

# **G-STAR RAW**

G-STAR ZERO DISCHARGE OF HAZARDOUS CHEMICALS  
PROGRESS REPORT 2017 on our Detox Commitment

April 2018

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## 1. INTRODUCTION

G-Star works actively to prevent the use of chemicals in our products or production processes that can have a harmful effect on health or the environment.

The basis of our Responsible Supply Chain Policy is the G-Star Supplier Code of Conduct (CoC) that clarifies and elevates the expectations we have of suppliers we work with and lays down the minimum Social and Environmental, Health & Safety (EHS) standards we expect each factory to meet. The CoC refers to the G-Star Restricted Substances List (RSL) as the basis for monitoring the use of chemicals in G-Star products.

In January 2012, G-Star committed to reach zero discharge of hazardous chemicals (ZDHC) from all our products and production processes by 2020. Following our commitment, we published a first action plan in 2012 that included all measures necessary to integrate this commitment into our business activities and work towards this target.

Since cooperation across the entire industry is essential, G-Star also joined the ZDHC Group in January 2012, to collaboratively work with a large number of world leading brands towards ZDHC by 2020. The ZDHC Group has set specific actions and timelines to realise this shared commitment and to set the right standard of environmental performance for the global apparel and footwear industry. G-Star supports and puts effort in the group's activities to collectively find safe substitutions for hazardous chemicals used in the apparel industry and work towards ZDHC by 2020. More information can be found on the ZDHC Group's Joint Roadmap website: [www.roadmaptozero.com](http://www.roadmaptozero.com).

In addition, early 2013 we became a system partner of bluesign technologies ag. We are implementing their bluesign® standard. This independent standard guarantees that products are free of hazardous chemicals.

By the end of January 2013, we reconfirmed our commitment by publically agreeing to the [Greenpeace Detox Solution Commitment](#). In 2014, our Detox Strategy explained further steps towards zero discharge of hazardous chemicals and going forward we have integrated our detox strategy in our overall Corporate Responsibility strategy towards 2020.

To transparently report on our progress towards zero discharge of hazardous chemicals in 2020 we yearly publish a progress report to show the progress made in line with our Detox Solution Commitment.

## **2. (MANUFACTURING) RESTRICTED SUBSTANCE LIST**

### **2.1 G-Star Restricted Substances List**

The basis for monitoring the use of chemicals in G-Star products is the G-Star Restricted Substances List (RSL). This list goes beyond international laws and regulations, is public and updated frequently. Our textile engineers and chemical specialists work together with suppliers on proper use of chemicals and compliance with the RSL. To check compliance of our products with the RSL, we perform risk assessments, audits and request independent test our products.

The product testing programme is set up on a seasonal basis and follows our risk assessment. G-Star requests two samples that are first out of bulk production to test for compliance with our RSL. Suppliers are requested to send the G-Star RSL team only bulk production samples and to strictly follow the procedures to avoid delay in shipments.

G-Star nominated a testing institute and sends the piece to an accredited laboratory closest to the supplier for testing. All orders that are subject to testing can only be shipped after good test results and approval of the RSL team. When new potential suppliers come in sight, the RSL team requests them to deliver fabrics for testing prior to starting production with the supplier. Testing fabric prior to production is a successful precautionary measure to diminish product testing failures in a later stage.

As from January 2009, G-Star started to conduct screening of Substances of Very High Concern (SVHC) related to the REACH legislation. This legislation is now an integral part of our RSL.

The G-Star Restricted Substances List (RSL) has been made publically available and can be found on G-Star's website in corporate responsibility section. The G-Star RSL is updated annually, but G-Star alerts its suppliers to check the European list of Substances of Very High Concern (SVHC) more often as this list is updated bi-annually. Each time our RSL is updated, our textile engineers and chemical specialists guide and train our suppliers to clarify changes made in the updated RSL and the possible implications it has for production.

### **2.2 Manufacturing Restricted Substance List (MRSL)**

The G-Star RSL only focuses on product content. Use of restricted substances may also occur on the production floor in production processes even though the restricted substance is not added to the product. The Manufacturing Restricted Substances List (MRSL) addresses the input chemicals that are used during production. Hence, we also focus on the input chemistry and not only on end of pipe with the implementation of an MRSL.

The MRSL contains a list of chemical substances by Chemical Abstracts Service (CAS) number that are subject to a usage ban in the manufacturing of materials, components and finished products, which include solvents, cleaners, adhesives, paints, inks, detergents, dyes, colorants, auxiliaries and finishing agents. The list will assist our suppliers in phasing out the use of the 11 priority hazardous chemical groups and beyond those groups in the future. It establishes enforceable limits for hazardous substances in chemical formulations used to process materials. The list sets limits to eliminate the possibility of intentional use of listed substances and shall be used by our suppliers when purchasing materials and chemicals from their suppliers. The identification and use of safe substitutions will enable us to make further steps towards zero discharge of hazardous chemicals, such as the elimination of hazardous chemicals in effluent and reducing water usage in production due to new sustainable chemicals.

We have made our MRSL publically available, including limits for leather processing. We aligned our MRSL with the ZDHC MRSL, which has established limits to ban the intentional use along with a transparent process which goes beyond the 11 priority chemicals.

## 2.3 Progress

In 2014 we finalized the draft of the G-Star MRSL. As an active ZDHC Member, G-Star's MRSL is overall aligned with the MRSL developed within the ZDHC and with bluesign®. Some adaptations with regard to chemical substances (PFCs) were made by G-Star in order to comply with our public Detox commitment.

In November 2014, we started implementation and training of the MRSL in our supply chain. We continued implementation and conducted a series of internal chemical management audits on hazardous materials, EH&S standards and wastewater management. With this implementation, we moved a great step forward towards the ZDHC goal, actively preventing hazardous chemicals to be used in manufacturing and moving towards a cleaner production. End of 2015, we started the process of adapting the MRSL based on experience and progress.

In March 2016, we adopted the ZDHC MRSL; therefore we aligned and updated our MRSL 2.0 with the latest publication of the ZDHC Foundation's MRSL requirements which included limits for leather processing as well as testing methods for chemical testing of input chemical formulations.

### **3. ENVIRONMENTAL GUIDELINE**

Scarcity of natural resources, pollution and environmental degradation are issues that affect everybody. G-Star wants to address these issues to protect and restore the natural environment for our suppliers, its employees and the countries in which they live and work, for our customers and for nature itself.

The G-Star Environmental Guidelines promote a standard of environmental management that ensures safe and responsible production of G-Star products. The guiding manual has been published to help business partners in guiding and advising to manage the environmental standards as set forth in our Code of Conduct. We strongly promote that environmental management will become part of a daily practice of operation and doing business.

The guideline also supports the implementation of all our tools and trains our suppliers on aspects as chemical safety, chemical management, and wastewater requirements.

#### **3.1 Progress**

In 2015, we developed our first Environmental Guideline for all our suppliers. For the roll out and successful implementation of the guideline, a face-to-face training was conducted in May 2016 for our wet processing suppliers. The training allowed us to actively engage in a question and answer session on chemical management, chemical usage, inventory and safety, etc. Since 2016, we also made our Environmental Guideline publically available on our website.

In May 2016, we updated our Environmental Guideline and aligned our documentation with the ZDHC Wastewater Guideline. Along with this important and profound change, G-Star provided face-to-face training to our wet processing suppliers. We see this as an important and necessary task to guide our supplier towards our goal of zero discharge. We saw the best results through active engagement with our supplier and by having an open dialog with our partners.

## 4 WASTEWATER GUIDELINE

G-Star recognizes that in the apparel and footwear industry, water efficiency is a critical aspect of sustainable and environmental conscious manufacturing. Many manufacturing processes use water and generate wastewater that will require treatment before reusing or discharge. Untreated wastewater from industrial operations harms ecosystems and causes health and safety problems for workers and the surrounded communities.

As a ZDHC contributor, we are committed to advancing towards the goal of eliminating the industrial release of hazardous chemicals into the environment, as outlined in the [Joint Roadmap](#).

The ZDHC Wastewater Guidelines was developed in a multi-stakeholder setting in collaboration with multiple brands, non-governmental organizations, universities, and technical experts. The guideline aligns all ZDHC contributors to a unified set of expectations related to wastewater sampling, test methods, pass/fail criteria, testing frequency and disclosure.

For Wastewater Discharge Testing and its associated requirements, limits and alignment with the industry, We adopted the [ZDHC Wastewater Guideline 2016](#)

### 4.1 Progress

In March 2017, we send out a Call for Action letter to all suppliers to inform them that G-Star committed and has adopted the ZDHC Wastewater Guideline and to adhere to these guidelines. With this announcement, we clearly communicated all expectations (type of sampling, frequency, limitations, etc.) and benefits to our partners.

In the autumn of 2017 G-Star conducted Wastewater discharge testing in accordance with the ZDHC Wastewater Guideline at our key suppliers. The waste water results are shared in the ZDHC Chemical Gateway Waste Water Module within 2018. For those suppliers who are not already on the ZDHC Gateway, Waste Water module G-Star will upload the results on the Gateway in Q1. Furthermore, the data is used by G-Star internally in order to actively monitor the progress towards G-Star's Detox commitment 2020.

## 5 CHEMICAL PHASE OUT

### 5.1 APEO elimination

G-Star recognizes the intrinsic hazardousness of all APEOs and acknowledges it is a priority to eliminate their use across our global supply chain. Therefore, G-Star committed to eliminate APEOs in its products. We enhanced our auditing and training together with other brands since there are multiple supply chain pathways for potential APEO contamination (including chemical formulations). We ensure that our suppliers have the latest information to mitigate the risk that APEOs may enter through undocumented contamination of chemical supplier formulations.

### 5.2 Status

- G-Star enforced an APEO ban in 2013
- G-Star investigated the level of compliance with the APEO ban, reporting the findings to the public by publishing a report in August 2013 on APEO Elimination Policy
- G-Star continues to actively monitors APEO's on product level on a seasonal basis
- In 2017 G-Star started to carry out wastewater testing according to the ZDHC Wastewater guideline in order monitor and control the use and discharge of APEO's
- We continue to urge any new suppliers to use APEO/NPEO free chemicals and provide necessary trainings and guidance if needed

### 5.3 Phthalates elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all Phthalates, we acknowledge it is a priority to eliminate its use across our global supply chain. We enhanced our auditing and training together with other brands since there are multiple supply chain pathways for potential Phthalate contamination (including chemical formulations). We ensure that our suppliers have the latest information to mitigate the risk that Phthalates may enter through undocumented contamination of chemical supplier formulations.

### 5.4 Status

- G-Star enforced a Phthalates ban in 2013.
- We are continuously monitoring on Phthalates and do not except any Phthalates in our garments and related plastic packaging material.
- In 2017 G-Star started to carry out wastewater testing according to the ZDHC Wastewater guideline in order monitor and control the use and discharge of Phthalates
- We continue to urge any new suppliers to use Phthalates free chemicals and provide necessary trainings and guidance if needed

### 5.5 Perfluorinated/Polyfluorinated Compounds (PFC's) elimination

In line with the precautionary principle and the potential intrinsic hazardousness of all PFCs, we committed to eliminate PFCs in the products that G-Star produces and/or sells. We committed to eliminate all C7 and C8 (and any longer chain) PFCs and 50% of any shorter chain PFCs (baseline as of 31 December 2012) by no later than 31 December 2013; and eliminate remaining PFC use by no later than 31 December 2014.



## 5.6 Status

- As of January 2015 all G-Star garments are free of PFC.
- We eliminated all long chain PFC's by December 2013
  
- By the end of December 2013, we published a case study on Subsport, the substitution support portal, titled: Root cause investigation of PFOS contaminations in leather garments explaining possible use of PFOS in the leather industry
- In March 2015 we published another case study on Subsport titled PFC free alternatives for water repellent textile finishes. This case describes the phase out of PFC chemistry for all products that require a water repellency function
- In 2017 G-Star started to carry out wastewater testing according to the ZDHC Wastewater guideline in order monitor and control the use and discharge of Perfluorinated/Polyfluorinated Compounds
- We continue to urge any new suppliers to use of Perfluorinated/Polyfluorinated Compounds free chemicals and provide necessary trainings and guidance if needed

## 5.7 Bisphenol A

In line with the precautionary principle, we have started an investigation in order to eliminate Bisphenol A used in thermal paper that consists of a paper base with at least one coating that changes color when exposed to heat. Due to suspicions on endocrine disrupting properties, which may affect workers (cashiers) and consumers G-Star has eliminated such thermal paper where used prior to the new enforcement law according to REACH ANNEX XVII which will become effective in January 2020.

- In February 2016 G-Star started to investigate if thermal paper contains any Bisphenol A residues
- In May 2016 we realized a complete phase out and replaced all thermal paper in our own stores with a Bisphenol A free version

## 6 TRANSPARENCY

### 6.1 Progress

In line with G-Star's commitment to the public's 'right to know' the chemical substances used within its global supply-chain and the products it sells, G-Star has taken the following actions in the past years:

- Published an updated 'Restricted Substances List' (including detection limits) and audit processes;
- Published an Manufacturing Restricted Substance List;
- G-Star publically disclosed discharges of hazardous chemicals and detection limits in its supply chain (i.e. location and individual data of each facility) on an individual facility level, disclosing chemical-by chemical use and discharge data. We published data of around 80% of our Global South suppliers via the IPE and G-Star website;
- Published its suppliers in the supply chain via the online manufacturing and linked the information to product and projects undertaken in collaboration with the supplier;
- In 2015, G-Star developed its first Environmental Guideline for all our suppliers. Since 2016 G-Star also made their Environmental Guideline publically available on our website;
- In March 2017, G-Star send out a Call for Action letter to all suppliers in order to inform them that G-Star committed and has adopted the ZDHC Wastewater Guideline. With this announcement we clearly communicated with regards to benefits, type of sampling, frequency, limitations and expectations of Wastewater testing
- The waste water results are shared in the ZDHC Chemical Gateway Waste Water Module within 2018. For those suppliers who are not already on the ZDHC Gateway, Waste Water module G-Star plans to upload the results on the within the coming weeks.

### 6.2 Supply Chain Disclosure

Suppliers that G-Star has worked with for over a decade make up half of the brand's production volume. Proud of these manufacturers, G-Star launched the Manufacturing Map in June 2014 so consumers can learn where their products are made. The map shows at which factories G-Star products are made, by showing the locations and supplier details including how long they have worked with G-Star, how many workers they have and in which sustainability programs they take part.

Through the Map, customers can also learn about the projects supported by the GSRD Foundation across the various manufacturing countries. Products in the G-Star online store are active on the map. This means that shoppers can discover the factory of origin of each product in the online store by clicking on the 'Where is it made?' button. With publishing the names and locations of our suppliers, G-Star takes a next step in transparency. This way we aim to highlight to our customers that all our products are manufactured in accordance with our social and environmental standards, and to promote a more transparent and ultimately more sustainable garment industry. We continuously update our manufacturing map in order to keep it up to date.

In March 2017 we signed the Supply Chain Transparency Pledge to commit to publish more information that will enable workers and consumers to find out where their products are made. We published the extra information on our direct suppliers and processing facilities in our G-Star Manufacturing List in line with the pledge end of 2017. This list will be updated on a bi-annual basis.

## 7 FURTHER RESEARCH

### 7.1 Polyvinyl chloride (PVC)

The use of polyvinyl chloride (PVC) scheduled to be phased out of G-Star garments by January 1, 2015.

#### Progress

- We keep on actively monitoring the usage of PVC.
- We expanded the scope of the PVC ban throughout the entire company and to all our products.
- We banned PVC since January 2012 in our RSL 1.0
- We reached our goal to eliminate PVC by the end of 2013 far ahead of our deadline in 2015.
- We keep on monitoring our supply chain for PVCs.

### 7.2 Leather

G-Star continuously investigates the use of chemicals in its leather products and at the leather supplier.

#### Progress

- Leather is less than 2% of our collection.
- In 2013 we investigated alternative solutions for CrVI tanning and have developed further expertise on degreasing processes and the limitation of hazardous chemicals used in production of leather.
- In December 2013, we published a PFOS case study on PFOS in leather on Subsport, the substitution support portal.

### 7.3 Denim finishing

Investigate methods to replace less sustainable processes in denim production with better alternatives.

#### Progress:

- In 2016, we initiated a project with MADE-BY on sustainable denim wet processing in which we linked styles, fabric and processes to the production facilities
- In 2017, we have shared the details of this exercise with all our denim wet processing facilities and provided them with a concrete action plan in order to eliminate certain chemicals from production
- G-Star will investigate further on alternative chemistry in order to eliminate Potassium Permanganate in 2018.

## 8 AWARENESS CREATION TOWARDS MANUFACTURERS AND CONSUMERS

Awareness creation is part of a change-oriented communication and mindset in which sustainable goals, developments, visions and missions are communicated to other organizations, manufacturers, designers and consumers. We strongly believe that learning through capacity building of different stakeholders will create understanding, sensitization and awareness in moving forward towards zero discharge of hazardous chemicals.

Throughout 2016 and 2017 G-Star took the opportunity to participate to some of the major trade shows around the globe in order to raise attention and understanding on the critical points when it comes to chemicals used within the textile industry and how to achieve the fashion industry's Detox goals.

- Texfor Barcelona, Spain June 2016  
<https://texmeetingbytexfor.com/programa/>
- Kingpins Transformers Amsterdam, Netherlands November 2016  
<http://rivetandjeans.com/target-deliver-keynote-kingpins-transformers/>
- Munich Fabric Start, Germany January 2017  
<http://www.sportswear-international.com/news/stories/Trade-Show-G-Star-and-Edelkoort-among-top-guests-at-Munich-Fabric-Start-12925>  
<http://rivetandjeans.com/g-star-raw-produce-line-bluesign-products/>
- DenimandJeans Ho Chi Minh City, Vietnam June 2017  
<https://www.denimsandjeans.com/events/denimsandjeans-vietnam-schedule-june-7-8-2017/26765>

## 9 PARTNERSHIPS

### 9.1 ZDHC

In 2012 we joined the Zero Discharge of Hazardous Chemicals (ZDHC) Group together with the brands adidas Group, Benetton, Burberry, COOP, C&A, Esprit, F&F, GAP, G-Star Raw, Gap, H&M, Inditex, Jack Wolfskin, Kering, Levi Strauss & Co., Limited Brands, L Brands, Li Ning, M&S, New Balance Athletic Shoe, Inc., NIKE, PUMA, Primark and PVH.

The joint mission of ZDHC is to advance towards zero discharge of hazardous chemicals in the textile and footwear supply chain and act to improve the environment and people's wellbeing. The vision is widespread implementation of sustainable chemistry and best practices in the textile and footwear industries to protect consumers, workers and the environment.

ZDHC represents 22 leading brands committed to working together to drive industry-wide change. For more information about the ZDHC Group and progress made in 2014, please visit the ZDHC group website.

ZDHC's goal is to eliminate the use of priority hazardous chemicals by focusing on the following areas: Manufacturing Restricted Substances List (MRSL) & Conformity Guidance, Wastewater Quality, Audit Protocol, Research, Data and Disclosure, and Training. ZDHC reports its progress via the website: [roadmapzero.com](http://roadmapzero.com).

### 9.2 Sustainable Apparel Coalition (SAC)

As of 2017, G-Star is a member of the Sustainable Apparel Coalition (SAC), a leading alliance that strives for sustainable production within the apparel, footwear and textile industry. In order to gain more consensus regarding the environmental, social and labour impacts of making and selling products and services, G-Star together with other SAC members is in the process of implementing the Higg-index which is to become a standardized supply chain measurement tool. Implementation of the Higg-index enables G-Star to address inefficiencies, resolve damaging practices achieve environmental transparency at an industry wide level.

### 9.3 Bluesign

Early 2013 G-Star have become a system partner of bluesign technologies ag, The declared objective of the independent bluesign® standard is to put a reliable and proactive tool at the disposal of the entire textile production chain – from raw material and component suppliers who manufacture e.g. yarns, dyes and additives, to textile manufacturers, to retailer and brand companies, to consumers. bluesign technologies ag has a database of several thousand dyes and chemicals that are controlled regarding hazardous chemicals, and can be used by G-Star and our suppliers to eliminate the eleven priority chemicals. In addition, bluesign technologies ag has a database of bluesign® partner facilities with bluesign® certified products, to identify reliable partners in our supply chain.

Two significant G-Star CMT suppliers (Young One and Saitex) are bluesign® system partner, as well as five trim suppliers G-Star works with. Until 2016 we visited several of our denim fabric suppliers together with bluesign technologies ag. In follow up to these visits in 2015 1 supplier have become a Bluesign partner.

Over the last years, we were able to engage more suppliers becoming bluesign® system partners and could therefore With its holistic approach the Input Stream Management provides an efficient solution for chemical suppliers, textile and accessories manufacturer as well as fashion brands

## 9.4 Plastic Soup Foundation

In 2016 the Plastic Soup Foundation (PSF) and G-Star RAW joined forces to stop the microfiber released by washing plastic garments. We collaborate to find innovative solutions to prevent the release of plastic fibers from garments in the future, such as fabrics that do not release microfibers or washing machine filters that capture the released fibers.

### Progress

- G-Star was the first denim brand to create denim from recycled ocean plastic and currently, we are in the process of completely replacing the 10% conventional polyester in our collection with recycled plastic.
- Despite the promising research into biodegradable plastics, through our collaboration with the Plastic Soup Foundation, we found out that the biodegradable bags barely break down and continue to demonstrate damaging consequences comparable to those of regular poly bags.

We have researched other alternatives such as thistle, cornstarch and PE sugar cane, but were not completely satisfied since they all exhibit some kind of down factor that we are not willing to accept. The biggest challenge is replacing the plastic polybags needed to maintain the quality of our products during transportation and shipment to customers. Although we are yet to find a sustainable solution yet to replace all polybags in our supply chain, we are determined to work with our partners to find an alternative that complies with the technical requirements.

## 9.5 Better Cotton Initiative (BCI)

G-Star is a partner of the Better Cotton Initiative (BCI) with the aim to increase the uptake of Better Cotton throughout our supply chain. The Better Cotton Initiative (BCI) promotes good farming practices and helps farmers to make global cotton production better for the welfare of farming communities, the environment it grows in and the sector's future. G-Star has the ambition to use 100% sustainable cotton by 2020 by using a combination of Better Cotton, recycled cotton and organic cotton in its collection. In 2017, MADE-BY verified that over 57% of G-Star's total collection was made from sustainable materials.

## 9.6 TextilePaCT program

Please find more information on <http://www.textilepact.net/>

In 2013 G-Star joined the Bangladesh Partnership for Cleaner Textile (PaCT) with Solidaridad and the International Finance Corporation. The PaCT Programme is an extension of a Cleaner Production Pilot Programme in Bangladesh. The goal of PaCT is to reach a reduction of water and energy consumption, improved chemical management, reduction of wastewater generation, improved water quality, and improved Water, Sanitation and Hygiene (WASH) conditions. The programme has a lead time of approximately 5 years and the majority of our G-Star suppliers in Bangladesh participate.

### Progress

- All suppliers that G-Star works with in Bangladesh are either a Bluesign member or participating in the PaCT programme.
- PaCT works with factories through the following approach:
  - Step 1 Awareness: The PaCT project is introduced to potential textile factories. Its goal, benefits, costs, investments and timelines are discussed.

- Step 2 Basic CP: A basic Cleaner Production (CP) assessment is carried out by PaCT technical experts. They recommend ways to minimise use of resources like water, energy, chemicals, etc. and support factories to implement the measures.
- Step 3 Deep Dive: The Deep Dive is an in-depth detailed assessment to identify capital intensive opportunities for large savings in water, energy and chemicals, within the wet processing unit, utilities and Effluent Treatment Plants (ETPs).

More detailed information can found here:

[http://www.textilepact.net/pdf/publications/brochures/PaCT\\_Brochure.pdf](http://www.textilepact.net/pdf/publications/brochures/PaCT_Brochure.pdf)

- In 2015 the G-Star suppliers have finished step 2 of the Cleaner Production Programme, the Basic CP assessment.
- One supplier, DBL Group is in a further stage of the project and has completed step 3 in 2015, the so-called Deep Dive
- On March 23, 2017, at the request of G-Star, we hosted a workshop at our headquarters in Amsterdam presented by Solidaridad focusing on introducing the DSG tool. The workshop was tailored for the Jersey division team with members present from both G-Star and members of the production team joining by video conference from Dhaka. The broad goals of the workshop were to:
  - Raise awareness of the Bangladesh Water PaCT: Partnership for Cleaner Textile
  - Demonstrate how brand decisions influence this impact
  - Introduce the DSG tool, and
  - Demonstrate how the tool can be used to guide discussion and decision-making.
- Under PaCT I, G-Star has completed 3 assessments. The participating suppliers illustrated a total amount of water saving of 432,425 m<sup>3</sup>/year, total energy saving of 162, 848 MWh/year, total factory investment of USD 328,029 and total factory savings of USD 75,735. Furthermore, on average, the G-Star suppliers that underwent In-depth CP reduced their water consumption from 129 L/kg to 111 L/kg (14% reduction) and their energy consumption from 15.2 kWh/kg to 11.2 kWh/kg (26% reduction).
- The case studies from the PaCT programme can be found here: <http://www.textilepact.net/publications.html>

## 9.7 Textiel Convenant

G-Star signed the Dutch Agreement (Textiel Convenant) on a Sustainable Garment and Textile Sector in July 2016. With this agreement, Dutch fashion brands, trade organizations, trade unions, the National Government of the Netherlands and social organizations came together to make the international textile industry more sustainable, fair and environmentally friendly. While the coalition commits to substantially improvement of labour conditions in the garment sector, a large amount of focus is also dedicated to measures to reduce the negative environmental impact of raw materials productions, using less water, energy and chemicals and producing less chemical waste and wastewater.

G-Star is audited on a yearly basis by the Dutch Economic and Social Council to see if due diligence is done in line with the OECD guidelines, if plans for progress are made and if in fact the promised progress is made.

## 10 OTHER SUSTAINABLE PROGRESS

### 10.1 MADE-BY Mode Tracker

Since March 2011, G-Star has entered into a partnership with MADE-BY. This multi-stakeholder organization supports brands in implementing strategies to improve environmental and social conditions in the fashion industry. MADE-BY verifies the implementation of G-Star's Corporate Responsibility policy and transparently monitors progress.

#### Progress

- Our social and environmental progress is published year-on-year by MADE-BY. In 2015 MADE-BY launched the MODE Tracker, an updated version of MADE-BY's previous Scorecard system that gives a holistic overview of our sustainability achievements. The MODE Tracker assesses progress on eight sustainability areas: People, Product, Manufacturing, Packaging & Transport, Own Operations, Use & Durability, Product Waste and Transparency. Yearly a new G-Star MODE Tracker progress report is published and can be found on [g-star.modetracker.org](http://g-star.modetracker.org).
- Within Mode Tracker the manufacturing cube how we manage and monitoring manufacturing impacts such as (chemicals, energy, water and waste as described in this report.
- In 2016 G-Star doubled the percentage of sustainable materials in our collection to 30,1% and reduced the use of air cargo with 29% due to better internal planning and good cooperation with our suppliers.
- In 2017 G-Star has developed policies and guides such as its 'Environmental Guideline' which sets out its expectations for all suppliers to manage their water, energy and chemical footprints. Beyond setting policies, G-Star conducts site audits, assessing topics such whether a supplier has an Environmental Management System through to if a supplier has an Effluent Treatment plant with adequate capacity.
- In 2017 we continued to maintain a supplier onboarding and ranking system which assesses a suppliers' environmental engagement before becoming a G-Star supplier. Beyond setting policies, we conducted site audits, assessing topics such whether a supplier has an Environmental Management System and an effluent treatment plant with adequate capacity.
- In 2017 we also ensured that strategic suppliers maintained industry best practice chemical management standards. Mode Tracker verified our policies in place, such as our Manufacturing Restricted Substance List (MRSL), which sets limits for potentially hazardous chemicals within production. We are also an acting board member of ZDHC.

### 10.2 Raw For The Planet (RFTP)

RAW for the Planet is the platform through which we persistently strive to innovate in our sustainable design. Our ultimate main goal is to reach circularity with regard to our denim design, production and consumer usage. G-Star approaches this by not only providing for sustainable alternatives for standard design and development practices, but more importantly, we are committed to push the boundaries of sustainable innovation through research and experimentation.

#### Progress

- Cradle 2 Cradle Certification: Through our platform, we pilot the design and development of our product in line with the principles of the Cradle To Cradle certification. This standard guides designers and manufacturers through a continuous improvement process that looks at a product through five quality categories: material health, material reutilization, renewable energy and carbon management, water stewardship and social fairness. A product receives an achievement level in each category (Basic, Bronze, Silver, Gold, or Platinum) with the lowest achievement level representing the product's overall mark.



G-Star achieves, together with its partner Artistic Milliners, the first denim ever to be Cradle to Cradle Certified™ at Gold Level by the Cradle to Cradle Products Innovation Institute.

- Most Sustainable Jeans Ever: G-Star RAW launches its Most Sustainable Jeans Ever, the G-Star Elwood RFTPi jean, developed by analyzing each part of the denim design process and exploring how to reduce the environmental impact at every step. It makes use of the world's cleanest indigo dyeing process in the world by making use of indigo that contains 70% less chemicals and no salts. The G-Star Elwood RFTPi jean, using the Gold Level Cradle to Cradle Certified™ G-Star denim fabric, marks a milestone in sustainable denim manufacturing.
- Earthcolors: In light of this, G-star recognized that many textile mills in this industry are responsible for dumping chemical-laden, used dye water into oceans and streams leading to unnecessary eco destruction. In partnership with Archroma, we as a denim company have taken the initiative to successfully launch a series of naturally-dyed jeans, coloured with traceable dyes derived from recycled plants and nutshells called Earthcolors.

### 10.3 Clever Care

We also advise our customers on how to care for their product after their purchase. We provide information how to extend its lifespan through proper care as well as how to help reduce the carbon footprint of clothing and textiles. Laundry alone accounts for approximately 30% of the carbon footprint of clothing. Our products feature since 2017 Clever Care information that provides explicit care instructions designed to help the customer get the most out of his/her clothing. A nice benefit is it leads to water and energy savings through less frequent machine-washing and drying, as well as guidance on ironing and professional laundering techniques.