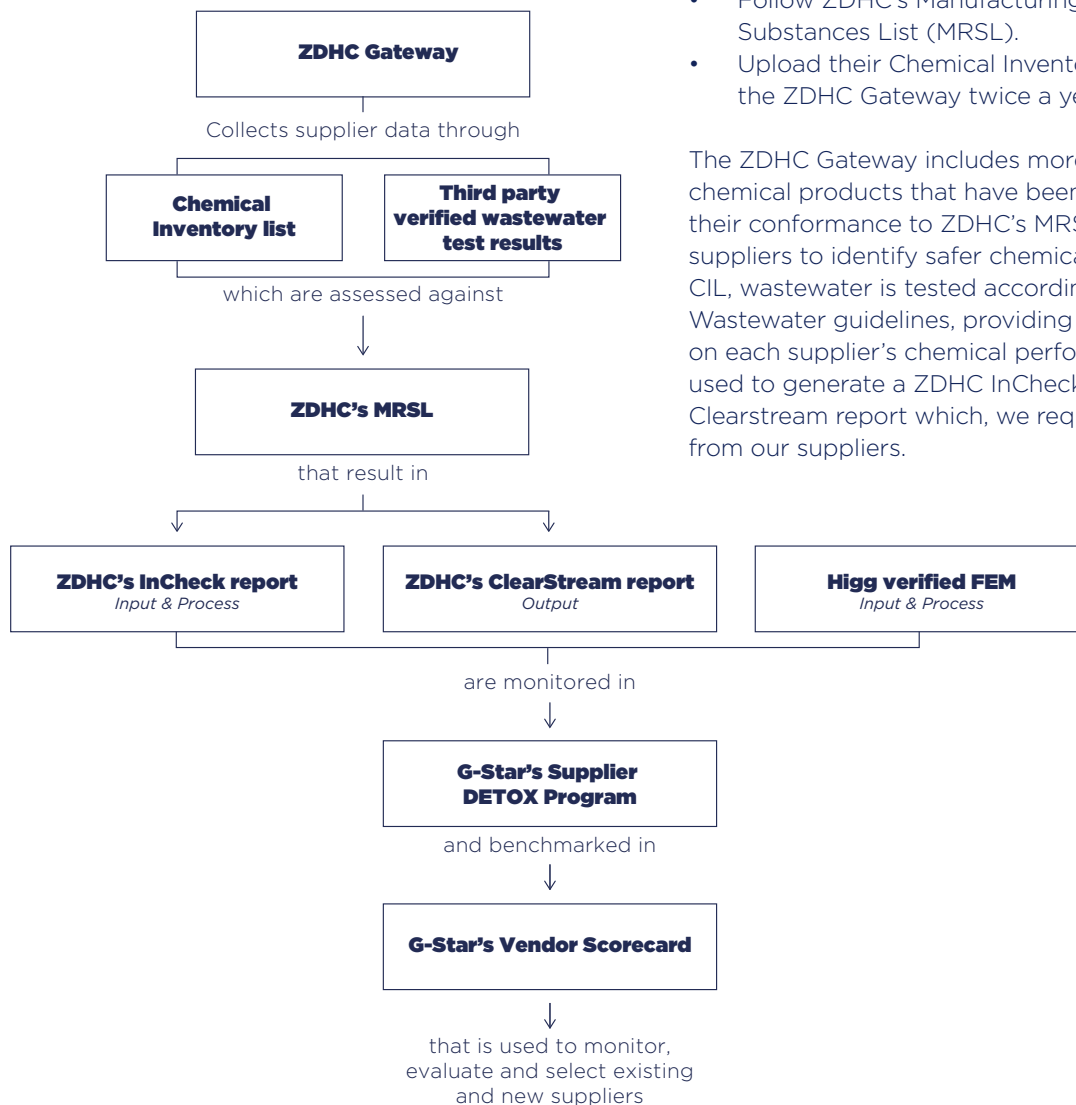
## Zero Discharge of Hazardous Chemical (ZDHC)

G-Star joined the Zero Discharge of Hazardous Chemicals (ZDHC) Foundation in 2012. Our first Supplier DETOX Program was established with our membership to the ZDHC initiative and later extended with the addition of complementary monitoring tools. The ZDHC member brands unite around a joint Roadmap to Zero to ensure safe and sustainable chemical use in the fashion industry. ZDHC also provides tools to improve chemical management.

As part of our Supplier DETOX Program, all G-Star supply chain partners are required to:

- Follow ZDHC's Manufacturing Restricted Substances List (MRSL).
- Upload their Chemical Inventory List (CIL) in the ZDHC Gateway twice a year.

The ZDHC Gateway includes more than 30,000 chemical products that have been assessed on their conformance to ZDHC's MRSL and helps suppliers to identify safer chemicals. Alongside the CIL, wastewater is tested according to the ZDHC Wastewater guidelines, providing verified data on each supplier's chemical performance. This is used to generate a ZDHC InCheck and a ZDHC Clearstream report which, we request twice a year from our suppliers.

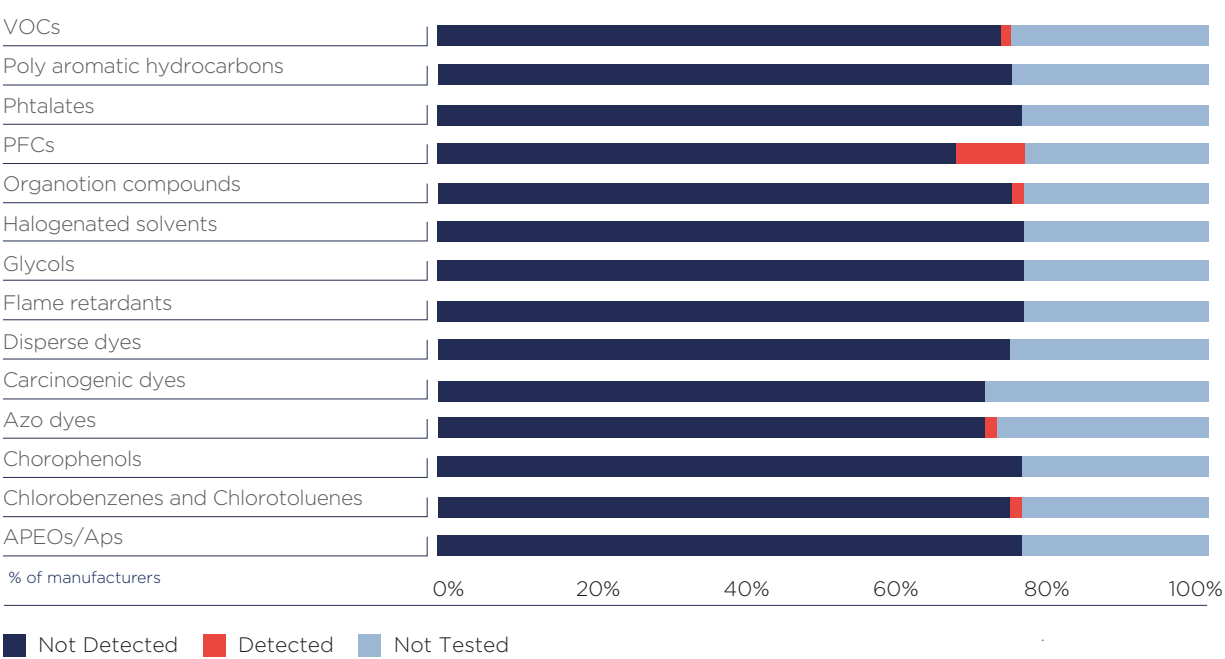


# PLANET CONTINUED

In 2021, ZDHC Implementation tokens were provided to G-Star Tier 1 and 2 suppliers who were new or, had recently started to implement the Roadmap to Zero program. The token system enables suppliers to access training for free via the ZDHC eLearning academy or to onboard the Supplier to Zero (StZ) program. In 2022, G-Star issued 8 tokens for the StZ program, allowing all factories to receive the Foundational Level certificate.

The performance of chemical substances per parameter in the Supplier DETOX Program is shown in the overview below. This performance covers all Tier 1 and Tier 2 wet processing factories that fall under the ZDHC scope in 2022, amounting to 107 in total. Over 60% of these factories were tested against MRSL substances, some of which were detected. To maintain and improve these we will ensure that suppliers failing to meet ZDHC requirements will conduct a Root Cause Analysis (RCA) and develop a Correction Action Plan (CAP).

**All Factories - Performance by Parameter (MRSL Substances)**



G-Star jumped from Foundational to the Progressive Level in the ZDHC Brands to Zero assessment report. This is based on 2022 data and sets out to understand how brands implement ZDHC requirements both internally and at a supply chain level, including how they engage with facilities.

# PLANET CONTINUED

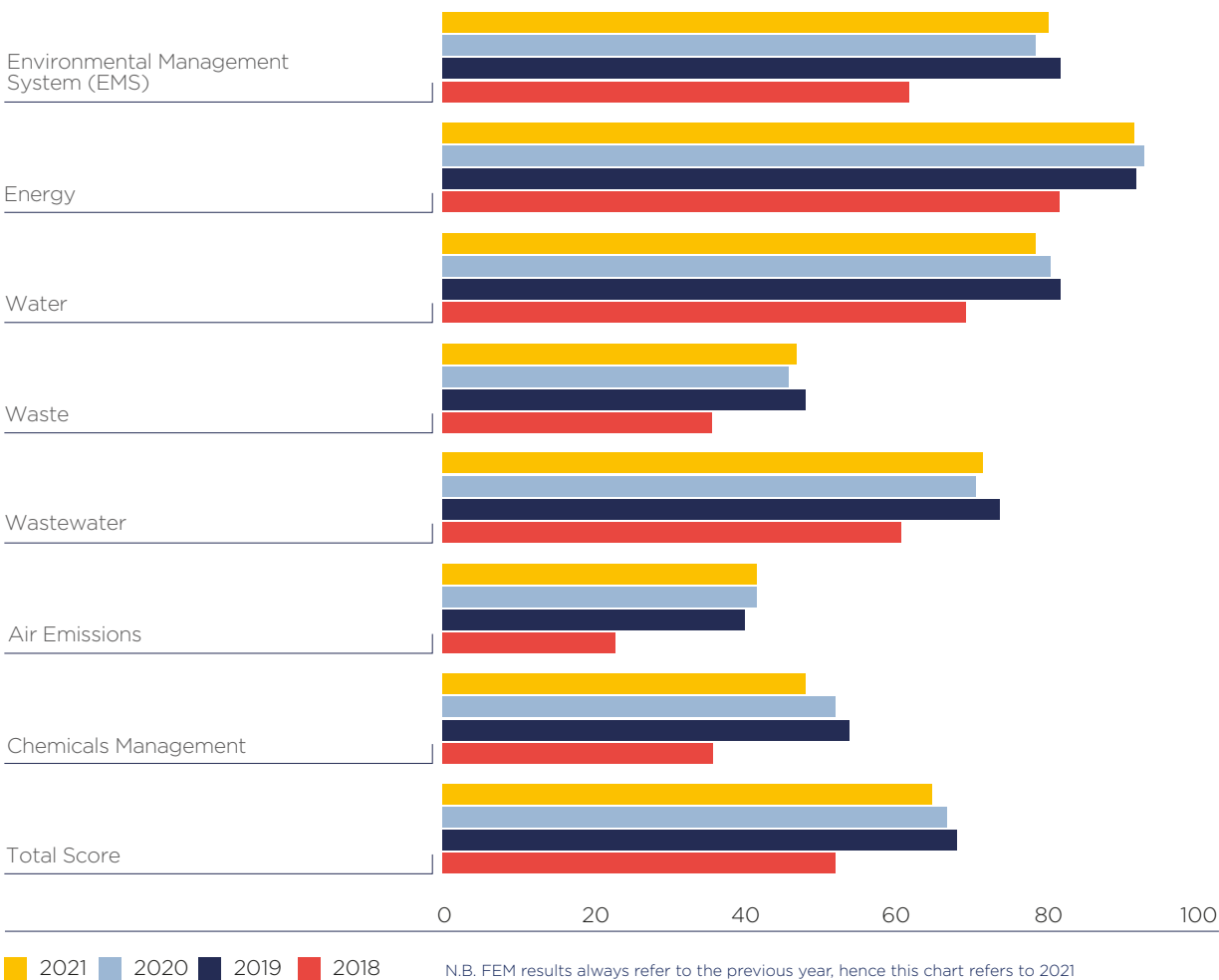
### Higg FEM performance

The Higg Facility Environmental Module (FEM) allows manufacturing factories to measure their environmental performance, benchmark their results against peers, and identify areas to make meaningful improvements. It also guides factories through a step-by-step approach to environmental management. Scores are generated by suppliers and verified by a third-party; results refer to the previous year, meaning the figure below demonstrates verified FEM scores from 2021.

A total of 84 factories completed the Higg verified FEM providing an average score of 65.2%. This is slightly lower than the previous year's 66% average. The latest score represents 83% of our Tier 1 business volume and 80% of our Tier 2 business volume.

In 2023 we will continue the Higg verified FEM assessment as part of our Supplier DETOX Program. We will aim for an average score above 65.2% which should cover at least 86% of Tier 1 and 82% of Tier 2 production volume. This is also in line with the SAC's membership requirements surrounding business volume.

Average Higg vFEM Scores





# PLANET CONTINUED

The Supplier DETOX Program combines 2021 data from the Higg verified FEM with the ZDHC 2022 results from the InCheck and ClearStream reports.

Once we receive this data it is analyzed based on three separate areas of chemical management:

- **Input** – the level of risk regarding chemical inventory is assessed. This is based on Higg FEM 2021 and ZDHC InCheck results.
- **Process** – the level of risk regarding chemical management on factory premises is assessed. This is also based on Higg FEM 2021 and ZDHC InCheck results.
- **Output** – level of risk regarding wastewater treatment is assessed. This is based on ZDHC ClearStream reports (wastewater testing).

By providing a risk qualification on each of these 3 areas, opportunities for improving a facility's overall chemical management system are easily identified.

For each of the 3 areas one of the following 5 risk qualifications is listed in the supplier report:

- Best in class
- Low risk
- Medium risk
- High risk (non-compliance)
- High risk (unknown)

We share their performance with our suppliers in individual DETOX Supplier Reports. These serve as a starting point between G-Star and our suppliers to decide which future actions can and should be taken towards zero discharge of hazardous chemicals and more sustainable performance.

Since 2021, these reports also include a Corrective Action Plan (CAP) to determine which follow-up actions require the attention of the supplier based on their performance. These actions and a time indication should be added by the supplier and shared with G-Star. In 2022 we reported fewer responses versus 2021 however, this is due to the baseline increasing significantly; in 2021 42 factories were considered whereas, 107 were in 2022.

Moving forward, we will continue to work with the ZDHC and Higg tools and standards to monitor the production and manufacturing performance of suppliers in the DETOX program.

	Higg FEM 3.0 Response			ZDHC ClearStream Report		ZDHC InCheck Report	
	Verified	Self-Ass.	No Response	Responded	Did not respond	Response	No response
2021	90%	5%	5%	88%	12%	81%	19%
2022	66%	7%	27%	62%	38%	48%	52%
Detox performance classification	Number of manufacturers			% of manufacturers			
	Input	Process	Output	Input	Process	Output	
Best-in-class	6	10	2	6%	9%	2%	
Low risk	0	21	19	0%	20%	18%	
Medium risk	55	17	17	51%	16%	16%	
High risk - Non-compliance	17	30	28	16%	28%	26%	
High risk - Unknown	29	29	41	27%	27%	38%	
Total	107	107	107	100%	100%	100%	

# PLANET CONTINUED

## Reducing our impact on Climate Change

At G-Star, we recognize the critical role we play in mitigating climate change and the importance of reducing our carbon footprint. As a result, we focus our climate impact work on our supply chain and consumer engagement, while also taking steps in our own offices and stores.

### Science Based Targets

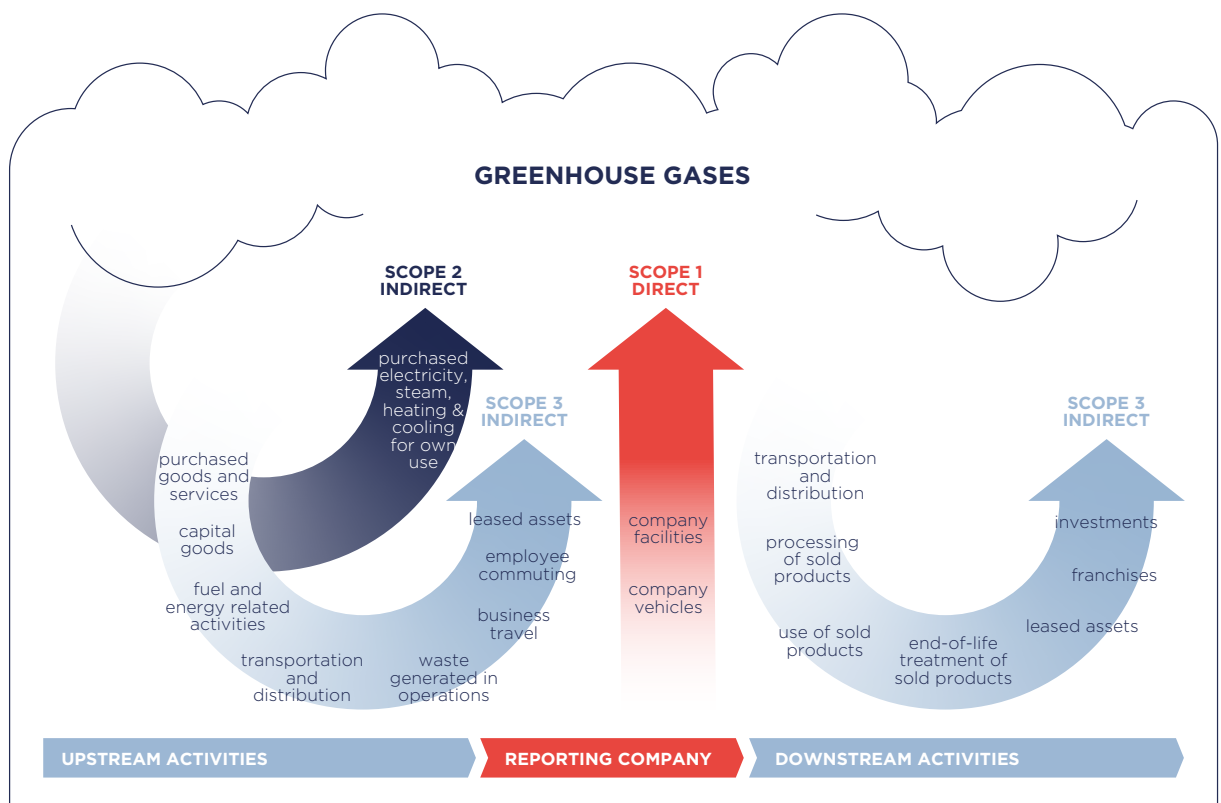
In July 2019, G-Star RAW signed the UN Fashion Charter and publicly committed to addressing the topic of climate change. Read more about the start of this journey [here](#). As a result, G-Star committed to the [Science Based Targets initiative \(SBTi\)](#), making sure our emission reduction goals align with the latest climate science and drive us towards meeting the 2015 Paris Accord, on limiting global

warming to well below 2 degrees Celsius above pre-industrial levels. In November 2022, G-Star submitted its carbon reduction targets to the SBTi and the targets were validated in July 2023. The process was completed with the support of our partners at RESET Carbon Ltd. and included an in-depth analysis of our carbon emissions for the year of 2021, which is our emissions baseline year.

### 2021/2022 Carbon Footprint Calculations

Carbon accounting is broken down into 3 categories defined by the Greenhouse Gas (GHG) Protocol Corporate Standard: Scope 1, Scope 2 and Scope 3, as can be seen in the figure below.

These definitions are retrieved from the [Climate Action Playbook](#) that explains the commitment from the [Fashion Industry Charter for Climate Change](#).



# PLANET CONTINUED

- Scope 1 emissions are directly emitted from G-Star owned and controlled operations.
- Scope 2 emissions are coming from the generation of electricity and heat and steam purchased by G-Star.
- Scope 3 includes all of G-Star’s indirect emissions from value chain activities. Examples include purchased goods and services, transportation and distribution, business travel, employee commuting, and use of sold products.

To calculate our carbon footprint, we followed the guidelines provided by international standards, including the GHG Protocol for Scope 1, 2 and 3. We utilized accurate data and robust estimation methods to ensure the reliability of our results and shared these with a third-party verifier, Carbon Footprint Ltd. who, provided their assurance for the 2022 carbon inventory.

Carbon Footprint Ltd. completed the review in accordance with the [‘ISO 14064 Part 3 \(2019\): Greenhouse Gases: Specification with guidance for the verification and validation of greenhouse gas statements’](#).

Based on the results of their verification process, Carbon Footprint Ltd. provided assurance that the GHG emissions statement:

- Is materially correct and is a fair representation of the GHG emissions data and information; and
- Is prepared in accordance with the GHG Protocol.

It is of Carbon Footprint Ltd.’s opinion that G-Star RAW has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the 2022 period and boundaries.



## Scope 1 & 2

A total of 115 owned and operated sites were included in G-Star’s inventory for the 2022 reporting period. The breakdown per site type and location can be found in the table below. During the year of 2022 13 sites closed down but the 2022 inventory still captured the emissions of the operated months of these sites.

Site type	Number of site
Mono Brand Store	60
Outlet	41
Office/Showroom	6
Office	2
Warehouse	2
Showroom	2
Mono store	1
Office/HQ	1

Country	Number of site
Netherlands	24
France	20
Japan	18
Belgium	13
Germany	13
United States	11
South Africa	4
Canada	3
Austria	2
Switzerland	2
Spain	1
Bangladesh	1
China	1
Macau	1
Ireland	1

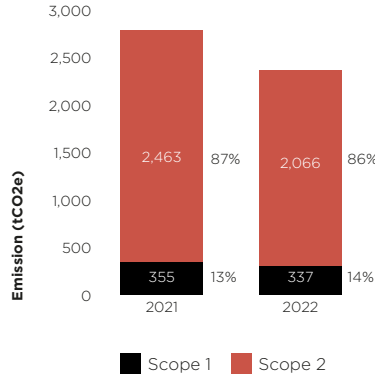


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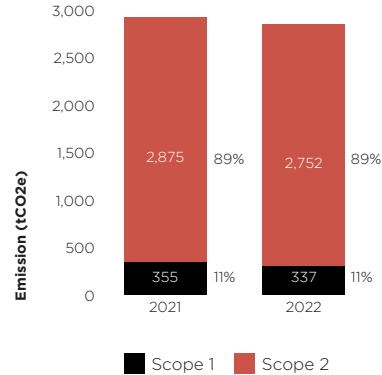
In 2022, Scope 1 and 2 totaled 2.403 tCO<sub>2</sub>e (location-based emissions) and 3.089 tCO<sub>2</sub>e (market-based emissions). In comparison to the emissions recorded in 2021, the year 2022 witnessed a noteworthy reduction of 15% (location-based emissions) and 4% (market-based emissions).

We observed a comparable distribution between Scope 1 and Scope 2 emissions, with Scope 2 emissions accounting for 86% and 89% of the total emissions based on the location-based and market-based grid factors, respectively.

**Breakdown of Total Emission (Location-based) by Scope**

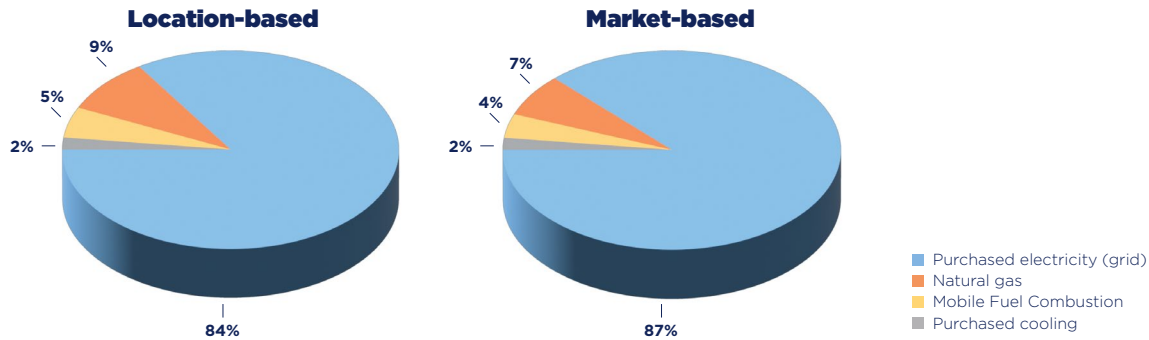


**Breakdown of Total Emission (Market-based) by Scope**



Purchased electricity constituted the largest portion of Scope 2 emissions, representing 97% of the total Scope 2 emissions based on the location-based calculation method. Scope 1 emissions were primarily attributed to natural gas combustion, accounting for 63% of the total Scope 1 emissions, while mobile fuel combustion contributed to the remaining 37%.

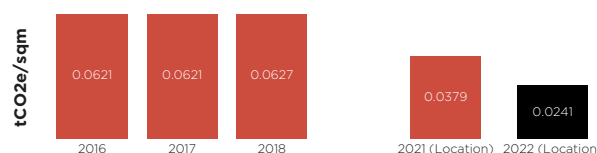
**Breakdown of Total Scope 1 and 2 in 2022 by Source**



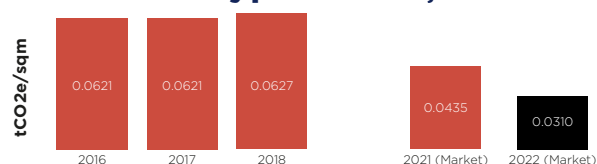
In 2022, we observed a rise in the gross floor area accompanied by a decrease in emissions, leading to a reduction in emission intensity per unit of floor area. Purchased electricity emerged as the primary source of emissions. Despite a slight increase of 2% in electricity consumption, the grid factor experienced a larger reduction, ranging from 4% to 16% compared to 2021.

# PLANET CONTINUED

## Emissions Intensity per Floor Area, Location-based



## Emissions Intensity per Floor Area, Market-based



	2021	2022	% Change
Floor area (sqm)	74,307	99,664	34%
Electricity (grid) (kWh)	6,959,595	7,065,713	2%
Weight EF (kgCO <sub>2</sub> e/kWh) - Location	0.338	0.284	-16%
Weight EF (kgCO <sub>2</sub> e/kWh) - Market	0.397	0.381	-4%
Emission (tCO <sub>2</sub> e) - Location	2,818	2,404	-15%
Emission (tCO <sub>2</sub> e) - Market	3,231	3,809	-4%

The analysis uncovered that the majority of Scope 1 and 2 emissions, amounting to over 90% of the total, were concentrated in 5 countries. Notably, The Netherlands alone contributed around two-thirds of these emissions. The leading countries in terms of emissions were The Netherlands, Japan, United States, Belgium, and South Africa. Within The Netherlands, it was found that 3

specific sites, the G-Star headquarters and 2 warehouses located in Amsterdam, collectively accounted for a significant portion of the country's emissions, totaling 78%.

For information relating to data quality for Scope 1 and 2 please refer to the methodology, detailed within the Appendix B.

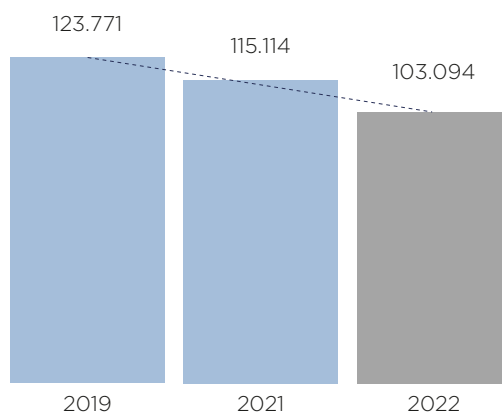
### Scope 3

In 2022, G Star's carbon footprint was primarily driven by Scope 3 emissions, which contributed to 97% of the company's total emissions, totaling 103.094 tCO<sub>2</sub>e. When compared to 2021, Scope 3 emissions reduced by 10%. The table below demonstrates the percent change per Scope 3 categories.

Scope 3 Category	2021	2022	% Change
Cat 1 - Tier 1&2	35,836	37,943	6%
Cat 1 - Tier 3&4	13,249	14,469	9%
Cat 1 - Other	13,003	7,753	-40%
Cat 3 - Fuel and energy related	626	703	12%
Cat 4 - Upstream transportation	24,865	11,351	-54%
Cat 5 - Waste	709	188	-73%
Cat 6 - Business travel	222	567	155%
Cat 7 - Employee commuting	2,513	3,209	28%
Cat 11 - Use of sold products	21,987	25,206	15%
Cat 12 - End-of-life of sold products	515	803	56%
Cat 13 - Downstream leased assets	386	169	-56%
Cat 14 - Franchises	1,202	732	-39%

# PLANET CONTINUED

## Scope 3 Total Emissions



For a full understanding of the calculated Scope 3, please refer to the table below.

Greenhouse Gas Protocol Scope 3 Category	Description
Cat 1: Purchased goods & services	Emissions from tier 1, 2, 3 and 4 suppliers and emissions from other purchased goods and services
Cat 3: Fuel and energy-related emissions not included in Scope 1 or Scope 2	Upstream emissions related to production of fuels and energy consumed by G-Star own operations
Cat 4: Upstream transportation and distribution	Emissions from 3 <sup>rd</sup> party transportation and distribution paid by G-Star
Cat 5: Waste generated in operations	Emissions from waste disposed from G-Star's operations
Cat 6: Business travel	Emissions from G-Star employees' business travel, including air, sea, rail, land travel and hotel stay
Cat 7: Employee commuting	Emissions from G-Star employees' commuting
Cat 11: Use of sold products	Emissions from washing and drying of G-Star sold products
Cat 12: End-of-life treatment of sold products	Emissions from disposal of G-Star sold products
Cat 13: Downstream leased assets	Emissions from tenants at G-Star headquarters
Cat 14: Franchises	Emissions from G-Star's franchisees and licensees



# PLANET

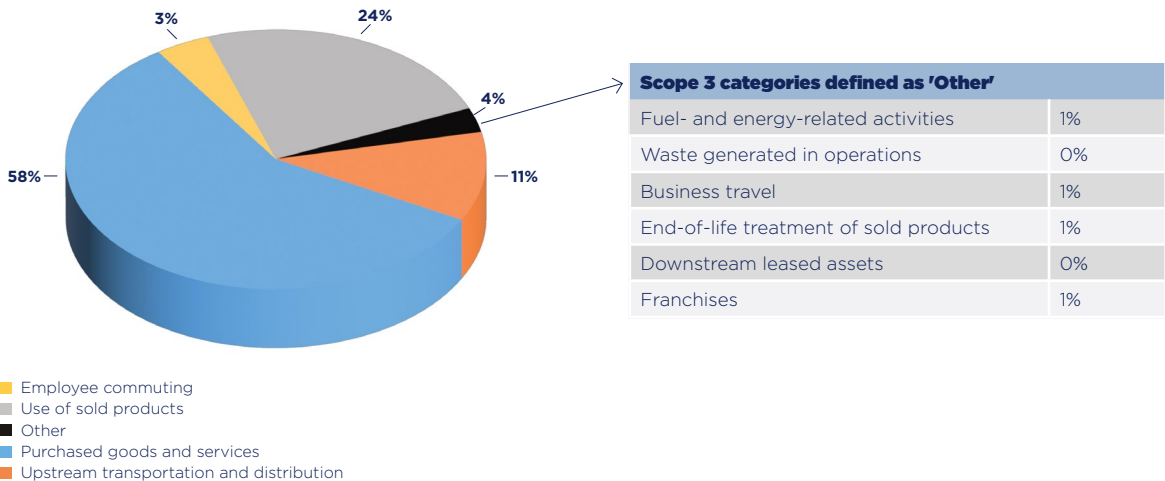
## CONTINUED

The table below shows the Greenhouse Gas Protocol Scope 3 categories that were excluded from the calculations and their respective justifications.

Greenhouse Gas Protocol Scope 3 Category	Justification for Exclusion
Cat 1: Purchased goods and services (packaging materials and financial costs)	Excluded due to insufficient data available
Cat 2: Capital goods	G-Star does not own any production facilities. Other purchased capital goods deemed to be insignificant to G-Star overall spending
Cat 8: Upstream leased assets	All upstream leased assets are captured in Scope 1 and 2 emissions
Cat 9: Downstream transportation and distribution	All product distribution and transportation are paid by G-Star and considered as upstream transportation and distribution
Cat 10: Processing of sold products	Not relevant. No additional processing is required for G-Star sold products (i.e. finished goods)
Cat 15: Investments	Investment is not a relevant emissions category for G-Star based on its business model

Among the Scope 3 categories, Category 1 (Purchased goods and services) had the highest contribution, accounting for 58% of the total, followed by Category 11 (Use of sold products) at 24% and Category 4 (Upstream transportation) at 11%. Altogether, they account for 93% of total 2022 scope 3 emissions.

2022 Scope 3 Emissions Breakdown



# PLANET CONTINUED

This distribution pattern remained consistent with previous years carbon footprint calculations. Within Category 1, the emissions from Tier 1 and 2 suppliers had the greatest impact, contributing to 63% of the total Category 1 emissions. Tier 3 and 4 emissions (materials) accounted for 24% of Category 1 emissions, while other purchased goods and services made up 13%. In comparison

to 2021, the total Tier 1 and 2 emissions increased by 6%, while the production volume by pieces decreased by 21%. This discrepancy can be attributed to the overestimation of production volume in 2021, leading to a substantial drop in production volume in the following year. Additionally, an increase in average facility intensity also played a role in the changes.

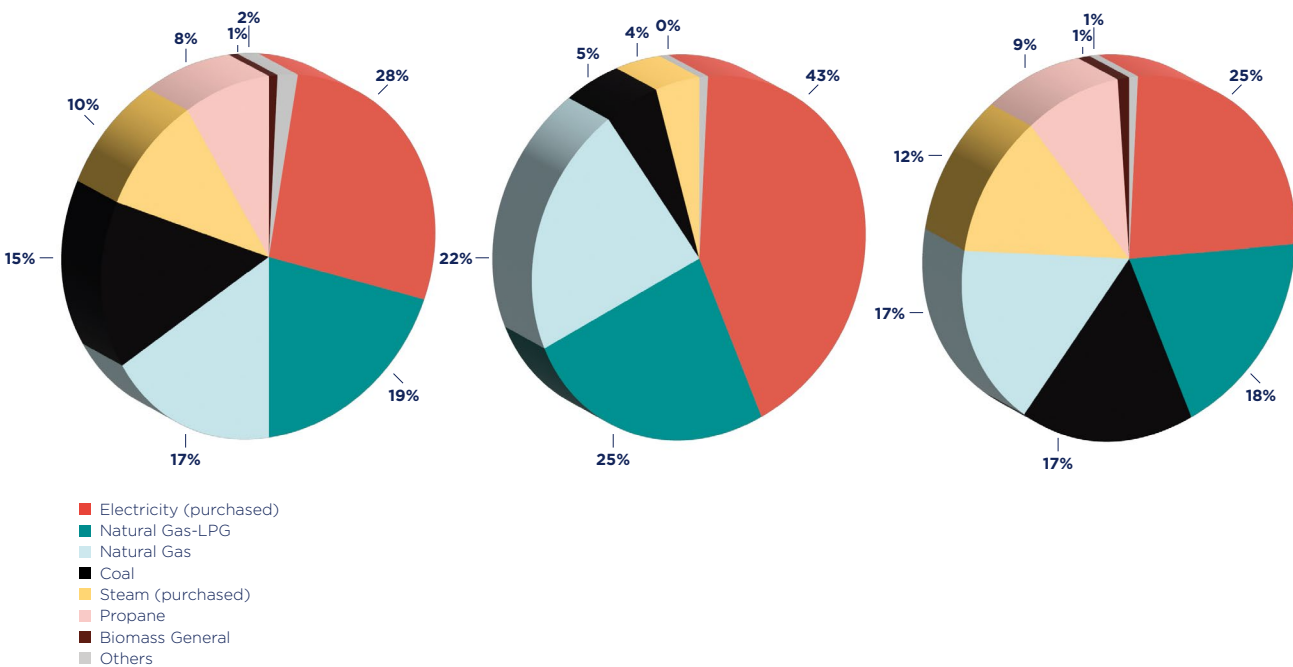
Emission Intensity (kgCO2e/PCS)	2021	2022	% Change
Tier 1 Average	1.05	0.69	-34%
Tier 2 Average	1.51	2.21	46%
Total Average	1.19	1.66	39%

Upon examining the breakdown of emissions of Tier 1 and 2 suppliers by fuel mix, it becomes evident that electricity stands out as the predominant hotspot among all types of fuel and energy, contributing to 28% of the emissions. This trend holds true across both tiers. Following closely behind electricity are natural gas and LPG, making them significant contributors to the overall emissions. It is noteworthy that coal accounts for 15% of the emissions, primarily originating from Tier 2 suppliers.

### Total Emission Breakdown by Fuel Type

Tier 1 Breakdown by Fuel Type

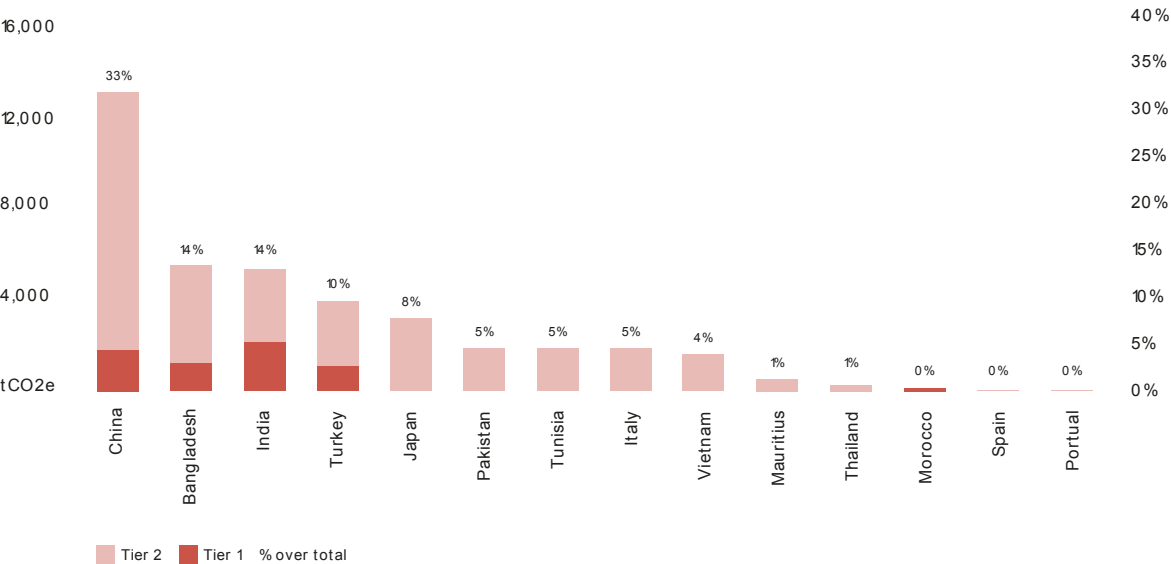
Tier 2 Breakdown by Fuel Type



# PLANET CONTINUED

Examining the distribution of emissions by country, China emerged as the largest contributor, accounting for 33% of the total Tier 1 and 2 emissions. This was followed by Bangladesh, India, and Turkey. Notably, the distribution by country remained similar to 2021, with China contributing to 30% of the total Tier 1 and 2 emissions in the previous year.

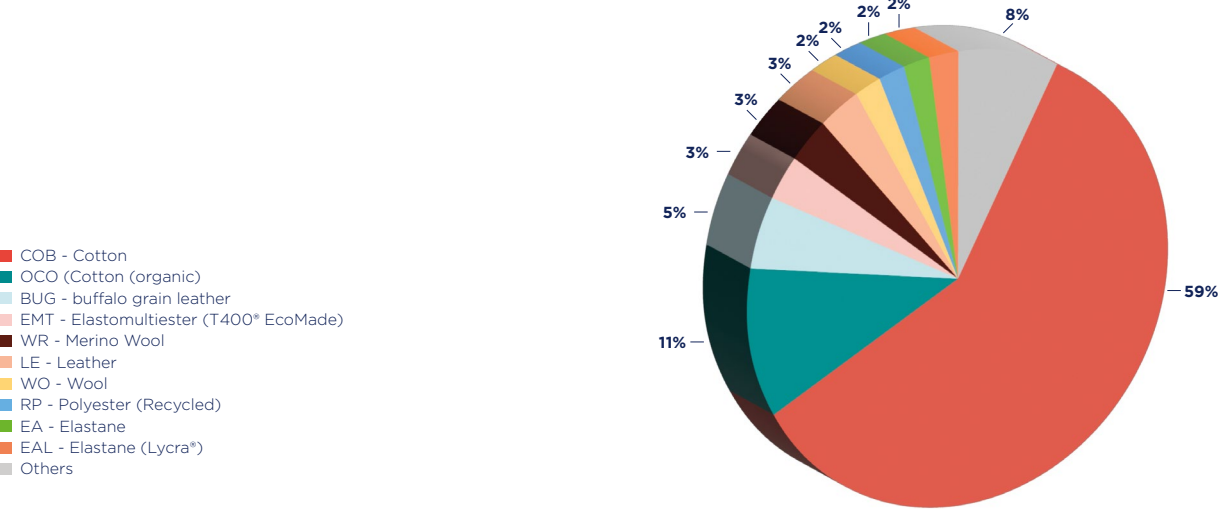
2022 Emissions Breakdown by Country



In terms of material emissions, cotton had the highest contribution, amounting to 72% of the total material emissions. BCI cotton emerges as the leading contributor to Category 1 materials emissions, accounting for 59% of the total. It is

followed by organic cotton at 11% and buffalo grain leather at 5%. The significant emissions associated with cotton can be attributed to its large quantity of purchase, while buffalo grain leather exhibits a high emission intensity.

Tier 3&4 Emission Breakdown by Material Type

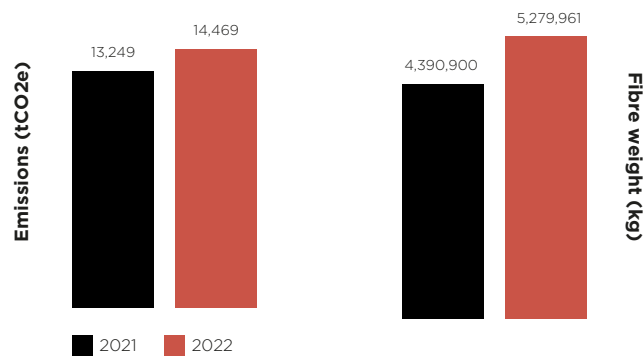




# PLANET CONTINUED

In terms of overall Tier 3 and 4 emissions, there was a 9% increase in 2022 compared to 2021. However, it is noteworthy that despite this increase, the total weight also witnessed a substantial 20% increase.

### Category 1 Tier 3&4 Emissions

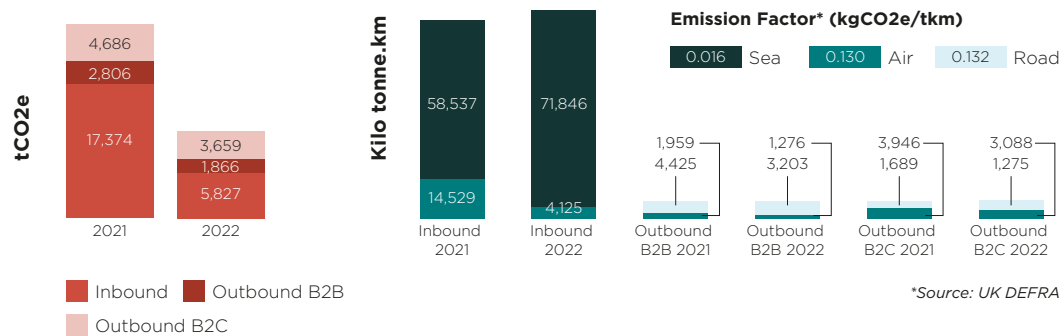


Taking a closer look at Category 4, we can observe some key patterns. Although the total shipping volume in tkm (tonne kilometer) remains relatively stable, there is a significant 54% reduction in total emissions compared to 2021. This reduction can be primarily attributed to a substantial decrease in inbound air shipment volume, which experienced a remarkable 72% decline. Consequently, this reduction resulted

in a significant 66% decrease in inbound transportation emissions.

Interestingly, with the exception of inbound sea transportation, which saw an increase, all other shipping categories experienced reductions in both tkm and emissions. These findings highlight the ongoing efforts to optimize transportation and mitigate environmental impact within Category 4.

### Category 4 Emissions



For information relating to the data quality for Scope 3, calculation methodologies and methodology updates, including a comparison to 2021 calculations, please refer to Appendix B.

# REFLECTIONS ON 2022

Strategic Topic	2022 Actions and Goals	2022 Highlights & Progress	2023 Actions & Goals
Circularity	<p>Recertify our Cradle to Cradle Certified® Denim Product.</p> <p>Proceed upscaling of Cradle to Cradle Certified® fabrics as part of Product Development and Sourcing Strategy.</p> <p>Train G-Star teams on the topics of circular economy and circular design, through a workshop program organized by Circle Economy.</p> <p>Further rollout in-store takeback service (Return Your Old Denim) to collect post-consumer waste.</p> <p>Explore long-term solutions for recycling of collected jeans.</p> <p>Rollout Certified Tailors in US, Germany, and South Africa.</p>	<p>Finalized recertification of Cradle to Cradle Certified® Denim Product.</p> <p>2.8% of our products are made with Cradle to Cradle Certified® fabrics.</p> <p>Circle Economy organized a 2 day training on circular design principles for the full product team which resulted in the creation of a circularity roadmap.</p> <p>In-store take-back is now active in 97 stores across 7 countries.</p> <p>Finalized rollout of Certified Tailors in Germany and South Africa.</p>	<p>Recertification of Cradle to Cradle Certified® Gold v 3.1.</p> <p>Proceed upscaling of Cradle to Cradle Certified® fabrics with the aim to reach 20% Cradle to Cradle Certified® fabrics in 2025.</p> <p>Launch reCommerce platform.</p> <p>Increase amount of discarded denims collected and recycled.</p> <p>Increase amount of denim products repaired.</p>
Responsible Materials	<p>Achieve brand-level certification for the Organic Cotton Standard; explore brand-level certification for the Global Recycle Standard.</p> <p>Explore the opportunity to develop the Responsible Materials Ranking as a tool to communicate beyond our main materials, but also include trims, linings and production processes.</p> <p>Continue participation in the Higg Transparency Program through Amazon.</p>	<p>Started the process to acquire brand-level certification for the Organic Cotton Standard and Global Recycled Standard.</p> <p>Continued collaboration with the Organic Cotton Accelerator to support farmers in their transition to organic cotton cultivation.</p> <p>Developed a new framework for sustainable claims to move beyond raw material claims and include lower impact production processes, certifications, manufacturing unit and recyclability.</p> <p>Amazon's Higg Transparency program is currently on hold.</p>	<p>Achieve brand-level certification for the Organic Cotton Standard and Global Recycle Standard.</p> <p>Grow the percentage of responsible materials in production in line with our responsible material commitments.</p> <p>Implement indicators for responsible production processes in PLM.</p>

# REFLECTIONS ON 2022 CONTINUED

Strategic Topic	2022 Actions and Goals	2022 Highlights & Progress	2023 Actions & Goals
Pollution	<p>As a minimum, achieve an average verified FEM score of 60% for Tier 1 and Tier 2 suppliers that represent 85% of business volume.</p> <p>Achieve 90% conformance with ZDHC waste water guidelines for MRSL and 60% compliance for level 1 of ZDHC InCheck report for 85% of our business volume.</p> <p>Improve supplier compliance to the G-Star RAW DETOX program.</p>	<p>Achieved an average score of 66% across both tiers which is 15% higher than the industry average. 83% of Tier 1 suppliers and 80% of Tier 2 suppliers are captured in this average score.</p> <p>Our DETOX program included 107 factories under the ZDHC scope, with an average of 77% conformance with the parameters set by ZDHC Wastewater Guidelines.</p> <p>Provided 8 ZDHC implementation tokens to new and existing Tier 1 and 2 suppliers to implement the Roadmap to Zero program.</p>	<p>As a minimum, achieve a verified FEM score for Tier 1 suppliers that represent 86% of business volume, and Tier 2 suppliers that represent 82% of business volume.</p> <p>Achieve 90% conformance with parameters set by ZDHC Wastewater Guidelines.</p> <p>Continue to provide ZDHC implementation tokens to suppliers to implement the Roadmap to Zero program.</p>
Climate Change	<p>Publish Scope 1, 2 and 3 carbon inventory results.</p> <p>Create GHG reduction scenarios with RESET Carbon.</p> <p>Reduce our (virgin plastic) packaging.</p>	<p>Finished full carbon footprint calculation for 2022 and completed verification via 3rd party.</p> <p>Created GHG reduction scenarios with RESET Carbon and submitted our targets to Science Based Targets Initiative and achieved official validation.</p> <p>All our suppliers now use polybags that consist of 100% recycled content.</p> <p>Replaced cardboard boxes for paper envelopes for air destinations and when shipping from stores.</p> <p>Offered bike delivery option in the largest Dutch cities, covering 4% of transportation in the Netherlands.</p> <p>47% of international e-commerce parcels shipped to customers were carbon neutral.</p> <p>100% of parcels delivered to customers in the Netherlands were carbon neutral.</p>	<p>As a minimum, achieve a verified FEM score for Tier 1 suppliers that represent 86% of business volume, and Tier 2 suppliers that represent 82% of business volume.</p> <p>Achieve 90% conformance with parameters set by ZDHC Wastewater Guidelines.</p> <p>Continue to provide ZDHC implementation tokens to suppliers to implement the Roadmap to Zero program.</p> <p>Define roadmap to reach Science Based Targets.</p> <p>Increase the amount of ecommerce parcels to be delivered carbon neutral.</p>



# PHILANTHROPY



# PHILANTHROPY

The GSRD Foundation was founded in 2007 as G-Star's corporate foundation. Its mission is to create a positive impact on the lives of the people and communities in the countries where G-Star RAW products are made. It does so by supporting projects that focus on the education, training and coaching of young adults.

The foundation's ethos is that knowledge, an entrepreneurial mindset and self-empowerment are key to economic independence and social development. To facilitate this, the foundation supports projects that focus on education and entrepreneurship.

## Education

Vocational training and education for young adults, focusing on knowledge and skills that will help them to learn a trade, improving their chances of acquiring employment and therefore, having a better future.

## Entrepreneurship

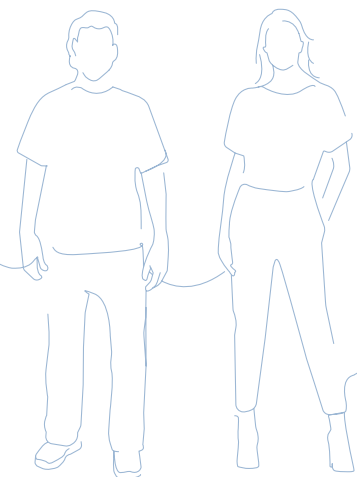
Life-skills training and coaching for young adults, to help them to become independent, seize initiatives and leverage opportunities to become more self-sufficient, either as proactive employees or through self-employment.

The activities from the GSRD Foundation directly contribute to reaching the Sustainable Developments Goals 4, 8, 10 and 17. They indirectly support the SDGs 1, 2, 3, 5 and 13 as well.

### Direct impact



### Indirect impact



# PHILANTHROPY CONTINUED

The GSRD Foundation is active in four G-Star RAW production countries:  
Bangladesh, China, India and Vietnam.



## Bangladesh

- Active since 2008
- 8 running projects in 2022

## China

- Active since 2009
- 2 running projects in 2022

## India

- Active since 2008
- 13 running projects in 2022

## Vietnam

- Active since 2014
- 10 running projects in 2022



# PHILANTHROPY CONTINUED

The Foundation supports all of its projects through partner organizations, which have a proven track-record in education and entrepreneurship and countries where GSRD is focusing its efforts. We strive for long-term relationships in order

to strengthen the projects we support and the partner organizations that run them. All projects seek to help people leverage opportunities to become more self-sufficient, either as proactive employees or through self-employment.

The GSRD Foundation has been working together with

## 57

partners over the past years.

Currently the GSRD Foundation works together with

## 24

partners.

## 109

projects have been supported since 2008.

## 33

projects are being supported today.

## 2022 in the rearview mirror

### 15 years of GSRD Foundation

2022 marked the 15th anniversary of the GSRD Foundation. The board took this occasion to conduct an evaluation among the foundation's partners, performed by a master's student from the Rotterdam School of Management.

### Partners and Projects

In the reporting year, the GSRD Foundation made 16 commitments to both existing and new partners in Bangladesh, China, India, and Vietnam.

Apnalaya became a new partner for the GSRD Foundation, while TIDE returned as a partner after several years. The Sage Foundation, where UnLtd India is incorporated, also joined as a new organization.

In 2022, the GSRD Foundation expressed rolling commitments to Friendship and Grameen Shikkha. However, by the end of the year, the long-standing relationship with the Partnership Foundation, supporting the Rainbow Home Program, came to an end through a contractual exit that had been

in preparation for many years. In the coming year, the board will directly support the Rainbow Home Program, including with a rolling commitment.

The foundation continued its support to various long-term partners such as Sawed Trust, The Asia Foundation, Save the Children, Solidaridad, MCNV, and Hand in Hand India.

The foundation continued its support to various long-term partners such as Sawed Trust, The Asia Foundation, Save the Children, Solidaridad, MCNV, and Hand in Hand India.

### Lotus Leadership Award

In April, the GSRD Foundation received the 2022 Lotus Leadership Award for its "significant contribution to empower women and promote gender equality." This award, presented by The Asia Foundation's Lotus Circle, honors individuals and organizations that have made remarkable contributions to women's empowerment and gender equality.



# PHILANTHROPY CONTINUED



## CASE STUDY

### GRAMEEN SHIKKHA

Grameen Shikka is part of the Grameen organizations created by Nobel Laureate Professor Muhammad Yunus. One of their missions, supported by GSRD Foundation, is to provide financial support to poor students, promoting mass education.

Dr Mukti Biswas is living proof of the life changing effect this can have. After completing his medical degree and internship at Dhaka Combined Military Hospital (CMH) and Kurmitola General Hospital in Dhaka in 2020. He recently joined the civil service and began his medical career at the Upazila Health Complex, Bagerhat, a place close to where he grew up, finally reaching his goal of becoming a doctor.

Mukti Biswas was born into a family with an extremely low income but he was a brilliant student. After gaining high grades throughout his studies in school, he was selected for an educational scholarship. Grameen Shikkha and the GSRD Foundation supported the scholarship and are proud of Mukti in pursuing his education, eventually leading to a valuable medical degree.

More information can be found about our Grameen Shikka program via the GSRD Foundation website.



## CASE STUDY

### APNALAYA

Apnalaya works with the urban poor enabling access to basic services, healthcare, education and livelihoods; empowering them to help themselves; and ensuring provision of civic entitlements through advocacy with the government.

Our partnership with Apnalaya started this June and aims to support 100 adolescents in the age group of 14 to 18 years in the informal settlements in Mumbai to ensure that they stay in school, improve their social education (self-awareness, social awareness, critical thinking) and remain unmarried until the legal age.

The image above shows the M Ward in Mumbai, as well as the students from Apnalaya's programmes. Students in the IT class learnt the fundamentals of computer applications including Microsoft Office. They can additionally choose to learn different programming languages such as Android programming, Java, CSS, and HTML for generating apps or website development based on their hobbies. You can learn more about Apnalaya via the GSRD Foundation website.



# APPENDICES



# APPENDIX A: RISK ASSESSMENT

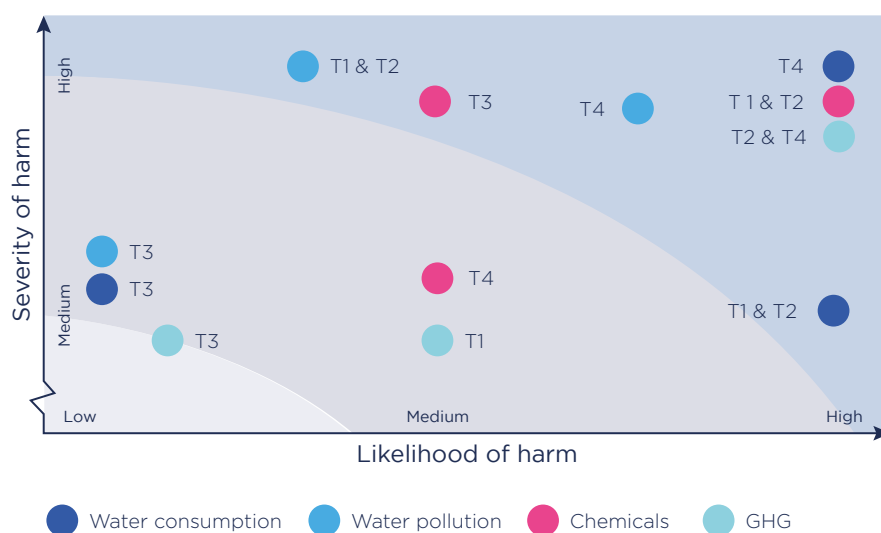
In our [2019 Sustainability Report](#) we first introduced a due diligence risk assessment following the guidelines of the [OECD Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector](#). Our risk assessment aims to identify both the likelihood and the severity of a potential or actual harm within the value chain. It provides the foundation and justification of our actions and goals. Our [Sustainable Supply Chain Handbook](#) explains how G-Star has conducted its risk assessment and identified the most significant risks in its supply chain.

In 2022 we carried out our risk assessment with the help of industry partners, stakeholders, and external resources. This was based on Tier 1 and Tier 2 suppliers from Bangladesh, China, India, Vietnam, Turkey, Pakistan and Mauritius. Accounting for 32% of our Tier 1 production volume and 23% of our Tier 2 production volume.

## Risk Matrix

The risk matrixes below illustrate the salient risks that have been identified for mitigation. The first matrix shows the social risk categories as identified by OECD translated to our supply chain Bangladesh, China, India, Turkey, Mauritius and Vietnam. The second matrix shows the environmental risk categories in Tier 1, Tier 2, Tier 3 and Tier 4, also based on data from our 6 production countries. Based on the analyzed information from our supply chain we can conclude that the areas in the right and middle to top corner of the matrix can be scaled as salient risks. These risks are included as key priorities as part of our Sustainability Strategy and action plan towards mitigation.

Compared to our assessment in our Sustainability Report of 2020, we can see that the most prevalent social risk factors remain similar with the addition of Turkey and Tunisia. Including Turkey and Tunisia does show some changes in environmental risk factors on tier level. We need to pay additional attention to the increased likelihood of water pollution in Tier 4, greenhouse gas emissions throughout Tier 1 and 3, and water consumption in Tier 1 and 2. A review of our supplier data showed that no major changes had to be made regarding the risk assessment.

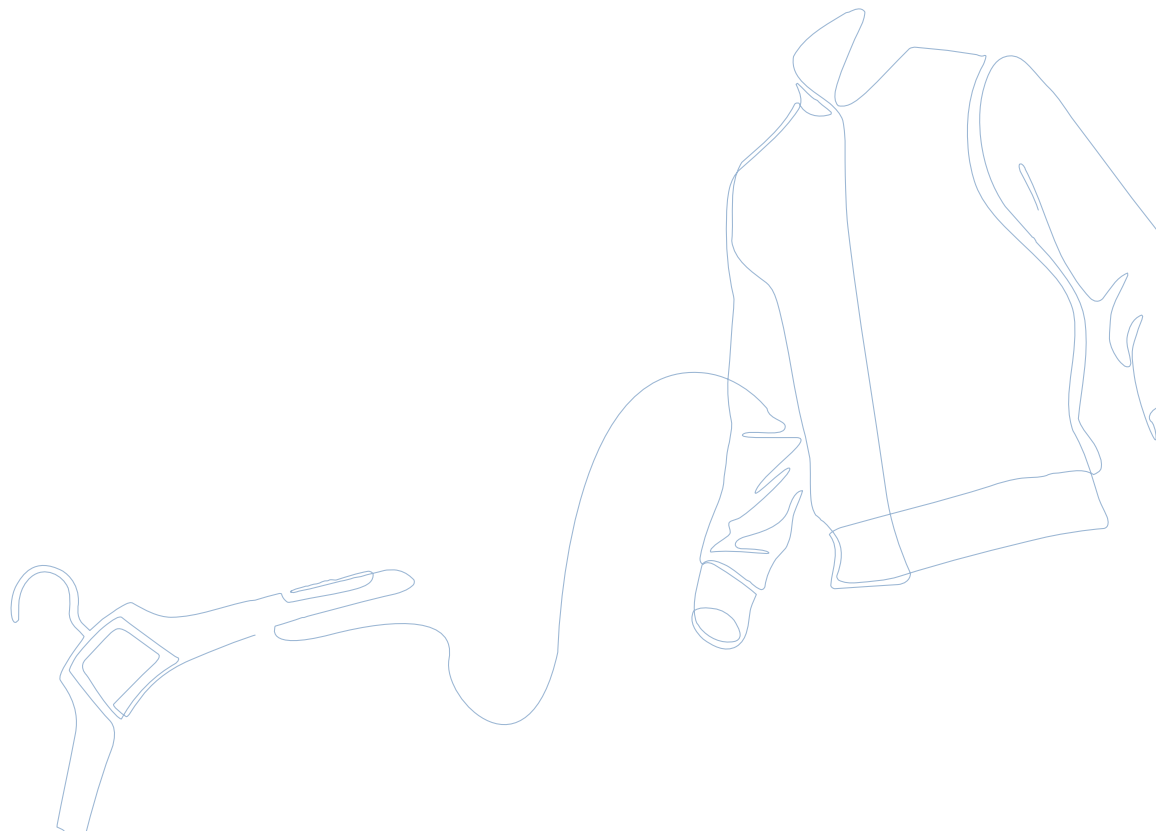




# APPENDIX A: RISK ASSESSMENT CONTINUED

## Next steps

Due diligence is an ongoing process, and so is this risk assessment. Our risk assessment supports us in defining and implementing our new Sustainability Strategy. In 2023, we will re-evaluate our risk assessment methodology, focusing on additional risk categories beyond the OECD and including the topics of the Higg BRM to create an even more holistic overview of the context of our value chain. We will also integrate more dialogue with local stakeholders, including trade unions and factory workers. This way we aim to include additional local perspective to be able to determine more specific actions in certain areas. The data that we collect in our Vendor Scorecard will form the center of our risk assessment. This way we integrate supply chain data more specifically and can link the results from our risk assessment more directly to our strategy.

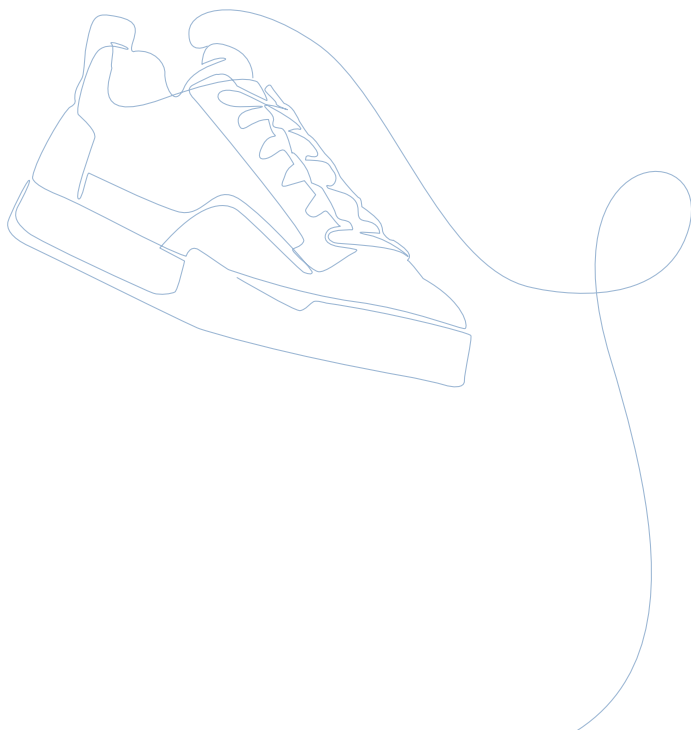


# APPENDIX A: RISK ASSESSMENT CONTINUED

## Strategic Priorities & Actions towards Mitigation

Based on the results of the risk matrixes above, we have linked our strategic topics from our Sustainability Strategy and the goals we have set and actions we are taking to mitigate the identified salient risks categories.

Strategic Topic	Related risk category	Goals 2025 - 2030	Actions specified for 2022
Worker's Rights	Child labor Discrimination / (sexual) harassment Forced labor Freedom of Association (Excessive) working hours	2025: Strengthen workers voice by offering a complaints system including fair terms, anonymous accessibility, process for complaints handling and capacity building to workers.	Continue supplier social performance improvement monitoring through the verified Higg FSLM and determine performance indicators.  Develop methodology on social supplier performance scorecard to integrate in our Vendor Scorecard. Share Vendor Scorecard with suppliers.  Increase visibility of Tier 3 & 4 suppliers in all countries by collecting and documenting the information received through direct and Tier 2 suppliers.  Continue Fair Wear Complaints Mechanism with key suppliers in India and organize Workplace Education Program.  Analyze output from Fair Wear Complaints Mechanism in India and use learning to feedback indicators that can improve communication on factory floor.  Define new country rollout with FWF.  Implement and improve G-Star Purchasing Practices following the ACT commitments: timely planning and forecasting, defining labor costing within purchasing prices, fair payment and term and a responsible exit strategy.  Research recruitment practice and work directly with factories to implement preventative measures.  Organize supplier conference focusing on key strategic topics and possible improvements.



# APPENDIX A: RISK ASSESSMENT CONTINUED

Strategic Topic	Related risk category	Goals 2025 - 2030	Actions specified for 2022
Fair Wages	Minimum wages Living Wage (Excessive) working hours	2025: Actively engage in lobbying towards an industry wide agreement on regional living wages and improve purchasing practices and wage management systems to increase wages in G-Star RAW production countries	Update our Living Wage Gap Analysis and incorporate results in Vendor Scorecard.  Train internal teams and suppliers on key purchasing practices topics based on survey findings with the help of ACT's training tool.  Set a baseline to improve wage management systems in factories.
Circularity	Water consumption Water pollution Chemicals Greenhouse gases	2025: 20% of our collection is made with Cradle to Cradle Certified® fabrics  2025: Design for durability and recycling to extend the life of G-Star RAW products by offering solutions for re-use, remake or recycling  2030: Enable G-Star RAW products to meet our circularity criteria's (made from recycled [mono] materials and components and designed for durability and recycling)	Renew Cradle to Cradle Certified® Denim Product Certification.  Launch Return Your Old Jeans in Europe, US and South Africa.  Increase the use of Cradle to Cradle Certified® fabrics.  Finalize agreement with recycling and upcycling partners.
Responsible Materials	Water consumption Water Pollution Greenhouse gases	2025: 75% of our collection will be made of recycled and/or organic/bio-based/compostable materials  2030: 100% of our collection will be made of recycled and/or organic/bio-based/compostable materials	Increase the use of more recycled, organic/bio-based or compostable materials.  Get certified on brand level for OCS and GRS.  Monitor progress on reaching Responsible Materials Goals 2025.

# APPENDIX A: RISK ASSESSMENT CONTINUED

Strategic Topic	Related risk category	Goals 2025 - 2030	Actions specified for 2022
Climate Change	Greenhouse gases	2025: Reduce 15% of GHG emissions	Update the inventory of Scope 1 and 2 based on 2021 data.
		2030: Reduce 50% of GHG emissions	<p>Map inventory of GHG emissions of scope 3 with external consultant.</p> <p>Define roadmap to reduce the GHG emissions according to goals continue to track scope 1, 2 and 3 emissions on yearly basis and publicly disclose results.</p> <p>Select key suppliers and engage with them on setting GHG reduction plans by using training tools.</p> <p>Set Science Based Targets through the SBTi platform.</p> <p>Create a responsible packaging strategy and share internal packaging policy globally.</p>
Pollution	Water pollution	2030: Achieve 100% sustainable chemical applications in G-Star RAW products	Continue the G-Star Supplier DETOX program tool to monitor and track supplier environmental performance.
	Chemicals		
	Water consumption		Increase supplier engagement on requirements of the ZDHC InCheck reports and chemical management.
	Greenhouse gases		<p>Increase adoption and performance improvement of verified Higg Facility Environmental Module (FEM) at Tier 1 &amp; 2 suppliers.</p> <p>Train Product Development team on verified Higg FEM performance for Tier 2 suppliers.</p> <p>Develop 2030 roadmap with external consultant.</p> <p>Update manufacturing map including verified Higg FEM scores.</p>

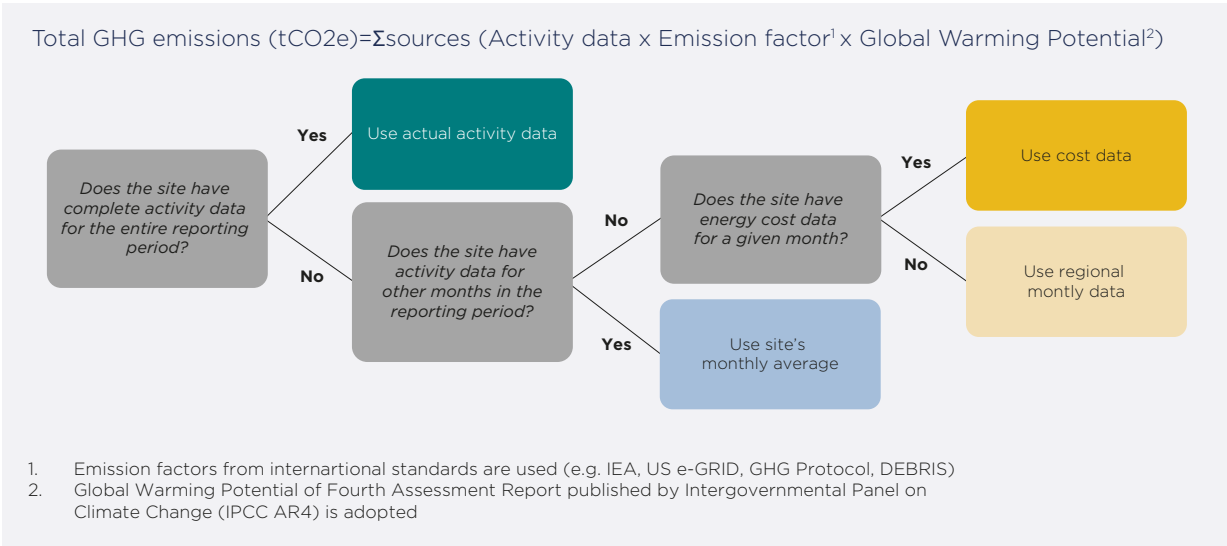


# APPENDIX B:

## FASHION INDUSTRY CHARTER FOR CLIMATE IMPACT - CARBON FOOTPRINT CALCULATIONS

### Methodology for calculating Scope 1, 2 and 3 emissions

This flow diagram demonstrates the methodology used for Scope 1 and 2 calculations.



The changes to emission categories used for reporting in 2022 (versus 2021) are demonstrated below.

Category	Changes
Cat 1: Purchased goods and services	Recategorization of tier of some factories and emission factors (DEFRA - Conversion factors KgCO <sub>2</sub> per £ spent, by SIC code 2020) for "Other purchased goods and services"
Cat 3: Fuel and energy related activities	
Cat 4: Upstream transportation and distribution	Emission factor changes
Cat 6: Business travel	
Cat 7: Employee commuting	
Cat 11 and 12: Use of sold products and End-of-life of sold products	Inclusion of outbound B2B amount

# APPENDIX B:

## FASHION INDUSTRY CHARTER FOR

### CLIMATE IMPACT - CARBON FOOTPRINT

### CALCULATIONS CONTINUED

This table below demonstrates the methodology used for calculating Scope 3 emissions.

Category	Sub-category	Quantification Method	Source of Data	Source of Emission Factors/References
Cat 1: Purchased goods and services	Tier 1 and 2	Supplier specific and extrapolation	Procurement data, Higg Facility Environmental Module (FEM)	Emissions directly extracted from Higg FEM
	Tier 3 and 4	Average data	Weight by material type	Higg Material Sustainability Index (MSI) LCA number
	Other purchased goods and services	Spend data	Spend on other purchased goods and services	DEFRA - Conversion factors KgCO <sub>2</sub> per £ spent, by SIC code 2020
Cat 3: Fuel and energy related activities (not included in Scope 1 or Scope 2)		Company-specific data	Energy consumption data from G Star's operation (Scope 1 and 2)	UK DEFRA
Cat 4: Upstream transportation and distribution		Average data	Inbound and outbound delivery reports	UK DEFRA
Cat 5: Waste generated in operations		Spend data	Spend on waste management	GHG Protocol Scope 3 Evaluator
Cat 6: Business travel	Business air travel	Average data	Business air travel record	UK DEFRA
	Business rail travel, road travel and hotel stays	Spend data	Business rail and road travel and hotel stays record	GHG Protocol Scope 3 Evaluator
Cat 7: Employee commuting		Average data and extrapolation	Employee numbers, transport type and distance assumptions based on allowance type	UK DEFRA
Cat 11: Use of sold products		Average data	Sales volume by product type	IEA grid factor

# APPENDIX B:

## FASHION INDUSTRY CHARTER FOR CLIMATE IMPACT – CARBON FOOTPRINT CALCULATIONS CONTINUED

Category	Sub-category	Quantification Method	Source of Data	Source of Emission Factors/References
Cat 12: End of life treatment of sold products		Average data	Sales volume by product type and region	UK DEFRA, waste disposal methods from The World Bank "What a Waste Global Database"
Cat 13: Downstream leased assets	Emissions for tenants in G-Star headquarters	Average data	Floor area of tenants in headquarter	Proxy from Scope 1 and 2 emissions
Cat 14: Franchises		Average data and extrapolation	Franchises' Sales Surface Area, purchased volume from G-Star's licensee	IEA grid factor

### Data Quality for Scope 1, 2 and 3 Calculations

#### Scope 1 and 2

In our emissions calculation process, we strive to capture primary data for all sites to ensure accuracy. However, it's important to note that we face challenges in accessing primary data for certain sites where utility bills are paid by the landlord and included in the site rent. Although we have made efforts to contact landlords and obtain the necessary data, it was not possible for all sites where utilities are included in the rent. Despite this limitation, we have employed estimation methods and utilized available data to ensure comprehensive and reliable emissions calculations for the majority of our sites. Moving forward,

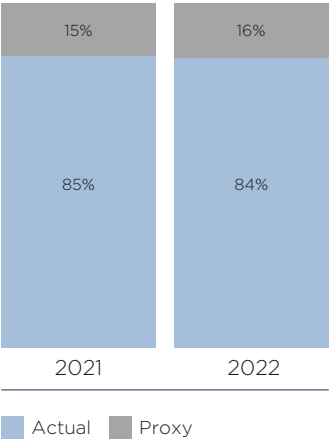
we will engage landlords at an earlier stage to ensure we have good access to utility primary data.

The data quality of our emissions calculations is primarily displayed within location-based emissions. In 2022, we were able to calculate 84% of our emissions using actual data, which is consistent with the previous year. However, it was observed that for Japan, the second-highest emitting country, approximately half (49%) of the emissions were calculated using proxy data. This reliance on proxy data was mainly due to the lack of energy unit cost data. Despite this limitation, we have made every effort to ensure the accuracy and reliability of our emissions calculations across all regions.

# APPENDIX B:

## FASHION INDUSTRY CHARTER FOR CLIMATE IMPACT - CARBON FOOTPRINT CALCULATIONS CONTINUED

Location-based Emission by Data Type



Country	Location-based emissions (tCO2e)	Actual data	Proxy
Netherlands	1,550	94%	6%
Japan	207	51%	49%
United States	162	70%	30%
Belgium	112	62%	38%
South Africa	98	73%	27%
Germany	49	36%	64%
France	35	85%	15%
Bangladesh	25	100%	0%
Canada	12	33%	67%
Switzerland	10	3%	97%
Macau	7	100%	0%
Austria	4	97%	3%
China	1	0%	100%
Spain	1	100%	0%
Ireland	1	0%	100%

Scope 3 (Tier 1 and 2 Factories)

In 2022, a significant number of our factories underwent 2021 Higg FEM verification, with 73 out of 116 facilities being verified. This accounts for 47% of the total number of factories within our inventory. Comparatively, in 2021, 52 out of 129 factories (40%) underwent verification. This increase in the number of verified factories demonstrates our commitment to ensuring the accuracy and reliability of our data. We also expect this increase to continue over the years, as G-Star has made Higg FEM a requirement to all factories producing for the brand.

Furthermore, when examining the emissions data, we observe a positive trend in data quality. The percentage of verified data increased from 57% in 2021 to 63% in 2022. This indicates a notable

improvement in the availability of verified data.

Consequently, there has been a decrease in the use of proxy data and self-assessed data by 3%. This decrease further signifies the progress made in obtaining more accurate and verified data from our Tier 1 and Tier 2 suppliers. These improvements in data quality reflect our ongoing efforts to enhance the transparency and integrity of our emissions reporting and management processes.

Overall, this comprehensive analysis provides valuable insights into our carbon footprint and highlights areas for improvement and focus for the upcoming years. G-Star remains dedicated to the commitment of sustainability and will continue to implement strategies to reduce the environmental impact of our business in the years to come.